

the Skeptic

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views and reviews



**BOOK REVIEWS
CREATIONISM
CHANNELLING**

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From the President

This issue contains details of our seventh annual National Convention which will be held in Sydney on the Queen's Birthday long weekend. This will be the third Convention to be held in Sydney and follows on the very successful 1990 Melbourne convention. We have ascertained that Manly is playing away that weekend, so there should be no distractions.

We believe that our annual conventions are important allowing our subscribers to meet and discuss issues of mutual interest. They are held on long weekends to enable our interstate subscribers to attend and we hope that some of them will be able to make it this year.

I am pleased to announce that our special guest and keynote note speaker will be John Dowd QC, who recently announced his retirement from the position of Attorney General of NSW. John is a friend of many years standing and has been a supporter of the Skeptics since its inception. I have no doubt that he will have much to say that will interest those who attend the convention.

In an age when the popular print media find that the

addition of pseudoscientific advice columns increase their circulations substantially, we will address the question of what is the media's responsibility to present accurate information. We are fortunate to have distinguished journalist and long-time sceptic, Richard Carleton leading this discussion. Mr Carleton's attendance is of course provisional on his not being required for a professional assignment at the time. We are still negotiating to add other speakers to this panel.

Other topics to be discussed will include Chaos Theory, Education and Scepticism, Hypnotism and the Effects of Superstition on the Ecology.

We have had six successful National Conventions to date and are confident that this one will add to that list. Its success depends very much on you, our readers. Do yourself a favour and keep the Queen's Birthday weekend free for an enjoyable and instructive meeting with your fellow Skeptics and bring your friends along.

See you at Brookvale.

- Barry Williams

the Skeptic

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Editors: Barry William
Harry Edwards

National Convention

The seventh annual National Convention of Australian Skeptics will be held at the **Manly Warringah Rugby League Club**, Brookvale on Saturday 8th June and Sunday 9th June, 1991. The dinner will be held at **The Harbord Diggers Club** on Saturday evening. Details of the dinner are on the enclosed insert.

The keynote speaker, who will open the Convention, will be **John Dowd QC**, recently retired Attorney General of NSW and long-time supporter of the Skeptics.

Topics to be covered at the convention will include **"Scepticism and the Media"**, which will feature distinguished television journalist and sceptic **Richard Carleton** (subject to last minute assignments) with other speakers still to be finalised.

Other topics will include **"Scepticism in Education"** and **"Chaos Theory and the Limits of Prediction"**.

The Saturday session will commence at 1.30 and conclude at 5.00. It will include the announcement of the winner of

the **Bent Spoon Award** for 1991 (nominations to be received no later than June 1). Sunday will consist of morning and afternoon sessions and will commence at **10.00** and will conclude at **5.00**, with break for lunch between 1.00 and 2.00.

Admittance fees are **\$5.00** for each session or **\$13.00** for all three.

There is no need to pre-book for the sessions, but it is essential that you return your reservation (with money) for the dinner, no later than June 3.

Sydney subscribers who wish to billet interstate visitors are invited to let the committee know by June 3 and interstate visitors who wish to be billeted should do likewise. You can leave a message on our answering machine (02) 4172071.

This machine will contain a message with up-to-date information on the Convention programme, from May 20.

The convention will be both informative and entertaining. Bring your friends and any extraterrestrials you know.

Acupuncture trial

The *Medical Journal of Australia*, vol 154, March 18, 1991 reports on a double-blind crossover study on the effectiveness of using acupuncture for treating bronchial asthma.

The study, conducted by M K Tandon, Consultant Thoracic Physician, P F T Soh, General Practitioner and A T Wood, Biostatistician, compared the effectiveness of classic Chinese acupuncture with placebo acupuncture on 15 patients with stable bronchial asthma. The acupuncture was administered with a laser to obviate the chance of cross infection from needles. The results showed no improvement in various tests for asthma sufferers and when questioned, five patients felt better on real treatment, five felt better on placebo treatment and five felt no improvement from either treatment.

Natural oils threat

A letter in the *Medical Journal of Australia* has warned that children being poisoned by eucalyptus and tea tree oils left around by their parents. The writer, Dr Helen Wilkinson, community paediatric registrar at Hornsby Child Health Centre, told of four recent serious poisonings of children who had drunk these oils. She said that parents had the mistaken belief that as these oils were 'natural', they were therefore harmless.

It is tragic to think that the

proliferation of 'new age' thinking infiltrating our society can make the terms 'natural' and 'harmless' synonymous. Readers might like to contemplate the harmlessness of natural items such as cholera bacteria, asbestos or earthquakes.

Divine retribution?

Readers of *the Skeptic* may remember the water divining tests we conducted in October 1989, which were reported in the Summer 89 issue. One of the diviners tested was the colourful mayor of Thuringowa, North Queensland, Ald Dan Gleeson. Ald Gleeson continued to attract publicity after his unsuccessful attempt to win our standing offer of \$20,000, appearing in the national media during 1990 after his public statement that homosexuals should be shot.

Now it would appear that Ald Gleeson's reign as mayor is over. In the recent Queensland local government elections, Dan hit the headlines again, with his claims that his trusty forked stick had predicted the starting and finishing dates of the gulf war and for the fact that one of his opponents was also a water diviner. Clearly the wands were wrong this time as both Dan and the other dowser were defeated for the mayoralty by another candidate who, as far as we can ascertain, made no claims for paranormal powers.

We are grateful to reader, Ald Stan Newman of the neighbouring Townsville City Council, for clippings from the local newspaper which told us of these

latest chapters in the Dan Gleeson story.

Radiation hazard?

It seems to be the trend these days for the proponents of the Extraterrestrial Visitor, UFO hypothesis to locate the home system of our galactic watchers in either the Pleiades cluster or in the Nebula in the Orion constellation. These are curious choices, because both locations contain 'young' blue stars which produce intense radiation and are most unlikely to have existed for long enough for life to have evolved in their vicinity. Could it be that these stellar groupings are nominated because they are spectacular objects in the night sky and figure prominently in various mythologies?

As the only solar system in which we have certain proof that life has evolved is our own, would it not make sense to postulate other life in the systems of stars of the G2 spectral class, similar to our sun?

Psychic Scud buster?

No Patriot, Uri!

Philip Klass, in his *Skeptic's UFO Newsletter* of March 1991, wonders why Uri Geller an Israeli, did not volunteer his psychic powers to protect his homeland from Scud missile attacks. The same thought had occurred to *the Skeptic*.

Vic Skeptics

Phone (03) 850 2816

Coincidence Corner

Harry Edwards

The phone rings and, as you lift the receiver, you instinctively know who is calling. You have been thinking about an old acquaintance, not seen for several years and you bump into him in the street. Oblivious to each other, watching TV or reading, you and your spouse begin to say the same thing at the same time. Premonition? ESP? Telepathy? or just plain coincidence?

Coincidence is probably the most common explanation we sceptics use to account for some putative 'psychic' phenomenon, yet, to many people, coincidences are evidence for predestination or other paranormal activity. This is largely because most people do not understand the laws of chance and if we postulate a coincidence with a one in a hundred thousand probability, many people will consider that it is a most unlikely event. That this is not so is evidenced by the number of state lotteries that are drawn every day in Australia. Every winning ticket has a one in a hundred thousand (or thereabouts) chance of winning, and every day, several of them win. So too with coincidences. If we consider the number of 'events' that occur every second, then it would be a remarkable world indeed if every 'event' was totally unique and there were no coincidences.

We propose to introduce a regular column (if you will help us) in which readers are invited to send us examples of coincidences they have experienced. They do not have to have any

paranormal component, but should be confined to 3-400 words.

To get the ball rolling, I recall that back in 1969, while crewing on a yacht in the South Pacific, I made friends with an assistant Patrol Officer by the name of Tony Cornelli on the tiny island of Kiriwina, in the Trobriand group, off PNG.

Back home in Newport some five years later, I came across an old salt-stained diary while clearing out my desk. Memories of turbulent seas, palm fringed lagoons, coral reefs and grass-skirted maidens came flooding back and inspired me to write a short story about my sailing days and experiences in the islands.

The manuscript finished and seeking assistance to give it a professional touch, I found a typist in the adjoining suburb of Avalon. At 10 pm the same evening, the typist rang me and said, "*I've just finished reading your manuscript and thought you'd be interested to know that the Tony Cornelli you met in Kiriwina is my husband!*" **Odds?**

Barry Williams piles coincidence upon coincidence:

Within days of typing the above contribution from Harry into the computer, I happened to be browsing through a copy of Australian Aviation magazine. One of the articles in the magazine was an historical piece on the Douglas Boston aircraft in RAAF service during WWII. At the end of the piece was a list of what had happened to each aeroplane. One of them had been shot down and crashed on the island of Kiriwina. Until I read Harry's article, I had never, to my knowledge, heard of the place!

World Round-up

Harry Edwards

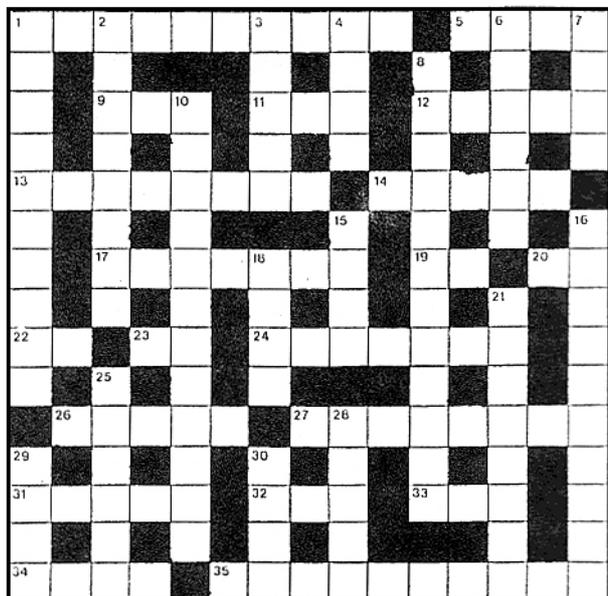
A shimmering image that some say resembled the Virgin Mary began to appear on a church wall for about one hour each day, attracting up to 2,000 miracle seekers per day to St Dominic's Church in Colfax, California, a town of some 1,000 inhabitants.

As local businesses bustled and church coffers presumably brimmed, the last thing that locals wanted was a rational explanation of the 'miracle'. After physics professor James Phelps, an optics specialist at California State University, Sacramento, speculated that the multicoloured vision was likely a natural reflection of sunlight from a light fixture, church officials acknowledged that its hanging light fixtures had been repaired one day before the image began to appear. Added the son of a church administrator, "They put wire around the outside of the glass covers and other pieces of metal, various and sundry stuff". But Bishop Francis Quinn of Sacramento said there were no plans to test Phelps' theory and parishioner Freda Hoffman added, "We believe it is the Virgin Mary. We believe in it because we are Catholics".

Tampa Bay Skeptics

**We still have no takers
for our fire-walking on
a steel plate offer. Are
these people afraid to
test their powers?**

the Skeptic Crossword



ACROSS

- 1 & 2 D Does this body have doubts about a national newspaper? (10, 8)
- 5 Excited before a biblical king. (4)
- 9 Especially short paranormal power. (1, 1, 1)
- 11 A little devil of a politician. (3)
- 12 With me in these conspiracies, they would fly. (5)
- 13 Study of a metaphysical Canadian province from first principles. (8)
- 14 Mixed pharaoh's blood factor? It's gospel. (5)
- 17 A rector was the manufacturer? (7)
- 19 Former editor's trade mark was meditation. (1, 1)
- 20 How Americans refer to themselves. (2)
- 22 Alien and French (1, 1)
- 23 Whitlam, for instance. (2)
- 24 Left luggage in French station? Rubbish. (7)
- 26 I assert that I am in a bivalve. (5)
- 27 In the quest for the ideal life, some insist that no girlie shall preach. (8)
- 31 Is Amin in Genesis, Kings or Judges? Don't be a dill. (5)
- 32 Confused republicans after Londonderry? (3)
- 33 A member of the Order of Australia? No a member of the family Dinomithidae. (3)
- 34 A Zoroastrian in the soup? (4)
- 35 Hur or von Daniken? (10)

DOWN

- 1 O star ogler, what do the signs portend? (10)
- 2 See 1 Ac.
- 3 Quieter 25. It just ain't so. (5)
- 4 Was Hanibal the first genetic engineer when he crossed these with proboscidean mammals? The evidence mounts. (4)
- 6 A billion game show comperes? Thats spooky. (6)
- 7 The nub of most of creative Duane's claim to a T. (4)
- 8 Unidirectional spin and dogma surrounding ritual calling to the departed. (12)
- 10 This sport elegist is in high spirits. (12)
- 15 British monarch or Remus' bunny? (4)
- 16 This observer creates a monster or a scientist? (10)
- 18 Got a matron' robe. (4)
- 21 The condition of Catherine from the Ham and Beef is euphemistically pregnant we hear. (8)
- 25 Loudly prevaricating about aviating. (6)
- 28 Vowels mixed in reading, writing and arithmetic. What a cock-up. (5)
- 29 Silicon signal modulation in old Asian kingdom. (4)
- 30 Is the naturo, osteo and homeo on the right track? (4)

Solution Page 29

Even more competition entries

Why can't you fit a square peg in a round hole?

Pegs and holes are of course complementary entities, rather like nuts and bolts, or tea and biscuits, while square and round are antagonistic quantities like hot and cold, positive and negative or government and helpful. As a result, we have two conflicting forces at work. The peg and hole attract each other but the squareness and roundness repel each other. Depending on the ratio between pegness and squareness on the one hand, and holeness and roundness on the other, the balance of forces may be either attractive or repulsive. Thus a very small square peg may fit in a very large round hole, while the converse is not true.

CREATIONISM

An Improper Defence of an Untenable Creationist Theory

Colin S.L. Keay

In the September 1988 issue of *The Australian Geologist* there appeared a special article titled “*Creation Science: a response to Professor Plimer*” by Dr Andrew Snelling, a member of both the Geological Society of Australia and the Creation Science Foundation Ltd, incorporated in Queensland. His article was in reply to two previous articles attacking the basis of Creationism by Professor Ian Plimer. Dr Snelling’s reply is a self-righteous tissue of deception and misrepresentation from beginning to end. Most of its errors were exposed in letters to the Editor published in subsequent issues of *The Australian Geologist*, but there were three false assertions of an astronomical nature in the article which do not appear to have been dealt with yet, mainly because the assertions were of an astronomical nature and difficult to deal with without access to the evidence. This composition is the outcome of my efforts to set the record straight.

Incidentally, in the Summer 1988 issue of *The Skeptic*, Andrew Parle made the crucial point that “one does not have to know a subject to lie about it, but one does have to know it to detect the lies”. To which I would add “and even then, tracing the true facts can be a very lengthy task”. Read on.

First, some background. In 1981 the Creationist journal *Ex Nihilo* published the first of a series of contributions by Mr Barry Setterfield of Adelaide. They presented a hypothesis that the speed of light has diminished substantially since the time of the formation of the Earth. The *raison d’être*, of course, was to reconcile the 60–century biblical time–scale with the vastly longer 4500–million–year span established by each and every one of the relevant sciences. The pseudo–scientific Setterfield hypothesis has been adequately demolished in “*Creation Physics and the Speed of Light*”, a chapter by Ken Smith in *Creationism – an*

Australian Perspective by Bridgstock and Smith, published by the Australian Skeptics.

Mr Setterfield’s frenzy of outpourings for the greater glory of his God reached its pinnacle in 1987 when he and Trevor Norman, a computer programmer in the (then) School of Mathematical Sciences of Flinders University, produced an 87–page report “*The Atomic Constants, Light, and Time*”. This report is rather hard to come by. At first, I believe, it carried the logo of the Stanford Research Institute (SRI) as well as Flinders University. A five page Foreward was contributed by Lambert T. Dolphin of the SRI, a gentleman who 25 years ago tried to sell me a radar transmitter design that was rather unusual (to say the least). However I understand that SRI dissociated itself from the report, ordered the covers be destroyed – and dismissed Mr Dolphin. Incidentally, SRI once had an interesting flirtation with Uri Geller – see Martin Gardner’s *How not to test a psychic: the Great SRI Die Mystery* in the Winter 1982–83 issue of *the Skeptical Inquirer*.

Back to the Snelling/Setterfield story: Flinders University withdrew all copies of the report when its fraudulent nature was realised. Members of the academic staff informed me it was a “terrible mistake”; “never should have been involved with it”; and so on in like vein. A secretary told me “there was quite a drama”. It seems there was a reluctance of people to cast negative opinions on the report until too late and the report had gone to press. The Flinders Physics Department had been invited to assess the report: unfortunately (in this case) they did not respond. Physics Departments everywhere suffer a steady stream of completely nutty papers, pamphlets and personal publications which claim solutions to everything you can think of, from the world’s energy supply (perpetual motion a specialty) to the structure of matter (alchemy is not

dead yet). This whole episode has been a very painful and embarrassing experience for many people at Flinders University but that is not the point. The point is that the Creation Science Foundation, and in particular Dr Andrew Snelling, continue to cite the discredited Norman and Setterfield report (referring to it as a “technical monograph” – sounds better) and its attribution to a member of Flinders University (e.g. *Ex Nihilo*, Vol 12, No. 3, 40–41, June–August 1990).

The Norman and Setterfield report also perturbed me for another reason. It states that “Initial independent analyses of these data [on the velocity of light] at Newcastle University concluded that ‘Any two stage curve fit gives a highly significant improvement over the assumption of a constant c value....’”. This is reference no. 53 of 377 references, the majority of which are legitimate scientific papers. But in this case the source is attributed to D. Malcolm, Lecturer in Computing, (personal communication, August 23, 1982). To the best of my knowledge, Dave Malcolm was never a Lecturer in Computing at the University of Newcastle. Until recently he was a programmer in the University of Newcastle Computing Centre (and one of the Creationist team in a 1989 public debate against the Newcastle Skeptics). His views on the constancy of c (the velocity of light) do not carry the imprimatur of the University of Newcastle as implied by Norman and Setterfield.

The *Ex Nihilo Technical Journal* has carried a number of papers on the Setterfield Speed of Light hypothesis. And some of them clearly reject the hypothesis. Vivian E. Bounds’ paper concludes “Setteffield’s hypothesis is, therefore, without any adequate foundation, whereas the constancy of the velocity of light through time is confirmed...”. John C. Osborn concludes “It is apparent that the evidence for a secular trend in fundamental constants is not conclusive. However, whether or not such a change has occurred, the theory proposed by Norman and Setterfield to characterize it is untenable. Therefore their conclusions regarding cosmological and geological dating must be rejected”.

The *ExNihilo Technical Journal* also contains an article “A Regression Analysis of Historical Light Measurement Data” by Professor A.M. Hasofer of the University of New South Wales, which reports “However, when the first 7 data points were deleted (1675-1771), the significance of the regression was lost”, and goes on “Although the quadratic

regression studied above is highly significant, it is not the only possible model that will fit the data. In fact a cubic model will fit even better...”. In a telephone interview, Professor Hasofer stated that it (the Setterfield hypothesis) “all depends on the credibility of the 18th Century measurements (of the velocity of light)”. Nevertheless, in an article in *Creation Ex Nihilo* (June–August 1990) Dr Snelling writes under the heading “A ‘Heavyweight’ Weighs In” the following paragraph: “To try to resolve this professional dispute, we asked Dr Michael Hasofer, Professor of Statistics at the University of New South Wales in Sydney, Australia, who is a highly respected scientist, for an authoritative opinion. With what seemed like initial scepticism towards the theory, Professor Hasofer replied that weighted methods were indeed appropriate, but that when used in the statistically appropriate manner, actually give a ‘highly significant fit’ in favour of changing c ”. There is no mention whatever of Professor Hasofer’s reservations about the credibility of the early measurements of c .

It is also of interest that Dr Gerald E. Aardsma, Head of the Astro–Geophysics Department of the Institute for Creation Research’s Graduate School, has published a critique of the Setterfield theory (*Impact*, No 179, published by the Institute for Creation Research, California, May 1988) in which he states that “there is no discernible decay trend in the data set presented by Norman and Setterfield”. He concludes by warning the creationist community that “caution is clearly in order”.

Quite apart from the baseless foundation and spurious claims of the Norman and Setterfield report, Dr Snelling’s defence of the Setterfield theory is of very serious ethical concern through his deliberate distortion and misrepresentation of published scientific results.

In his article in the *Australian Geologist* there are three such cases, relating specifically to astronomical matters, which warranted my inquiries. In the first case, referring to the data selected by Mr Setterfield, Dr Snelling states “Indeed, one set of these historical measurements (64 measurements in all) involved scientists using the same measurement method (the aberration method first used by Bradley in 1727) over a 200–year period, and the decay trend is clearly evident. (Twenty–nine of these measurements were made in the same laboratory, the Pulkova Laboratory in Russia, on the same equipment over a 100–year period!).” To most people, such

a statement sounds highly convincing, as it is intended to be.

Clearly, without the measurement values to hand, there is no way to prove the above statement wrong except to go to the laboratory which made the measurements. But the laboratory is in Russia. And it is not the “Pulkova Laboratory”, but the famous Pulkovo Observatory just south of Leningrad. In June 1990, during the course of a visit to Pulkovo, I made inquiries about the matter. The Pulkovo Director, Dr Victor Abalakin, very kindly gave me a written response. It reads: “Dear Professor Keay: ... may I let you know that in Pulkovo Observatory there were no experiments concerning determination of the velocity of light during the whole of its history. The statement on the changes in the velocity of light as supposedly revealed by Pulkovo astronomers is wrong. Perhaps the opinion on the variability of the velocity of light is based on comparison of values indirectly obtained by derivation from various results of the aberration constant determinations. These, indeed, belonged to fields of interest of Pulkovo astronomers. So, the velocity of light is unchanged for the whole period of our experiments and precise measurements show the accurate value to be 299,792,498.2 m/sec.”

The above authoritative statement leaves little room for misinterpretation.

Dr Snelling went on to state that the reason why the value of the speed of light has apparently stopped decaying is because “it is simply a function of the mathematical form of the decay reaching an asymptote.” (Mathematicians, please stop laughing, this is meant to be serious.) He then goes on to assert “More recent refinement of the mathematical interpretation of the data suggests that the decay has not stopped at all. Furthermore, a long series of observations over 16 years (1965–1981) of time as measured using an atomic clock compared to gravitational or astronomical time measured using the moon’s orbit by Van Flandern at the US Naval Observatory, Washington, seems to confirm the Setterfield hypothesis. And historical measurements of other physical constants are also in full agreement with predictions of the Setterfield hypothesis.” The nature of these “historical measurements” is nowhere indicated, nor are they referenced.

In order to check Dr Snelling’s assertions I wrote as a fellow astronomer to Dr Tom Van Flandern, who replied “My published studies using lunar observations suggested a departure between the atomic and gravitational time scales

on the order of a few parts in a hundred billion per year. This difference becomes appreciable only over times comparable with the Hubble age of the universe. I interpreted the observations as supporting Dirac’s proposal that the gravitational constant may decrease with time, rather than that the speed of light varies.” (“*Is the Gravitational Constant Changing?*”, *Precision Measurements and Fundamental Constants II*, 625–627, 1984). Dr Van Flandern goes on to remark “From what little I know about the Evolution vs Creation controversy, both sides seem interested in time scales of thousands of years, not tens of billions. I am curious about what significance so small a variation could have to either side.”

It is not the small variation that is so worrisome. It is the attempt by Dr Snelling to insinuate that Dr Van Flandern’s findings could possibly be linked to the massive variation in the speed of light demanded by the Setterfield hypothesis.

The third and last verifiable statement in Dr Snelling’s defence of the Setterfield hypothesis reads “Interestingly, an article by the Russian cosmologist Troitskii has just come to light (*Astrophysics and Space Science*, Vol 139, 1987, pp389–411), in which he argues on theoretical grounds for a model of universe evolution based on a decrease of c (the velocity of light) from an initially infinite value. With sophisticated mathematics, he shows how this would be consistent with recognised physical principles.” With that crushing pronouncement, Dr Snelling rests his defence of the Setterfield hypothesis.

Dr Troitskii’s paper is pitched at an extremely advanced level exclusively for specialist cosmologists. His intention was to examine a cosmological model in which the observed red shifts of distant galaxies and quasars are not due to expansion of the universe, but instead result from a steady evolution of the laws of physics. This, according to Troitskii, would involve a gradual decrease in the velocity of light such that the overall size of the universe remained constant.

The required decrease (which is the inverse of the Hubble age of the universe) amounts to just one part in seven hundred thousand million per year. Even such a tiny variation is still a thousand times larger than the very stringent observational limits (including Dr Van Flandern’s) on the amount of variation with time of the fundamental physical interaction constants. Troitskii gets around this problem by making other physical constants vary with time to compensate. Researchers have

tried various other versions of this approach, but they all, Troitskii's included, suffer serious shortcomings and none have been accepted by cosmologists generally.

Returning to the Setterfield hypothesis, by taking the amount of decrease in the speed of light as postulated above by Troitskii, it is a simple matter to calculate that the variation over the biblical time-scale of six thousand years amounts to little more than one part in a hundred million. This is nowhere near enough to reconcile the biblical and cosmological timescales, because the total accumulated extension of the biblical age of the Earth using Troitskii's model adds up to no more than 11 hours! Dr Snelling could have readily verified this by the application of a little high-school arithmetic.

There is one other paragraph in Dr Snelling's discussion of the speed of light decay (using his phrase) in which he makes the completely unsubstantiated assertion that objections to the Setterfield hypothesis "have been dealt with and totally overcome", and that it has "been accepted by a number of university academics (including physicists and mathematicians)" without specifying who they are. Furthermore, Dr Snelling claims that "decades of measurements of electron rest masses ... show a trend exactly as predicted by the Setterfield postulate." No references are given, so no check is possible. To the best of this author's knowledge, no time variation of the electron rest mass has ever been experimentally verified. If it were so, there would be major repercussions throughout the entire discipline of physics.

This leads to the inescapable conclusion that Dr Snelling has knowingly and purposely sought to misrepresent and distort fundamental aspects of physics and cosmology in order to bolster an untenable Creationist mythology. It is highly immoral for a University educated scientist to behave in this fashion, as such actions are completely contrary to the ethical standards demanded by the scientific process.

One may well wonder why it is that a person trained in the rigorous discipline of Geology to doctoral level, and therefore familiar with the scientific method, should knowingly pervert his training by totally misrepresenting allied scientific disciplines as well as his own. It is frightening to think that any system of religious belief can exert such a malevolent influence over an intelligent person. Unfortunately one does not have to look far to find plenty of similar examples. ■

IMPORTANT NOTICE

We at Skeptics Central have been dragged kicking and screaming into the computer age (and about time too, I hear you cry).

Any reader who wishes to make a contribution to the Skeptic can now do so in a number of ways which will place no strain on the overworked typing fingers of the Editors.

Anyone with access to a Macintosh can send us articles written in **MacWrite II**.

Anyone with access to other computers can send us a 5.25" disc containing plain text (no underling, boldfacing etc) ascii files and a print out showing how you intended it to look.

Additionally, either a **Microsoft Word** or **Word Perfect** format file may be included.

The third alternative is to send us original hard copies from any good printer and we can sew it onto a Mac disc.

Finally, if you have a modem, call us on **(02) 417 2071** and we will give you a number which can be used to transfer files in one of a variety of protocols.

Of course, hand written contributions are also acceptable.

If you wish to send us a contribution, be it letter, article, news item or book review, please try to get it to us within six weeks of your receipt of the previous Skeptic, which will give us plenty of time to carry out all the extremely complex operations that are required to produce this magazine. We have a number of contributions for the next issue, which arrived too late for incorporation in this one.

We do not guarantee to print every contribution and we reserve the right to edit them for space, pedantic and legal reasons, but we will studiously endeavour to preserve the context of contributions that are published.

We do, however, want to hear from you to ensure that the Skeptic prints items of interest to all our subscribers.

Please drop us a line.

BOOK REVIEW

Science and Earth History

Ken Campbell

Science and Earth History - The Evolution/Creation Controversy

Arthur N. Strahler, Prometheus Books, Buffalo

The writing of this book was undertaken in response to the awakening of a professional scientist, late in his career, to the dangers of political pressures being brought to bear on science by groups who find the perversion of real science to be to their advantage. The groups he is concerned with are the so-called Creation Scientists, but they are only one group of many at the present time. The growing numbers of advocates of New Age ideas, ill-informed adherents of the Environmental Movement, and even social reformers of both left and right, have no real understanding of the natural world, based on the discoveries of natural law, though they see great advantage in a propaganda that claims the support of science for their views. The extent and power of this attack are only now being appreciated by professional scientists who are having to come to grips with, two alarming phenomena - the dwindling number of quality students enrolling in science faculties and the increasing proportion of those who do enrol but have a distorted image of science, formed in unscientific, or even anti-scientific school and public environments. We should, therefore, welcome a book that tackles, in a serious academic fashion, one of the main sources of this problem - "Creation Science".

The book approaches the issue from the point of view of the distinctive attributes of science as opposed to other forms of intellectual activity, or distortions thereof. It then deals with the origin and history of creationism and the reasons for its present resurgence. Parts III-VI cover the conflict between science and creationism, using the interesting technique of offering "*Two Views on Cosmology and Astronomy, Geology and Crustal History, the Origins of Landscapes and Stratigraphy and the Fossil Record*". These parts are, in my view, the kernel of the book and

show, in stark relief the ludicrous consequences of some creationist beliefs. The exposé of the remarkable pseudo-scientific account of the Mt Isa ore body illustrates, in a stern and rigorous fashion, the main features of the creationist's distortions of evidence and the chapter in part VI on "*Fossils and Flood Strata - a Hydraulic Stratigraphy*" is no less rigorous and, to a palaeontologist, the working out of the implications of the creationist approach shows just how laughable their position really is.

This "*Two Views of...*" approach is unfortunately abandoned in Parts VII-VIII, which handle "*Integrity of the Evolutionary Record Under Attack by Creationists*" and "*The Origin of life on Earth - Naturalistic or Creationistic*". Under the last mentioned heading, the two chapters are "*Speculations on Life Origins*" and "*Bio-chemical Speculations on Life's Beginning*". With these chapters the solid basis of the previous work is abandoned and, in my view, Strahler does more harm than good to his total effort.

After this general commendation, I must note some other problems with the book from the perspective of a geologist/palaeontologist. Much of the defence of science against creationism is cast in terms of biological evolution and it is led by biologists. This is unfortunate because the weapons of modern creationism are directed at the nerve centre of all science viz. the concept that it is possible to draw consistent conclusions about the behaviour of the natural world through time, from observations that can be made now. That is, they deny the possibility of a temporal consistency (or order) in the natural world, or the uniformity of natural law, as most scientists would express the concept. If this anti-uniformitarian view was to be accepted, no historical science would be possible - no geology, no biology apart from a limited amount of experimental work, no astronomy nor cosmology. The significance of this can be appreciated when we remember the role such historical

physical sciences have played in the development of all. For example, where would the scientific revolution of the 16th and 17th centuries have been without the astronomical observer Tycho Brahe and the theoreticians Copernicus and Galileo?

It is good, therefore, to find an anti-creationist apologia that purports to be based essentially on a history of the Earth, rather than on a history of life (biological evolution). It is disappointing, however, to find that the author found it necessary to sub-title the book *The Evolution/Creation Controversy*. He had the opportunity to single out the distinctive and vital role of the Earth Sciences in establishing a coherent science of the past, a job that he does very effectively indeed; but then he -seems to have felt the need to ally himself with a wider group of protagonists and has chosen the biologists. This has meant excursions into fields such as “*The Genetic Code - A Review of Mainstream Molecular Biology* (11pp), “*Molecular Biology and Phylogeny*” (10pp) and “*The Rise of Man and the Emergence of the Human Mind* (42pp).

Strahler had a distinguished career as a Professor of Geology at Columbia University, New York, and is well known to students of Earth Science through his introductory textbooks. His main research has been in geomorphology and physical geology. This background equips him well to handle the physical but not the biological aspects of Earth History. His touch loses its deftness when he deals with issues such as the significance of the evolution of the metazoans in the Ediacara fauna and the evolution of Palaeozoic vertebrates. These treatments have an out-of-date feel as a result of derivation from general texts. I am not qualified to judge the sections on anthropology, but note that much of his material on human physical evolution derives from two main sources, and the philosophical treatment draws mainly on Dobzharsky (a geneticist), Simpson (a palaeontologist) and Bernard Campbell (an anthropologist). Much of this material could have been omitted, reducing the size of the volume with advantage. Its 552 pages have double columns, with 75 lines per column. This densely packed format does little to make the book attractive.

This comment raises the question of the intended readership. The author gives no direct answer. The book is too large and too diverse to be set as a text for any course other than the History and Philosophy of Science. For such a course it would be excellent. It would also be a

A Quotable Quote

The following comment was published in *Meditation at 10,000 Feet - A Scientist in the Mountains* (p 116, James Trefil, Charles Scribner's Sons, New York, 1986). Our thanks to Dr Ken Smith of Queensland University Dept of Mathematics for bringing it to our attention.

People who call themselves creation scientists frequently seize on controversies like those surrounding the rate of universal expansion to argue that the earth was, infact, created about the time Bishop Ussher said it was. At least they argue that the age of the earth and the universe is to be measured in thousands, rather than billions, of years. Such arguments completely ignore the fact that neither age is fixed by a single method of calculation or a single number. Rather they are fixed by several independent analyses, which converge on one result.

Dissenters also ignore the fact that even in the most controversial case, the choice is between a universe a little less than 10 billion years old and a universe 15 billion years old. Neither party to the controversy would countenance a universe whose age was measured in millions (much less in thousands) of years. In this case, I'm afraid, the creationists are like someone who overhears an argument about whether a particular office is on the fifty-fifth or fifty-sixth floor of the Empire State Building and concludes that the building is only one storey high.

from previous column...

useful reference text for some courses in Earth Science, Biology or Anthropology. It contains too much detail and the format is not sufficiently attractive to draw the general reader. It would be ideal for an Adult Education course for scientifically literate persons who wanted to know what the fuss was all about. As these are the members of the community who have the most influence with bureaucrats and politicians, who make decisions about our educational system, perhaps the book will serve a useful function in this respect.

BOOK REVIEW

Cosmic Winter

Colin S L Keay

"The Cosmic Winter"

Victor Clube and Bill Napier, Basil Blackwell Publishers
1990, 307pp. A\$39.95

Way back in 1950, Immanuel Velikovsky's best seller, "Worlds in Collision", generated enormous interest among scientists and laymen alike. To this day, forty years on, the name Velikovsky is remembered for his scenario of chaos in the solar system as a fascinating explanation for the many ancient reports of terrestrial upheavals and celestial scourges which abound in the bible and many other early myths and legends. Astronomers and geologists alike branded Velikovsky's notion of colliding planets as utter nonsense, but that did not deter anthropologists, archaeologists, historians and classical scholars from conducting serious conferences on Velikovsky's concept of astronomically triggered catastrophes within the time-frame of human history say five thousand years, give or take a millenium or so.

The unpalatable truth, for the Velikovsky faithful, is that the solar system has been far too stable for far too long (several billion years, in fact) to have undergone the planetary rearrangements required by Velikovsky. It can be shown quite easily that Velikovsky's planetary chaos is ruled out by no less than the second law of thermodynamics! And that is one of the many reasons why well-trained scientists everywhere heap scorn upon Velikovsky. It is definitely not a case of a scientific mafia at work, as has been alleged by many of Velikovsky's ardent followers.

However it now appears that Velikovsky almost got it right! Too bad he picked the wrong heavenly bodies.

Velikovsky was trained as a psychiatrist, so he did not appreciate the absurdity of his astronomical arguments. But his historical work has been upheld by many experts, and the way he has drawn together and identified a common denominator in so many ancient legends is very appealing.

So where did he go wrong? During the past decade, two highly respected British astronomers, Victor Clube and Bill Napier, have chipped away at the problem and their work has borne fruit. Being expert in the study of comets and asteroids, they realised the impact potential of such bodies and the likelihood of such events during historical times.

In their new book, "*The Cosmic Winter*", now available in Australia, they argue most convincingly that periodic intrusions of massive cometary bodies into the inner solar system could have wrought exactly the sort of catastrophes described in many historical writings.

In brief, Clube and Napier show that cometary intrusions, under the influence of galactic forces, periodically expose the Earth to bombardment by large globs of primordial material and a host of lesser missiles. They arrive in swarms at intervals of roughly 26 million years, each time the Sun passes through the plane of the Milky Way galaxy. The larger globs, up to one hundred kilometers or more in diameter, can set alight whole continents, trigger ice-ages and global winter, cause major species extinctions, interrupt plate tectonics, create ore-bodies and even reverse the Earth's magnetic polarity. It is now thought that the dinosaurs succumbed to several centuries of bombardment by successive cometary missiles during the so-called K-T extinction episode some 65 million years ago.

Clube and Napier present evidence for a similar, but less severe, bombardment episode only a few thousand years ago. Their evidence is most persuasive because of its scientific coherence and through the illumination it throws on so much of the history of civilisation.

The most startling revelation to all of us conditioned to the apparent stability of celestial affairs (the uniformitarian approach), is the identification of the Taurid meteoroid complex as the current threat to the world. At any moment an impact equivalent to a thousand hydrogen bombs could

wipe out several states or small countries (and conceivably trigger a nuclear reprisal to compound the annihilation). The Tunguska event of 1908 in Siberia was just a sampler. The incident body was a member of the Taurid complex along with four known meteor streams and such remnants as Comets Encke and Rudnicki. There is an estimate that ninety-percent of the Apollo Earth-crossing asteroids have thus far eluded discovery. We had a near miss only a few months ago, and during four days in January 1991 with three new small asteroids were discovered in orbits passing close to the Earth.

Clube and Napier urge a thorough search for all cometary asteroids in Earth-crossing orbits, to give some hope of deflecting the paths of the more threatening ones sometime in the future when we develop capable technology. It is interesting to note that Dr Duncan Steel, of Adelaide University (and scientific co-worker with Victor Clube of Oxford University) has recently commenced such a search at the Siding Spring Observatory.

"*The Cosmic Winter*" is instructive reading for all with a concern for the future of the human race. It is not really sensational: just scary in a very thought-provoking way. The writing is clear, with just a few lapses: two of the Figures (14 and 15) are incomplete; a number of necessary references have not been cited in the extensive reading list; and there is the odd definition missing, such as the intended meaning of "years" in ancient reckoning (where there is evidently a difference from what we understand as a year).

Clube and Napier's very last sentence reads "There is a need for this book". I couldn't agree more. Every Skeptic should add it to her/his collection and it should be in every library in the land, not least the Parliamentary Library (although it might be expecting a bit much for "*The Cosmic Winter*" to be read by those who hold our future in their hands).

Anyway, "*The Cosmic Winter*" is a splendid book which I whole-heartedly recommend. Toss out the astronomical rubbish of Velikovsky and get the real thing! ■

This is not to say that sceptics cannot read and enjoy *Childhood's End*, or indeed any other work of speculative fiction. As Clarke himself says, "*it's a work of fiction, for goodness sake.*" It is when we judge the works of assorted UFOnuts similarly as works of fiction that we realise their skills do not begin to match those of a master craftsman like Arthur C Clarke.

Childhood's End?

Science fiction fans will be familiar with the work of Arthur C Clarke, generally regarded (along with Isaac Asimov and Robert Heinlein) as one of the three all-time greats of the genre. In 1954 Clarke published a book called *Childhood's End* which, with his 2001: *A Space Odyssey* and *Rendezvous with Rama* deal with the problems encountered by our species after exposure to the wisdom of ancient, extraterrestrial civilisations. This theme is familiar to sceptics as the underlying thesis of many of the areas of paranormal belief with which we deal, especially those revolving around UFOs and ancient astronauts.

It is instructive therefore, to read what Arthur Clarke has to say in the new Foreword to a re-issue of *Childhood's End* (Pan Books, London, 1990)

When this book was written in the early 1950s, I was still quite impressed by the evidence for what is generally called the paranormal, and used it as a main theme of the story. Four decades later, after spending some millions of dollars of Yorkshire Television's money researching my Mysterious World and Strange Powers programmes, I am an almost total sceptic. I have seen far too many claims dissolve into thin air, far too many demonstrations exposed as fakes.

Later, Clarke goes on to say:

When Childhood's End first appeared, many readers were baffled by a statement after the title page to the effect that "The opinions expressed in this book are not those of the author." This was not entirely facetious: I had just published The Exploration of Space, and painted an optimistic picture of our future expansion into the Universe. Now I had written a book which said "The stars are not for Man", and I did not want anyone to think I had recanted.

Today, I would like to change the target of that disclaimer to cover 99 percent of the "paranormal" (it can't all be nonsense) and 100 percent of UFO "encounters". I would be greatly distressed if this book contributed still further to the seduction of the gullible, now cynically exploited by all the media. Bookstores, newsstands and airwaves are all polluted with mind-rotting bilge about UFOs, psychic powers, astrology, pyramid energies, "channelling" - you name it, someone is peddling it in the final outburst of fin de siecle decadence.

continued previous column...

Skeptics Library

Barry Williams

This list contains books mainly about physics and cosmology, which should be readily understandable to non-scientist readers. It is a personal selection of books that I have read and enjoyed. Readers are invited to submit names and details of other books which they believe will be of interest to fellow Skeptics.

- Einstein's Universe**, Nigel Calder, Greenwich House, 1982. Relativity made plain.
- The Key to the Universe**, Nigel Calder, Penguin Books, 1981. A report on the new physics.
- In Search of Schrodinger's Cat**, John Gribbin, Corgi Books, 1985. Quantum physics and reality.
- In Search of the Double Helix**, John Gribbin, Corgi Books, 1985. Quantum physics and life.
- In Search of the Big Bang**, John Gribbin, Corgi Books, 1987. Quantum physics and cosmology.
- The Omega Point**, John Gribbin, Corgi Books, 1988 The search for the missing mass and the ultimate fate of the universe.
- Cosmic Coincidences**, John Gribbin and Martin Rees, Bantam Books, 1989. Dark matter, mankind and anthropic cosmology.
- Frozen Star**, George Greenstein, Futura Publications, 1986. Pulsars, black holes and the fate of the universe.
- 100 Billion Suns**, Rudolf Kippenhahn, Unwin Paperbacks, 1985. The birth, life and death of the stars.
- The Universe**, Isaac Asimov, Pelican Books, 1967. From flat earth to quasar.
- The Collapsing Universe**, Isaac Asimov, Pocket Books, 1978. The story of black holes.
- Asimov's New Guide to Science**, Isaac Asimov, Penguin Books, 1987. A general guide.
- Asimov's Biographical Encyclopedia of Science and Technology**, Isaac Asimov, Pan Books, 1977. Lives and achievements of 1195 great scientists (Isaac Asimov has also produced many collections of articles on scientific topics, all of which are very worthwhile reading.)
- Superforce**, Paul Davies, Unwin Paperbacks, 1985. The search for the Grand Unified Theory of nature.
- The Cosmic Blueprint**, Paul Davies, Unwin Paperbacks, 1989. Chaos theory.
- Other Worlds**, Paul Davies, Penguin Books, 1990. Space, superspace and the quantum universe.
- Superstrings**, Ed. Paul Davies and Julian Brown, Cambridge UP, 1988. A theory of everything.
- The Red Limit**, Timothy Ferris, Quill, 1983. The search for the edge of the universe.
- Coming of Age in the Milky Way**, Timothy Ferris, The Bodley Head, 1988. Cosmology.
- A Brief History of Time**, Stephen Hawking, Bantam Press, 1988. From the big bang to black holes
- The Cosmic Code**, Heinz R Pagels, Penguin Books, 1983. Quantum physics as the language of nature.
- Perfect Symmetry**, Heinz R Pagels, Michael Joseph, 1985. The search for the beginning of time.
- The First Three Minutes**, Steven Weinberg, Fontana, 1977. A modern view of the origin of the universe.
- Surely You're Joking Mr Feynman**, Richard P Feynman, Unwin Paperbacks, 1986. Autobiography of a great scientist.
- What do You Care What Other People Think?** Richard P Feynman Bantam Books, 1989. Further adventures of RPF.
- The Left Hand of Creation**, John D Barrow and Joseph Silk, Unwin Paperbacks, 1983. The origin and evolution of the expanding universe.
- Order out of Chaos**, Ilya Prigogine and Isabelle Stengers, Heinemann, 1984. Man's new dialogue with nature.
- The Quantum Universe**, Toney Hey and Patrick Walters, Cambridge UP, 1987, Quantum physics.
- Quarks**, Harald Fritzsch, Penguin Books, 1984. The stuff of matter.
- The Particle Connection**, Christine Sutton, Hutchinson, 1984. The discovery of the missing links of nuclear physics.
- The Ambidextrous Universe**, Martin Gardner, Penguin Books, 1982. Mirror asymmetry and time reversed worlds.

FORTUNE TELLING

A Skeptic's Dilemma

Harry Edwards

Following the publication of a three page spread in People magazine (May 18, 1987) in which I claimed to be a psychic in communication with spirits of the dead, I received a phone call from a young Fijian lady who was in a state of shock, having been told by a "clairvoyant" that there would be a death in her family, and that she would have to return to Fiji.

Referring to the article and to my ability to contact the spirits of the deceased, she asked if I could contact her late uncle and her guardian angel to advise her and to find out whether any credence could be placed in the predictions.

As my Australia-wide coverage had credited me with scholarly conversations with such diverse nether world characters as Plato, Einstein, Rock Hudson and Marilyn Monroe, I mused that contacting someone's uncle and guardian angel should be elementary stuff.

I was in a quandary however - should I disclose that it had been a hoax, an exercise to show how easily one could set oneself up in the occult business, how one could acquire a reputation as a seer, should I tell her that my supposed conversations with the dead were sheer fantasy, or should I play along?

If I went for the first option she would probably turn to another charlatan, if the second, she probably would not believe me but, to a committed sceptic, the third option would appear hypocritical and unethical. As the woman was obviously distraught and needing reassurance, I threw caution aside and decided on the latter course. An appointment was made for two days later and as the phone went dead, I was left to ponder my decision.

Surprisingly I felt little apprehension at playing my unlikely role as a professional spiritualist and when the woman arrived, any lingering fear that my deception might be unmasked had been dispelled.

Quite well dressed and better educated than I would have thought, she had been working in Australia for a couple of years as a computer operator. A firm believer in the spirit

world, she seemed convinced that communication with the dead was possible. Notwithstanding that I was already aware of the problem, my opening gambit was simply to ask again, fishing for a lead.

Seeking to learn what her work prospects were, she had consulted a "clairvoyant", only to be told of a future death in the family, which would necessitate her returning to Fiji.

To put her at her ease (and to solicit useful information), I asked about her background. I learned that, as a child and young woman, she had relied heavily on her late uncle for advice and that she believed that everyone had a guardian angel to watch over them. There had been no bad news from her homeland, her anxiety had been caused solely by what the "clairvoyant" had told her during a reading. Who was going to die? Was the "clairvoyant" correct? What should she do? Her late uncle would know, would I contact his spirit?

Sinking deep into my armchair, I closed my eyes, lightly pressed my fingers to my temples, drew a series of deep breaths and feigned a trance. This allowed me to plan my strategy. As far as the woman was concerned, she was confident that I was searching the nether world for her late and favourite uncle.

As is common with all "channellers", whose controls appear on schedule or are available at their beck and call, my luck was in - uncle just happened to be hanging around for such a call. Suddenly, as though subject to an uncontrollable spasm, my lips trembled and, in a barely audible whisper, I stammered, "*B..b ... bull ... bull ... bulla bulla*".

Squinting up from under my half-closed lids, I noted the effect on my client, who had just been greeted in her native tongue by her uncle from the "other side". I came out of my "trance" and innocently asked, "What does bulla bulla mean?"

"*It's Fijian for Hello*", she replied.

Confidence in my ability to channel had been established but, by using up my entire vocabulary of Fijian words, I had

forged a two-edged sword.

“Can I speak to my uncle in my own dialect?”

The dilemma of all “channels” who purport to speak to “entities” whose language is not that of the “channel”. And the answer which they all use in one variant or another.

“No, I’m sorry, but you must use my psychic powers as a medium, besides it would be very slow for me to repeat what you said, one word at a time.”

(Apart from not knowing the language, if she could speak to the uncle directly, it would make me redundant.)

“What would you like to ask your uncle?”

“Ask him who is going to die and will I have to go back to Fiji?”

Feigning a semi-comatose state, I mumbled unintelligibly to myself, paused, then opened my eyes and relayed the answers.

“Uncle said that none of your family is on the new arrivals list and none is scheduled to come over in the immediate future. There is no need for any anxiety and no need for you to return to Fiji. He’s pleased that you are happy in your job and that you care about your family.”

My ploy having worked, the obviously relieved woman opened up about her family. One of ten brothers and sisters, and her father having died when she was young, she was left with much of the responsibility for raising the family. She was, and still is, devoted to her mother and helps the family financially. Her eldest sister had married into a well-to-do American family and, although she had, to all intents and purposes abandoned her family, she had recently started to correspond with her sister in a conciliatory manner.

Armed with this wealth of information on which to speculate and build, I was not totally unprepared for what came next.

“Could you contact my guardian angel and ask why my sister hates me?”

Slipping back into my “trance”, I had no trouble locating her guardian angel, who conveniently, just happened to be lunching with her uncle. Retracting my invisible antenna, I responded to the question by saying that her guardian assured me that there is no hatred involved but that her sister was simply jealous. The last part of the statement was designed to encourage some speculation as to why.

As I anticipated, the spirit world was forgotten and the conversation now came down to earth. She opened up

about her past relationship with her sister and, with her response came additional information, offering diverse opportunities around which to mould plausible explanations.

“Why should she be jealous? She is rich, has never been burdened with the responsibility of looking after the family and has everything in life one could wish for?”

Any pretence to spiritualist guidance was forsaken and elementary psychology took over.

“Ah yes”, I replied, “but you are only looking at it from a materialistic point of view. Who has been supporting your family? Who has looked after your mother through sickness and health? Who has been most concerned about the family’s welfare?”

“I have.”

“And your sister in America

“She hasn’t helped at all.”

“Now she wants to?”

“Yes.”

There’s your answer, your sister doesn’t hate you, she has been nurturing a resentment all these years because you were the one closest to your mother and the family. Now, at this late stage, she has had a twinge of conscience and wants to make it up to you and the family. So why don’t you welcome her back into the fold like a prodigal sister?”

How close to the truth this explanation came I’ll probably never know but it seemed to have the desired result. The woman departed much happier, her unsubstantiated fears allayed, and looking forward to a renewed relationship with her sister so perhaps the hypocrisy of my charade can be justified and forgiven. I had given her no more than the advice that a thoughtful friend would have given and, unlike the original spiritualist, I had not made her afraid with warnings about a family death that neither I, nor the spiritualist could have known about.

I have often pondered on the dilemma, that while a sceptic favours the rational approach, persuasive argument alone rarely achieves the result; yet, given the circumstances above, a paranormalist could well argue that regardless of whether he is endowed with psychic powers or not, the end justifies the means.

The other Editor comments:

In the above case, it is probable that Harry did the right thing by the woman, in that he took away the fear instilled

by the spiritualist. There are many cases where any “psychic” can act as a listener to someone’s problems and, just by the act of listening, contributes to the person solving their own problem. In general terms, that is probably no bad thing. All of us give advice, of a general nature, to our children, to friends and work colleagues about all manner of things.

The problem lies in anyone seeking to give serious advice, while purporting to have some specialised knowledge. You seek advice about the law from a lawyer, about health matters from a health professional, about the wiring in your house from an electrician. All sorts of regulations exist which should ensure that these people are qualified to give that advice and further, remedies exist that enable you to get satisfaction if the advice proves to be erroneous.

A great assortment of people, who can be covered by the generic term “paranormalist”, claim all manner of specialised methods of obtaining knowledge (astrology charts, tarot cards, channelled entities *et. al.*), offer their advice on matters on which their expertise must, by any objective test, be that of an amateur. If you take that advice and it proves to be erroneous, you have very little recourse to any sort of remedy. The general advice that these people give is that of the amateur psychologist, although we do hear of people phoning the radio talkback “psychics” with questions about whether they should divorce their spouse, sell their house or change their job. Some of these “psychics”, on no more evidence than a birth date or something equally ephemeral, then tender quite serious financial or personal advice. A popular women’s magazine reports that its circulation rises substantially every time it adds another advice column from some “psychic”. We have no way of knowing whether anyone actually takes the advice but it is quite a frightening prospect. If the Government is hoping for us to become a “Clever Country” then the evidence suggests we have quite a way to go.

My advice (which I am quite unqualified to give), to anyone seriously contemplating consulting a “psychic”, about matters of consequence, is that all you are very likely to get is amateur psychology. If you don’t mind that, then I ask, “would you also contemplate having a cataract removed by an amateur ophthalmic surgeon?” Curiously enough, that question often causes people to reassess their intentions.



Back Issues of *the Skeptic*

Not, as you might imagine, a discussion on lumbar treatments but a reminder that Australian Skeptics has a supply of every issue of the Skeptic, for sale to those who may have only recently become subscribers.

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CHANNELLING

Warm, Wet, Wonderful Wisdom

Sir Jim R Wallaby

The trouble with *the Skeptic* being a quarterly journal is that it is often impossible for us to bring current issues to the attention of our readers in time for them to take advantage. Such is the case with a brochure which slipped through the mail slot of Wallaby Manor a couple of weeks ago. It chronicled the impending visit to Australia (March 22 to April 8) of Rev Neville Rowe who, and I shall quote the brochure verbatim, "is a graduate electrical engineer and a certified hypnotherapist who has been involved in the spiritual growth movement for over 15 years. His technical training has enabled him to synthesise many differing philosophies and techniques."

Upon reading this, I immediately approached my son-in-law, the Hon Stephen, who is also a graduate electrical engineer. "Does your technical training enable you to synthesize many differing philosophies and techniques?" I interrogated him. Giving me a rather strange look, he responded, "Have you been at the cooking sherry again, you silly old bugger?" I can see I will have to stop him consorting with politicians.

But back to the Rev Nev's pamphlet. The next piece of intelligence is that Neville's work "is the intent to lead people to their own self-impowerment." Uncertain of that word "impowerment", I sought the aid of Messrs Collins' Lexicon. "Impower", it read, "a less common spelling of empower." So, no common speller is our Nev.

Then the relevance of his electrical engineering degree became clear. "Neville", the leaflet continues, "has appeared frequently on TV both as a channel and as a speaker." Rushing to my portable National, I ran through the channels. ABC, SBS, TCN, ATN and TEN but no NEV! Not to be thwarted, I removed a cover plate to look at the speaker. JBL it read, not Neville. So if the good Rev is converting himself into electrical components, he has not been doing it in the ancestral pile of the Wallabys.

However, enough of such frivolity, let us get down to the *raison d'etre* for the Rev Rowe's Australian visit. The

introductory paragraphs tell it all.

"Neville started his telepathic contacts with the dolphins as a trance-channeller about six years ago. Through him we are able to listen to the wisdom and highly inspiring messages in modern English. He channells a group of 6-7 dolphins who are living in different seas and oceans. They, call themselves 'Kajuba'."

It is certainly comforting to know that the dolphins speak to us in modern English. If they spoke to us in cetacean or Chaucer's dialect, it is highly unlikely that we would understand them. On the other hand, it is worrying that Nev doesn't appear to know whether 'Kajuba' consists of six or seven dolphins. Is it because dolphins, not having fingers, never learned to count? What this planet really needs is wisdom from beings who cannot distinguish between six and seven. Imagine the confusion it would lead to in cricket scoring.

"Border dances down the wicket to Marshall and hits him back over his head."

"Is it a four Ritchie?"

"No Ian, I think it is a seven".

"That's the third seven in this over Ritchie."

"Yes Ian, that's eighteen off three balls."

I am also a little concerned about the dolphins' apparent acceptance of the human convention of arbitrarily splitting up the world's watery cover into oceans and seas. Wouldn't they tend to think of it all as the one big wet?

Finally we reach the *piece de resistance* of Neville's performance. Besides the innumerate dolphins, "Neville channells a **galactic social worker** called Soli. Soli is here to assist us with our many questions and spiritual growth and awareness."

Now I know that times are tough, but a **galactic social worker**, I ask you? Going by the publicity some terrestrial social workers have attracted lately, I can only assume that Soli will probably determine that we are all child molesters

and remove all the earth's children to Mars. That should curtail the Teenage Mutant Ninja Turtle craze I suppose.

As if this were not enough, elsewhere in the brochure we are informed, "*Soli is an expression of group entities working together to oversee the evolution of the earth and the solar system, assisting and guiding those who are working for the light.*"

Now this seems to indicate that Prof Ian Plimer and the Creation Science Foundation are both barking up the wrong eucalypt. Neither God nor the workings of chance are to blame. It is all the fault of a social worker. I think I would rather be a creationist. (To all our readers who do social work, I am only joking.) As for the "*group entities working for the light*", I can only assume that this refers to the trade union which covers Electricity Commission workers.

Now we come to the session I am really sorry to have missed. "*With the outbreak of the Gulf War there have been many questions for us. In this evening Soli will assist us to comprehend the metaphysical dimensions of this conflict.*"

Tactics I understand. Logistics is a piece of cake. I have even tried to understand the strategy of the Gulf War. But the metaphysics of the war is something I suspect would give Stormin' Norman himself pause.

Other questions that Soli and the Dolphins (great name for a pop group) answer are: "*Can money be spiritual?*" and the "*meaning of polarity and love*". Actually, I can answer that last one. Polarity is which end of a magnet points south, and love is a duck in tennis.

Now I will reveal the last piece of information about Rev Nev Rowe, the bit that caused me the most curiosity. "*Born in New Zealand, Neville is currently living in Phoenix Arizona.*" This brings my final question about this remarkable event. "IF Neville was born in New Zealand, why is he channelling dolphins? Aren't sheep good enough for him?"

"But, Sir Jim", I hear the loyal reader cry, "what is the good of telling us all this now, when it is too late for us to explore the metaphysics of the Gulf War with a galactic social worker?"

Well, dear friends, all is not lost. We Wallabys did not get where we are today by ignoring our social responsibilities to the public. I attended a meeting of that peculiar body, the National Committee of Australian Skeptics to put my contretemps into their capable hands. Much to my surprise,

I found that members of this committee, having wearied of the dearth of fiduciary emoluments attendant upon the practice of scepticism, had themselves entered into the enterprise of trancechannelling. No wishywashy cetaceans for this doughty crew, but good, hard nosed advice from the entities that really count.

Below, I list a small sampling of the wisdom produced. Full readings are available, for a small fee, from Wallaby Enterprises (NL), PO Box E324, St James, NSW 2000.

Lachlan Partridge channels a consortium of snails (somewhere between 7 and 26) whose specialty is the teleological implications of cabbage. Sample wisdom: "*Food! Mmmmmm! Food! Slidefaster, slither, slither, Food!*"

Dick Champion channels a cluster of mullet, which call themselves 'Theodore'. Sample wisdom: "*Look out lads, here come those bloody illiterate dolphins.*"

Mel Dickson channels a commune of Marxs. Sample wisdom: "*My name is Captain Spaulding, the African explorer, from each according to his abilities.*"

Tim Mendham channels a coterie of garden gnomes. Sample wisdom:

" . ." (You have to be really New Age to believe that concrete can think.)

Ian Bryce channels a congregation of creationists, who call themselves 'scientists'. Sample wisdom: " . ." (See comment above.)

Harry Edwards channels a composition of tunesmiths (J.Lennon and L. Beethoven a specialty). Sample wisdom: "*Da da da dum, yeah, yeah, yeah.*"

Steve Walker channels a cricket team of Yorkshiremen. Sample wisdom: "*Ee oop, trooble at wicket.*"

Peter Rodgers channels Harry Houdini. We locked him in a cell and haven't seen him since.

Richard Gordon, with the assistance of his stethoscope, channels *E.coli* bacilli, which speak no English, modern or otherwise. In any case, what wisdom would you expect from an organism that lives in the gut?

Barry Williams channels streets for the Water Board and his wisdom is not only unmemorable, it is unprintable.

Competition Entries

The following are entries in our competition, in which we invited readers to submit plausible 'scientific' explanations for common sayings, clichés, aphorisms or saws. While the quantity of entries was disappointing, the quality was beyond belief. **PT Millard** and **Steven D'Aprano** are joint winners of our competition and each of them is entitled to a free entry to our Convention or to a copy of *Skeptical*.

Parkinson Is Law states "Any job, project or undertaking will expand in complexity and duration to fill the time available for it". Why?

The prospect of having time and space to carry out a job carefully and without haste engenders a fever of delight and enthusiasm, and it is that heat which, in accordance with the laws of thermodynamics, will naturally expand the job to fill the available time.

Spare the Rod and Spoil the Child.

Stahnke and Westerman (North Utah Journal of Forensic Psychology Vol III No 7, 1993) report on a prospective study of 150 children of age 5 followed to age 15. They were divided into two groups of 75, evenly matched as to sex, economic, social and educational status.

In one group the children were spared all corporal punishment, while in the other group the rod was conscientiously used on every appropriate occasion.

A survey after 10 years gave the following results:

	R	U	A	P
RODDED	3	35	35	2
SPARED	2	35	35	3

($P = 0.058$)

R = Revolting, U = Unpleasant, A = Alright P = Perfect
Added credence must be given to these figures since, when set out in graph form, they produce a perfect bell curve.

It is to be deplored that these results must cast some doubt on the authority of Biblical lore.

Murphy's Law states "In any undertaking if anything can possibly go wrong, it will".

This is an instance of diabolical or diabolical influence. Although the evidence is obscured with Satanic subtlety, the link is clear to anyone not blinded by the woolly thinking of the rationalists.

In some places a potato is known as a "Murphy" (an innocent idiom you may think). When it is remembered that POT is an evil drug (an invention of the Devil) and that 8 Os (atoes) is one of the Devil's numbers, Murphy's Law assumes a very sinister significance.

**P T Millard
Narrabeen NSW**

He who laughs last, laughs best.

This is a reference to the daisy-chaining of energy. Energy can be added to, in a series, leading to the greatest accumulation of energy being in the last link on the chain. This is called the "Quilt Effect", similar to communal peasant quilt-making activities. It is similar to, but not the same as, Rupert Sheldrake's morphogenetic theory of causative formation (or formative causation, or formative formation), which is that "Anyone who laughs after the first laughs, laughs at exactly the same thing and in exactly the same way" which is evidenced by everyone having the same sense of humour. There is a further version of the same basic epigram, to wit, "He who laughs last, laughs last", which is indicative of the profundity, but not the accuracy, of creation scientists.

You never miss the water 'til the well runs dry.

This is patently obvious to anyone who has fallen down a well. A well is so narrow, and the water so conveniently malleable as to perfectly fit the well contours, that unless there is no water in the well there is no way you can miss it.

**I'm Mandy the Moth
Manly NSW**

Workers of the world unite. You have nothing to lose but your chains.

Recent research reveals that one of the great social

revolutions of history came about because of a misprint. Karl Marx, appalled by the constricting dress conventions of the Victorian era, fell out with his German haberdasher father and fled his native land, one jump ahead of the bully boys of the Neckwear Guild.

Settling in England, he set about writing a paen of defiance to the prevailing norms which he entitled the ---*Clean Chest Manifesto*", a volume which contained the rallying cry which he believed would set men free from the tyranny of constricted necks. "*Workers of the world untie. You have nothing to expose but your chins*".

In joining this struggle, Marx, became the spiritual heir to another great German dress reformer, Ron Immanuel, founder of the Kampaign Against Neck Ties (so obsessed was Immanuel with his crusade that his name has become inextricably linked with his cause. Even today it is widely known as the Immanuel KANT school).

A combination of Marx's appalling handwriting, the sweated labour conditions in Victorian publishing houses and slipshod proof reading found his seminal work published in the version which appears above, leading to one of the great tragedies of modern times men are still forced to decorate their necks with absurd pieces of cloth.

Clarrie Stalin (No Relation)
Roseville NSW

The sun never sets on the British Empire:

The sun is a globular collection of gas (largely hydrogen and helium) which radiates energy as a result of thermonuclear reactions. Its temperature (15 million K at the core, 5,800K at the surface) precludes the formation of complex molecules such as gelatin or pectin, thereby making it highly improbable that the sun will set under any circumstances.

The grass is always greener on the other side of the Fence:

This is one of the successful predictions made by the quantum theory of the wave nature of light.

All paling, wire and other open structure fences are, by international convention, constructed with the gaps conforming to an exact multiple of the wavelength of green light. With light shining through the fence, the green frequencies form an interference pattern and each other, while all other frequencies will tend to cancel out. Thus grass on the other side of the fence will always appear to be greener. NOTE:

This statement is NOT true for brick or other solidly constructed fences.

Ezekiel Scorpio
Science Adviser

The Creationist Astrology Foundation

The following selection was sent in by **Steven D'Aprano of Plenty, Vic.** Further examples of Steven's odd thoughts appear throughout the magazine.

Why must you look before you leap?

It is well known that quantum mechanics states that there is uncertainty in the position of every object. Only after an object is observed will the quantum wavefunction collapse to a point, giving the object a definite position. As a consequence of this, if you do not look before you leap, the object you are leaping onto will not have a definite, fixed position and could be anywhere in the Universe.

Why do those who hesitate become lost?

After successfully collapsing the wavefunction of an object by looking at it, it is vital that you leap onto it immediately. If you hesitate for even an instant, the wavefunction will smear out again. Thus, by the time you land on the object, it (and therefore yourself as well) could be anywhere in the Universe. Clearly there is no way to predict which point the wavefunction will collapse into and so both you and the object you have leapt onto will be lost.

Why do socks disappear in the washing machine?

During the spin dry cycle of the washing machine, the clothes tumble around quite violently. Occasionally an item of clothing is compressed by the tumbling and the weight of the other clothes below a certain minimum size known as the event horizon. Once this occurs, the item of clothing collapses into a microscopic black hole. Smaller objects such as socks and hankies turn into black holes more readily because they are already closer to the event horizon radius. Once a single sock has collapsed into a black hole, it will remain in your washing machine, sucking in the odd handkerchief, and slowly grow. When it gets big enough to start swallowing tablecloths and sheets, it is time to sell your house and move overseas.

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FORUM

The Fall of Lucifer Revisited

J.E. Aitchison

Forum allows readers who have a different view from the original author to present their opinions on an article already presented in the Skeptic. The original author will be invited to comment at the end of the piece.

What an excellent opening critique of the Lucifer - Sin - Fall story. Alan Towsey is to be congratulated on his article, so far as he has gone (*the Skeptic* Vol 9 No 3). The summation holds only one problem for me. Alan stops short of taking his investigation of Satan to what I believe is its logical conclusion - a fabrication by NT authors to graft non-Jewish concepts onto their new religion of resistance to Rome. This religion was different to that of Paul, which preached subservience to Rome.

Alan's arguments for denying the use of Revelation 12 and 2 Peter are correct, however, I believe he has missed the connecting parallel in Isaiah and Revelation. In both books an oppressed generation is exhorted to look forward to freedom from a hated foreign power. In both books the story of the control exercised in heaven over the planets is likened to the power which God can and will wield over the short-term power of the oppressor.

In *Isaiah*, Lucifer (accepted as Venus) is implicitly brought to heel by Israel's guardian, God. In *Revelation* it is Michael and his angels who specifically defeat "*the dragon, that old serpent called the Devil and Satan*" and thus bring the same actor(s) to heel. Both these stories have counterparts in the myths and legends of other races. I am of the opinion that Revelation and Isaiah draw on the same popularly believed story to reinforce their prophecy of salvation from oppression.

In *Rev.*, the defeated enemy is called "*dragon/serpent/devil/Satan/(which deceiveth the whole world)*". As *Rev.* was written to bolster Christian steadfastness to the Roman Emperor Domitian's persecution, it is he who is to be defeated, not the concept of Satan. Rome and its Emperors were seen as the adversaries of Jerusalem and God. Thus the analogy of Rome = Babylon is supportable in the two biblical contents.

Once one argues that the enemy in *Rev.* is to be construed as Domitian, one must defend against the Fundamentalist argument that *Rev.* is prophetic in its allusions to the defeat of the devil.

In applying a defence, one cannot fault the historical truth as stated by Alan Towsey. The early Hebrews had no concept of Satan and *1 Chronicles*, 21-1 is, as Alan says, the first mention of Satan in the Bible. What then of the teaching by the devil/Satan in the Garden of Eden story? What truth lies behind the urban myth that the devil (the fallen first angel of heaven), in the guise of a serpent, tempted Eve to discover knowledge?

There is no mystery to the meaning of these words in the oldest part of the OT. They are common words which, when viewed against a different scenario, tell a simple, devastating and worrying story.

There are a few words easily laid aside in the study of the Eden story. Satan (an adversary) is first used in *1 Chron.* 21-1 and, therefore has no link with *Genesis*. Hell, which is only an early Hebrew concept for the grave, is not mentioned in *Gen.* Not only did the early Hebrews have no concept of Satan/Hell, they had no concept of Heaven, in the NT sense. The Hebrews, as with most other cultures, were more concerned with pacifying their god so that no calamities (defeat, drought etc) would befall them or their nation. So we are left with that interesting word "serpent", which eventually, by theological process, is inextricably linked with the Devil, or with Satan, or with Lucifer.

Before proceeding, one should look at the story in a different way. John V Myers (*Kronos* Vol 2, No 2, 1976), in his essay *Sin and the Control System*, makes a good argument that (a) the story is of a catastrophe, (b) that it is told back to front and (c) that it is told by the survivors of the catastrophe.

The catastrophic elements in the story are listed as:

(i) climatic change from benign to harsh;

(ii) forced migration from somewhere which was previously a secure and pleasant place to be.

One can add to these calamities concepts such as the onset of guilt and an awareness that God could be capricious and

destructive.

Myers goes on to argue, and I think he does it most forcefully, that when Adam and Eve (the ancestor archetypes) realised the capriciousness of God, they also realised that the power that held them in its hand was capable of evil. The effect on our ancestors' psyche was thus tremendous. Here they were, dependent on someone (thing) that could be benign, then harsh without apparent reason. Myers then argues that it was at this moment of awareness that sin and guilt were born and religion came into existence. By seeking ways to pacify and keep in good with this capricious god, our ancestors believed they could escape his wrath.

The Bible story is told backwards. Adam and Eve were not driven out of Eden because they had sinned; they assumed they had sinned because they had been driven out.

Now, as to the survivors of this catastrophe, they could also assume that something or other that they had done was sufficient to keep them in God's good graces. To find out what this something was and how to continue using it for appeasement, they launched religion, its mysteries and protocols and thus its priesthood on a power curve, since manipulated so extremely well that it is unlikely to be given up.

To carry this concept, that religion was spawned in the minds of survivors, one need only look at the postexodus period. In Deuteronomy Ch 5 V 2-3, Moses reinforces the point that the "chosen ones" are those still alive after the flight from Egypt, the Red Sea debacle and the various other vicissitudes that had befallen his new nation, to that point in time.

"The Lord our God made a covenant with us in Horeb. The Lord made not this covenant with our fathers, but with us, even us, who are all of us here alive this day."

This contention of mine is not a new idea, nor one unique to my powers of deduction, tempered by catastrophism. Recently this quote from *The Treasures of Darkness*, by T. Jacobsen, came to my attention:

"Basic to all (ancient) religion... is, we believe, an unique confrontation with a power not of this world. Rudolf Otto called this confrontation 'numinous' and analysed it as the experience of a mysterium tremendum et fascinatum, a confrontation with a 'Wholly Other' outside of normal experience and indescribable in its terms; terrifying, ranging from sheer demonic dread, through awe, to sublime majesty; and fascinating, with irresistible attraction, demanding unconditional

allegiance. It is the positive human response to this experience in thought (myth and theology) and action (cult and worship) that constitutes religion."

Now, returning to Myers' argument, I believe that one can take out the "devil" bit from the story of the fall. But there must have been something in the story in *Gen.* for it to have been accepted and to have eventually been incorporated into Hebrew scriptures. Returning to the story, we find continual involvement of a special tree and a serpent. This motif had a strong appeal to the Israelites at least. Moses at one stage created a serpent entwined around a pole, as a focal point for suffering snake bite victims. By gazing thereon, the victims could, if they were in God's good grace, be cured. The control system was working well, by this stage of Israel's progress along its theological path.

Were the Israelites unique in accepting this motif? No, Talbot, in *The Saturn Myth*, has shown that, with few exceptions, ancient cultures had a concept of a benign period, a golden age, ruled over by a god with a commonality of names meaning Saturn. This Saturn ruled the Earth from his throne or home in the vault of the sky (Hebrew=Heaven), atop a celestial pole, or tree, or mountain, around which flew his messengers (Hebrew/Greek=Angels), tracing out a sinuous path, reminiscent of a serpent. The medical fraternity's motif (caduceus) is a modern example of the continuing psychological importance of this phenomenon. The Catholic monstrosity and the method of portraying saints with halos are much older visualisations of this phenomenon.

Now the Hebrews or Israelites only existed as a nation subsequently to Abraham but there is no reason to doubt the human qualities of remembrance or plain plagiarism, which brought such ancient motifs into the religious psyche of those immediate family and circumcised servants, dependent on Isaac/Israel for their protection and subsistence.

One very dramatic motif taken into the Israelite religion was its word for God, used in *Gen.*. The word is of Canaanite origin and is EI or Elohim and its meaning is Saturn. So we are back to square one.

We can now look at the Fall story as the end of the "golden age", with motifs which abound in other cultures, such as god, Saturn, a tree and an encircling serpent-like apparition, which has come down to us as Satan or the devil, which tempted mankind away from its benevolent state, existing cheek by jowl, so to speak, with God.

But have we lost sight of the link between the serpent and the devil? Not really, again we must return to Talbot

and *The Saturn Myth* and the various authorities he uses. The word used in the OT for "devil" has a few problems, which are explicable by Talbot's arguments. The word "serpent" is simply "of a hissing - therefore of a snake". The word "devil", however, has some other interesting meanings, "shaggy, hairy, rough, a he goat". This is how the devil is drawn as a man with horns. What ancient motifs support this method of rendition?

Culture after culture depict one of their gods as with horns. Some of those cultures saw the god as benign, whereas the Hebrews and others eventually saw it as malignant - the guilty party in the destruction of the Golden Age, which appeared to dominate heaven and earth.

What heavenly body appears to have horns and be considered dangerous? Certainly not the moon, although its horns or crescent points are very obvious. No, the answer is a comet. And what terminology is used to describe the comet in ancient language? Hairy, horned, shaggy!

Are comets considered dangerous? Not now, as we appear to have more information than our ancestors did. But was this always the case? No! As late as the 16th century, a bright comet in the sky caused social havoc in Europe. Clube and Napier think comets can be dangerous, so do people like Asimov and Sagan. So also did poor Velikovsky, who was ridiculed and plundered, so that the likes of the preceding uniformitarians could espouse their theories within a less threatening time scale.

Do we then, as I believe, have in the story of Eden, an eyewitness account of destruction of our environment by a passing comet and not, as our fundamentalists believe, the story of mankind's fall from grace? ■

Alan Towsey responds

Mr Aitchison's article appears to be a suggestion that the story of Eden, and similar myths of a fall from grace in other cultures, is really a memory of a devastating change in conditions from a benign to a harsh climate and/or a forced migration from a formerly pleasant place, possibly caused by a comet.

It is an interesting idea, and worth looking into, but I personally shall keep an open mind about it until more evidence is forthcoming. It is, of course, plausible - cf the current theory of the disappearance of the dinosaurs being due to the impact of a huge meteorite. I'd be interested to hear what other people think of Mr Aitchison's ideas.

I do, however, query a couple of his points.

In para. 1, he is not quite right. Probably proceeding from a misunderstanding of the *Isaiah* story and the influence of Greek mythology, in the intertestamental period (beginning about 200 BCE), the Jews began to develop the concept of Satan as a fallen angel who was kicked out of Heaven with a number of others because they refused to worship Adam, who was made of clay, while they were made of light, and the ruler of a kingdom of evil as opposed to the kingdom of God. The apocryphal *Book of Enoch* spells out the story in detail, and the concept was already widespread by the time of Jesus, who accepted it wholeheartedly. The authors of *Jude*, *II Peter* and *Revelation* were obviously familiar with the Book of Enoch, too. The serpent of *Genesis* became the personification of Satan himself, although originally the *Gen.* story was merely a myth to explain the antipathy between mankind and snakes. (see *Genesis* 3 : 14-15)

He is right about El/Elohim being of Canaanite origin; it is common Semitic, actually, but the scholars are not agreed as to its basic meaning; many think it derives from a root meaning "strength, power". I have not seen any suggestion linking it to Saturn however. El was the chief god of the pantheon at Ugarit, and contrary to usual Jewish custom, seems to have been taken over by the Israelites, who apparently identified him with their Yahweh, probably originally the chief god among many.

Most scholars think religion began as a kind of animism, a multiplicity of spirits (who had to be placated, to avoid mishaps, and to invoke their blessing on new projects, the crops, hunting etc), developing into Polytheism with the priests then perhaps beginning to use it to reinforce their edicts and tribal laws, then Monotheism. The Hebrews seem to have been aware that they were originally polytheistic - see *Joshua* 24 : 2. It appears also from slips like *Gen.* 126, "Let us make human beings in our image..." and *Gen.* 3:22, "The man has become like one of us"

He is right, too, about the Jews originally believing that all things, both good and evil, proceeded from God. The later concept of Satan, however, borrowed from the Persians, offered them a more rational explanation of the origin of evil in the light of a supposedly omnipotent yet all-good God.

But "serpent", by the way, comes from Latin *serpere* = to creep - nothing to do with "hissing", so far as I have been able to discover. ■

STORY

Confession

Whitley Strudel

Ten metres above the house of the intended subject, the Anterran exploration ship Thyroid dropped its invisibility shield. The mission's commander, Horace, studied the ship's sensors with great interest.

"Good," it mused aloud. "The subject is by itself."

"Oh! dear," Trevor said, its voice full of sympathy. "I wonder if it's lonely?"

Horace looked at Trevor, the commander's fellow explorer and only crew, with a certain incredulity. It was still not used to the younger Anterran's attitude to work, despite four centuries in its company.

Surely that's the whole point of the exercise," Horace said patiently. "If it wasn't alone we wouldn't be able to nick it, would we?"

"Yes, I can appreciate that," Trevor agreed, "but just the same - "

Horace cut off the younger Anterran's speech with a wave of a tentacle. "Start up the tractor beam. Quickly! It's about to go outside."

Trevor rushed to its station. Actually, it slithered as quickly as possible. It's difficult to rush anywhere when your only means of locomotion is a single, huge gelatinous foot.

"All set!" Trevor boomed, beginning to get excited.

Horace, head down over the scope, lifted a tentacle. The air in the small spaceship thickened with tension as Horace waited for the subject to leave its house. Suddenly the tentacle dropped and Trevor pulled down a lever. The machine made a sound like an all-day sucker being pulled from the mouth of a baby and a human appeared in the spaceship amidst a puff of null-space smoke and a whiff of ozone.

It looked confused.

"Hello," Trevor said eagerly, extending a tentacle. "My name is -"

The human looked at the Anterrans, down at itself, and then up again at its hosts. It screamed.

"Sorry about your clothes," Horace began, "but the tractor beam only brings up living tissue ... hello?..."

The human had fainted and lay somewhat indecorously on the floor.

"Modest little thing," Trevor observed.

"I suspect it wasn't modesty that made it pass out," Horace said.

Trevor's single eye socket blinked and its tentacles waved about in confusion. "Then what could it possibly have been?"

"Us, I'm afraid."

Trevor seemed shocked. "Us? Goodness. Was it something we said, do you think?"

"I don't know," Horace admitted. It pointed to a gravity couch. "Help me get it up there, and I'll see if I can't rouse it."

The two Anterrans had no problem lifting the small human off the floor and taking it to the couch.

"Might as well take the opportunity to examine it," Horace said, gently prodding the strange form with a tentacle. "Horrible skin."

"Yes. Feels terrible dry. I wonder how they slime?"

"Maybe they don't."

"Unhappy creatures," Trevor said, massaging the creature's feet. It slowly worked its way up to the human's throat, exploring every bump and cavity. It didn't want to touch the head in case it damaged one of its sensors.

"No apparent brain cavity," Trevor commented, surprise creeping into its voice. "And two eye sockets. How extraordinary."

"How inefficient you mean. Let's wake it."

Trevor held up one of the specimen's appendages and Horace injected it with a stimulant.

The human came to immediately, recognised its surroundings and moaned. It brought its feet up under its chin and backed away from the two Anterrans until the bulkhead would let it go no further

"Are you alright?" Trevor asked, its voice full of concern.

"You're an alien," the human said to Trevor.

"Actually, in the context of the society within which each of us lives -"

"Trevor," Horace interrupted.

"- every individual can be considered an alien-"

"Trevor!" Horace insisted, "I think the human is speaking literally."

"Well," Trevor said, its huge eye socket blinking in disappointment, "that's a rather obvious thing to say."

"I've never met an alien before," the human said a little defensively, "what did you expect me to say?"

"Oh! I don't know. 'How do you do' might have been nice."

"Trevor, this is all really beside the point," Horace calmly pointed out. "There are other matters to be investigated and we haven't a great deal of time."

"Yes, of course. Sorry. Carry on."

"Other matters to be investigated?" the human asked, sounding nervous.

"For example," Trevor said, throwing caution to the wind, "does your species have sexual differentiation?"

"Sexual diff..." The human looked puzzled for a moment, and then actually annoyed. It pointed between its legs. "What do you think this is?"

"An udder?" Trevor suggested helpfully, "at least that's my guess. Horace thinks it's a purse, don't you Horace?"

Horace didn't answer. It could see the human was getting even more annoyed, and so it waved its tentacles around in what it hoped was a placating manner. The human cringed back against the bulkhead.

"Please understand, we Anterrans have over seven sexes and the genitalia for all of them is internal. The only way we can tell if we actually had intercourse or merely had an interesting conversation is if the earth moves."

"That all sounds a bit hit and miss," the human reflected.

"Rather more miss than hit, actually," Horace admitted.

Trevor, meanwhile, was becoming increasingly impatient and his eyes were beginning to roll around in their socket like four, brightly coloured marbles in a saucepan.

"What's wrong with your friend?" the human asked Horace, sudden concern in its voice.

If it had been possible for an Anterran to blush, Horace would have done so just then. Instead it lifted its tentacles and let them drop in a sigh. "There is one question in particular we must ask you."

"Yes?"

"It's very difficult for us to ask, you understand, because it might offend you - "

"Oh, for Kral's sake, Horace," Trevor muttered between clenched fangs, its pseudopod tapping an anxious beat on the floor.

Horace shot Trevor a disapproving look. Trevor knew the commander didn't like it when he blasphemed against Kral, the cross-eyed god of Anterra. Kral's ego was huge and fragile, but his vengeance, though swift, wasn't necessarily accurate. Every time Trevor took Kral's name in vain, Horace was just as likely to be struck by a bolt of lightning.

"Alright, Trevor, I'm getting around to it." It addressed their guest. "Human.."

The human sat up straighter, obviously expecting something important

"Where do you keep your brain?"

"I beg you; pardon?"

Horace cleared one of its two throats and repeated the question. Trevor leaned forward, barely able to restrain its curiosity (the last time it escaped, the Anterrans searched for several hours before finding it behind the fridge with a full set of encyclopaedias).

"What an inane question."

"It's just that we couldn't locate it," Trevor blurted out. Horace groaned and buried its head in a tentacle.

"You what?"

"Couldn't ... ah ... find it, actually," Trevor said meekly. "Where did you look?" the human asked, genuinely interested.

"Oh, all the obvious places: chest cavity, buttocks..."

The human was pointing to its head. "What about up here?"

Horace and Trevor looked at one another, wide-eyed and mouths agape.

"Gosh, no," Horace admitted, "I'll be a Scyrian slimesucker..." Trevor muttered.

"Where do you keep your brains?" the human asked. Using a tentacle, Horace pointed to its pseudopod.

"Then what's in your heads?"

"Mucus," Horace said.

"For sneezing," Trevor added, a little unnecessarily.

"Oh."

"Nothing worse than a dry sneeze."

"I suppose not."

There was moment's embarrassed silence before the human asked, "Are you going to let me go?"

"I don't see why not," Horace replied, "we certainly can't take you with us. "

"Aren't you afraid I'll tell the whole world about you?"

"Who'd believe you?"

"I'm a writer," the human said.

Horace and Trevor gazed at him with great sympathy.

"A respected writer," the human insisted.

"No such thing," Trevor said flatly, "but it hardly matters. There are so many writers on your planet who are crying 'wolf' right now that one more won't make any difference."

"Yes, true, I'm afraid," Horace added, and he patted the human's shoulder with a consoling tentacle. "In fact, all this brouhaha about alien kidnapping has given us the perfect cover. We've been here for years, studying your people from a distance but until now we haven't dared physically examine any of you, let alone reveal ourselves."

"Except to George Lucas," Trevor corrected the commander.

"You know, that had completely slipped my mind."

"You know George Lucas?" the human asked.

Well no, not personally, as such. We're not exactly what you'd call on a first name basis with the great maestro. But we were in Star Wars. You remember the bar scene? We were the two aliens sitting at the rear table on the right hand side." Horace was beaming proudly.

"I don't remember you," the human said.

"I think we ended up on the floor of the cutting room."

"Carrie Fisher," Trevor mused, momentarily lost in some private reverie. "Wonderful human."

"Terribly nice," Horace agreed. "I wish we Anterrans had actors of that quality." ■

More Competition Entries

.....from page 23

Where do hamsters go to die?

It is well known that elephants have a secret burial ground where they go to die. Located somewhere in deepest Africa, it would contain literally millions of tonnes of ivory. However, it is not so well known that hamsters also have a secret burial ground. When hamsters feel death coming on, they make their way to a patch of ground somewhere in the Amazon jungle. Unlike the elephant burial ground, the secret hamster burial ground has absolutely no value whatsoever.

Who are the "they", as in "They say that ..."

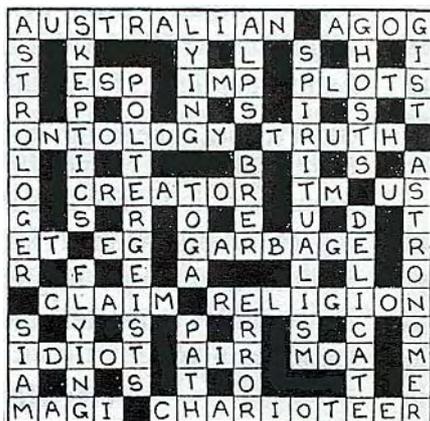
There is a secret society of taxi drivers and barbers that banded together three centuries ago to combat the spread of falsehoods and lies. To do this, they swore to always be ready with the facts on any question. However, after a slight misunderstanding with the Freemasons, the secret society became a laughing stock. Rather than disband, the secret society swore never to use their name again, instead referring to themselves simply as "they".

What is anti-matter?

The concept of 'anti-matter' is one which has puzzled philosophers and scientists for centuries. Even today, antimatter is not fully understood. However, the best way to explain what is known of anti-matter is by example. If you dig a hole in the ground, removing the dirt (matter), the absence of dirt in the hole is in fact anti-matter. This explains why the hole disappears when you put the dirt back in (mutual annihilation). The hole in the middle of a donut or a Lifesaver is another example of anti-matter. The small round blobs of donut batter that are sold as 'donut holes' are in fact the anti-hole in the centre of an anti-donut.

Why do the tough get going when the going gets tough?

When the going gets tough, Newton's Law of the Conservation of Opposites states that the conversion of going into tough must be balanced by an equal but opposite conversion of tough into going. Therefore, at the same instant as the going gets tough, the tough must get going.



Uranian astrology

Sir,

Gary Dalrymple asks about Trans-Uranian Astrology (Letters, Vol 11, No 1). Among astrologers it is known as the Uranian system, and world-wide it retains a small but devoted following.

To a non-astrologer the Uranian system will seem unusual but it is not alone in postulating more planets than are known. There are now perhaps over 100 hypothetical bodies proposed and testified to by astrologers of some standing and ephemerides have been published for at least 25 of them. None have been confirmed and none are known to agree with another. In astrology you get used to this sort of thing.

The major proponent of hypothetical planets are the Hamburg (Uranian) school in Germany with eight and the Ram school in Holland with three. Each school was founded by a man considered by his students to be a genius, each established its results from a study of events over many years of work and built them into a complex metaphysical system, each failed to meet the most elementary standards of objective investigation, and each was convinced it was right.

The Uranian hypotheticals were introduced before the discovery of Pluto in 1930. None of them coincide with Pluto or are in a significant astrological aspect to it. This suggests that either (1) Pluto has no detectable effect, or (2) Uranian techniques are ineffective. Because Pluto was

LETTERS

Letters to the editor on any topic of interest to other Skeptics are welcome. We cannot guarantee to print them, but they are definitely welcome

subsequently included in the system, point (1) is discounted, leaving only point (2). The resulting paradox is ignored in the Uranian literature, the argument being that the system is empirical, ie based on observation, and therefore beyond criticism. However, the system generates a total of 5082 individual planetary combinations, each with a specific meaning. Because any 400 or more can be present simultaneously in the average horoscope, the unravelling of individual meanings was clearly no mean affair. No wonder many devotees claim that no other system can possibly be tenable today.

The Ram planets were introduced after the discovery of Pluto. None of them agree with any of the Uranian planets, although established by similar methods. Each school claims to have found the "upper octaves" of Mars, Jupiter and Saturn, in which case their supposed meanings should agree. But they do not. For example, the upper octave of Saturn in the Uranian system is Admetos, ruling "raw material and death", whereas in the Ram system it is Demeter, ruling "art and music".

The good news is that astrologers are not limited to a mere 100 hypotheticals. Today a few hundred fixed stars, comets, meteors, radio sources, perigees, nodes, galactic elements, antiscions, contrascions, and of course

the right asteroids (nearly 3000 to chose from) can improve any horoscope. One small disadvantage is that merely to list the resulting interactions would take many thousand km of computer printout. Another is that merely to scan the associated meanings would take the client several hundred years - a point of some significance because its execution would presumably nullify the indications. However an interim synthesis could be obtained within 10 years by a team of say 10,000 astrologers working around the clock. Hence the ultimate form of astrology, although difficult and expensive (at perhaps \$10 per horoscope, forecasts extra), is not impossible. With help from Hawke, Keating and a years worth of GNP, the Skeptics could run a test, yes?

**(Dr) Geoffrey Dean
Subiaco WA**

It's all Greek

Sir,

Thank you for another lively and informative issue of *the Skeptic*. Without wishing to be pedantic, my little Greek compels me to make a small correction. Our word sceptic comes initially from the French *sceptique*, which derives from the Latin *scepticus*, from the Greek σκεπτικός, meaning thoughtful and inquiring. Interestingly, Dr Johnson's dictionary lists the spelling of sceptic with a V without comment, although English spelling usually translates the Greek *kappa* as a 'c'.

**Peter Henderson
Burradoo NSW**

More sobriety

Nearing the completion of my major in philosophy at Macquarie University, I am finding the Skeptic an excellent companion and help in my studies. I only wish it would find its way to the reading list of more students as it is with great sadness, mixed with despair and sometimes anger and bitterness that I bear witness year after year to the disappointingly vast number of university students, many of them science undergraduates, who, not only without further thinking, claim to believe in most pseudosciences, but who are vigorously defending them. (Though this is not confined to undergraduates alone, it goes right through to PhD. in some cases.)

Often, it seems to me, their main motivation is not a conviction arrived at through critical search for truth, but sadly their rejection of the materialistic view of the world which they take to be the hallmark of all orthodox science, and the source of all evil. As with religion, alas, they start from the wrong end, trying to wrap the facts around the "Truth" they claim to possess, "Truth" which allows no critical examination.

This is why it is so very difficult, almost impossible, to win any converts from their camp.

I have no solutions, except to emphasise that in all debunking it is vital not to lose sight of this religious or quasi-religious attitude of the believers in pseudo. Hard facts are endlessly malleable in hands of pseudo-defenders. Ridicule and scorn

are no good allies for a Skeptic - it may bring momentary relief to the Skeptic himself (or herself) but only makes the pseudos sink deeper and deeper in their own esoteric black hole, ever more convinced about their "chosen" status as possessors of the "Truth". The pity and scorn are on the Skeptic.

If anything, I would like to see articles in the Skeptic dealing with these difficulties: how to handle the pseudos and new agers and all that lot scientifically! Perhaps it is time to educate ourselves, hopefully with a little help from psychologists versed in belief-formation and other relevant areas. Understanding the mechanisms behind and understanding the ultimate motivations would surely be an approach with more far reaching benefits than laying out facts expecting them (the facts) to speak for themselves. We all know how remarkably silent the facts are in front of a non-Skeptic. Therefore we Skeptics should acquire better skills in debating with pseudo-believers, learning to attack from where the resistance is lowest. Possession of such skills would greatly enlarge the scope of influence at work-places, schools, universities and any social gatherings, and would also perhaps reduce to some extent the feeling of utmost frustration we Skeptics are all too familiar with whenever facing a non-Skeptic.

Ritva Voutila
Woolwich NSW

We try to maintain a balance between those who prefer a strictly serious approach and those who prefer levity. See the following letter. Ed

Less sobriety

I've just received my Autumn 91 issue of *the Skeptic* and I enjoyed it immensely. Thank you to all involved for your hard work.

To answer the two questions asked or implied in the magazine:

NO, I did not like the cover. I found it insipid and washed out looking, furthermore smooth white paper gives me an acute attack of ecoguilt.

YES, buying several cheap bottles of plonk and liberally imbibing them as you are writing certainly adds sparkle to the magazine. I don't know what you really did but I like the style - please keep it up. For a while *the Skeptic* had gotten more and more serious, almost as if it had to court respectability by becoming dead dull.

If we are to make any mark in Australia, we must be able to laugh at ourselves and those we debunk. So buy yourself another bottle of plonk before you start writing the next issue.

Thanks again for a good read and a lot of hard work on your part.

Marta Sandberg
Bridgetown WA

Thank you Marta. The colour on this cover should be stronger and most of those who commented liked the new look.

I don't know where you got the impression that I drank "cheap plonk" before writing. I only drink plonk I can't afford, which is a good way to stay sober. Ed

Biblical confusion

Sir,
In the past few weeks I have had an experience that I would like to share with other Skeptics - the graduation of my brother from the Sydney Missionary & Bible College.

The ceremony took place at Sydney's Trinity Grammar School. Apart from the unaccustomed singing of hymns, I found several events singular.

A feature of the night was a talk in which the nature of Christian life was claimed to "prove" the Bible as God's word, that the Bible was true but that the New Testament supersedes/replaces the Old. That struck me as an extraordinary set of claims - three, when only two were required for a migraine inducing circular argument.

The night also featured a discussion of the purpose and dedication of the new graduates. This lesson discussed Thessalonians, where the conversion of a community to "the teachings of Jesus" is achieved by a pair of disciples who "argue from the book", (ie the Old Testament) over three sabbaths, rather than through miracles or the wisdom of Jesus. This rather rabbinical process was glossed over, as were any mention of why a bunch of Greeks (pre-christians) would be available for three sabbaths to be converted to the, as yet uncompleted New Testament, by Old Testament precedents. Nary a Jew was acknowledged.

I found it a bit worrying as I had always assumed that passage to be an oblique reference, justifying the extermination of the Gnostics, whose thesis was that all could find God

through knowledge and not necessarily through the Testaments or the Church structure.

My Bible scholarship is admittedly thin, but for this to be presented at the culmination of years of sincere study by 100 or so young people strikes me as being less than satisfactory. What do you think? Is this sort of thing common?

Gary Dalrymple
Bexley North NSW

Help wanted

Sir,

I am currently undertaking research for my MA Honours thesis into the Christian Right, principally those organisations with American links. I am interested in finding out how widespread such groups have become, their influence within their local communities and whether any of these groups actively seek to pursue any form of political power as do their American counterparts. I am interested in how they pursue some of their aims such as the teaching and propagation of so called "creation science" and in their opposition to "secular humanism". The latter would seem to indicate their enthusiasm for the establishment of a theocratic state.

With their interest in exposing pseudoscience it seems probable that many Skeptics will be aware of such groups within their communities. I would appreciate it if you would publish this letter, requesting any Skeptics so inclined to let me know of such groups they may have come across to the following address. Any information I uncover of interest to *the Skeptic*, I

shall be more than pleased to pass on to you.

Peter Henderson
Chorleywood
Burradoo Rd
Burradoo NSW
2576

Statistics questioned

Sir,

Your study of the germination of radishes is intriguing and commendable, but the presentation of the statistical analysis is somewhat opaque and leaves what we might call technical loose ends. These may be obscure and, fair to say, exasperating to the layman, but they are crucial for interpreting the graph which shows days to germinate plotted against dates in October.

The actual distribution of germination times is not given; we assume that the labelled points are means only. That there is a lower bound to the process, which shifts linearly with time, is acceptable. Hence the need to extract some covariate. But thereon it gets muddy. If given only the graph and a ruler, I express all mean germination times as departures from a linear lower bound to the process, and do a Wilcoxon test, there is no result that justifies any statement about borderline significance. Ibis doesn't mean I like Wilcoxon tests; the data force me to go that way.

It looks as though Good days are only associated with quick germination, but Bad days are all over the place. That would be fun if true, because it

suggests that the reliability of planting on Good days, where reliability is the inverse of variance of germination time, is better. Without the full sample, and a log transform of all the individual germination times which were from seeds which sprouted, and a Behrens Fisher test after removing the covariate trend, I wouldn't myself dare to reach any conclusions at all.

As we are concerned with germination times, and failure to germinate, I think that the Anova model is hopelessly inappropriate, and the removal of outliers was conditioned on a wrong assumption about the process statistics. I can see that the experimental design has low power because there are far more Bs than Gs, and I can see that the treatment of outliers is suspect, and I can share with Prof. Barnard (*Journal of the Royal Statistical Society*, Series B, 1991, 53, p 100) a complete distaste for 5% significances, but I feel that the Skeptics have not made a case either way, because the data analysis was inappropriate or incomplete as published so far.

(Prof) **R A M Gregson**
Armidale NSW

We passed Professor Gregson's letter to our ACT Branch for comment, but at the time of printing had not received a response. We will publish their response in the next issue.

Unkind readers who suggest that getting any sort of response on anything out of Canberra qualifies as a miracle and for the Skeptics' \$20,000, should be ashamed of themselves. Ed.

Vitamin C

(or not vitamin C, that is the question)

Sir,

Why is an elephant like a Vitamin C molecule? Because , whether examining elephants or Vitamin C, it pays to get the whole picture.

The proverbial blind men poking parts of the elephant might get a good understanding of the elephant's tail, for example but, without connecting it to the rest of the creature, they misunderstand the whole animal (a matter of some practical consequence if they're about to be trodden on by a large pachyderm). So too with Vitamin C. Anthony Wheeler, in debunking 44 alternative therapies" (Vol II, No1), gives us a good understanding of the chemical structure of Vitamin C, concluding that, contrary to some alternative therapy views, "natural or artificial, all Vitamin C must be the same as all other Vitamin C".

Anthony is chagrined, and rightly so, that only 11 % of his Science students understand this scientific truth. Nevertheless, that nine out of ten of his students believed "that natural vitamins are better for you than laboratory made ones" is not necessarily a cause for pedagogical angst, if, as was possible given the wording of his True/False statement, some students were responding holistically, on the basis that naturally occurring Vitamin C comes with a great deal of other nutritional necessities, like minerals, dietary fibre and other vitamins. Viewing Vitamin C (like the tail of the elephant) as an isolated phenomenon is of some practical consequence in terms of overall nutritional well-being if it fosters

a belief in the techno-magic of a vitamin capsule rather than the whole orange.

Vitamin C is Anthony's strong case. Synthetic B vitamins, however, are slightly different in chemical structure from the natural forms (and therefore not as chemically active and nutritionally useful). Synthetic Vitamin E, too, can include both left-handed and right handed molecules whereas naturally occurring Vitamin E is solely right-handed. As Anthony is probably aware (and I can vouch from my experience as a former maths teacher) there is always at least one student who delights in lying in wait to trip up an unwary teacher on a point of esoteric fact.

Skeptics are right to criticise the sloppy science of the more dotty "alternative therapy" hucksters but our scientific method needs to be as flawless as possible if we are to take the experimental high ground. This includes recognising the value of an holistic science which can guard against some of the reductionist pitfalls of an atomist science - if, that is, we don't want to get done over by an elephant or the 'magic pill' therapy of orthodox medicine.

Phil Shannon
Narrabundah ACT

Tony Wheeler responds:

I agree with Phil Shannon that terse questions with limited options to respond should be used with great caution. There is always the risk that answers may be produced for reasons that the questioner has not anticipated. However, in using my question on whether "natural vitamins are better for you than laboratory produced ones" I relied on this question, among others used, having previously been used

reliably in the UK and the USA.

More importantly, during our post-test 'debriefing', when my students are accustomed to complaining about any question that they feel is unfair, with great vehemence in order to gain extra marks, no such complaint was made. No student claimed to have given the 'right answer' for the 'wrong reason' such as Phil Shannon suggested. No student claimed to have interpreted 'natural' in the context of being vitamin C plus its surrounding orange. No student introduced the bogy of spurious dangerously-active, associated chemicals accompanying the laboratory-made vitamin. Nor did any student mention the dangers to natural vitamins from the pesticides, herbicides, fungicides or any other -cides, applied to so many natural containers. Nor did any student use *this* question in an attempt to trip-up their humble teacher.

I agree with Phil Shannon on the dangers in excessive reductionism, but my holism will not let me accept everything just for the sake of pursuing holism. Let us instead value those therapies and theories that work first and leave the philosophical name that they go under until we want to broaden their context.

Confusion

Sir,

It is so easy for us Skeptics to become confused!

I dutifully read "A friendly reminder to our subscribers" on page 4 of the Autumn 1991 issue and really tried to understand all the words about one year, two years, etc. I was suitably contrite about not reading my address label to see if it had the magic number (90) on it. When I saw what was in store for me from our Treasurer, I quickly rum-

rnaged through the garbage bin, up to my armpits in last week's rubbish, to retrieve my envelope. Would you believe, a HAND ADDRESSED envelope?

It took me quite some minutes to realise that we were participating in another great scientific experiment. The clue came from the heading on page 5 - "Psychic phenomena in the media". Obviously Barry and Harry, on their fourth bottle of red while editing this great journal, hit upon the idea that they could put the membership expiry date on the address labels, if only they had address labels. (They knew that none of us could remember whether previous issues of the Skeptic had labels or not.) They obviously decided to send a telepathic message to the envelope addressers that they should use labels. The addressers did not get the message, so we keep getting hand-addressed envelopes.

As they were probably both drunk at the time, we can understand the derivation of "double blind" experiments.

Good try guys!

Jim Young
Chatswood NSW

PS It occurs to me that there is another possible explanation. The addressers really were using labels, but in the middle of the job the random number generator used to put on 90, 91, 92 etc, broke down, and being too scared to tell the Treasurer, they hand-addressed the remaining envelopes.

About our Authors

Ken Campbell is Professor of Geology at Australian National University

Harry Edwards is National Secretary and chief *agentprovocateur* of Australian Skeptics and Associate Editor of *the Skeptic*. His psychic powers are legendary (or is that mythical?)

Colin Keay is Associate Professor of Physics at the University of Newcastle. He is an astronomer and is the President of the Hunter Region branch of Australian Skeptics.

Whitley Strudel is a man of mystery. He is channelled by Simon Brown, who is also a bit mysterious.

Sir Jim R Wallaby is a man of few words, most of them incoherent. He recently retired as undefeated heavyweight saxophone champion of New South Wales.

Barry Williams is President of Australian Skeptics, Editor of *the Skeptic* and his fingers are much better than you.

Actually, Jim, we are conducting an experiment to see if people whose initials come at the end of the alphabet suffer from persecution complexes. So far the evidence favours the proposition.

The truth is that your subscription arrived after the labels had gone to the printer. All late subscribers get hand-addressed envelopes (which is better than a visit from the Treasurer). Ed