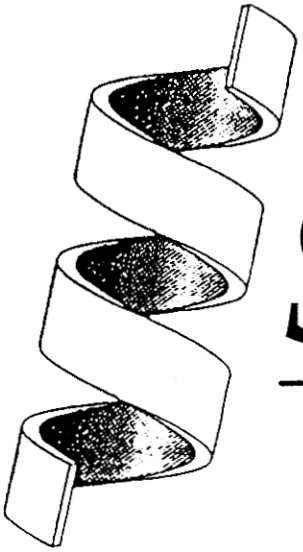
ISSN: 1172-062X



NEW ZEALAND SKEPTIC

SPRING 1996 — NUMBER 41

A New Age Myth: the Kaimanawa "Wall"

Neville A. Ritchie

The media love to manufacture a mystery, and the Kaimanawa Wall is a great example of this. Watch closely, as a perfectly natural rock formation becomes a megalithic structure...

In the 4 May 1996 issue of the *NZ Listener*, an article titled "Megalith Mystery: Are giant stones in the Kaimanawa Forest Park evidence of an ancient New Zealand culture?" (Chapple 1996:28-29) appeared. It centred on Barry Brailsford's contention that the "Kaimanawa wall" was "the best (physical) evidence so far" of the pre-Maori "Waitaha nation" which he alleges flourished in New Zealand over 2,000 years ago. Shortly thereafter I was telephoned by Jim Mora of TV1 and asked to give a "traditional archaeological perspective" on the matter as part of an item on the *Holmes Show* arising from Brailsford's contentions about the "wall".

That phone call was the beginning of an amazing media frenzy which lasted for about a fortnight. The Department's Taupo and Tongariro based field staff and I received over 100 phone calls about the "wall", in addition to being asked to participate in several national and regional radio interviews (including three from Australia) and to appear on TV1 and TV3 news. During this time (mid May 1996) the "wall" was a major topic on talk-back radio. The issue drew a range of views right across the spectrum.

Until the late 1980s, Brailsford, then a Canterbury-based archaeologist and historian, supported the generally accepted view that New Zealand was first colonised about 1,000 years ago via a series of Polynesian canoe landings. He published two popular books, *The Tattooed Land* (1980) and *Greenstone Trails* (1983), which helped him gain an MBE for services to Maori scholarship. These books did not challenge the conventional theories of New Zealand's first settlement based principally on historical and archaeological evidence, and to a lesser extent on Maori traditions. However, in the interim, Brailsford, at the invitation of some South Island Maori elders, has gone on to publish two further books, *Song of the Waitaha* (1994) ⇒ p3

CONTENTS

Skeptical Health

At the Skeptics' conference we were treated to one official's view of the status of scientific medicine relative to alternative treatment systems and beliefs. This presentation reinforced many of our fears that modern medicine is truly the victim of its own success. Now that so many of us live to old age, and find that pharmaceuticals and surgery can do little to prevent inevitable decline, we are encouraged to turn to away from "Western orthodoxy" towards "alternative" systems of other, more "spiritual and "holistic cultures".

Although these treatment systems have been remarkably unsuccessful in delivering health and longevity to their own people, it seems that when added on to "Western orthodoxy" they can deliver the health, beauty, and sexual vitality which we obviously deserve — and which Mrs Shipley so stubbornly refuses to give us. Even if you want your cultural shamans, now it seems that the RHAs are ready to deliver. Next time I am admitted, I plan to demand that my bed is showered with shamrocks and that I consult my personal leprechaun.

There is one exception to this widespread belief in the ability of ancient remedies to cure our nagging pains with herbs, needles and beads. I am sure that I shall never see Any naturopathic dentistry. (If P.J. O'Rorke didn't say that, he should have.)

Many in the audience must have wondered where the pressure for medicine to abandon its self-confidence is coming from. When someone is run over by a bus you will not hear them cry "Take me to my naturopath!"

Of course not, they want the full orthodox treatment from the full western works.

My own experience in the world of business is that some pharmacists are pushing these ancient barrows for all they are worth. They fear deregulation and so are working hard to find new markets. It is no accident that their shelves are beginning to burst with the ministrations of homeopathy, aromatherapy, and any other New Age magic they can lay their healing hands on.

Many of them believe that the key to reforming the health system is to provide a network of "wellness centres" in which "well informed" people, rather than your "hidebound doctors", will direct people to the range of healers in the network, who will then encourage customers to explore their own "wellness". If they should be genuinely sick, then they can experiment with a wide and diverse range of health systems from around the ancient world, and which happen to have been distilled into convenient little bottles on the pharmacists' shelves.

One of the obvious advantages of "wellness centres" is that they dramatically increase the size of the market. Instead of being restricted to the sick, these "wellness centres" can target the millions of worried-well suffering from advanced Woody Allen Syndrome and similar incurable complaints.

It's good thinking, and it's probable that many others have identified the same opportunity. No doubt they are pressuring the RHAs to bring all these alternative treatments into the public health system so as to break the medical profession's monopoly over treatment and to provide greater consumer choice. A popular argument is that the public health system would then provide the funds needed to properly test these alternative treatments — something which the conspiring monopolistic drug companies will presently not allow.

My problem is that if someone is going to be treated using my taxpayers' money then I demand some accountability — which, at the very least, means that there should be some evidence that the treatment works, or that it is being tested within a regime in which evidence will finally prevail over belief.

On the other hand if an insurance company is prepared to fund acupuncture and the like, that is a private matter between the insured and the insurer, and nothing to do with me. So it seems that if we are going to have such a free-for-all in medical care then, rather than drawing all these alternative practises into the

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

Please indicate publication and date of any clippings.

Next issue deadline: **1 December**

Contributions should be directed to:
Owen McShane, *NZ Skeptic* Editor
50 Te Ahu Ahu Road
RD1 Karekare, Auckland 7
Email:omcshane@deepthnk.kiwi.gen.nz

public system, the whole system would have to be privatised.

But this raises another set of dilemmas. Health care is tricky in that it often ends in death — as the Prime Minister so foolishly pointed out on television. So when the aromatherapist fails to cure your nearest-and-dearest's cancer, who sues whom? And how do we regulate the market to control the charlatans? Are we destined to end up with a private health system matched in size and expenditure by an army of civil servants, lawyers and TV producers all determined to give the survivors a "fair go"?

While the enthusiasts for alternative medicine hold up the drug companies as their enemies, these research based organisations are finding that an ever-expanding web of regulations and open ended-liabilities are making it increasingly difficult to bring new drugs to the market. When they see how easy it is to bottle up diluted-water or mandrake oil, and charge the same price as FHA registered pharmaceuticals, their shareholders will demand that they join this immensely profitable game.

Therefore I suspect that where the pharmacists lead, the pharmaceutical companies will not be far behind. And if the presentation to the Skeptics conference is anything to go by, new-age health administrators seem only too ready to open the door — or even to lead the charge.

Depressing isn't it.

Owen McShane

and *Song of the Stone* (1995), and further books of a similar ilk are in the offing. These latter books, according to Brailsford, are based on "ancient knowledge given direction by his words". They tell of "a Waitaha nation" — by Brailsford's reckoning some 200 tribes reputed to have settled in New Zealand 2,000 years ago, only to be obliterated some 700-800 years ago by the arrival of a warrior culture. Incidentally, Brailsford, in part, equates the Waitaha with the "moa hunters", a term widely used in the past to describe the earliest Polynesian settlers in New Zealand, but puts their arrival back at least another 1,000 years.

Criticism of Brailsford has revolved around his lack of evidence, beyond quotations from a few elders who claim Waitaha descent and recite a genealogy going back 70 generations, rather than the record of 40 generations or so claimed in most Maori accounts. He has continued to assert that certain hard evidence does exist, unrecognised, such as stone altars reworked from natural forms, "some of them over 100 feet tall". Others see them as natural formations (Chapple ibid.).

But the Kaimanawa wall, according to Brailsford, is the real clincher, "the best evidence so far", of a pre-Maori civilisation in New Zealand, partly because "in terms of Maori culture, there is nothing like it [in New Zealand]" (Brailsford quoted in Chapple 1996:29). From his observations, he contended the wall was too old to be European, and the style was not Maori.

Not surprisingly, Brailsford's assertions, publicised for the first time in highly accessible national media (the *Listener* and the *Holmes Show*), sparked considerable public interest, with attention focused on the age of the "wall", whether it was built or natural, and the possibility of a major re-write of the history of human settlement in New Zealand.

The Site

The "wall" is located at the toe of a relatively steep spur on the south side of Clements Mill Road within the Kaimanawa Forest Park (NZMS 260 map sheet U19 Kaimanawa, GR 864457). It is almost at road level and about seven metres back from the road, being visible without leaving one's car.

The ignimbrite outcrop of which the "wall" forms part is covered with soil composed of a clay-coloured ash and fine pumice overlain by 30cm or more of humus. The composition and depth of the overburden was determined from the soil composition evident in a single small test pit excavated on the upper slopes of the spur. Without recourse to extensive testing, the average depth of the soil-ash-pumice appears to be about one metre. Nearby road cuttings have exposures, up to four metres thick, of layered pumice deposits from the AD 185 Taupo eruption. Therefore some form of preferential non deposition or erosion process, probably attributable to local topography and the steepness of the spur, has resulted in the relatively thin soil-pumice veneer over the outcrop. The test pit in front of the wall revealed a similar clayey pumice soil. A large red beech (*Nothofagus fusca*), estimated to be at least 70 years old, is growing on the outcrop immediately above the "wall". Its roots have caused some displacement of the

blocks which make up the "wall".

Research, Inspection and Assessment

Following the request from TV1, I checked out available geological literature on the area, particularly with regard to ignimbrite and the nature of jointing in the rock, and researched past human activity in the area, in both pre-European and more recent times. As a first step in the process, the possibility that the "wall" was in any way connected with the nearby site of Clements's sawmill had to be eliminated. The mill was established in 1937 by Jack Clements, a timberyard owner in Hamilton, and closed in 1963.

I first examined the "wall" on 7 May 1996, accompanied by Owen Wilkes (now with DoC Historic Resources in Hamilton), several Tongariro Conservancy field staff, and the TV1 news crew. Anticipating meeting only with Barry Brailsford, David Childress and the NZ Archaeological Association's Taupo filekeeper, Perry Fletcher, at the site, we were surprised to find about 30 people gathered there. It soon became apparent that many of those present, following the media publicity, had come to see the "wall" with their own eyes. At times it was difficult to see the rock for the people milling in front of it.

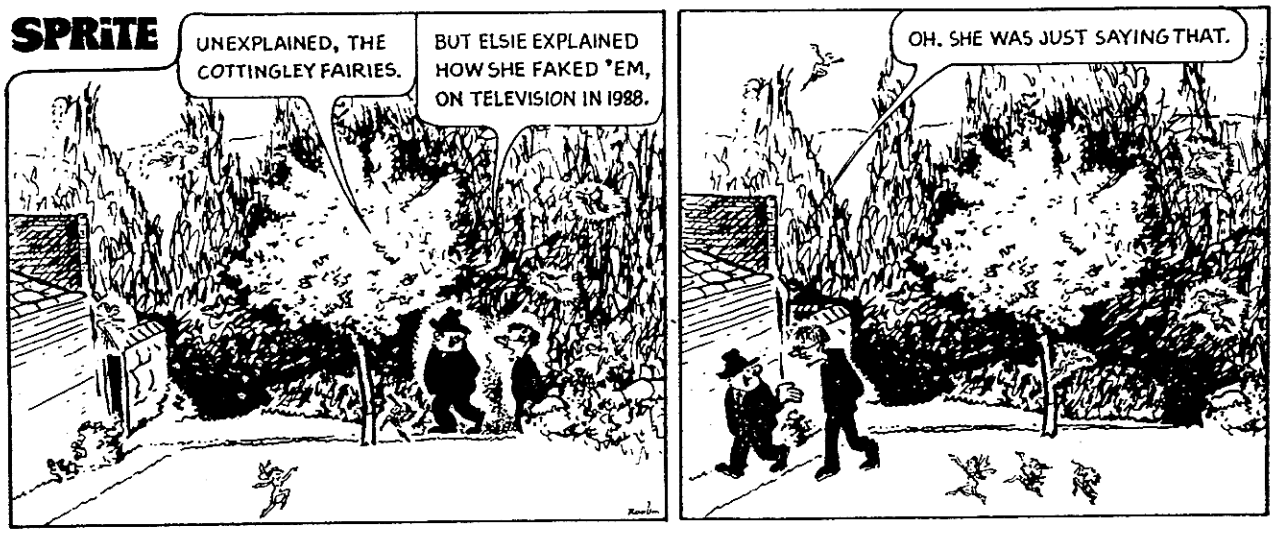
I conducted a bit of a straw poll among those present — about 50% believed the feature was a wall or were unsure because "they couldn't see how nature could create such perfect blocks" (symmetrical fractures).

The size of the "wall" varies depending on how one measures it. Brailsford (quoted in the *Listener* article) states that the four visible stones in the front were a uniform 1.9 metres wide by 1.6m tall, and one metre wide [deep]. "In one place you can insert an arm into a root-ridden cavity and feel the back face and the front face of the next tier". Brailsford surmised, based on surface probing, that the wall was part of a stepped pyramid-like structure made of cuboid blocks stepping back up the hillside. He contends the "blocks" are evident (by probing) to a height of 6-7m above the base of the wall (i.e., the structure is at least 4-5 blocks high).

When I first saw the formation, I had no doubt that the "wall" was a small portion of a natural ignimbrite outcrop based on its general configuration and size, although I would be the first to agree that the remarkable symmetry of the blocks exposed at ground level at the front of the outcrop looked very wall-like at first glance, especially when the jointing pattern was obscured, as it was initially, by ferns, mosses and other vegetation.

However, it didn't stand scrutiny. Close inspection immediately revealed several natural features such as perfectly matching micro-irregularities along the joints. In most instances, it was obvious (without recourse to measuring) that most of the fracture planes between the blocks were neither straight nor truly horizontal or perpendicular. In other words, the "blocks" which make up the supposed wall were not regular in size, nor perfectly worked building blocks as Brailsford implied (measurements taken by Owen Wilkes confirm the discrepancies).

On the contrary, the formation overall not only looked natural, there was nothing to



Donald Rooum, *Skeptic (UK)*

suggest it had been modified, that the stone was stacked (with one exception the joints are not staggered) or that it had been used for any human purpose such as a platform, altar, retaining wall or loading ramp.

A Geologist's Opinion

Because the issue was unlikely to settle down or be resolved to most people's satisfaction without further research, Dr Peter Wood, a geologist with a specialist knowledge of local ignimbrites employed by the Institute of Geological and Nuclear Sciences at Wairakei, was commissioned by the Department of Conservation's Tongariro Conservancy to give an independent professional opinion on the "wall". By the time Dr Wood visited the site on Monday 13 May, a much larger area of the outcrop had been exposed through an illicit excavation in front of the formation by persons unknown during the weekend. I quote from his report (Wood 1996):

In my opinion the so-called "Kaimanawa Wall" in the Kaimanawa Forest Park is a natural rock formation. It is an outcrop of jointed Rangitaiki ignimbrite, a 330,000 year old volcanic rock that is common in the Taupo Volcanic Zone.

The regular block shapes are produced by natural fractures in the rock. These fractures (joints) were initially produced when the hot ignimbrite cooled and contracted after it had flowed into place during the eruption. Near vertical and horizontal joints are common in welded ignimbrites of this type. The forces of erosion, gravity, earthquakes and tree growth (roots) probably have all contributed to the movement and displacement of the blocks over time.

The apparent regularity and "artificial" aspect of the jointing is spurious. Most of the joints are not cuboidal. The eye is deceived mainly by one prominent horizontal joint which can be traced almost continuously along the outcrop into an area (recently excavated) where it is but one of an interlocking series of irregular joints. Even where the joints are most "block-like", detailed inspection of the joint surfaces showed they were natural, with small matching irregularities in opposing surfaces which would not be produced by artificial block laying.

Previous Reports and Events Involving the "Wall"

Despite the publicity Brailsford's recent claims about the "wall" have engendered, it has been the subject of at least one earlier non-conventional investigation. In 1990 Bruce Cathie, a former Air New Zealand pilot who uses mathematical calculations to explain UFO phenomena and the relationship of ancient sites (e.g. Stonehenge and the Great Pyramid) and world-wide cosmic energy grids, contacted Perry Fletcher after being shown photographs of the wall (Fletcher 1990). Cathie is the author of several books on harmonics and related topics. According to Fletcher (ibid.), Cathie checked the location of the "wall" (grid co-ordinates N103 650056) against his grid system and concluded "that the place had significance, and was of a much older time than that of any known civilisations". Further discussion of Cathie's contentions are beyond the scope of this paper.

Conclusions

The conclusions of the Department of Conservation investigation into the "Kaimanawa Wall" are straightforward and unambiguous. The "wall", despite its remarkable symmetry at first glance, is a small part of a large ignimbrite outcrop created some 330,000 years ago. It is not a megalith. Neither the "wall" nor its parent outcrop appear to have been modified by human activity, but the possibility that some loose blocks have been removed from the front of the "wall section" (most likely in European times) cannot be totally ruled out. The "wall" is not a unique natural feature. Similar block-like jointing patterns are known to exist in other ignimbrite outcrops in the Kaimanawa-Taupo region.

Despite contentions by some visitors that the "wall" is aligned directly north-south, and therefore its orientation is or must be significant, accurate measurements revealed that it is orientated in a general east-west direction (trending 93 to 98 degrees true), making the face about five degrees off true north. While some might invoke divine providence to account for its position and general alignment, the more prosaic scientific explanation is that the proximity of the "wall-face" to true north is a coincidence, the result of natural processes (outlined earlier) and the topography which existed when the ignimbrite outcrop was formed.

The "stepped pyramid' form of the structure which Brailsford deduced from probing merely reflects the natural steep ridge-like profile of the

outcrop (as far as could be ascertained without extensive excavation). It is broad at the base and narrows towards the top of the spur.

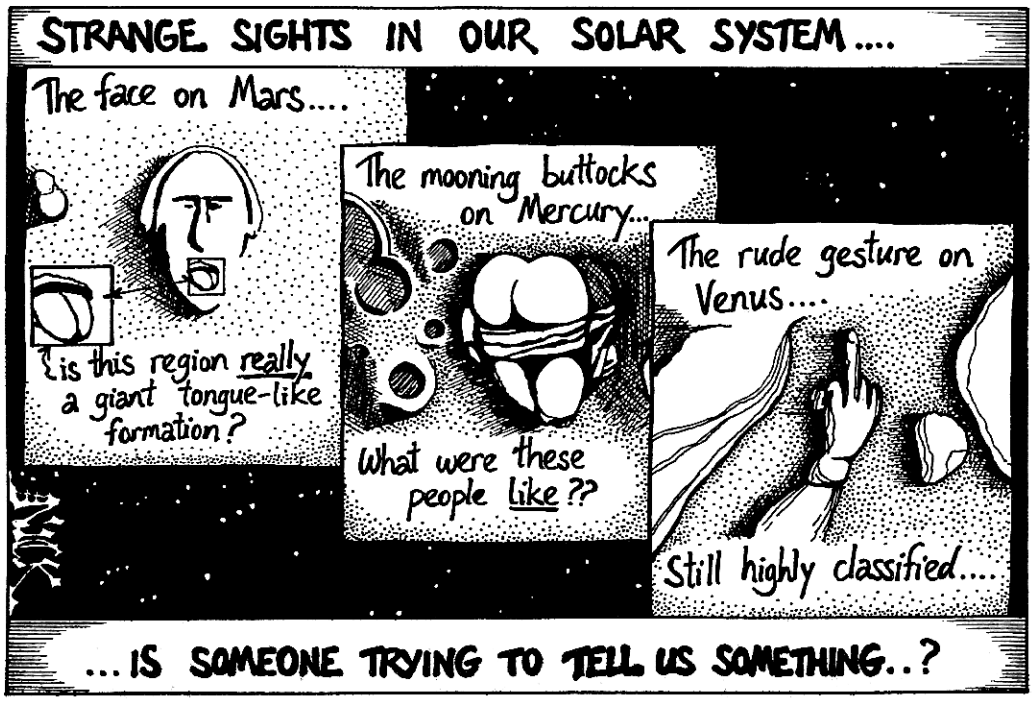
Brailsford's original contention that the formation is part of a pyramidal structure is wishful thinking based on surmise and spurious interpretation of the physical evidence. His contentions that it was built by the Waitaha (pre-Maori settlers) by some sophisticated and lost means of conveyance and construction are just right off the wall. There is no evidence at this location, nor any substantive archaeological evidence elsewhere in New Zealand, that the country was settled by anyone other than the Polynesian antecedents of the Maori about 1000 years ago.

In media statements, representatives of Tuwharetoa, the tangata whenua, stated they had "strong oral traditions" associated with the place. Such places are called kohatu. They refused to reveal more.

The public debate engendered by the "wall" resulted in the widest range of views being expressed publicly. Many (including a few Maori) were adamant or hopeful that the "wall" was evidence that an earlier people (i.e. non-Maori) settled these islands first. At the other end of the spectrum, the rock formation is regarded by some (of New Age persuasion) as a "power node" or special place in a greater universe.

As in other instances where maverick researchers have suddenly burst into print with extreme or poorly researched claims, the Kaimanawa wall incident highlighted a number of difficulties which arise for scientists when they are expected to draw quick and under-researched conclusions on the spot for the media. Likewise, the presence of the public before a scientific assessment has been satisfactorily concluded (or started in this case) is also an added pressure most scientists can do without. Laypeople can get the wrong idea about removing overlying vegetation, sampling, test pitting or similar activities which are often perceived as destructive. The tangata whenua's expressed disapproval of any further excavation would have been a major constraint in this case if it had not been possible to confirm or refute Brailsford's contentions without more extensive subsurface testing. However, one remains optimistic that had more subsurface investigations been deemed necessary to resolve the matter, the tangata whenua following further explanation and discussion about the situation, would have approved such actions as were required to set the record straight.

The Kaimanawa Wall incident is a classic example of a modern media "beat up". The story had the right ingredients: a maverick researcher challenging conventional theories (in this case, the time and source of the first human settlement of New Zealand) with a claim that he had at last found something (the "wall") which was proof positive of the settlement of New Zealand (and by implication the Pacific) by a pre-Maori people. With this inbuilt element of controversy, it didn't matter to the media whether it was a wall or not, it was just great "public interest" material for selling newspapers or attracting viewers. Within the space of a couple of days it was a major news story. The Department of Conservation was inundated with calls. However, once we obtained independent corroboration, media interest waned rapidly. In general most media didn't even bother to report the outcome.



Neville Ritchie is Regional Archaeologist with the Department of Conservation in Hamilton.

Can Science Be Taught In Schools?

Judy McDonald

It often seems as if home schooling is the domain of hard-line Christians. In fact, they're not the only people who feel that their children are better taught at home than in school.

Most people are skeptical *about* homeschooling. We claim instead to be skeptics who *are* homeschooling.

We suffer from a goodly dose of skepticism about the virtues of education as she is practised. In recent years schools have been turned into businesses, but businesses staffed by people whose talents and enthusiasms do not lie in that direction. The most common complaint from my teacher friends is they don't have time to teach — they're too busy filling in forms and doing riot control. While I could go at length about the indignities done to the education system, I have to remember this is a skeptics conference focusing on education, and primarily science education. In fact, one of the come-ons in the conference advertising was "can science be taught in the home, and to what level?"

I'd like to put the reverse question: "Can science be taught in schools?" We both feel the essence of a scientific training, and the essence of a skeptic, is the development of an enquiring mind — an interest in "how do we know that?" and the ability to evaluate evidence and ask questions so the answers have meaning.

Teachers in primary schools are often anything but scientifically minded. The selection procedures, employment conditions and general low status of teaching select against people with analytical or scientific minds.

By contrast, parents who are scientifically inclined may do better by keeping their kids at home. Having time to potter and to indulge your own enthusiasms is a very strong component in the background of many eminent scientists — and where better to achieve that than at home? If an enthusiasm strikes, it can be pursued uninterrupted for days if necessary, without being wrenched apart because now we have to go to PE or assembly, or because science is over until next Thursday morning.

I'm not suggesting such a nurturing environment exists in all, or even most, homeschooling situations. Homeschooling, perhaps more than most educational environments, is beset with fringe groups, notably fundamentalist Christians. However, for those who, like us, are agnostics or worse, with an interest in the way the world works, I suggest home schooling may give the best chance to foster a truly enquiring scientific mind.

As for the equipment, the chemicals, the pipettes, we agree with Prof Witten who said schools don't need computers to teach computer literacy. What people need is thinking practice, plus a pencil and paper. The same applies to scientific thinking. A lot of good thinking work can be done using basic household gear.

A fundamental concern we have about school science is that it is pretty much an exercise in getting the right (already known) answer. Which is about as far as you can get from the actual practice of science, which is muddled, messy, seat-of-the-pants stuff. School science is like analytical science — can you accurately determine how much lead is in this sample, what pH is this liquid... I am not denigrating the importance of analytical science, but it may be less important in the average person's comprehension of the world, and their ability to interpret what they see and hear, than the other kind of science: the probing sort of scientific thinking, which takes risks and works laterally, linking to other ideas.

The latter is the kind of scientific thinking we believe is best fostered at home. You need the security of being able to spend plenty of time thinking, plenty of time pottering with ideas, the freedom to get it wrong. The school system, with all respect to the great work done by the science education research team at Waikato University, cannot provide this, no matter how hard it tries, if for no other reason than the examination system and "the syllabus" constantly hangs over everyone's heads.

We believe that interest and motivation are of great importance in science, as indeed they are in everything else. We have been interested in comments

from a variety of sources to the effect that homeschooled kids are generally regarded as highly attentive and emotionally mature. Our seven year old and two of his homeschooled friends (aged six and eight) recently attended beginners class in pottery. This class was intended for adults, doing a three hour session every Friday. The tutor and the adults students were astonished at their endurance and enthusiasm, and the quality of their work. Maybe it's because the kids are accustomed to interacting with adults, and to treating each other as individuals. Peer pressure has a lot to answer for. Some of us feel we would rather avoid it, and take our own chances on producing a thinking, creative, skeptical adults.

In conclusion, we have been led to believe that a child's ability to think rationally and skeptically about the world is largely dependent on their family life, regardless of whether they got to school or not. If they're too tired, or you're too tired, to discuss the workings of the world after school, maybe you should consider taking them out of school

Judy McDonald is a Hamilton skeptic with an interest in education.

Flying into the Future

A skeptical look at the Natural Law Party provided to journalists in preparation for the election.

Dear Journalist,

The Natural Law Party, the political party that makes McGillicuddy look *really* serious, is again running candidates in the general election. The Natural Law Party has received $35,000 from the electoral commission to run its campaign.

The Natural Law Party is the political front organisation for a religion: Transcendental Meditation, founded and still orchestrated by the Maharishi Mahesh Yogi. The Beatles made the Maharishi famous in the 1960s and he has followers all over the world, including thousands of Americans. One of the ways they have devised to promote their beliefs is to form the Natural Law Party.

That TM is a religion is something the Natural Law people will probably deny, but it has been ruled so by a judge in an important American court decision. That decision came as a result of the attempt to introduce TM into a public school curriculum; as the US Constitution forbids the teaching of religion in tax-supported public schools, the courts had to decide whether TM was a religion. After very careful consideration, the decision, upheld on appeal, is that TM is a religion.

The Christian parties in New Zealand are promoters of religious beliefs too, and there may be other such parties. The New Zealand Skeptics have no objections to religion or to religious-based political parties. But it is especially important to understand this about the Natural Law Party because the party would have us think *its claims are based in legitimate science.* These claims need to be understood.

- **Yogic crime busting**
  The party has claimed that large number of meditators sending out their magical vibes en masse can lower the crime rate. Some Natural Law people insist that they lowered crime in Washington DC by a mass meditation of followers in Washington. In fact, the murder rate rose significantly during their most recent Washington exercise, and the general crime rate was unchanged. The Maharishi himself has repeatedly claimed TM would reduce crime but has also denounced Washington DC as a "pool of mud" and admitted defeat with his project (*Washington Post*, December 16, 1991). If Natural Party people make these claims about crime, demand proof not from Natural Law Party publications, but from recognised local law enforcement authorities. So far

Seeking No-Hokum Locum

The *NZ Skeptic* bids farewell to our resident skeptical medicine man, Dr John Welch, Base Medical Officer at RNZAF Woodbourne, whose coverage of nonsense from the world of doctors and "doctors" has been a feature of the magazine since the dawn of time. Due to an increased workload, John is regrettably unable to find the time to continue his column.

We would be most interested to hear from any other skeptic with appropriate expertise who would like to take on the task of continuing the column.

as we can see, the only effect meditation has on crime is that the crime rate among TM meditators drops to zero while they meditate. You can't rob a bank in the lotus position.

- **Flying**
  Recently in the US, Robert Kropinski was awarded $137,890 by a jury because the Transcendental Meditation organisation had not taught him to levitate ("yogic flying") as it had promised. The court found the TM promoters and the Maharishi International University guilty of fraud, according to American press reports. The ultimate claim of Transcendental Meditation is that if you study long enough, and pay enough money to the TM folks, *you'll be able to fly*. Whether by "yogic flying" they mean cross-legged hopping or actual levitation is something we've never been clear on. In the US, they have shown levitation videos and photos (taken over trampolines which are cropped out in the prints), but nobody has ever seen them in person do anything but hop in the lotus position. (Quite funny, incidentally, if you get a chance to witness it.)
- **Health**
  "Studies show" — to use the phrase beloved by medical medical salesmen the world over — studies show that people who practice Transcendental Meditation are admitted to hospital less often than the general population, and enjoy a generally higher level of health than the general population. And it's true! Studies would also show that journalists and university lecturers are admitted to hospital less often than the general population. The reason for this is not because being a journalist makes you healthy but because middle-class people in gainful employment are always healthier than the "general population", which includes the chronically ill, the medically disabled, the very young, and the very old. The kind of thirty-something, self-obsessed people who take up TM (*Seinfeld* characters perfectly fit the mould) are always going to be healthier than the total average for any national population. So what?
- **Pseudoscience**
  Many of the "scientific studies" supporting the Natural Law Party's claims originate from the science departments of the Maharishi International University in Fairfield, Iowa. This "scientific" research has exactly the same degree of credibility as the anti-Darwinist research carried out by the fundamentalist-backed Creation Research Institute in San Diego. According to John Knapp, an ex-TM instructor who makes information available on the Internet, "In sworn court documents Anthony DeNaro, MIU professor of economics and business law, alleged TM-research fraud at the school in 1986. One year later, Dennis Roark, MIU dean of faculty and chair of the department of physics, claimed he had seen routine suppression of negative data collection in movement research studies."
- **The Germans**
  The Institute for Youth and Society in Germany has come up with some truly disturbing findings about Transcendental Meditation. They say that long-term meditators experienced psychological disorders (76%) and that 26% have nervous breakdowns. According to Knapp's summary, "Researchers found a startling drop in honesty among long-term meditators," and "70% recorded a worsening ability to concentrate." We have no idea whether this is all true (I wonder if these figures are about the results of meditation or the kind of people who are attracted to TM); in any event, it's not the sort of thing you'll get out of "research" conducted at the Maharishi International University. It is a very unsettling report.

There is now a wealth of information available on the Internet at the web site run by John Knapp, who was for twenty years a TM practitioner. He has a Web site at http://www.trancenet.com.

Internationally, the Maharishi and his TM movement, along with the Natural Law Party, is said to be a multi-billion dollar organisation. It is very important that journalists know the background of this group: *always demand independent proof* of any claims made on behalf of TM or the Natural Law Party policies.

It is the right of every political party in New Zealand to have its claims tested in open debate. The Natural Law Party is no exception. The attached material is provided with the hope that it will generate more informed discussion of the claims of this unusual political party.

Copies of the 20-page information package, with clippings and articles, can be had for the paltry sum of $5 from:

Denis Dutton
Fine Arts Department
University of Canterbury
Private Bag 4800
Christchurch.

Sex abuse trainin

Counsellors taught much that has no ba

GREG NEWBOLD
Sociologist

and

GORDON WAUGH
Retired military officer

Over the past decade or so, New Zealanders have become increasingly aware of an area of crime which for many years has been obscure: that of child sexual abuse. And as we have realised the size of the matter, so have we become concerned about the devastating effect that such abuse can have on the development and life chances of children.

As our knowledge of this topic has developed, we have also sought ways of combating this endemic problem. New Zealand is woefully short of experts able correctly to diagnose and treat genuine cases of child sexual abuse, and we are equally short of qualified people to train workers in the field.

Since 1992, the Mental Health Training Service at Green Lane Hospital in Auckland has offered a course entitled "certificate in sexual abuse counselling — approaches to practice." An average of 50 people a year complete the training. It is the only Government-funded course of its type and it has accreditation from the Qualifications Authority.

It lasts 12 days, at the rate of one day a week. The training service claims that the programme is balanced and that it is "an introductory one which basically makes people aware of the different theories and methodologies in this field." It is also claimed that "academic freedom" to explore any valid subject is an important aspect.

With Government funding and Qualifications Authority endorsement, one might expect the course to conform to accepted standards of science and scholarship.

A perusal of the curriculum, supplied reading material, recommended reference texts and student lecture notes, however, raises doubt that these standards are being met. The concerns of a number of people who have seen this material and written about it to the Minister of Health are several.

First, students in the course are taught that "13 per cent of all American sexual abuse survivors are survivors of ritual abuse by satanic cults."

They are also instructed on "key words" such as magic surgery, marriage rituals, mind control, and forced perpetration, and on the ritualistic impregnation of children, and the birth, murder and cannibalism of babies. The alleged perpetrators of such heinous acts are, they are told, "invariably very respected members of the community, usually part of institutions such as businesses, Churches and clubs."

These claims are unsupported by any research or facts, and they will encourage graduates in practice to arrive at outrageous conclusions when faced with everyday human problems.

Secondly, the course relies on such widely discredited books as Bass and Davis' *Courage to Heal* and *Secret Survivors*, among others. These titles promote the idea that it is common for sexual abuse victims to repress memories of childhood sexual abuse which can then be recovered years or decades later by appropriate therapy.

Repressed memory is, in fact, one of the core themes of the course. One reading, titled, *Treatment of Women Sexually Abused in Childhood: Guidelines for the Beginning Therapist*, claims that, "between 19 per cent and 45 per cent of adult women have [a history of childhood sexual abuse]" and that "most women with severe abuse histories have repressed all or part of their experience."

Examples are given of a woman who had intense headaches, a woman who suffered from nausea, a woman who had rages against her husband. All "discovered" under therapy that their problems were caused by repressed memories of child abuse.

Another reading, *Facing the Truth About False Memory*, tells of a man whose sexual relationships kept failing and who "discovered," after more than six months of therapy, that he had been sexually abused by his older cousin.

One young woman took almost a year of therapy to recall that her airline pilot father and his "flying buddies" had gang-raped her at the age of six. Her mother never noticed.

This material is presented in spite of the fact that scientific evidence for a mechanism for repressed memory is totally lacking. A growing catalogue of former therapeutic clients now realise that their "memories" of abuse produced during therapy were false.

A number of American therapists have been successfully sued for implanting memories in clients about things that never happened, and courts in the United States, Canada, Australia and New Zealand now regularly reject testimony based on so-called "repressed memories."

Aware of its unreliability, in 1994 the American Medical Association, and in 1996 the Canadian Psychiatric Association, both strongly and clearly warned against the use of "recovered memory therapy."

Thirdly, although there is no scientific evidence to suggest a causal link between sexual abuse and any specific psychiatric or psychological condition,

Herald 3 Sept '96

g full of nonsense

sis in science

students are taught to recognise at least 40 possible "indicators" or "symptoms" of sexual abuse. A small sample of these includes low self-esteem, bed-wetting, promiscuity, frigidity, impotence, unwanted pregnancy, prostitution, addiction, sleeping too much or too little, unspecified relationship difficulties and nightmares.

The list of "indicators" is so broad that it could be applied to almost anyone on the planet. To assume these problems commonly arise from childhood sexual abuse is nonsense.

Finally, emphasis is given in the course to the necessity of uncritically accepting the validity of a child or adult's allegations (whether elicited before or after therapy). *Courage to Heal*, for example, informs the reader that "Many women don't have memories [of abuse] — this doesn't mean they weren't abused ... If you are unable to remember any specific instances ... but still have a feeling something abusive happened to you, it probably did ... You must believe your client was abused, even if she doubts it herself."

Students doing the "certificate" are taught that children and adults are rarely mistaken when they talk about sexual abuse. But we know that they are often mistaken.

KEYPOINTS

- The country's only Government-funded centre for training sexual abuse counsellors uses material that may be unscientific.
- Study texts talk of satanic practices and promote belief in "repressed memory" which can be "recovered" under therapy.
- North American authorities warn against recovered memory therapy.
- The course regards some very common behaviour as "indicators" of sexual abuse. It encourages allegations to be accepted uncritically.
- The course has been approved by the New Zealand Qualifications Authority.
- The public has a right to expect that anyone working in the area of sexual abuse will have received training that is scientifically sound.

There is now undeniable clinical proof, from New Zealand and the United States, that young children who are subjected to repeated questioning or to certain verbal and non-verbal cues can be induced to say almost anything. They can also easily be persuaded to believe that things happened which never happened at all. So can adults.

Many of the allegations made by child and adult "survivors" of satanic abuse, both here and overseas, have been no less preposterous than those of the medieval witch crazes five centuries ago.

In her reply to several members of the public (including the authors) who expressed concerns about the Green Lane course, an Associate Minister of Health, Katherine O'Regan, suggests that its critics have misunderstood it. She declares that the course is "professionally designed, delivered, accredited and monitored," and concludes that there is no need for further investigation.

The Associate Minister's general and non-specific response to such an important issue is unsatisfactory. The public has a right to expect that any person working in the complex, sensitive and emotionally charged area of sexual abuse will have been trained on the basis of scientific, ethical and testable knowledge.

It also has the right to expect that any publicly funded training programme, particularly if it carries the Qualifications Authority credential, will withstand the tests of ordinary common sense and professional scrutiny.

The Mental Health Training Service programme presents a strange paradox. At its best it provides students with useful information about the detection, treatment and prevention of child abuse in families. At its worst it exposes them to a panorama of supposition, distortion, fantasy and fallacy.

It is this aspect of the programme which is dangerous. The damage which the application of pseudoscience can do to clients and to those whom the clients may implicate, is immeasurable.

Already, innocent New Zealand families have been torn apart by unfounded allegations of sexual abuse made on the basis of "recovered memories" by disturbed people after counselling by zealous, misguided and poorly trained therapists. Such counsellors have been unable to distinguish good sense from nonsense.

Aspects of the certificate in sexual abuse counselling course thus propagate a pernicious dogma. By funding the course in its present form, the Ministry of Health endows belief systems which we know to be false with an undeserved mantle of credibility.

For this there is no excuse. No responsible Government can allow cant and fantasy to invade an area so greatly in need of reason and sobriety. The public purse, the public good, and the credibility of the psychotherapeutic profession itself, all demand that our health system become responsive to the wisdom of contemporary science.

As it does that, it must eradicate the madness from the sexual abuse industry.

- The Mental Health Training Service declined an invitation to answer this article.

- **Gordon Waugh is a foundation member of Casualties of Sexual Allegations; Greg Newbold is a senior lecturer in sociology at the University of Canterbury.**

2/3/96 DOM

Cultural safety 'bars virus probe'

By ANNA KOMINIK
Health Reporter

CULTURAL safety issues were preventing thousands of hepatitis B carriers from getting help, the Maori affairs select committee was told yesterday.

Hepatitis Foundation director Sandor Milne told the committee there were about 40,000 hepatitis B carriers in New Zealand, almost half of whom were Maori and Pacific Island males.

However, most carriers were unaware of their status because the Health Ministry was slow setting up a national screening and follow-up programme.

Mr Milne said Health Minister Jenny Shipley had unnecessarily reconvened a working party into hepatitis B, for the third time, to look into setting up a pilot screening programme for 10,000 people.

"It's off the wall. We [the foundation] already have the figures on how much it costs, but they [the Health Ministry] are setting up another working party."

He said concerns about whether screening apparently healthy people was culturally unsafe were fundamentally immoral, particularly if they were being used as an excuse for withholding screening and monitoring of people at risk.

The foundation had 1600 carriers on its records and was struggling to help a further 1000 carriers "sitting on the shelf" because of lack of resources.

He said of the 1600 carriers the foundation was dealing with, most were more concerned with staying healthy than cultural safety.

Auckland Medical School clinical biochemistry professor Garth Cooper said in a written submission: "I am persuaded by scientific evidence I have reviewed that hepatitis B poses a major on-going health problem for Maori and other high-risk populations in New Zealand."

He said though vaccination programmes for children and mothers had helped, "there remains . . . a large residuum of Maori, in the 15 years and older age group, who are currently infected with active hepatitis B virus".

United NZ's MP for Wellington-Karori, Pauline Gardiner, told *The Dominion* the ministry was employing "delaying tactics" because screening would find carriers "and when they find carriers they are going to have to do something about them".

But Health Ministry general manager of public health Gillian Durham said the working party was carrying on from work it had done previously.

She said screening programmes for pregnant women, blood donors and people close to known carriers had been set up, as well as immunisation and community education programmes, in response to that work.

Concerns about cultural safety were just some of the issues the working party was grappling with to come up with practical suggestions on how a screening programme could work, she said.

ODT 1/10/96

Skeptics support Ellis trust

Wellington (PA): New Zealand Skeptics have granted $2500 to the defence trust set up for convicted Christchurch creche worker Peter Ellis.

The conviction and continued incarceration of Peter Ellis is very disturbing," Skeptics treasurer Prof Bernard Howard said.

Ellis is serving a 10-year prison sentence after being found guilty of sexually abusing children at the Christchurch Civic Childcare Centre from 1990-92.

A trust has been set up by Ellis supporters. Dunedin barrister Judith Ablett-Kerr QC has said she will take the case to the Privy Council in London.

The decision to donate the money was made by a unanimous vote at the group's annual meeting in Hamilton last month.

"The Peter Ellis saga bears all the hallmarks of child care sex abuse witch-hunts witnessed in the United States in the late 1980s," Prof Howard said.

"In light of current understandings of children's testimony and their susceptibility to suggestion, it is very unlikely Ellis would be convicted if his trial was held today.

"The jury was denied access to important evidence which might have altered its assessment of the accusations against Ellis. This was a clear violation of natural justice."

N2 Herald 6/7/96

School science a worry

ERO: Many teachers not adequately trained

WELLINGTON — The Education Review Office believes many teachers are inadequately trained to teach the new science curriculum, which was introduced last year.

In a report issued yesterday the office said some schools relied too much on centrally provided training to get teachers up to speed with the curriculum.

The report, *Science in Schools*, said it was alarming that some schools were not planning further science training for teachers.

"Training in the teaching of science must clearly be a continuing priority for both Government and individual boards of trustees if the science curriculum is to be implemented as expected," said the office's national manager of evaluation services, Frances Salt.

She said the science curriculum statement itself was unclear on how science should be taught and might be the biggest barrier to the successful implementation of the curriculum.

Another barrier was the relatively low level of teacher expertise and confidence in science.

Frances Salt said the ERO was concerned about the small amount of time devoted to science in many primary schools compared with other subjects.

"The fact that it is integrated into other subjects means that children develop the attitude that science is not important," she said.

"However, science is one of the seven areas of learning deemed to be essential. High levels of achievement in science are seen as vital for the economic well-being of the country."

A little touch of nonsense to make life more bearable

Press 14 Sept

A DICTIONARY OF SUPERSTITIONS by Iona Opie and Moira Tatem. Oxford University Press, 494pp, $27.95. Reviewed by Peter Lange.

Years ago I had a job demolishing a beauty parlour — three entire walls were lined with mirrors, 20 or so, that had to be smashed off the wall. My mate wouldn't touch them, I was the sceptic and got the job, but it made me uneasy.

One hundred and forty years' bad luck is a lot to take on before morning smoko, but I figured the sentences might be concurrent, so I crossed all my fingers and spat on a spectacled man straight away after, and, apart from a bit of bad luck with the spectacled man, so far, touch wood (or iron, or a frog's heart with bent pins sticking in it — just hang on, I'll be back in a sec) the sentence has been suspended. My mate got the sack for skiving.

Even the clearest-thinking and technologically comfortable and dependent of us is touched by superstition (imagine Neil Armstrong taking off without his fingers crossed). This book clarifies the sociological and historical context of superstitions of the British Isles in a fascinating study of the capacity of the human mind for irrationality, creativity, and sometimes pure looniness ("It is good luck for a dairy farmer to use a corpse's hand to stir the butter") in the face of what must have been unbelievable fear and desperation as family and friends succumbed constantly to disease, crop-failure, mining and fishing accidents, toothache, spinsterhood and death.

The dictionary traces each superstition in chronological order — many are remarkably unchanged through the centuries: the 1507 promise of good luck from a four-leaf clover is almost identical to that of 1993. Many are contradicted across county lines. In Kent a black lamb in a flock is good luck, in Shropshire, bad.

Some are fairly self-evident: "It is unlucky to volunteer for a job", and "it is unlucky to tumble down the stairs". Some have a familiar New Zealand flavour, raising the question of where the original came from: "A fantail in your house signifies death", and its sequel: "Good luck if it rains at the tangi", both Maori but also both here as 17th-century British versions.

My six-year-old daughter once happily took seat number 13 in an aeroplane explaining to the stewardess that, in the event of a crash, it was fairly unlikely that seat 13 would be the only casualty, and then had the good luck to be given extra lollies. Surprisingly, Friday the 13th has no reference before 1909.

Miners are incredibly superstitious. No work on days when: you pass a cross-eyed woman, or a broken bottle, or someone whistles in the mine, or your boots fall over in the night, or it's the last day before a holiday — the list goes on and on. It would have to be one of the more difficult employment contracts to draw up. Ironies abound — Donald Campbell refused to drive a car painted unlucky green in his land-speed record attempt, sending it back to be replaced with a blue one.

It is a well laid out book with an additional analytical cross-reference index at the back, and there is no strong editorial stance or guarantee, only a keen interest in the subject. Many of the recent quotes are out of the pages of women's magazines and they, along with New Age literature, will ensure that this completely unreliable, charming and mainly harmless folk-lore will survive. But consider — the modern equivalent of passing a child nine times under a piebald horse as a cure for whooping cough is the crank cure for cancer.

It is essentially a book of nonsense, but the sort of nonsense that can sometimes add an unpredictable and often enjoyable emotional blip to our daily routines. Want the rest of the day to be lucky? Tip your hat to a virgin. I just made that up but it may catch on, although probably not in Auckland — there's a shortage of hats.

'Creation science' attacked

Otago Daily Times 25 Apr 96

By John Gibb

Advocates of "creation science" were trying to infiltrate their beliefs into New Zealand schools, Prof Ian Plimer, of Melbourne University, warned in Dunedin yesterday.

Prof Plimer, the head of the Melbourne School of Earth Sciences, is a geologist and author of the best-selling book, "Telling Lies for God: Reason Versus Creationism."

He gave an open lecture titled "Creation 'Science': Divine Revelation or an Abuse of Science?" at Otago University last night as part of a national lecture tour funded by the New Zealand Rationalists organisation.

Prof Plimer said in an interview that "creation science" denied evolution and falsely claimed scientific backing for the view that the world was created a mere 6000 years ago.

A few people with higher university degrees, none still holding university posts, had deliberately flown in the face of their own scientific knowledge to promote "creationism", he said.

"Creation science" was now mandatory in many schools in the southern United States and was taught in more than 100 primary and secondary schools in Australia, mainly in Queensland.

Since the "creation science" movement had been established in New Zealand five years ago, it had quietly "infiltrated" several Auckland schools, he said.

Creationists had found a "sophisticated way of selling snake oil to kids" by trying to add their message to the curriculum on a school by school basis.

Despite its spurious claims, "creation science" was totally unscientific, merited no place in the science curriculum, and was confusing and damaging to vulnerable youngsters.

"We don't teach 'witch doctory' in a medicine course, we don't teach cannibalism in a human nutrition course and I see no reason why we should teach documented fraud to our schoolchildren," he said.

New Zealanders should insist on maintaining a strictly-monitored national curriculum to thwart local infiltration and should avoid complacency, given the rapid growth of creationism in the United States and Australia.

"Creation science" was a form of religious fundamentalism which also opposed traditional biblical scholarship, and was in turn rejected by mainstream Christian churches.

Although creationists initially sought a toehold in schools by appealing for tolerance, they often used "stand-over" tactics towards other views after achieving dominance.

Teaching creationism would damage the ability of future adults to think rationally, and would ultimately create a hostile, intolerant society, he said.

1996 Annual Reports

Chair-entity

This year has seen one of the most significant discoveries ever made — the announcement that there are solid indications of life having once existed on another planet. The implications for us all, whether scientific, philosophic or religious, are tremendous.

I was intrigued, and a little saddened, to note that most media people contacting the Skeptics over this issue expressed surprise that we were delighted and hopeful that the reports were correct; that we weren't dogmatically dismissive of the possibility of other lifeforms. Those who know us know that we aren't dour, down-in-the-mouth cynics — we're still working on changing that general image.

Following on from the discussion at last year's AGM, we ensured that the Awards decision-making process was made more transparent by distributing the nominations for the Bent Spoon Award and the Bravo Award to all the committee members and calling for their comments and recommendations. I was pleased to see nominations come in from the membership and would encourage you all to keep an eye out for the occasional excellent item as well as the inane — we take nominations all year.

I also urge you to take the opportunity to send material in for the *NZ Skeptic*, particularly locally sourced material or topics close to your heart.

There were good attendances at the April lectures of Australian geologist, skeptic and creationist-savager Ian Plimer, who really ripped into one of the more insidious areas of anti-science. I would like to think that the issue of creation science is not as great a problem in New Zealand as in Australia or the US, but I have my doubts...

We've undertaken one of the more ambitious tours in recent years by coordinating the New Zealand visit of eminent British scientist Richard Dawkins. His presence in the country is courtesy of our Australian counterparts and their burgeoning bank account, and we have had very generous support from the British Council as well as from the various universities which are hosting Richard's lectures next month. I urge you to get to one of his talks if at all possible for an entertaining and thought-provoking evening.

There are, as usual, people to be thanked for their hard work and enthusiasm over the past year, including (but not necessarily exclusively):

- our hard-working Secretary/Treasurer Bernard Howard and his ever-patient assistants and tea-makers George Errington and Molly
- the frenetic Denis Dutton, whose 36-hour a day lifestyle has been partially ameliorated by the help of Jay Mann in the local lecture circuit
- our conference organisers Annette Taylor and David Riddell
- the *NZ Skeptic* editor Owen McShane and the *NZ Skeptic* cartoonist Nick Kim for keeping us all aghast, informed and amused at the foibles of humanity
- our far-flung committee members and meeting organisers and assistants
- my own staff for ably fielding media calls every Friday 13th without losing their good humour

And finally, thank you to you all for your support for critical thinking.

Vicki Hyde
Chair-entity, NZCSICOP Inc.

To: Members of NZCSICOP
From: The Treasurer

To those who responded promptly to the call for 1996 subscriptions: THANK YOU.

To those who responded to the reminder that 1995 subscriptions were still owed: THANK YOU, THANK YOU

To those who have not yet responded ... hasten, before you are cast into the outer darkness of *NZ Skeptic*lessness.

Bernard Howard

Bernard Howard,
Treasurer

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

Income and Expenditure Account
Year Ended 31 December 1995

Income	
Members' Subscriptions	6,353.41
Interest Received	1,150.14
Surplus from Conference	397.89
Net Sundry Sales	36.02
Total Income	7,937.46
Expenditure	
Newsletter production and distribution	4,895.09
Clerical, secretarial and editorial expenses	1,576.21
Audit fee and bank charges	53.85
Net cost of meetings	87.58
Total Expenditure	6,612.73
Excess Income over Expenditure	1,324.73

Balance Sheet as at 31 December 1995

Sundry Creditors	5,670.10	Bank Account	584.85
Total Members Funds	18,110.43	Deposits	16,000.00
		Sundry Debtors	7,195.68
	23,780.53		23,780.53

What Do We Spend Money on?

At the AGM, and in a subsequent letter from a member, the question was raised "what are we saving money for?". Certainly the Skeptics bank account is a reasonably healthy one, after ten years of frugal saving on the part of Treasurers past and present.

Last year, in the Chair-entity's Report, I asked members for suggestions as to activities or measures which the society should undertake, mentioning:

- increasing the page count in the *NZ Skeptic*
- providing school information kits
- promoting a paranormal challenge with a prize

We haven't had *any* suggestions to date, but these ideas still stand, and any others are welcomed.

At the AGM, members approved a $2,500 donation to the Peter Ellis Trust which is looking to lodge an appeal against Ellis' conviction on child sex abuse charges in the Christchurch Civic Creche case. The main reason for this, judging from the comments made during the discussion, was concern over the use of inappropriate investigation methods and claims of ritual abuse paralleling many of the now-dismissed cases overseas. (For an excellent article on the concerns that have been raised, see *North and South*, August 1996.)

We also spent some money on the recent tour by Richard Dawkins, but this was well-covered by our first try at gaining sponsorship, thanks predominantly to the British Council and the Royal Society of New Zealand.

A third item of recent expenditure was the production and distribution of an information pack on the Natural Law Party and their "scientific" claims (see p8). This has been sent to major media outlets, print and broadcast, for their files so that they will have some real information when interviewing the flying candidates.

So, what else should we be doing?

Vicki Hyde

NZQA Qualifies for Bent Spoon

The organisation responsible for setting exams for New Zealand secondary students receives the Skeptics' annual rap on the knuckles for bad science.

The New Zealand Qualifications Authority has won the 1996 Bent Spoon Award from the New Zealand Skeptics for its failure to understand the difference between good science, bad science and shonky science.

The NZQA was roundly criticised by a number of individuals and organisations regarding flawed questions in last year's 5th Form Science examination, but it was predominantly the authority's reaction to the criticism that saw it win the award.

"One could understand an examination body having problems with getting the questions right in organising a series of exams — though you'd hope that a 'qualifications authority' would have a decent quality control programme in place. What disturbed us, and ultimately saw the Bent Spoon awarded to NZQA, was their very public reaction that involved ad hominem attacks, an apparent lack of understanding regarding the basic science they were supposedly assessing, and a callous disregard for the students they had disadvantaged thereby," comments Vicki Hyde, Skeptics' Chair-entity.

"We found it particularly sad that, on commenting on the flawed questions they had approved, the authority blithely said that only students with an advanced understanding would have been puzzled. Surely our education system isn't requiring students to have to second-guess the examiners' intentions?!"

"We weren't the only ones to be concerned over the attitude of our national qualifications body," says Hyde. In Christchurch, an editorial in *The Press* saw the NZQA's response to criticisms as "complacent, disturbing and bad-mannered". The New Zealand Institute of Physics has expressed concern about misleading advice and the lack of a promised response on the part of NZQA.

In commenting on the NZIP's involvement, NZIP President Geoff Stedman, noted that "since the NZQA has roundly failed this exam (as a test of its quality control) on all fronts, the omens for the larger issues are bleak indeed".

In its response to the criticisms, NZQA accused Professor Stedman of having some form of hidden agenda and indicated that science was a mutable concept which attracted various viewpoints. The Skeptics are concerned that if NZQA truly believes this, then it has major implications for how it operates as a qualifying body for science courses.

Two years ago, the NZQA was asked to approve a Bachelor of Applied Science in Naturopathy, treating naturopathy as having the same research basis and credibility as anatomy, physiology or physiotherapy. Naturopathy is a branch of alternative medicine which uses a variety of generally untested, unresearched techniques and materials.

"As far as we can find out, NZQA are still considering the application. By dithering for this long, not only has NZQA shown itself incapable of distinguishing between science and pseudo-science, but it has also severely disadvantaged those students who took up what they thought was going to be a degree course."

"If people want to pay money to study naturopathy, that's fine," says Hyde, "but there should have been no question of it being part of an Applied Science degree unless it can satisfy the research requirements, the rigour, the experimental evidence that is demanded by a science. NZQA should have been able to decide on that almost immediately."

One critic has compared the proposed degree to allowing a Bachelor of Commerce in Numerology or a Bachelor of History in Astrology.

The Skeptics are also keen to reward well-researched reporting.

"We're delighted that this year marks the largest number of nominations for our Bravo Award ever," says Hyde. "There is such a great deal of poorly thought-out interviewing and writing in our media, so we appreciate those who make an effort to actually inform and educate the public with thought-provoking interviews and articles.

Kim Hill of National Radio, and her production team of Maryanne Ahern and Heather Church, headed the list this year.

"Kim Hill is well-recognised for her excellent interviews, but

we also wanted to acknowledge the input of her producers in helping to ensure that Kim has the background information vital to take a critical look at issues of public interest, " says Hyde.

The particular interview which prompted the nomination for the Bravo Award was on the so-called Kaimanawa Wall, where careful, considered questioning helped to explicate an issue which was dealt with by most other media in a superficial, sensationalised fashion."

Also winning Bravo Awards this year were:

- Simon Collins of *City Voice* for a March 21 article on the "Tabaash phenomenon", an investigation into a Wellington channeller
- David McLoughlin for his television documentary on questions concerning the Christchurch Civic Creche case and for a follow-up *North and South* (August 1996) article
- Mark McNeill of First Hand Productions for his television documentary on recovered memory or false memory syndrome
- Diana Dekker for her well-researched *Evening Post* article on the claims made by an alternative healer to be able to treat cancer using magnets

The awards will be officially presented at the Skeptics' annual conference at the Chanel Conference Centre in Hamilton at the end of the week.

The Bent Spoon Award is named in honour of Uri Geller, the former nightclub magician who claims he can bend metal with his bare mind. The Skeptics have their doubts....

Helping Students Understand

Malcolm Carr, from Waikato University's Centre For Science, Mathematics & Technology Education Research, talks to Annette Taylor about the nature of science education and the new science curriculum following his address at this years' conference.

The whole thrust of the science curriculum is to help students to use their developing scientific knowledge, skills and attitudes to make better sense of their world. This frequently involves challenging their prior, often instinctive, ideas.

This is a vital, but sometimes misunderstood, feature of the new science curriculum. The reason why the new curriculum proposes real world contexts to explore, the development of the notion of fair testing, and significant exploration of the nature of science and technology is that these all contribute to getting these ideas out and working, and to their review and development.

In very simple terms, we could describe some science education approaches as: sit down, you've got nothing in your heads, we'll tell you all the right ideas, learn them, and everything will be fine. What actually appears to happen in that process is that a lot of these prior ideas survive unchallenged and get in the way of understanding.

So the challenge to the view that learning science is acquiring a whole lot of these facts and exactly reproducing them comes from an international understanding about the way students' ideas can be very resistant to change. A common misunderstanding of an alternative approach which seeks learners' understandings and works from them is that their ideas are somehow therefore accorded equal worth to those of scientists. On the contrary, while it is important to realise the prior ideas of learners — to value them and try to understand them — this is to provide the basis for challenging them because there are some better ideas which the learners are encouraged to understand and accept.

In my contribution to the conference, I suggested that science educators need to help students understand that there are some rules that scientists use in developing their explanations and that these are worth thinking carefully about. The rules that I suggested we place high value on are that the explanation should be tested against experience — which brings in the whole tangled philosophical description of reality. Does it exist out there, is it objective, is it subjective and so on.

As far as science education is concerned, that philosophical discourse which people get into violently opposed camps over is almost irrelevant.

If you say to kids: "You've got this idea. Can we set up a fair test of it, and what do you make of what happens?", you just have to ascribe a reality to the physical world and use it as the arbiter. This is why the the new science curriculum talks a lot about using fair tests to explore ideas.

This procedure of changing prior ideas is complicated. I've spent a number of years with classroom-based research and I wouldn't underestimate the difficulty of getting kids to change

some pretty fixed ideas that they have, because often the scientists' explanation is a bit difficult for them to understand or it does not connect well with their world of experience. For example, it's difficult to persuade young learners that something will continue at a constant speed without a force acting on it, because this does not fit their everyday world. The concepts of heat, of gravity and of energy which learners bring to the classroom are often rich and amazing.

Science education is then a matter of quite subtle and complex interaction with learners' ideas, helping them to develop explanations that serve well against their experience and to connect up these explanations into coherent knowledge.

In this context we should recognise that in a lot of areas of science, we in some ways idealise the world, downplaying real world complexities and inventing our explanations on that basis. The learners' real world lacks this simplicity.

Other rules of the game put high value on the explanation being elegant, universal, and interconnected.

As far as being elegant, throughout the history of science people have been pleased when explanations are aesthetically satisfying. Ideas such as the Sun being the centre of the solar system and material substances being made of a limited number of atoms, replaced more complicated theories, in part because of their elegance and simplicity.

The universal aspect is very interesting. I recognise the power of many ideas in science which are accepted in many cultures. We do not need to reinvent mechanics for different environments. This is not to arrogate science a "closed shop" on explanations. There is a exciting discourse at the moment about the validity of other explanations of the world.

The Aboriginal culture in Australia had an understanding of the environment, and human interaction with it, which deserves serious consideration. The Aborigines were puzzled at the way the arriving white people used the environment, often seriously damaging areas which had been productive for centuries. So the universal aspect should incorporate other perspectives, if they make a valid contribution to our understanding of the world.

I'm uncomfortable with the sequence "Is there a Maori science? No, there isn't, there's only science." If there are Maori understandings of the way the world operates, that tell us more about the world, as universal descriptions of the world, then science should find a way to incorporate them.

The last aspect is interconnectedness. A group of people who call themselves skeptics should be interested to pursue this, since challenges to scientific understanding often ignore the value and strength of the interconnectedness of science.

Consider the debate about creationism versus evolutionism. If a creationist may highlight a "missing link" or an unexplained detail, and then suggest that the Theory of Evolution falls down, there is a misunderstanding here of the interconnectedness of evolutionary explanations. A single challenge may highlight areas which remain to be explored further rather than be a crucial test. Unless a better, more elegant, universal and interconnected proposition is provided, science tends to "repair and fill in" ideas rather than discard them.

In this context it is valuable to remember that science hasn't explained everything, there remain huge areas to be considered and make up good ideas about. This notion of science as an exciting set of ideas to explore and develop is embedded in the new science curricula.

Haden falls into trap

Sunday Star-Times

AS A skeptic at the Skeptics conference, Frank Haden (September 8) can sometimes still manage to hear what he wants to hear.

The Bent Spoon Award he reported well and factually, but reporting on the last of the presentations he fell into the speaker's trap, perhaps because her message was subtle. It was that we can be so entrapped within our own cultural mindsets (even Westerners do have them!), and trained to sneer at non-Western superstitions, that we can undermine our efforts to be of help.

Often other people will only want to take proper advantage of our "Western" medicines if they are offered within the comfortable frame of reference of their own culture. This is not easy, but is certainly being tried within New Zealand. With more open minds it is also possible we may learn something leading to greater scientific understanding of our *own* health needs.

Unfortunately Frank Haden is no Spinoza. The following quotation from this 17th century Dutch philosopher concluded an important article in the latest New Zealand skeptics magazine: "I have made ceaseless effort not to ridicule, not to bewail, not to scorn human actions, but to understand them."

JEANNE VAN GORKOM
New Plymouth

Believe It or Not!

One of the interesting things about the Skeptics is the wide range of opinions that can be found in our group — not to mention the ever-readiness to express them. So I was interested to read Frank Haden's column on the conference and how he found it.

Of particular interest was Frank's interpretation of two speakers who, although speaking on different topics (science education and health ethics) nonetheless expressed a common thread. At least that's *my* view — Frank heard something quite different. So just to show that there's more than one side to a coin, here's my penny-worth.

I think that at the heart of both presentations was the intention of having us recognise the need to take into account the beliefs and knowledge that a student or patient brings to the classroom/surgery if you are to educate/treat them appropriately.

This doesn't have to be a cop-out for trendy constructivist approaches to education or a mad rush to take on jungle cures (and I don't believe either speaker was advocating such). What it does recognise is that people do bring along their own ideas and concepts and that these can have a major effect on the way in which they react, whether it's a child who is firmly convinced that the world is flat or an adult who is convinced that a chicken sacrifice is the best possible treatment for their illness.

If you are to teach that child, you have to have some idea of what they think they know — we're all aware of the dangers of hidden assumptions. I recall one example (at another meeting) where students were happy to apply the classic MRS GREN mnemonic for living things to fire (after all, it moves, reproduces, grows, eats and excretes etc). By not being aware that they believe this, getting children to differentiate between living things and non-living things is made more difficult. Science is full of difficult concepts, made all the harder by the weird and wonderful "knowledge" we absorb from parents, friends, television etc.

If you want to challenge beliefs, you have to know that they are there in the first place whether within ourselves, our children/students or our patients. That's something on which I think all Skeptics would agree.

Vicki Hyde

Education these days is not scientifically correct

Sten Times & Sept

Frank **HADEN**

THE decline of the education system with the Qualifications Authority imposing what the New Agers call holistic knowledge, chopping all teaching up into tinier and tinier units with equivalent value no matter what the subject, got a thrashing at last weekend's Skeptics Society meeting.

The NZQA is a spreading mass of prejudice and social evangelism, exercising a baleful influence on education generally but science lessons, in particular. It is dedicated to the idea that competition should be removed from education, even though graduates will enter a world of competition and those who don't compete don't eat.

That's why the community is indebted to the Skeptics this year for their much-feared bent spoon award. It went to the NZQA for seriously considering proposals for a degree in naturopathy, which has no basis in science, and for looney School Certificate science examination questions.

The Skeptics were particularly incensed by the NZQA's reaction to scientists who ridiculed the looney exam questions: The body charged with ensuring that young New Zealanders become qualified by international standards loftily told the scientists to mind their own business. The kids knew what sort of answers were expected, the NZQA explained, because they were used to that sort of sloppy, unscientific phraseology from their teachers. Kids who chose to be picky and pointed out the questions were scientifically wrong deserved to be penalised.

It would be hard to imagine an educational approach more calculated to arouse the ire of the Skeptics, most of whose members are either qualified in science or keenly interested in getting facts straight. The conference was larded with papers and off-the-cuff commentary aimed at making the NZQA squirm, if only in absentia. As for the naturopathy, the Skeptics are naturally furious that the NZQA would give house room to New Age mumbo-jumbo. Naturopaths claim to know better than doctors. They reject drugs and treat patients by rubbing their backs, changing their diet and making them do exercise — all things that do no harm to healthy people and probably do them good but endanger sick people who could benefit from science-based medicine.

But the NZQA is under the influence of the New Age theory that all ideas about the world are equally valid, that scientists and teachers should be "open-minded" and take due note of witch-doctors, primitive herbalists, ufologists and flat-Earthers. The conference heard about this from good sources: A couple of Hamilton professionals in positions of considerable power in education and medicine. What they had to say is a dreadful warning of trouble ahead for science education.

One gave a presentation on new approaches to science education, which among other trendy flights of unscientific fancy said in effect that since the concept of energy is hard to get a handle on intellectually, it is OK for individual pupils to have their "beliefs" about energy accepted. Never mind about taking a scientifically honest stand and saying you can't grasp what is demonstrably true and other people fully comprehend: Just say you have BELIEFS about it and your irrational position will be accorded equal standing!

The other, in a position to influence the course of medical treatment, mounted an extraordinary attack on "traditional medicine", saying wonderful cures happen in the jungle that Western doctors shouldn't laugh at.

This presentation warned that the "doctrine of the omniscient doctor" is on the way out. On the way in are the new concepts of "values" and "patient choice", where the patient is "empowered" to know better than the doctor and take the advice of a tohunga, a colour therapist or a man with a bent stick. The spirit of the New Age, according to this presentation, is to take a "holistic" approach, to consider not just the gangrenous toe in isolation but the whole body of the patient along with "social factors", the environment and, presumably, his or her star sign. These tidings were received in polite but horrified silence.

The most telling condemnation came from Auckland University's professor of geophysics. He told the conference of his disgust that students from high schools arrive almost without exception burdened by a quasi-religious belief in the global warming myth.

REMEMBER: The NZQA is to blame, no matter how much it tries to wriggle out of responsibility.

POSTAGE PAID
Christchurch, NZ.
Permit No. 3357

If undelivered, return to:
Prof Bernard Howard
150 Dyers Pass Rd
Christchurch 2

Moving Around?

There may be psychics out there, but none of them help with the Skeptic. *If you change address, please tell us.* We want you to enjoy your magazine.