

 **the Skeptic**

Volume 11, No 1 (Autumn 1991)

Registered by Australia Post - Publication No NBH 8121

moon issue



**LUNACY
CONSPIRACY
BUREAUCRACY
(AND OTHER INSANITY)**

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From the President

And so we enter the last decade of the 20th Century, one which has seen more change, for good or ill, than any that preceded it. A century that began before human beings had left the ground in powered flight, that had just passed its 2/3 mark when humans were walking on our neighbouring satellite, that has before its end seen a human made artifact venturing into interstellar space.

It has been a century of unparalleled scientific and technological change, which has seen the first real successes in conquering disease, which has in turn led to an explosive population increase. It is a century which began with the speed of intercontinental communication being limited by the speed of the fastest ship and is ending with it limited only by the speed of light.

It has been a century in which the fruits of scientific understanding have been put to the most horrific uses in war and in the suppression of the human spirit by some of the most obscene regimes ever to have infested our planet and yet it is ending with just the faintest glimmer of hope that people might be able to use those fruits to take control of their own destinies. A century in which we have developed the means to destroy our species entirely, yet one in which we have

so far managed to refrain from doing so.

The 20th Century finds us with a greater knowledge about the world in which we live than any people have ever had before and has given us the tools to make the world a far better place for all its inhabitants, if only we have the will to do so.

And yet there seems to be an irrational streak within our species which rejects knowledge and reason. Why else would so many of us cling tenaciously to old superstitions and fears? Why do we still have astrologers, occultists, creationists and others who worship ignorance and who reject responsibility?

I do not know the answer, just as I do not know what the remaining decade of this extraordinary century will bring, though I suspect that much of it will surprise us. I am optimist enough to think that, on balance, the surprises will be pleasant and I am egotist enough to believe that organisations like Australian Skeptics, by their commitment to fighting ignorance, superstition and the other dark parts of the human psyche, will play a part in bringing about a better world.

- Barry Williams

the Skeptic

Vol 11, No 1

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Subscription
1991 - \$18.00 pa

the Skeptic is produced by the National Committee of Australian Skeptics Inc. Views expressed in articles and letters are not necessarily those of the National Committee. Articles may be reprinted with due acknowledgement to "the Skeptic".

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A friendly reminder to our subscribers

Despite our messages in Vol 10, Nos 3 & 4, that all subscribers would receive a Renewal Notice in the last issue for 1990 but **that only those whose address label had the figure (90) after their name need pay any heed to the notice**, quite a number of you renewed your subscription unnecessarily.

If the renewal was for one year and your old sub had one or two years still to run, we have extended your current sub by one year. If the renewal was for three years and you had one still to run, we have extended you to a four year sub. If you had two years to run and you sought to extend for a further three, we have sent back your cheque.

The Treasurer hates to send back money, but we have prevailed upon him to make an exception, just this once.

We could, of course, ask our printer to print a special number on each magazine or to insert Renewal Notices in only those magazines whose subscription is due for renewal but that is quite a complicated exercise and would add to our costs. We do try to keep these costs to a minimum so that you can get the best value out of your subscription.

Every issue that you receive this year will have a number after your name on the address label. Those whose subscription ends with Vol 11, No 4 (in December 1991), will have the number (91) on the label. Those whose subs terminate in December 1992, or in Decembers 1993 or 1994, will have the number (92), (93) or

(94) after their name respectively.

If you have thrown away the envelope in which this issue arrive, please write a note and attach it to your refrigerator door with one those little magnets that say "Same Day Carpet Cleaners", or "World Best Refrigerator Magnet", to remind you to check the label on the next issue.

The Treasurer, a remarkably mild mannered bloke for a retire professor of psychology, is threatening to form a Provisional Wing the Skeptics and to send some muscle-bound enforcers around, in the dead of night, to grill subscribers as to the number on their label. Those who cannot give a correct answer, he avers, will be pilloried the gutter press as closet astrologer or creationists. The other committee members have managed to restrain him thus far, but it has not been easy.

If, on the other hand, you had (90) on your last issue, and you did not renew your subscription, you will not be reading this notice, mentioning it is pretty pointless.

To end on a much more positive and far less complicated note, we would like to extend our gratitude to all those subscribers who included a donation with their renewal. There were far too many of you to thank personally please accept this as a token of our appreciation.

Psychic phenomena in the media

It seems remarkable that "psychics", who presumably believe that they have some ability to predict the future, are not astonished by the stupefying banality of those things that are revealed to them. Could it be that they are so out of touch with the real world, that wars and recessions, which everyone else has been expecting for months, come to them as a shock when they actually occur?

But then one only needs to study the techniques used by the more public "psychics", whose maunderings appear in the popular news media, to see a pattern emerge.

Most of the "predictions" concern those current events, which anyone could guess would have a better than even chance of occurring. Then there are a few predictions about the career, sexual or marital exploits of popular entertainers, which are likely to be believed whether they occur or not. Finally we have a couple of long shot predictions of the "Alien intelligence discovered on Jupiter" kind.

A "psychic" acquires a reputation for accuracy (among the believers) by having most of his "even money" banal predictions come true. The "show biz" predictions are usually bizarre, but no more so than much of what is reported

about the behaviour of the inhabitants of that world, so that anything that happens will be seen as confirmation of the prediction. The long shots are included because it needs only one correct guess in a lifetime to ensure the reputation of that "psychic" for ever. The other curious thing about this is the number of remarkable long shots which occur every year that no "psychic" ever predicts.

The Sydney *Sunday Telegraph* of December 9, 1990, featured a series of articles under the heading "*What does the future hold?*", in which four "seers" prognosticated on the future for Australia and the world in the coming few years. These startling revelations display no more insight than one would expect from any normally well informed citizen and are considerably less precise than those offered by the regular political and economic commentators in this paper.

I would have no hesitation in agreeing, in a general way, with almost every statement they made about Australia's political and economic future and I make no claims whatsoever to any psychic ability.

There is only one really revelatory passage in the whole piece, and that happens in the introduction of the "seers". Robyn Worthy of Canberra claims to number "*politicians and their staff*" among her clients, while Shelley Kirtoslie of Sydney has "mainly business people" as her clients.

The state of Australia's business and political life at the moment indicates most strongly that these claims must be true. It is almost impossible to believe that we could have got into the mess we currently are, merely by the

exercise of normal human incompetence.

The *Sydney Morning Herald*, Today's People column of March 13 reported a tale of delicious irony. Pat Robertson, televangelist and failed US presidential candidate is reported to have fulminated loudly about the "wrath of God" when Universal Studios was devastated by fire. Universal had produced the film *The Last Temptation of Christ*

However, the *SMH* gleefully reported, "Preacher Pat fell strangely silent when a fire destroyed his radio station, causing \$1 million in damage and silencing his radio show for a week".

We don't know if this is evidence for the existence of God, but it is certainly evidence that he has a sense of humour if he does.

As has been pointed out before, the reason why so many people believe the assessments given by "psychics" is that, to a very large extent they are true. What is surprising, is how many people do not understand that they are equally true for almost everybody.

This point is the subject of an excellent article, *Hooked on horoscopes* by Adrian Furnham, reader in psychology at University College, London in *New Scientist* (26th Jan, 1991). Furnham considers the "Barnum Effect", specifically in reference to astrology and graphology and refers to a number of studies challenging the validity of the assumptions that underlie these pseudo-psychological beliefs. Anyone interested in the subject should seek

Creationists get it wrong (again)

In response to the book *The Creation Science Controversy (TCSC)*, by Barry Price (reviewed in *the Skeptic* Vol 10, No 2), the Queensland based fundamentalist sect, the Creation Science Foundation Ltd (CSF), dashed into the fray with a sensationally tiled pamphlet *A Response to Deception*, subtitled *An expose of Barry Price's book The Creation Science Controversy*.

An introduction that read like the fulminations of an old-time fire and brimstone preacher, or the newsagents poster for one of the magazines, promised so much, that I was surprised that it was not listed as being "For sale to those over 18 only". The text, however, comes as a complete let down. It consists largely of trivial quibbles and differences of opinion (rarely of fact) along with a liberal sprinkling of *ad hominem* attacks on Mr Price, Professor Ian Plimer and, for some obscure reason, Australian Skeptics, which had nothing whatever to do with the production of the book.

The authors of the pamphlet, unidentified so far as I can determine, seem to flirt dangerously with the sin of pride. In many of their quibbles, they take Price's generic references to creationists as referring uniquely to themselves, when quite clearly he does not. Much as the CSF might like to think of itself as the only authentic voice of creationism in Australia (a curious ambition) there are others around, some

of whom have even more peculiar interpretations of the Biblical message than those espoused by the CSF. When this is considered, the majority of the quibbles in this turgid tract can be demonstrated to be straw men. Leaving aside the trivialities, the polemics, the self justification and the gratuitous abuse, the actual points of legitimate dispute could have been accommodated on less than a page.

Apart from its possible value to Mr Price in the production of the second edition of his book, in that it does identify some typographical errors and minor discrepancies in his original text, this 24 page diatribe would not be worthy of mention in *the Skeptic*, were it not for one unintentional (we presume) glimmer of light it throws on a mystery of some years standing. Price, in giving examples of the tendency of creationists to distort the views of reputable scientists, shows how Duane Gish, in his book *Evolution the Fossils Say No*, misrepresents the writings of the French anthropologist Marcellin Boule on the topic of *Sinanthropus* (Peking Man). The CSF, in their rush to defend Gish, actually published a misquotation from a third author, Patrick O'Connell, which misquotation Gish had presented verbatim, including an incorrect page number, and attributed to Boule. The publication of this original misquotation was the clue needed by a number of researchers to track down the source whence Gish was getting his erroneous information. In a future issue, we will publish a detailed article on this matter, by Dr Alex Ritchie of the Australian Museum, which will expose the details of this, and other gross distortions of the views of a respected anthropologist,

Boule, who died in 1942.

Now comes the interesting bit: Somehow the CSF became aware that, in their haste to denigrate *TCSC*, they had perpetrated a blunder that would reflect badly on their fellow creationist Gish. People would now be made aware that, not only was Gish responsible for his own misquotations (a very popular method of "research" among creationists, as their notorious *Quote Book* fiasco illustrates) but that he also used another person's misquotation, with no attribution to that author, and indeed with a false attribution to the original source.

A new and revised version of the pamphlet, one which seeks to extenuate the original errors, has been sent to those who purchased the original document. Far from clarifying matters, it attempts to submerge the errors under the sheer weight of its verbiage (this one has 28 pages). The accompanying letter stresses (twice) that the new version was at no cost to the recipient. The problem is that the information received by the CSF about the reaction to their blunder must not have been complete. Their long and tedious rationalisation by no means addresses the main issue identified by Dr Ritchie, the inexcusable misquotation by Gish, so presumably we can expect yet another, even longer and more tendentious, revised version, sometime in the future.

Unless we all obey the stern admonition at the end of the cover letter, to "destroy" the original (shades of revisions to the Great Soviet Encyclopaedia), we will end up with a library full of CSF apologies. Frankly, they are not worth the shelf space.

What's in a Name?

One of the questions we hear most frequently is "Why Skeptics? Why not Sceptics?" Which just goes to show what a lot of pedantic people there are in the world.

Some assume that because we use an American spelling it shows that we are part of some sinister CIA plot to subvert the English language (see Sir Jim on conspiracies elsewhere in this issue), others claim that the original Greek used Sk, not Sc but if the Greek programme on this Macintosh is anything to go by, the Greeks used the word

ΣΚΕΠΤΙΧΟΣ,

which may or may not spell Skeptics in Ancient Greek.

The point is that we needed to distinguish ourselves from common or garden, small "s" sceptics, who don't believe political promises, economists or the excuses given by their spouses. We could have called ourselves big "S" Sceptics but, with the proliferation of typographical errors in the world, this would have all too frequently found us bracketed with the aforementioned small "s"s.

And so we became Australian Skeptics, a title which has no underlying sinister purpose, nor contains any hidden agenda. This choice of name has occasionally led to curious results. On more than one occasion, having given our name and address to an enquirer on the phone,

with the admonition, "That's Skeptics with a "k", we have subsequently received a letter addressed to "Australian Sceptiks". Some people are just naturally crossgrained.

In this journal, the term "Skeptic" will refer to a subscriber to this organisation, or to this publication.

The term "sceptic" will be a generic term to describe all those who have their doubts about anything in general. The adjective "sceptical" will normally be used whenever an adjective is appropriate and the noun "scepticism" where that is apt.

American readers should not despair. English is such a fun language.

BW

A Blatant Plug

The Australian Museum Society (TAMS), in their "Super Science" series of lectures, late in 1990, presented two controversial speakers of interest to Skeptics.

Dr Richard Dawkins, author of *The Selfish Gene*, *The Blind Watchmaker*, and *The Extended phenotype*, spoke most entertainingly on the topic Darwinism with a Vengeance, the whole of which was later broadcast on the ABC Science Show on December 29. Dr Dawkins made a very persuasive case for the proposition that the religious impulse can be seriously considered as a virus of the mind. Although I personally found his proposition to be most convincing, Robyn Williams tells me that it did not go down too well with some sections of the audience.

The second speaker was Dr Rupert

Sheldrake, proposer of the Morphic Resonance hypothesis, which holds that all things are interconnected and that once a certain number of individuals has learned how to do something, it then becomes automatically easier for others to learn how to do the same thing. Robyn Williams interviewed Dr Sheldrake on the Science Show on December 15.

For those who missed these shows, tapes are available from ABC Shops.

BW

Obituary

The July 31, 1990 issue of the *Manly Daily* carried a feature article on clairvoyant, astrologer and psychic consultant, Marc de Pascale.

This article quoted Mr de Pascale as claiming to have advised Bob Hawke, Kerry Packer, opera stars, royalty and ministers of Philipines governments.

He was alleged to have foreseen the assassination of Robert Kennedy, earthquakes in Japan, the fall of Ferdinand Marcos, the peoples' revolution in the Philipines and the 1987 stock market crash.

It was surprising, therefore, to read in the Sydney Sunday Telegraph of December 30, 1990 that Mr de Pascale had been murdered in the Philipines.

It is without any sense of gratification that we report this fact, which should serve only as a warning to those who place their faith in, and guide their lives by, the supposed predictive abilities of "psychics".

HE

LUNAR EFFECTS I

Full Moon and Empty Heads

Barry Williams

A commonly-held belief has it that various social phenomena are associated with the phases of the moon. Such is the strength of this belief, achieving folk-lore status in many societies, that it is accepted almost without question, especially by the popular media.

There are at least two possible reasons why this belief is so strongly held; it may be that it is true; or it may be that some other factor is in play that makes it **appear** to be true. A number of studies has been conducted into this assumed phenomenon, some of which purport to show that there is some validity in the hypothesis that the phase of the moon has an effect on such things as child birth, suicides, accidents, bleeding and mental instability. Many other studies are unable to show that any such relationship exists. Details of several of these studies can be found in *The Moon and the Maternity Ward* (Abell and Greenspan) in *Paranormal Borderlands of Science* (Prometheus, 1981) and "The Moon is Acquitted of Murder in Cleveland" (N. Sanduleak) in *Science Confronts the Paranormal* (Prometheus, 1986) and in various back issues of *The Skeptical Inquirer*.

Informal inquiries among emergency service workers and hospital staff have revealed a belief that when the moon is full there is an increase in the number of accidents and in the rate of bleeding in patients undergoing surgery. Other inquiries show that most of the people questioned (in common with most of the population at large) have no idea of what the phase of the moon is at any particular time. This raises the suspicion that when any particular period of increased activity occurs, those involved, having cognisance of the folk-lore, may well assume that it must be full moon, without any real knowledge of whether or not this is the case. If this is true, then the "Lunar Effect" could easily achieve the status of a self sustaining myth, without the benefit of any facts intruding into the case. Although it would not be easy to prove it, there is a strong suspicion that this very simple explanation can account for most of the folk-lore associated with the "Lunar Effect".

Before we seek to discover whether or not a Lunar Effect

is a reasonable supposition, we should consider some of the facts about the Moon and its relationship to the Earth.

Earth is the only one of the four inner "earthlike" planets to have a substantial natural satellite. Mercury and Venus have none and Mars has two very small ones. Each of the four "gas giant" planets has a retinue of major and minor satellites, and Pluto, as far as can be presently ascertained, has only one. Our Moon is a respectable body, being the sixth largest of all the satellites and is larger than the planet Pluto.

The Moon travels in an elliptical orbit around Earth or, to be more accurate, both Earth and the Moon orbit about a point called the barycentre, which is located in a direct line between the centres of the two bodies and about one third of the distance between Earth's surface and its centre. At its closest approach (perigee) the Moon is 354,000km from Earth's centre and at its furthest point (apogee) it is 404,000km away. The Moon makes one rotation on its axis and one revolution about Earth every 27.3 days but, because of Earth's motion around the Sun, one "lunation" (the period between the beginning of a particular phase and the next beginning of the same phase) is 29.53 days. The Moon's orbit is also tilted at about 5 degrees to the ecliptic (the projection of Earth's orbit against the celestial sphere or the apparent path of the sun against the background stars). This is fortunate for lovers of full moons. If this were not so, every full moon would occur simultaneously with a lunar eclipse and every new moon would produce a solar eclipse. The "moonlight" we see is only reflected sunlight, the moon having no intrinsic luminosity and, such is its albedo (the fraction of incident light reflected) that only approximately 7% of the incident sunlight is reflected to us as moonlight..

We are all familiar with the Moon's tidal effect on the oceans of Earth, which is a function of gravitational attraction between the two bodies. This effect is directly proportional to the mass of the two bodies and inversely proportional to the distance between them. Less well known effects of the tidal interaction are the synchronous or captured motion of

the Moon, in that it always presents the same face to the earth and the fact that the dissipation of tidal energy means that the Earth's rotation is slowing by 0.02 seconds per century, and that this slowing of Earth's rotational speed is transferred (by conservation of angular momentum) to the Moon, causing it to speed up and recede from Earth by about 4.5 cm per year.

These are the main physical effects of the two bodies. I make no mention here of the psychological effects of moonlight on the more romantic denizens of Tin Pan Alley, as these lie outside the orbit of this article.

In the context of the facts mentioned above, what does the term "full moon" mean? As moonlight is reflected sunlight, we see a "full moon" only when the Sun, Earth and Moon lie in an approximate straight line, with Earth between the other two bodies, that is when the Sun is shining directly on the lunar face we can see. On the opposite side of its orbit, when the Sun is shining on the side of the Moon we never see, we have "new moon", when we cannot see the Moon at all. (Actually, we can sometimes see a very faint Moon by reflected Earthlight.) The other phases lie between these two extremes and are dependent on the angles between the three bodies.

One physical effect of the Moon on Earth is dependent on the phase of the Moon the height of tides. When the Sun, Moon and Earth are in line, either at full or new moon, then we get spring (higher than normal) tides. This is caused by the tidal effects of the sun and the moon being cumulative. At other times, when the three bodies subtend an angle other than 180 degrees, the solar and lunar tidal effects tend to ameliorate each other to some extent.

While the tidal effects between Earth and the moon may be substantial, these effects of the moon on a single human being are so minute as to be unmeasurable, and this is what we should be considering when seeking any particular "Lunar Effect" on individual people. Tidal effect, as was mentioned earlier, is a function of gravitational attraction. The gravitational effect of Earth on each of us is so weak that we can stand up, jump or climb a ladder despite the entire mass of Earth trying to prevent it. The Moon has only 1/81 of the mass of Earth and it is sixty times as far from us as is the centre of Earth, not forgetting that the gravitational attraction falls off as a function of the square of the distance, showing that the Moon's gravitational attraction on us is negligible. Add to this the fact that the tidal effect of the Moon on Earth is enhanced when the Sun, Moon and Earth

are in line, then if gravity has anything to do with this "Lunar Effect", its effect at new moon should be even stronger than at full moon. We should also have a "Solar Effect", because while the Sun's tidal effect is less than that of the Moon, it is nonetheless significant. And we should not forget the fact that at some times (perigee) the moon is 50,000km closer to us than at others (apogee). Perigee and apogee have nothing to do with the moon's phases. This difference in distance (remembering the inverse square rule) certainly should have a greater effect than would the different phases. Why then has the "Perigee Effect" not become part of our folk-lore? I suggest that no-one, apart from a few astronomers, has any idea when the moon is at perigee (or indeed that such a thing as a perigee even exists), while everyone has been exposed, through the media, to the Full Moon Effect mythology, and only has to look at the night sky to determine when there is a full moon.

Unless we accept the mysterious "Energies Unknown to Science", which have been covered before in this magazine (10:1), and for which there is no evidence outside the fevered imaginations of those who would postulate a paranormal view of the world, we have to assume that any Full Moon Effect must be mediated by either gravitational or electromagnetic radiation. Gravity, as shown above, would appear to be a very poor candidate and electromagnetic radiation would appear to be even worse. The only difference in electromagnetic radiation we experience at different phases of the moon is in the amount of reflected sunlight we see. If reflected sunlight can have such an effect, then we should experience a very much more noticeable effect between day and night, here on Earth. We certainly get orders of magnitude more sunlight reflected from our own planet on any day than we do from a few pathetic glimmers of moonlight, no matter how full the Moon.

Regardless of how irrational it may appear, if there is indeed a Lunar Effect, then somehow we should be able to work out how it occurs. We human beings have managed to solve far more difficult problems than this, as any non-scientist who has ever read about relativity and quantum physics will attest. But, as has been stated many times before in this magazine, there is not much point in wasting time on discovering how something occurs until it has been established that it does occur. Until there is a great deal more evidence that there is a Lunar Effect, we are perfectly entitled to regard it as nothing more than "Moonshine".



LUNAR EFFECTS II

Effect of Lunar Phase on Blood Usage in a Sydney Hospital

John Smyrk and Roslyn Fekitoa

BACKGROUND

As discussed in the preceding article, there is a commonly-held belief that various phenomena are associated with the full moon.

OBJECTION

We decided to look for evidence of increased trauma associated with the Full Moon in the patterns of blood usage at a Sydney Metropolitan Hospital. Daily consumption of blood (in packs) was obtained from Hornsby and Kuringgai Hospital for the period 1 July, 1989 through 30 June, 1990. If, as is claimed, accidents tend to occur more frequently, or if patients undergoing surgery tend to bleed more freely at the Full Moon, then one would expect to see this reflected in the levels of blood usage.

The hospital chosen is one of the largest district hospitals in the Sydney Metropolitan Region. Situated on the Pacific Highway, on the northern outskirts of Sydney, this hospital services the victims of a large number of road accidents.

APPROACH

A simple spreadsheet model was built (in Excel) to carry out the necessary statistical calculations and data management. Five columns were created to hold the data of primary interest to us:

Date:

Day of Week: identifying the day as "Monday" through "Sunday".

Blood Consumption: showing the total daily usage measured as a pack count

Full Moon Indicator: comprising a simple sequence of "I"s and "O"s in which the "I"s indicate the days on which the Full Moon occurred. This information was obtained from a standard Ephemeris.

Full Moon Week Total Blood Usage: containing twelve

totals - each associated with the seven day period beginning with the full moon. Any impact of Full Moon induced trauma should be seen in these periods as an increase in blood consumption.

Non Full Moon Week Total Blood Usage: containing twelve totals - each associated with the seven day period beginning fifteen days before the Full Moon. The selection of this period was made so that it began one half of a lunation out of phase with the Full Moon. Such intervals of time should be free of Full Moon effects.

OBSERVATIONS

Amongst the features revealed in our spreadsheet were the following:

The average one week blood consumption for "Non Full Moon" periods actually exceeded the corresponding figure for "Full Moon" periods (61.08 versus 57.83 packs per week).

The starting days for "Full Moon" weeks were acceptably spread amongst possible days of the week: (Mon=1, Tue=1, Wed=2, Thu=3, Fri=2, Sat=1, Sun=2)

There is a statistically significant lower usage of blood over weekends (6.21 versus 9.14 packs per day). This effect (called intra-week seasonality) can be attributed to the scheduling of elective surgery between Monday and Friday. We chose seven day periods for the two series on which the following analysis was based so that the seasonal effect would be eliminated.

Some Background in Statistical Decision Making: We now face a common situation in hypothesis testing. To what extent are our results consistent with the proposition that blood consumption tends to be higher due to trauma associated with the Full Moon? Conventional statistical practice offers us the following method:

Frame the proposition as two mutually exclusive (and hence competing) statements. The first of these takes the form of a "Null" hypothesis which asserts that no underlying differences exist between the two sets of data being explored. The second is an "Alternate" hypothesis which asserts that there is an underlying difference.

Use the data to test the believability of the Null Hypothesis. This is achieved by: assuming that the Null Hypothesis is true; and asking how consistent are the observed results with the Null Hypothesis?

If the observed results are not surprising in light of the Null Hypothesis, then we have no reason to abandon it in favour of the Alternate Hypothesis and so we would accept it as an adequate explanation of the data at our disposal.

If the observed results are surprising in light of the Null Hypothesis, then we would reject it in favour of the Alternate Hypothesis as a better explanation of how our data came about.

We elected to use the average of "Full Moon" week and "Non Full Moon" week as the statistic on which this procedure would be based. We adopted the following hypotheses for testing:

***Null Hypothesis:** That there is no difference in average weekly blood consumption between "Full Moon" and "Non Full Moon" weeks

***Alternate Hypothesis:** That average weekly "Full Moon" consumption and "Non Full Moon" consumption differ.

Note how we do not say that either Hypothesis is proven. The strongest statement we can make is to the effect that one hypothesis or the other is supported. In the event of the Alternate Hypothesis being favoured, those promoting a "Full Moon" effect are required to do two things:

- *find other data which may be used to replicate the initial result;
- *offer a model describing the nature of the cause/effect mechanism which explains the observed phenomenon.

ANALYSIS AND CONCLUSION

To assess the consistency of our results with the Null Hypothesis we used the "t" test for the equality of sample means from populations with unknown variances. This

enables us to determine how surprising is the observed difference between the two average blood usage figures ($61.08 - 57.83 = 3.25$) if the Null hypothesis was true. If we define "surprise" as a 1-in-20 event, then we would need to see a difference in usage figures of about 14.5 before we could reject the Null Hypothesis

We conclude therefore that there is no evidence from blood usage at Hornsby and Kuring-gai Hospital which supports the view that increased trauma is associated with any Full Moon Effect.

APPENDIX A

For the benefit of readers with a knowledge of inferential statistics we provide a formal statement of our test of hypotheses.

Hypotheses:

Null: Mean(FM) = Mean(NF)

Alternate: Mean(FM) \neq Mean(NF)

Where:

Mean(FM) = (True) mean of blood consumption during weeks following the Full Moon.

Mean(NF) = (True) mean of blood consumption during weeks beginning 15 days before the Full Moon

Level of Significance:

0.05

Test Statistic:

$t = (\text{mean(fm)} - \text{mean(nf)})/s(d)$ t(22)

Where:

mean(fm) = estimate of Mean(FM).

mean(nf) = estimate of Mean(NF).

s(d) = estimate of standard error of difference between two means.

t (22) "students" t distribution with 22 degrees of freedom.

Decision Rules:

Accept Null and reject Alternate if $-2.074 \leq t \leq +2.074$

Accept Alternate and reject Null if $-2.074 > t < +2.074$

Computations:

Estimate of pooled variance = 17.18

s(d) = 7.01 Critical ratio $\hat{A}t = 0.46$

Decision:

The result requires application of our first decision rule, and so we accept the data as consistent with the Null Hypothesis.

APPENDIX B

An additional test was conducted into the "Tidal" effect. It has been claimed that certain social phenomena are influenced by the colinearity of the Sun, Moon and Earth. According to this model, tidal effects are significant and so increases in events like accidents will occur at both the Full and New Moon. We tested this hypothesis by examining four data sets - the two used for the primary study and another two "quarter cycle" series. The latter were obtained by taking two seven day periods beginning nine days before ("3/4 cycle") and seven days after ("1/4 cycle") the Full Moon respectively. The four resulting series correspond approximately to the Full Moon, Half Moon waning, New Moon and Half Moon waxing.

In the second investigation we decided to test the hypothesis that the mean blood consumption was the same for all four series against the alternative that they were different.

We noted that the mean 7-day consumption figures for our two new series were 57.08 and 58.00 for the 1/4 cycle" and "3/4 cycle" respectively.

Our test in this case involved analysis of variance - using the F test for the equality of sample means. As before, the data is consistent with the Null hypothesis, in which the (true) means of all series are the same.

We conclude therefore that there is no evidence from blood usage at Hornsby and Kuring-gai Hospital which supports the view that increased trauma is associated with any Tidal Effect.

As before, we provide a formal statement of our statistical procedure.

Hypothesis:

Null: $\text{Mean}(\text{FM}) = \text{Mean}(\text{NF}) = \text{Mean}(\text{H1}) = \text{Mean}(\text{H3})$

Alternate: The four means are not equal.

Where:

$\text{Mean}(\text{FM}) = (\text{True})$ mean of blood consumption during weeks following the Full Moon

$\text{Mean}(\text{NF}) = (\text{True})$ mean of blood consumption during weeks beginning 15 days before the Full Moon.

$\text{Mean}(\text{H1}) = (\text{True})$ mean of blood consumption during weeks beginning 7 days after the Full Moon.

$\text{Mean}(\text{H3}) = (\text{True})$ mean of blood consumption during weeks beginning 9 days before the Full Moon.

Level of Significance:

0.05

Test Statistic:

$F = \text{MSC}/F(3,44)$

Where:

MSC = mean variation between series

MSE = mean variation within series

$F(3,44) = F$ distribution with 3,44 degrees of freedom

Decision Rules:

Accept Null and reject Alternate if $F \leq 2.80$

Accept Alternate and reject Null if $F > 2.80$

Computations:

MSC = 37.50

MSE = 218.13

$F(3,44) = 0.1719$

Decision:

The result requires application of our first decision rule, and so we accept the data as consistent with the Null Hypothesis.

Help us to Find New Subscribers

The loose sheet in this issue has been included so that you, our loyal reader, can let others know just how much enjoyment and information can be gained from subscribing to the Skeptic.

It is cunningly designed to be easily attached to a notice board in your local library, community centre, place of work, club, staff room or palace. Further copies of the sheet are available from the National Secretariat (or your photo-copier).

LUNAR EFFECTS III

A Test of Lunar Effects on Crop Germination Times and Yield

Drew Meek

Canberra Skeptics recently completed analysis of a test of the alleged effects of the moon and stars on plant growth. We became interested in this claim when the Canberra Times gardening column presented information on the best times for planting vegetables, based on the phases of the moon and its apparent passage through the zodiacal signs. This information was provided by the Canberra Organic Growers Society (COGS). Our president responded in a Letter to the Editor suggesting that this was drivel. Various letters then appeared attesting to the veracity of "Moon Planting". This correspondence led to Betty Cornhill (president) and David Evans of COGS attending a Skeptics meeting to discuss the theory.

In the 1920s, Rudolph Steiner developed the Biodynamic method of agriculture. Planting according to the moon's phase and position in the Zodiac is part of Biodynamic theory. Steiner is also known for his association with the Theosophical Society and as the founder of the breakaway Anthroposophical Society.

The association of various signs of the Zodiac with the four elements (earth, air, fire and water) and the movement of the moon, in various phases, across these signs was claimed, differentially, to effect the best times for planting, nurturing and harvesting leaf, root and fruiting plants. Planting at "good" times was said to enhance germination, cause more prolific growth and produce qualitatively better produce. "Good" and "bad" times could be separated by less than 24 hours.

With the help of COGS, Greg Tanner (a biochemist with a greenhouse) and Warren Mueller (a biometrician - a statistician specialising in biological assays), the Canberra Skeptics arranged a test of these claims.

Method:

It was originally intended to select 14 pairs of planting times, each pair being selected having one favourable and one

unfavourable time, as determined by COGS. Then comparison could be done within each pair and any effect of later planting times giving greater growth would be minimised.

Unfortunately, due to circumstances beyond our control, this plan was not followed and only 22 plantings occurred, with irregular patterns of good and bad times.

A statistical analysis could still be done using a covariance analysis to minimise effects of later planting.

Radish plants, because of their quick growth, were chosen for the experiment. Seed and mulch were provided by COGS. Greg Tanner, who was planting and monitoring growth, was provided with a list of times to plant but was not told if these were "good" or "bad" days. This information was given to Warren Mueller, our statistician, only after he had processed the raw data.

Plants were grown in a glasshouse with environmental parameters monitored. Fourteen seeds were planted at each time indicated. The plantings were made in a chequerboard pattern to minimise the effects of shade or localised environmental changes.

For each plant the following information was obtained:

Tp = Time of planting (time of day and date)

Tg = Day plant germinated (date only)

Th = Time of harvest (time of day and date)

R = Root fresh weight at harvest

L = Leaf fresh weight at harvest

Harvest occurred approximately 35 days after planting.

Weights were adjusted to 35 days to simplify comparison.

[Weight (adjusted) = 35 X Weight / (growing time)]

Results:

The statistical investigation involved first analysing all data, then removing outliers (individual abnormal results) and then covariate analysis. A complete description of this analysis is available from Canberra Skeptics.

The figures presented below are based on a reduced data set after covariance analysis.

Mean Root and Leaf Weights:

The table shows the mean weights of roots and leaves adjusted for a uniform growing time of 35 days.

Variable	Mean Weights (gm)	Good	Bad
Root		37.7	41.1
Leaf		10.02	10.30
Total		47.7	51.4

There was no statistically significant difference in mean fresh weights between "good" and "bad" planting times. For crops, it could be argued that total yield could be a more important variable than mean weights. Therefore, the total leaf and root yields from the plantings were compared (results not shown). The results revealed no evidence that the phase of the moon and the signs of the Zodiac at planting had an effect on the fresh weights of the radishes at harvest. The distortion of the intended design by planting times not occurring at the times originally indicated by COGS cannot be reasonably advanced as a possible explanation of the result, especially as the "bad" day means and totals were greater (but not significantly) than the "good" day means and totals.

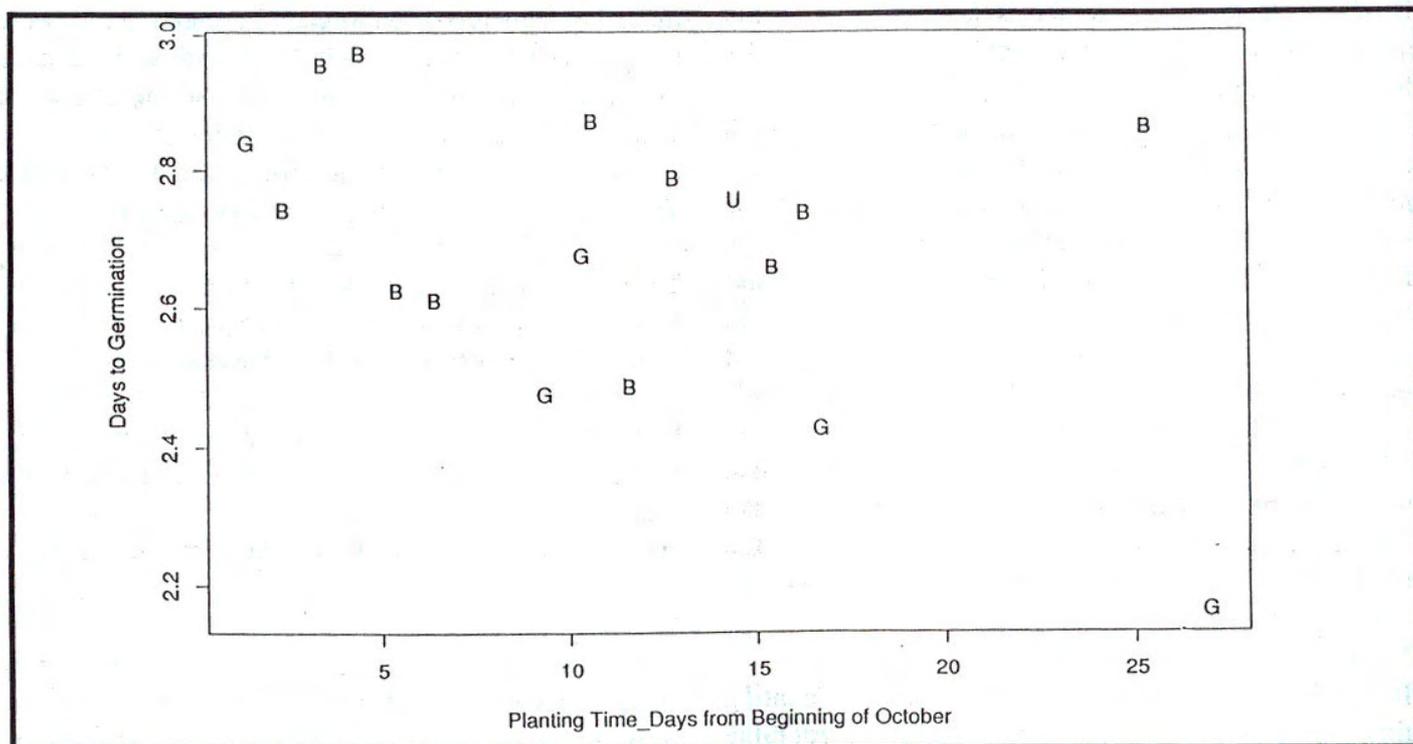
Time to Germination:

Germination times are shown on the accompanying graph. There is a general downward trend in germination times as the month proceeded. This emphasises the need for the covariate analysis to conariate for effects of later growth.

The study of germination times did produce some results which were near significance at the 5% level. However, this must be treated with caution for two reasons. Firstly, the data from several plantings were not collected due to illness and one planting occurred at a time that was not defined as "good" or "bad". It was only using this reduced data set, with the unknown planting being assumed to be "bad", that differences approached significance (P=0.063). Secondly, germination was monitored only once per day, while germination took between 2-3 days. This period of observation was insufficient to properly establish differences between different groups. If possible astrological effects on germination is to be further studied, more frequent observations should be used, say every 4-6 hours.

Conclusion:

In this experiment there was no significant difference in germination time or weight of produce when seeds were planted at "good" and "bad" times, according



...from page 14

STATISTICAL ANALYSIS:

Warren Mueller explains how he analysed the data:

Analysis of variance is a technique by which data are examined to determine whether known factors that are varied are causing observed differences in the data. A null hypothesis is set up, which asserts that there are no differences between the item being compared, in this case "good" and "bad" planting times.

The analysis then tests this hypothesis by determining the probability, or chance, that the data obtained could have arisen at random, with no true difference between the items. If the probability is very low, by convention less than 0.05, then the null hypothesis is rejected and it is asserted that the items are "significantly different". In this experiment, a significantly low probability would indicate a difference between "good" and "bad" plantings. Analysis of covariance acts in a similar manner to analysis of variance but with an additional complication. A null hypothesis is still set up, but before testing for differences between items, the effect of some other variable, usually a nuisance variable of no real interest in the experiment, is removed. In this experiment, the nuisance variable or covariate is the date of planting, in that later planting might tend to give higher fresh weights after 35 days no matter whether the moon phase and Zodiac sign are favourable or unfavourable.

From an analysis of covariance, both the significance of the covariate in removing variation of no interest, and the significance of differences between items being compared, are obtained.

Acknowledgements

Canberra Skeptics would like to thank Greg Tanner and Warren Mueller for the collection and analysis of data. We would also like to thank COGS for their willingness to discuss their theory with us and their cooperation in organising this experiment.

It should also be pointed out that not all members of COGS believe in moon planting.

NATIONAL CONVENTION

The 1991 annual National Convention of Australian Skeptics will be held in Sydney during the Queen's Birthday long weekend, June 8-9 at the Manly Warringah Rugby League Club, Brookvale.

The convention will consist of Saturday afternoon and Sunday programmes, with a dinner on Saturday evening.

The convention will be widely publicised, both by direct mail to subscribers and by media releases, which should attract a substantial audience from among local and interstate Skeptics and from the general public.

As a subscriber to the Skeptic, you can assist us by bringing the convention to the attention of friends and colleagues whom you think would be interested in hearing informed comment on rational alternatives to many commonly accepted perceptions about paranormal and pseudoscientific phenomena.

Call for Speakers

This is also a call for participants who wish to present a talk on any topic which will be of interest to fellow Skeptics and members of the general public. Subjects for talks may include, but are not confined to, any of the matters covered in past issues of The Skeptic, new discoveries in the physical and social sciences which have a bearing on how we view our world or how our perceptions of the world are prejudiced and compromised by how the information is presented to us.

Some of the suggested topics include: Psychotherapy; Hypnosis; Urban Legends; Chaos Theory and the Limits of Prediction; Self Improvement and Human Potential Courses; The Media and the Paranormal; Scientific Literacy for the Public; Pseudomedicine.

If you wish to take part in the programme, please send us a synopsis of your proposed talk. You should anticipate speaking for about 20 minutes and be prepared to participate in a panel discussion. It is important to remember that the audience will consist largely of intelligent lay people, who have a general interest in, but not necessarily an in depth knowledge of, scientific matters.

To become part of the action, all you need to do is send the synopsis to **Australian Skeptics, PO Box E324, St James NSW 2000.**

BUREAUCACY

Bureaucracy One, Euclid Nil**Harry Edwards**

While the potential victims of pseudoscience are able to subject the claims made to critical analysis before they buy, to have it foisted on you, and in addition to have to pay rates and taxes for the privilege, is a bitter pill to swallow.

Many readers will be aware that the Melbourne Metropolitan Board of Works won the Australian Skeptics Bent Spoon Award for 1984 for its payment of \$1,823 to US “psychic archaeologist” Karen Hunt to use divining rods to detect an alleged “Electromagnetic Photo Field” and thus to divine the outlines of long demolished buildings on an historic site at Point Cook (*the Skeptic* Vo15, No 3).

My recent experience suggest that an addiction to dodgy science is not confined to local government agencies in the Garden State. My case concerned an application to the Town Planning Department of Warringah Shire Council in NSW to replace a flat roof on a block of home units, with a one metre overhang on the southern side, with a 35 degree pitched roof. The long axis of the units is aligned East / West. The application was refused on the grounds of shadow encroachment on adjoining properties on the southern side.

Despite the submission of detailed shadow diagrams, calculations and other evidence to show that the shadow cast by the proposed roof would be LESS than that cast by the existing roof, the Town Planning Department was adamant that their shadow analysis criteria indicated otherwise.

I pointed out that the noon angle of the sun at Newport at Winter Solstice was 33 degrees 37 minutes and thus the sun would cross the roof at a glancing angle at that time of year (the worst case) and that the removal of the one metre flat overhang and its replacement with a shorter one at the angle of the roof would definitely reduce the shadow. I presented statements from six of my Skeptical colleagues, each of whom was a tertiary graduate in mathematics or science, that my calculations were correct and **STILL** the

council officers would believe me.

I pointed out that the angle of the mid-winter noon (sun at Newport would not alter unless Australia reversed its current direction of continental drift and sped off southwards at a speed that would surprise even (but a convinced creationist, or unless the tilt of earth’s axis suddenly increased dramatically. All to avail.

The impasse continued until I lodged an appeal v the Land and Environment Court, at which point received a notice of a change of heart by the council. .

delay in construction was fifteen months and cost almost \$1,000, all because professional council office were not able to understand simple geometry or comprehend common geographical and astronomical facts. At no stage would they explain to me what “facts” or theory were used to determine the shadow effect t were considering.

While we Skeptics rightly deplore the general lack scientific knowledge, which allows members of public to be intellectually ripped off by any passing “psychic” or “creationist”, we always recognise legal principle of *caveat emptor* or “let the buyer ware”.

We should not have to accept a similarly lax approach to reality by those who are paid, by us, to serve us professional capacity.

CHANGING ADDRESS?

**Please advise us so we can
redirect your Skeptic.**

CONSPIRACY

Karl Marx's Grave is Communist Plot - OFFICIAL

Sir Jim R Wallaby

Conspiracy: a secret plan or agreement to carry out an illegal or harmful act – a plot

There is no doubt about it, the world is full of conspiracies. Every time two or more people get together to plan a bank-job, to fix a race, to rot a company or to suborn a public official, they are involved in a conspiracy. At any minute of any day, anywhere in the world, it is certain that many conspiracies are being hatched.

But my purpose here is not to consider the common or garden conspiracies that are as much a part of our everyday life as are arguments about football or religion, rather I will look at the grand conspiracies that explain everything wrong with the world. Just as physicists and cosmologists seek Grand Unified Theories (GUTs) and Theories of Everything (TOEs) (I don't understand why physiologists are not involved in this – guts and toes would seem to be more in their court), conspiritologists are seeking the Grand All Encompassing Unified Conspiracy Theory, which will allow them to sheet all blame to the right quarter.

Many Grand Conspiracies fall into the ambit of what we Skeptics regard as our natural province, while others (some of the more exciting ones) do not, but instead lie within the realm of politics and power. Though these latter might be considered to be outside our area of interest, I will show that there is a connection. My contention is that the sort of mind-set which allows someone, noticing an unusual light in the sky, to conclude that scout ships of the Sirian Empire Space Fleet are about to abduct them for the purpose of strange sexual experiments, is the same mind-set which can convert a late mail delivery into evidence for a plot for world domination. If, in failing to make the necessary connection, I at least make a superficially attractive case then, in an article on this topic, that will be singularly appropriate.

Let me begin with something that should be a familiar topic to all Skeptics and then we will follow the Great Conspiracy Trail to see where it leads.

The World-wide Conspiracy of Scientists:

This conspiracy explains a great many of the ills that infect our society. Scientists, apart from the fact that they gave us The Bomb and that they all experiment on animals, have banded together in a sinister plot to protect their territory from outsiders. This is what precludes us from obtaining the benefits which would accrue from the application of marvellous inventions including: unlimited and cheap energy from perpetual motion machines; international and intragalactic travel at speeds far exceeding that of light; anti-gravity machines and who knows what else.

A couple of simple examples will show just how scientists close ranks and conspire to keep outsiders from receiving just recognition. Of 135,000 papers presented to 68 major scientific publications over a recent four year period, not less than 18 were papers on creation science. **NOT ONE OF THESE PAPERS WAS PUBLISHED.** If that is not proof of conspiracy by the scientific establishment, then I don't know what is! And anyway, it is a well known fact that the Second Law of Thermodynamics absolutely forbids evolution, but will any scientist admit it? Of course not!! So there!!! And what about Velikovsky, I ask????

A measure of the arrogance of the members of the Scientific Conspiracy is that, when you wish to show that the Theory of General Relativity is wrong, they expect you to know what the theory actually says. They seem to forget that “They all laughed at Galileo”. And he was right.

It follows that anyone who challenges the established paradigm is likely to be laughed at, and is equally likely to be right. Doesn't it?

But let us now move to a related conspiracy.

The Universal Medical Establishment Conspiracy:

Which prevents our health from being immeasurably improved by the application of magnetism, herbs, meditation, breath control, homoeopathy, naturopathy, iridology,

acupuncture/pressure, diets consisting solely of vitamins, vegetables, water, fibre, fruit, air etc, not to mention faith in assorted superior beings.

In all of these cases, the only thing that prevents us from receiving such miraculous beneficence as would permit us to live forever, is the insistence by the Medical Establishment on such dubious doctrines as clinical trials, double blind testing, repeatability and similar incomprehensible jargon. All to protect the investment of drug companies and the incomes of doctors. But these are small scale conspiracies. Others are involved in this sneaky business, like:

The Giant Business Cartel Conspiracy:

It is common knowledge that many devices have been invented which will improve the fuel efficiency of cars by 100% or more. Indeed, it can be that any car fitted with more than one of these contrivances will become a net producer of petroleum (which in the current international climate must be a good thing). Where then are all these devices? The answer is clear. The multi-national oil cartel has purchased the lot and has hidden them away, just to keep their profits high. (This is certain proof that all the energy polarisers that were around a few years ago were duds. Had they been genuine, they would have been snapped up by the oil companies. Then again, we don't see too many of them any more, so perhaps they were.)

There are of course other arms to the commercial conspiracy. What ever happened to the permanently sharp razor blade (see Harry Edwards article in this issue on sharpening razor blades), the perpetual light bulb and all those other wonderful products that would make our life simpler? Conspiracy, thats what!

But these are only penny ante conspiracies. After all, oil companies, scientists and doctors do not have a great deal in common. Do they?

Well, perhaps they do, and here is where the plot thickens.

The Great Jewish Conspiracy:

What they have in common is Jews. Look at Einstein – a Jew! Lots of scientists are Jews aren't they? And isn't it a little bit too much of a coincidence that Newton's first name was Isaac? And doesn't every Jewish mother want her son

to be a doctor? And aren't a lot of Jews in business? And where is Israel? Right there in the Middle East where all the oil is! Coincidence? Hah!

Then of course, as everyone knows, the so-called Holocaust never actually happened – it is all Jewish propaganda. The Nazi gas chambers could not have worked, the gas used was not very poisonous and those who died only died of starvation and typhoid and anyway, the Gypsies were treated just as badly. What is not commonly known (except to those in the know) is that the Nazis were bankrolled by the Jews, as was Stalin (and presumably Ghengis Khan, Attila the Hun and probably Saddam Hussein). All of this has been documented in the famous Protocols of the Elders of Zion.

Apropos protocols, I should inject one here. It is bad form these days to be seen to be an anti-Semite, so in the best of conspiratological circles, the term International Bankers is used. It is perfectly OK to be anti-banker. (In Australia these days you don't need to be anti-semitic or even into conspiracies to be anti-banker.)

Next we must look at a conspiracy that contains all the elements of both the scientific and the governmental genres.

The Alien Plot:

For many years, it has been widely known that alien species, from distant parts of the universe, or from the centre of the Earth, or from a different dimension, have been observing the Earth. They have crashed in their space ships and their bodies have been kept in a hangar 17 at Wright Patterson USAF Base in Ohio, since 1947. Depending upon which conspiracy you choose to believe, there are even live ones, living on a reservation in Nevada, or Utah (presumably these are Mormon aliens). They have abducted humans for strange sexual experiments, mutilated livestock, given us their technological secrets, refused to give us their technological secrets, eaten strawberry ice cream and sent Men in Black around to knock on the doors of those who ask too many questions.

In the past, they built pyramids, made strange landing fields in the South American deserts, mated with Neanderthals to produce hybrid entities who turned out to be us, built the Sydney Opera House and did everything else worth doing.

They get away with it because all the governments on

earth are part of the plot. Whole books could be written about the Alien Conspiracy. In fact whole books have been written about it, thousands of them, to the great detriment of vast forests of trees.

This leads us logically (or as logically as any article on this topic can get) to:

The Illuminati Plot:

The Illuminati were a group of 18th century European religious fanatics who believed that they alone had received the true light of Jesus. Not much of a basis for a conspiracy, I hear you mutter. That just shows how much you know! The Illuminati in fact form the basis of the Real True Genuine Great Universal All–Encompassing New World Order Conspiracy.

Depending upon to whom you listen, the present Illuminati, whose purpose is no less than world domination through One World Government, include all or any of the following groups or individuals (Those you choose to include in the plot depends entirely on which part of the political spectrum you inhabit): Bankers (Ha!), Freemasons, Zionists, the British Royal Family, the Vatican, George Bush, the Soviets, the Mafia, the United Nations, anybody named Rockefeller, diplomats, industrialists, Fabians, socialists, liberals, Marxists, conservatives, Margaret Thatcher, the KGB, the CIA, members of the Stock Exchange, and above all, Henry Kissinger. We even have one correspondent who claims that Australian Skeptics is part of the conspiracy.

What these people do is get together every now and again to determine just how to further their nefarious schemes. Since it is perfectly obvious that any meeting which consists of, among others, the Pope, George Bush, Queen Elizabeth, the Secretary General of the UN and the chieftains of the Mafia, is unlikely to go unnoticed, then it must be equally obvious that the news media are covering up these meetings and are thus part of the conspiracy. Indeed, if one cares to listen carefully to a conspiratologist a case can be made that **everybody** is part of the conspiracy (apart from the conspiratologist himself, of course).

Hang on a bit though! There **is** a time when most of these people congregate with seeming legitimacy. When a prominent head of state dies. Could it be that when a meeting is due, some king or president is knocked off? Could I

have stumbled on the answer? Could I be in danger? Could I be part of the conspiracy? Could be!

The Australian Connection:

Those of us who are fortunate enough to live within the broadcast range of a certain evening programme on a Sydney commercial radio station can be left in no doubt about the strength of the conspiracy in Australia. The tentacles of the Oz conspiracy are spread widely and include all political parties, all activists of any stripe, all business people whose enterprise is larger than a corner shop and the membership of most organisations having more than two members, among many others. Their tools include (but are certainly not confined to) Bank Card, the late (and unlamented) Australia Card, Telecom's Computer Centre, water fluoridation, and the New Zealand Bureau of Mapping (I promise that I heard a Kiwi conspiratologist making a very persuasive case that this body has pinned down everyone on earth into an individual map reference, so we can all be watched by satellite).

The central "fact" of this conspiracy is that the seat of the One World Government is to be located at no other place than in our very own Canberra. This, the theorists allege, nay aver, is why we spent all that money on building the New Parliament House. A New House for a New World Order, no less!

Indeed, it is this "fact" that causes me to think that the great One World Unifying Super–Plus–Ultra–Never–to–be–Repeated Conspiracy may not be entirely fair dinkum. At the risk of causing the ACT membership of Australian Skeptics to resign *en masse*, I must now ask this one question:

“If you, or anyone you know, had the power to control the entire world, and you could do it from any place on earth, would you really want to do it from Canberra?”

If you answered “Yes” to this question, may I humbly suggest that you resign immediately from the Skeptics and join an organisation more congenial to your thinking, such as the Creation Science Foundation, the Flat Earth Society or the Federation of Astrologers.

Oddly enough, the more one reads about conspiracies, the more one realises that the true believers always associate them with their own immediate environment. Could conspiratologists be chauvinist? You bet they could.

The Truth at Last:

Of course, in this brief study I have only skimmed the surface of the field of conspiratology and I have no doubt that our readers can supply many more examples from their own experiences.

The important thing to remember about conspiracies, and the thing that makes them so strangely believable to so many people, is that the problems they identify are very real problems. Governments and other large organisations really interfere in our lives to an unconscionable degree. People feel powerless to control their own lives. Science and medicine (and all other professions) use incomprehensible jargon that tends to keep outsiders outside. Large corporations suppress ideas to keep their markets secure. Life is not particularly easy. But, is this evidence for a malicious conspiracy by shadowy power brokers, with a secret plan to control the world? Or is there another answer?

When confronted with a question like this, it is useful to apply a maxim that is every bit as applicable to the world at large as Occam's Razor is to the enterprise of science. As far as I am aware, this maxim has no particular name (although I would like to suggest Occam's Shaving Brush) and it comes in a number of forms, the most formal statement of which is: *“Never ascribe to malice, that which can equally be explained by incompetence,”*

or, to put it more colloquially,

“If the choice is between conspiracy and cock-up, go for cock-up every time.”

It may be comforting to believe that all of the world's ills can be ascribed to dark and sinister forces, plotting interminably to enslave us all. Cold comfort I hear you say but at least a conspiracy is something which can be combatted. All you need is some Bulldog Drummond or James Bond character to infiltrate the inner sanctum and send the Evildoer to his just reward. End of conspiracy.

Unfortunately, the world and the people in it just ain't that simple. It would be very easy if we could point to some individuals who were pure, undiluted evil, with no normal human characteristics, whom we could blame for everything. The trouble is, total sociopaths and psychopaths are not all that thick on the ground and those that do exist are unlikely to reach positions in which their pathology can cause more than local mayhem. This is not to ignore cases of a few individuals from history who are nasty pieces of work in any

language (Hitler, Stalin, Pol Pot, Idi Amin spring to mind), however, as I shall show, the harm that these individuals wrought sprang not merely from their undeniably unpleasant personalities, but from something far more mundane.

My proposition is that we do not need to postulate the existence of purely evil individuals to account for the ills inflicted on humanity. I suggest that much more commonplace, and in many cases admired, human traits can explain matters better, with possibly the most commonplace of all being the perceived need for order and conformity in society. This desire manifests itself in many ways, most of which are seen by the holders of these ideas to spring from the best of motives.

The most popular manifestation of this is seen in the tendency for people to wish to control and regulate the behaviour of other people, all for their own good of course. Curiously, we seldom hear people say, “**I** need discipline; conscript **ME**” or “Reading Ulysses has corrupted **ME**; ban it” or “Prohibit the sale of alcohol so **I** will not get drunk and abuse my family” or “**I** am different; throw **ME** in gaol”. This is unsurprising, because while **I** am normal, **YOU** are definitely suspect.

Now all of this wouldn't matter much, the desire to control other people's actions, (only in their own best interests) were it not for the “*Aorta Syndrome*”. Not, as you might imagine, a cardiac complaint, but the catchcry of the terminally nosy, as in “*A orta do something about that*”. And “**A**” or “**they**”, meaning those people we foolishly allow to hold positions of authority, on hearing enough rumbling aortas, do “*do something about it*”. And what do they do? They invoke one of the most pernicious absurdities ever devised by the species homo. Something which makes the thermonuclear device, the rack and the thumbscrew look like cases of collateral damage. And that something is **bureaucracy**.

The Plot Thickens:

My dictionary defines bureaucracy in two ways. 1. *a system of administration based on organisation into bureaus, division of labour, a hierarchy of authority, etc: designed to dispose of a large body of work in a routine manner;* 2. *any administration in which action is impeded by unnecessary official procedures and red tape.*

Far be it from me to tell Messrs Collins their jobs, but in their first definition is a cop out. It may be that that is what

bureaucracies are **designed** to do but the reality is otherwise. It is like saying that a perpetual motion machine is **designed** to put out more energy than is put in. OK as a statement of intent, but utterly fatuous as a statement of fact. Indeed, a bureaucracy may be used as an example of maximum entropy, ie, *a closed system incapable of doing useful work*. The second of the definitions much more nearly approximates the truth of bureaucracy.

Those who believe that the BBC programme “*Yes Minister*” is a somewhat exaggerated portrayal of how bureaucracy works, have obviously never worked within one. Those who believe that bureaucracies are filled with people who spend all day drinking tea, should only wish that they were right. Bureaucracies would do much less damage if the consumption of hot beverages was all that they ever achieved. Those who use the term bureaucratic efficiency are as guilty of oxymoronic language as those who use the terms military intelligence or creation science.

Yet bureaucracies are seldom initiated for sinister purposes. Very often their genesis lies in nothing but the best of intentions. A problem exists? Give someone the job to solve it. Of course the person who has the job has to answer to someone. Appoint a supervisor. Set up some rules. But then you need to ensure that the job is being done right. Institute a weekly meeting, then a monthly report, conforming, of course, to strictly laid down guidelines, then a quarterly consolidation, on the form provided, then an annual review as laid down in Para (b), sub para 2(c). The supervisor has to read all the reports and respond. She is too busy? Give her a secretary. Add a filing clerk. And an office junior. And an office manager. And a tea lady. And a driver. Too many people for one supervisor.? Give her an assistant – who also needs a secretary. New rules are required for an organisation this large. Set up a committee to investigate the needs and requirements of the organisation, establish sub-committees. Send some people on a fact finding mission. And on and on and on.

Meanwhile, the person who was appointed to handle the problem, which only really needed the attention of one person in the first place, has no time to even think about it. He is too busy attending meetings and writing reports. Which no-one reads.

And this is the one universal factor that lies at the heart of all bureaucracies, governmental and private alike. Inefficiency. Lest my readers, most of whom would work within a bureaucratic structure of some kind, think that this

is an attack on them personally, may I assure them Not So. The efficiency of individuals is entirely irrelevant to the efficiency of a bureaucracy. Those who work within its structure are as much its victims as are those on the outside. Bureaucracy itself is as effective a barrier to corporate efficiency as relativity is to superluminal travel. It is a law of nature.

The evidence for this is all around us. Australia suffers from a plethora of bureaucracies. They have been established to combat all manner of problems, which, we would all generally agree, need solutions. Poverty, organised crime, intolerance, shonky operators in many fields, drug abuse, welfare, education, health *et al*. All are being addressed by any number of worthy bodies but is there any indication that any of these problems is about to be solved? Again, if you answered “Yes”, I respectfully suggest that there are other organisations more conducive to your mania than Australian Skeptics.

This is the prime reason why the All Pervasive Conspiracy makes no sense. For any individual or group to seek to control the world, they would need to inaugurate an almighty bureaucracy. Once this bureaucracy is established, it develops an agenda of its own. The ostensible reason for its establishment, be it for good or ill purpose, rapidly becomes secondary to the real motivation of any bureaucracy – the maintenance and, hopefully, the extension of its own existence.

Assume that George Kissinger really does want to control the world. It is obviously too large a job for one man, so he establishes a bureaucracy. Matters are now entirely out of his control. Bureaucracy acquires a life of its own and, like a virus, it spreads and mutates. Initial intentions, be they malign or benign, are irrelevant, as the fundamental and all pervasive ingredient of all bureaucracy, incompetence, has now entrenched itself, permanently and ineradicably.

Now we come to the question:

In seeking an explanation for the problems that we see in the world, do we need to invoke sinister conspiracies, or is another answer more probable?

To this question we first apply Occam's Razor. We know that bureaucracy can account for what we perceive, we know that bureaucracy behaves the way it does, regardless of the intentions of its initiators, why then do we need to invoke a further level of complexity to account for phenomena for which bureaucracy seems to be a perfectly adequate answer.

Although conspiracies undoubtedly occur, to postulate a conspiracy which, of necessity, requires homo bureaucraticus, to act efficiently, coherently and with a pre-planned objective in mind, is a wholly unrealistic hypothesis. The application of Occam's Razor makes it clear that the bureaucracy hypothesis multiplies far fewer needless assumptions in explaining the problem. And, if we equate conspiracy with malice and bureaucracy with incompetence, as I suggest we are entitled to do, then Occam's Shaving Brush would seem to put the issue beyond doubt.

My Lord, Ladies and Gentlemen of the Jury, I rest my case.

P.S.

Before the readers sit back, with sighs of relief, thinking to themselves, "Gee, I'm glad I don't have to worry about conspiracies any more", let them consider this final point.

While it is quite possible, in a good old fashioned conspiracy, to send in Bulldog Drummond to wipe out the conspirators, there is no way of eradicating bureaucracy short of sterilising the planet with radiation and allowing the cockroaches to inherit the earth.

They at least are smart enough never to have invented this pernicious scourge.

STOP PRESS

After completing the above expose, I came into possession of a document which confirms (or denies) my dismissal of conspiracy as an explanation of absolutely everything.

This document "fell off the back of a truck" or "precipitously descended from the hindmost sector of a self propelled transportation unit" as my informant put it.

It details the attempt of certain powerful elements within the Commonwealth Department of Ceremonial Protocol, Official Occasions Section, Lyrical Enactments Branch, to replace our current National Anthem with what is alleged to be a more popular piece of music.

As the words normally associated with that music were considered to be inappropriate to the solemnity of the occasions on which the National Anthem is frequently played, a Task Force was established to revise the lyrics. The results of this revision are published, for the very first time, in the following column.

I solemnly swear, on a stack of Manuals of Administrative Practice, that this is a true story.

Waltzing Matilda

*(in accordance with the National Anthems Act of 1920 (as amended)
Chapter 9, section 1:04, para 3/c, sub-para 11(ii))*

During a previous time frame, a jocose rural itinerant resided temporarily al fresco, in the environs of a permanently adjusted watercourse, Availing himself of the umbrageous qualities of an indigenous floral specimen, to wit Eucalyptus microtheca.

As he maintained a vigil and underwent an ongoing hiatus, in anticipation of the elevated temperature phase of his cylindrical liquid containment vessel, he vocalised euphoniously,

"You and I will engage in a terpsichorean episode in 3/4 time".

Enter a member of the species Ovis aries, intent on an oral irrigation experience,

Initiating, in the protagonist, the convulsive attainment of an upright posture, the forcible restraint of the mammalian livestock unit and the simultaneous exhibition of vocal and physiognomical risibility.

His audible exudations as he ensconced the ungulate within his mobile victual conservation facility, may be summarised as,

"Indulgence in rhythmical pedestrian activities is mandated"

At this juncture, the idyll was interrupted by the appearance of a member of the rural land-owning sector, in an appropriate equestrian mode, Accompanied by a triumvirate of law-enforcement operatives, similarly non-pedestrian in locomotion. "Confess the current location of the animated ovine, secreted in your comestible stowage module, You will experience a physico-musical, one-on-one situation with us."

The indigent resumed his perpendicular posture, prior to launching his physical person into the fluid medium "Incarceration whilst vital signs are in evidence is contra-indicated" was his riposte.

Habitués of the immediately adjacent spatial co-ordinates of the aforementioned riparian geological formation attest to certain audible phantasmic manifestations,

"Lyrical undulation in a bipartite context is indicated"

INVESTIGATION

Pyramid Power or Sharp Practice

Harry Edwards

Clinging tenaciously to the myth of pyramid power, New Agers will expound at length on stories about the mysterious and miraculous properties that they ascribe to pyramids, erroneously supporting their beliefs with "authoritative" quotations from "reliable" researchers such as Erich von Daniken.

Occasionally, the name of a Czech electrical engineer, Karel Drbal, crops up as the man who not only allegedly discovered that a razor blade, placed under a pyramid shaped container, will be re-sharpened by "magnetic energy curves", but who actually patented a device which will harness the force to do just that. Further, it is claimed that various foodstuffs, organisms, wine etc will remain fresh or preserved from decomposition by the properties inherent in the pyramid shape. (See *Pyramids, pyramyths and Pyramidiols*, Harry Williams, the Skeptic Vo18, No 3).

Drbal's line of reasoning appears to have been motivated by the observations of a Frenchman by the name of Hovis, who had observed that the corpses of small animals in the Cheops pyramid in Egypt had been mummified. Although the interior of the Great Pyramid is humid, it is well known that the hot dry Egyptian climate and/or hot air currents are conducive to the rapid dehydration and preservation of corpses in a mummified form. Since time immemorial in the Far East, fish have been laid out in the hot sun to dehydrate and preserve them and, once dried, they will keep almost indefinitely. Drbal decided, however, that there was a more mysterious force at work and the multi-purpose, multi-functional mini-pyramid was the result of his experiments.

Patenting an invention does not necessarily imply viability-plans for perpetual motion machines and rungless ladders for legless painters litter the archives of many a patent office. For reasons beyond the cognizance of even a moderately rational mind, Drbal's idea caught on in the USA; the Toth Pyramid Company of New York was formed to

manufacture and sell cardboard replicas. Since then, the concept has proliferated in many forms, shapes, sizes and materials, from pyramid hats to aid meditation and temper psychic awareness, to pyramid shaped dwellings for psychic and therapeutic benefit.

It is doubtful, given the generally unquestioning and naive acceptance of the weird and wacky by your average New Ager, that any have ever bothered to enquire further. Had they done so, those who, in a weak moment, may have succumbed to critically examining the evidence would have had their faith shattered, for not only is the description of the invention completely devoid of any supporting scientific evidence, but the inventor actually negates his own hypothesis.

Accompanying this article is a facsimile of page one of the patent and a marginally abridged translation.

Reading it, I find it difficult to believe that the inventor, whose exposition appears to be inconsistent with the attributes one would normally associate with his profession, is serious. This leads me to conclude that there must have been a devious motive behind the registration of such a patently transparent concept. Either there was a sinister communist plot to undermine the production of razor blades by private enterprise, or this was a ploy to help the Czech steel industry to meet its quota.

Coincidentally, the patent became valid on April 1.

BENT SPOON AWARD

Send your nomination for the most outrageous example of a paranormal or pseudoscientific event for the year, with as much detail as you can, to our PO Box.

The winner of this least sought after award will be decided and announced at the National Convention, June 8-9, 1991.

PATENT DOCUMENT NO.91304

Rights to use the invention are reserved by the State as per § 3, vol.6, official No. 34/1957 Sb.

KAREL DRBAL, PRAGUE

Method of maintaining razor blades and cut-throats sharp.

Registered on November 4, 1949 (P2399-49)

Validity of Patent from April 1, 1952

Invention applies to a method of keeping razor blades and cut-throats sharp, without the aid of any helpful source of energy. During sharpening of razor blades as per invention no mechanical means are used, or means of heating, or chemical interference and electrical means from artificial electrical sources. For the sharpening of razor blades up to date, various means of mechanical sharpening devices are in use, in which the blunted sides of razor blades are sharpened by rough interference, which results in a certain amount of wear or loss.

It is known further (my italic emphasis throughout), improving sharpness of razor blades and cut-throats by using an *artificial magnetic field* into which these items are placed so that their cutting edges point in the general direction of the (magnetic) energy curves. As per the invention, the razor blade is placed in the magnetic field of Earth under a hollow pyramid made from dielectric material, such as cardboard, paraffin paper, plywood or some other artificial substance.

The pyramid has at its base an opening in the shape of a square or oval, oblong or similar, through which the blade is placed inside the pyramid. *Best suited* is a pyramid with four sides and a square base, while the side of the square is *preferably equal* to the height of the pyramid multiplied by half Ludolf's number.* For instance, for the height of ten cm, a base of 15.7 cm is chosen. The razor blade or cut-throat is placed on a pad of similar material as the pyramid or other material (cork, wood, stone, paraffin paper) whose height is chosen *between 1/5 and 1/3 of the pyramid's height*.

The dimensions of the pad (placed inside the pyramid) should be such as to allow the sharp edges of the razor blade or cut-throat to be free of obstruction while its height can be different to the measurement given above.

Even though it is not basically required, it is recommended to place the razor blade on the pad so that its sharp edges point to the East and West respectively. This position improves the effect, *however it is not necessary for utilisation of the invention's principle*.

After correct placement of the razor blade, it is covered with the pyramid so that its side walls *preferably* face North, South, East and West.

By using the invention, 16 razor blades, Czech Trade Mark, "Dukat Zlato" completed 1778 shaves, giving an average of 111 shaves per blade. The lowest number was 5 and the highest 200. From the national economy point of view the advantages are as follows:

One razor blade of the above trade mark weighs 0.51 g. We will consider as average 50 shaves when the blade is sharpened in the pyramid against 5 shaves without the aid of the pyramid. Thus, in one year we use 73 blades, without using the pyramid, against 8 blades with pyramid sharpening, a saving of 65 blades annually - or 33.15 g of stainless steel.

For the registration of the invention, only the pyramid shape has been tested but the invention is not restricted to this particular shape. *It may consist of another geometric shape* made from dielectric materials and used in the same method.

Consider the following references to dielectric mater fields, artificial magnetic fields, alignment, geometric shape, and the mathematics and geometry in Mr Drbal's description of his invention.

Dielectric materials

I can claim a rudimentary knowledge of electric components gleaned from an apprenticeship in the era immediately following the invention of the germanium crystal and cat's whisker detector set (those readers under the age of 60 not familiar with the term should consult "*The Early Days of Wireless*" by Mark Oney) and seem to recall that dielectric material is simply another name for insulation such as paraffin wax pap mica, glass and even air found between the plates or a minium foil of a condenser or a capacitance. It can stated unequivocally that to function, a condenser requires the application of an electrical potential and dielectric is not affected by or has anything to do with magnetism which works on stationary ferrous metal and moving things such as electric motors and generators.

Drbal's dielectric container serves no purpose other than to keep the dust off its contents. Paradoxically magnetism was not subject to Kepler's inverse proportional law, then an increase in the dielectric constant (air plus an additional insulation) would inhibit not enhance the effects of magnetic flux.

Artificial magnetic fields

Although Drbal omits any reference when he claims that “it is known further that razor blades can be sharpened by artificial magnetic fields”, this unsubstantiated claim implies that a razor blade placed in proximity to a refrigerator motor or between the poles of a horseshoe magnet would be just as efficacious as his pyramid.

Alignment

The earth’s relatively weak magnetic field notwithstanding, the inventor invalidates the requirements of N-S-E-W alignment by saying that while it is “preferable”, it is “not necessary”. And later, although he recommends a certain alignment of the razor blade, he abrogates the requirement by adding that “it is not basically required” !

Geometric shape

This is where any credence, if any can be had at all in the putative powers of a pyramid shape, evaporates. Drbal states “It [the container] may consist of another geometrical shape” and, using another shape, “regeneration of the razor blade will take place too”. This statement negates completely any suggestion that the uniqueness of a pyramid shape enhances in some way the focus or concentration of the earth’s magnetic field.

Mathematics

A complete absence of mathematical and geometrical precision is evident in the physical construction requirements where Drbal says “the sides of the pyramid should preferably be equal to the height multiplied by Ludolf’s number” and whose “height should be between 1/5 and 1/3 of the pyramid’s height”, and finally “its height can be different”.

Conclusion

Drbal would have us believe that a razor blade can be placed at any height, facing any direction and under any non-metallic container regardless of shape or size, and a mysterious honing energy will act upon it. In view of the contradictions, ambiguity, arbitrariness and assumptions replete throughout Drbal’s description, it is difficult to isolate any resemblance to a coherent and plausible hypothesis.

Given the unrestricted parameters, it vaguely implies that a pyramid shaped container somehow focuses geomagnetic fields to interact with the atomic structure of metals. While this would have immense industrial and scientific value, a consideration of the materials and methods used place it in fantasyland.

*Ludolf’s Number is a common German appellation for the ratio π . It derives from the name of 16th Century German mathematician, Ludolf van Ceulen, who worked out the ratio accurately to 35 places.

My thanks to Pani Helena Simlova, of Prague, who went to a great deal of trouble to obtain a copy of the patent, and to her brother Josef Holman for his translation.

91304	DT 621.735.3
REPUBLIKA ČESKOSLOVENSKÁ ÚŘAD PRO PATENTY A VYNÁLEZY	
Třída 18 c 8,50 69 20,02	
	Vydáno 15. srpna 1959 Vyroženo 15. ledna 1959
PATENTNÍ SPIS č. 91304	
Právo k využití vynálezu přísluší státu podle § 3 odst. 6 zák. č. 34/1957 Sb.	
KAREL DRBAL, PRAHA Způsob udržování holicích nožů a břitev ostrými	
Přihlášeno 4. listopadu 1949 (P 2399-19) Platnost patentu od 1. dubna 1952	
<p>Vynález se týká způsobu udržování holicích nožů a břitev ostrými, aniž by se k tomu účelu použilo jakéhokoliv pomocného zdroje energie. Při ostření holicích nožů podle vynálezu není tudíž použito ani prostředků mechanických, ani tepelných, ani chemických, ani prostředků elektrických z umělého elektrického zdroje. K broušení opotřebovaných holicích nožů se až dosud používá různých mechanických brusných zařízení, u nichž ztupený břit jest ostřen hrubým zásahem brusné hmoty, což má vždy za následek určité nové opotřebování hmoty břítu působením brusného pochodu. Dále jest známo, zlepšovat ostrost holicích nožů i břitev použitím umělého magnetického pole, do něhož se tyto předměty vloží tak, že jejich ostří leží v podstatě ve směru siločar.</p> <p>Podle vynálezu se holicí čepelka uloží v zemském magnetickém poli pod dutý jehlan z dielektrického materiálu, např. z tuhého papíru, parafrinovaného papíru, tvrzené lepenky nebo některé umělé hmoty. Jehlan má dole otvor tvaru čtverce, kulatý, oválný apod., kterým se čepelka vkládá. Nejlépe se hodí jehlan čtyřboký se čtvercovou základnou. Dřičemž strana čtverce se s výhodou rovná výšce jehlanu násobené polovičním Ludolfovým číslem. Tak příkladně pro výšku 10 cm se volí základna 15,7 cm. Čepelka nebo břitva se položí na podložku rovněž z dielektrického materiálu, stejného jako jehlan nebo i jiného, např. korku, dřeva, kameniny, parafrinovaného papíru apod., jejíž výška se volí mezi 1/5 a 1/3 výšky jehlanu. Tato podložka spočívá rovněž na ploše z dielektrického</p>	
91304	

ALTERNATIVE THERAPIES

Natural, Alternative Misnomers

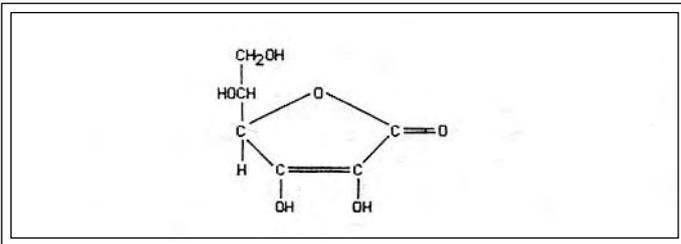
Anthony G Wheeler

Barry Williams' creditable publicising of another study exposing the ineffectiveness of "alternative therapies" (Vol 10, No 4) brings me to consider two of the issues raised.

Natural Vitamins?

Barry suggests that one of the fallacies of such philosophies is that we are expected to believe that ... 'natural' chemicals are somehow different from, and better than artificial ones.

One molecule of vitamin C consists of six carbon, atoms, eight hydrogen atoms and six oxygen atoms and, weighs 176.13 daltons. These atoms are arranged in a, four-carbon/one-oxygen ring structure, with one double, bond.



Other names for this compound are L-Ascorbic acid and L-xyloascorbic acid; the three names refer to the same chemical. Would anyone really believe that vitamin C made in the laboratory is any different from that made in a living cell? And if it were different, wouldn't this show up in the composition, structure and reactions of the different compound? Surely that the three years of compulsory High School science that all our students experience would equip them with sufficient knowledge of chemistry to know that a chemical is a chemical, and that, however formed, the same chemical will always be the same chemical, and if not, then it will be a different chemical. So that vitamin C is always the same vitamin C, whether produced by a living cell growing as part of an orange tree, a living cell cultured in the lab, or from selected reagents reacted in sequence in the lab. And if different reagents are used, a different chemical may be produced, in which case it would not be vitamin C. Natural or artificial, all vitamin C must be the

same as all other vitamin C.

To find out what the beneficiaries of High School science classes believe, I asked all my students at the end of last year. I gave them the statement "Natural vitamins are better for you than laboratory-made ones", and asked them to respond "True" or "False".

For each class the results were:

Ending 8 Science,	23 students,	13% correct
Ending 9 Science,	20 students,	20% correct
Ending 10 Science,	17 students,	6% correct
Ending 11 Biology,	12 students,	0% correct
Ending 12 Biology,	14 students,	14% correct
Ending 12 Maths in Soc.	18 students,	6% correct

Of all my 104 students, only 12 (11% of the total), identified this statement as false. If they had been blindfolded and unable to read the question, then answering randomly they would have been expected to have scored better, being correct 50% of the time.

In conclusion I deeply regret to report that at least one of Barry Williams' expectations of what the alternative therapists ask us to believe is what we actually do believe – that natural vitamins are better for us than laboratory-made ones.

Alternative Therapies

The alternative therapists lie in many ways. They lie in their pretence to understand the causes and nature of disease; their pretence to be able to deliver therapies that will moderate symptoms and cure disease; their pretence to have cured diseases in the past; and most of all, they lie in the title they give to themselves.

Of all the medical modalities available, the conventional, 'proper', establishment medicine offered by registered medical practitioners (doctors) is really the most 'L' 'alternative' of all. It is alternative in the sense of always experimenting with new modalities, testing new ideas, and

adopting any and all that are shown to be effective. Vaccination was a dubious new technique that proved effective, was adopted and is now widely used. Acupuncture was an interesting suggestion that has been repeatedly tried but has been repeatedly found to be of little value. Apart from trans-dermal electrical stimulation to relieve chronic pain, acupuncture has no benefit. Because of these constant revisions, adoptions of new techniques, drugs etc, any therapy that our local GP offers us today is likely to be radically different from (alternative to) that offered 20 years ago. All our modern therapies in conventional medicine are alternative to all that have gone before.

By contrast the so-called alternative therapies are neither. They are certainly not alternatives to anything. They are as fixed as stone carvings, and as obsolete. Acupuncture, chiropractic, homeopathy and the others have benefited little from the 20th century, there has been no updating of their understanding of the nature, the causes and the treatment of disease. Their only adoption of new knowledge has been the trivial use of electricity, as in electro-acupuncture.

Neither are the alternative therapies, since, as Barry Williams and others have shown, these modalities do not cure; are not therapeutic.

Instead we could re-name the 'alternative therapies' the 'parallel medicines'. 'Parallel' because they mimic science and medicine in their language and genre, but when you listen closely, or even talk to, say, an acupuncturist, they are talking a different language. Talking about the benefits of vaccination to an acupuncturist is like selling American 110 volt plugs in Australia – the two systems are so different that no conversion is possible. Our acupuncturist is likely not to recognise the existence of bacteria and viruses, so what is the point of talking about vaccines? The 'parallel medicines' are parallel in the sense that they run alongside medicine, but are always distant, never meeting.

The 'medicine' part of 'parallel medicine' appropriately has a lesser implication (compared with therapy) of a cure. Which is more accurate because, while you are having your back straightened, your headache might get better, but not necessarily. The treatment and any cure are not logically related.

I suggest that re-naming our contentious non-alternative non-therapies as the 'parallel medicines' may clarify the services and the benefits that they offer.

Skeptical Library

Barry Williams

Continuing the list of books which are available and which cover various topics of interest to Skeptics.

Ancient Astronauts and Cosmic Collisions, William H Stiebing, Jr, Prometheus, 1984

Scientists Confront Velikovsky, Donald Goldsmith (ed), Cornell U.P., 1977

Beyond Velikovsky, Henry H Bauer, Illinois U.P., 1984

UFOs Explained, Philip J Klass, Vintage Books, 1974

UFOs The Public Deceived, Philip J Klass, Prometheus, 1984

UFO Abductions—A dangerous game, Philip J Klass, Prometheus, 1989

The UFO Verdict, Examining the Evidence, Robert Sheaffer, Prometheus, 1980

The Elusive Quarry, Ray Hyman, Prometheus, 1989
A scientific appraisal of psychical research

The Adventures of a Parapsychologist, Susan Blackmore, Prometheus, 1986

A Physicist's Guide to Skepticism, Milton A Rothman, Prometheus, 1988

Physics and Psychics, Victor J Stenger, Prometheus, 1990

Not by Design, The Origin of the Universe, Victor J Stenger, Prometheus, 1988

Inquest on the Shroud of Turin, Joe Nickell, Prometheus, 1983

The Shroud Unmasked, David Sox, Canterbury Press, 1988

Skeptical

A handbook on Pseudoscience and the Paranormal

Published by the Canberra Skeptics
Available from Australian Skeptics
PO Box E324 St James 2000

Only \$7

Free Markets

Sir,

The intellectual and spiritual journey of Richard Buchhorn from the cocoon of Catholic theology still has some way to go, judging from the latter part of his epistle to the Skeptic (Vol 10, No 4) . One can applaud his desire to dismantle the structures of exploitation and oppression, and his views on the role of humour in debunking popular sacred cows. Perhaps one day he will be amused by the notion of reverting to the lifestyle of the Aborigines and to the egalitarian, advertisement-free, minimal consumption, non-competitive and non-growth policies of socialist central planning.

It is all very well for affluent Australians to deplore economic growth but this offers the only hope for a better life for the majority of people on earth, among them many poor people in this country. The point is to ensure that this growth is sustainable and that the benefits trickle down instead of being trapped by vested interests with political influence. It is important for Dr Buchhorn and many others who share his prejudices to learn how free markets can contribute to both these objectives.

As for the ecological importance of free and competitive markets, one of the ways to husband scarce resources is to price them at replacement cost. Under this constraint the quest for profits will promote the efficient use of resources and the development of alternatives. Free market environmentalists are doing a lot of good work to

LETTERS

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

show how to save the planet with minimal intervention by Big Brother and his bureaucrats.

In the area of social justice, free trade is often blamed for evils that have come about precisely because market forces have been suspended or blunted by governments. Typical examples are the unemployment, inflation and low productivity produced by the centralised wage fixing system. The operation of market forces in wage fixing could dramatically reduce the cost of living and create a great deal of employment as well. Dr Buchhorn is cordially invited to dispense with clichés such as 'the quasi-religious doctrines of healthy competition' and embark on a good humoured re-examination of his ideas about economics.

**Rafe Champion
Cremorne NSW**

Free Minds

Sirs,

I have seldom read such pitiful sophistry as that in the page-long letter from Richard Buchhorn (Vol 10, No 4).

His words ooze cheap, pseudophilosophy which, in the end, mean nothing: typical inane priestly discourse in a rambling attempt to glorify an Iron Age religious maniac

who wandered through the lands of Mesopotamia proclaiming himself to be the son of a god.

This must be one of the earliest recorded confidence tricks perpetrated upon mankind. It is still current, 2,000 years later, and is being injected into the brains of innocent little children day after day in the present era of so-called civilisation.

It is truly written that all men are mad but some are more mad than others. Men are deliberately taught insanity by the priesthoods.

**John Fitzgerald
Frankston North VIC**

Apology Accepted

Sir,

Thank you for your apology. The answer to my little problem (Vol 10, No 4) is about one inch of flood water.

According to a novel dictionary I have just been given, the word you want is "Fiunary", meaning "a safe place you put something and forget where it was". I use it frequently.

**Dr H.H.Macey
Floreath Park WA**

Is this the same place that has several hundred of my socks and my other pair of glasses? Ed.

P.S.
**How do you like
the new cover?**
Let us know.

A touch of culture

Sir,
Sir Jim R Wallaby is an ignoramus: anyone can quote Shakespeare, but no-one should quote Shakespeare who has not read him. While Wallaby was ferreting around in his dictionary of quotations, he missed the Hotspur/Glendower exchanges, great theatre as well as scepticism versus mumbojumbo. Please allow me to quote at length.

Glendower....: *at my nativity*

The front of heaven was full of fiery shapes,

Of burning cressets; and was at my birth

The frame and huge foundation of the earth

Shaked like a coward.

Hotspur *Why, so it would have done at the same season, if your mother's cat had but kit-*

tened, though yourself had never been born.

Glend *I say the earth did shake when I was born.*

Hot *And I say the earth was not of my mind,*

If you suppose as fearing you it shook.

Glend *The heavens were all on fire, the earth did tremble.*

Hot *O, then the earth shook to see the heavens on fire,*

And not in fear of your nativity.

Diseased nature oftentimes breaks forth

In strange eruptions: oft the teeming earth

Is with a kind of colic pinch'd and vex'd

By the imprisoning of unruly wind Within her womb; which, for enlargement striving,

Shakes the old beldam earth and topples down

Steeple and moss-grown towers. At your birth

Our grandma earth, having this distemperature,

In passion shook.

Glend *Cousin, of many men I do not bear these crossings. Give me leave*

To tell you once again that at my birth

The front of heaven was full of fiery shapes,

The goats ran from the the mountains, and the herds

Were strangely clamorous to the frightened fields.

These signs have mark'd me extraordinary;

And all the courses of my life do show

I am not in the roll of common men. Where is he living, clipp'd in with the sea

That chides the banks of England, Scotland, Wales,

Which calls me pupil, or hath read to me?

And bring him out that is but woman's son

Can trace me in the tedious ways of art

And hold me pace in deep experiments.

Hot *I think there's no man speaks better Welsh. I'll to dinner.*

Mortimer *Peace cousin Percy; you will make him mad.*

Glend *I can call spirits from the vasty deep.*

Hot *Why so can I, or so can any man;*

But will they come when you do call for them?

Glend *Why, I can teach you, cousin, to command the devil.*

Hot *And I can teach thee, coz, to*

shame the devil

By telling truth: tell truth, and shame the devil.

If thou hath power to raise him, bring him hither,

And I'll be sworn I have power to shame him hence.

O, while you live, tell truth and shame the devil!

Mort *Come, come, no more of this unprofitable chat.*

It hardly needs mentioning that Harry 'Hotspur' Percy ends as food for worms and Glendower makes a graceful exit from the play, still alive. A.L.Rowse wrote "(Glendower) is a legend in Wales. He was a Welsh mage; Hotspur was a fool." And so was Diogenes.

Niall R. Brawley
Strathfield NSW

Sir Jim responds:

Ignoramus I may be, but completely stupid I am not. If you think that I would use a quotation which makes disparaging comment on **Owain Glyn Dwr** (the way the Welsh spell his name), in a magazine whose editors go under the names of Williams and Edwards, then you have another think coming. Note I did not fall for your **Shakespeare** ploy.

Ageing new age

Sir,

Is it just me, or is the New Age becoming Old Hat? Could it be that the realities of war and economic recession are forcing us to face up to reality? Or are we just waiting for the next crazy fad?

S.G.Joyce
Roseville NSW

Medico's *cri de coeur*

Sir,
I thought your readers may be interested to know that in my particular area the role of the sceptic goes beyond the armchair. I hope you'll forgive me for suggesting that our endeavours in the realm of ghosts and UFOs and the like are relative trivialities. In my profession as a family doctor I am confronted daily by poltergeists and werewolves in the shape of herbal remedies, colonic detoxification and iris diagnoses.

The health area is a Pandora's Box of lies and half-truths told by health practitioners. Here at the coal face I find I must battle harder each day to reason with my patients after they have been told by the naturopath that their "liver" needs to be "detoxified". Regrettably my reasoning is deadly dull and boring when compared with the exciting revelation that garlic and vitamin C will cure all their ills. Even when I have made a significant diagnosis such as diabetes or hypertension I must struggle to persuade my patients that the "poisons" which I peddle are a better option than "alternate therapy".

That the enemy forces are growing is easily established by studying the Yellow Pages over the past ten years. It seems there is a limitless market for medical poppycock. This process is significantly enhanced by unquestioning journalists who are eager to report unsubstantiated and sensational claims. They make much better news than dull, boring doctors with their scientific blinkers on. Radio seems to abound with talk-back programmes where

iridologists, naturopaths and herbalists offer answers to all and every ailment, sight unseen.

In a country where every power point, kettle, floor joist, motor car and school lavatory must meet rigorous (and usually excessive) consumer standards, how can it be that absolutely anyone is entitled to sell medical advice....given that wrong advice is every bit as dangerous to health as a faulty kettle?

So I say unto you fellow sceptics, by all means keep hunting the elusive paranormal phenomena and their proponents but ANYTIME you feel like getting down to some real live medi-lies, come down here to the world of health care. Visit a "health food" store and browse among the pamphlets which flutter in the breeze beside the door. You need look no further for good juicy lies to debunk.

You would do our gullible patients a favour and save we docs the pain of trying to unravel all the crap by ourselves.

**George Quittner
Mosman NSW**

Fire walking

Sir,
When I read of the challenge to firewalkers to strut their stuff on a metal plate (which would also come in handy for a mass barbecue at the same time) I recalled an encounter with firewalking I had during a holiday in Sri Lanka in 1982.

In the early evening, branches were lit in a trough (about 4' by 7') in the dirt floor of a restaurant and allowed to burn

down to coals. Then the firewalker was outfitted in an elaborate costume and got himself stoned by inhaling smoke. Music on the PA system was building up to a crescendo. By this time the coals had cooled down a bit, so they had to be fanned until they glowed again, stirring up a great shower of sparks. To the accompaniment of gasps, cheers etc from the audience (all tourists), the firewalker trundled several times to and fro across the pit, carrying a fat German tourist on his shoulders for one journey; all very impressive.

The audience began to disperse. Having been in the front of the audience and thus at the back of the departing crowd, I saw the waiters and staff beginning to set out tables and chairs for the evening's business. Within minutes of the end of the performance, several locals had walked barefoot through the still-hot coals, rather than bother to walk around it. They didn't hurry across it or react to it at all. Possibly the mysterious secrets of firewalking are common knowledge in Sri Lanka (unlikely, since it was never part of the indigenous culture until the tourists came); or maybe it has something to do with the locals never wearing shoes, thus acquiring soles hardened beyond touristic belief.

**Steve Roberts
Lower Templestowe VIC**

Strangely we have been underwhelmed by the rush of acceptances of our offer to allow fire walkers to test their theory on a steel plate. The offer remains open. Ed.

Trans-Uranian Astrology

Sir,
 Something that fellow Skeptics might like to share. I have a stall at Glebe Public School's Sunday Market (The rationality zone), selling Space and Astronomy posters. A few weeks ago I found, on one of the "alternative" stalls, an innovation, so surprising in its consequences that it is astonishing that it has been around for so long and has been so little noticed (particularly by the "P" magazines and newspapers which run astrology columns). It is a book that promises to change our lives much more than humanistic/psychic/intuitive/eastern and western astrologies.

Trans-Uranian Astrology was the book's title; the preface explained that in the late 1800s a noted German astrologer had a feeling that something was missing in his horoscopes. Naturally, after reflection and examination of countless predictions etc. and with a determination to make the facts fit the theory, he concluded that there were four additional "Trans-Uranian" planets, which affected human destiny and which science had failed to discover. He gave them names like Zeus/Hades and "discovered" their positions and orbits. He made his discoveries known to a professional colleague, who returned his notes, saying "Yes" to the four but revealing that he (the colleague) had "discovered" yet a further quartet of "planets", increasing the solar system to sixteen "planets" and so preserving the "Science" of Teutonic Astrology. The book contained the Ephemerides for the eight new planets, epoch 1850

to 2000.

Skeptics may care to dwell on the numerological motive for this addition to the heavens. Eight natural, plus two lots of four, to complete a square number of planets, sixteen; an inner four, Mercury-Venus-Earth-Mars; an outer four gasgiants, Jupiter-Saturn-Neptune-Uranus; and now the additional two lots of four. The gods of balance and proportion be praised!

Have other readers run into this form of astrology before? I have read in Sputnik (the Soviet Readers Digest) of sets of additional planets which may have been derived from this source. Curiously, the book was published after 1930, which was the year in which Clyde Tombaugh discovered Pluto.

**Garry P Dalrymple
 Bexley North NSW**

Cryogenics

Sir,
 I've long been interested in the idea of cryogenics - the freezing of your body after your death, in the hope that one day it may be possible to reanimate you.

I can see two big uncertainties with cryogenics.

Firstly, the technical problem of freezing, storing and reviving people. On the whole I tend to be optimistic about it and think my chances of waking again as high as 50/50. Certainly they are a lot higher than my chance of rising from my grave through any other means. The second problem worries me more. It concerns trusting the people who will store me. I am, after all giving a bunch of people I have never met the bulk of my life savings, at a time when I am dead and therefore at something of

a disadvantage in keeping an eye on my investment.

This seems to me to be a perfect set-up for a con-game. A very deadly con-game. I stand to lose a lot more than my trust in human nature and some money - my chance to a second life is on the line.

For that matter, trusting honest but stupid people who, with the best of intentions, manage to go bankrupt, would be just as bad.

Now, I finally come to the reason for my letter. I'm asking all my fellow Skeptic readers for help. Does anyone have any information about cryogenic organisations that I might find useful? Has anyone investigated them or know of such an investigation? Do you know how I can check them out? Can you help in any way? Please!

**Marta Sandberg
 Bridgetown WA**

Correction

Sir,
 Thanks for publishing my review of Paranormal or Normal. However, you omitted from the quote at the top of column 2 on page 17 (5th line) the word "was" between "and" and "touching", thus turning my example of sloppy English into reasonably normal English. Should any of our readers write in to query my sanity, standards or motives, I would be obliged if you would publish this little correction.

**Alan Towsey
 Tahmoor NSW**

Sorry. Done. Ed.

Book Review

Richard Gordon

Cancer - What to do about it.

Ray Lowenthal MB, BS, MD, MRCP (UK), FRACP
Lothian Books, Port Melbourne, \$19.95

Dr Lowenthal is Director of Medical Oncology (ie a specialist in the treatment of cancer) at Royal Hobart Hospital. His aim in writing this book is to inform non-medical people about cancer and he does it very effectively.

The book is set out to allow for cover to cover reading and is well enough indexed to be used as a reference. He begins by defining cancer, then goes on to known causes, methods of diagnosis and the specific and supportive treatment of cancer. The book goes on to describe specific cancers, cancers in special situations and the future for cancer sufferers and for cancer research.

Chapter Six will be of most interest to Skeptics, dealing as it does with unorthodox cancer treatments and answering specific questions relating to the treatment of the disease by psychological methods and other unproven remedies. Many cancers can be treated successfully if diagnosed early enough. The problem with so-called alternative therapies is not that they are necessarily harmful, although some certainly are, but that the patient, in seeking these treatments is likely to delay seeking proper treatment that may well save his life. This chapter also deals with the question of who should treat cancer, discusses the qualifications of those who do and shows how lay people might evaluate information about cancer and its treatment.

Dr Lowenthal's approach to these latter questions and his clear and concise style makes the information he gives about this most feared of diseases readily understandable to the layman.

Aimed at the general public, this book is a valuable aid to understanding for cancer sufferers, their families and for all who wish to be well informed about this disease.

Richard Gordon is a General Practitioner, a member of Australian Skeptics National Committee and did NOT write Doctor in the House.

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.

1981 set	(3 issues)	\$6.00
1982 set	(4 issues)	\$6.00
1983 set		\$6.00
1984 set		\$10.00
1985 set		\$10.00
1986 set		\$10.00
1987 set		\$15.00
1988 set		\$15.00
1989 set		\$15.00
1990 set		\$18.00

As an, unrepeatabe, one-off, unique, unprecedented, end of our tenth year of publication, offer we will supply a complete set of all back issues, 1981 to 1990 (including the rare Vol 10, No 4, with the full frontal Tim Mendham photo) for a special price of:

\$100.00

Postage in inclusive for all Australian orders.

WE can also supply back issues of *The Skeptical Inquirer*, published in the USA by the Committee for Scientific Investigation of the Paranormal (CSICOP). All issues **\$10.00 (post incl)**.

Orders to:

Australian Skeptics
PO Box E324
St James NSW 2000

Bent Spoon Revisited

Barry Williams

Benter than the Walkleys, spoonier than the Logies, 1991 will see the ninth annual presentation of the Australian Skeptics Bent Spoon Award.

Presented to the perpetrator of the most outrageous paranormal or pseudoscientific claim of the year, the Bent Spoon has acquired a reputation as the least sought after award in the calendar.

Named after a similar award presented by James The Amazing Randi, prominent American Skeptic and master magician, the Bent Spoon Award consists of a gold plated dessert spoon, psychically bent into an aesthetic shape, attached to a polished wooden base. It is rumoured that the wood originally came from Noah's Ark.

The Bent Spoon is awarded each year, with the lucky? recipient being decided and announced at the annual convention of Australian Skeptics.

Eagle eyed readers will notice that no Bent Spoon was awarded in 1988. This is not because our bicentenary year suffered from a dearth of ratbagery (far from it in fact) but because we changed the date of our annual convention from the Easter weekend, which is early in the year, to the Queens Birthday weekend, which falls in June. The award was originally presented for events that happened in the calendar year preceding the convention. It was too much to expect members to remember events that occurred at least six months before, so we changed the nomination time to the 12 months preceding the convention. No doubt, in a couple of thousand years time, fundamentalist Skeptics will read all sorts of mysteries into this missing year.

Winners of the award are fully entitled to claim the plaque and retain it for a full year, the only proviso being that they remove it from our care by psychic means.

To this date and much to our surprise, no recipient has taken advantage of this generous offer. To remind readers of what has gone before and to encourage nominations for the 1991 award we hereinunder list in full our past honourees.

Your nominations should be sent to our Post Box in time for consideration at the convention in June.

1982. Tom Wards, self proclaimed "psychic", whose predictions in the popular press were renowned for their inaccuracy. Tom continues to predict, with no noticeable increase in veracity, despite the honour we accorded him.

1983. Dennis Hassel, "medium" whose chief trick was to make his hand disappear. Why? Who knows? Dennis has not come to our notice for some time, so perhaps he extended the trick to his entire being.

1984. Melbourne Metropolitan Board of Works, which paid money to an American "psychic" archaeologist to find the site of buildings previously located on their land. A fine example of your taxes in action.

1985. The Findhorn Festival Group, which sponsored the visit to Australia of American "psychic dentist" Willard Fuller. "Brother" Willard left town just ahead of some injunctions from real dentists.

1986. Peter Brock, prominent racing driver, whose highly touted "energy polariser" generated more heat in the motoring media than it did energy in his car.

1987. Anne Dankbar, Adelaide "psychic", whose discovery of the Colossus of Rhodes created something of a media stir until it was shown to be modern builders rubble.

1989. Diane McCann, yet another Adelaide winner, who wrote that Adelaide was built on one of the temples of Atlantis, which she later changed to Lemuria. We have pointed out before in these pages that the practice of medicine in South Australia is suspect, now we add geography to the list.

1990. Mafu, multilified entity, channelled by Penny Torres Rubin and who, despite millennia of experience, was remarkable for the banality of his/her pronouncements.



The Skeptic Competition

The December 1990 issue of *Omni* magazine, which was billed as “Special UFO Edition”, contained a number of articles on that topic, as well as some very good colour photographs of British crop circles.

It was not this, however, which attracted the interest of your humble editors, so much as the “Last Word” column, located unsurprisingly on the last page.

In this column, the writer, identified only as “Merry Morris (who) lives in Philadelphia”, provided answers to some of the questions which have plagued humanity since Neanderthal times.

To give the flavour of the sort of delightful answers Ms Morris provides (and to avoid being sued for plagiarism) we will mention just a couple.

“Q. Why does a watched pot never boil?”

“A. When a person watches a pot while waiting for it to boil, the intense radiation beamed from his eyes causes a vacuum over the surface of the liquid, making it impossible for the liquid to boil.”
and

“Q. Why are thunderclouds dark?”

“A. Thunderclouds are dark because they are ominous rather than luminous. Ominosity produces darkness, while luminosity produces lightness.”

Despite their obvious nuttiness, these answers have a curious sort of logic of their own and they certainly

make a lot more sense than many of the pseudosciences we deal with in Australian Skeptics.

We have always maintained that, to be a true Skeptic, one needs a finely honed sense of the ridiculous.

To test this hypothesis, we invite our readers to submit their explanations of some of the proverbs, clichés, axioms, truisms or givens that we encounter in everyday life.

The winning entry will be judged on originality, humour and evidence of obliqueness of thought.

First prize will be a copy of *Skeptical*, (advertised on page 27) or a free entry ticket to the National Convention, (advertised on page 15) as well as publication in the *Skeptic*.

This competition is open to subscribers to the *Skeptic*, professors of jurisprudence, ministers of the Dutch Reformed Church, mild mannered reporters on great metropolitan dailies, amateur taxidermists, persons who have been abducted by a UFO driven by a creationist, their relatives in the second or third degree, their heirs and successors according to law, or anyone with a 43 cent stamp.

The judges of the competition will be the editors and such other members of the National Committee as shall be co-opted against their will.

The judges decision shall be final and any correspondence entered into will probably attract an abusive response.

Entries should be addressed to PO Box E324, St James NSW 2000

About our Authors

Harry Edwards is National Secretary of Australian Skeptics and once grew a beard, which he removed when someone mistook him for Barry Williams. He is thus an expert on razor blades.

Roslyn Fekitoa is a hospital scientist at a major Sydney district hospital. She is one of only three people who has attended every Skeptics National Convention.

Dr Drew Meek works as an immunologist for the Therapeutic Goods Administration of the Dept. of Community Services and Health. He is President of the Canberra Skeptics and confidently expects to inherit the earth.

John Smyrk is a former NSW Secretary of Australian Skeptics. He is a management scientist who knows far more about computers and statistics than is good for him.

Dr Anthony Wheeler is a scientist, a teacher and a former Secretary of QLD Skeptics.

Barry Williams is President of Australian Skeptics, Editor of this journal and has very tired fingers.

Sir Jim R Wallaby was the Acting Deputy Assistant Under Secretary of the Dept of Dubious Activities until he discovered that the Tea Lady was entitled to a larger carpet square than his. Suspecting a conspiracy, he resigned in low dudgeon.