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

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Sex Abuse and ACC

Constitutional changes

Didgeridoo sound therapy

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content

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Material supplied by email or CD is appreciated.

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editorial

What do we believe?

A RECENT UMR Research poll has provided a snapshot of what New Zealanders believe about a range of paranormal subjects. More than half accept that some people have psychic powers; on the other hand, only 24 percent think astrology can be used to predict people's futures and two thirds do not believe aliens have visited the Earth.

Questions also assessed beliefs in God or a universal spirit, whether Jesus was a historical person, and life after death.

There were some interesting results, particularly where the data are broken down more finely by demographics and the intensity with which beliefs are held. Belief in life after death declines with age, so it would seem the growing sense of one's own mortality isn't a major factor in such belief. But belief in psychic powers increases with age, so it's not just a case of increasing years bringing higher levels of scepticism.

While a majority (61 percent) believe in God, only 41 percent are absolutely certain or fairly certain about this, and belief is much less pronounced in men (52 percent) than women (72 percent). Women are also more likely to believe in life after death, psychic powers and astrology, while the sexes are evenly split on UFOs and whether Jesus was a real person.

Astrology takes a real hiding. Forty percent are absolutely certain it can't predict the future, while only two percent hold the opposite view. Alien visitation also did rather poorly, with only 11 percent absolutely or fairly certain it has happened, as against 44 percent holding the contrary positions.

An Australian 2009 Nielsen poll makes for interesting comparisons. It seems the Aussies are slightly less likely to believe in psychic powers (49 percent), slightly more likely (68 percent) to believe in God or a universal spirit, about as likely to believe in UFOs, and much more likely (41 percent) to believe in astrology, although this last one may be just the way the question was asked (belief in astrology vs its ability to predict the future).

The poll (**www.umr.co.nz/Media/WhatDoNewZealandersBelieve-Dec11.pdf**), was conducted online from 21 to 28 September 2011 on a nationally representative sample of 1000 New Zealanders 18 years of age and over. Detailed quotas and weighting were used to ensure that the sample was as representative as possible. The first results were released in December; future reports based on the data will cover such subjects as beliefs about Maori culture and public faith in herbal remedies. It will be interesting to see how they turn out.

David.

What is happening to skepticism?

Martin Bridgstock

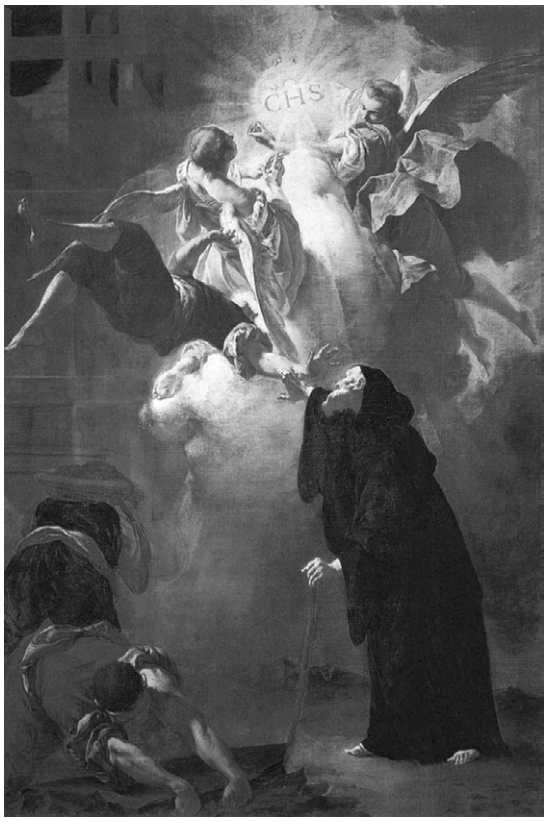
Massive changes are transforming the skeptical movement.

A TIDAL wave of change is hitting skepticism. The people, the ideas and the place of skepticism in society are all changing. We need to understand what is happening, and this paper is a start.

First of all, what is skepticism? The word is used in many ways, but the Australian and NZ Skeptics roughly agree that it is the investigation of paranormal and pseudoscientific claims using a scientific approach[1]. Presumably both would also agree that it involves an interest in publicising the results of such investigations, and pressing for relevant improvements in education.

Most skeptics know that we face an overwhelming majority of the population who do not agree with us. Surveys in several countries show that about 80 percent of the population have one or more paranormal beliefs. I did a survey of a first-year science class at Griffith University, and found that just under 60 percent of the students had one or more paranormal beliefs[2]. Amazingly, one student had 14 such beliefs, another 12.

Now, it is clear that some paranormal beliefs can be extremely dangerous. Imagine a severely ill child, whose life is in danger. Medical science, promptly applied, could save the child's life but the parents opt for pseudoscience instead. There have been cases of this, with horrible results, in both Australia and New Zealand[3]. There are many cases of gullible people being swindled out of their money by fake psychics[4]. In another way, creation science and intelligent design are a threat to modern science: they want to replace it by theories based upon one particular religion. Since so much of our current welfare depends upon science, the threat is obvious. Finally the anti-vaccination movements endanger us all. We have forgotten the terrifying epidemics of the past. Without vaccination, they might return. Clearly, skeptical work is important. However, there are several problems plaguing skepticism, and I want to look at them here.



IT'S A MIRACLE: Religions promote supernatural beliefs, so are atheism and skepticism really the same thing?

Religion and skepticism

Religion around the world is going through great convulsions, and this has massive implications for skeptics. We are probably all aware of the steady decline of most of the older, liberal churches, and the rise in western countries of aggressive evangelical and

fundamentalist Christianity. In poorer countries, especially in Africa, Christianity is rapidly increasing the number of its adherents, and they are far more militant and fundamentalist than their first world brethren. Meanwhile, quietly and almost without fanfare, the proportion of non-believers in developed nations is increasing. In the United States, a strongly religious nation, the proportion of unbelievers has increased to about 17 percent. At the other extreme, in some Scandinavian countries, the proportion of unbelievers is nudging 50 percent[5]. In Australia, apparently, the proportion of nonbelievers is about 30 percent, and it is 25 percent in the conservative state of Queensland.

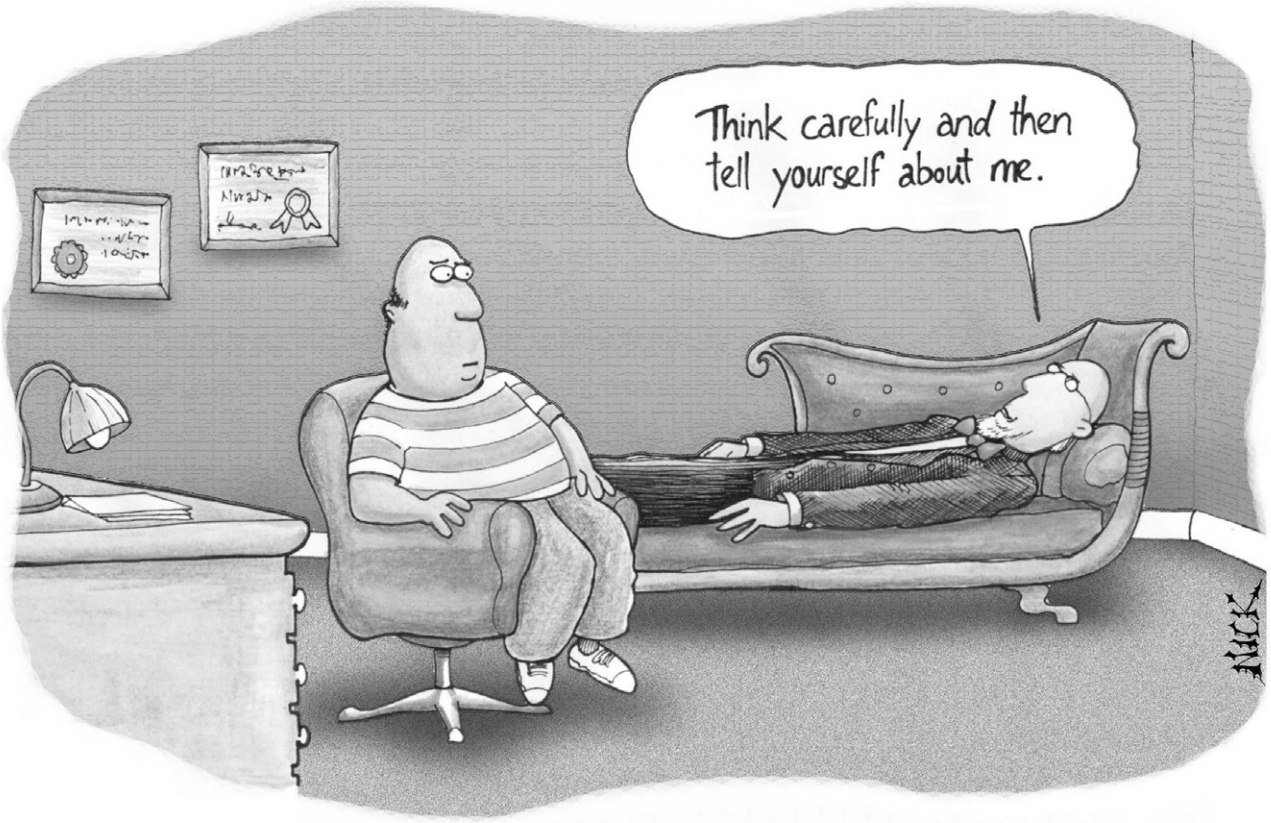
There is much skeptical work to be done analysing the claims of the fundamentalists, as their claims are so often false. Perhaps even more difficult than aggressive religion is the question of how skeptics should view the steadily increasing number of atheists and other nonbelievers in developed countries. I have done some informal polling about this, at skeptical conferences in Australia and New Zealand. My best estimate is that about 90 percent of the skeptics at these events would describe themselves as atheists. There is a big overlap between the two movements.

The older skeptics subscribe to magazines, often attend local meetings and go to national and international conventions. The younger ones don't do these things.

One plausible line of thought argues that atheists and skeptics should make common cause and ally against religion. The argument runs like this. Skepticism is about looking at the evidence for paranormal beliefs, and working out whether the evidence is strong enough to support the belief. Logically, if a person looks at the evidence for religious belief and finds it inadequate, is this not a skeptical process, and therefore are not skepticism and atheism the same?

On the other hand, many atheists have not arrived at their views through this kind of rational process. The two best-known are Stalin and Mao. Now both of these dictators were atheists, but neither can be described as a skeptic. Both supported the pseudoscience of Lysenkoism,[6] and you could also argue that their murderous, dogmatic faith

NEARING ZERO by Nick Kim



Reverse Psychology

in Marxism-Leninism showed a marked lack of skepticism. It seems as if atheism can be arrived at without going through anything like a skeptical process of thought. What's more, some very prominent skeptics have held religious beliefs. The late Martin Gardner, who helped found the modern movement, had religious beliefs. So does Dr Pamela Gay, one of the most prominent Americans popularising both science and skepticism.

So, while atheism and skepticism may sometimes stem from similar thought patterns, they may also be quite different. The dogmatic atheism taught in Mao's China and Stalin's Russia is quite opposed to the evidence-seeking approach of skeptics, and so there is no guarantee whatsoever that a skeptic and an atheist have much in common.

Another point comes from Daniel Loxton, the Canadian skeptic[7]. Loxton points out that skeptics are the only people who specialise in investigating and (where necessary) debunking the bogus psychics, faith healers and all the rest. We have accumulated a good deal of expertise in doing this: it is a form of consumer protection. Loxton makes the key point: if skeptics do not investigate these dangerous paranormal claimants, who else will? There is plenty for skeptics to do in our current area of activity, so why not focus on that?

We are a small movement, and in my view it means that we should welcome genuine skeptical help from whatever quarter it comes. If someone wants to help us investigate the quacks and creation scientists and all the rest, we should welcome them. And if, on other nights of the week, they go off to church or to atheist meetings – or to witches' covens, for that matter – we should not worry about it. We are doing something important, and we need all the help we can get.

The generation gap

Another set of problems come from within skepticism itself. Until recently, there was a pervasive image of the average skeptic, and it was somewhere near the truth. The average skeptic was overwhelmingly likely to be male, older than average, very intelligent, mostly conservative and grumpily critical of anything to do with the paranormal. Things have changed radically: there is now an influx of skeptics who are much younger, much less likely to be bearded, and who include a substantial minority of women.

This is wonderful. The problems arise because the different generations of skeptics seem to act very differently. The older skeptics subscribe to magazines, often attend local meetings and go to national and international conventions. The younger ones don't do these things. Instead they blog and use Facebook (and, God help us, Twitter) all the time. The older and younger skeptics have broadly similar views, but they are separated by a gulf of communication. This means that the younger skeptics are likely to be unable to benefit from the (perfectly real) expertise of the old grumpies, and the oldsters won't be exposed to the vigour and enthusiasm of the new wave.

What should be done? Kylie Sturgess, a colleague of mine, has tried to persuade younger skeptics to subscribe. No success. Also, many older skeptics find Facebook and the like bewildering. I confess, I have tried looking at a few blogs and Facebook sites. Sometimes they are interesting, but the issue of quality control keeps appearing.

What do I mean? Well, the words you read in this magazine, or in any skeptical magazine, have been scrutinised and perhaps modified by an editor. Probably the editor has rejected other material that didn't seem good enough. There is no such safeguard in the world of blogs and Facebook. As a result, the quality is often very poor. Indeed, in most online discussions I have seen, there is usually at least one person who seems pig-ignorant, certifiably batty or stridently abusive (in some cases, all three). Although there is good material as well, I really wonder if it is worthwhile becoming involved in this morass. Perhaps it's my impending old grumpyhood, but I really don't get much out of it. Put crudely, electronic skepticism needs quality control.

Selling skepticism

I'll mention a third issue as well: skepticism doesn't sell, and I suspect the problem is increasing. Publishers are wary of accepting skeptical manuscripts, whereas pro-paranormal books sell by the million. I am used to going into bookshops and finding shelf after shelf of paranormal books, with no skeptical ones in sight.

Of course, this asymmetry in sales fits logically with the depressing statistics from opinion polls. Many, many people want the paranormal to be true, and apparently lack the critical thinking necessary to separate out the good from the bad and the bogus. What can we do?

One obvious solution is more education. If educated people are more skeptical, then they might buy more skeptical books, magazines and so on. However, this does not work very well. Assorted research indicates that education may reduce some paranormal beliefs, but has no effect on others. What's more, even among highly educated people, there is often a large proportion that still hold paranormal beliefs[8].

Explicitly skeptical education does work. For ten years now I have been teaching a skeptical course at Griffith University. I don't try to affect my students' beliefs, but they must understand the skeptical approach, even if they don't accept it. Before-and-after surveys of belief have shown that the course reduces belief by large amounts: astrology, for instance, went from 30 percent acceptance to zero[9].

A second possible remedy is to expand the size of the skeptical market. Skeptics are a tiny minority, but worldwide there are thousands and thousands of us. So if we each resolved to buy one more skeptical item each year, it would increase skeptical sales, and eventually increase the books published. So, if you bought a couple of skeptical books last year, resolve to buy three henceforth. Read the extra book yourself, or give it to someone as a present. Or both. You will know more, and help the skeptical movement as well. Start browsing at the Prometheus Books website. Surely, you will find something worth buying.[10]

Finally, I am going to try to unite skepticism a bit. Each week or two I will plunge into the blogosphere, or onto a Facebook site, and try my luck at communicating there. I will be polite, even to the abusers and lunatics. And maybe I will learn a little more about skepticism.

Wish me luck.

Notes

1. Compare the aims of the Australian Skeptics and the NZ Skeptics on their websites: www.skeptics.com.au/about/our-aims/ and skeptics.org.nz/SK:ABOUT:607676243 respectively.
2. Martin Bridgstock: Paranormal Beliefs Among Science Students. *Skeptic* (Australia) 23, 1, 2003: 6-10.
3. Caleb Moorhead in New Zealand (nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=2045066) and Gloria Thomas in Australia (dailytelegraph.com.au/news/homeopath-thomas-sam-guilty-of-daughter-glorias-death/story-e6freuy9-1225723018271) are obvious examples.
4. Martin Bridgstock: *Beyond Belief*. Melbourne, Cambridge University Press. 2009: 2-3
5. eg Mark Chaves: *American Religion* New Jersey, Princeton University Press. 2009; Amadu Jacky Kaba The Spread of Christianity and Islam in Africa. *The Western Journal of Black Studies* 29, 2: 2005: 553-570; Zuckerman, Phil: The virtues of godlessness. *The Chronicle of Higher Education* 55.21 2009.
6. Loren R. Graham: *Science in Russia and the Soviet Union*. Cambridge, Cambridge University Press. 1993. William Hinton: 1984, *Shenfan*, London, Vintage
7. Daniel Loxton: Where do we go from here? (first published 2007) www.skeptic.com/downloads/WhereDoWeGoFromHere.pdf
8. Erich Goode: *Paranormal Beliefs*. Prospect Heights, Illinois, Waveland Press. 2000: 172-3.
9. Martin Bridgstock and Alisa Taylor. Teaching Skepticism: does it affect paranormal belief? *Skeptic* (Australia) 27, 3 2007: 12-15.
10. See www.prometheusbooks.com Put 'skepticism' in the search window and begin browsing.

Martin Bridgstock is a Senior Lecturer in the School of Biomolecular and Physical sciences at Griffith University in Brisbane, Australia. He runs the course Skepticism, Science and the Paranormal, and published the skeptical book Beyond Belief in 2009.

New Hawkes Bay Skeptics group

Steve and Heather Darroch have recently moved to Hawkes Bay and are looking to form a Skeptics Group, starting with a Skeptics in the Pub. They intend for this to be as family-oriented and female-friendly as possible.

Says Steve: "We have two grown children, 21 and 18, one in Wellington and one at the University of Otago. I would like to create a friendly skeptical community.

Once we get some numbers we will get going. Go the Bay."

www.facebook.com/groups/HBSkeptics/

The 10 Myths of 1080

Harry Broad

Sodium monofluoroacetate (1080) is a proven tool in the New Zealand pest control arsenal, but significant opposition to its use continues, much of it irrational. This article is based on a presentation to the 2011 NZ Skeptics Conference.

THERE is a brutal battle being waged every night in our forests. It's our own little horror movie. NZ's 'mammal mafia' of possums, stoats and rats has been accused of devouring more than 26.5 million birds in native forest annually. Landcare Research scientist Dr John Innes, quoted in the *Waikato Times*, said it was time opponents of 1080 "... got real about the facts. Most endemic forest birds are disappearing because of predators – millions of forest birds are being killed by mammals every year."

Myth One: Its all about 1080

No, its not. The real issues are around protection of our natural heritage, and while we do win many battles, it's the war that still needs to be won. We know that where we do intervene we make a positive difference and we support a wide range of private initiatives, recognising we need all the help we can get.

Quite simply we have a toolkit approach to pest control and we used the best tool to fit the type of country and the type of pests we are trying to manage. 1080 is a crucial part of this toolkit. It is the only toxin registered for aerial control on the mainland, and it complements a range of other toxins and the widespread use of trapping.

Research in South Westalnd has provided clear evidence that 1080 protects kaka from predation

Its main use is on difficult, challenging country where the costs of ground control, whether by toxins or trapping, are double or treble the cost of aerial 1080 use. For example in the case of the Cascade Valley in South Westland, trying to do pest control by ground methods would have cost an extra $1 million and we have the quotes to prove it. It can be applied over 25,000 ha in a single day and is highly effective, often achieving 99 percent kills.

But DOC is not addicted to 1080. DOC does around 550,000 ha annually of mammalian pest control and less than 30 percent is delivered by aerial 1080. In terms of stoat control, over 250,000 ha are controlled by ground trapping.

Myth Two: We need an independent inquiry

Why? We have already had two and both reconfirmed the need for 1080. Indeed the Parliamentary Commissioner for the Environment (PCE) 2011 report went further than the Environmental Risk Management Agency's (ERMA's) 2007 review, and said we should be using more of it.

"My underlying concern is the decline in bird populations. In the future, the only place native birds will exist is on protected offshore islands and mainland sanctuaries. Without good pest control we will move to the functional extinctions of populations, where numbers are so low they are not viable," said Dr Jan Wright, the current PCE.

Myth Three: We are poisoning paradise

Well if we are, we're doing a terrible job of it. What does the science tell us? The latest studies on 1080 in soil measured degradation at 20, 10, and five degrees. Even at five degrees, 1080 disappeared in six to eight weeks (Dr Penny Fisher, Landcare Research). So the soil is not being poisoned and there are no lasting impacts from 1080 drops.

In a normal aerial 1080 drop there would be a pellet every 32 square metres and only 0.15 percent of each pellet is poison. A week after an operation it can be hard to find any 1080 pellets.

The pellets all biodegrade, and how long they remain depends on the rainfall and temperature. Importantly,1080 does not bioaccumulate and does not persist in the soil. Studies show that no 1080 residues will remain and some of the most productive wildlife areas, for example the East Taupo forests such as Pureora and Tongariro, have had multiple 1080 drops.

The user agencies have also got much better at application. The dose rates have dropped over time from 20 kg to two kg (and some promising science research may allow us to drop it further) and the use of GPS systems specifically modified for NZ keep helicopter overflies to a minimum.

Myth Four: What about the water then?

The dispersal of 1080 in water after operations has been studied for nearly 20 years and there have been over 2400 tests. Over 96 percent of the tests showed no detection at all, and where there were slight traces, these soon dissolved and there have been no impacts on human health.

The most authoritative work on breakdown in water has been done by Alastair Suren of the National Institute for Water and Atmosphere (NIWA). His water trials show that after five hours half the 1080 was lost with the concentration down to 10 percent of original after 24 hours. The baits themselves remained intact for 48 hours and by 72 hours fragmentation was occurring.

Myth Five: It's impacting on human health

1080 is a poison and must be managed accordingly. All risk is relative and nothing can be guaranteed as totally safe. What the department is saying is that the risks to health from 1080, for a population or an individual, are insignificant in a well managed operation done under strict protocols. Most New Zealanders will never come in contact with 1080. In terms of human health risks, the people who would be most at risk from using 1080 are those who process it into cereal baits and other formulations at the factory in Whanganui.

1080 Success stories

- Kiwi populations in Tongariro Forest were boosted following a very successful aerial 1080 pest control operation in 2006.

Ash the kiwi, tracked in Tongariro Forest after a 1080 operation in 2008.

- Mohua (yellowheads) were under threat from predators at the head of Lake Wakatipu. Ground operations controlled stoats, but 1080 aerial control in 2007 and 2009 was needed to control the threat from rats.

- An aerial 1080 pest control operation in Kahurangi National Park's Anatoki River area in October 2009 significantly reduced predator numbers, curbing an expected explosion of rats and stoats.

- 1080 has been used once every four years to suppress possums in the Otira forest.

- A study during a rat plague in Fiordland in 2006 showed much reduced levels of rat predation on bats in areas treated with 1080.

For more details on these and other examples see TrakaBat's channel on **www.youtube.com**

The workers' health is being monitored closely. The department also runs a random testing system for aerial 1080 operations to ensure staff using the product are protected. There has only ever been one death from 1080 in NZ and that happened to a possum trapper in the 1960s. It is possible that he mistook the raspberry-based paste for something edible but it is not really known.

Myth Six: You can't prove it works

Of course we can. There are a wealth of field and working reports done by staff showing the benefits of 1080 (see sidebar). The department currently has an active science research portfolio, focused on the impacts of 1080, partly as a response to recommendations made by ERMA.

These include a forest monitoring project to look at forest recovery in the wake of 1080, a study of the impact of 1080 on kea, and a three-site trial looking at the benefits and risks for a range of native birds, when using aerial 1080 for rat and stoat control. These will be formally published. The results so far from the latter trial are very encouraging and confirm what we have been saying.

• 14 kaka nests were monitored through the last 1080 drop in Whakapohai in South Westland, seven in the 1080 zone, seven in nearby areas that had not had 1080 for two or more years

Four of seven nests fledged in the 1080 area, only three of seven fledged in the non-1080 – not much difference, but two nests in the non-1080 area were taken by possums and one by a stoat. No mammalian predators were identified killing nests in the 1080 zone though a kea got one of them.

• 36 riflemen were monitored through the last 1080 drop in Whakapohai. All survived. This is the first time riflemen have been monitored in 1080 drops.

• Comparing bird counts in two of the blocks that get 1080, and the other block that gets none, Kaka were heard nine times more often in the 1080 area, bellbirds six times more often. Kakariki and tomtits were heard significantly more often in the 1080 area, but the difference was not great.

Myth Seven: DOC ignores the native species by-kill

It certainly does not. We have always acknowledged that there may be a small by-kill but argue strongly that the benefits will comprehensively outweigh the losses – a claim which ERMA endorsed in its 2007 report on 1080. Eleven species of native bird have been intensively monitored, and several other bird species monitored using less precise techniques. None of these studies have identified population level mortality which threatens the viability of the species.

Kea are a concern. We know that in low predator environments kea will have 80-100 percent fledgling success, but in high predator environments this will be well below 40 percent.

We do lose birds, and the real question is whether individual losses can be made up for by fledgling successes. We recently lost seven kea in Okarito out of a total of 38 being monitored for the recent aerial 1080 operation which was aimed at protecting rowi, the country's rarest kiwi, in their habitat.

The operation itself, over 30,000 ha, has been wonderfully successful in reducing rats by 99 percent and stoats just hovering above zero, so this should allow for a much greater fledging success not just for kea but for kiwi. In two previous 1080 operations where kea have been monitored we lost none at all.

Invertebrate populations have been monitored in nine aerial poisoning operations and none have shown significant population effects on any species studied, nor is there evidence to suggest poisoned invertebrates are a significant factor in secondary poisoning of other animals. Long-term monitoring of native land snails indicates substantial benefits to threatened populations in sites treated with aerial poisoning.

Myth Eight: It is not a humane poison

It can take the best part of a day for a possum to die from 1080. This is rated by most authorities as a 'moderately humane' toxin. The other element is to focus on what the bait is trying to achieve, which in the case of 1080 for conservation, is trying to protect our most vulnerable species. It is certainly more humane than the brodifacoum that goes into the common household Talon bait for rats, which can take four days to work.

Myth Nine: You don't do any work on alternatives

Just two examples provide the comprehensive rebuttal to this claim. DOC, in conjunction with private firm Connovation has just produced a toxin specifically for stoats, known as PAPP. It's the first stoat toxin ever produced and together we have invested over $1 million. It is humane, quick acting (30-45 minutes) and it works very well.

The government and the Green Party agreed to invest $4 million over three years into our self-resetting trap, which allows a trap to be reset 12 times. If successful and large-scale trials are going on, this should significantly improve the cost/efficiency of ground control. Overall the government has invested $3-4 million annually in new and improved methods of pest control.

Myth 10: We can do it all by fur trapping and promote an industry as well

The Department is committed to working with the possum fur harvesting industry so long as conservation objectives are not compromised. The reality is that there is often an inherent contradiction between trying to eliminate possums as the undoubted pests they are, and the needs of the possum trappers to have enough animals to make their industry economic. For the 1080 user agencies, the driver for the possum control operations is to slash numbers to as low a level as possible.

The current situation on public conservation land is that generally our possum contractors are able to recover fur if they so wish. Some do but most don't because of the nature of our performance-based contracts and the need to do the job as

promptly as possible.

Beyond this, there are literally millions of hectares of both public conservation land and private land, which are not subject to possum control management, and where possum fur trappers can go right now to get fur if they wish. They can get a permit from their local DOC office or get permission from the individual landowners and away they go. Fur price is the main driver of activity and the recent price lift to $135/kg has seen more trappers chasing the fur.

The Department is also working closely with the industry to extend its balloting system, which allows fur trappers not doing pest control the exclusive right to harvest possums off individual blocks of land for 4-8 months, thus giving them some business certainty.

In conclusion, if we didn't have 1080 available for pest control we would have to invent it. But it is not a silver bullet and must be respected as the poison that it is. The real tragedy of 1080 is that its impact doesn't last long enough.

Harry Broad is a Pest Control Advocacy Coordinator for the Department of Conservation.

conference

NZ Skeptics Conference 2012

Friday 31 August-Sunday 2 September, Otago University, Dunedin

Friday will open with the usual cheerful evening get-together, this time at Otago Museum's Hutton Theatre. The Saturday and Sunday lectures will be in the Archway 3 Theatre. The conference sessions, as always, will cover a large field of fascinating issues, with lots of entertaining activities and thought-provoking ideas. The Annual Dinner, at the University Staff Club, will see the announcement of the year's Bent Spoon and Bravo Awards.

Do please let others know about this entertaining and educational gathering – pass the word, send the link (**www.skeptics.org.nz**) or beam the message telepathically, whatever works for you. (If you can work the last option, we'd like to know about it...)

The conference welcomes all those with an open mind; only the Sunday morning AGM discussions are restricted to subscribing members.

ACCOMMODATION: this year's semester timing means we are not able to arrange hall accommodation. Providers around the university range from hotels and motels to backpackers. If members wish to stay at Cargills Hotel (678 George Street, 03 77- 7983), cite the NZ Skeptics for a discount rate of $111pp. We recommend you contact them early.

Battling the Bands

***Gold** takes local action against PowerBalance, with encouraging results.*

POWERBALANCE Bands are hideously expensive silicon rubber wristbands with a mylar hologram in them. PowerBalance, an American company, made a killing with these after convincing some popular sports personalities that they had the ability to improve their strength and performance. They achieved this by working "with the body's natural energy field". They were shut down in Australia due to the work of a number of people, including Richard Saunders of the *Skeptic Zone* podcast who did a great informal double blind test with the *Today Tonight* show and the local distributor[1].

Good for what ails you: The Placebo Band.

After this happened I found that these were all over the place on TradeMe. From memory there were on average 30+ listings for these at any given time. This was when I discovered something quite handy on TradeMe. The site has a Community Watch feature that allows you to report listings for all sorts of reasons. These are checked and the item is taken down if the complaint stands up. With the recent takedown of PowerBalance in Australia it wasn't hard to convince TradeMe to remove the listings. Within a week the average number of listings was around 3-4 and I would hammer these every few days to keep the number low. As I write there are 10 listings if you search for "power balance bands" on TradeMe. I'll submit complaints about these after I get this article off.

Recently a local skeptic, who we'll refer to as Bob, started posting a listing which was a copy of the Corrective Notice from the Australian Competition & Consumer Commission[2] with a description that explained exactly what PowerBalance bands are, how they fool you into thinking there is an effect (they use a 70-year-old stage magician's trick that relies on applied kinesiology), and that any proceeds from the sale of the Notice would go to the NZ Skeptics Society as a donation. Despite being very clear about the fact that the product for sale is a printout of the Corrective Notice[3] which PowerBalance were ordered to post on their site, the member has been instructed to no longer post these listings.

The Solution? Placebo Bands. The Skeptic Bros[4] are a couple of guys from Australia who tracked down a manufacturer for these silicon bands, scraped the money together, had a Placebo Band design made up, ordered the first 1000 (minimum order) and crossed their fingers. The bands sold well. Bob currently has a supply of these that are being listed on TradeMe, so you'll be able to get your own should you want one. Proceeds (after covering costs) will be donated to the NZ Skeptics Society.

The American company is still active, although they have also recently filed for Chapter 11[5].

1. YouTube: **goo.gl/dN1i8**
2. TGA ruling: **goo.gl/bMVEp**
3. Retraction notice: **goo.gl/j8mw4**
4. The Skeptic Bros: **goo.gl/NUGWU**
5. Google News: **goo.gl/o4XWx**

Gold is chair-entity of the NZ Skeptics.

Compiled by David Riddell

'Suckers' feed on alternative health patients – literally

THE NZ Herald (10-14 January) must have been having trouble filling its pages during the silly season, looking at its recent series on alternative therapies.

Each day for the best part of a week, the paper sent its reporters out to try a range of "alternative relaxation and remedies".

Reporter Andrew Koubaridis must have drawn the short straw – while others in the series got to try out Japanese and Korean variants of spa therapies, he had two leeches sucking blood from his arm for more than an hour.

"I couldn't take my eyes off the little suckers," he said.

Mehdi Jaffari, who runs the Life Clinic Hirudotherapy centre on Auckland's North Shore, says he learned the practice from his Iranian father and that the art had been passed down for generations in his family. Leeches can treat problems ranging from arthritis, diabetes, endometriosis, hepatitis and high blood pressure to bronchitis, he claims. They can even help reduce wrinkles, apparently.

"Their saliva has enzymes that helps break blood clots, and widens blood vessels to stop bacteria growth and prevent inflammation. It also helps blood circulation and flow," Jaffari says.

The article refers to the UMR Research survey on the beliefs of New Zealanders (see Editorial, p 2), which found a majority believed in alternative remedies. Nearly three out of four believed arnica reduces bruising and slightly over half believed that homeopathic remedies are scientifically proven.

In the same series, Lincoln Tan and Amelia Wade checked out Ayurveda, a traditional Indian system of medicine.

"The human body is made up of five basic elements," says Ayurveda specialist Priya Punjabi, "and whenever there is any disorder, these elements become imbalanced and they affect bodily channels and tissues, creating illnesses in the system."

The elements are earth, water, fire, air and sky. This is obviously a huge advance on the traditional western view that there are only four elements.

Paranormal investigators open for business

A paranormal investigation team has been given front page coverage by the Waikato Times (10 December).

The group, who call themselves the Quantum Foundation (what is it with that word quantum?) say they're not ghost hunters, but are called in to "paranormal hot spots" where they try to put clients' minds at rest. Nor are they ghostbusters. "We don't get rid of whatever's there. We can call in people to do that," said co-founder Tracey Royce.

Royce and fellow investigator Lisa Austen said they took a scientific, research-based approach to the supernatural, and sought natural explanations for alleged hauntings.

They use equipment such as cameras, digital recorders and electromagnetic field readers and spend up to eight weeks reviewing content. They have carried out 10 investigations in 16 months, and do not charge for their services.

Most of what they collect is mundane, and they seemed to recognise that 'orbs' are artifacts caused by dust particles reflecting light through a camera lens (*NZ Skeptic 94*). But both say they have had experiences they can't explain, including a sighting of a "full-blown apparition" of a ghostly figure, that drive them on.

Recently they investigated Diggers Bar in central Hamilton, where they captured "electronic voice phenomena", including laughing, a voice saying "it's coming", and one instance of aggressive swearing. Someone swearing around a bar late at night in central Hamilton? How could there be a natural explanation for that?

David Riddell (who's he?) of the NZ Skeptics reportedly said gullible people were often suckered in by folks with fancy equipment, though I have it on good authority he said no such thing. But he did suggest that we are awash with electromagnetic fields, and a recorder is likely to pick up all sorts of things if left on overnight. Even if something couldn't be explained it didn't mean it was from another world.

"A lot of people, when faced with something they can't explain, automatically say [it] must be something supernatural. But sometimes it is okay to say you simply don't know what it is."

Conspiracy theorists get a roasting

Also in the Waikato Times (19 December), freelance writer Joshua Drummond has got stuck into conspiracy theorists with a nice piece of old-fashioned debunking. The three most terrifying words in the English language, he says, are "Did you know?"

"'Did you know,' said an idiot to me one day, 'that 9/11 was an inside job?'"

Over the next half-hour, says Drummond, he was subjected to a sloppy paraphrasing of an internet documentary called *Loose Change*. This alleges a government conspiracy which was somehow, "as these things commonly are, both tremendously competent and massively incompetent at the same time."

He goes on to list a number of other currently popular conspiracy theories, including "the ever-popular primate change denial, courtesy of creationists, who may not like being labelled conspiracy theorists, but that is what they are."

Drummond says conspiracy theorists waste their time on nonsense when far better examples of true wrongdoing lie right in front of their unseeing eyes. Drug companies, for example, may act in highly questionable ways in their endless quest for higher profits – "but it doesn't follow that vaccination doesn't work."

Vitamin supplements unnecessary

A major study of vitamin supplements has found taking the pills does nothing for people's health (NZ Herald, 27 December).

The study, by researchers at Nancy University in France, followed 8000 people for more than six years. Those taking supplements were just as likely to have developed cancer or heart disease as those who took an identical-looking dummy pill. There was hardly any difference in how healthy members of the treatment and control groups reported themselves feeling.

Catherine Collins, chief dietician at St George's Hospital in London, said it was the worried well who were taking these pills to try and protect themselves against Alzheimer's disease, heart attacks and strokes.

"But they are wasting their money. This was a large study following people up for a long period of time assessing everything from their mobility and blood pressure to whether they were happy or felt pain.'

Other recent studies have indicated that, for some people, vitamin supplements could actually be harmful. One last year found pills containing vitamin E, ascorbic acid, beta-carotene, selenium and zinc increased the risk of malignant melanoma four-fold.

Another discovered women on a daily multi-vitamin pill increased their risk of breast cancer by up to 20 percent.

While the evidence that vitamins can do harm is still limited, the latest study seems to confirm that many people are at the very least taking them unnecessarily.

Split for Scientology?

Scientology has had a rough few years, and now a schism seems to be opening up within the so-called 'church' (NZ Herald, 7 January).

Debbie Cook, a former senior member of Sea Org, Scientology's equivalent of the clergy, has circulated an email severely criticising the management style and financial policies of the group's current leader, David Miscavige. She says Miscavige's dictatorial leadership style is at odds with the doctrines laid down by the church's founder, science-fiction author L Ron Hubbard, and that he has become obsessed with fundraising. His regime is now "hoarding" a cash reserve of more than US$1 billion, she claims, and has spent tens of millions more on a portfolio of large, upmarket buildings which largely sit empty.

Cook left the Scientology payroll in 2008, but says she remains "completely dedicated" to its beliefs. Her criticisms strike a chord with many disaffected recent defectors, but her highly respected status within the usually secretive world of Scientology may give her views weight among more active members, the article says.

Seeing what you want to believe

Siouxsie Wiles

Spoiler alert: *Don't read if you haven't seen the film* Contagion *(which I highly recommend) but want to.*

"RECENTLY, I saw the new movie *Contagion* which is about the rapid spread of a virus and how it killed many people around the world while the health authorities refused to consider a potential (natural) cure and instead waited for the development of a vaccine."

So starts the *Ponsonby News*'[1] resident health 'correspondent' (and online vitamin and supplement seller) John Appleton in his December column. Funnily enough, I also saw *Contagion*, Steven Soderbergh's latest film, and have a rather different recollection of the movie. I'll start by saying I loved it. As science-based movies go, it's pretty accurate, which isn't something that can usually be said of science in movies. Well, apart from the fact that the scientists don't seem to balance their centrifuges. But I'm not going to bang on about that. For those who haven't seen *Contagion*, it's a kind of worst-case-scenario-type movie involving a highly infectious virus (which spreads with the aid of inanimate objects like glasses and door handles – known as fomites) with a massive mortality rate. The virus spreads from an animal to a person and then pretty much rampages across the world with the help of aeroplanes and other forms of transportation. It is absolutely terrifying, even more so because, in this modern world of globalisation and habitat encroachment and destruction, it really could happen this way.

The film's science advisor was Dr W Ian Lipkin, Professor of Epidemiology and Director of the Centre for Infection and Immunity at Columbia University's Mailman School of Public Health. He based the fictional virus in *Contagion* on Nipah virus, first identified in 1999, when it caused an outbreak of neurological and respiratory disease on pig farms in Malaysia, resulting in over 250 human cases, including 105 human deaths, and the culling of one million pigs. Nipah is carried by some species of fruit bats and its transmission from bats to pigs is thought to be due to an increasing overlap between bat habitats and piggeries in peninsular Malaysia. Like the fictional virus in *Contagion*, Nipah causes fever and headache leading to coma, but in 14-16 days not four.

Anyway, that's enough virology. Let's look at Mr Appleton's recollection of the "potential (natural) cure" that the health authorities were ignoring, busying themselves instead with trying to find a vaccine. What Mr Appleton is referring to is a subplot involving a blogger and internet conspiracy theorist called Alan Krumwiede, played by Jude Law. He uses his blog to push a homeopathic cure called forsythia, while making money from it. Sounds awfully familiar to me. Krumwiede is portrayed as a real believer, not a cynical charlatan, which also sounds awfully familiar. The film nicely portrays the power of the internet to spread misinformation, as Krumwiede posts footage of himself clearly suffering some viral infection, then taking forsythia and surviving. Turns out he just had the flu. But his championing of a 'cure' while the authorities race to find a vaccine leads to a quite chilling scene where people stampede in a pharmacy trying to get hold of forsythia. I thought the director was pretty blatant in his lampooning of the

Krumwiede character. But it was obviously too subtle for a true believer. A classic case of confirmation bias, where we see what we want to believe in the 'evidence' presented.

But am I just as bad? Where Mr Appleton sees the health authorities ignoring the 'natural' brigade, I see the film as a champion for science. Here we have teams of scientists all doing their bit; some are trying to find the source of the infection, others are trying to grow the virus in the lab and develop a vaccine, and then we have the ones dealing with the infected laboratory monkeys trialling potential vaccines. One of the characters even does a 'Barry Marshall'[2], dosing herself with the top candidate vaccine and then visiting her dying father in hospital to expose herself to the virus.

While the lesson I take from the movie is how we really should be addressing the issue of habitat destruction if we want to avoid such a pandemic in the future, Mr. Appleton uses it as a chance to push the importance of taking high dose vitamin C to prevent and treat disease. To be fair, at least Vitamin C has an active ingredient, unlike forsythia. Naturally he brings up the case of Allan Smith, the farmer with swine flu, whose family fought to have him treated with high dose vitamin C. He survived. Accompanying Mr Appleton's column is a full page advert for the book 'Primal Panacea' by Thomas E Levy, which promises to reveal how "Vitamin C can be used to prevent and treat hundreds of infectious diseases (viral and bacterial)…". If we do face a pandemic, is this what the people of Ponsonby are going to be stampeding to their pharmacies to buy? Oh I forgot, they can buy it from Mr Appleton's website. Enough said.

1. The *Ponsonby News* is a monthly 150 page glossy A4 advertising magazine distributed free to over 16,000 homes and businesses in Auckland.

2. The Australian medic who won a Nobel Prize in 2005 for his role in the discovery of the bacterium *Helicobacter pylori* and its role in gastritis and peptic ulcer disease; he famously drank a culture of *H. pylori*, developing gastritis a few days later.

I declare the following conflict of interest (which is more than John Appleton ever does...): I am a publicly funded research scientist working in the field of microbiology. I am a strong proponent of vaccination. And before you ask, I'm not in the pay of Big Pharma.

sex abuse

Deconstructing Sex Abuse Industry Claims

Gordon Waugh

ACC's best-practice guidelines for identifying cases of sexual abuse are not credible.

TWENTY years ago, New Zealand had a mere handful of people who claimed to be 'counsellors'. Now they number in their thousands. The phrase, "victims were offered counselling", has become commonplace, yet the only practical intervention they can make is to talk.

How did we suddenly produce so many wise folk who can provide counselling and therapy to so many? Is counselling science-based or evidence-free ideology? What did we do before we had counsellors ?

Despite lofty claims of being trained health professionals, counselling is not registered under the Health Practitioners Competence Assurance Act 2003. Nor is it regulated by Government or any public process. It requires no specific or mandatory training, public examination, knowledge or skills. Selling counselling services to the public can be done by anyone, without control or accountability, much like psychics, spirit guides and mediums.

My particular concern here is sex abuse counselling, the industry it spawned and the part ACC plays. An ACC press release of 16 October 2009 advised that "[b]y law, ACC can only accept sensitive claims from those diagnosed with a mental injury resulting from the sexual abuse they've suffered." There are two parts to this; firstly, sexual abuse must have occurred, and secondly, it *caused* a mental injury.

A Sexual Abuse Syndrome ?

Do sexually assaulted people exhibit predictable behavioural characteristics that can accurately be profiled? The term 'syndrome' is defined in the *New Shorter Oxford English Dictionary*

as a "group of symptoms or pathological signs which consistently occur together, especially with an (originally) unknown cause". There is yet no reliable scientific evidence that sexual abuse is a cause of any specific psychiatric, psychological or behavioural condition. Reactions to sexual abuse are generally idiosyncratic and therefore unpredictable.

The existence of a sexual abuse syndrome would mean the "(originally) unknown cause" could be determined from client behaviour alone. Police would have a field day! No such syndrome has yet been identified, making it impossible to properly conclude from client behaviour alone whether a sexual abuse event was experienced.

Science – and evidence-based diagnosis – should always precede treatment decisions and methods. To ensure correct treatment is given to sexual abuse victims, it is also necessary to define what behaviours are *not* indicative of sexual abuse, but that has not been achieved. If the possibility of sexual crimes arise, then it is essential to find the facts from other forms of evidence.

Counselling

A recent president of the NZ Association of Counsellors declared that counsellors are not ideologically driven people – they are trained health professionals with high ethical standards who are not required to investigate crimes. Sexual abuse is a serious crime. But counsellors lack the skills, resources or authority to conduct external investigation of client claims.

To help it survive and grow, the industry created ideological myths and beliefs about abuse, amongst others, the fantasies of recovered memories, multiple personality disorder and satanic ritual abuse, and then invented scores of 'counselling modalities' to treat the claimed effects.

Full knowledge and awareness of that vast number of clusters is beyond ordinary human capacity.

Counsellors believe that sexual abuse can be detected, confirmed or diagnosed from client behaviour. They created extensive lists of 'effects' and believe that clients presenting with a 'cluster' of these 'effects' must have been sexually abused. In reality, the causes of those 'effects' are myriad. Test it for yourself – how many causes of (eg) 'depression' can you name?

The three glaring flaws in most sex abuse counselling cases are a lack of credible evidence that the client was in fact sexually abused, inability of counsellors to separate the effects of sexual abuse (if any) from the effects of other trauma in the client's life, and a penchant to make treatment decisions on the basis that inevitable detrimental consequences arise from sexual abuse.

To them, allegations of abuse are proof of abuse, but absent externally corroborated evidence or other reliable markers of sexual abuse, a counsellor cannot know whether a client was in fact abused.

ACC's Best-Practice Guidelines

There is much misguided and ill-informed thinking underscoring this vexed topic, as shown by ACC's document *Sexual Abuse and Mental Injury : Practice Guidelines for Aotearoa New Zealand,* March 2008 (generally called the Massey Guidelines).

It was developed for ACC by a research team from Massey University's School of Psychology (Turitea Campus) and purports to describe best-practice guidelines for professionals from all disciplines providing therapeutic services to people who have experienced sexual abuse.

ACC's October 2009 press release said, "[t]hese guidelines represent a significant landmark in the treatment of mental injury resulting from sexual abuse, because they're developed by New Zealanders for New Zealanders; *are evidence-based;* and the product of four years' extensive research and consultation."

The Massey Guidelines declare that over 700 effects of sexual abuse have been identified, which are believed by counsellors to be reliable indicators of sexual abuse. The document states :

> "No single effect can be seen as a trustworthy indicator of sexual abuse. Since effects never occur in isolation, it is useful to consider them in terms of what effects are more likely to co-occur."

'Effects' present as 'clusters'. If 'pairs of effects' had been specified, it would mean sets of

two. However, the term 'clusters' means a group of three or more.

How skilled would counsellors need to be, to be able to determine retrospectively from 'clusters of effects' whether the client experienced sexual abuse? A reliable test would be to calculate the permutations to establish how big the task might be.

In the Massey Guidelines, no required order of choice of any single 'effect' is evident, and repeatability of any item is allowed (for example, 'depression' could appear in none, any, many or all clusters). Under these conditions, the permutation formula to calculate the number of clusters is nPr, where $n = 700$ and $r = 3, 4, 5 \ldots\ldots x$, depending on how many effects make up a 'cluster'.

Suppose any four effects are simultaneously presented as a cluster, then r = 4. The number of different 'clusters' able to be presented by a single client, and which the counsellor must be able to recognise, is therefore 700^4 raised to the power of 4. That is, 238,047,385,800 possible clusters.

Full knowledge and awareness of that vast number of clusters is beyond ordinary human capacity. Counsellors would also need the ability, resources and authority to externally investigate each cluster and its individual components to ensure – before making treatment decisions – that the *sole cause* was in fact sexual abuse and not some other event or trauma in the client's life.

The Guidelines say that for practical purposes in writing the document, the number of effects was conveniently reduced to 200! The number of possible clusters is consequently reduced. With just 200 effects presented in random clusters of four, a mere 1,552,438,800 clusters could exist.

Belief in the utility and reliability of these 'clusters' allows counsellors to assert that virtually any human behaviour is caused directly by sexual abuse, and conveniently removes the need for any other form of evidence of abuse.

Debate about the sex abuse industry is one about belief vs evidence. ACC supports the quaint notion of 700 'effects' and believes mental injury is caused by sexual abuse which can be diagnosed from client behaviour alone. But no syndrome yet exists. Besides, counsellors and ACC fail to demand testable evidence of claimed sexual abuse.

I conclude the sex abuse industry is an ideological house of cards, based on myth, assumption and belief, and that ACC and sex abuse counsellors fail to meet legislative obligations. Moreover, every sexual abuse claim submitted to ACC without proper evidence of abuse and mental injury, constitutes a case of improperly using a document to obtain money, services and/or advantage.

Gordon Waugh is a retired Air Force officer with over 30 years of electronics engineering experience. He was a foundation and executive member of Casualties Of Sexual Allegations (COSA), a national organisation dedicated to helping men and their families damaged by false allegations of sexual abuse.

Compartmentalising the mind

MICHAEL Edmonds' article in the latest issue (NZ Skeptic 101) was very interesting, especially laying out the groundwork for non-chemists. If I still had science classes, I would have them all read it and may pass it on to some friends to use.

Michael Edmonds wondered why some people, trained to a high level in chemistry, could turn to pseudoscience. He suggested that external bias, such as religious beliefs, could be one reason. That still does not really explain how those people could 'switch tracks' like that and go from apparently working in 'science' mode to denying the science that didn't fit their beliefs. I had the experience of working with someone like that for quite a few years, and it took me a long time to sort out how this could happen.

Dr V was an excellent chemist and knew details of even obscure reactions. He regularly caught mistakes in science exams, including bursary papers here. He was an extremely well organised person and would happily put in much extra effort to do demonstrations other teachers wouldn't attempt or be bothered to do.

We had a 'hydrogen organ' that he used and showed me how to set up. My class jumped a full 30cm off their stools when it went off. He once nearly deafened himself when his went off prematurely, and he enjoyed

telling this story with a laugh at his own mistake. He once fell in the river collecting marsh gas to show his class how cleanly it burned. You can imagine his classes enjoyed things like this.

He was always willing to help younger teachers with chemistry reactions and demonstrations and enjoyed designing new demonstrations of chemical principles. However, his knowledge of biology was more limited. He refused to do dissections, taught reproduction to the limited extent defined by the syllabus (just the basic structures and the names of the parts of the reproductive system), and flatly refused to mention evolution.

In discussions, he would argue against radioactive dating, saying we couldn't know that the radioactive decay rates hadn't changed over time.

Another day, he would argue that the earth couldn't be more than 10,000 years old – on the basis that if you extrapolated the changes recorded in the magnetic field over the last 60 years, you could not go back more than 10,000 years before the field became ridiculously strong.

How could he make this switch? It was literally like he had switched to a different part of his mind/way of thinking. Yes, he enjoyed arguing.

That, alone, wouldn't explain things. What he did, I finally realized, was compartmentalise things in his mind, just like he did with equipment in his lab, like having lots of little drawers to pull out. Pull out one drawer for describing an acid reaction. Pull out another for dealing with a plant structure. Pull out another for dealing with his religion. There had to be some mental capacity to do this, since I am unable to compartmentalise the world in that way. This is the only way that I could understand or explain his ability to switch tracks in thinking.

Having heard a recent TED talk by Oliver Sacks on hallucinations in people with vision impairment (Charles Bonnet syndrome), and how specific parts of the brain generated specific types of hallucinations (observations by MRI of people during hallucinations, including Oliver Sacks, himself, who has some visual impairment), I can understand better how my former colleague could compartmentalise.

Louette McInnes
Christchurch

Natural Health Products Bill

I was disappointed to read that some therapies are not covered in the new Bill, in particular subluxations which can be seen on an X-ray only by a chiropractor, and ear candling which not only is complete baloney but also in a number of people has resulted in burns to the ear and even perforated ear drums.

Only today a flyer came in the letter box for craniosacral therapy.....

However I guess many of these mumbo-jumbo therapies are really a type of psychotherapy involving a belief system and the Laying On Of Hands which therefore makes people feel better, which I suppose can be OK in the scheme of things ... And of course something like 80 percent of complaints get better over a couple of weeks anyway.

Bill Tucker
Auckland

walk

3000 km for skepticism

***Gold** takes a long walk.*

SOME time back I noticed that I was getting the first signs of Repetitive Strain Injury (RSI). I'm a web developer and spend way too much time in front of a keyboard and mouse. It's a common enough thing among people in my industry. From what I can tell one of the best 'treatments' for it is to just stop for a bit. So I am.

In order to do something productive, or at least worthwhile, during this time I'm going for a sponsored walk to raise funds for the Christchurch Earthquake Appeal Trust, Woman's Refuge and our own NZ Skeptics Society. I've built a half-way decent website for it (**intentionallyhomeless.org**) and it's able to take pledges for distance covered. Providing I finish the full trail I have already raised over $2000 as I write this.

The trail I'm following is called Te Araroa (The Long Pathway) and it was only recently completed and opened. It runs for 3000 km from Cape Reinga to Bluff, although I'm starting in the south and fleeing the (potentially) foul weather instead of heading into it.

I'll be maintaining a journal on the website where you can follow the journey and, should you choose, you can pledge money to the charities or sponsor me personally.

I'm also looking for supply drops, couches and interesting things along the walk. One way to check the track would be to install Google Earth and load the trail using the .kmz file available at the official site (**tearaoa.org.nz**). If you, as a resupply drop or couch, or the point of interest are close enough to the trail I'll definitely make the stop.

The best way to contact me would be via the contact form on the Intentionally Homeless site or via **chair@skeptics.org.nz**

Gold is chair-entity of the NZ Skeptics.

Proposed alteration to the constitution of NZ Skeptics (Inc.) and convening of Special General Meeting

OVER time, the legislative environment in which societies such as the NZ Skeptics operate undergoes change. This society has recently been working to ensure that we are compliant with the current regulations covering incorporated societies and that we are up to date with our tax status. We have been informed that our current constitution does not comply with the current regulatory environment. In light of that, the Inland Revenue Department (IRD) has revoked our non-profit tax status and requires the society to make changes to our constitution. These are to be submitted to the department for approval before the NZ Skeptics may reapply for non-profit status.

In conjunction with this, the society intends to apply to be a charity with the Charities Commission. This also involves a number of specific amendments to our constitution. Accordingly, we have contracted with a legal firm who has prepared a new constitution which conforms with legal requirements. It is important the society makes these changes due to the implications of having a non-compliant constitution and possible liabilities related to this.

It is proposed that a Special General Meeting be convened to consider and move on this motion. The date of this meeting is likely to be mid-April and the society would appreciate it if all members would give due consideration to the proposed changes. If the proposed constitution is moved, the constitution will be submitted to the Incorporated Societies Office and then to IRD for approval and reinstitution of non-profit status prior to any application for charitable status.

The current constitution and the draft proposed changes may be viewed at the Members Only section of the website:

skeptics.org.nz/SK:MEMBERSACCESS

Copies are also available on request from the treasurer (**treasurer@skeptics.org.nz**) as an email attachment, or via post from:

Constitution,
NZ Skeptics Incorporated,
PO Box 30501,
Lower Hutt 5040.

Summary of changes

Section 1 covers the incorporation of the Society and amendments to the rules.

Section 2 gives the name of the society.

Section 3 provides definitions of 'paranormal' and 'pseudoscience'.

Section 4 covers the objects of the society. The changes in this section are to state that the object of the society shall be to advance education. This is intended to comply with the provisions of the Charities Act 2005 which requires that the society has a charitable purpose. The section also states that the society shall be limited in attaining its objects to the advancement of charitable purposes and also contains a pecuniary profit clause required by the IRD which states no member shall derive any personal pecuniary benefit along with a statement that the society is intending to register with the Charities Commission.

Section 5 deals with statutory and other powers of the society to use funds in order to carry out the objects of the society. This section also contains pecuniary profit clauses required by IRD stating that funds are to be applied solely towards the promotion of the objects of the society and may not be transferred as profit to members of the society. Transactions between the society and any member, officer and member of the committee shall be at arms' length and in accordance with prevailing commercial terms on which third parties would be dealt with.

Section 6 covers membership. Most provisions are similar to the current constitution, with disciplinary provisions moved to section 7: cessation. In this section there are added provisions of notification to the secretary of change of

NZ Skeptics Inc. – Membership Renewal

Dear Member,

Please affirm your continued interest in the NZ Skeptics by renewing your membership to receive future issues of the NZ Skeptic and support the on-going activities of the Society.

Michelle Coffey, Treasurer

For renewal, if paying by internet banking or credit card (preferred methods), fill in the on-line renewal form at **www.skeptics.org.nz/SK:SUBSONLINE**

For credit card payments you are then taken to a PayPal page to complete payment. For internet banking, login to your internet banking account and use the details below; all references must be completed to enable identification of your payment.

First ref (particulars): Your Surname

Second ref (code): First Name

Third ref (if available): Membership type

ANZ Bank a/c name: New Zealand Skeptics

a/c number: 11-7810-0185045-11

If paying by post, fill in the form below, tick box for type of membership and post to:

The Treasurer
NZ Skeptics Inc.
PO Box 30501
Lower Hutt 5040.

Cheques to be made payable to "New Zealand Skeptics". Receipts issued on request only.

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o Waged Individual: $40.00
o Unwaged Individual/Student: $20.00
o Overseas Individual: $50.00 (Note: payments must be in NZ Dollars. We can't take cheques in other currencies; paying by credit card is an easy way to get NZ Dollars to us – see payment instructions above)
o Household: $60

Name: _____

Address: _____

_____

_____

Email: _____

address and the requirement that all members shall promote the interests of the society. There is also a provision that no member may speak on behalf of the society except for the nominated media spokesperson or those specifically nominated by the Chair-entity, a provision currently agreed to on accepting membership with the society.

Section 7 provides for cessation of membership. This section contains provision for resigning and liability for fees owing. This section also contains amended disciplinary provisions as the previous constitution only allowed for appeal after determination of misconduct. This gives the committee discretion to decline to investigate until after hearing of another Court or Tribunal, to dispose of or decline the complaint, or instigate further investigations. The following portions of the section deal with the procedures to be observed when a complaint is investigated and considered.

Section 8 covers meetings. The section gives the dates an Annual General Meeting may be called, the business to be conducted and the ability to hold additional General Meetings along with the procedure for doing so. Later clauses deal with general matters such as who is entitled to vote, the quorum for any General Meeting, who chairs meetings and how voting is to be conducted. This section also provides for resolutions passed by the required majority at any General Meeting to be binding on all members.

Section 9 covers the committee. This provides for the expansion of the committee beyond its current size, with election to officer roles and up to nine further members. The later provisions provide for nominations to officer positions, terms of office for the committee, vacancies and removal of members of the committee. This section also allows the committee to appoint a solicitor and fix duties and fees, and allows for limitation of the liability of members of the committee for acts or defaults of other members of the committee.

Section 10 deals with management by the committee. This states the society shall be administered, managed and controlled by the committee, who shall be accountable to members for implementation of policies as approved at General Meetings subject to the constitution and resolution of those meetings, and that the committee may exercise all the society's powers. Later clauses give the power to appoint sub-committees and allow the committee to meet at such times and places and in such a manner as it may determine, state that the committee may act by resolution approved by not less than two-thirds of the members, and provide for making regulations, bylaws and policies that are consistent with the constitution. This section also provides that subject to statute, decisions are final and binding on all members and that the committee may employ any person or company to administer or manage the affairs of the society.

Section 11 covers the duties of the secretary in taking minutes of meetings, holding records, documents and books, and dealing with correspondence.

Section 12 provides that the registered office shall be at such a place as the committee shall determine and provides that due notice be given to the Registrar of Incorporated Societies and Charities Commission.

Section 13 covers finance and the duties of the treasurer. This states the records that must be kept, the requirement for preparation of an annual statement of accounts and provision for consideration by the committee and later submission at the Annual General Meeting, along with any auditor's reports that may be prepared on request or on expected appointment of at least every three years. This section also covers the appointment of an auditor. The financial year remains 1 January to 31 December and there is provision for approval by committee members for cheques or withdrawals before payment. There is also a requirement for funds received on account of the society to be banked within seven days.

Section 14 covers execution of documents and holding of the Common Seal of the Society by the chair-entity. This clause states that execution of documents may be completed by affixing the Common Seal witnessed and countersigned by other members of the committee and for signing on behalf in circumstances where a document is not required to be executed.

Section 15 deals with alteration of rules. This provides that the rules may be altered provided no amendments be made that alter the charitable or tax exempt nature of the society, the pecuniary profit clauses, and winding up rules. This clause to prevent changes to particular clauses is required by IRD. The rest of the section deals with motions to amend or replace rules and the notice required along with notification of members prior to a General Meeting at which the proposal is to be considered.

Section 16 covers winding up. This clause prevents distribution to members on winding up as required by IRD and the Charities Commission and provides that remaining property after winding up be given or transferred to some organisation or body with similar objects to the society. In the event a decision cannot be made, remaining assets are to be distributed as a Judge of the High Court directs.

Regards

Michelle Coffey, Treasurer

New woo for you: 'sound' therapy

***Alison Campbell** learns how to fine-tune the universe with a didgeridoo.*

RECENTLY a commenter on Orac's *Respectful Insolence* blog (**scienceblogs.com/insolence**) mentioned the therapeutic use of didgeridoos for various health issues. Surely this is a joke, I thought. But no: it seems that didgeridoo sound therapy (**www.didgetherapy.com**) is indeed alive and well.

Apparently it works by:

(a) producing ultrasound frequencies that have a massaging effect (no, really!);

(b) clearing "emotional and energetic stagnation"; and

(c) allowing "meditation and mind-body healing". And of course "[m]editation can also be used to quantum manifest healing and the co-creation of our universe."

Wow! Who'd have thunk it? Every time someone meditates, they're fine-tuning the universe (if not actually remaking it anew).

So, we have all the signs of classic 'woo' here. Quite apart from the (mis)use of words like 'quantum' (in the words of Inigo Montoya, "you keep using that word. I do not think it means what you think it means"), we have information-poor statements like this (original grammar but I've emphasised a phrase):

> "This low frequency producing characteristic of the didgeridoo creates a no touch "sound massage" and *has been reported* to provide similar results as conventional ultra sound treatments and relieve a wide range of joint, muscular and skeletal related pain."

"reported"... By whom, to whom, and where? In other words, show us the data. Without that, we are simply dealing with anecdote and testimonial.

And there's the energy cleansing: here the website blurb refers to both TCM and Ayurvedic 'medicine', and gushes that the effects of playing a didgeridoo are as follows:

> "The most basic description one could give for the energetic clearing power of the didgeridoo is "it is like a reiki or qi gong power washer." It has been reported that the energetic clearing effects are similar to traditional five-element acupuncture."

This might be fine if reiki actually did anything ... And there's that "reported" again. Plus, how was the similarity to the results of acupuncture measured, and for which ailments? (There's quite a list of health issues for which didgeridoo therapy is supposedly useful, on that website. At least they don't claim that it actually cures cancer.)

One testimonial, featured on the website, describes didgeridoo music as an "Ancient Vibrational medicine" (it would be interesting to know how Australian aborigines view this), which fits with the statement that:

> "Sound Therapy is based on the theory* that all life vibrates at various frequencies and specifically the human body has multiple vibrational frequencies that can slip 'out of tune' due to emotional or energetic stagnation. When these frequencies are 'out of tune' they can lead to physical and emotional health issues."

This vibration thing has been around for a while – Orac has taken several looks at the various claims made about it (including the truly bizarre claim that DNA produces sound waves, that these can be recorded, and that those

recordings can be transmitted to someone else and change their DNA in turn!) However, the idea's longevity doesn't actually mean that it's in any way an accurate reflection of biological reality.

And finally, we have this:

"Didgeridoo Sound Therapy & Sound Healing is not an Aboriginal Australian tradition or practice, though love and respect is given to them for sharing this amazing instrument with the world."

So – not an "Ancient Vibrational medicine" at all, then ...

* Not 'theory' in the sense of 'strong, scientific explanation for a large number of observations/measurements', but rather, in the sense of 'some idea I've** come up with.'

** Not me personally!

Alison Campbell is a lecturer in the Biological Sciences Department at Waikato University. She writes Bioblog as a way of encouraging critical thinking, looking at scientific papers that are relevant to the Level 3 curriculum and Scholarship, and fielding questions from readers.

Avoiding the trap of belief-dependant realism

***The Believing Brain: how we construct beliefs and reinforce them as truths*, by Michael Shermer. Times books, New York. 386pp. ISBN 978-0-8050-9125-0. Reviewed by Martin Wallace.**

AS a member of NZ Skeptics I have become increasingly aware of the huge and ever-growing list of unsubstantiated beliefs in our society, including religion, alternative medicine, alien abductions, ESP, flying saucers, vaccination refusal, and so on and on. Why are there so many of them and their adherents, and so few of us skeptics?

In his new book Michael Shermer sets out the reasons for this situation. It is our believing brains, evolved hundreds of thousands of years ago, that are responsible. Belief without evidence is a salutary behaviour when facing a trembling bush behind which a predator may be lurking. Don't wait for evidence – just go! Survival is selected for by belief.

Michael Shermer is the founding publisher of *Skeptic* magazine in the US, writes a regular column in *Scientific American*, and is an adjunct professor at Claremont Graduate University. He lives in Calfornia.

In this book he explores beliefs in many fields, and how we select data after forming the beliefs, to reinforce them. He describes how deeply inherent is our desire to detect patterns in our sensory information, and the evidence from neurophysiology and behavioural genetics which shows how and where this occurs. Religion for example exists in all cultures and can be called "a universal".

Dr Shermer explores the history of empiricism and the extraordinary prescience of Francis Bacon (c 1620) in his recognition of those human behaviours which inhibit the determination of reality, and the need for a new approach.

He makes a strong argument for the teaching of scientific method in our schools as well as teaching the nature of the world revealed by that process. It is the unwillingness to apply that method which has resulted in the perseverance of our plethora of beliefs. We are not endowed by evolution with that aptitude, which after all is only 400 years old. We have to learn it.

Unsubstantiated beliefs have been part of our nature for a million years. This is why there are so many of them, and why they are so widespread. Shermer writes: "Science is the only hope we have of avoiding the trap of belief-dependant realism. It is the best tool ever devised to determine: does belief equate with reality?"

The prologue is available on Shermer's web page (**www.michaelshermer.com**) and gives some idea of what lies within. There are liberal notes for each chapter and a comprehensive index.

I would recommend this book to anyone, sceptic or not, who wishes to better understand our human nature.

Martin Wallace is a retired physician who is resuming his education in literature, natural history, and in trying to understand human behaviour.

If undelivered, return to:

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P.O. Box 30501
Lower Hutt 5040

New Zealand Permit No. 3357 Permit

The NZ Skeptics Facebook page – now in its third year!

Facebook provides another way for New Zealand's skeptics to keep in touch, find out about skeptic-related events, and exchange opinions and information.

The NZ Skeptics Facebook page is open to all, and provides a mix of official society information and user-generated content, including images and video.

Follow the link to the page from the NZ Skeptics website.
www.skeptics.org.nz