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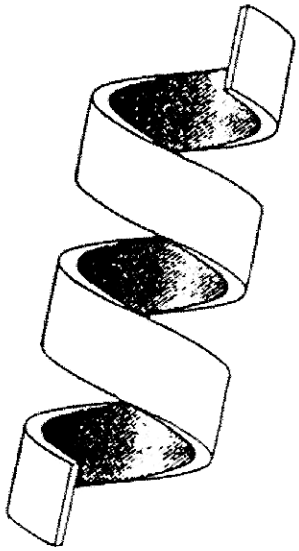

NEW ZEALAND SKEPTIC

AUTUMN 2001 —NUMBER 59

Raising a Skeptical Family

Vicki Hyde

Being a skeptical parent in New Zealand isn't always easy, but it has its rewards. This was originally presented to the Skeptics' World Convention in Sydney, in November.

WHEN I became head of the New Zealand Skeptics seven years ago, the irrepressible Denis Dutton had great delight in ringing the major newspapers to announce the fact that the organisation had elected someone who was female, of Maori descent and pregnant.

"How more politically correct can you get?" he crowed triumphantly. I don't know about elsewhere around the world, but for some reason the New Zealand Skeptics are rarely seen as PC.

What Denis didn't know was that the gravid situation provided me with a great excuse to pass back to him the many invitations to speak to seemingly innumerable numbers of Rotarians, Roundtablers, Lions, Great Elks and other assorted male mammalian service groups. There's nothing surer than saying you're pregnant to get an all-male group to back off hurriedly.

I like to think of it as part of my personal crusade to singlehandedly boost the skeptical population of our country.

I must say that people seem to delight in predicting that my sons are going to grow up to be Sensitive New Age Guys. If they really want to make me nervous they add that David and Perry will be New Age, rugby-playing accountants who'll end up working for Treasury. I can't see it somehow — after all, they're both fire signs...though I do find it a bit worrying that my seven-year-old has started paying attention to the stockmarket reports and cheering every time Telecom drops a few more points.

Of course, his interest—and incidentally the reason why the bulk of this audience is

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My Life of Hell — Sub-editor Tells All

MY brain hurts. I haven't used it in some years, so there's no surprise really. After managing to avoid external employment for a goodly time, a job has finally got its teeth into me and won't let go. Which is not to say I've been totally lazy at home these past years, there's been free-lunch work to do and projects such as the NZ Skeptic to help pass time. But all of these could be done in the privacy of one's own home, dressed in striped jarmies if the mood took and it often did.

Now I have a part-time job at the local paper, writing headlines (my favourite to date ran with a four sentence story about the Alexandra Easter rabbit shoot: Bunnies Bagged) and subbing stories. This means going over copy with a fine toothed comb and making sure there are no errors of any kind. It also requires you know how to use the ancient computer system. It's not easy being a sub.

People have these unfair expectations of you. Like you can spell and know good grammar and where to split an infinitive - all those things that I have tried to avoid most of my adult life since leaving school.

The biggest strain, of course, is the intense concentration to make sure everything is as right as it possibly can be, given restrictions of time. It was put very well in a January editorial in the Evening Post, which talks about the need for scepticism in the media and how every junior reporter is told to trust no one. "Experience in the news business proves day after day that no one is lily white" and that includes sub-editors!

Such scepticism has been found wanting in two instances earlier this year - the fiasco over Phillida Bunkle's home address and the Children First Foundation's use of Rangi Whakaruru (who later turned out not to be a good choice in fronting TV ads aimed at stopping child abuse.)

If these two organisations had been a mite more sceptical at the start, neither would have found itself embarrassed, apologetic and defensive.

"It's worth remembering that ... a not insignificant number among the community have barrows to push and motivations that aren't especially worthy. Judicious questioning therefore is a useful skill, especially among those accepting and spending public money."

Tomorrow while I sit chained to my computer, I shall try to keep in mind someone pushing a barrow... who knows, it may help. I must also remember that skeptic is spelt with a 'c'.

Anyway, if I don't say so myself, this is a particularly fine edition of the NZ Skeptic. And I take no responsibility for it. At the end of each day, after I staggered home and ordered a cup of tea, I'd ask husband David how the Skeptic was coming. It took a while, because the lead article we wanted to run on Sai Baba was unavailable. See, sub-editors have a truly tough job...) and Vicki, our wonderful chair-entity, had her own adventures, as you will see on page 16. However, we managed to get a copy of her address (thanks, Claire and Ros!) and in it you can find new ways to view dead hedgehogs. Honest. I'll never walk past one again without thinking of Vicki.

Annette

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

male—is explicable. According to psychologist Bertrand Cramer, it all relates to early adolescent experimentation with gender-specific body parts. Most notably that manipulation which causes said body parts to move and retract, which, according to Cramer:

"...presents the boy with a particular challenge in the development of the body image; this may contribute to his interest in machinery, physics and the like.

"The boy's better spatial sense relates to the greater use he makes of space in motor activity; the ability the boy has to perceive his sexual organ may also contribute to a better representation of space and to his better skill and greater interest in experimental science and mathematics."

One can only conclude from this that women should be over-represented as mining engineers, tunnellers and speleologists....

Anatomy and Skepticism

I must confess to a certain degree of scepticism concerning the relationship between gross, so-to-speak, anatomy and an interest in science or its handmaiden, skepticism.

I attribute my interest in skepticism to my early fascination with science and science fiction, thanks to writers such as Arthur C Clarke and Isaac Asimov.

In both their fiction and non-fiction, they posed questions and looked for answers, they acknowledged the sometimes-tentative nature of their conclusions, they changed their minds when the facts built up against them. Their science was not the boring stuff of school textbooks, but involved real people trying to find answers to all manner of questions.

They raised real concerns about where the world was heading long before anyone had started worrying about the H-bomb or the China Syndrome, Dolly the cloned sheep, or global warming.

Of course, by no means have all their predictions of the future been accurate ones; nor have the predictions made from respected scientists or the even more highly respected astrologers. Arthur C Clarke knew this when he postulated his First Law which states that:

...when a distinguished but elderly scientist states that something is possible, he is almost certainly right. When he states that something is impossible, he is very probably wrong.

There are times when this Law is overthrown, as noted in Isaac Asimov's Corollary to Clarke's First Law:

...when the lay public rallies round an idea that is denounced by distinguished but elderly scientists, and supports that idea with great fervour and emotion, the distinguished but elderly scientists are then, after all, right.

And while I read Asimov and Clarke and Sagan and Feynman, I was also reading Velikovsky and von Daniken. I tried experiments with Rhine Cards and fervently scanned the skies hoping for a close encounter of my very own. I drew up natal horoscopes in my astrophysics labs, and made more money off astrological charts than I ever did from writing astronomy columns.

But throughout it all, my tendency to ask questions, to try and look at all sides of an issue, stuck with me. That was helped by a goodly dose of debating at school and university level, probably one reason why I tend to be an equivocator.

And, if I want to get Freudian, I can blame my father. He was a staunch non-believer in gravity, and we had lots of arguments about air pressure, centrifugal forces, Newton and apples. I'm still not sure to this day whether he was having me on or not, but it taught me never to accept things at face value.

A Conundrum

The latter is something we could all do well to remember. I think the most stunning example of this I've seen came from a speaker we had after our annual skeptics dinner one year. We'd settled back in our chairs and were presented with the following conundrum:

Two men — James and John — are in a room. James is taller than John. John is taller than James.

How do you explain that? Just think about it for a moment. James is taller than John. John is taller than James.

Well, we had a room of 100 or so skeptics, the most critical minds in the country, and the suggested explanations were legion, not to mention ingenious. I'm sure many of you have already thought of similar solutions to the ones we came up with:

James is standing on a box but John is actually taller.

The floor slopes.

James was taller but then some time passed and John grew taller than James.

The gravitational field is different in different parts of the room.

By the time we started to argue about the effect of singularities, the speaker called a halt and put us out of our misery. There were two obvious explanations that we had failed to come up with:

He was lying OR he was mistaken.

We're just not taught to be suspicious enough. As a species, we're suckers for the confident conman. It's laughable when it's some guy with a toy submarine drumming up some tourism in a local loch; it's not so funny when we're asked to believe that another part of the human race is inferior based on their skin colouring or religion.

I find it sad that few people bother to ask questions. It's an indictment really of how little critical thought enters our lives, how rarely people are prepared to think, really think, about issues that may affect them. This holds as true for any activity in which we participate, whether it's debates on astronomy and astrology, alternative medicines and health reforms, or the way in which we choose our political representatives.

I remain highly skeptical about acupuncture and its uses, but didn't really start to question it until a mother in my local baby group announced that her acupuncturist had said the best way to treat a baby with a fever was to bleed it.

"That's positively medieval" I gasped, only to be reassured "oh no, it's much older than that, it's Chinese."

I knew this woman wasn't going to be interested in a tirade, but I pointed out just how little blood a small baby has to lose before it gets into dire trouble. She could see what I was getting at. But maybe only because I was the closest pseudo-authority figure at the time.

Healthy, Natural Diseases

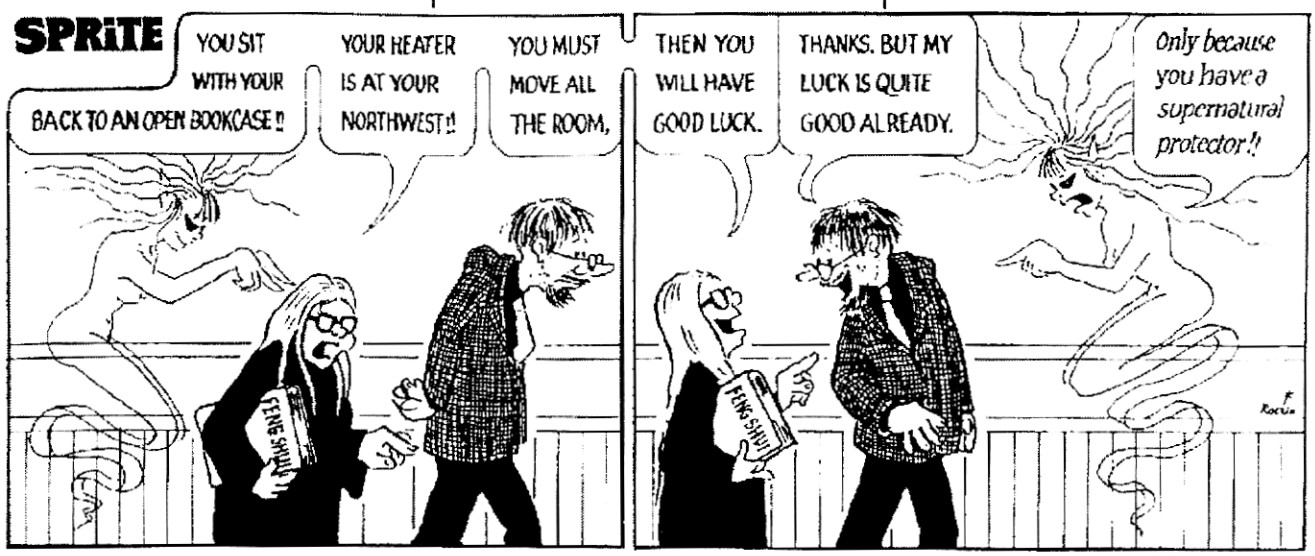
Some of these women refuse to have their toddlers immunised because it's not natural. Somehow it's more healthy for their children to get diseases — they've had measles, mumps and whooping cough so far. These are women who worry about radiation from their microwaves and electric blankets, but who drive their kids around in their urban combat vehicles without safety belts. These are women who listen to the health shop staff and buy heaps of herbs, royal jelly and megavitamins, but who automatically distrust anything to do with Western conventional medicine.

You can't argue with them, that's confrontational. Yet you can't leave them to their wilful ignorance unless you're willing to accept that the price of the New Age is an uninformed populace making decisions based on supposition and superstition.

And why worry about some ditzy women? Well, it's said that if you educate a man, you educate an individual. If you educate a woman, you educate an entire family.

I believe that we each have a responsibility as individuals, as parents, as citizens to be educated — that doesn't mean sending everyone off to university. What it means is having enough nous to ask questions until we can understand or, perhaps more importantly, can recognise our lack of understanding. It also requires us — whether operating as card-carrying members of the Skeptics, or simply as friends and parents — to encourage questions, to provide alternative viewpoints, to make our case effectively.

If you explain homeopathic solutions in terms of a teaspoonful of gin stirred into a Pacific Ocean of tonic, people can immediately grasp what you're getting at when you challenge the idea of potent dilutions. Start talking in terms of



moles, millifibles or inverse powers of ten and you've lost them.

The New Zealand Skeptics had toyed with killing two birds with one stone by taking on the homeopaths and the urine-quaffers simultaneously — we figured we'd take a glass of urine, dilute it homeopathically way past any chance of a single molecule of urine remaining and invite the press along to see the "Skeptics Take the Piss out of Homeopathy". We weren't confident we could explain the maths to the representatives of the Fourth Estate however.

If you encourage people to stop and think about it, they know that it doesn't seem all that likely that a civilisation immeasurably more advanced than ours would want to travel millions of miles across space to stick things up the noses of neurotic Americans. The idea becomes even more ridiculous when you point out that the figures being bandied about for alien abductions mean that one American has been abducted every minute every night for the past 30 years. People know that there are simpler solutions. Even children can figure that out.

Effective Presentation Essential

We do need to present our case effectively, because if we don't, the fallout can be disastrous. It's easy to laugh at tales of UFO abductions — it's not easy to laugh at a child's coffin. We've had a huge debate in New Zealand over the past 18 months as to the rights of the parent to decide what is appropriate treatment for their children.

Many people would argue that parents have the ultimate right and responsibility. I can decide what is best for my child. After all, I'm a caring, well-educated, white middle-class parent who dearly loves her children and would do only what is best for them.

I do wonder if the commissioner would uphold the rights of people who believe their child's diabetes will be aided by prayer, rather than by insulin. Somehow I doubt it.

Sounds reasonable you say? But be careful. After all, I may truly believe that it is appropriate to beat my child. People do. I may think it appropriate to withhold a life-saving blood transfusion from them. Jehovah Witness parents believe this sincerely. Or I may decide that my child will be better off having quantum-boosted radio waves or happy thoughts beamed at his cancerous growth, rather than nasty chemotherapy. After all, in commenting on just such a case, the New Zealand Health and Disability Commissioner said that parents have the right to choose what treatment is given to their child.

I do wonder if the commissioner would uphold the rights of people who believe their child's diabetes will be aided by prayer, rather than by insulin. Somehow I doubt it. After all, in one recent case, two parents were charged with manslaughter for withdrawing their 13-year-old son from chemotherapy treatment for a 15-kilogram tumour — the prayers hadn't worked and the boy died.

Yet, in the cause celebre that was the short eventful life of Liam Williams-Holloway, it appeared that something was different. There are a number of factors that one could point to: the parents were white and middle-class, not Samoan and poor; they gained supportive media coverage from our major news celebrity Paul Holmes; and they were relying on alternative therapy, which sounds more effective and reasonable to a secular society than appealing to God.

Liam had neuroblastoma cancer, with a tumour on his jaw. It's a difficult cancer, but when the oncologists first saw him when he was three, they thought he had a 60-70% chance of beating it if they could treat it quickly. This type of cancer has a very fast drop-off in success rate; by the time children with it reach five, they have about 15-20% chance of survival.

Chemo Courses Stopped

Liam had had two courses of chemo and then stopped. The oncologists made numerous attempts to talk his parents into bringing him back, including agreeing to alternative treatments running alongside the conventional, to no avail. Healthcare Otago eventually went to the Family Court and Liam was made a ward of the courts to enforce treatment; it's not an uncommon outcome in this sort of case, though is more typically used to permit blood transfusion for Jehovah Witnesses' children.

At that point, things careered out of control. The family went into hiding so they could pursue alternative treatment, in this case Rife Quantum Frequency therapy

which promised to explode all the cancer bacteria in Liam's jaw. The Holmes prime-time current affairs program portrayed them as a loving, well-intentioned family hounded into hiding by uncaring oncologists for having the temerity to question orthodox medicine. The country was up in arms about the perceived jackboot tactics of the medical profession; talk-back phonelines ran hot; the police copped it in the neck for being a party to the search for the child; the Family Court made the unhelpful decision to try to muzzle any media reports on the case.

One constant refrain throughout was that the decision to stop chemotherapy was an informed one. I was therefore dismayed to see the family citing the book "Suppressed Inventions and other Discoveries", as a reference source; a book initially published, I am sad to say, by our own Auckland Institute of Technology.

As its name suggests, this book deals with a vast range of conspiracy theories, from NASA's suppression of evidence for intelligent life on Mars through to the perpetual fruitless quest for free energy sources. It is the stuff of which fortunes are made by those prepared to rip off the vulnerable, and you can't get much more vulnerable than being the parent of a child diagnosed with cancer.

The family were clearly taken in by these claims, as their next move was to head for Mexico and the Oasis of Hope Clinic in Tijuana; these clinics were featured in the "Suppressed Inventions" book also. Again they got great coverage on Holmes and other media about their fight to protect their child, about the wonderful treatment they were having — reputedly for $45,000 a month — about the dreadful things that the cancer industry were responsible for in suppressing cancer cures.

The New Zealand Skeptics gave the 1998 Bent Spoon to Holmes for exploiting a sick child and desperate parents in the name of entertainment without asking the hard questions that needed to be asked.

Deceptively simple questions such as "why do clouds float?" and "what makes this light work?" reveal the questioning nature of a potential scientist and — all too often — the adult's lack of knowledge.

And while all this was going on, paediatric oncologists around the country were treading very warily. In July, a six-year-old died following his parents refusal of radiotherapy. Doctors said that the Williams-Holloway case made them wary of acting in the best interest of their child patient. In the case of the 13-year-old mentioned earlier, the parents' lawyer argued that it was the health authorities who were negligent in not seeking a court order to enforce treatment for the boy. They, too, had been scared by the fervent public opinion whipped up around the Williams-Holloway case.

We had a publicly funded documentary follow one woman through alternative therapy to treat a lump in her throat. No mention that the alternative healer also claimed to be regularly abducted by UFOs, no questioning of his claims that cancer is caused by bacteria, no questioning of the ethics of him prescribing 35 health supplements daily from a brand in which he had a financial interest. And how did this piece of investigative journalism end — with the conclusion that the reason her lump ended up bigger over the 16 weeks of treatment was because she hadn't believed in it enough!

We now have parents on cancer wards torturing themselves for not offering their children a less invasive alternative.

Well, to cut a long and harrowing story short, Liam died recently in Mexico. He outlasted the oncologists' predictions by about a year, which has been taken by some as clearly indicating that the alternative treatment was working. The fact that he has died, and made front-page headlines in doing so, may, I hope, cause others to think again.

Parents Exonerated

One of the most disturbing reactions I have seen to the news came from our Commissioner for Children, Roger McClay, a man who has had the highest profile in arguing for the rights of children, who has wept publicly over cases of child abuse. His response was to exonerate the parents once again because they had made "the right choice for them" and then, astonishingly, he added:

"Whether a different course of action would have been better, there's not much point in worrying about it now."

Well, I'm sorry Commissioner, but there's a great deal to worry

about. When you have medical professionals paralysed for fear of a public roasting, when you have alternative therapists seemingly having full access to national publicity with no fear of demands for proof of their claims, when you have people believing that there is some conspiracy by cancer specialists to suppress cures and harm children, then you've certainly got something to worry about.

The Need to Question

I believe it all comes back to that need to question, and to encourage others to question. After all, we all start off with a questing spirit. Babies explore their world, and anyone who has dealt with small children is well aware of their apparently endless store of questions about how the world works.

Somewhere along the way, many people lose that desire to know, to broaden their horizons. My mother, a primary school teacher for many years, reckons this loss happens when children start to ask questions which are beyond the scope or training of their teacher. Deceptively simple questions such as "why do clouds float?" and "what makes this light work?" reveal the questioning nature of a potential scientist and — all too often — the adult's lack of knowledge.

Some people, whether parents or teachers, feel threatened by this. It's seen as disruptive, irrelevant, potentially disrespectful. It gets in the way of the lesson plan, or interrupts the structured bedtime routine.

Yet it is these very aspects that make children so receptive to science, so able to question.

Science writer and physics professor Chet Raymo identified the habits of mind which children have at their most creative, and which are mirrored in the world of science:

- curiosity
- voracious seeing
- sensitivity to rules and variations within rules
- fantasy

He mourned having to teach undergraduates whose image of science was of a dull, dry, boring subject devoid of interest, to be endured and then forgotten in the interests of more lively pastimes such as astrology or parapsychology.

Instead, he said, we need to convey the adventure stories that make up science, the fantasy that forms it. Small wonder that he so often cites children's literature, whether the works of Dr Seuss or Maurice Sendak.

"In children's books," he says, "we are at the roots of science — pure childlike curiosity, eyes open with wonder to the fresh and new, and powers of invention still unfettered by convention and expectation."

Don't Despair

So don't despair if your kids are into the latest SF, Goosebumps or Harry Potter. That doesn't mean that they will grow up to be would-be wizards or psychic investigators. What they will learn is that there are more things in the world, Horatio, than can be found within the pages of a school textbook, and that's never a bad thing.

My kids first started asking about werewolves and ghosts after encountering Scooby Doo on television. I think Scooby Doo has been around long enough that most of us will have watched him and his gang of kids who, every episode, unmask the villain who's dressed up in the wolf suit or the white sheet to frighten or con someone. I hadn't thought about Scooby Doo as an agent of skepticism, but have to wonder about the creators of this show.

There are plenty of children's science shows produced all over the world, but few take a direct look at things of a skeptical nature. My all-time favourite has to be "Oi" which, I am proud to say, was produced in New Zealand, and which has won awards internationally. In each 30-minute show it had a segment which was pure skepticism. If the New Zealand Skeptics ever get a major bequest, I'd like to put together a Greatest Hits of Skepticism using material from "Oi".

I've had some small measures of success in subverting my own children. Davey was barely three when we were in a local bookshop and he paused before a display of that bastion of Australian culture, Bananas in Pyjamas.

"We don't buy that," he announced. "Why?" I asked. "Because it's commercialization." The lady next to us was startled but I was delighted — I'd been teaching David to be suspicious of the ploys of marketers. My kids know that the sweets at the checkout counter are a trick and are determined not to be fooled. They may look longingly at the chocolate bars, but it means I don't get the whining which can be clearly heard emanating from the other aisles.

We often talk about what's real and what's not, whether it's discussing Pokemon, the TV news,

Halloween, dinosaurs or whatever has taken their fancy. My children are used to me equivocating — I'm happy to preface a response (note — not an answer, but a response) with "it depends", "we're not sure but..." or "what do you think?".

Over the past couple of years, David and Perry have read and reread their way through Dan Barker's guide for young skeptics "Maybe Yes, Maybe No" which sets out the basic rules of science:

- check it out
- do it again
- try to prove it wrong
- keep it simple
- it must make sense
- be honest

and which concludes "it is okay to say 'I don't know'".

That's a phrase I use a lot with my children, but I usually follow it up with "let's see if we can find out".

You see, one of my greatest delights is discovery — new facts, new words, new ideas — and I want to do my best to encourage that delight in my children.

It doesn't take a good reference library or Internet access, though we're lucky to have both available at home. It can be something as simple as a walk to school.

We talk about what the weather is doing, how clouds form, the difference between fog and smog. We peer cautiously at the various items of roadkill, and consider how death and decay is a part of life. The late arrival of the Sun over the sea in winter is a practical reminder of Earth's movement around our star. The changing bird populations on the estuary mirror changes in the seasons, as do the annual cycle of the tomatoes grown in the large glasshouse on the corner.

Pure Joy

I get pure joy when I ask David why he thinks such-and-such happens and get a gratifying moment of thoughtful silence before he makes the attempt to explain. It's not a matter of getting things "right", though it's a delight when he does. It's more a matter of virtually seeing his thought processes at work, of experiencing that fresh interest when all is new.

We do get odd looks from other pedestrians who are busy hurrying on their way. They see us examining the death mask of a hedgehog by the side of the road or stirring an oily puddle with a stick, but they don't see our joy of discovery as we discuss why a hedgehog's teeth are so sharp or what makes the colours on the puddle's surface.

There's an adage that one should "stop and smell the roses" — but you can do so much more. Why do the roses smell like that? Why aren't roses shaped like cornflowers? Why do they have thorns?

We mightn't be able to answer every question, but it's the journey to those answers that provides the excitement. It's a journey on which, as a parent, I am privileged to be accompanied.

Vicki Hyde is, of course, chair-entity of the New Zealand Skeptics.

Organic "Evidence" Doesn't Stack Up

Howard Bezar and Denis Curtain

Scientific support for organic farming isn't all it seems

AN article appeared in the Canterbury Digest in December, 2000, claiming organic foods have 'superior nutritive value'. The article, titled "Rapid growth in organic products" was by Seager Mason, Technical and Certification Manager for Bio-Gro New Zealand. It contained a table headed "Scientists prove superior nutritive value of organic food". The table presented data showing large nutritional advantages of five "organic" vegetables over "inorganic" vegetables. The source was said to be "Researchers at Rutgers University".

A search of the internet revealed that over 20 websites have published this material together with some commentary. The websites attribute the data to F. E. Bear of Rutgers University. On further investigation the original paper was identified. This paper was published 52 years ago and is titled "Variation in mineral composition of vegetables" by F. E Bear, S. J. Toth and A. L. Prince, published in 1948 in the Proceedings of the Soil Science Society of America Volume 13: pages 380-384.

The article grossly misrepresents the work of scientists who are now deceased and unable to defend their research. More seriously, the information is false and misleading to readers of Canterbury Digest as well as people using the internet as a source of information and who will not have an opportunity the check the data presented against results in the original, 52-year old research paper.

The deliberate misuse of scientific information in this way is a serious concern in that it undermines public confidence in science, it undermines the credibility of any organization using the information without checking the original source, and it undermines the editorial integrity of any media using the data without first checking with reliable expertise before publishing.

Seager Mason's claims in relation to this paper are inaccurate on several counts. He claims that the researchers "set out to disprove the claim that organic is better". Not so. The stated purpose of the paper was to examine the effects of variation in environmental factors (principally soil type and climate) on mineral concentrations in vegetables. At no point in the paper were the terms "organic" and "inorganic" production used or implied. In fact, there were no comparisons between vegetables grown in "organic" and "inorganic" systems. In essence, the study was a survey of the mineral contents of five vegetable crops sampled in ten US states with widely differing climatic conditions and soil types.

Mason claims that the "researchers purchased selections of produce at supermarkets and health food stores." Not so. The paper clearly states that "samples of cabbage, lettuce, snap beans, spinach, and tomatoes were obtained from commercial fields of these crops." Management practices used to grow the crops were not specified.

The results in the paper of Bear et al. were summarised in the form of Tables showing the lowest and highest values recorded for each crop. Mason misrepresents these results by indicating that the highest values were obtained for organically produced crops and that the lowest values came from crops grown by inorganic methods. There is absolutely no justification for this. As pointed out above, vegetables representing "organic" and "inorganic" production methods were not even included in the study.

The summary remark that "organic foods are three to 100 times more nutritious (than inorganic food)" bears no relation to the contents of the paper published by the Rutgers scientists. It is certainly ridiculous to claim that "many essential elements were completely absent in the commercial (i.e., inorganic) produce". Plants just will not grow in the absence of essential elements!

The labels on columns of data are transposed, the molybdenum column has been left out and some other transcription errors are apparent. This means that the ash content is reported as phosphorus, the calcium column as sodium, etc. All the columns are wrongly labeled except for cobalt.

Further points to note in relation to this paper are:

- A comprehensive review of international literature undertaken by Dr Diane Bourn and Associate Professor John Prescott of the Department of Food Science, University of Otago in April 2000 (currently in press), concludes that "With the possible exception of nitrate

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Newsfront

David Riddell

Help at Hand for Mobile Phone Users

I would've thought the main hazard from mobile phones was the increased risk of accident when using one in the car. No-one seems to worry about this, however, instead many are deeply concerned that a few milliwatts of radio waves are going to fry their brains. This has opened tremendous opportunities for the enterprising.

Last issue we reported on the Personal Harmoniser, which minimised radiation effects by strengthening and protecting the body's immune system. But new on the market is the BioChip, which attacks the root of the problem. It fits into the battery of a mobile phone, from where it emits a signal which disrupts the strong, regular electrical impulse which experts say can damage the cells of the brain. The chip raises the cost of a battery by around a third. Which sounds okay until you remember that with the connection deals now available, the batteries are often the most expensive part of the phone.

(Christchurch Press, 6 January)

Pikachu or Pikajew?

If you've felt vaguely uneasy about Pokemon and its possible adverse effects on children, but couldn't quite put your finger on the precise nature of the problem, Saudi Arabia's most senior Islamic clerics have figured it out: Pokemon is too Jewish. According to a fatwa issued by Sheik Abdul Aziz bin Abdullah al-Sheik, all Muslims should beware of this game and prevent their children from playing it so as to protect their religion and manners.

The clerics said the concept of the game's characters appeared to be based on Charles Darwin's theory of evolution, and most of the cards figure six-pointed stars, a symbol of international Zionism and the state of Israel.

(Evening Post, 26 March)

Wedding bells for Uri

Everyone's favourite spoon-bender renewed his vows to wife of ten years, Hanna, in March. The event probably would have been overlooked by the world's media if it hadn't been for his choice of Best Man—Michael Jackson!

(Dominion, 6 March)

Ghostly Goings-On

High profile sceptical parapsychologist Richard Wiseman has been a busy boy. First he was making headlines around the world with his investigations of the ghost of Henry VIII's wife Catherine Howard, who was beheaded in 1540, but is said to still stalk the corridors of London's Hampton Court Palace. Just bodies of cold air and some unusual draughts, he said on that occasion.

But things in Edinburgh seem, at this stage, rather more interesting. Wiseman has sent 240 volunteers into the cells of Edinburgh Castle, and cellars in the bowels of the mediaeval "Old Town".

Nearly half the guinea pigs reported ghostly goings-on, although most were (again) no more dramatic than a sudden drop in temperature, an uncomfortable draught or a feeling of being watched. But one person reported a burning sensation on the arm, and another was nearly reduced to tears by breathing noises in the corner of the room.

Wiseman says the reports are much more extreme than expected, and, importantly, the highest number of experiences came in vaults already reputed to be haunted. But he won't be a believer until he gets something on film. Meanwhile, local tourist guides are said to be "delighted" at the findings.

(Waikato Times, 19 April)

Rope Trick Mystery Tied Up

You probably knew this anyway, but the Indian Rope Trick is a hoax, it's never been performed.

Peter Lamont, a former president of the Magic Circle in Edinburgh (that place again!) and now a researcher at the city's university, found that the story was invented by the Chicago Tribune 111 years ago as part of a subscription drive. Little notice was taken of a short note the paper published four months later admitting the article had been a publicity stunt. It was assumed readers would realise it was a hoax because the story was bylined Fred S Ellmore.

Supposedly, the trick involves a boy climbing an unsupported rope and disappearing at the top. He is followed up the rope by a man with a sword who also disappears, before parts of the boy's body fall from the sky into a basket. The man reappears and tips out the basket, revealing the boy to be in perfect health. Various attempts at explaining the trick have been made, including the involvement of twin boys, one of whom would actually be murdered.

(Evening Post, 16 April)

Another Psychic Scam

Mailboxes around the country have been bombarded with letters from a self-proclaimed "highly-regarded psychic" offering information about how to win more than $300 000. A reader has sent one in here, and a columnist at the Waikato Times received two, each talking about different amounts of money, and involving different dates. Now the Commerce Commission has released a statement urging recipients to throw the letters away.

The psychic, going under the name Antoinette de Ville (no relation of Cruella?) claims to have dreamed of the recipients winning a large amount of money, which usually varies from letter to letter. While she would normally charge $1000-2000 for such a service (her clients include many celebrities and movie stars, apparently), the dream was so powerful she felt compelled to contact the recipient directly, and would only charge a "handling fee" of $59 on this occasion for providing the information necessary to make the winnings a reality. A money back guarantee is offered.

Whangarei police Detective Senior Sergeant Marty Ruth says there was nothing police could do unless a deliberate intent to defraud could be proved. You have to wonder what level of evidence is necessary.

(Evening Post, 9 April)

Hogwarts it Isn't

Harry Potter fans who want to enrol in a real school for witches and wizards can now do so at the Isle of Avalon Foundation, near Glastonbury Tor in the west of England. Avalon coordinator Colette Barnard says the foundation has taught 350 people Goddess skills and Wicca traditions since 1995, and currently has 185 students. Now, they are offering a part-time course on witchcraft for the 21st century.

(Evening Post, 7 April)

No Money, No Corpse

The corpse of former Nigerian soccer captain Sam "Zagallo" Opone, who died last November, is being held by a witch doctor until he has recovered money owed to him for the player's treatment. Opone was being treated by the witch doctor who discontinued treatment claiming unpaid bills. When he died (must have been the treatments that were keeping him alive) the witch doctor refused to give up the corpse to the family until he had been paid about US$1200.

(Dominion, 17 April)

Death Takes a Holiday

Not many cruise passengers want to talk about death on their vacation, but the Intuitive Vision Network has just conducted a week-long Psychic and Spiritual Healing Cruise on the liner Norwegian Sky for those who want to combine a cruise with life-transforming experiences. Clairvoyants, channellers and "intuitives" offer the chance to speak with the departed and explore the metaphysical.

The ship sails a round trip from Miami to Nassau, San Juan, St Thomas and Great Stirrup Cay. Hmm, that's along the southern edge of the Bermuda Triangle...

(Dominion, 27 February)

Chair-Entity Stricken

Skeptics Chair-Entity Vicki Hyde and her family were recently involved in a car accident near Timaru. While the rest of the Hydes escaped with minor scrapes and bruises, Vicki has a broken leg and has spent several days in Timaru Hospital. Opinions are divided as to whether this was an Act of God in retribution for sins unspecified, or an instance of divine protection, without which things would have been much worse. No word has yet been heard as to whether the Hyde family has been offered counselling, or, if so, whether it has been accepted.

The Christchurch Press noted the event in their Diary section (21 April), observing that a skeptical colleague was quick to spot an opportunity. Why not offer her leg as a test for people claiming to be able to heal at a distance? However, for a properly conducted scientific experiment, both of Ms Hyde's legs would have had to be broken, to provide a control. Keen though she was to test paranormal claims, she says she had to draw the line somewhere.

HEALING WAYS

Graeme Sharp

A new book on alternative medicine has little to add

LAST year, I wrote to the Minister of Health protesting at her plans to spend $600 000 on a Ministerial Enquiry into Complementary Medicine. Press reports quoted the Minister as saying that acupuncture was an example of an alternative technique that is now accepted as mainstream.

In my letter I said that acupuncture had never been shown to be better than placebo. Frank Haden followed up my protest with a supportive article in the *Sunday Times* and this is where the fun began.

A Dr Robin Kelly wrote criticising me, and accusing me of acting unethically. In my response to him I made an error of fact, which he pointed out to me. But the interesting thing about his reply was that he claimed I was losing the battle because of misinformation, a point that I will revisit.

On October 17 Dr Kelly was interviewed by Kim Hill on the National Programme in her *Nine to Noon* show. My name came up several times, for which I am, of course, very flattered. The interview was basically an advertisement for Dr Kelly's new book, *Healing Ways* (Penguin NZ, 2000), but several points in the discussion intrigued me.

Kim Hill said she was sure Dr Kelly could explain to her how an anaesthetic worked. Now, I am a consultant anaesthetist with some twenty years experience, and if I could explain fully how a general anaesthetic worked I would immediately put in for a Nobel Prize. General anaesthesia is a complex process, and although many aspects are understood there are still large and fundamental gaps in our knowledge of exactly what happens during general anaesthesia. Maybe Dr Kelly can explain how an anaesthetic works, but I'll lay a bet that he cannot.

Kim Hill then invited him to explain how acupuncture works. After several assurances that he would do so, Dr Kelly failed. He said that an acupuncture needle acts like an aerial, allowing contact from the outside to the inside. Well, in his explanation the needle sounds more like a conductor than an aerial. Is he saying that acupuncture needles must be metal, and not bamboo for instance?

Dr Kelly then told us that much research was proceeding at Monash University. Well maybe it is, but it is the results we want, not the assurance that the research is being done.

Dr Kelly stated that I would benefit from some acupuncture, though he did not state for which condition I needed it. He also said that what he was on about was enhancing the placebo effect. But hold on. Was he not criticising me for saying that acupuncture had not been shown to be any better than placebo?

You can't have it both ways Dr Kelly!

Throughout his interview, Dr Kelly was at pains to say the material was covered in his book. I went and bought a copy of *Healing Ways*, much to my wife's annoyance as she predicted it would be a total waste of money. How right she was (a very wise woman is Mrs Sharpe.)

I wish I could in all honesty say that I have read *Healing Ways*, but try as I did I just could not READ it. So Dr Kelly will be able to claim I have missed vital material. I was merely able to dip into it and read small sections.

To be fair, *Healing Ways* has some valid and potentially useful material. Dr Kelly emphasises the importance of listening to patients, and writes empathetically about dealing with dying patients and their families. I did not, however, find anything particularly new or startling in this material.

The rest of the book is a mix of many current trendy alternative claims. Acupuncture and Chinese Medicine, homoeopathy, applied kinesiology, Gaia hypothesis, healing touch, prayer therapy... you name it, it's there!

I was particularly amused at the contention that Dr Benveniste is a leading researcher in water memory. Readers will remember the good Dr B. and his thoroughly discredited paper on water memory and homoeopathy in *Nature* back in 1988.

Another enjoyably silly section in the book deals with breathing.

Continued on page 17

The Spectre of Kahurangi

Jim Ring

GOETHE'S *Faust* is a tale of the supernatural. According to a famous passage, on Walpurgisnacht a witch's sabbat was celebrated on top of the Brocken, a mountain in the Black Forest. Old maps show this point circled by witches on broomsticks. Although probably not a very ancient tradition, it grabbed the imagination of 19th century romantics. They claimed at certain times magical visions could be seen from the peak. Even though no witches were visible on the mountain, gigantic shadowy figures were projected onto the clouds; the Spectre of the Brocken.

According to the *Encyclopaedia Britannica* 'this phenomenon is often observed on mountain peaks' but even the non-supernatural explanations seem unbelievable. According to the *Britannica* 'When the sun is low, shadows cast by the sun become magnified and seemingly gigantic silhouettes are cast on the upper surfaces of low-lying clouds or fog below the mountain.'

A later entry is contradictory: 'The apparent magnification of size is an optical illusion that occurs when the observer judges his shadow on nearby clouds to be the same distance as faraway objects seen through gaps in the clouds.'

So is the magnification real or an illusion? As the sun's rays are practically parallel, any shadow cast by the sun remains the same size as the object. Thus a shadow at even a modest distance from the observer can only seem small. In justification *Britannica* mentions the common sight of an aeroplane's shadow cast on clouds beneath, but a jumbo jet casts a decent sized shadow, a human sized shadow would be insignificant.

In spite of many literary references (De Quincey for example) first-hand accounts of 'the Spectre' by first-rate observers seem non-existent. (Does any reader know of any?). But some accounts state that the figures seem frightened of the observer and rush away as soon as they are seen.

The whole thing seems ridiculous, or so I thought until I saw the phenomenon myself in New Zealand. In fact I have observed this effect twice—which considering the time I have spent in the mountains, implies it is a relatively rare event.

The first occasion was when climbing a ridge above the Wangapeka River in what is now Kahurangi National Park. The sun rose over another ridge behind us and gigantic shadow figures appeared on the hillside across the valley. Before I had fully grasped what was happening they had shrunk down to normal size, where they were just visible. At least that explained the accounts of figures 'rushing away', they simply got smaller, and very rapidly too.

The explanation was quite obvious to anybody with some knowledge of optics; light is refracted when passing over an edge. The first gleam of sunlight over the ridge was bent into a widening beam that produced a huge shadow as effectively as a point of light projects an enlarged shadow onto a screen. The bush-clad hillside opposite us acted as a screen on which we could see the projection. But as the sun rose, the refraction diminished until enough of the sun was visible to produce the normal parallel rays with which we are familiar. So the initial large shadow quickly shrank to normal size.

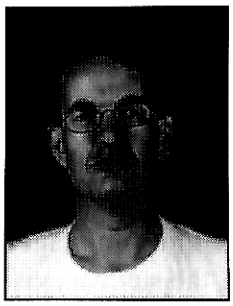
Was this illusion awe-inspiring? Was it even an illusion? Were we frightened? Was it immediately obvious that we were observing our own shadows not supernatural entities? Well no, no, no, and yes. My wife, the complete skeptic, summed up, "Why make a fuss about shrinking shadows?"

I am confident that I can explain the reports of run-away shadows in mountain regions. The conditions necessary for observing this phenomenon seem to be that the sun must rise over a not too distant sharp edge, the air should be still and very clear. The observers be on a minor peak or ridge, and the projection be onto a fairly plain surface.

Does this explain the 'Spectre of the Brocken' better than the Encyclopaedia? Well to be honest, no. The Brocken is the highest mountain around. So how could the sun rise over a sharp edge unless other peaks are very close? I doubt that clouds can ever have sufficiently sharp edges to produce the effect.

Perhaps the Spectre of the Brocken is as real as the reports there of witches, while its magical reputation has seen it acquire stories of phenomenon that are real in other mountainous areas.

Jim Ring is a Nelson skeptic.



Hokum Locum

John Welch

Recently returned from a posting in Saudi Arabia and now suffering from a cold and a bleeding nose, John Welch continues his column on medical matters.

Dilutions of Grandeur

As a Fellow of the Royal NZ College of General Practitioners (it came in the cornflakes) I receive a regular copy of their journal, the *NZ Family Physician*. There are some good contributions but I find it irritating to see reviews of homeopathy studies appearing in what should be a serious and scientifically based journal. In *Vol 27 Issue 5*, a study is reviewed in which mice were given nux vomica 30c, 200c and 1000c. 30c means that the "active" substance has been diluted 10 to the power 30 times. A mole of a substance contains about 10 to the power 24 atoms (Avogadro's number) and this means that the 10^{-30} dilution is extremely unlikely to contain *any* active material. This is the main failing point of homeopathy, which depends on faith and the placebo effect. In the study reviewed a positive finding was made that mice treated with various dilutions of nux vomica, and then challenged with ethanol, regained their righting reflex more quickly. Such a result is a delusion.

I would add from my perspective: "The abuse of science will cause discomfort for many scientists."

Integrated Medicine?

The same issue contains an article which should not have been published as it is a commercial for the use of Vega (read "vaguer" and you are on the right track) testing. There is no place for this unscientific rubbish to be practised by any medical practitioner and it is a matter of regret that the Medical Council do not have the power to ban the use of such machines. I have written before on the subject of this quackery and at the last Auckland Conference Dr David Cole gave an excellent presentation on the evolution of "black-boxes" which allegedly test "biofields". The article frequently uses the following words and expressions (with my translations):

Biofield = imaginary energy aura which can only be detected by trained observers

Paradigm shift = more of a lurch into another dimension of foolishness

Energy based Quantum Physics = the author is ignorant of any physics

Dramatically improve = an excellent placebo effect was obtained

A double-blind randomised study of Vega-testing published in the *BMJ (Vol 322, 20 Jan p131)* concluded predictably : "Electrodermal testing cannot be used to diagnose environmental allergies."

Re-birthing Backfires

Because a young girl was having trouble bonding with her adoptive mother, a couple of loony therapists decided she had a "reactive attachment disorder" and decided that a spot of rebirthing was in order. This unfortunately went tragically wrong when the girl suffocated inside the sheet which had been wound around her. This is a graphic reminder of the sometimes appalling outcomes associated with the activities of the lunatic fringe. It need not actively cause death as in this case, but can cause death by neglect when effective measures are denied such as in the Liam Holloway case.

(Sunday Star Times 22/4/01)

Aromatherapy Flunks

Subjects had their reaction times tested with and without the benefit of essential oils sprinkled onto surgical masks they were wearing. I will quote directly from the article: "The essential oils appeared to make no difference to reaction times, but the volunteers who rated the oils highly showed small improvements in their reaction times." (Presumably not a significant difference).

"Dr Richard Tonkin, president of the Research Council for Complementary Medicine, said the power of suggestion was a big factor in all medicine."

I would only add that the power of suggestion is the main factor in all complemetary medicine.

(The Dominion, 20 April)

Teething, Feeding, Wind and Worms

One of the problems of an aging population is that there are too many "old wives" promulgating myths about childhood illness. Twenty-five years ago, my old Professor of Paediatrics, Fred Shannon, gave a lecture to us with the above title, and observed among other things, that wind was a meteorological phenomenon. He must have been ahead of his time because Australian researchers found no link between ill-health and teething in a cohort of infants over the period of 6-24 months of age. It is obvious that chance events such as a minor illness will occur when a tooth is erupting and a folk myth is soon created. When death certification began in the UK in the early 1800s, as many as 4000 deaths annually were attributed to "teething". As Fred Shannon observed: "teething causes teeth." I certainly found this to be true with my own series (N=2 daughters) of cases.

(Pediatrics 2000;106:1374-9)

Head-drilling again?

I have mentioned this subject before but thought it to be an uncommon procedure. In the US (where else?) two men pleaded guilty to practising medicine without a licence after drilling a hole in the head of a woman's skull in order to "restore her childhood buoyancy". Now I have been doing quite a bit of swimming lately and I am very sure that a hole in the head would not help my bouyancy at all!

It's about time!

At a medicolegal conference reported in *Doctor 14/3/2001,* Fiona McCrimmon called for the Ministry of Health to act against the manufacturers of complementary medicines where misleading claims are made. Pharmacies are full of such products which are not registered and are only lawful if they do not make any therapeutic claims. Ms McCrimmon went on to observe: "It is a challenge to find a flyer (for complementary therapies) that complies with the law."

Book Review

In Mendel's Footnotes: An Introduction to the Science and Technologies of Genes and Genetics from the 19th century to the 22nd, by Colin Tudge. Jonathan Cape, $59.95. Reviewed by David Riddell.

The recent advances in genetic technologies have been quite bewildering. But, Tudge contends, borrowing a phrase from the philosopher AN Whitehead who maintained all moral philosophy was footnotes to Plato, all genetics is merely footnotes to Mendel. His classic experiments on peas, easily understandable by high school students, lie at the base of everything that has followed. Tudge lucidly recounts this very familiar territory, explaining the genius which underlay such deceptively simple studies, and placing them in a historical context: Mendel was working at a time when even such basic questions as whether both parents contributed equally to the offspring were still unresolved, and chromosomes, never mind genes, were yet to be discovered. Tudge also provides a good deal of biographical information, refuting the popular myth that Mendel was of peasant stock and working in a backwater.

This is all good stuff as far as it goes. Those hoping, on the strength of the book's title, for technical information on just how genetic engineers go about their business at the beginning of the twenty-first century are likely to be disappointed, however. Over half the book is devoted to issues which are at best peripheral to the practice of genetics. There is, for example, a lengthy chapter on the much-maligned discipline of evolutionary psychology. This is interesting reading, and obviously a favourite subject of Tudge's, but seems a little off-topic. Sections on the application of genetics to conservation biology, and why eugenics doesn't work, are more relevant, but largely theoretical.

Tudge closes by asking what we should do with all this power, and concludes there are grounds for cautious optimism. Just because a technology is available doesn't mean it will become widely adopted. Human nature is, he asserts, much more subtle and innately "moral" than many choose to believe: we can reject the more exotic promises of biotechnology, and to some extent have already shown an ability to do so. It is for its discussion of the ethical and social ramifications of genetics and, more broadly, evolutionary theory, rather than its coverage of the nuts and bolts of genetic technology, that this book has its greatest value.

Forum

Sai Baba Video

In the NZ Skeptic No. 58, p.16 Bernard Howard writes of a presentation about Sai Baba by Richard Wiseman at the Skeptics' World Convention in Sydney: "We know the latter Indian "godman" is merely a conjuror; what was clear from the film is what a bad one he is, a real fumbler."

However Richard Wiseman does not at all claim that the videotape even shows that Sai Baba is a conjuror. Quite to the contrary in [1] he states that it "offers no unequivocal evidence of fraud" and concludes that it is "a clear example of how a videotape containing a scene where sleight of hand *may* have occurred can become an allegation that trickery has in fact taken place." (emphasis in the original).

In an investigation of his own of another Indian godman published in [2] with similar results he comes to the rather different conclusion that the phenomenon is "more likely to have been caused by simple sleight of hand". I elaborated on this in [3].

Richard Wiseman is spreading the videotape abroad, especially among groups of sceptics who might tend to circulate the news of the alleged or real exposer without examining the tape. This he did also at the previous Skeptics' World Convention in Heidelberg. There I had the opportunity to ask him about his seemingly inconsistent assessments. He answered to the effect that he did not think of the tape as proof of fraud because it is never possible to prove anything with certainty. He did not address my question how he then was able to reach the different conclusion in [2]. Neither did his coauthor Erlunder Haraldsson who to the best of my knowledge was sent a copy of my questions in [3].

Gerald Huber

[1] Haraldsson, Erlunder and Wiseman, Richard (1995): Reactions to an Assessment of A Videotape on Sathya Sai Baba. Journal of the Society for Psychical Research Vol. 60 No. 839, 203-213. [2] Haraldsson, Erlunder and Wiseman, Richard (1996): The Skeptic (published in the UK) Vol. 10, No. 2, 6-7. [3] Huber, Gerald. (1996): Are Some Gurus More Equal? Indian Skeptic. Vol. 9 No 4, 5-6.

Different Filters

People in this country are allowed to believe what they want to. We are not in a dictatorship, thank God. What people come to believe as adults is coloured by how they were brought up. We all tend to replay the attitudes we absorbed as small children. As we mature and learn more we can either reject our childhood training or accept it. We all view the world through a filter of things we have been taught when young. Changing the filter comes by conviction through education and experience and sometimes inspiration or intuition. One who has experienced childhood with a harsh, cruel, drunken, violent father cannot conceive of God as a desirable Father. Only a supernatural switch in filters can show him the truth of God's unfailing love. Only God can do that, and He does, as many testify.

It is not for me to condemn you who have a different filter. And it is not for you to scoff at me because my filter is different from yours. There is room for us all in this free country. In the Soviet Union, children were routinely greeted by the class teacher: "Good morning children, there is no God", to which the children obediently replied: "Good morning teacher, there is no God." Any child who refused to say that was disgraced and bullied by teacher and classmates. Thank God for teenage rebellion. Teenagers dare to question what they have been taught. Some Russian teenagers asked: "How come if there is no God, they are so nervous about Him?" This is how the Underground church started, which after 70 years of relentless persecution finally overthrew the atheist Soviet system.

Judith Petterson, Waikanae.

Geller's Spoonbending

The Summer 2001 issue of New Zealand Skeptic just received here. I note a problem....

The caption on the cover photo says, "Uri Geller bends a spoon during a visit to New Zealand in 1975." This is incorrect. In my opinion, it should read, "Uri Geller poses with a bent spoon during a visit to New Zealand in 1975." Geller tries mightily to give the impression that he bends spoons merely by touching them as shown, and NZS should not lend itself to that effort....!

Otherwise, an EXCELLENT issue! I will be stealing excerpts from it for months to come!

James Randi

Continued from page 12

Apparently we should focus our breathing on our navels, because that is where we got our oxygen before birth. Dr Kelly advises that we watch how a baby breathes and learn from this natural breathing pattern. It is a pity that he does not revise his physiology lessons from medical school. Babies breathe the way they do for a number of reasons, but the end result is that the oxygen cost of breathing is proportionately much higher. Also, a baby does not have a functional reserve volume to the same extent that an adult does. Therefore any interruption to breathing in a baby is more likely to result in hypoxia. I do not think we want to run the same risks.

All in all, *Healing Ways* is an irrational collection of trendy claims, lacking any evidence of scientific validity.

What concerns me about *Healing Ways* is that I expect this to be typical of the "evidence" that will be presented to Annette King's enquiry. I have told Ms King that the enquiry will be a waste of time and money. If I am correct about the material that will be presented, I will take no great pride in being proved correct.

I will however concede the final round to Dr Kelly. He said that I was losing the battle because of misinformation. Having heard his interview with Kim Hill, and read the greater part of his book, I am inclined to agree, with the proviso that we recognise that it is people like Dr Kelly who are providing that misinformation!

Graeme Sharpe is a consultant anaesthetist at Wellington Hospital

Divine result pleases Australian Skeptics

by Kim Woods

A $110,000 prize offered by Australian Skeptics Incorporated is safe after testing a world record number of water diviners at Mitta Mitta on Sunday. A total of 52 diviners, or dowsers, used an array of forked sticks, fencing wire, copper wire and bare hands to test their ability to divine water in surface containers on a green of the Mitta Mitta golf course.

Twenty two-litre bottles were filled with either tap water or sand, wrapped in brown paper, numbered and positioned in a large circle. Diviners were able to calibrate their equipment before the start and had only to identify the contents of each bottle without time restrictions. Sigrid Condon, a Mt Beauty mother with no divining experience, up-staged the line-up of professionals with the highest score of 14 out of 20 correct.

Bob Nixon, chief inspector of the Skeptics, said all scores fell into an expected pattern of random results — "The scores skewed towards failure: there were more bad scores below 10," Mr Nixon.

"We weren't surprised. It was exactly what we predicted would happen."

Midway through the test, a hostile group of diviners demanded Mr Nixon reposition the bottles, claiming interference from underground streams.

"We asked them to draw a map of the area and seven marked out streams, but there was absolutely no correlation between them," Mr Nixon said.

The test was almost thrown into disarray when a dog, belonging to a Skeptics member, left his watery mark on one of the packages, calling a temporary halt to competition.

Mr Nixon said the event represented a new world record for the most diviners tested at the same place in one day, and the result added to the body of evidence accumulated over the past 20 years that divining is nothing more than random guessing.

Berrigan dairy farmer and diviner Shane Spunner was skeptical of the Skeptics' ability to stage a fair test. "The test should have been made fairer by finding an area with no underground water," he said.

From The Weekly Times, Victoria, Southern NSW, 14 March 2001.

Polytech pays out $515 000 to students

Aoraki Polytechnic has paid former naturopathy students $515 000 for falsely advertising their course had degree status. The students were seeking $4 million in compensation.

The long-running dispute between the 36 students and the polytechnic was settled in November 1999 after three days of mediation in Christchurch.

At the time both parties agreed to keep secret the terms of the settlement contract. The settlement details were obtained under the Official Information Act.

Details were made public in March after a 16-month investigation by chief ombudsman Sir Brian Elwood.

From the Dominion, 28 March 2001.

Beer and Skittles Religion, Drugs and a Build-up of Toxins.

John Riddell

Even in a secular age, it's hard to surrender the religious habits of old

BACK when our ancestors lived in caves, life was frightening. Anything could kill you. Lions, earthquakes or disease. I don't suppose people felt they had much control of their own destiny. So they invented religion. They sought supernatural assistance. The Gods (or goddesses if you prefer) are powerful. Suck up to one of the Gods and He will make sure everything goes well. And if things don't go well, it's not because the Gods don't exist, it's because the sacrifice wasn't pleasing.

The great thing is this works even if the Gods don't exist. So long as you think they exist, you feel better. You have the illusion of control.

I think it was Karl Marx who said "Religion is the opiate of the masses." Religion, like a drug, keeps you happy. God will take care of everything. God's plan is unfolding as it should. Everything happens for a reason.

Not too long ago, everyone believed in God. Well, nearly everyone. The priests told us that disease was God's way of punishing us for being sinful. For breaking his laws. If you broke the seventh conmandment (not a typo) (Exodus 20:14), for example, you caught VD. Simple cause and effect.

And then along comes a medieval skeptic who says "What about babies? Why do babies get sick when they haven't committed any sin? And why did St. Francis get leprosy if he was such a saint?"

"Easy," says the priest. "Exodus 34:7 says that God will visit 'the iniquity of the fathers upon the children, and upon the children's children, unto the third and to the fourth generation.'" Which means children are punished for the sins of their ancestors. Now apart from being untestable and not very fair, this explanation means it was God's will that you got sick. So curing illness means going against God's wishes. So you shouldn't try.

Some people didn't like that explanation.

So they looked for another one.

Maybe it isn't God's will. People have come up with a lot of different explanations. Maybe disease is caused by toxins. We are being poisoned. Before anyone discovered bacteria and viruses it was commonly believed that disease was simply poisoning. You prick your finger on a rose bush, and a day or so later your finger swells up and oozes pus. If you don't do anything about it, you die.

We now believe bacteria and viruses cause infections. But at the time, it was a good explanation. And even if the explanation is wrong, the treatment can work. You clean the wound, slap on a poultice and draw out the toxins (which are really bacteria) and if you do it in time, you get better. And because this works, you wrongly conclude that disease is caused by toxins. So treatments concentrate on flushing these toxins out of your system. The word virus originally meant poison. The idea that diseases are caused by a build up of toxins has been replaced by germ theory in modern medicine. But it is still widely believed among the alternative health crowd. They think nasty modern agriculture is putting lots of chemicals on crops and farm animals. These chemicals are supposed to be poisoning us. Give us cancer. The fact that the average life span has doubled in the last 100 years does not seem to bother them.

There are many alternative treatments designed to purge toxins from your system. These do not work on cumulative toxins, or any other toxins for that matter. But you can buy herbal detoxification remedies (although I don't understand why eating large amounts of herbs that contain dozens of toxic chemicals could possibly remove toxins from your

body). You could try colonic irrigations or coffee enemas but why you might want to is a mystery.

But some people swear by them. Why? Because they appear to work.

You work hard at school, get a qualification and a job. You get married and have 1.7 kids. You worry about saving for your retirement and how the kids are doing at school. You drink countless cups of coffee during the day and after a stressful day at work you relax with a glass of beer or seven. And because you are so tired at night you don't exercise and because you skip breakfast in the morning, you overeat at night. Then your wife leaves you to find herself with Susan from Accounting. And takes the kids. You haven't been feeling too well for a while now. You always have aches and pains, and headaches. And you don't sleep through the night the way you used to. And you don't have much energy or motivation these days. So you go to the doctor and he tells you that you need to take it easy. Your problems are psychosomatic. Which you think means that he thinks it's all in your mind. But you know it isn't all in your mind. The pain is real.

And then Janice, who works in the marketing department, tells you about her naturopath and how great he is. So you go to a naturopath who uses applied kinesiology (See http://www.quackwatch.com for more details) to diagnose your problem as a build up of toxins. Probably caused by all those herbicides and pesticides they are using these days. But the good news is he can help you.

This is great. You knew it wasn't all in your mind. He sells you a herbal detoxification program and tells you to eat only organic food. You start to feel better almost before you leave his office. And it really does make you feel better. Now Janice has one of those water distillation machines and since she moved in you've been drinking your eight glasses of water a day. You feel great. Your energy levels are at max. You are motivated again.

But why?

Did the naturopath accurately diagnose and treat the problem?

Or did you have a moderate case of depression which was treated by a lifestyle change?

We eat too much. We smoke too much. We don't get enough exercise. We work too hard, or not enough. We worry too much. And then we get sick. But do we blame our lifestyle? Not likely, because that would make it our fault. It's easier to blame someone else. Multinational chemical companies. They're poisoning us. That must be it.

Sometimes what we really need is someone to say that everything is going to be all right. To give us that illusion of control. We have got rid of the Gods, but we still have those needs that made people believe in them in the first place. We still are afraid of dying. We still need to feel we have control of the uncontrollable. So we invent another religion. It's no more rational than the rest, but it is more suitable for our modern lives. We think we control earthquakes with improved building codes. But we still need protection from the fast changing world. Life is still frightening. We need to feel we have control over science and technology. Over all those toxins.

Of course the solution might lie in the Bible. "Give strong drink unto him that is ready to perish, and wine unto those that be of heavy heart. Let him drink and forget his poverty, and remember his misery no more" (Proverbs 31:6-7: see also 1 Tim 5:23 and Ps. 104:15).

No mention of beer I'm afraid.

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content, there is not strong evidence that organic and conventional foods differ in concentrations of various nutrients".

• In May last year the British Advertising Standards Authority upheld four complaints against the Tesco and Iceland supermarket chains for claiming in brochures that organic food is tastier, healthier and better for the environment and animals. They ruled the supermarkets had not been able to provide evidence and that the claims were "misleading" and "unsubstantiated".

• In a February 2000 interview with ABC News 20/20 Kathryn Di Matteo of the US Organic Trade Association, in answering the reporter's question, Is it (organic food) more nutritious?, replied, "It is as nutritious as any other product on the market." This has been widely taken as an acknowledgment by the US organics industry that organics are no more nutritious than other food.

Footnote: Seager Mason and Canterbury Digest editor Simon Nutt have since apologised for the article.

Howard Bezar and Denis Curtain are scientists with Crop & Food Research.

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