

*The worst speculative Sceptic ever I knew,
was a much better Man than the best
superstitious Devotee & Bigot.*

David Hume

**Mad Consumer Disease
An Identified Flying Object
Mission to Saturn
Evolution Website**

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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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Space Ships and Mad Cows

IT WAS a dark and stormy night. But (almost) without flinching we set off to hear Jet Propulsion Laboratory scientist Kevin Grazier speaking about the Cassini mission to Saturn.

During the talk (see page 6), he mentioned how there was opposition to the mission, stemming from the nuclear power source required for travel so far from the sun (the plutonium is encased in ceramic designed to survive re-entry at 11km per second, in the event of an accident). At a party he overheard one guest declaring that Cassini carried a nuclear warhead, which the scientists planned to fire into Saturn's atmosphere, setting it alight. He has an interesting life. As well as his fulltime Nasa job, he lectures at UCLA, gives public addresses at Griffiths Observatory and tours the US giving talks to school students, and is a member of the screenwriter's guild. We thought he was worth a profile.

He enthralled the crowd for over an hour and fired up this family to keep a close eye on Cassini's odyssey. We also had great fun making our very own paper model of the space probe (saturn.jpl.nasa.gov/kids/models/pprmdl.pdf). Making the real one must have been even more difficult. Recommend this a good thing for a skeptic to do on a rainy day.

Speaking of spacecraft, one of our members almost saw a UFO on a recent visit to the west coast, but his sceptical facilities got in the way of what could have been a really exciting discovery (page 8).

Another thing to do on inclement days is visit the new website on evolution, put together by Waikato University biological sciences staff. Skeptics members were invited to comment, on the site, and all were very complimentary. Public understanding of evolutionary theory is very poor, and this should be a very useful educational tool (see page 5).

The lead article this issue provides insight into the consumer response to BSE. It's interesting that, in spite of the wave of panic which overtook British beef eaters, concern over beef consumption dropped dramatically when the price was right.

Finally, founding member and long-time stalwart Bernard Howard brings us up to date on the latest health fad from Europe (page 17). Bernard is recovering after two weeks in hospital; our thoughts are with you, Bernard, get well soon.

Annette

“Mad Consumer Disease”: the response to BSE in the UK

Consumer response to the outbreak of Bovine Spongiform Encephalopathy has involved a complex balancing of risk and price

Fiona Carruthers

BOVINE Spongiform Encephalopathy (BSE) has officially been recognised in the UK since 1986, a year after the first signs of disease amongst the UK herd. It was only in the 90s, though, that a link with the human illness, Creutzfeld-Jakob Disease (CJD) was investigated, leading to the famous announcement on 20 March 1996, by the health secretary in Parliament, that there was a ‘probable’ link between BSE in cattle and a new form of CJD, known as “new variant CJD”. This was the day that the floodgates opened. It has been described as Britain’s ‘most costly peace time catastrophe’, although that might have changed since the foot and mouth outbreak of 2001. I, fortunately, was working at the time as a dietitian in Health Promotion. My predecessor at the Meat and Livestock Commission, Amanda Wynne, was not so lucky.

Consumer reaction

That Government announcement precipitated an unprecedented response from both the media and consumers—the two obviously being inextricably linked. There was an immediate reduction in sales of some 30%, with consumers avoiding beef in its most obvious form,

ie roasts and casseroles, but not meat products so much. This immediately gave a hint of consumers’ misunderstanding, as the incidence of BSE was much higher in dairy herds, from which meat products are more likely to be made, with prime cuts coming from beef cattle, which remained largely unaffected. There had also been a ban on the use of what are called ‘specified bovine offals’ since 1989, which included the spinal cord, thymus and brain, so it was likely that any possible transfer to humans occurred before this time. Stopping eating beef now was not really going to help.

At what price?

But what price are consumers willing to pay to reduce risk? Inevitably the price of beef plummeted shortly after the announcement in the Commons—one supermarket cut its prices by 50%. The effect on consumers was dramatic—beef sales went through the roof! Some supermarkets saw a ten-fold increase in sales. There was suddenly a widespread acceptance of risk because it came at a bargain price. These are two examples of quotes that appeared in the press at the time: “There are still a lot of people who are buying

beef and where it is reduced they are buying it in quite large quantities,” said a spokesman from Tesco. “I’m not all that confident, but it’s a good price and I’m willing to take the risk,” said one customer who bought half-price steaks. And well she might—the British Medical Association published figures at the time showing the risk of dying from CJD was 1 in 10 million (equal to being hit by lightning), compared to 1 in 8000 for a fatal road traffic accident or 1 in 200 for dying from smoking 10 cigarettes a day. I remember one person saying to me that they would buy the cheap beef and put it in the freezer until the scare was over!

There was clearly a point at which people were willing to trade perceived risk for cheaper food. It has been paralleled with the effect on the air industry following the September 11 disaster. In the month following, British Airways saw its passenger numbers to America fall by 32%. In contrast, the budget airlines have seen their trade boom. Admittedly, most of those airlines in the UK do not fly to America and you could argue terrorists are more likely to target the big carriers flying out of New York or Heathrow, than those flying

to Tenerife from a minor UK airport like Luton or Stanstead. But people are remarkably consistent in the way they balance risk with price—consider your own behaviour regarding smoke alarms, bike helmets or your car tyres.

This has also been highlighted recently during the GE debate. Actually buying organic produce in a supermarket for example, does not always reflect reported behaviour.

Beef sales

Despite these quirks of human nature, beef consumption did drop overall during 1996, and it was hardly surprising that some people were anxious about eating beef when on a Friday the Government said it would give guidance on feeding children beef, but not until the following Monday! There was a considerable reduction in the consumption of beef from March 1996; this was not entirely due to a reduction in household consumption. Two hundred and three out of 204 local councils banned beef from their menus in March 1996, which most notably included schools, but also social services. Interestingly, a similar reaction has been seen in France in 2000, after a confirmed case of vCJD (though not their first), with beef being taken off all school menus and beef sales falling by 20-50%.

The response since

Since 1996, consumer confidence in British beef has increased dramatically. Continuing with the analogy of the air industry, it is said to be safest to fly the day after a plane crash—I think that is true in NZ too. Britain has had to examine its procedures in tremendous detail, and consumers are

recognising the changes that have been made, and are keen to buy a product in which they now have confidence. Beef sales are not only back up, but exceeding pre-BSE levels. A Mori poll in 1999, of perceived “threats to health”,

People are remarkably consistent in the way they balance risk with price—consider your own behaviour regarding smoke alarms, bike helmets or your car tyres.

showed the fear of BSE at the bottom of the list, well below the major killers of cancer and heart disease.

Having been one of the first fast food chains that stopped using British beef in 1996, McDonalds threw its weight behind an industry initiative in 1998, aiming to increase consumption of the British product. Following the launch of this “Buy British” campaign, two thirds of those surveyed preferred to buy meat produced in the UK, 40 % ranking it “very important”.

But in October 1998, 170 local authority bans still remained in place. This triggered a high-profile campaign by the industry, enlisting the support of Government, the Food Standards Agency and a well-respected scientist, Hugh Pennington. This was required to counter the “well, you would tell us it’s safe, wouldn’t you” sort of reaction. Within a month, 56 local authorities had lifted their bans, and within six months only three remained. Today, just two bans remain, plus a couple in primary

schools. The key issue in terms of returning to beef was traceability, even outweighing price—though only just. Consumers needed reassurance, focused on identified consumer concerns. Several quality assurance schemes were introduced throughout the food chain, most notably one for mince, introduced quite soon after the crisis began. It was a rosette developed for use on mince, stating that the product did not contain offal, and was made from cattle less than 30 months of age. Consumers had become concerned about the quality of mince, and this quality mark worked well to reassure them. It was later extended to burgers as well. Consumers in the UK are as responsive to stickers on packs as they are here. Even if they don’t fully understand what they mean, it is a symbol of quality.

Food safety is still a major concern for consumers in the UK – highlighted by the latest consumer attitudes survey, carried out by the Food Standards Agency – but it is broader than just BSE. Unsurprisingly, food poisoning is of greatest concern in Scotland, reflecting the site of the *E. coli* outbreak, also in 1996, in which 20 elderly people died. But over 90 per cent of those surveyed eat meat on a regular basis, with true vegetarianism still below 5% of the population.

Reaction in NZ?

So how did consumers react here at home? It appears to have been perceived very much as an overseas problem, and if anything helped our product. The fact that NZ is BSE-free reinforced consumers’ confidence in the NZ product and the meat production

systems employed here, ie grass-based and extensive.

What of the farmers?

In conclusion, I would ask you to spare a thought for the farmers. By March 2001 there had been 95 cases of vCJD in Britain. And whilst no one would deny it is a hideous illness, compare this to the number of suicides amongst farmers and the figures pale dramatically. In 1999, there was more than one suicide a week amongst farmers, totalling 400 over the last few years. This, as far as I know, never made the headlines.

Acknowledgements

Grateful thanks go to former colleagues at the Meat and Livestock Commission for supplying information for this paper, in particular Chris Lamb, consumer marketing manager and Tony Goodger, trade sector manager.

Fiona Carruthers works for the New Zealand Beef and Lamb Marketing Bureau, Takapuna, Auckland. This article is reprinted with permission from the *Proceedings of the Nutrition Society of New Zealand* 27, 97-99.

flying object

An Identified Flying Object off Abut Head

One of our members almost spots a UFO

Barry Donovan

IN LATE August 2003, three friends and I spent several nights in a hut on the north bank of the Whataroa River in South Westland, 5km from the river mouth. One evening at about 9.30pm the smoker among us called from outside, saying that a bright light low on the horizon downriver had twice accelerated at high speed and disappeared behind and reappeared from a large hill just to the north, and that the speed was greater than that of any aircraft known to us.

Being a skeptic I at once called for one of us to get binoculars while the fourth person and I dashed outdoors. The sky downriver was mainly clear with just a little wispy cloud moving quite quickly down the coast. I soon realised that the

light was in fact a star, which was being obscured intermittently by cloud, but at the same time the night began resounding with cries of "look at it go, look at it go, look at it climb", and "look at it dive". The person with the binoculars even saw a winking red light just beneath the bright light. However it was obvious to me that the position of the light in relation to the silhouettes of shrubs just below it on an island in the riverbed was remaining unchanged, and I declaimed so quite loudly, but for several minutes to no avail. Finally, the other three conceded that indeed the light was a star, and the whole situation was summed up by the comment from one of the three that "we (three) have been the victims of mass hysteria".

In case the thought has crossed your minds, yes, except for the smoker we had indeed had a few drinks before dinner an hour or so earlier, but nobody was at all adversely influenced. Also, all the other three are well-educated and worldly-wise, and have worked in science research all their working lives, and are not the types to readily jump to erroneous conclusions. So how was it that they did believe that a light, which was in fact a star, was moving at great speed?

Well it seems to me that the pattern of cloud movement was such that without referring to stable points of reference such as the outlines of shrubs on the island, the smoker was easily able to conclude that when the light was being obscured by cloud moving south, it was actually moving rapidly to the north behind the hill. The minds of the other two were implanted with the expectation of seeing just this before they went out from the hut, and when the light did disappear they too concluded that it was moving. When there was no cloud between the light and the hill there was an appreciable distance between them, so when the light disappeared, apparently behind the hill, then of course it must have moved at high speed to get there in no time at all. Flashing red lights are often seen on flying craft at night, so the third observer who saw one beneath the light, which the other two were repeatedly confirming was a fast-flying craft, probably saw what he expected to see. Of course his report of a flashing red light in turn reinforced the belief of the other two that they were indeed observing a flying craft.

A few days later an earthquake of magnitude 6.2 rocked the

southwest of the South Island, including our hut.

It is interesting to speculate on the possible consequences if heavy cloud had obscured the star permanently just before my skeptical nature had had time to observe the constant spatial relationship between the light and the outlines of

shrubs on the island. On the evidence of the other three observers – and perhaps me included – one would have had to conclude that only an alien craft could have moved at the observed speeds. The earthquake might then have been attributed to the disruption of the earth's gravitational field by the obviously hugely powerful space

drive of the alien craft. From a northern hemispheric perspective all this would have occurred at the ends of the Earth. And so another UFO sighting with concrete back-up evidence from scientifically-minded observers would have taken on a life of its own, forever.

Barry Donovan lives in Christchurch

Science, Space Probes and Cylons

The US\$3.3 billion Cassini mission is about to rendezvous with Saturn, but if some had had their way the robot probe would never have left the ground.

Dr Kevin Grazier, a scientist from Nasa's Jet Propulsion Laboratory (JPL), in California, was in New Zealand briefly and took the opportunity to give a public lecture on the mission at Waikato University. Afterwards he spoke to NZ Skeptic.

NZS: What brings you to New Zealand?

KG: About five years ago, Philip Sharp at Auckland University read a scientific article that I published, and it turns out that we have very similar research interests. He is interested in developing mathematical and computational methods for doing simulations of solar system celestial mechanics. I'm interested in that, but more interested in applying these methods to answer questions into our solar system's origin and evolution. I'm in New Zealand to collaborate with Philip on a couple of papers on numerical methods, which we will be publishing soon.

NZS: What is your role on the Cassini mission?



Kevin Grazier at Waikato University

KG: I'm investigation scientist for the Cassini Imaging Science Subsystem. There are 12 instruments on Cassini—associated with each is a team of scientists. These scientists provide me with lists of observations they would like

Cassini to make. I then have to determine, to the second, when the spacecraft will be in the proper position to make the observations.

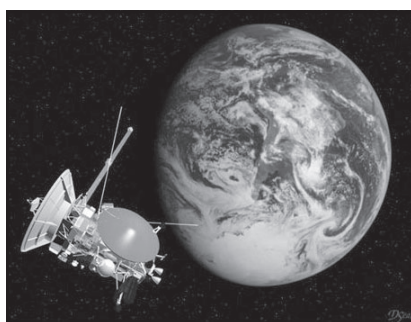
NZS: At your talk you mentioned there was a bit of a backlash on the Cassini mission in the early days. Can you expand on that?

KG: Because Cassini has 72.3lb of plutonium oxide on board encased in three RTGs (radioisotope thermoelectric generators), there was a small but vocal movement which wanted the launch stopped back in 1997. Their claim, which I think Nasa countered quite well, was that if there was a launch accident the plutonium could be dispersed widely. Ironically there are still people who think that somehow

Cassini can come back to Earth with its radioactive payload to poison the Earth—sorry, that's not possible.

NZS: How can you respond to people who think this way?

KG: Well, it seems like every year there is the "Astronomical Catastrophe du Jour". Let's go back to 1997 and Comet Hale-Bopp. First it was supposedly on a collision course with Earth. Then, after it passed, it was supposedly



Cassini flies by the Earth, 18 August, 1999. Image Courtesy Nasa/JPL-Caltech

on a collision course with the sun, as if that would matter. Astronomers were saying otherwise, but there were folks in the media and folks who wrote books, and folks who made web pages, who were "in the know", and "knew the real facts that astronomers won't tell you".

What I tell people in this case is, this is an excellent opportunity for you to calibrate your sources. Here, astronomers are saying one thing, the detractors are saying another. When all this has come and gone, recall who said what, and keep that in mind next time (the next time, in this case, being the planetary alignment on the fifth of May 2000).

NZS: You've given public talks about Mars. Do you get asked about the Face?

Coming Soon: The Cassini-Huygens Show

Cassini is the largest and most sophisticated spacecraft ever sent into deep space. It began its seven-year, three billion-kilometre journey in 1997. Speaking at Waikato University in February, Kevin Grazier told the audience 17 nations had contributed to building the spacecraft, and more than 200 scientists worldwide will study its data.

"We're on course for a July 1 orbit insertion, and the spacecraft's operating fantastically and sending back information already," he said.

Riding piggy-back on Cassini is the Huygens probe, which is to detach from Cassini on December 23. It will plunge into the atmosphere of Titan, the largest of Saturn's 31 known moons and the only moon in the solar system with an appreciable atmosphere - which makes it of great interest to scientists.

"Hopefully we'll get images as it descends through that atmosphere, which we think is very similar to the atmosphere Earth had that gave rise to life. A term often applied to Titan is that it is the early Earth in a deep freeze."

After watching the Gemini and Apollo launches as a child in Michigan, Dr Grazier decided when he got to college he would take up space. "My educational career was dedicated to getting into where I'm working now - at JPL."

JPL, whose first director was New Zealand-born William Pickering, began as a laboratory dedicated to jet propulsion, which changed with the launch of Sputniks I and II - "we instantly saw we were behind in this thing called the space race!"

"JPL became the Nasa centre building spacecraft for earth orbiting and then planetary exploration - we've been sending spacecraft to planets for over 40 years now."

Dr Grazier has another claim to fame which he shared on the night. A fan of science fiction, he played a Cylon centurion (one of the bad robots) in the *Battlestar Galactica: The Second Coming* trailer. "I approached them about me being a science advisor to the show, and they stuck me in this Cylon outfit!"

It was, he says, an out of this world experience, if somewhat hot and restrictive. He's just accepted the job of science advisor on the upcoming TV series of *Battlestar*, so might get a chance to wear the suit again. In the meantime, there's Cassini to keep an eye on, and landing a probe on an unexplored moon.

For further updates on the Cassini mission, visit the JPL website: saturn.jpl.nasa.gov/index.cfm

KG: I talk to school groups fairly regularly, but I talk about the Cydonian face only when asked. Actually that's not quite true. In my standard Mars talk, I build up to a slide in which I promise them I'm going to show them a photo of the face on Mars they've never seen. Then I show a smiley face imposed over a crater on Mars.

Actually, when I talk about Mars I usually have a slide with me showing the 1976 Viking image in

which the formation in Cydonia looks like a face, as well as the much higher resolution 1997 Mars Glo-bal Surveyor images, in which we clearly see this is a naturally occurring feature.

Some people don't want to believe that, and say it's a Nasa cover-up. You just have to accept what's staring you in the face. You know, my job is completely open, we don't do anything with the military, everything we do is wide

open, and people just can't accept that. It's not a conspiracy, we see what we see. We release what we see.

NZS: Are skeptics an endangered species?

KG: Sometimes it seems that way, and it's astounding when I hear some of the beliefs some of my students hold, coming into the class. Am I a skeptic? Any scientist is a skeptic, or should be.

evolution website

Evolution Website a Hit with Teachers

Annette Taylor

A WAIKATO University website on evolution has received overwhelmingly positive feedback from teachers, says biological sciences lecturer Alison Campbell.

"We held a teacher meeting in April for the Waikato and Bay of Plenty area from which we got some very favourable comments, but I've heard that teachers from Auckland and Wellington are quite taken with the site as well."

The site is aimed primarily at providing expert support and quality material for New Zealand's science teachers. It has been developed over eight months by a group of staff from the School of Science and Technology.

"Why did we do it? Penny Cooke and I have been concerned for quite a while now about the low level of understanding of evolutionary theory that we find in our

first-year earth science and biology students. In addition, I'd been fielding requests from biology teachers for some sort of resource that could help them teach evolution."

The team, which also includes Kathrin Cass and Kerry Earl, tried to produce a comprehensive site that dealt with many aspects of evolutionary theory and research and the related earth sciences concepts.

"We put a lot of effort into making it attractive and easy to use, and from teachers' comments I feel we've succeeded in this."

She has had other feedback, including a query from one person asking why there was nothing on "alternative theories" such as Intelligent Design. "I directed him to the site page addressing the nature of scientific theories. And then there was one from someone

who intends to use the site to demonstrate the failings of scientists to their children, to counteract the teaching on evolution they'll receive from school..."

Much of the content fits in with the curriculum objectives of the NCEA. "It was very important to us that the site has New Zealand flavour, as students are expected to be familiar with New Zealand examples of evolution."

She feels there's a lot of very good evolutionary material on the web, but it lacks this New Zealand focus.

The content will be reviewed annually so that the site remains accurate and relevant. "In human evolution, for example, there's a lot of new information coming on stream every year, and it's very hard for individual teachers to keep up with this, but we can offer them this service."

The team felt that the sections on the nature of science and the context in which evolutionary thinking developed are essential areas of the site. "One of the main objections for many people is that evolution is 'just a theory'. Similarly, science education research has demonstrated that students are more likely to come to accept the theory of evolution if they are given the opportunity to see how it developed, rather than just having the fact of it dumped on them.

Dr Campbell has heard that colleagues at other universities intend to use the Waikato website with their second and third-year students, and she has used it extensively with her own first and second-year classes.

"From what I've heard, my own students have found it a very useful resource."

As well as dealing with the science of evolution, the site tackles, in rather oblique fashion, the old skeptics' bugbear of creationism. Evolution is, the site says, probably the only theory to be rejected on grounds of personal belief.

There's a section on the distinction between hypotheses, theories and laws, reinforced in the Frequently Asked Questions section, where "Isn't evolution 'only a theory'?" gets a clear response. The FAQs also include creationist-related queries such as: "If humans descended from monkeys, why are there still monkeys?" and, "Living things have fantastically intricate features, shouldn't they be the products of intelligent design, not evolution?" As well as providing brief answers to these, the site has links to external sites which cover these issues in more detail.

A section titled Darwin and Religion has quotes from such people as Pope John Paul II and Stephen Jay Gould on the proper relationship between science and religion, followed by interviews with

two scientists who see no real conflict between the two.

The Evolution for Teaching website is on: sci.waikato.ac.nz/evolution/index.shtml

Student Quits over Necklace Ruling

A Pakeha student whose necklace was forcibly removed by a teacher – even though Maori students are allowed to wear their taonga (treasures) – has quit school over the incident. Megan Church complained to the Human Rights Commission about the Marlborough Girls College dress code.

This permits students to wear greenstone or bone carvings as part of its "Treaty of Waitangi obligations". But it does not allow any other necklaces except the Christian cross and the Jewish star of

David, and they must be kept out of sight on a long chain.

Megan, 16, wanted to be able to wear her necklace of crystal amethyst, a gemstone she believes has a calming effect on her. She has worn the stone since she was 10.

She knew the dress code and had been told several times last year not to wear the necklace. She tucked it under her clothes rather than remove it.

MONIQUE DEVEREUX and NZPA,
February 27 2004



Psychic Scam Busted

TWO fortune tellers apparently failed to foresee the end of their alleged scam in Christchurch (The Press, January 29).

The men were arrested and charged with fraud after they were accused by a Ferrymead person of conning them out of more than \$1000. Police believe the men, who apparently touted their mystic trade in a door-to-door routine, may have claimed other victims.

Constable Al Lawn of Sumner police, who arrested the men, said the pair approached the victim earlier. It was alleged they predicted “catastrophic events” for the person and said they would return the next day to tell them how to avoid these events. When they returned to the address the police were called and the arrests made.

Lawn said the charges rested on what the intent of the men – one a 32-year-old Sikh wearing a turban, the other a 30-year-old Indian – was.

The victim was “embarrassed”, and Lawn hoped if there were other victims they would not be too embarrassed to lay a complaint.

The two men had arrived in Auckland the previous week and then travelled to Christchurch.

Lawn said the case was a strange one. “We’re definitely not in the business of going around monitoring clairvoyants.”

Christchurch barrister David Ruth said criminal charges over fortune telling were highly unusual as most people knew fortune telling

was “all nonsense and a bit of a gag”.

Good Luck Charms Do Work - In Your Mind

A pioneering study into the effectiveness of “lucky” charms has found they do work - but only in the minds of the people who carry them (Dominion Post, January 6).

British scientists found that though carrying a charm had no effect on events based on chance, such as winning the lottery, those who believed in them felt more confident and optimistic. In the study, 100 people around Britain were asked to take a supposedly lucky Victorian-era penny with them for a month, and keep a diary as to how their fortunes changed in areas such as finance and health.

Perhaps the most compelling statistic came at the end of the survey when participants were told they could give up the lucky coin—70% said they would keep carrying it.

Bucket Remark Brings Apology

A massage therapist who told a client her “uterus could end up in a bucket” has been taken to task by Health Commissioner Ron Paterson. He found the therapist tried to financially exploit the patient by prescribing \$800 worth of ginger treatments. The therapist has been ordered to give the client a written apology for breaching the patient code of rights (Nelson Mail, March 15).

Fortune Hunter Finds Hits and Misses

Dominion Post journalist Diana McCurdy had an interesting time sounding out the fortune tellers (January 10), and reported a range of responses. “Clair-audio” Tania Kettle (a little voice in her head tells her about the future) reckoned McCurdy’s relationship was going to break up: “There’s no chance with the one you are with at the moment. I believe he’s going back to someone he knows.” Kettle also believed McCurdy was in the wrong profession.

Not so, said medium and clairvoyant Maria Angelica. McCurdy and her partner were spiritually connected and would be fine. And McCurdy was definitely in the right profession; being a little bit psychic herself helped her track down stories.

Feeling warm and fuzzy despite herself, she ended with a visit to NZ Skeptic chair-entity Vicki Hyde, who offered “gentle sympathy”.

“We put our souls into the hands of these people because they are claiming to have some kind of special knowledge. You’re less vulnerable because you’re doing it on a professional basis, but you can still feel the tug of that authority.”

And what does the future hold for the world at large? Maria Angelica believed The Return of the King would win more Oscars than its predecessors - though probably not Best Picture.

Tania Kettle saw more cases involving children coming before the courts. The distance between rich and poor in New Zealand would

continue to increase. Because of this disparity, immigrants would get a hard time.

Numerologist Eleanor Lefever felt that since 2004 was a SIX year “there’s going to be some surprising things that will happen.”

Vicki Hyde saw the NZ cricket team improving markedly (this was before the highly successful series against South Africa), with a new player breathing life into it (Chris Martin, perhaps?). She also said George Bush would win the next US election. This is the woman who predicted the All Blacks wouldn’t make the 1999 World Cup final, remember.

Where Everyone Gets a Haunting

Staff at the Warehouse in Nelson have been getting more than they bargained for, with reports of ghostly goings-on prompting a belated blessing for the building (Nelson Mail, July 10, 2003).

Three ministers blessed the building after two women reported seeing a girl who was believed to have been killed at nearby shunting yards in the early 1900s.

Staff, who knew the history of the girl’s death, had seen her very vividly, store manager Ross Barnett said—“even down to her pale blue dress.”

Archdeacon Harry Whakaruru, one of the ministers who blessed the site, said it appeared the “unusual happenings” had come about after the building was extended across a waterway. The tapu lifting was completely different from an exorcism, he said. It was an “acknowledgement of our old Maori customs that if you disturb

our earth mother, you carry out a blessing in respect of the disturbance that has been made.”

Archdeacon Whakaruru said he was called on to bless unrest about once a week across the top of the South Island.

Mr Barnett said the first ghost sighting was well over two years ago. After more sightings recently, he decided to investigate whether the building was blessed when it was first built, and found that it had not been. “For me, it is something I always have done when I have opened up a new store.”

There had been no reports of ghost sightings since the blessing, he said.

Autism Doctor on Professional Misconduct Charge

The doctor who linked the measles, mumps and rubella (MMR) vaccination to autism is to be investigated for alleged professional misconduct (The Independent, February 23). Dr Andrew Wakefield’s research prompted one of Britain’s biggest health scares and a drop in the injection’s use throughout the Western world.

The Secretary of State for Health, Dr John Reid, called for the investigation after it emerged that the doctor had failed to declare a financial interest when he submitted his research for publication.

The director of the Auckland University-based Immunisation Advisory Centre, Dr Nikki Turner, said: “We’ve got overwhelming literature showing no link, but that hasn’t rapidly come through to reassure parents. How do you undo a myth, that’s the problem.”

Research published in the latest New Zealand Medical Journal shows that 21% of doctors and 41% of nurses are unsure whether the MMR vaccine is associated with autism or Crohn’s disease. Eleven per cent of the 188 health workers who took part thought that immunisations posed “unacceptable dangers”, although 72 per cent thought that they did not, and 17 per cent neither agreed nor disagreed.

Dr Richard Horton, editor of The Lancet medical journal, admitted that the research would never have been published had it been known that Dr Wakefield had also been working for lawyers preparing legal action by parents who believed that the jab had caused their children’s autism.

He said that the disclosure, admitted by Dr Wakefield, amounted to a “fatal conflict of interest” and that his key finding was “entirely flawed”.

The author’s research fund received £55,000 (\$145,738) from the Legal Aid Board for studies on 10 children suspected of having been damaged by vaccines. Four of the children were also used in the highly controversial study that linked the MMR vaccination to autism, it was admitted.

Other allegations, that the research was biased and lacked proper ethical approval, have been rejected by the journal and the Royal Free Hospital in London, where the research was done.

A hospital statement said Dr Wakefield, who left his post two years ago, should have declared the interest, but defended the other researchers involved.

Global Warming Mechanisms - Room For Debate

WHEN I sent my letter to the NZ Skeptic (Spring 2003), I did not expect vehement denials in the next issue. Such debate is, of course, healthy and occasionally useful. My letter, though, was not intended to cover the whole subject; merely to offer some points to ponder. The responses have been rather more thorough, and I feel I must defend my position.

I must also defend Bjorn Lomborg from Alan Ryan's critical comments. Sadly, he fell foul of an attack instigated by the most recent editor of Scientific American. The prejudiced intent of this was shown by the choice of authors, who included Stephen Schneider (who has made a fortune writing books promoting AGG global warming), and E Wilson, who has been pushing an eco-catastrophe barrow for years. This was followed by a kangaroo court called the Danish Committee for Scientific Dishonesty – which had among its members not one scientist – and which severely criticized Lomborg, apparently purely on the basis of the Scientific American article. The Danish Ministry of Science later declared Lomborg not guilty of either bias or dishonesty.

Next, I must agree with Kerry Wood that the world is warming; that CO₂ is a true greenhouse gas and is increasing in the atmosphere, and that (in theory) this should be a powerful mechanism for retaining atmospheric heat. However:

1. AGGs are only one variable—and not necessarily the dominant one.

2. When the AGG hypothesis is used as the basis for climate models, the calculations don't make sense. For example, by their reckoning, the 20th Century should have warmed by well over 2°C. The actual warming was 0.6°C.

3. Other observations do not support the idea that AGGs dominate global temperature change. The current bout of global warming began around 1700 to 1720. In NZ, coastal glaciers like the Franz Josef began retreating about 1750. Greenhouse gases didn't increase at all till 1850, and only to a negligible degree until about 1920. From 1940 to 1976, global temperatures fell, to the extent that Time published a special edition on "The Forthcoming Ice Age."

Three main systems are used to measure global temperature: averaging meteorological station results; averaging weather balloon readings; and averaging satellite temperature measures (available since 1979). The latter two methods agree with each other startlingly, and show very little global temperature rise since 1979. The first method shows clear, linear temperature increases from 1920 to 1940, and then from 1976 to the present. Most measurements are taken in cities or airports, which have been growing larger for many decades, hence increasing the local warming effect of tar and cement.

AGGs contribute only 0.3% to the greenhouse effect. By far the greatest impact comes from water vapour, which averages about 300 times the insulating effect. Yet in

conventional global warming models, variations in water vapour are considered unimportant.

The major alternative hypothesis to AGGs is increasing solar output. While direct (and very recent) measurements of this show too small an increase to explain global warming, it is also true that the sun does not change by small increments. Instead it is characterised by occasional spectacular changes – sunspots, flares etc. The sudden temperature increase in 1976 is better explained in this way.

During the "Little Ice Age" of 1600 to 1700, the sun experienced the "Maunder Minimum" in which almost no sunspots were seen. In 1998, which was hailed as the hottest year for many centuries, there was also increased sunspot activity. New Scientist (December 20, 2003) reports that high sunspot activity correlates with a drop in the price of English wheat, and this has been true over many centuries. This makes sense if sunspots coincide with warmer periods.

I do not want to appear to be offering a "proven" mechanism for global warming. Instead, please read my comments as simply a reminder that there is much, much more that we do *not* know about climate change than that which we do. Global warming - yes. Mechanism? We still do not know. (Abridged)

Lance Kennedy
Tantec

Greenhouse Gas/Climate Link Unproven

The consensus “Summaries for Policymakers” adopted line-by-line by Governments, which appear at the beginning of the various reports of the Intergovernmental Panel on Climate Change (IPCC) have never stated that there is a proven relationship between emissions of greenhouse gases and any harmful climate trend.

Instead they have resorted to ambiguous, non-committal statements like “The balance of the evidence suggests a discernible human influence on global climate”, which does not mention greenhouse gases as part of the “human influence”, and is merely a “suggestion”.

You have to go to Chapter 1 of the 2001 IPCC report to find the real truth, which is:

“The fact that the global mean temperature has increased since the late 19th century, and that other trends have been observed, does not necessarily mean that an anthropogenic effect on the climate has been identified. Climate has always varied on all time-scales, so the observed change may be natural.”

Recent reported temperatures are less than recent estimates for the “Medieval Warm Period” 1000 years ago, so they could be due to natural variability. At least part of recent “warming” has been attributed to the unusual El Niño ocean patterns.

Computer-based climate models, based on the absurd assumption that greenhouse gases are the only influence on the climate, have very limited predictive value, a point that is admitted by Kerry Wood, who mentions the IPCC

projected range of 1.4 to 5.8 degrees mean temperature increase for the year 2100. He should know that this range could easily be extended further by choosing slightly different values for the many uncertain parameters in the models. The IPCC, actually, discourages the use of the word “prediction”, and prefers “projection”, which is based only on a particular set of assumptions, some of which can be absurdly exaggerated.

Emissions of greenhouse gases must have some effect on the climate, together with changes in the sun, cosmic rays, volcanoes, ocean circulation, and other human effects such as land-use changes and urban development. Without a greater knowledge of all these factors it is foolish to believe that restricting greenhouse gas emissions is likely to have any worthwhile positive change to our climate.

Vincent Gray
Wellington

THE HOMEOPATHIC MAN

As I was going up the stair
I met a man who wasn't there.

He wasn't there again today.
I wish, I wish, he'd go away.

(Hughes Mearns, 1875-1965)

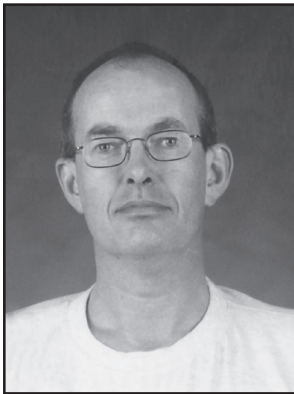
Bjorn Lomborg - Misunderstood?

Bjorn Lomborg certainly touched off a powder-keg when he implied that the environmental movement could do with a session in the sweat lodge and a little critical self-assessment, and the very title of the

book neatly co-opts our organisation into the debate whether we like it or not, and we probably do. The letter from Alan P Ryan directly criticises Lomborg and that by Kerry Wood indirectly. (Forum, NZ Skeptic 70).

I am somewhat at a disadvantage as I have lent my copy of *The Skeptical Environmentalist* to a statistician friend who, before reading the book, was also of a critical inclination towards Lomborg's arguments, along with a lot of the scientific community. But if my memory serves me well *vis a vis* climate change, Lomborg was not making the claims attributed to him. The criticism solely relates to the statistics but no one that I have read addresses the at least equally important aspect of the book, that of social policy. This book is about who will serve and who will eat, a very proper point of enquiry for a politics department of any university. Lomborg's thesis, common throughout the book, is: before we go and spend a king's ransom on Kyoto et al, let us make sure we are getting value for money. There is no end of good causes to spend public money on: glue ear operations, PKU tests for newborn children, vaccinations or even a campaign to stamp out religious stupidity - all cheap and effective in improving the general lot of mankind, but unfortunately not sexy. Saving the Earth of course is sexy, as are international conferences to discuss same. The social effects of a focus on such lovely big problems, where it is not possible to falsify assertions in any meaningful time frame, while fun, are most damaging. Smaller but nonetheless significant matters like income distribution, social justice etc, all fall

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Selenium - Too Much of a Good Thing?

NEW ZEALAND soils are deficient in selenium and this can cause serious health problems for animals. A 500kg animal needs about 1mg selenium daily. There is no evidence that NZ adults need selenium supplements and this situation has been described as “a deficiency in search of a syndrome”.

A 52-year-old dairy farmer presented to her doctor with chronic aches and pains, lethargy, sore throat and painful swallowing. After some weeks of fruitless investigations she admitted to taking 0.5ml daily of a solution containing 5mg/ml of selenium, several times the recommended daily human dose. All of her symptoms disappeared once she stopped taking the supplement.

Despite the lack of proof for any deficiency syndrome in adults, local pharmacy leaflets stated “selenium is an essential trace element” and that “low levels of selenium are linked to a higher risk for cancer, cardiovascular disease, inflammatory diseases and other conditions associated with free radical damage, including premature ageing and cataract formation.”

It is quite clear that it would have been much safer for this woman to have taken a homeopathic selenium

remedy and there would have been no risk at all of any toxicity from over dosage.

NZ Family Physician Vol 30 Number 6, Dec 2003

Animal Homeopathy

I know that homeopathy has been done to death but it crops up everywhere, even in the treatment of animals. People defend this delusion by claiming that the placebo effect does not work in animals, therefore any observed effect must be real. Any observed effect is clearly due to expectation on the part of the person administering the water, sorry, I mean the homeopathic remedy. An article in the Christchurch Press (March 12, 2004) described how Taranaki’s first qualified animal homeopath has gained an “advanced diploma of homeopathy”. She also has a BSc and it beggars belief that someone with that background can take up a pseudoscience such as homeopathy. This is what HL Mencken was referring to when he said: “How is it possible for a human brain to be divided into two insulated halves, one functioning normally, naturally, and even brilliantly, and the other capable of ghastly balderdash?”

I find it amusing reading such accounts because the clue to the belief system is usually contained in the article but is unrecognised. In this case the animals are described as “glowing with health in a way that suggests good feeding and love but their appearance is so striking it indicates there is *another ingredient as well*”. You guessed it—the other ingredient is homeopathy! It’s obvious that the animals’ condition is due to the “good feeding and love” and to claim otherwise is a delusion.

It would not in the least surprise me if the diploma of advanced homeopathy is NZQA approved.

Snake Oil Flunks for Snake Bite

Boonreung Bauchan was known in Thailand as the “Snake Man” and held a Guinness world record for spending seven days in a snake enclosure. The Mamba family of snakes are extremely venomous and when one of them bit him on the elbow he relied on a traditional herbal remedy and a shot of whisky. As we all know, herbal remedies are mostly placebos and should not be used for serious or life-threatening conditions and Boonreung is sadly no longer with us. Had he taken a proper antidote, his chances of survival would have been excellent.

Christchurch Press March 23, 2004

Counsellors

If you get up in the morning and find your letterbox has been vandalised, don’t worry, counselling is available to help with your distress and grief. (Dominion Post March 6, 2004).

Following September 11, an estimated 9000 grief counsellors turned up in New York and one hotel was booked out by a single group of 350 counsellors. This absurd behaviour is of course defended by the counselling “industry” despite the existence of research that shows that many of such interventions are actually harmful. Counsellors defend their behaviour by claiming that it cannot be scientifically tested. For example: “People working from the scientific model want to measure outcomes. A lot of people would say, ‘I feel better’, but that doesn’t fit a scientific model.”

Such claims should be treated with complete contempt. This sort of reasoning could be used to justify the implementation of all sorts of quackery because it makes people “feel better”.

To put it bluntly, counselling is a placebo therapy. Third-party funding ensures that an industry has been able to develop. This has disempowered people from learning to deal with personal trauma by simply talking to a friend or other family members.

Hair Analysis

Last year I spent some time working in Westport and noticed an advertisement for hair analysis. Hair analysis does have a scientific basis but it has been taken over by quacks who offer all sorts of ridiculous assessments. When I got home I wrote to the address and sent hair from my wife Claire and my oldest daughter Eve, under their own names, and some hair from “Russell”. “Russell” was actually my daughter’s dog, a wheaten terrier.

For \$40 I received a detailed four-page handwritten report and after reading it I felt quite mean because the writer’s sincerity was obvious. I have sent a copy of the letter to the Editor but will summarise the main findings. I see no value in exposing the writer because the letter was written in good faith but note that sincerity and good faith can go hand in hand with gullibility and foolishness. His findings were as follows:

Claire needs natural estrogen—“raspberry leaf” two tabs daily. Wormwood—5 drops in water daily. Bach flower remedies—“Mimulus, Rock Rose”. Conscious deep breathing—practise six times daily. There was also a recommendation to have “faith” and consider the Bahai religion for that reason.

Meta-analyst: “One who thinks that if manure is piled high enough it will smell like roses.”

Eve had a systemic yeast infection. Recommended treatment: nystatin, aloe vera juice, Blackmores chewable tablets, wheatgerm capsules, super strength kelp, rescue remedy (Homeopathic), extra progesterone in the form of “wild yam cream”.

Russell also had a systemic yeast infection, and iodine deficiency. Recommended treatment: nystatin (oral antifungal agent), self heal tincture—50 drops twice daily, herbal B vitamins—six tabs daily, super strength kelp—three tabs daily. Repeat hair analysis in three months.

It is easy to see that such a “scatter gun” approach to treatment

would be bound to work in a well-motivated believer. I did not inquire as to the method of hair analysis but this is unimportant because any diagnostic method will work provided it is plausible and the treatment offered is congruent with the particular belief system. The homeopathic vet would no doubt approve of Russell’s diagnosis and treatment.

Shockwaves for chronic heel pain

High energy sound waves are now being used to treat various conditions such as tennis elbow and other painful areas such as the heel, knee and shoulder. It is claimed that 60-70 per cent of patients will gain relief from the treatment.

The same technology (extracorporeal shockwave therapy or ESWT) is used to disintegrate kidney stones.

In the case of kidney stones there is no need for a randomised controlled trial (RCT) because it is obvious when a large stone has been broken down into smaller pieces.

When treating various painful conditions with no such “marker”, one has to be much more cautious and this therapy is crying out for a randomised controlled trial with a placebo group who would receive treatment administered when neither the patient nor the technician were aware that the machine was actually switched off. I predict that when such trials are carried out, there will be *no* advantage over placebo.

NZ GP November 12, 2003

John Welch lives in Picton and is a retired RNZAF medical officer.

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beneath the pall of climate change and saving whales et al, in the same manner that Aids activists usurp R&D money at the expense of other perhaps more pressing epidemics.

I digress. Lomborg, I believe, simply states that climate change, global warming even, is happening and that the relevant question is how much and what does this mean. Your correspondent Wood states the problem fairly: "Beyond the basics, climate change is hellishly complex and far from fully understood". No one disagrees, not even The Skeptical Environmentalist. Vladimir Putin nailed his colours to the mast recently, claiming that a bit of global warming would be a good thing for Russia. If the matter is so little understood and the modelling so variable, why not save our money so that we might spend it on problems in the here and now, not in 2100. When we have fixed the problems right in front of our faces we can proceed to the new and improved problems that will no doubt appear in the years to come. Reading the book might be a good skeptical start.

Alastair Sims
Hahei

**Parliamentary Commissioner
for the Environment on the
Right Track**

Poor Bruce Taylor! You can't please everyone, but the Parliamentary Commissioner for the Environment (PCE) does make an honest effort to please most of them. Certainly, nothing in his reasoned article in the Spring, 2003 Skeptic warranted Vincent Gray's diatribe in the summer Forum,

which reads like a potpourri culled from the Old Testament, Mein Kampf and the worst of that archpriest of greenwashers, Bjorn Lomborg.

His anthropocentrism stems from the anti-Darwinian notion that evolution is teleological; that man is the apotheosis of an imaginary Grand Design. Worse still, he seems to envisage (Gaia forbid!) a future superman spawned solely by his limited notion of 'science'. His rejection of pluralism and the social contract is pure Fascism.

Analogy is at best a metaphor for an underlying reality; it may be useful for simplifying a difficult concept, but it can never stand on its own as an explanation: the more so in Dr Gray's case where the analogy is itself false. The only self-aware species is the misnamed *Homo "sapiens"*; we alone can invent 'moral values' from abstract concepts. So the first part of his letter is merely so much Social Darwinism and anthropomorphising sociobabble.

He believes that moral values have no place in modern society. Let's indulge in a little thought experiment. Suppose a mad scientist has succeeded in cloning a human-machine hybrid to use as an Asimov-style robot. Would Gray be happy with this, or would he suddenly discover that he has values?

His second section begins: "Progress... depends on improved emphasis on human moral values... human rights... and a continued advance of science and technology". Well, just so and who could argue with that? Certainly the PCE doesn't so argue, other than in Gray's imagination. Or does he really believe that possum dust

proposals would influence their decisions?

I am a scientist and a dedicated atheist but I know that religious beliefs, socioeconomic considerations and cultural sensitivities should be considered, though they should not be allowed to predominate over the scientific evidence where this is strongly at variance with them. Fortunately, there is no evidence to suggest that this is happening. Vicki Hyde's excellent editorial in the spring 'Skeptic' provides a balanced view on this topic.

A recent report in Nature predicts that a quarter of all species will become extinct by 2050 because of global warming. This estimate doesn't include the effect of habitat loss, increased pollution and downstream ecological disturbance on an already overstressed biosphere. Even the Pentagon has now released a report expressing doubt that the USA could survive the consequences of global warming. What Gray and his like ignore at the peril of the majority is that humans are not separate from the rest of "creation" but a part of it.

(Abridged)

Alan P Ryan
Kaiapoi

Superstition Bashing?

Did the convenors of the first Annual Meeting of the German Skeptics (GWUP) know that they were setting themselves up to hold their 13th Conference on Friday, 13 June, 2003?

Bernard Howard
Christchurch

Nothing Grand About Grandeur Water

“Energised Water” turns out to be much the same as the other kind

Bernard Howard

GRANDER water indeed, than the ordinary stuff from the tap; Europeans are paying more than the equivalent of \$NZ20 per litre for it.

Punning aside, Johann Grandeur is a Tyrolean man who has “discovered/invented” a wonderful but secret way to “energise” water, by loading it with “Natural Information of the Highest Order”. A quantity of this water is sealed in the device which is inserted into the domestic supply line; although the two lots of water do not mix, the “Information” in the energised water passes over to the water flowing to the taps, so the fortunate householder, who has paid thousands for the privilege, has a never-ending supply of “Grandeur water”. The efficacy of the device does not change over periods of many years (this I can believe).

What do you get for all this outlay? Whatever water does for you, Grandeur water will do it better. Of course, your water tastes better, it improves the quality of your food, and is useful in treating a wide range of ailments from corns to cancer. You economise on laundry detergent, and your house plants will grow and bloom better.

Unlike many products of this kind, Grandeur water has been

subjected to scientific tests; in fact, three tests. The first was carried out as a student research project; several bulk properties, such as electrical conductivity, pH, and many others, were the same whether the water came straight from the tap or had first passed through the “energiser”. Astonishingly though, the surface tension of energised water was markedly lower, an observation apparently inexplicable in scientific terms.

Enter Herr Heckel and Dr Heinig, a geoecologist and physicist respectively, of Berlin, to carry out the second test. Not content, as are many scientists, to treat Grandeur’s claims with disdain, they studied the student’s thesis carefully, and noticed that the Grandeur water in the test, but not the tap water, had been passed through a length of “Gardena” garden hose. The plastic of which these hoses are made contains “plasticisers”, which are well-known surface-active agents, ie, they lower the surface tension when leached into the water in the hose. Eureka! Experiment showed that water passed through the hose had lower surface tension, water not passed through the hose had normal surface tension, irrespective of being “energised”. Conclusion: Grandeur water is indistinguishable from tap water, in

any of the many tests carried out on it.

The third investigator, Dr Eder of the University of Vienna has done some double-blind tasting tests on his friends and acquaintances. This small-scale study showed half the test subjects could not distinguish Grandeur- from tap water, and the other half were equally divided in their preference. A great preponderance of subjects preferred the taste of cooled tap water to that of water at room temperature. This casts doubt on a test carried out elsewhere on “energised” spring water, which tasted better than “unenergised”. A careful check found the “energised” water was cooler.

Did these revelations cause a slump in sales of Grandeur water, and did Herr Grandeur return ignominiously to his Tyrolean home? Skeptics will, sadly, not need to be told the answer to those questions. On the contrary, Dr Eder faces a challenge in the Austrian courts for publishing his view that Grandeur’s claims are nonsense, and Herr Grandeur has been awarded the Austrian President’s Cross of Honour for Science and Art.

With acknowledgments to “Skeptiker”, Drs Heinig and Eder, and Herr Heckel.

Pseudohistory Rules

Raymond Richards

LIKE scientists, historians use a dependable methodology to ensure their findings are reliable. Assertions of historical fact can properly be based only on empirical evidence. Historians then use their critical thinking skills to assess the trustworthiness of this data.

Lately, however, a vogue called postmodernism has challenged all claims to knowledge, including the work of scientists and historians. Science and empirical research supposedly are approaches that elites insist upon in order to strengthen their own standing. There are ways of knowing other than the rational. There is no one reality, only different perceptions and paradigms, all equally valid.

My favourite example of such thinking is the lecturer who told me some Polynesian students think the Earth is flat and that I deserve to be charged with harassment if I tell them they are wrong.

As a historian of the United States, I encounter postmodernism a lot when I teach and research the history of the Mormon church.

This church was founded in the state of New York in 1830 by a young man called Joseph Smith, who tried to use his interest in the amazing to make money. Smith claimed he had found a magic stone that let him see buried treasure. After hiring himself out as a treasure diviner, he was convicted of fraud by a New York court and largely gave up the practice.

Smith then started to claim that angels had been visiting him for

years. They had led him to a buried box that contained golden plates. The history of ancient times was inscribed on these plates in “reformed Egyptian,” which Smith could translate by using magic stones. His translation of the golden bible went on sale as *The Book of Mormon*.

According to the Mormons, the book gives a divinely inspired account of ancient events in the Middle East and America. It treats the biblical story of the Tower of Babel as factual and adds a twist. A man called Jared, his brother and about 100 others were saved by the Lord from having their language confounded. God commanded the brother of Jared to build eight submarines and to load them with their friends and families, as well as their flocks and herds, including elephants. After travelling on and under the ocean for almost a year, the Jaredites discovered America. There they built great cities. After several centuries of civil wars among the Jaredites, one man was left out of millions of people. This adventure took place about 2000 BC.

The Book of Mormon is full of tales that belong to the same fantasy genre as *The Lord of the Rings*. But the Mormon church insists this fiction is fact and that historians and scientists have got things all wrong. Mormon leaders are hostile to evidence-based scholarship. They claim that their revelations trump research.

Church leaders claim to speak as the voice of God and to be



infallible. They place great pressure on members to accept their teachings. For example, someone who leaves the church and becomes an apostate supposedly will lose his or her family for eternity. Even to question the teachings is a sin. So controlling is the Mormon church that some observers consider it a cult.

Last year, at Waikato University, I presented a seminar on Mormonism in which I outlined the tales in the Book of Mormon and said they obviously are not authentic history. Imagine my amazement when a professor who is not a Mormon leapt to her feet and denounced me. She quoted postmodernist theory, and said *The Book of Mormon* might be accurate. We cannot prove what is not true, she said. Some of my fellow academics gave her enthusiastic applause. The seminar left me sad about the state of education at New Zealand universities.

Even international, academic presses recently have published Mormon pseudohistory. Last year Oxford University Press published *By the Hand of Mormon*, by Terryl Givens, a Mormon who is Professor of English at the University of Richmond, Virginia. Givens says an angel really did reveal the Book of Mormon to Joseph Smith, and that its history of ancient America

really is divinely inspired and true. Shame on Oxford University Press. And they are not alone.

I suspect many academics have not spoken out against the challenge from the Mormon church because they are not informed about Mormon ideas. Others may feel reluctant to criticise a religion. But when a religion claims to be the supreme fount of fact, when it contradicts research and opposes freedom of inquiry, then it should be challenged by academics. Although students can be victims of this church, universities should fail students who use unsound methodology to believe in pseudoscholarship, such as Creationism or the Book of Mormon, as history. If they do not insist on competent thinking, then universities are a joke.

Oddities

“It is amusing when the medical profession takes it upon itself to warn the public against herbal remedies such as garlic and echinacea - even though their safety and efficacy have been proven in scientific studies. Yet they’re more than happy to recommend the flu vaccine, even though every vaccine contains highly toxic substances such as formaldehyde, aluminium, phenol, and ethylene glycol (antifreeze).”

Margaret Whittaker, herbalist
Christchurch

Letter to the *Sunday Star Times*, 4 April 2004

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

Three Rules for Sticking Needles in People

Bob Brockie gets himself a qualification in acupuncture

LAST year a healthy anaesthesiologist, Dr Kinsinger, visited nine chiropractors in Oklahoma, claiming that his chest or back were playing up. All nine chiropractors misdiagnosed some kind of illness including appendicitis, misplaced bones or shifting ribs. Clearly, these guys had no idea of what they were doing, falling well short of conventional medical standards.

Back here, I once attended a Skeptics Society demonstration at Massey University. There, a medical doctor showed us how to make homeopathic concoctions by running a few drops of fluorescent dye along a row of 20 glass flasks filled with distilled water. He diluted, diluted and further diluted the mix until, by the 20th flask, there was theoretically not a molecule of the dye left—only distilled water.

In making their concoctions homeopaths do the same thing but with the juice of lawn daisies, onions, snake venom, sepia ink, sulphur and the like. They dilute the stuff until not a molecule remains in their 20th, 30th or 200th flasks, only distilled water. This is what they sell you, claiming that their remedies cure or relieve anything from asthma and infertility to fear of flying.

Most scientists and doctors are very dubious about these claims because they fly in the face of a basic chemical “Law of Mass Action”. The law says if you want to intensify a chemical reaction, add more chemicals. If you want to

weaken a reaction, dilute the chemical.

At a later demonstration, another medical doctor and one-time acupuncturist showed us how to become an acupuncturist. “You need know only three rules.” He said. “One: Keep your needles clean. Two: Never stick needles into very fat people and Three: If a patient is really sick, send them to a proper doctor.” After 20 minutes’ instruction we were all given certificates, mine countersigned by a distinguished physician, certifying that we were all now acupuncturists. Again, endless medical trials show that acupuncture doesn’t work. One survey of almost 200 American acupuncturists revealed 132 cases of fainting, 26 cases of increased pain, eight cases of punctured lungs and 45 other adverse results in their patients.

Naturopaths claim they can rid your body of toxins and increase your “vital force”. The entire discipline of organic chemistry refutes this nonsense.

Scientific and medical trials of these four disciplines reveal that their short-term successes depend not on the treatments but on placebo effects.

If you want to know more about these fraudulent shenanigans go to Quackwatch or to the US or Australian National Councils Against Health Fraud on the web.

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