

*In their early years children are knowledge junkies, questioning everything in their view, though exhibiting little skepticism. Most never learn to distinguish between inquisitiveness and credulity. Those who do either come to a bad end or become professional skeptics.*

**Michael Shermer**

**Long-range Weather Forecasting**

**Reasons to be Cheerful**

**Aids Myths**

new zealand

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# Electoral transparency vital for democracy

In the Autumn 2004 issue of the NZ Skeptic, we reported on Vicki Hyde's prediction in the Dominion Post that George Bush would win the US presidential election. Given that this was at the height of the scandals over Abu Ghraib prisoners and the lack of Weapons of Mass Destruction in Iraq, it seemed a bold claim indeed, on a par with her prediction that the All Blacks would miss the 1999 World Cup final. But once again, history has shown our chair-entity to be better at the prophecy game than almost any of the professional seers.

There is, however, a small but nagging sense of unease over the election. First, there is the discrepancy between the exit polls and the official results, which were particularly pronounced in key swing states. Exit polls almost invariably produce results which are very close to the final vote tallies, and where there are discrepancies, as in the recent Ukrainian election, this is generally taken as a sign that the election has been rigged. Yet the mainstream media have almost universally adopted the line that the US exit polls must somehow have been in error. The alternative, that the world's most powerful nation is politically corrupt, is apparently unthinkable.

The use of electronic voting machines which provide no paper record able to be checked subsequently is also a concern, as is the fact that the software which runs on these machines is deemed to be commercially sensitive, and not subject to outside scrutiny. This is doubly worrying given that Wally O'Dell, the CEO of Diebold, the company which provided most of the machines, sent out a fundraising letter in August 2003 in which he promised to "deliver Ohio's electoral votes" to Bush. Ohio, where exit polls suggested John Kerry should have received 52% of the vote, was of course narrowly won by the incumbent president, providing him with the crucial electoral college votes he required to take the election nationwide.

Then there is the curious fact that Ohio Secretary of State Ken Blackwell, the man responsible for overseeing the running of the election in that state, was also the Bush-Cheney Ohio campaign co-chairman. As one commentator has said, this is like the coach of the New York Yankees being made chief umpire for the World Series.

The internet is awash with conspiracy theorists claiming the election was stolen. Conspiracy theories thrive when information is withheld; the role of cold war secrecy in fostering the Roswell myth is a classic illustration. Whether you believe them or not, these theories will not go away until there is some transparency in the US electoral system. There needs to be a paper trail so that meaningful recounts can be carried out. Voting machine software must be open to inspection. Officials with clear conflicts of interest need to stand aside from the process. Until then, the results of US presidential elections deserve to be regarded with scepticism.

## Contributions

Contributions are welcome and should be sent to:

Annette Taylor  
122 Woodlands Rd  
RD1 Hamilton  
Email: [number8@ihug.co.nz](mailto:number8@ihug.co.nz)

**Deadline for next issue:**  
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Letters for the Forum may be edited as space requires - up to 250 words is preferred. Please indicate the publication and date of all clip-pings for the Newsfront.

Material supplied by email or IBM-compatible disk is appreciated.

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# Ring Around the Moon

Bill Keir

*Neither theory nor observation support claims that lunar cycles can be used to forecast the weather*

**K**EN Ring of Titirangi is New Zealand's best known proponent of the idea that the Moon is an accurate weather forecasting tool. He publicly scoffs at official forecasters and climate scientists for ignoring the lunar effect, and the news media love him.

In 1999 he self-published a book expounding his theory (*Predicting the Weather by the Moon*). He willingly addresses community groups. He has his own website, [www.predictweather.com](http://www.predictweather.com), where he sells forecasts and peddles his theories, and he publishes an annual Almanac of daily weather forecasts for the coming year for 57 New Zealand towns.

His theory can be summarised as follows: It is well known that the Moon's gravity causes tides in Earth's oceans and these can be predicted with great accuracy. There is some evidence of comparable tides in Earth's atmosphere. Like the ocean tidal bulges, the atmospheric tidal bulges occur at points in the atmosphere roughly in line with the Moon, and like the ocean bulges, they sweep around the Earth daily (really Earth sweeps under them) due to Earth's axial rotation. These atmospheric tides cause predictable changes in the weather due to the gas laws.

Therefore the Moon's position can be used to predict the weather.

The theory claims that monthly perigee (Moon closest to Earth) and fortnightly syzygy (Moon, Earth and Sun aligned at full and new Moon) cause atmospheric tide maxima sufficient to cause predictable bad weather at these times, in the same way that they cause the well-known weekly spring-neap component of the ocean tides.

To anyone with the average hazy understanding of astronomical

by experts in astronomy and atmospheric science. It is riddled with typographical errors, careless mistakes, confusing sentences, muddled astronomical explanations and outright contradictions. Like its new-age stablemates it is a misleading mixture of correct and garbled science, folklore, astrology, misrepresentations of other authors, and hints of trickery and bluff. His attempts to match Moon events with weather events are amateurish with no analysis of statistical significance (this would not be possible with his crude data anyway).

According to Ring, "The weather is nothing more than the Moon pulling the atmosphere around." What is wrong with this theory?

Firstly, the physical forces invoked could not have the supposed effects – they are so weak that they would be completely overridden by other more

powerful forces. Secondly, the claimed correlations between weather events and Moon positions are spurious.

As any good weather textbook will detail, the behaviour of the atmosphere, both on large and small scales, is governed by the laws of thermodynamics driven by the Sun's heat, which is vastly more energetic than gravity. There are



**Does the moon control the weather? Probably not.**

processes this would sound like very convincing science. But it is not as it seems. On scrutiny Ken Ring's understanding of gravity and tidal force is poor, as is his understanding of astronomy and atmospheric science. On scrutiny his weather forecasts are no more successful than orthodox ones. It is obvious his book has not even been proofread let alone assessed



also significant influences from Earth itself – its shape, axial rotation, the Coriolis effect, the orientation of its rotation axis to the Sun, its oceans and land masses, its ability to absorb and reflect heat, the composition and structure of its atmosphere, its own gravity (which exerts about 10,000 times more force on the atmosphere than the Moon's gravity), and an array of chaotic factors associated with these influences, all of which combine to make weather prediction an inexact science at the best of times. The effect of the Moon's gravity on Earth's atmosphere, although it exists, comes a very distant and feeble last in the list of forces associated with the weather.

### **The tides are weak**

The feebleness of tidal forces can be seen from the magnitude of the ocean tides. The tidal force from lunar gravity raises Earth's oceans only about half a metre. (This is the calculated magnitude in mid-ocean due to the Moon only – the Sun adds a small fraction at syzygy. The tides we notice at sea coasts vary worldwide from 0.1m to 18m in bays, estuaries and coastlines due to the "slosh" effect around land masses). A half-metre tidal bulge in Earth's oceans is a minuscule amount in terms of Earth's diameter (12,000,000 metres) and in terms of the depth of the oceans (about 4000 metres mean depth). A parallel tidal bulge in Earth's atmosphere would not be detectable due to the mobile and less dense nature of gases. The mass of Earth's atmosphere is about 300 times less than that of its oceans.

As Newton taught us, gravity is a function of mass and distance. The mutual gravitational force of

attraction between two masses is directly proportional to the product of their masses and inversely proportional to the square of the distance between them. This relationship dictates extremely weak forces in the case of small

## **Any theory that atmospheric tides cause the weather must explain the absence of any regular weather pattern cycling twice daily in step with the tides**

masses or great distances. Tidal forces are even weaker because they are a function of the difference between the gravitational force at the centre and that at a distance from the centre of the body being tidally influenced. These forces can be calculated by well-understood formulae and agree with measurements.

It is true, as Ken Ring tells us, that the Moon's distance from Earth at perigee is significantly closer than at apogee – about one eighth closer. It is also true that the perigee tidal force of the Moon on Earth is about 50 per cent stronger than that at apogee. However, this translates to a tidal bulge in the ocean of 0.45 metres at apogee and 0.67 metres at perigee. This is a minuscule variation in terms of Earth's size. A comparable variation in atmospheric tide would not be detectable and could not possibly contribute to the weather because it would be overwhelmed by the much more energetic thermodynamic processes.

The detection of atmospheric tides is problematic. Unlike ocean tides they could not be observed

easily as a height variation because of the diffuse and mobile nature of gases. The upper boundary of the troposphere (the bottom layer of the atmosphere where the weather happens, and where 85% of its mass is located) cannot be defined more accurately than to the nearest kilometre. Its height is usually given in the range of 12-15 km at the equator and it is several kilometres lower at the poles. Its height varies, due to thermodynamic forces, by an amount far greater than any tidal bulge in the atmosphere due to lunar gravity – likely to be only a few centimetres.

These facts alone make detection of atmospheric tides problematic. The scanty evidence that exists comes indirectly by extrapolation from measurement of factors other than height. They have been identified as the cause of small barometric pressure variations observed as daily cycles above the equator. One study (Hutchings and Gellen, 1988) analysed about 30 years of daily sea-level atmospheric pressure readings from 16 stations on Pacific Islands in the tropical latitudes north of New Zealand. The authors determined the magnitude of the twice-daily lunar tide component of sea-level atmospheric pressure at a maximum of about 0.1 hPa. This is much too small to affect the weather – it would be overwhelmed by the typical 20 hPa pressure variations associated with weather systems. There is also evidence that these observed barometric tides are partly caused by forcing of the sea-level atmosphere by the ocean tides.

Ring's arguments are always directed at making the theory fit the known weather patterns. But any

theory that atmospheric tides cause the weather must explain the absence of any regular weather pattern cycling twice daily in step with the tides (two tides a day, as with the oceans, from two tidal bulges on opposite sides of Earth). Ring's version of the theory relies mostly on the long-period tide cycles caused by the orbital motion of bodies, ignoring the twice-daily cycles due to Earth's axial rotation. The orbital period tides, such as the lunar syzygy-quadrature spring-neap tides and the perigee-apogee tides, are only small components of the daily tides and their maxima are located at different latitudes on Earth. Occasionally Ring paradoxically refers to the daily tides with statements like, "If the Moon is in the sky there is less likelihood of rain."

### Supporting Evidence

By way of supporting the existence of atmospheric tides Ring lists in his bibliography a few journal articles on the subject but he doesn't discuss them. Harry Alcock of the Waikato, the author of an earlier book expounding the theory (*The Lunar Effect*, 1989), described an experiment he conducted to test for the existence of atmospheric tides. Using a filtered photographic exposure meter aimed at the Sun he recorded the readings on cloudless days. He also recorded the Sun angle and Moon phase for each reading. He seems to have expected high atmospheric tides to allow less solar radiation through the atmosphere. He didn't give any of the data, but simply declared, "The brightness readings under similar conditions, but different Moon phases, varied by an amount which suggested the atmospheric tide could alter by as much as 25 per cent."

The naivety of this exercise will be obvious to anyone with a nodding acquaintance with scientific method. But Ken Ring swallowed it whole, recounting the experiment in his book and announcing the 25 per cent atmospheric tide as if it were established fact.

### Long-term Cycles

Ken Ring claims that weather patterns repeat over long-term Moon cycles enabling you to predict the weather many years ahead for a specified location to the day. To support this claim he presents a table of eight serious droughts in Britain between 1853 and 1976 which purports to show that they fall into pairs separated by the length of the Metonic cycle – 19 years – or multiples thereof, give or take a year or two. But the pairs have been selected non-chronologically. When you put the eight drought years into chronological order none of them are separated by 19 years. The separations vary randomly from three years to 46 years. Furthermore, two of the pairs are repeated on the table, feigning seven pairs instead of five. Three of the drought years are used in more than one pairing, and two of the pairs are achieved by selecting conjoining drought years from the same drought (some of the droughts lasted up to two years).

To support his claim that the lunar perigee brings disasters Ring gives a table listing 11 disasters which occurred between 1931 and 1999. Two of them are earthquakes, one is a volcanic lahar, and the rest are weather-related. Eight of them occurred in New Zealand and three elsewhere. Part of Ring's theory is that earthquakes are also triggered by Lunar gravity maxima.

The table employs a cunning device. To increase the hit rate the definition of a hit is made as broad as possible. Five of the disasters are said to have occurred "in the same week" as perigee. The date of the disaster is deemed eligible for coincidence with perigee if it occurred within four of five days. This, of course, is approaching half way to apogee (seven days) when the lunar tidal force is on its way to its minimum. The table also has several errors and significant omissions. Three of the events are tropical cyclones that reached New Zealand, but he doesn't attempt to determine when they formed, which is the crucial fact needed to validate his theory. On my count there are only five out of the 11 disasters on Ring's table with convincing perigee coincidences (within a day). You could expect such a result by chance given that lunar perigee happens once a month.

### Other Lists

He has more comprehensive lists on his website giving the date of every perigee in the previous year with a list of world disasters that happened around each. He notes that some disasters happen around apogee, but that doesn't faze him. He simply invents a mechanism to make it fit, waffling on about potential energy being stronger than kinetic energy at apogee because the orbital speed is slower, and appealing to astrological talk about the Moon "giving its energy" to the Earth.

A recent study on earthquakes (J Vidal et al, 1998) analysed 13,000 earthquakes over 25 years from 1969 to 1994 along a section of the San Andreas fault. It found that when lunar tidal forces "favour" earthquakes the rate of quakes is

only, at most, 2% higher – a statistically insignificant correlation with no predictive value.

### Isobaric Maps

An intriguing feature of the annual Almanac is the isobaric maps drawn for every day for a year ahead. Ring implies that he generates his maps “using algorithms derived from past Moon cycles.” This sounds very impressive, but he doesn’t reveal the algorithms. I’ve compared his maps with Met-Service maps over several months and never found more than superficial similarities. Some are glaring mismatches. Occasionally there is a mildly convincing chance hit.

He employs an engaging trick with his maps. He publishes two maps for each day, deliberately drawn very differently (using “lunar orbital calculations” of course), and invites you to select the one that matches the reality best. Now wait a minute. Aren’t these maps supposed to be a prediction? Or is this a matching exercise after the event?

Ring obligingly provides hints in his Almanac for doing your own forecasting. Some are akin to hints for fortune telling – couched in terms so general that virtually all possibilities are covered. Some don’t follow the principles of his own theory. For example, he says, “When perigee or apogee is close to new or full Moon, then a dry weather period can be expected (less than 36 hours between). When perigee or apogee is more than two days apart from the nearest new or full Moon then a wet period may be expected.” This contradicts his main argument that perigee and full and new Moon are the lunar positions strongly linked with rain.

### The Bottom Line

Are Ken Ring’s weather predictions accurate? You don’t have to look hard to find evidence that they are not as impressive as he wants the world to think. Curiously, he has deemed it prudent to admit this in the disclaimer he attaches to his work: “The forecasts in this work are the result of best-of-ability endeavour. They represent the opinions of author and associates and no claim of 100% accuracy is made.” This rather dampens his claims about the superior forecasting capabilities of his theory. He also insists that we allow a three to four day latitude when interpreting his predictions. This nicely covers most of the possibilities, given New Zealand’s well-known average three-day high-low cycle, but negates his claim to be a reliable consultant for choosing a day to make hay or have a wedding.

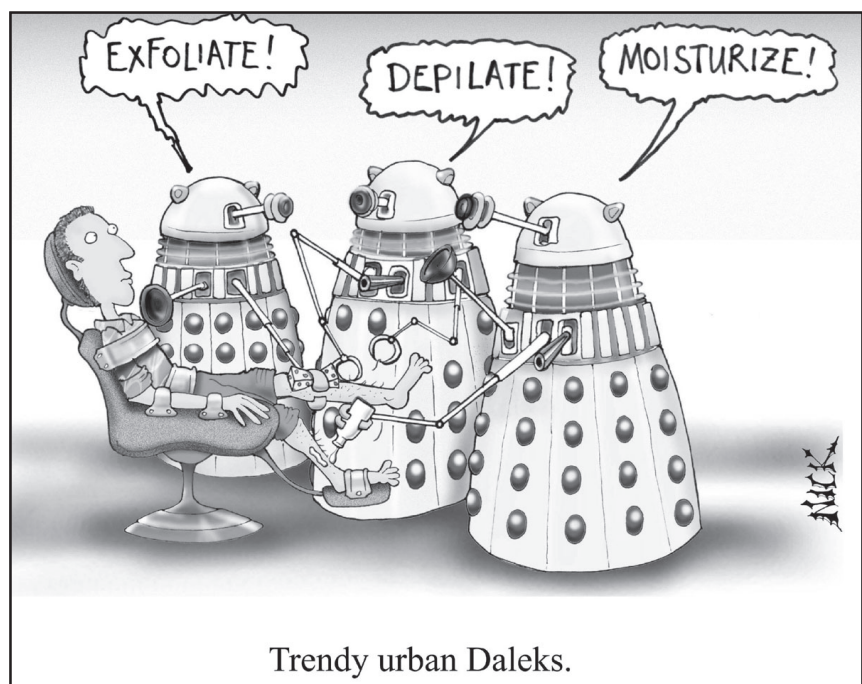
I have found many cases where his predictions failed. For example, from January to July 2004 he predicted dry weather almost everywhere around the dates of six major rain events including the

Manawatu floods in February. In the same period he also predicted widespread rain events which didn’t eventuate in two prolonged dry spells. I also compared his monthly rainfall estimates with actual rainfall and found that in only 18 of 78 cases did his estimate come anywhere near the actual rainfall.

It is hard to escape the impression that Ken Ring achieves his claimed 80 per cent forecasting success by a combination of luck and educated guesses based on known weather patterns. Nothing in his writings constitutes evidence that Moon positions are a useful weather forecasting tool, or that they are related to weather at all.

**This article is condensed from two articles first published in the Auckland Astronomical Society Journal, October and November 2004, and published here by permission of the society. The full versions can be read at the society’s website, [www.astronomy.org.nz](http://www.astronomy.org.nz), in the Journal section.**

**Bill Keir is an amateur astronomer of Hokianga who has published many articles on astronomy.**



Trendy urban Daleks.



# Why are we crying into our beer?

Owen McShane

*The battle between the Enlightenment and Romantic traditions is far from over, though it has taken on new forms. This article is abridged from a presentation to the NZ Skeptics Conference, 2004.*

**P**J O'ROURKE famously asked "Here we are, the longest lived, healthiest, wealthiest, best educated, best fed generation that has ever lived – so why are we crying into our beer?" This question begs the reverse question "Why are some of us not crying into our beer?"

Many of us recognise that we are indeed well off and are optimistic about the future. Virginia Postrel has recognised the existence of two cultures, in a political sense, in her book, *The Future and its Enemies*. In this she divides people into two groups, the stasists, who fear the future, and the dynamists who enjoy change, choice and the multiple futures which lie before us.

## The Root Cause

Previously I have argued that these big debates about the nature of our world continue to reflect the contest between the conflicting traditions of the Enlightenment and of Romanticism. Of course these traditions overlap in their influence on all our lives. The most reasonable of us is likely to have some affection for nature. So we are talking about positions on a spectrum.

My earlier argument was that:

- Socialism is the dark side of the Enlightenment tradition – if we can use science to design a bridge then we can use science to design Europe.

- Fascism is the dark side of the Romantic tradition – Fascism is anti-reason, believes that truth is culturally constructed, looks to the racial wisdom of the "volk" and promotes the need for great leaders to tell the masses what truths are holistically true.

- Communism combines these two dark sides into an engineered utopia which also accepts fascistic leadership to reveal the truth of the Marxist "book".

All three belief systems maintained that the modern world is too complex to depend on spontaneous order, and must be planned, and that wise men must therefore direct and control the rest of us. The alternative was economic chaos. There are many people who are happy to be planned and only too many who are happy to do the planning. Since the collapse of the Berlin Wall, and the belief systems which shored it up, these models are no longer there – but the conflict between reason and romanticism remains. And the controllers are always waiting in the wings.

The new controllers have identified a new chaos or dystopia. They say that our population, wealth and technology and consumption is destroying the planet, or will do so in future, unless, of course, the environmental planners take control and manage our lives so as to avoid this future.

## The Two Views

These two conflicting cultures have differing views on the environment. The people of the Enlightenment tradition, or the dynamists, are concerned about the environment because they live in it, and know that their enjoyment of life depends on clean surroundings. They know that as people get wealthier they become increasingly concerned about the quality of their physical environment. At a certain income per capita people want clean water, at a somewhat higher income they want clean air, and at a higher income again they want clean soil, waterways and visual amenity etc. Which is where we are.

We are rich enough to care about the environment and have the discretionary wealth to do something about it. Truly poor people focus on finding tomorrow's breakfast. The truly poor people of the past were responsible for the great megafaunal extinctions.

However, the Romantics interpret our care for the environment as a sign of our willingness to make penance for our sinful consumption and that everything wrong with the environment is our fault. We have sinned against nature and must be punished for our sins.

Global warming presents the perfect punishment – we shall be burnt in the heat of a greenhoused

Earth. A new group, Powerless New Zealand, are convinced we are about to run out of fossil fuels and have cheerfully predicted that only two billion of our present six billion will survive this century. No doubt they continue to believe we shall be cooked in greenhouse gases at the same time because many nature worshippers are able to believe in two impossible things before every breakfast.

How are these alternate views expressed?

### **Environmental law**

After almost a century of neglect there is now much discussion of the role of private property in promoting personal freedom and generating wealth. Property and Freedom by Richard Pipes, and The Mystery of Capital by Hernando de Soto are two excellent examples. Both implicitly support the view that environmental law should maximise human welfare.

Klaus Bosselmann and David Grinlinton, of Auckland University's School of Environmental Law, reject the "anthropocentric" view that environmental law should focus on managing adverse effects on the environment in order to maximise human welfare. This "anthropocentric" view, reflected in the concept of sustainable management within the Resource Management Act (RMA), assumes that there is not much point in being rich if you cannot swim in the sea, breathe the air, or drink the water.

Instead, Bosselmann and Grinlinton's collection promotes an "ecocentric" world view which assumes "that nature with all its life forms has intrinsic value independently from any instrumental values for humans." The ecocentric

view assumes that nature exists in stable harmony and that extinctions and similar catastrophes can be prevented by human action – or inaction. Unfortunately, nature does not see it this way. As John Gribbin explains in *Deep Simplicity*, virtually all species are now extinct, and every surviving species is at equal risk of extinction at any time. We occupy a biosphere continually on the edge of chaos. The ecocentric view also assumes that the purpose of environmental law is to protect nature from human activity. We are the problem and our welfare ranks below the welfare of "nature".

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## **One wonders if Rousseau himself dropped in on early New Zealand and shared a few thoughts with the locals**

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Most authors introduce us to Rousseau's thoughts on property rights with the following quote from his *Discourse on the Origins of Inequality*:

"The first person who, having enclosed a plot of land, took it into his head to say this is mine and found people simple enough to believe him, was the true founder of civil society. What crimes, wars, murder, what miseries and horrors would the human race have been spared had someone pulled up the stakes or filled in the ditch and cried out to his fellow men: 'Do not listen to this impostor. You are lost if you forget that the fruits of the earth belong to all and the earth to no one!'"

Rousseau's assault on private property reflected his recent discovery of "the state of nature"

enjoyed by "the noble savages" of Tahiti and elsewhere.

Rousseau clearly flagged that nature worship leads to an assault on private property in favour of communal ownership and governance. Bosselmann and Grinlinton appear to be happy with Rousseau's position, and appear equally comfortable with contemporary equivalents of the "noble savage" who uphold their own ecocentric view.

Their collection includes a chapter by Andrea Tunks, lecturer in the Auckland University Faculty of Law from 1994–2001, which records her "indigenous vision" of sustainable development, which suggests:

"... indigenous peoples see 'the West' as responsible for cumulative environmental degradation and environmental catastrophe. This is due to its economic and political ideologies which do not have a holistic and spiritual understanding of the environment nor the humility attached to being one small part of a complex web of environmental systems."

Ms Tunks then quotes from Maori Marsden's *Kaitiakitanga*: A definitive introduction to the Holistic World View of Maori, written for the Ministry for the Environment in 1992:

"Man is the conscious mind of Mother Earth and plays a vital part in the regulation of her life support systems and man's duty is to support and enhance these systems. The tragedy however is that when these first principles are forsaken and Mother Earth is perceived as a commodity and her natural resources as disposable property ... man becomes a pillager, despoiler and rapist of his own mother."



One wonders if Rousseau himself dropped in on early New Zealand and shared a few thoughts with the locals.

The Bosselmann and Grinlinton collection honestly acknowledges that ecocentric environmental law inevitably undermines private property and the freedoms we associate with the Open Society. The authors see man as a tool of nature and nature's needs must determine what we can or cannot do. Once again, human beings are subservient to the state, but this time it's "the state of nature".

These ecocentric arguments are mounted by intellectuals sitting in the comfortable affluence of Western societies, which have generated sufficient wealth to allow them to promote the welfare of insects and rocks above the welfare of their fellow human beings. They can even afford to espouse the animist wisdom of indigenous peoples over the scientific traditions of the Open Society.

Hernando de Soto sees a different world. In the *Mystery of Capital* he asks why capitalism works in the West and fails everywhere else. De Soto is a third world economist who finds millions of people living short, brutish and poverty-stricken lives within an environment which poses a continual threat to their health, safety and longevity.

These people have no great affection for their "state of nature" and want both the wealth and health of their capitalist neighbours. Traditional explanations for their failure to generate wealth have been either racist – bad genes, or culturalist – wrong beliefs. De Soto finds that their real problem is a lack of private property – both in lack

of ownership of land and other assets, and in the legal framework needed to support secure property and to enable contracts and trade.

To the discomfort of the wealthy ecocentrists these people are increasingly raising their voices against the "eco-imperialists" who place the welfare of first world birds over the lives of third world children.

In his book *Risk Society, Towards a New Modernity* (1992), Ulrich Beck proposes that society is in the process of moving from the culture of the "Industrial Society" to a "New Modernity" which he calls the "Risk Society".

I am not convinced that this is a universal movement in which Beck's Risk Society will finally prevail. Once again, I see this new conflict as just as another example of the ongoing conflict between the Enlightenment and Romanticism.

Beck characterises the "Industrial Society" and the new "Risk Society" as follows:

### **The Industrial Society**

**1 The Role of Science:** Science is the keystone of the Enlightenment Tradition – science is in the service of man and generates wealth for all.

**2 The Major Concern:** Having generated so much wealth the major problem is how to distribute the wealth among the people, and among different communities and nations.

**3 The Nature of Risk:** Risk is an external factor subject to objective analysis. Risk analysis is one of the triumphs of mathematics. We manage risk by weighing benefits against risky side effects.

**4 Civilisation and Nature:** Civilisation is safe and Nature is dangerous. The aim of the Industrial Society is to tame and harness nature for the benefit of people.

**5 Democracy:** Industrial Society exports democracy along with the benefits of the Industrial Economy.

**6 Awareness of Risks:** Members of the Industrial Society are aware of the risks they must deal with – such as loss of job, accident, and death, and these risks are assessed and managed by experts.

### **The Risk Society**

**1 The Role of Science:** Science is the destroyer of the environment and society. Science is the problem. Science has no monopoly on "truth".

**2 The Major Concern:** How to deal with the undesirable abundance and dangerous knowledge generated by unconstrained science. Waste is the problem.

**3 The Nature of Risk:** Risk is internal and an outcome of modernity – rather than an external and manageable problem. These threats are global and unknowable – and all risk must be eliminated (eg the zero molecule approach).

**4 Civilisation and Nature:** Civilisation is dangerous and Nature is safe. The key task is to protect nature from humanity and preserve its harmony and balance.

**5 Pollution:** Industrial society exports pollution to underdeveloped societies and puts all at risk.

**6 Awareness of Risks:** "Victims" cannot determine their

**Continued on page 12**

## Intelligent Design Gets a Boost

**T**HE small Pennsylvania town of Dover has become the latest battleground in the creation/evolution war. If it survives a legal test, this school district of 2800 children could become the first in the US to require that high school science teachers at least mention “intelligent design” (ID) theory (Dominion Post, 31 December). In October, the board passed this motion: “Students will be made aware of gaps and problems in Darwin’s theory and of other theories of evolution including, but not limited to, intelligent design. Note: Origins of Life is not taught.”

“The school board has taken the measured step of making students aware that there are other viewpoints on evolution of species,” said Richard Thompson, of the Thomas More Law Center, which represents the board and describes its overall mission as “defending the religious freedom of Christians.”

Board members have been less guarded, and their comments go well beyond the intelligent design theory. “If the Bible is right, God created us,” said Assemblies of God pastor John Rowand, a board member. “If God did it, it’s history, and it’s also science.”

Eleven parents have, however, joined the American Civil Liberties Union and filed suit in federal court seeking to block mention of ID in high school biology. “It’s not science, it’s a theocratic idea,” said Bryan Rehm, a former Dover science teacher. “We don’t have enough time for science in the classroom as it is – this is just inappropriate.” When applying

unsuccessfully for a position on the board, Rehm said he was subjected to a barrage of questions, including whether he was a child abuser.

The battle is being fought in many parts of the US. In Charles County, Maryland, school board members recently suggested discarding biology textbooks “biased towards evolution.” In Cobb County, Georgia, the school board ordered that stickers be placed inside textbook covers stating: “Evolution is a theory, not a fact.”

Intelligent design argues structures such as cells are too complex to be accounted for by natural processes. Though its proponents insist it is science, Brown University biologist and textbook author Kenneth Miller said it was very clear ID had become a stalking horse for creationism. “If these school boards had their druthers, they would teach Noah’s flood and the 6000-year-old design of the Earth. My fear is that they are making real headway in the popular imagination.”

### Creation Museum almost ready to go

Meanwhile Ken Ham of Answers in Genesis, who makes no bones about being an old-style, Young Earth creationist, is about to achieve his dream of opening a US\$25 million Museum of Creation in Kentucky this northern spring (Dominion Post, 7 January).

“Visitors are going to be hit by the professionalism of this place,” said Ham. “It’s not going to be

done in an amateurish way. We are making a statement.”

Displays will include a model Tyrannosaurus pursuing Adam and Eve – “that’s the real terror that Adam’s sin unleashed” – and a reconstruction of the interior of Noah’s Ark. “You will hear the water lapping, feel the Ark rocking and perhaps even hear people screaming.” Yeah, smite those evil-doers.

### Good times foreseen for Japanese clairvoyants

Japanese women’s concerns for the future are driving a boom in psychic services in the land of the rising sun (Dominion Post, 31 December). Helping to fuel the trend is a wave of daytime television shows that scare housewives with horror stories about health and relationships, then introduce them to the mysteries of the supernatural to calm their nerves.

Other hugely popular programmes invite astrologers and psychics to help solve real crimes that have baffled the police. One such seer claims to have been regularly approached by police, company presidents and, in the run-ups to elections, politicians wanting their fortunes told.

Ken Kitashiba, a former police psychologist, said, “It’s true. I really have seen the police station chief heading off with some gift to seek supernatural advice on a crime.”

Along the famous Ginza in Tokyo clairvoyants charge up to

NZ\$70 for a 10-minute session. “Miss Tiger”, a palmist in her early 70s, says the rise in women wanting their services was understandable. “Women talk less to their parents than they used to, so their reaction is to turn to us for guidance.”

### **Acupuncture the new Botox?**

Sticking needles in your ankles might not seem like an obvious way to rid your face of wrinkles, but acupuncture face-lifts are now available in the US (Dominion Post, 6 November). A series of 10 hour-long appointments will set you back about US\$1500, but this is supposed to last six months or more. By comparison, Botox injections cost several hundred dollars for a treatment which lasts about three months, and “traditional” surgical face-lifts cost US\$5-20,000, but last for years.

“It’s better than going under the knife, that’s for sure,” said 54-year-old acupuncture client Barbara Leivent, who blamed her wrinkles on “worrying if I should get Botox or not.”

However American Society of Plastic Surgery president Scott Spear said acupuncture may help with pain but such face-lifts had not been shown to be effective or long-lasting.

### **Chiropractic School for Florida University?**

New Zealand is not the only place where alternative medicine is being looked at seriously at the highest levels. Florida State University is seriously considering establishing a chiropractic college, the first at a US public university (CNN.com, 17 January). Many

staff are upset at what they see as a threat to the university’s academic reputation. Some have been circulating a parody map of the campus of the future, featuring a Bigfoot Institute, a School of Astrology and a Crop Circle Simulation Laboratory.

### **Still more mediums**

Psychic superstar Colin Fry’s visit to this country in November was marked in the Dominion Post (19 November) with a full-page feature. Apparently once described in a New Zealand magazine as the Robbie Williams of mediumship, there is, writes journalist Tom Cardy, a rock star aura around Fry. He fills major venues and in October staged a show at the London Palladium.

Fry said his TV show, *Sixth Sense* with Colin Fry, came about after he was approached by an independent producer, who allowed him a lot of input into how the show should be presented. It has been very popular in this country, and generated a lot of buzz – and ticket sales – for this, his first tour here.

Sometimes, Fry says, he does literally see dead people; other times he only hears them. “But a lot of the time it’s a sense. It’s a feeling of some spirit temporarily sharing some aspect of your mind and you get some sense of either their memories, their feelings, their communication.”

Not all spirits are good communicators, which he says makes things a bit more difficult. “The big mistake that people make is that they think we can call them up, and we can’t. They connect to us, we don’t connect to them.”

Fry said he knew that for everyone who believes him, there’s an equal number who believe he’s either fooling himself or he’s a fake. “I don’t actually convince anybody. I just do what I do. People must make of it what they will. The hardened sceptic you’ll never convince. It doesn’t matter what you do. They’ll never be convinced because they don’t want to be. They feel safe in their fixed opinion that there’s nothing in it.”

Hey! Look! He’s talking about us!

### **Colourful spin-offs of Cross-wiring**

People who see colourful auras around others could have faulty wiring in their brain, according to a University College London psychologist (Guardian Weekly, 29 October - 4 November). Jamie Ward, whose study of a woman known as GW is published in the journal *Cognitive Neuropsychology*, says the aura suggests a rare condition known as emotion-colour synaesthesia.

“A popular notion is that some people have a magical ability to detect the hidden emotions of others by seeing a powerful ‘aura’ or energy field that they give off,” says Ward. “Our study suggests a different interpretation. These colours do not reflect hidden energies being given off by other people; rather they are created entirely in the brain of the beholder.”

According to the paper’s abstract, GW perceived colours around words which had emotional significance for her, such as names of people she knew, or which had an emotional connotation, such as “love”.



**Continued from page 9**

level of unknowable risk. Hence risk is assessed by “self knowledge” and internal conviction. The precautionary principle protects us from the unknowable risks of change. Chernobyl is the turning point. We calculate the future dead rather than count the existing bodies.

At the root of Beck’s manifesto is the fear of a world “out of control”. The Socialists believed that the economy was too fragile to be left to Smith’s invisible hand or “spontaneous order”. Environmentalists and planners (by definition) believe the biosphere is too fragile to be left at the mercy of selfish individuals. Beck declares: “Society has become a laboratory where there is absolutely nobody in charge.”

As always, hordes of will-ing “controllers” are waiting in the wings.

There is a measure of truth in Beck’s comparative schema. The Industrial Society removed us from a human condition where naturally occurring hazards (disease, flood, famine, and the like) – along with social hazards such as invasion and conquest – moulded the fate of individuals and groups. Members of the Industrial Society take control of their own fate by deliberately undertaking risky behaviour for the sake of the benefits conferred. Achieving these benefits requires technological mastery of nature. So far, so good.

Thereafter Beck’s arguments get murkier. His key position is that Risk Society begins where nature ends. We switch the focus of our anxieties

from what nature can do to us to what we have done to nature.

Surely in the age of Aids, BSE, Sars, as well as earthquakes and eruptions, we are still subject to nature’s hazards. Nature is NOT safe.

The food supply is far safer than it has ever been, mainly because we are now protected against naturally occurring deadly toxins such as botulism.



**What is the proper relationship between nature and civilisation?**

How real is Beck’s assumed novelty of the “global dimension of risk”? The Mount Pinatubo eruption vented as much particulate matter into the atmosphere as the entire history of industrialism to date. Beck ignores such “global” impacts of nature’s handiwork.

Many of the “new modernists” aspire to zero risk or perfect safety, and yet we know that if we pursued this to its logical conclusion we would ban all human activity including conception.

Indeed, life is a sexually transmitted terminal disease.

### **The State of Harmony**

The idea that Nature is in a state of harmony and balance underlies much of the resistance to human

activity. And yet this view is surely anthropocentric. Our surroundings appear stable only because we look at the world through the eye-blink of a human life-time.

The idea of the stable fragile globe was hugely reinforced by those early Nasa photos of the Earth as seen from the Moon. These photos encourage modern stasists to believe that when our satellites tell us that sea levels are rising at about 2 mm a year on average then this is what is happening everywhere around the globe.

Local district plans are rushing to confirm that every beach in New Zealand is going to sink beneath the waves (a few hundred millimeters in a hundred years’ time) and hence we must withdraw from the coast and huddle behind the walls of inland towns, watch Coronation Street, and ride in trains.

Whakatane’s new plan is full of the problems of rising sea levels. I pointed out that the Institute for Geological and Nuclear Science’s measuring devices confirmed that the tectonic plate at Whakatane is rising over the Pacific Plate at a much faster rate than the sea level is rising, which adds up to an overall fall. In my submissions I pointed out that if someone in Whakatane had a sea view they were much more likely to have the floodwaters come through the back door than the front door and that this could happen next week – rather than in a hundred years’ time.

Unfortunately, nature decided to appear as an expert witness on my behalf and delivered floods and an earthquake to Whakatane only a few weeks later.

## The Conflict of the Culture Clubs

The new Romantics reveal their greatest inconsistencies when they deal with cultures, and tribal cultures in particular. On the one hand they oppose globalisation but are all for global government. The late Alistair Cooke's favourite placard at an anti-globalisation rally read "Join the International Movement against Globalisation."

Global government is espoused on the grounds that the air does not need a passport and only global government can enforce Kyoto protocols etc.

But the Romantics' attack on reason draws on a conviction that scientific knowledge is just one human construct and that because all cultures are valid then all belief systems are valid. They conveniently overlook the fact that some seem to work better than others.

However, the Romantic nature worshippers' attack science for several reasons – not the least of which being that they always have. Rousseau argued that the way we see the world depends on our upbringing and our cultural heritage and hence there is no single "truth".

The Fascist Romantics have always turned to the forest people or *völke* whose deep wisdom was deemed to be superior to that of the rational thinkers, or elite – especially those of Europe, who just happened to be Jews.

The nature worshippers now turn to the indigenous peoples of the world because they are seen as maintaining a holistic view of the world as opposed to the hated reductionism of the Open Society, which rests on a foundation of

science and democracy (which are two sides of the same coin).

The late Karl Popper, in *The Open Society and its Enemies*, reminded us that holistic thinking is the handmaiden of fascism. Although he wrote that while here in Christchurch I suspect it is seldom quoted in those halls of academe where social sciences prevail.

The irony is that not long ago we were encouraged to believe in "the family of man" and to overlook the differences in our colour, race, creed or religion. In these post-modern times we celebrate the difference between cultures and especially the difference between tribal cultures and the culture of the Open Society. Indeed these cultures are now regarded as "indigenous species" which must be protected from the impact of the Open Society.

### Unknowable Cultures?

Many RMA documents, and the documents which surround them, argue that Maori culture is essentially unknowable to non-Maori. These views are strongly challenged by Pinker in *The Language Instinct* but they have gained much traction. Again, the cultural anthropologists emphasise the differences between our "tribes" at the same time as the biologists are finding that genetic differences between races are trivial.

The latest challenge comes from Germaine Greer, who, from the comfort of her home in England, is telling Australians that the only way they can gain an identity is to become aboriginal. As Nicoless Rothwell writes in the September 2004 issue of *Prospect*, "Greer assumes that 'being aboriginal' is straightforward, and that you can

almost think yourself into that state." I am not sure if the half million aboriginals would appreciate the impact of 20 million Aussies suddenly "thinking themselves" into being aboriginals, and just whose identity would finally prevail. On the one hand we are supposed to cherish these unknowable cultures and on the other we are supposed to embrace them – presumably without knowing what we embrace and even whether the indigenes actually look forward to the embrace.

What is remarkable is that this mythmaking gains any traction at all. But it does. Our Environment Court has concluded that the Maori holistic view of the world means they make no distinction between land and water. I find this hard to believe. Certainly the Maori who live around me seem to know when to turn off their outboard motors to avoid running aground. Indeed I suspect that the difference between land and water was central to the conceptual framework of the ocean-going Polynesians who settled so much of the Pacific.

But should we worry? We have done remarkably well and most of our great achievements have been in recent times. It's not that long ago that there were only two of us. Now there are six thousand million of us. And yet as PJ reminds us we are richer, longer lived, healthier, better fed, and better educated and enjoy more creature comforts than at any time in history. If any of you have a hankering for the good old days, PJ reminds us to consider just one word – dentistry.

**Owen McShane is director of the Centre for Resource Management Studies. He lives in Kaiwaka.**

## Climate Change still has its doubters

SCIENCE has not “progressed only by slow cautious steps” as Piers McLaren claims (Forum, Spring 2004), but by great bold ones. Scientists should resist new ideas but it is a myth that they do so irrationally. Contrary to McLaren’s letter, quantum theory rapidly won the day. Planck published in 1900, Einstein in 1905, in 1913 Bohr produced a quantum structure for an atom. By 1922 all three had won Nobel prizes for work on quantum theory.

In 1952 a model of DNA led to a Nobel Prize ten years later. However a model alone would not have won; it required confirmation of the theory by innumerable experiments.

Anthropogenic climate change has had plenty of time to win Nobel prizes, or some other recognition from the broader science community. Why has this not happened? Where are the papers that might be nominated? Looking from the outside it seems quite different from science as I learnt it.

Computer modelling is an analogy; argument from analogy is religion not science. Models should allow the development of some testable predictions. Look what actually happened; the first IPCC in 1990 produced four scenarios. In 1992 the second IPCC produced six scenarios (but favoured one). The third IPCC in 2000 produced 40 scenarios and recommended six. They are getting vaguer.

It is the doomsters that irritate, not the IPCC. The latest in the news: “Human civilisation as we know it doomed by the end of the century.” Doomsday scenarios tell

us more about the personality of the predictor than the future.

When the last El Niño effect was running, its severity was blamed on global warming; more frequent and more severe El Niños were predicted. This may still happen but this year (2004) the frequent hurricanes affecting the southeast US are also being blamed on global warming. More of these are being predicted.

But hurricanes in the Caribbean correlate strongly and negatively with El Niño events. My non-trivial and precise prediction (and I have *nothing* to do with this field) is that during the next year in which El Niño is in full swing, Florida will not get a hurricane. If this prediction is incorrect then we may have some evidence of climate change.

Jim Ring  
Nelson

Despite Piers McLaren’s assertions in the last Forum, I think that global warming “evidence” is something that needs to be approached sceptically. Much of the IPCC reports base their evidence for the warming on the 1998 “hockey stick” paper of Mann et al that analysed and averaged data from the last 500 years. It is probably the most cited paper for climate research. However, McKittrick and McIntyre in a 2003 paper have shown that much of the data used by Mann was wrong or incomplete. When they corrected the data sets, it showed the 1500s were significantly warmer than now. Subsequent work has since shown a fundamental error in the maths behind the averaging programme.

It is such that even random numbers as data shows global warming!

There is also the interesting observation by McKittrick that worldwide temperatures showed a 1.5°C step rise at the end of the 80s when the number of reporting weather stations worldwide was halved, mostly by closing remote or rural stations. We even have a similar effect here in Taupo where the weather station has been moved from beside the Waikato outlet to the airport. We are now officially warmer and less prone to fogs but windier.

One of the problems with the cited evidence for warming is it is used very selectively. Satellite data doesn’t match that from ground stations. The Antarctic ice sheets may be melting, but so are the Martian ones. Europe is the warmest it has ever been, except when they used to grow grapes in Britain during Roman times. Contradictions like this abound.

The world, particularly in the west, is on an unsustainable path of profligate energy consumption. The day of reckoning when energy prices skyrocket because of scarcity is in the foreseeable future. However, trying to bring a change in behaviour by a combination of scare tactics and shonky data as the basis for public policy is not the way to proceed. Kyoto is politics, not science. Otherwise, why would coal exports to Asia be encouraged at the same time as they want to carbon tax it here?

Skeptics should challenge all information as a matter of principle, not just that which is contrary to their beliefs.

C Morris  
Taupo

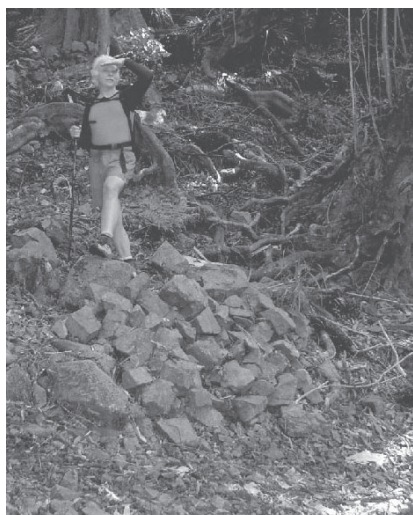


### Faulty wiring

Jamie Ward, a psychologist at University College, London has recently published a paper in Cognitive Neuropsychology, which attributes Kirlian Auras to “faulty wiring in the brain”. The condition is known as emotion-colour synaesthesia. In other words, the colours are real to those that perceive them, but they are created with the brain. I suggest that the very large number of believers in this and many other paranormal phenomena are also suffering from faulty wiring!

Alan P Ryan  
Kaiapoi

### More ancient archaeology



Here is a photograph of what is obviously an ancient rock wall created by the original inhabitants of New Zealand, found in Belmont Regional Park, Lower Hutt, by Paul King and Bob Metcalfe. By golly, you can hardly fit a knife blade between those stones.

Bob Metcalfe  
Wellington

### Psychic vision a waste of time

A psychic’s “vision” that a bomb was hidden on board caused the cancellation of an internal US

American Airlines flight in March last, despite a search having revealed no trace of a bomb, and of course causing inconvenience to travellers. Persistent questioning by CSICOP staff elicited an explanation; the details, reported in Skeptical Inquirer, contained good news and bad. The good news was that the official body, the Transportation Security Administration, had searched, found no bomb, and, contrary to previous reports, described the psychic as “not a credible source”. The bad news was that, despite these assurances, the flight crew refused to fly. In the

absence of a replacement crew, the flight was abandoned.

The not-so-good news was that the psychic was not prosecuted for the mischief caused, since he/she had not acted out of criminal motives. How sad that a group of intelligent, highly trained technicians should behave so superstitiously. I am reminded that sailors are notoriously steeped in superstition; are all navigators cursed with this disease?

Bernard Howard  
Christchurch

### book review

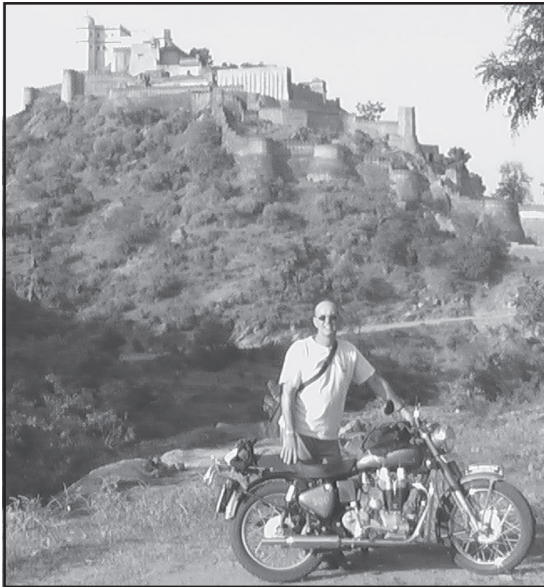
**How to Poison your Spouse the Natural Way: A Kiwi Guide to Safe Eating, by Jay D Mann. JDM & Associates, \$24.95. Reviewed by David Riddell.**

A Christchurch mother who fed her five-year-old son raw beans was surprised when he fell ill. Because they had not been sprayed, she reasoned they should be a natural, healthy snack. But natural, as Jay Mann makes clear in this highly entertaining guide to the contents of your dinner plate, doesn’t necessarily mean safe. Beans for example contain lectins, which have no bad taste to warn unwary consumers, but destroy the lining of your small intestine. Alfalfa contains canavanine, which disrupts DNA and RNA metabolism, though you would need to eat a lot of alfalfa to be poisoned by it. Lots of common foods are laden with poisons, all perfectly natural of course, but best consumed in small doses only.

Perhaps the scariest chapter is the one on fungal toxins. Fungi are everywhere, and many of them have chemical weapons that would put the arsenals of certain Middle Eastern countries to shame. The message is clear: minimise your risk by eating a broad-based diet, and throw out any food that is even slightly mouldy or musty-smelling.

While there are many health risks associated with food which we should be worried about but often aren’t, there are other issues that concern people that really shouldn’t. Monosodium glutamate (MSG) is a good example. Dr Mann argues convincingly that this flavour-enhancing substance is not the cause of “Chinese restaurant syndrome”; instead histamines in soy sauce are the culprit. And rather than proudly boasting of their lack of preservatives, he says products should carry labels declaring: “Warning! No preservatives!”

All skeptics should enjoy this amusing and informative book. It is available from bookshops, but can also be bought from the author (4 Kantara Lane, Somerfield, Christchurch). Some first edition copies (minus a few paragraphs, and plus several typos) are available to Skeptics members for \$20, postage included.



**John Welch has recently returned from a spiritual pilgrimage to India...**

## Agent Orange: Déjà vu all over again?

**I**F YOU don't get the answers you want from a Government inquiry, press for another inquiry. Vietnam war veterans have continued such a campaign and have produced a map to confirm that they were present in areas that were sprayed with the defoliant under the US Army "Operation Ranch Hand".

The Dominion Post (4 October) reports: "The year-long inquiry [the third] heard new medical evidence and harrowing testimonies from veterans, who related the effects of Agent Orange on their health and the health of their children."

As we all know, harrowing stories get a much better press than the facts. A map confirming exposure is irrelevant. A study of veterans of Operation Ranch Hand found no association between exposure to Agent Orange and birth defects. The US Environmental Protection Agency's (EPA) Science Advisory Board concluded that dioxin (the alleged carcinogen found in Agent Orange) caused no health effects except for a skin disease seen at very high exposure

levels. This is "chloracne": a recent classic example is the ravaged face of the new President of the Ukraine who was poisoned with dioxin by political rivals.

Victims of the Seveso (dioxin) disaster have been followed up now for 15 years (Epidemiology 1997; 8: 646-652). When all types of cancer were grouped into one category, no statistically significant excess of cancer was observed. However, some cancers have a much longer lead-in time, say 20-25 years. My crystal ball tells me that these current findings will stand the extra test of time.

All of this reminds me of a similar campaign to define or legitimise the problems that US Vietnam veterans had in re-entering American society. As Edward Shorter puts it (A History of Psychiatry, p.304-5) "In language that anticipated the 'struggle for recognition' of numerous later illness attributions, such as repressed memory syndrome, the veterans and their psychiatrists argued that "delayed massive trauma" could produce subsequent "guilt, rage, the feeling of being

scapegoated, psychic numbing and alienation."

In 1978 the world was presented with the new diagnosis of "post traumatic stress disorder", commonly referred to as PTSD. Commenting on this politicisation of science Shorter comments: "Given such antics, it would be difficult to take seriously any official psychiatric pronouncements about problems surrounding ... the psychiatry of stress."

### The Near Starvation Diet

Drastic calorie reduction (CR) is the latest diet fad for narcissistic yuppies and is based on experiments that showed animals lived longer and looked younger when fed less. Proponents of CR consume about half the calories normally advised for healthy eating. As if you hadn't already guessed, the CR Society is California-based. There must be more fruitcakes in California than anywhere else but it (fruitcake) would definitely be off limits for a CR adherent.

As one of them is quoted as saying: "ageing is a horror that has got to stop now." The society's website "includes a 'better chocolate pudding' made with, among other things, 13 squirts of sucralose concentrate, guar gum and micro-nised cellulose." It sounds more like a chemistry experiment! CR is basically on the right track but like all such extreme movements has gone too far. Fat people are overweight because they eat too much of the wrong food and they lie to themselves about how much exercise they take. Eating the right quantity of food in the right mix will allow most people to maintain a healthy weight for their height.

## ACC Fraud

An ACC beneficiary was jailed for almost three years for obtaining \$80,000 by fraud. This was through the use of falsified documents and invoices for home help (Dominion Post 6 July).

A careful reading of the article reveals the source of the real fraud. The claimant in this case had received cover for the pseudo-scientific diagnoses of “fibromyalgia” and “occupational overuse syndrome”. Fibromyalgia is claimed to be a disorder where there are tender spots all over the body. The French called these “points hysteriques” and I have also seen it humorously described as the German “unt here” syndrome. The patient has pain “here, unt here, unt here”. The diagnosis of fibromyalgia is a logical fallacy as outlined by Quintner (Lancet 1999; 353: 1092-1094).

“Fibromyalgia has been promoted as ‘a common and recognisable cause of chronic, diffuse musculoskeletal pain’. This statement violates the dictum in logic that an effect – in this case an illness – should not be confused with its own cause.”

Many such syndromes can be easily explained by existing psychological paradigms and it is clear that fibromyalgia is merely a rheumatological interpretation of chronic fatigue syndrome.

As for OOS, those of you who were at the conference will remember the terrific presentation by Dr Lucire who argued persuasively that OOS is a psychological disorder caused by somatisation. This same model could easily fit for fibromyalgia. The real fraud as I say, is when quack doctors endorse

complaints as being work-related and therefore penalising innocent employers as well as being a fraud against ACC.

## In Brief

- Worried about cancer? Why not schedule a whole body CT scan! This sort of absurd over investigation (“grope-a-gram”) could only happen in the US where the phenomenon of third-party insurance ensures that people can get any investigation they request. Radiologists have warned that there is a cancer risk from this radiation. One such scan every year for 30 years would produce a cancer risk of 1 in 50 (NZ Doctor, 8 September).

- An armed robber is suing the police because a police dog bit him. “He suffered recurring flashbacks and nightmares from which he woke in a cold sweat. A prison psychologist had treated him for the after effects of the dog attacks and childhood sexual abuse.” Yes – he has received a diagnosis of PTSD. But wait a moment, doesn’t PTSD require experience of events *outside of normal experience*. I would have thought that being bitten by a police dog is a normal part of life for such criminals. Still, a diagnosis of PTSD could be useful in getting an ACC claim or getting a sickness benefit. I am more concerned about the police dog. It’s probably quite upset about being made to bite people. I recommend referral to the homeopathic vet and treatment for Pooch Traumatic Stress Disorder (Christchurch Press 31 August).

- It is claimed that an alcohol vapouriser can produce a feeling of euphoria but not drunkenness. The device has been introduced into the US and uses alcohol combined with

pressurised oxygen. I don’t think so! For a start, euphoria is just another term for a form of drunkenness. If alcohol is being delivered to the brain then subjects must therefore be under the influence of alcohol. Pressurised oxygen is highly dangerous and I doubt very much if it could be combined with alcohol without giving subjects a “real blast” (Christchurch Press, 24 August).

My favourite story about the dangers of oxygen and inflammable substances is the story of a USAAF pilot who turned up for work with his hair liberally impregnated with a petroleum-based hair gel. As he strapped himself into his jet he felt a bit hungover so turned his oxygen on to 100% and had a few whiffs to clear his head. Horrified ground staff witnessed the explosion as his helmet blew off with most of his hair leaving him alive but badly burned.

- A celebrity chef lost her licence for exceeding the NSW Blood Alcohol Level (BAL) of 0.05. That is, 50mg per 100ml of blood. The NZ limit is 80mg% or 0.08. The chef claimed to have drunk one glass of wine four hours earlier. This is absurd as in order to exceed that limit she would need to have had at least three to four drinks over that period. A single glass of wine would have been fully metabolised over the course of four hours. Some Asians lack an enzyme essential for the metabolism of alcohol but I doubt whether this would be an effective defence. With respect to drink driving, I suspect that judges must have heard every excuse possible and this one just doesn’t wash! Perhaps she had unwisely experimented with the “alcohol vapouriser” (Dominion Post, 25 January).



# Deadly Ignorance

Raymond Richards

*Pseudoscientific beliefs can be dangerous when they form the basis of government policy*



IN MY last column, I mentioned that conspiracy-thinker Phillip Day travels the world (he again toured New Zealand late last year) with his message that there is no Human Immunodeficiency Virus (HIV), that Acquired Immune Deficiency Syndrome (Aids) is not sexually transmitted and that the “highly poisonous Aids medications” are part of a “calculated and inhumane population control agenda which has been sanctioned at the highest political levels.”

So absurd are these claims that readers may doubt whether people such as Day attract much of a following. Why should Skeptics bother to speak up? Sadly, misinformation can be deadly to entire populations when policy makers adopt it. A shocking example is the case of Aids in the Republic of South Africa.

In 1982 the first cases of HIV were diagnosed in South Africa. The government was very slow to respond to the growing crisis. By 1998, when 50% of adult medical admissions to hospital in Gauteng province were Aids-related, there was still no national treatment plan, public education about Aids was almost nonexistent, and superstitions were widespread. When

health worker Gugu Dlamini made her HIV status public on World Aids day, she was stoned to death by a mob that included her neighbours.

The reason for the government’s slow response became clear: ignorance among the leadership of the ruling African National Congress. The South African president, Thabo Mbeki, who succeeded Nelson Mandela as president in 1999, shocked the world health community when he said Aids is caused by poverty, not by HIV. By 2000, 10% of South Africans were HIV-positive, but in May of that year he appointed a panel and charged them with solving the country’s Aids problems. One of the panel members chosen by Mbeki was American scientific outcast Peter Duesberg, who says Aids is caused by anti-Aids drugs, such as AZT, but not by HIV! Mbeki ruled out providing AZT to HIV-positive pregnant women, claiming the drug did more harm than good.

In fact, the drug has been proven effective in drastically cutting the transmission of the deadly virus to the baby in childbirth. Thousands of HIV-positive babies continued to be born every month. Duesberg

said he doubted South Africa was experiencing an Aids epidemic, and the panel debated whether Aids is spread by sex or not. Mbeki thus wasted precious time and resources. In July 2000, about 5000 doctors and scientists took the extraordinary step of releasing The Durban Declaration as a rebuke to Mbeki. The document said the link between HIV and Aids is “clear-cut, exhaustive and unambiguous.” South Africa’s doctors appealed for an end to the debate which they said was confusing people who should be fighting Aids, which was spreading faster in South Africa than anywhere else on Earth.

Mbeki continued to downplay the threat of Aids. His government continued to ban doctors from providing antiretroviral drugs to HIV-infected women, thus ensuring that the disease was passed on to thousands more babies. The cheap or free drugs that pharmaceutical companies had been offering for five years were not accepted.

Indeed, the Ministry of Health at great expense distributed a pamphlet justifying this deadly nonsense. In 2001, Mbeki again refused to link HIV with Aids, even though he agreed “that’s what the scientists say.”

Progress slowly came. President Mbeki found himself increasingly isolated as members of his cabinet and government supporters stated that they accepted the link between HIV and Aids. He also came under fierce international criticism from scientists and medical experts for his ignorance and lack of action.

In November 2003, the government reversed its position on the anti-retroviral drugs and planned to quadruple its spending on HIV/ Aids. President Mbeki, however, continues to lash out at efforts to provide scientific treatment. Phillip Day praises Mbeki’s bizarre beliefs.

The World Health Organisation says Aids is the biggest cause of death in South Africa, where it affects nearly six million people, more than in any other country. About one million people died in South Africa last year from Aids.

No society in history has had to deal with an epidemic like this. There is no containing an epidemic that has already infected 30% of adults in Durban. By 2010, life-spans will probably be reduced in South Africa from about 70 years (in the absence of Aids) to about 36. Millions of deaths from Aids that have occurred in South Africa and millions that will happen were avoidable.

When leaders fall for crank ideas, the results can be massively tragic.

**Dr Raymond Richards is a Senior Lecturer in History and American Studies at Waikato University. He can be reached at ray@waikato.ac.nz**

# Never Pay an Electric Bill Again!

*You can't break the laws of thermodynamics, says **Bob Brockie***

**N**EXT time you visit the US don't miss the Museum of Unworkable Devices, the brainchild of physics Professor Donald Simanek from the University of Pennsylvania.

For centuries, scientists and tinkerers have dreamed of building perpetual motion machines or machines which will put out more energy than goes into them. Professor Simanek's museum is full of these devices, none of which work.

You can see models of Fludd's closed cycle flourmill, various buoyancy and capillary motors, Sinclair's siphon, overbalanced wheels, the Schadewald gravity engine, Cheng's magnetic shield engine and many more. None of them work because their creators misunderstood or did not know about the laws of physics (well the laws of thermodynamics and energy conservation) which say you can't get more energy out of a system than you put into it. Professor Simanek uses his museum to teach his students why any such device can never work as their inventors intended.

But there are some remarkable hucksters about who make a good living by selling perpetual motion machines to a naïve public. For 14 years Dennis Lee's American company, Better World Technologies has touted cars that run without fuel or batteries. "Never pay an electricity bill again," he trumpets as he sells his all-but finished electric generators that

produce "15 times as much electricity as you need at no cost".

Lee claims to be a self-educated God-fearing genius, fighting against the pompous, closed-mind scientific establishment and a vast corporate conspiracy which is trying to suppress world-shaking inventions.

He argues that perpetual motion is not the big deal scientists make it out to be. Lee thinks that the "free" invisible energy of gravity is always there and he taps into this energy to make his machines run.

But physicists have found no evidence of any invisible "free energy". They tell us that gravity is not a source of energy at all and that the laws of physics will never allow a machine to be built on Earth that runs off gravity.

In his many years on the road, nobody has ever seen any of Lee's machines working. He claims that his machines are just on the verge of final development but still need a few tweaks and refinements. Nevertheless, Lee has no trouble selling \$100,000 "dealerships" for his technology.

It has been pointed out that, as far as is known, all Better World Technology dealers still get their power from local electricity companies.

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