

# NEW ZEALAND SKEPTIC

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## Skepticism and Miracles

William Grey

*This article is abridged from a series by the author on philosophy and the paranormal. Here, Dr Grey discusses David Hume's analysis of miracles and his view that belief in miraculous events is always unjustified. He also investigates the nature, virtues and dangers of different skeptical viewpoints.*

### Hume's Razor

What is a miracle? In the vernacular we speak of "miraculous" escapes and the like, to characterise events which are extremely unlikely — at odds with the normal course of experience. A miracle in this weak sense just means a very improbable event.

David Hume, in his famous essay "On Miracles," had a stronger sense of "miracle" in mind, namely something which violates a law of nature. It is in this sense that miracles have commonly featured in religious systems of belief, as the means by which God has been thought to have demonstrated His presence or His power to His chosen people.

The question which Hume addresses is: are we justified in believing that miracles have in fact occurred? He argues for the very strong conclusion that we are *never* justified in believing

that a miracle has ever occurred.

Hume is *not* claiming to show that miracles have never occurred. Proving negative existence claims is notoriously problematic. Hume's claim is the importantly different one that we are never rationally justified in believing that miracles have occurred. That is, Hume is addressing the epistemological issue of what it is rational to

believe, rather than the metaphysical question of what is and is not possible in our sort of world.

The argument has two parts. First, Hume argues that the evidence *against* miracles is usually very strong. (And according to one of Hume's epistemological maxims "a wise man proportions his belief to the evidence.") We therefore have to weigh the evidence that a miraculous event happened against the evidence that it did not.

In evaluating testimony for miracles, Hume advances a principle which, echoing the famous methodological principle commonly attributed to William of Ockham (c. 1285-1349), has been  $\Rightarrow p3$

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# Trivialising Sex Abuse

Do you ever feel dirty or ashamed? Do you have no sense of your interests or goals? Do you sometimes feel powerless, like a victim, have phobias, arthritis, or wear baggy clothes? According to two recent books, *The Courage to Heal*, (over 500,000 copies sold) and *Secret Survivors*, if your answer to any of these questions is yes, you may well be a victim of incest.

Never mind that you cannot remember being subjected to sex abuse by a family member: if you have doubts you were abused or think it's maybe your imagination, then you probably suffer from "post-incest syndrome." Denial is just a symptom; you're blocking memories. As one author puts it, in the realm of sex abuse, "If you have any suspicion at all, if you have any memory, no matter how vague, it probably really happened." In fact, there are platoons of therapists eager to use hypnosis to discover your forgotten episodes of violation and victimisation.

This distressing new turn in victim fashions is recounted in a stunning *New York Times* Book Review article by social psychologist Carol Tavris (write or phone me if you'd like a copy). She shows how the current spate of "incest-survivor books encourage women to incorporate the language of victimhood and survival into the sole organising narrative of their identity" — often with the encouragement of dubious therapists.

The mechanics of memory, Tavris rightly explains, are subtle and complex. Regressive hypnosis is more likely to generate fantasy "memories" than to recover recall of actual events. It's a matter of memory by creative suggestion. When a troubled client is searching for the cause of a current malaise, such "digging" into the past can carry over into mere persuasion.

To the Skeptics it has a familiar ring — "experts" who hypnotise patients/victims to "discover" that they were raped in previous lives, or were abducted by UFOs and taken to

the planet Zork to be subjected to weird medical experiments. But there is a difference: the man who raped me when I was a housewife in Atlantis is no more available for prosecution than the little gray Zorkian who abducted me. But dear old dad — well, there he is, and mum too. After the therapists come ... the lawyers.

The definition of abuse in this new victimology is as expandable as a hot-air balloon, according to Tavris. She tells how one of the gurus of this new victimology "didn't like the way her mother would plant a 'wet' kiss on her, look at her in ways that made her feel 'queasy' and walk in on her in the bathroom." It wasn't until years later, the guru claims, "that I came to terms with my mother's behavior and saw it for what it really was — sexual abuse."

Skeptics will find this new trend in victimhood disturbing for two reasons. First, the creative incitement of pseudomemories of sex abuse will lead to false accusations against parents and others, with devastating results for individuals and families. Second, it is no secret whatsoever that there is appalling sex abuse going on in our society. To use sex abuse as a principle explaining every incidence of adult unhappiness trivialises a serious human problem. In a world in which every unhappy soul is a "victim," the needs of real victims will be ignored.

We'll present more on this important topic at the Skeptics annual meeting in September in Christchurch. Mark your calendar!



This is a floppy disc. If at all possible, please send articles on **IBM-compatible** disc in ASCII, Wordstar or Word Perfect formats, or **email** them (address at right). Discs will be returned if clearly labelled.

Please indicate publication and date of any clippings.

Contributions should be directed to:

**Dr Denis Dutton, School of Fine Arts,  
University of Canterbury, Private Bag 4800,  
Christchurch.**

**Email: [fin012@csc.canterbury.ac.nz](mailto:fin012@csc.canterbury.ac.nz)**

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called Hume's Razor. The principle is:

*No testimony is sufficient to establish a miracle unless that testimony be of such a kind that its falsehood would be more miraculous than the fact which it endeavours to establish.*

The second stage of the argument claims that even though the evidence in favour of miracles *might* outweigh the evidence against them, *in practice this never happens*. Hume maintains that there never was a miraculous event established on sufficiently strong grounds to warrant rational belief in its occurrence. There are four factors which undermine the credibility of any claim of the miraculous.

First there is the problem of witness credibility. Witnesses who testify as to the occurrence of miracles are seldom totally above suspicion of either having been deceived or of the intent to deceive. In evaluating their testimony, we must always choose between believing that a miracle occurred or believing that the witnesses were deceived or deceitful.

According to Hume, no miracle has ever been "attested by a sufficient number of men, of

such unquestioned good sense, education and learning as to secure us against all delusion in themselves; of such undoubted integrity as to place them beyond all suspicion of any design to deceive others..." All claims for miracles, that is, suffer from

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### **There is a natural human affinity for the novel, the surprising and the marvelous.**

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what we call a credibility gap.

The second problem which Hume identifies is human credulity. There is a natural human affinity for the novel, the surprising and the marvelous. Recognising this propensity for credulity, we must take note of and be guided by the following maxims in evaluating claims for the miraculous:

- ☐ Objects of which we have no experience resemble those of which we do have experience;
- ☐ What we have found to be most usual is most probable;
- ☐ In case of dispute, give preference to the side favoured by the greatest number of observations.

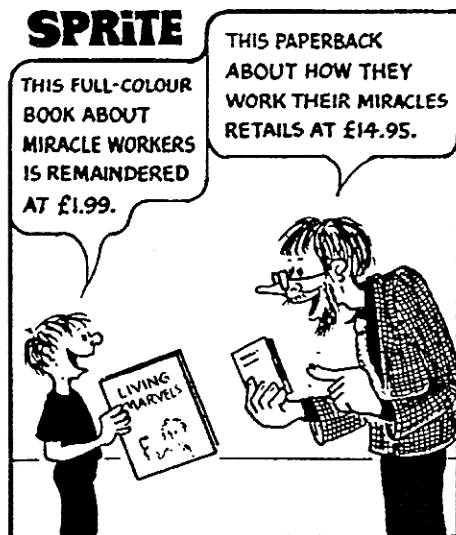
These sound, if somewhat pedestrian, maxims are fre-

quently overridden by the excitement and novelty which is often the basis of human credulity.

Hume's third point about miraculous claims is the tribal origins of superstition. Miracles occur mainly in primitive (in Hume's words "ignorant and barbarous") nations, or are derived from barbarous and ignorant ancestors. As human understanding develops, we come to reject omens, oracles, astrology, demons, and the like as unhelpful in explaining natural phenomena.

Finally, Hume points to a problem which confronts claims of the miraculous concerning conflicts of testimony. It is impossible that the religious traditions of "ancient Rome, of Turkey, of Siam, and of China" should all of them be established on any solid foundation. Every miracle claimed within any one of these traditions is intended to establish the truth or that tradition and to discredit the claims of the others.

Hume believed that the inclination of mankind towards superstition and the marvelous may receive some check from sense and learning, but he also seems to have believed that it could never be thoroughly ex-



British & Irish Skeptic, Donald Room



tirpated from human nature. Hume, one suspects, would not be surprised to find beliefs in astrology, UFOs, crystals, channeling, and similar credulous ideas in the twentieth century.

### The Virtues of Skepticism

Skepticism can be characterised as a critical stance with regard to knowledge (or existence) claims, and a skeptic is one who calls such claims into question. Skepticism can refer to either the critical stance adopted in subjecting knowledge claims to careful scrutiny, or to a state of doubt or disbelief which may be the outcome of such an inquiry.

Being skeptical in the second sense (withholding assent, or suspending belief in a particular claim) need *not* involve believing the opposite. Skepticism is a matter of doubt rather than denial. If I withhold assent from the claim that God exists, it need not be the case that I believe that God does not exist. I might believe that the evidence is just not strong enough to settle the matter either way.

We need to distinguish between *critical* and *dogmatic* skepticism, and between *selective* and *global* skepticism, though these terms do not mark absolute distinctions.

Skepticism is dogmatic if assent is withheld *a priori*, that is, on the basis of prior conviction without considering the evidence. For example, Galileo's colleagues expressed a perfectly intelligible skepticism about the existence of the moons of Jupiter; they became dogmatic when they refused to look through his telescope.

Skepticism is global if it is general and encompasses *all*

claims to knowledge; selective if it is targeted to *specific* knowledge claims.

Global skepticism is rare. Perhaps Cratylus, an older contemporary of Plato (c. 428-348 BC), is the most global skeptic recorded in the annals of philosophy. His skepticism is said to have been so extreme that he refused to answer questions and would only wave a weary finger at his interlocutor to indicate that truth was so elusive and ephemeral that it would be useless to reply. (At least, that is what his interlocutors are reputed to have believed him to have been attempting to say).

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**While rejecting a dogmatic skepticism which refuses to countenance anomalous events, critical skepticism seeks to gather as much evidence as possible concerning any extraordinary or allegedly paranormal event, claim or theory.**

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Skepticism which falls short of the global always has to be qualified by specifying the subject matter to which it is directed. There are various beliefs, for example about rocks and tables, which are immune to skeptical doubts — at least outside philosophy seminar rooms.

At the other extreme there are tooth fairies, Santa Claus and the elixir of life, which most will immediately dismiss as lacking sufficient epistemic warrant. In between (drawing boundaries here will create controversy) there are various disputed cases and claims, such as God, economic rationalism, J-curves, nuclear deterrence and

psychic and paranormal phenomena. Disputed cases are also the coal-face of the professional philosopher: on which side of the dividing line, for example, should we put minds, beliefs, desires, meanings, properties, and numbers?

### Strange Claims

When confronted with a claim about some strange, paranormal or similarly anomalous phenomena (an accurate premonition, a "near death" or an "out of body" experience, say), we should adopt a scrupulously skeptical approach. By this I do not mean that we must conclude that the experience did not occur, or that whoever had the experience must have been somehow deluded — though do not rule that out either! Rather, we should be alert to the possibility of natural and ordinary explanations of unnatural and extraordinary occurrences.

We must be especially careful in evaluating the evidence which appears to support such anomalous events. While rejecting a dogmatic skepticism which refuses to countenance anomalous events, critical skepticism seeks to gather as much evidence as possible concerning any extraordinary or allegedly paranormal event, claim or theory.

Critical skepticism means keeping an open mind not rejecting disputed claims *a priori*. We must examine the evidence scrupulously. But it means refusing to accept as true claims for which there is insufficient or ambiguous evidence, and recognising that withholding belief is preferable to accepting claims for which there are not sufficient grounds.

It also means adopting as a methodological maxim the



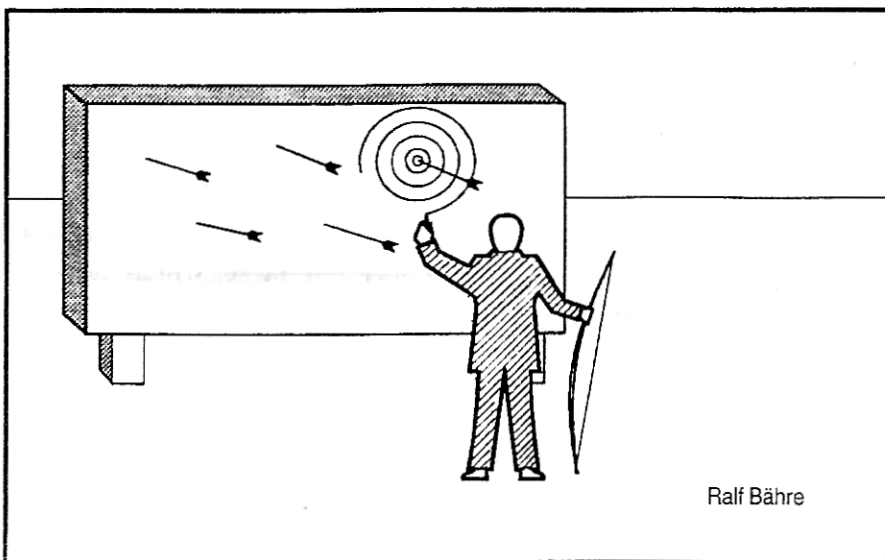
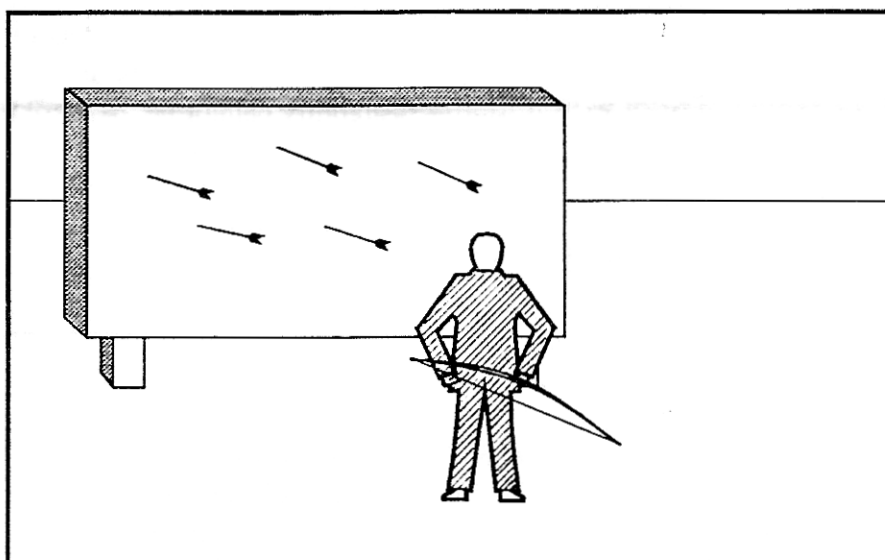
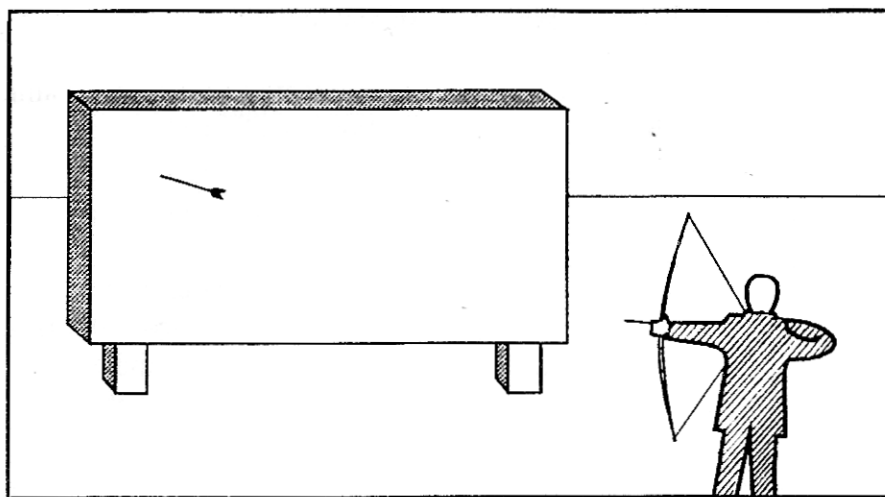
principle that in seeking explanations we should prefer the ordinary to the extraordinary, and the simple to the complex. This is *one* interpretation of "Ockham's Razor."

Skepticism is the disposition, or art, of matching belief to evidence. There is at present no convenient antonym for "skeptic." For convenience, I propose to revive the archaic expression "credulist" to serve this role. A credulist can be understood as someone who is apt to accept claims without sufficient evidence, that is to say, someone whose epistemic standards are too low.

### Why be Skeptical?

Etymologically, *skeptikos* means "inquirer," and the value of skepticism is that it leads to — and when seriously entertained is usually the result of — a systematic inquiry into the foundations of knowledge. Skeptical arguments play a central role in inquiry, particularly philosophical inquiry where they have been directed not just at eccentric belief systems, but at beliefs which most regard as self-evident. Thus skeptical arguments have been raised about the existence of other minds, knowledge of the past, knowledge of material objects (the "external world"), moral truths, sensory knowledge and even about knowledge of logic and mathematics.

The purpose of skepticism in these cases is (usually) not to raise extravagant doubts (though that is sometimes an unintended consequence), but rather to clarify our understanding of the subject of inquiry. There are apparently more modest forms of skepticism which challenge, for example, theological or metaphysical knowledge. And in some cases



Ralf Bähre

## Bullseye!

(for example, I suggest with respect to astrology or phrenology) skepticism seems to be not merely defensible, but appropriate.

When pressed to extremes, skeptical arguments sometimes turn out to be self-defeating, and the critical pursuit of knowledge leads to a denial that knowledge is attainable. Extreme or global skepticism has often been the consequence of setting unreasonably high standards as to what is acceptable as knowledge — in particular setting absolute certainty (the impossibility of being mistaken) as a requirement for genuine knowledge.

### Objections to Skepticism

Routine rejoinders to skeptics are, first, the claim that skeptics demand unrealistically high standards of proof (often accompanied by the charge that the skeptics' insistence on these standards is unjustified), and, second, an insistence (sometimes dogmatic) that a disputed category of experience (a psychic experience, say) is more certain than any skeptical argument which calls them into question.

Regarding the first point, the insistence of protocols, controls, and repeatability are based on the beliefs that nature is consistent — and human nature often suspect. No one demands 100 per cent repeatability. There are always anomalous observations due to the quirks of experimenters or their apparatus. (Indeed with complex scientific experiments it is a formidable task to get anything to work at all.)

But for any extraordinary claim to gain respectability, it has to be replicable by someone somewhere. A recent example

of the failure to meet this requirement was the discrediting of the exciting empirical claim by Pons and Fleischmann about so-called cold fusion.

The problem with psi phenomena is not that it is difficult for careful researchers to get it to work occasionally under rigorously controlled conditions; it is difficult for careful observers to get anything at all that can't be dismissed as noise, error, wishful thinking, chance and often, sadly, fraud. It is for this reason that the requirements of controlled experiments and repeatability cannot be dismissed as unduly fussy: experience shows that nature does not cheat and that people sometimes do.

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There are number of manipulative techniques such as "cold reading," which are well known to psychics (and magicians), which are used to fool people into believing that there are special psychic powers.

Skepticism should not be confused with *cynicism*, though it frequently is. A cynic is someone who is inclined to believe the worst about people. Cynicism is however a *form* of skepticism: it is skepticism about the sincerity or goodness of human motives and actions.

Historically, Cynics were a sect founded by Antisthenes, a pupil of Socrates, who condemned wealth and the enjoyments of life. The most extreme and celebrated exponent of the movement was Diogenes.

In the history of philosophy we find skeptical arguments are repeatedly proposed and then attacked and "refuted." Skepticism is a continuing challenge to dogmatic claims, and helps to maintain the spirit of free inquiry. Without skepticism we would be in danger of failing to distinguish enthusiasm, prejudice, and superstition from serious, rational, and well-grounded beliefs, which is essential to the task of making sense of the world.

Perhaps the main danger for skeptics is that they sometimes have difficulty in distinguishing hard and soft data, that they set their standards of epistemic acceptability at too high a level (in contrast to credulists, whose epistemic standards are too low) and may tend to promote their own form of dogmatic conservatism.

The aim of skepticism is to combat doctrinal rigidities which can afflict almost any belief system, but skeptics must remain alert to the possibility of falling prey to rigidities of their own. Skepticism is all about matching belief to evidence. It is a difficult and continuing challenge to maintain the right proportion of skepticism in our inquiries. Only then are we able to steer between the Scylla of dogmatism and the Charybdis of credulism.

Dr William Grey is a lecturer in the Department of Philosophy at the University of New England, Armidale.

# Put a Pixie in Your Petrol

Bernard Howard

*A Sprite in your Spirit, a Bogle in your Benzine, a Fury in your Fuel, a Greyhound in your Gasoline. With acknowledgement to the oil company which, many years ago, urged us to "Put a Tiger in your Tank."*

*"It is far too easy for promoters of such products to make extravagant claims, and very difficult, time consuming and expensive to challenge such claims ... there needs to be a system whereby advertisers can be required to prove such fulsome claims, rather than requiring disbelievers to disprove such claims."*

Yet another moan about homeopathic medicines from the pages of *Skeptical Inquirer*? Wrong! The quotation above is from the New Zealand Automobile Association's *Directions* (September 1992), and refers to "Petrol Pills," claimed by the distributors to improve your car's fuel consumption by up to 17%, increase power by 8-12%, and to reduce harmful emissions. In careful tests, the AA could not confirm any of these claims.

The "Petrol Pills" promotion was backed by the usual "unsolicited testimonials" and by vague test reports of doubtful provenance. The subject of this next note has an apparently more respectable origin. It was observed by a contributor to *Skeptiker*, our German counterpart, at a well-respected technical exhibition, "Ceramitec," in Munich.

Among the many well-attested marvels of modern ceramic technology was the stand of a Japanese firm, introducing "Mirax" pellets — a "philosopher's stone," according to our German colleagues. A few pellets

in your petrol tank will alter the molecular structure of the fuel(!), so that the specific heat of combustion is raised. This is claimed to allow fuel savings of 10-20%, power increases of 10-20%, the reduction of CO<sub>2</sub> and hydrocarbon emissions by 30-40%, and a general cleaning of motor and exhaust systems.

This material of paranormal power is made by sintering together over twenty common ceramic materials. One of these contains uranium, and the "Mirax" pellets contain much more radioactivity than is usually considered safe. Apart from the safety aspect, automotive engineers can see no way in which these pellets could work as claimed.

Our final "pixies" do not actually go into the tank; they are magnets which are fastened round the fuel intake to the carburetor. They are claimed to "excite" the fuel as it passes to the engine, making it burn more efficiently and less pollutingly. *New Scientist* has reported on a number of these devices recently.

The British Advertising Standards Authority has ruled against the claims made for several of them, on the ground that no evidence was provided to substantiate them. More colourfully, a university engineer says a dead chicken wrapped around the pipe would be just as effective. American authorities, both state and federal, have used the courts to stop the sale of these devices until the claims are proved.

A joke from my boyhood was about a man who installed so many petrol-saving devices in his car that his fuel savings exceeded 100%, and he had to stop occasionally to empty his overflowing tank. Apparently the old chestnut has not lost its point.

Bernard Howard is the Secretary of NZCSICOP.

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## The New Zealand Skeptic Overseas

Several copies of each issue of our newsletter are sent to the international skeptical movement's headquarters in Buffalo, New York. Many of these are distributed to our sister organisations around the world, and it is gratifying when items by our members are noticed in other publications.

Two recent examples:

Russell Dear's article on "Equine Pseudoscience" is reprinted with acknowledgement in the UK *Skeptic* for March/April (Vol 7 No 3). Solace for poor Russell, who appears from his writing to live a "horse-pecked" existence.

An editorial in *Skeptiker* (1/93) summarises at length Hugh Young's recent article on "Cold Reading for Fun and Profit". Hugh's gentle deception of "Madame Mamoque's" customers receives high praise. So also does Dr John Welch, whose notes in "Hokum Locum" are seen as a refreshing antidote to the views of many German doctors.

Bernard Howard



# 1993 Skeptics Conference:

## Science, Pseudoscience, and Junk Science

Christchurch, September 3rd-5th

The programme for the 1993 Skeptics Conference is still under development, but it's shaping up to be really interesting. It'll be a rather omnivorous event, complete with meat *and* teeth. Come along for the usual humour and frivolity that make our conferences fun, but also be prepared to be challenged.

We know we're a diverse group, but one of the common characteristics of *Homo skepticus/skeptica* is the tendency to talk and debate...at length...at the drop of a hat...on almost any subject.

Consequently, this year's conference is looking at having a number of panel sessions to encourage participation from a range of speakers semi-simultaneously, with plenty of discussion time following to enable extended participation from the floor.

Three main panels are so far under development:

**The Nature of Scientific Method** — what are the characteristics of good science, what should we be looking for in science, how should science be conducted, and how can it be useful in everyday life?

**Junk Science** — having got some form of grounding in real science, we then turn our attention to junk science to see the way in which

science is used and abused in everything from environmental issues to health research.

**Teaching Critical Thinking** — what is being done in schools to encourage critical thinking and/or an appreciation of the scientific method, what should be done and how can it be encouraged, is there room for this in the new curriculum, what is the place of science and technology?

There'll also be a pile of speakers and unspeakable demonstrations throughout the conference, such as:

- ☐ Police Use of Psychics
- ☐ Acupuncture
- ☐ Electric Medicine
- ☐ Witches
- ☐ Manufacturing Memory

Last, but by no means least, we are delighted to be able to tell you that we have a \*magical\* after-dinner speaker in the form of Margaret Mahy, internationally acclaimed children's author and Skeptic. She's living proof that you can be creative *and* rational at the same time! (Don't forget to send in your filking and photography entries, even if you can't make it to the conference itself!)

### Skeptical Songs

*Did Astronauts in ancient  
times  
walk upon England's  
mountains green?*

Put appropriate words to well-known melodies for Skeptical Songs to be sung or displayed at the conference.

Bring them with you, or send them in and win a mystery prize!

### Phenomenal Photography

Is it a moa? Is it a Yeti?  
Or is it just Superman??

All Skeptics are encouraged to send in their photos of strange and unusual phenomena for display at the conference. Send us your photo or slide with a paragraph on what it is (or is meant to be!) Include an SASE if you want it returned.

**PRIZE:** "Fringes of Reason" — an amusing and educational tour of the New Age, donated by the *New Zealand Science Monthly*.

# Monkeying with Your Private Parts

Bernard Howard

Rejuvenation! The wish of many a tired old man, and not so old: to regain the physical and sexual vigour of youth.

During the early decades of this century it was widely, though not universally, believed that such a rejuvenation, a turning back of the clock, could be achieved. It was thought that the secret of youth lay in the primary sex organs, so transplantation of the testis from young to old was the method adopted. In the 1920s a dozen or more surgeons around the world were ministering to this fervent desire by grafting the testes of young animals into those patients who could afford the fee.

We now know that this operation was quite useless, yet the surgeons and their hundreds of patients were on the whole convinced that the latter were indeed made to feel younger and fitter. Since that time we have discovered what formidable barriers the body raises against the introduction into it of "non-self" tissues. Material even from close relatives is rejected, and only in very recent times have methods been found for breaching the body's defences to allow the intrusion of carefully matched foreign organs. This type of operation still makes newspaper headlines. Grafting *between different species*, using the techniques of sixty or more years ago, is impossible; rejection, the complete killing of the graft, would have been very rapid.

We have here, then, a most powerful example of the placebo effect, so a closer look at these events would follow natu-

rally on Bill Morris's article on the subject in the previous issue (*Skeptic* 27).

To set the scene, the medical background to the activities of the gland grafters, we note that as the century began the science of endocrinology was just beginning. The powerfully acting secretions of the endocrine glands were slowly being discovered and studied. First, the effect of extracts of thyroid glands on cretinism and myxoedema, then in the early twenties the anti-diabetic action of the pancreas extract insulin.

## Gland Extracts to Restore Virility

It seemed a natural extension that an extract of the testis gland should restore flagging virility, and some unsuccessful trials along these lines took place. (When a hormone was, many years later, isolated from testes, and named testosterone, it was found not to have the effect sought.)

Seeking a more successful way of using the sex gland, surgeons looked to grafting. It was known at that time that cornea and bone could be transplanted from one person to another, but it was not then realised that these successful grafts were rare exceptions — rather, they were taken to indicate that grafts between people of any organ were possible. This view was strengthened when the discovery of blood groups enabled doctors to avoid the disasters which attended many of the early attempts at blood transfusion. The fact that some skin grafts did not "take" was ascribed to less-than-perfect tech-

nique, and many apparent "takes" were only the growth of the recipient's own skin, and not the graft at all.

So the grafters got to work, initially on animals, and then on human patients. The usual technique was to excise the testis from the donor animal, open the scrotum of the recipient, and place either the whole donor testis, or a slice, close up against one of the recipient's testes, and then to sew him up again. In most cases the implanted tissue appeared to persist over time, giving the impression that the graft had "taken." From our present standpoint we view this effect as the result of the rapid invasion of the graft by host cells, so the apparent "extra" gland was merely inactive host tissue.

Some of the earliest transplants into humans (from 1919 onwards) were carried out on those well-known experimental subjects, the residents of US gaols. These were man-to-man transplants, the "death row" of the prison serving as a regular source of fresh donor material. Dr Leo Stanley, chief medico at San Quentin Prison in California, was the leader in this work, and carried out many transplants into "volunteer" prisoners during the 1920s. He and his patients were generally pleased with the results, and he impressed his fellow physicians sufficiently that several of them underwent the operation themselves.

In spite of this, there is no doubt that the most famous of the testis grafters was Serge Voronoff, a Russian émigré doctor of great wealth and cha-

risma, active in Paris from the 1880s until the Second World War. Already in his 50s, and with a successful and fashionable medical career behind him, he turned in 1919 to the work that made him famous, his rejuvenation treatment. Lacking access to human material, he chose as donor animal the chimpanzee.

Believing that human grafts were possible, he picked on man's closest relative as being the most likely to provide a transplant acceptable to the recipient's tissues. Despite the expense (the chimpanzees alone cost a small fortune, as they each had to be caught in Africa and brought safely to France), he had many patients.

Voronoff's fame during the 1920s arose not only from the "success" of his grafts, but also from his copious output of books on the subject, which he continued to publish long after the operation had passed out of favour. He had had from the outset critics who doubted the efficacy of the testis grafts, but it is uncertain whether, judged by the knowledge of the time, they had more reason for their skepticism than Voronoff had for his optimism.

The two British doctors' journals took differing views: the *Lancet* was consistently critical of Voronoff's medical claims and reviewed his books unfavourably, while the *British Medical Journal* was generally more approving.

Perhaps surprisingly, Voronoff's undoing came not from a medical but a veterinary quarter. Emboldened by his success with human patients, he returned to his earlier interest in animals, and put his talents at the service of French agriculture. In 1924 he secured the use

of a flock of sheep at an agricultural station deep in the French colony of Algeria. Some of the young rams of this flock received a testis graft, others were left unoperated. On reaching maturity, the operated rams were found to be heavier, and yielded more wool, than the unoperated controls. Not only this, but the progeny of the grafted rams also gave more wool.

### Success?

Conclusive proof! Surely this evidence would silence those who had doubted. The animal results could be assessed objectively, unlike the confidential and subjective observations on the human patients. So groups of veterinarians and agriculturalists were invited to inspect the "super sheep." All but one of the international visiting parties were quite convinced; only the British put their fingers on the fatal flaw in Voronoff's case.

Translated into present-day statisticians' jargon, he had failed to randomise his young rams at the start of the trial. It is as if we judged the winner of a race by noting who first crosses the finish line, without ensuring that all competitors started from the same place at the same time.

Knowing now that these grafts must have been rejected, we can only conclude that Voronoff had, perhaps unconsciously, selected the better quality rams for the transplant group, and that this superiority had carried on into the animals' maturity, and to their offspring.

Voronoff's claims for the superiority of the offspring of his grafted rams implied "inheritance of acquired characteristics;" thus, all unwittingly, he had strayed onto the battle-

field between the Lamarckians and the Darwinians. So, by his sheep experiments, he widened the area of interest in his work beyond the medical, attracting the attention of veterinarians, agriculturalists and finally general biologists.

By 1930 medical opinion was already turning against him; the scrutiny of the non-medical scientists hastened this process. By their nature, his human operations were very private, confidential affairs, the results of which were quite inaccessible for objective assessment by others.

When the fad for this operation had died down, and its uselessness was realised, the practitioners were widely ridiculed, and reviled as quacks and charlatans. This was incorrect and sadly ungenerous; with few exceptions these surgeons were sincere men who wholeheartedly believed in what they were doing. Voronoff himself defended his work until his death in 1951.

### A Change of Glands

That is not quite the end of the story of the gland-grafters. At the same time as testis transplants were going out of fashion, as described above, endocrinology was discovering more and more hormones produced by the body's many glands, and these were available for "treating" a wide range of disorders.

The pituitary gland, in particular, was found to have a special role in controlling the activity of other glands (it was at one time called "the conductor of the harmonic orchestra"). Injection of cells of the pituitary, then, could be used by unscrupulous doctors to treat whatever glandular deficiency the patient could be persuaded he had.



The leading practitioner, Dr Niehans, a Swiss, was active until the 1950s, and counted Top People (from Hollywood to the Vatican) among his patients. None of his injections could have been of any use.

What lessons ought we to learn from this story, this false turning in medical science? Firstly, we see that misguided enthusiasts can be as dangerous as unscrupulous quacks. Furthermore, we should all subject our enthusiasms to rigorous self-scrutiny.

If Voronoff had kept better records of his operations, and taken a more objective view of the results, he might eventually have seen his error. Had he invited a histologist to examine his early sheep grafts he might have been convinced that they had indeed been rejected by the host. From the patient's viewpoint, a person unhappy with his present state of health, having undergone a very expensive and uncomfortable operation, carried out by a charming, confident and persuasive surgeon, can almost be guaranteed to confirm whatever outcome of the operation the surgeon suggests to him.

A last thought: in a period which delivered to women the suffrage, protective labour laws and power-driven domestic appliances, the "rejuvenation" movement was almost entirely male-oriented. No-one seems to have considered whether anything could be done to help the post-menopausal woman who longed to be twenty again.

I am indebted for the information in this article to *The Monkey Gland Affair* by David Hamilton, London: Chatto & Windus, 1986.

Bernard Howard is Secretary of NZCSICOP.

## Dawkins on Theology

*The British Independent recently ran an editorial not worth reproducing in the Skeptic. The editorial did, however, generate a vigorous response from Richard Dawkins which is worth thinking about.*

Sir: In your dismally unctuous leading article asking for a reconciliation between science and "theology," you remark that "people want to know as much as possible about their origins." I certainly hope they do, but what on earth makes you think that "theology" has anything useful to say on the subject? Science is responsible for the following knowledge about our origins.

We know approximately when the universe began and why it is largely hydrogen. We know why stars form, and what happens in their interiors to convert hydrogen to other elements and hence give birth to chemistry in a world of physics. We know the fundamental principles of how a world of chemistry can become biology through the arising of self-replicating molecules. We know how the principle of self-replication gives rise, through Darwinian selection, to all life including humans.

It is science alone, that has given us this knowledge and given it, moreover, in fascinating, overwhelming, mutually confirming detail. On every one of these questions, theology has held a view that has been conclusively proved wrong. Science has eradicated smallpox, can immunise against most previously deadly viruses, can kill most previously deadly bacteria.

Theology has done nothing but talk of pestilence as the wages of sin. Science can predict when a particular comet will reappear and, to the second, when the next eclipse will occur. Science has put men on the moon and hurled reconnaissance rockets around Saturn and Jupiter. Science can tell you the age of a particular fossil and that the Turin Shroud is a medieval fake. Science knows the precise DNA instructions of several viruses and will, in the lifetime of many present readers of the Independent, do the same for the human genome.

What has "theology" ever said that is of the smallest use to anybody? When has "theology" ever said anything that is demonstrably true and is not obvious? I have listened to theologians, read them, debated against them. I have never heard any of them ever say anything of the smallest use, anything that is not either platitudinously obvious or downright false.

If all the achievements of scientists were wiped out tomorrow there would be no doctors but witch-doctors, no transport faster than a horse, no computers, no printed books, no agriculture beyond subsistence peasant farming. If all the achievements of theologians were wiped out tomorrow, would anyone notice the smallest difference?

Even the bad achievements of scientists, the bombs and sonar-guided whaling vessels, work! The achievements of theologians don't do anything, don't achieve anything, don't even mean anything. What makes you think that "theology" is a subject at all?

Yours faithfully,  
Richard Dawkins  
Oxford

# A Skeptic's Bibliography, Part II

John Thomas & James Rusk, North Texas Skeptics

Continued from last issue. Prices are US dollars.

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## The Amazing Randi is Coming

James Randi, magician, skeptic, and bane of Uri Geller will be visiting New Zealand briefly in early July, thanks to the generosity of the Australian Skeptics paying his airfare. He will speak publicly in Christchurch, Wellington and Auckland.

**6 July, Christchurch.** Large public meeting, Room A1, University of Canterbury, 7pm.

Contact: Denis Dutton

Phone: (03) 348-7928 (home), 366-7001 (work), 364-2858 (fax).

Email: fina012@csc.canterbury.ac.nz

**7 July, Wellington.** Large public meeting at night — details to be arranged.

Contact: Prof Tony Vignaux

Phone (04) 476-7851 (home), 471-5313 (work).

Email: vignaux@isor.vuw.ac.nz

**8 July, Auckland.** No details as yet.

Contact: Bill Cooke

Phone (09) 376-4041.

# Hokum Locum

Dr John Welch

## Skin Lighteners

The pop star Michael Jackson has denied that he uses chemicals to lighten his skin and claimed to be suffering from a disorder called "vitiligo," which is a spontaneous loss of skin pigment. Jackson said "There is no such thing as skin bleaching. I've never seen it. I don't know what it is." (*GP Weekly* 24 Feb, 1993)

In fact, skin lighteners are used extensively by Afro-Caribbean women in response to social pressures. These preparations contain hydroxyquinone, which inhibits the production of melanin (normal skin pigment) but causes skin damage with prolonged usage.

"Because the creams are cosmetics rather than drugs they are not subject to stringent tests or regulations, and of 33 skin lighteners for sale in Southwark, half were wrongly labelled; six had illegally high hydroxyquinone contents; three contained mercury, which is banned by European law; and two contained cortisone, which should be available only on prescription." (*BMJ* Vol 305 p333)

This is a classic illustration of the abuses that occur when potent drugs are allowed to be dispensed as "cosmetics." I do not know whether Michael Jackson truly does suffer from vitiligo, but with his history of repeated cosmetic surgery and hyperbaric oxygen treatment, I would not be surprised if he is using skin lighteners.

## Addicted to Sugar

*Woman's Weekly* 14/12/92 carries the story of a woman who was chronically depressed

until she saw an iridologist who proclaimed the patient "...a sugar addict. Her exceptionally high sugar-loaded diet had filled her body with toxins. The whites of her eyes were yellow, and her colon contained faeces which had been present for years."

This story has all the elements of quackery. Iridology is arrant nonsense adequately dealt with in one of our truth kits, and just what are the "toxins" so favoured by quacks? Can the colon really hold faeces that "have been present for years"? The world's record for constipation is held by a man who resisted the temptations of the toilet for 368 days. He is said to have become weak after delivering 36 litres of faeces on June 21, 1901, but "there was much rejoicing in the family." (*CMA Journal* May 22, 1976/Vol. 114)

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### The world's record for constipation is held by a man who resisted the temptations of the toilet for 368 days.

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This woman clearly suffered from a depression and wasted years in looking for outside "causes." The iridology diagnosis and treatment is a form of placebo validation of her symptoms, which has allowed her to get better without facing up to more important psychosocial issues. The standard of such stories in the *Woman's Weekly* is so pathetic that the staff surely deserve a permanent bent spoon award.

## Sports Enhancement

It appears that athletes will do anything to enhance their performance in their chosen sport. Ben Johnson could not give up the use of anabolic steroids and has earned himself a permanent disqualification. Other athletes, such as Katrina Krabbe, have received feeble punishments for the same abuses. Some athletes go to extraordinary lengths to either justify or rationalise their use of performance enhancing drugs. A swimmer (*Marlborough Express* 16/3/93) complained that a heavy beer-drinking session led to her urine test showing twice the permitted testosterone levels.

A survey of private gymnasiums (*British Journal of Sports Medicine* 1992;26:259-61) found that 62 out of 160 customers had taken anabolic steroids, along with other drugs to counter the side effects of the steroids. Steroids have been used by some occupational groups, such as debt collectors and bouncers, to enhance physical size and improve employment prospects.

Users have also been observed to participate in needle exchange services through their requirement to administer the drugs intramuscularly. (*BMJ* Vol 306 13/1/93 p459)

## Cooking with Radon

Disused uranium mines are finding a new use as chronically ill people rush to sit in the "health mines" in order to inhale radon gas which is touted to cure everything from migraine to blindness. For as little as \$2.50 you receive exposure



to radiation while "having a good time playing cards, doing jigsaw puzzles, and reading magazines." (*People Magazine*)

### **(Un)Natural Remedies**

Readers will remember the tragic deaths of twin infants from congenital infection of the mother with *Listeria*, a type of bacteria widely found in seawater and in particular, mussels. It is alleged that the infection was acquired through mussels eaten by the woman as a "natural" source of iron. If only she had taken the completely safe iron tablets available from her local chemist but then, they are not "natural."

In Belgium, many women have suffered renal failure and died through taking slimming powders containing Chinese herbs, in some cases prescribed by doctors! (*GP Weekly* 3/3/93) Women are cynically targeted by the diet industry, and it is not surprising that obese people continue to be attracted to slimming remedies which can be eaten.

### **Oddities of the East**

In China, ants are being used in the treatment of Hepatitis B and various rheumatoid diseases. 28,000 patients have been treated using medicine made from ants which are rich in zinc and (unspecified) trace elements. 20 percent of a survey of 339 patients were described as "cured," 77 percent were helped and only 2 percent remained unchanged. No one was made worse. The application of percentages and vague reports of "improvement" does not improve a fundamentally implausible study. (*GP Weekly* 20/1/93) Applying Skrabanek's demarcation of the absurd theory, a clinical trial is not indicated.

Chinese herbal preparations often have inscrutable ingredients. A post-menopausal woman attending gynaecology outpatients had a biopsy taken from her uterus, which showed tissue changes consistent with the use of hormones. She was on no medication apart from a herbal remedy prescribed by a homeopath. The doctors found that the list of ingredients included 10 µg of ethinyl-oestradiol (a potent female sex hormone) with no warnings about long term use. (*BMJ* Vol 306, 16 Jan 93, p212)

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### **The irony of a homeopath prescribing a potent remedy will not be lost on readers.**

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The irony of a homeopath prescribing a potent remedy will not be lost on readers. Homeopaths should confine their prescribing to their harmless placebos.

Continuing the theme of arcane Eastern practices, even forms of therapeutic massage are not without side effects. Following a vigorous bout of Shiatsu (Japanese-style massage) a patient developed an attack of shingles caused by a reactivation of latent *Herpes zoster* infection of the affected skin area. (*NZ Doctor* 18 March 1993)

A man from Belize (Central America) was admitted to hospital with an abscess on his arm which was leaking a shiny pus. He admitted to injecting "white magic" into his forearm a month earlier and an X-Ray showed high density globules in the muscle of his arm.

The material in the injection was mercury, used according to Mayan superstition to ward off evil spirits and increase sexual

potency. Tubes of mercury are cheap and freely available in Belize. Historical figures such as Henry VIII were treated for syphilis with mercury, which led to the expression "a night with Venus and a lifetime with mercury."

The herb chaparral (aka. creosote bush) has been in the news lately, implicated as a cause of toxic liver hepatitis. It is under scrutiny in the US (NCAHF Vol 16 No 1), but as usual our own Health Department is dithering instead of banning it and putting the onus on the distributor to prove that it is safe. I have sent them a copy of the NCAHF article.

### **Natural Remedies Neglected**

Neglect of proven health and hygiene measures can lead to disease as well. 46 people were infected with salmonella from an imported Irish cheese made with unpasteurised milk. The infection was traced to four cows excreting the same strain of salmonella in their faeces. There is no excuse for these human infections because pasteurisation kills all disease-producing bacteria commonly transmitted in milk. (*BMJ* Vol 306 13/2/93 p464)

Soviet Russia had fewer than 60 cases of diphtheria during the mid-1970s. The present social and economic chaos has led to a resurgence of this disease and almost 4000 cases occurred in 1992. Immunisation used to be compulsory but there are now fears that the vaccine is dangerous and AIDS may be caught from the needles. Diphtheria has become endemic in rural areas where the standard of health care is very low. (*BMJ* Vol 306 13/2/93)

Even New Zealand has groups of ignorant people actively campaigning against immunisation. Those who forget the past are condemned to repeat it!

### **Non-medicine**

Thoracic outlet syndrome (TOS) is characterised by subjective complaints of pain and sensory changes in the upper limbs. Skepticism in the literature prompted researchers to examine data, which showed that the diagnosis of TOS is heavily influenced by a patient's insurance coverage. Those without such cover are rarely diagnosed as having TOS. (NCAHF Vol 16 No1)

There are many operations performed by surgeons which are of questionable indication. Surgery has a potent placebo effect and most surgeons would be reluctant to put operations to the test of a placebo controlled trial as outlined by Dr Bill Morris in the last issue of this journal.

### **Black Spot Mystery**

Many mysteries turn out to have mundane explanations which are seldom accorded the same publicity as, for example, alien abduction stories (actually due to a dream state in susceptible individuals). Local health authorities in Green River, Wyoming sent out questionnaires, mapped homes and exhaustively tested scabby spots from the scalps of school children before concluding that the spots were flakes of tar which had blown off the school roof! (NZ Doctor 1/4/93)

Dr John Welch is a medical officer with the RNZAF.

## **The Crackpot Index**

*On open access computer bulletin boards and networks, any entity with a theory can expound on it at length. Many do — usually to a very unappreciative audience. A seemingly-large proportion of such expositions have certain similarities of style. The following scale (tentatively attributed to John Baez of Usenet sci.physics) will help readers establish just how crackpotted something is...*

### **A simple method for rating potentially revolutionary contributions to physics.**

- (1) A -5 point starting credit.
- (2) 1 point for every statement that is widely agreed on to be false.
- (3) 2 points for every statement that is logically inconsistent.
- (4) 5 points for each such statement that is adhered to despite careful correction [by other readers].
- (5) 5 points for using a thought experiment that contradicts the results of a widely accepted real experiment.
- (6) 5 points for each word in all capital letters (except for those with defective keyboards).
- (7) 10 points for each claim that quantum mechanics is fundamentally misguided (without good evidence).
- (8) 10 points for each favorable comparison of oneself to Einstein, or claim that special or general relativity are fundamentally misguided (without good evidence).
- (9) 10 points for pointing out that one has gone to school, as if this were evidence of sanity.
- (10) 20 points for suggesting that you deserve a Nobel prize.
- (11) 20 points for each favorable comparison of oneself to Newton or claim that classical mechanics is fundamentally misguided (without evidence).
- (12) 20 points for every use of science fiction works or myths as if they were fact.
- (13) 20 points for defending yourself by bringing up (real or imagined) ridicule accorded to one's past theories.
- (14) 30 points for each favorable comparison of oneself to Galileo, claims that the Inquisition is hard at work on one's case, etc..
- (15) 30 points for claiming that the "scientific establishment" is engaged in a "conspiracy" to prevent one's work from gaining its well-deserved fame, or suchlike.
- (16) 40 points for claiming one has a revolutionary theory but giving no concrete testable predictions.

There is no set score which a theory must reach to be labelled "crackpot," but the higher its score, the more likely it is that a theory's author is an eccentric rather than an Einstein.

# Schools look to Creationism

By MICHAEL GRANBERRY, of the "Los Angeles Times", in Vista, California

**A**NATIONALLY watched debate that might ultimately be resolved by the United States Supreme Court has captivated this normally quiet San Diego County community, as a Christian majority on the city's education board moves toward a policy mandating the teaching of Creationism in public schools.

In January three board members of the Vista Unified School District — the majority of a five-member body — assured anxious parents that they would not champion what many feared would be the beginnings of a pro-Creationism agenda.

Four months later, sceptical parents worry that the promise is about to be broken. Educators throughout the country are keeping an eye on Vista, which may yet offer a benchmark of the growing political power of the Christian Right.

The board recently voted to begin its meetings with a prayer, and might soon consider the issue of reinstating prayer at high school graduation exercises in defiance of Supreme Court rulings on the state and federal level.

Board members this month will decide whether to forbid teachers from teaching science "dogmatically", according to the proposal formulated by the board president, Deidre Holliday, a member of the National Association of Christian Educators, a conservative group that seeks to influence school curricula.

Vista's policy, if adopted, would encourage teachers to show "weaknesses that substantially challenge theories in evolution", a concept that Holliday's group finds particularly objectionable.

It is that aspect of the policy that causes the most concern among officials for the State Department of Education, which establishes guidelines for public schools throughout California.

"When used in a scientific context, we should make it abundantly clear that a scientific theory is not quite the same thing as my theory on why the New York Mets are having a bad year," says a spokesman, William L. Rukeyser.

"The point is, when I say I have a theory about baseball or trout fishing or whatever, I'm basically saying I have a notion, a vague idea. The point the state board makes is that, in scientific discourse, a theory is quite different," says Rukeyser. "It's developed and tested and may be discredited — but only through established scientific procedure."

State authorities are equally concerned about what Rukeyser calls the attempt by the Vista board's proposed policy to mandate "discussions of divine creation" in classrooms.

"The state guideline is a permissive one," he says, "but takes pains to avoid the mandate of saying, 'Thou shalt hold discussions' ... about a divine creation of the universe."

An incumbent board member, Sandee Carter, who, with Linda Rhoades, form the two-person minority, says she "lost patience" with the increasingly volatile issues surrounding the Vista board.

The goal of the three-member majority, she says angrily, "is to include religion in the classroom one way or the other", a tactic that Carter vehemently opposes.

She notes that, after the January meeting, a board member, John Tyndall, sought to include in the science curriculum the book "Of Pandas and People", which critics say attempts to debunk the theory of evolution.

A teachers' committee voted unanimously to reject the book, which Holliday says, "makes a dead issue of 'Of Pandas and People' — a claim that Carter calls highly suspicious."

"I do know that a lot of people are getting really worked up over everything, and that's absurd," says Holliday.

Carter disagrees, calling the proposed science policy "superfluous ... not at all

necessary. We don't have a policy telling teachers how to teach math, or social studies, or foreign languages."

No subject in Vista schools is taught dogmatically, she says, and parents who feel betrayed by a broken promise "should feel that way. At the (January) meeting Holliday clearly stated we weren't going to include Creationism in the curriculum."

The greatest concern of all, says Carter, is one expressed even by conservative Christians — that the board's highly political posture will lead to lawsuits and the hiring of high-priced attorneys paid by taxpayers.

The American Civil Liberties Union has notified the board of its intention to pursue legal action should the science policy be adopted. ACLU officials contend that school authorities are in danger of violating State Board of Education requirements and rulings of the Supreme Court.

"The issue at stake is the very essence of religious liberty in the United States," meaning that no one faith or philosophy should dominate, says Jordan Budd, staff counsel for the ACLU of San Diego and Imperial counties.

"What's ultimately at stake," he said, "is nothing less than the separation of Church and State."

Los Angeles Times-Washington Post News Service

## Priests seek support for whaling plans

Reuter Gravdal, Norway

A group of Norwegian priests plans to urge colleagues abroad to rally behind Oslo's decision to resume commercial whaling, saying it is un-Christian to compare whales with human beings.

"Environmentalists see whales as something sacred that cannot be touched, treating them as the human beings of the sea," the Rev Elliv

Larsen, vicar of Buksnes parish in Lofoten, a Norwegian whaling and fishing town, said yesterday.

"Animal rights movements are in conflict with Christian thinking," he said, citing the Bible's declaration that man shall rule the earth and all its animals.

"Man has been created in God's image — and thereby given a very special position."

Mr Larsen and seven other Lutheran priests in the area hope for backing from churches around the world.

"I'm surprised that churches in the United States, England, and Germany have not reacted. They should offer guidance on this issue," Mr Larsen said.

Environmentalists from these countries have voiced the loudest protests against

Norway's plan to resume commercial whaling this year in defiance of a 1985 ban by the International Whaling Commission. Mr Larsen described the ban as "American cultural imperialism".

Norway will probably catch between 300 and 800 minke whales, but the exact quota will be set after an IWC meeting being held in Japan has finished.

Mr Larsen said that the eight priests had approached the foreign affairs council of the Norwegian Lutheran State Church to pursue the initiative, but the body, which handles external relations, had delayed any decision until after the IWC meeting ended.

Oslo says stocks of minke whales have recovered sufficiently to sustain limited commercial catches.

## Want to tweak your CDs? Give them a spell in the freezer

**C**OMPACT discs, as we all know, should be held by the edges, returned to their cases after playing, and not left on the back shelf of a car in mid-summer. Sensible maybe, but too mundane for the hi-fi buff. What does he do to lavish that little extra TLC on his beloved collection? Answer: he pops his CDs in the deep freezer.

This unlikely notion is the latest buzz in the arcane world of hi-fi "tweaking", where enthusiasts vie with each other to come up with better ways of improving their system, without actually throwing it away and buying a better one — running two sets of wires to each speaker, for example, or using isolation platforms for record decks. But CDs in the freezer?

Ever since the idea was mooted in a recent issue of "Audiophile" magazine, aficionados have been bedding down their discs between the frozen peas and fish fingers and reporting astonishing results.

"After freezing I felt the sound

From JOHN MORGAN  
in London

was clearer, firmer, and more solidly focused," says Jimmy Hughes, the brave soul who risked his CD collection in the interests of researching the article. "I wasn't imagining it."

The story provoked a near-record postbag. One correspondent admitted he was so impressed with the result that he decided to give his CD player the same treatment, followed by his tuner, amplifier, and mains cable.

"The technique works on any material which involves high temperature during the manufacturing process," he explained.

I put this breakthrough to the technical people at EMI, which this year expects to manufacture 37 million CDs. Should they all go into the freezer? "It can't improve the music signal, but some CDs have a residue of static and freezing could counter that, reducing crackle," said a spokes-

man. "Either way, we can't see it doing any damage."

As for putting your entire kit in the deep-freeze, this runs the risk of short-circuiting the system. Side-effects could include electrocuting yourself or burning the house down, so it may be wise to restrict the treatment to the discs themselves.

If you want to try this at home, the CDs must remain in the freezer for at least 12 hours, and brought back to room temperature very, very slowly. (This means packing them with ice in the first stage of thawing, then keeping them in a cold room for at least three days). And does it really work? Yes, of course it does.

The point is that all hi-fi tweaking has a self-fulfilling success rate. You are not going to go to all that trouble only to tell your friends, "Well, it didn't make any difference, actually." So the quest for improvement goes on.

Some people place tilted rubber poles at strategic points in

the room in order to absorb unwanted acoustics. Others insist that the lead that connects the CD player to the amplifier performs differently depending on which way round you run it. And one American hi-fi writer swears that suspending speaker cable from the ceiling improves its performance.

Hi-fi will perform better when the electricity supply is strong, so avoid listening at peak demand periods (meal times or immediately after popular television programmes). Instead, try setting your alarm for 4am, when you can experience Beethoven as you've never heard it before.

And don't forget the most important hi-fi component of all: our ears. Richard Charnley, editor of "Audiophile", has already thought of it: "One of our writers had his ears syringed as part of a tweaking exercise. His conclusion was yes, it makes a difference, but everything sounded just a bit too bright and lively. It wasn't necessarily an improvement."



# NEWS FRONT

## 50% of workers on ACC 'feigning'

June 11

PA  
**T**HE Accident Rehabilitation and Compensation Insurance Corporation should investigate ways of identifying the 50 per cent of workers on compensation "feigning" injuries, a world-renowned New Zealand physiotherapist says.

Mr Robin McKenzie said early treatment, consisting of active patient involvement in their own recovery, was vital to avoid 14,500 people being off work with back injuries on earnings-related compensation.

"I urge ACC to pursue and implement measures that identify the 50 per cent of the supposedly back-injured workers who should already be at work," he said.

"Our rehabilitation unit is for injured persons, not for those feigning disability."

Mr McKenzie was speaking at the opening of the McKenzie

Institute International's new clinic in Aurora House. Among those present was the ACC Minister, Mr Birch.

Mr McKenzie said physiotherapy had for 75 years relied on unproven methods and "hocus pocus" electrical gadgetry.

"Even today our physiotherapy schools spend many hours teaching that healing can be accelerated by such means.

"Perhaps if the physiotherapy schools stopped teaching outmoded topics they could fit the curriculum into three years rather than the four that they insist are necessary."

The body had a remarkable capacity to repair itself, he said.

"As therapists we do not heal. Magic fingers do not exist. Good physiotherapy guides the patient through the healing process so that repair is not disrupted and healing is not delayed. We must

commence the restoration of function before the patient even considers the possibility of prolonged disability."

Any treatment whereby the therapist did something to the patient created dependency.

"The patient must be taught to deal with his own problem on the event of recurrence. He should not be running to his doctor, physio or chiropractor at the first twinge of pain.

"Structured specific exercises tailored individually for specific disorders and commenced as early as possible following injury should be our goals."

Mr McKenzie said doctors should prescribe active rather than passive therapies. "Seven years ago I warned my colleagues that society will not fund indefinitely unproven methods that encourage dependence. Society is finally speaking."

## Bad luck traced to trees

Reuter  
President Fidel Ramos says he will look into reports that three misplaced trees as well as unlucky symbols on the presidential seal and on banknotes were to blame for many misfortunes afflicting the Philippines.

Mr Ramos was told during a television interview that according to Chinese "feng shui", or geomancy, the study of the arrangement of objects in the universe, there were three major sources of bad luck in the country.

These were the three huge trees in front of the Malacanang presidential palace, which allegedly blocked the flow of cosmic energy, the presidential seal, and the latest 500-peso bills. Feng shui practitioners suggested the trees be cut down.

They said a sea-lion in the presidential symbol had an inauspicious crooked tail, while stars around it meant darkness.

The 500-peso bill was unlucky because it contained 13 stars, showed 13 people, and the number 500 appeared 13 times.

"Actually, I personally do not believe much in feng shui," Mr Ramos said.

However, he said the comments about the palace, seal, and banknotes were eye-openers.

"We should look into them carefully so we do not add more misfortunes to our beloved country."

In recent years thousands of Filipinos have been killed by an earthquake, a volcanic eruption, typhoons, floods, and droughts.



MR RAMOS

# The Wyant Heavy-Weight Motor

Carl Wyant

It may interest skeptics to know that I have solved the world's energy problems. The concept is surprisingly simple... but then works of great brilliance often are.

Our methods employ what we call "The Straw that Broke the Camel's Back Technologies." I won't mind however, if future generations call them "Carl Systems."

As etheric physicists know, all objects on Earth inherently "want" to leave the planet. But they can't, because gravity holds them down. We call this

syndrome "weight frustration." Thus, metals like gold or lead are "extremely frustrated," whereas subjects such as feathers and dry leaves are only "mildly neurotic."

The Wyant Heavy-Weight Motor — simply called by the boys and girls at the lab the "Wymo" — works according to ancient cosmic principles.

The fuel, already desperate to fly forth from the Earth, but held back by the forces of gravity, is subjected to further "annoyance" by way of a powerful screw-driven press. This "fur-

ther annoyance" is The Straw That Broke The Camel's Back, known as "strack" among professionals.

Basically, Wymos and other strack devices increase "annoyance" until the fuel "freaks out" and discharges its "frustration."

So far we have found lead to be the best fuel for strack machines. Forty pounds of lead will drive a six-foot turbine at 190 RPM for five hours, producing ten times as much energy as it takes to drive the press.

Granite and other hard rocks are also proving to be good sources of frustration. And with the current development of strack amplification units we expect major breakthroughs with alarm clocks and bulk copies of the *Listener* any day now.

Some alternative fuels, unfortunately, have not shown favourable graphs. For example, repeated stracking trials using glossy magazine editors and cow-shooting journalists for fuel have failed to turn over our smallest turbines, much less "over produce."

We have hopes of explaining this anomaly in the near future. But for now, why 20 pounds of granite yields more energy than 150 pounds of journalist remains a hotly debated issue at the Wymo lab.

In the meantime, we persist with our work. We are confident the patent office will soon recognise the importance of the Heavy-Weight Motor.

Carl Wyant is an Aquarian engineer who really has stumbled onto a breakthrough this time.

## The Effect of the Calendar on Climate

*John Cole, editor of Creation/Evolution, recently wrote of his tendency toward hair-pulling, in the National Centre for Science Education Reports, Vol 12 No 2 (Summer 1992).*

Anti-evolutionists continue to contradict optimists who would like to think that we're about to enter the 21st Century. Unscientific and anti-scientific ideas abound in our society.

The coming Millennium has already inspired Millenarian thinking such as the writings of Hal Lindsay (*The Late Great Planet Earth*) — i.e., that the "End Times" are approaching with a "promise" of Armageddon (and that's from the *optimists*!). The Lubbovitcher Rebbe recently declared that the Messiah is among us, so Jews, he says, should be ready to celebrate the end by 2000 (he hints that *he* may be the one).

We can expect a lot of craziness in the next few years because of the calendar. As an example of this, an environmental policymaker recently asked me for information about the projected effect of the millennium on the Earth's magnetic field and climate. I was taken aback, at first, but I then tried to explain that "2000" was an arbitrary number — why not use the Jewish calendar, for example? 2000 is not even an accurate date if you accept it as meaning the number of years since the birth of Jesus — which scholars now treat as 4 to 7 years "B.C." if they accept it at all. (And for that matter, 2001 C.E. begins the next millennium, not 2000.)

But this guy persisted — interested in my argument about the calendar, certainly, but still concerned. "Could you give me some references on that?" I was asked.

Examples like this show the need to keep trying, I think, rather than the futility of trying. (However, hair-pulling and discreet screaming may well be in order...)

# Forum

## Hail Guns?

Several of my friends are orchardists, and two of them lost their crop last year due to a hail-storm.

The hot topic at present is "hail guns." Do they work? How do they work?

There seems to be a dearth of real information on the topic. The manufacturers make extravagant claims but it comes to mind that not too long ago mankind was firing arrows and cannons at the clouds just as confidently.

Does anyone out there have the answers?

*Phil Spencer  
Westbank, Motueka*

## OOS and 6000 Years

(1) It hurts me to write this, but as a sufferer from RSI (now called "Occupational Overuse

Syndrome" or OOS) I was annoyed by Dr John Welch's description of it (*Skeptic* 27) as "essentially a conversion disorder" and a "delusion." I can assure him the pain is no delusion.

In my case it arose after I began transcribing long interviews (fast, repetitive typing, unlike creative work), and that is precisely what you would expect from an analysis provided by the ACC in terms of the metabolism of oxygen by the muscles.

I am grateful for the publications on ergonomics, which have helped me; pity about the forests, but there are plenty of worse ways they are used (such as those that clog my letterbox every day).

Stress and boredom may well be factors, but in my case, disabling pain is likely to have an effect exactly the reverse of

"helping [me] sort out [my] ... financial problems."

(2) All power to Phil Spencer and the celebration of the Hexamillennium, but has he taken into account the lack of a year zero (which is going to drive the world crazy at midnight on December 31, 1999, just one year too soon)? The change from the Julian to the Gregorian calendar? And the day that was lost when the sun stood still during the Battle of Jericho?

Congratulation to whoever typed out all those little slips saying "4004 BC": I hope it didn't give you RSI (OOS)

*Hugh Young  
Pukerua Bay*

*It was Bernard Howard who typed 300 little "4004 BC" slips and pasted them in every issue. We wish him well with the ACC. — Editor*

## Renewal Time!

In the last issue of the *Skeptic* was a copy of the 1993 membership renewal form. For those of you who forgot about it, here it is again...

### NZCSICOP MEMBERSHIP

## RENEWAL

(for the year January–December 1993)

**Amount Due: \$25 (\$10 for students/unwaged)**

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Please send your 1993 subscription to:

**B H Howard, NZCSICOP, 150 Dyers Pass Road, Christchurch**

Dear Member,

That time has rolled around again when we ask you to affirm your existence and your interest in Skepticism by contributing to our operational costs for the following year.

**B H Howard, Treasurer**

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### Changed Address?

If you've shifted, if you've got a new Private Bag number, or if your organisation has just changed its name — you know who you are and where you are. **Let us know too!**

### New Zealand Committee for the Scientific Investigation of Claims of the Paranormal (Inc.)

*NZCSICOP is a network of New Zealanders—including scientists, educators, health professionals and many others—dedicated to increasing public awareness of the dangers and inanities of pseudoscience and bogus paranormal claims. Through meetings and its regular periodical, The New Zealand Skeptic, the group encourages informed, critical examination of the claims of fringe and quack medicine, astrology, so-called creation science, supposed extraterrestrial visitations, psychic phenomena, and associated "New Age" gullibility.*

*Annual membership is \$25; students and unwaged \$10. For further information, write to B.H. Howard, Secretary NZCSICOP, 150 Dyers Pass Road, Christchurch 2.*