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Mind Over Matter?

Dr Susan Blackmore

People are very bad at estimating probability or understanding chance and randomness. Such innumeracy could well explain much of the phenomena currently treated as paranormal. This article, adapted from ones appearing in New Scientist and the Auckland Star deals with the illusions of probablity that lead to claims of psychic powers.

More than half the population believes in psychic phenomena, and most claim to have experienced telepathy, precognition or psychokinesis. But experiments in parapsychology over 50 years have failed to convince most scientists that paranormal powers really exist.

Now a growing body of new psychological research suggests that the experience may not be due to astral vibrations or the power of the spirits, but to the way our minds look for non-existent connections. It is rather like a visual illusion, but an illusion of probability rather than of vision.

If the paranormal does not immediately seem like a case of probability, think of an example. You wake up one morning from a dream in which your friend Ferdinand lies dead on the grass by a foreign motorway, covered in a white sheet. The very next day you hear that Ferdinand died that night.

Anyone who has this experience is likely to say: "It couldn't possibly be a coincidence. It must be psychic." **That** is where the mistake occurs.

It could be a coincidence, and probably was. Statistician Christopher Scott has calculated that, assuming only one death dream per person per lifetime, and allowing for the number of people in Britain and the number who die each day, a coincidence like this ought to happen to someone, somewhere in Britain, once every two weeks.

Of course, if you were one of them, you would have to be superhuman not to be affected by it.

It would seem even more stunning if Ferdinand died in a car crash, or was in hospital covered in a white sheet. In a typical dream there may be hundreds of identifiably separate details which could be right, yet we forget most of them and only remember ⇒3

CONTENTS

Cloning Our Lord

The Associated Press recently ran an item with interesting implications. Datelined Washington, the story (*Christchurch Star*, May 4) told of efforts by a panel of geneticists to obtain for analysis samples of cell material from Abraham Lincoln. Because Lincoln was shot, bits of his brain, with samples of blood and hair, were preserved from the surgeons' attempt to save his life.

The panel wants to know whether Lincoln suffered from Marfan's syndrome, an affliction that makes people long and spindly. More generally, the experiment could "set a precedent for molecular studies on historical figures that could determine their susceptibility to inherited disease and, ultimately, personality traits that may have influenced their decisions."

Such reasoning is hollow — no blood test is going to tell us why Saddam Hussain invaded Kuwait, unless there's a gene for thinking you can get away with it. But there remains the intriguing idea of genetic reconstruction, and this indeed is what the scientists have in mind for Lincoln. "Once recovered," Lincoln's DNA "would be cloned to produce sufficient quantities for research."

"If the tissue samples were found to still contain recoverable DNA...a library of Lincoln's genetic makeup could be recreated," the geneticists say. But why stop with some cultured cells in a petri dish? Armed with a full genetic library, we eventually might go on to clone Lincoln himself and re-raise him from infancy.

The ramifications of this test-tube Abe would be remarkable. American parents have traditionally told their sons, and lately their daughters, that if they work hard enough they might grow up to be President. Think of having to tell your kid he used to be President. The Lincoln administration would be a tough act for any lad to follow.

But my mind is running more in the direction of another historical character whose blood, if you believe the Shroud Crowd, is still available.

Imagine if we could clone the being whose blood is found on the Shroud of Turin, recreate him as a test-tube baby, and raise him in our culture. What would this kid be like, and how would people react to him? "Why, you don't look Jewish!" "All right, so Scientology was a disappointment to you. Why don't you just walk away rather than insist on reforming it?" "You always hang around with those strange guys — how about finding a nice girl and settling down?"

I'd welcome a DNA test for the Shroud, just as I looked forward to the carbon-14 test, and I suspect that the Shroud groupies once again would be in for a shock. For there's every likelihood that the clever fellow described by Bishop d'Arcis in 1389 as having concocted the Shroud of Turin did not use human blood to tart it up, but blood from a slaughtered beast. Perhaps he waggishly meant to give a literal reading to traditional Christian allegory about the blood of the lamb.

If at some future date Shroud blood is cloned into something that prefers "Baaaah" to King James Aramaic, we can only guess at the catalogue of Shroud Crowd excuses — the philosophical: "Oh, science is fallible" (religion obviously isn't). The historical: "The only cloth Joseph of Arimathea could find was an old butcher's apron." The theological: "What more fitting way for our Lord to reveal Himself to the modern age than as a cross-bred Merino wether?"

Denis Dutton

Contributions should be directed to:

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Absolute Final Deadline for next issue:

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continued from p1

the ones which are confirmed, so exaggerating the coincidence.

Even meeting friends in odd places is susceptible to a simple analysis. One researcher calculated that his social network included 212 people whom he would greet if he met them.

On a typical trip away from home he counted seeing 460 people. On this basis he ought to expect to meet a friend in an unusual place rather often.

Probability Test

The basic fact is that humans are not good at understanding probability. If you think you are an exception, try the questions in the box.

Do not be dismayed if you get some wrong. Psychologists have found that people tend to make probability estimates based on rather rough heuristics, rather than anything like a mathematical calculation. For example, they might see how many instances of something they can "bring to mind" and base their guess on that. Not very accurate — but it may be the best we can do.

Part of the problem may be that we have evolved ways of thinking appropriate to a much simpler life than the world of television pictures and instant communications we have today.

If this theory of psychic experiences is correct, it should be testable. One prediction is that people who believe in the paranormal (termed "sheep") should be less accurate in probability judgments than disbelievers (goats). This was confirmed in a series of experiments at Bristol University.

In particular, the sheep did worse at tasks requiring them to understand randomness. Perhaps this is why perfectly random coincidences in their everyday life appear to be strange, leading them to look for paranormal explanations. Interestingly, university students did no better than schoolchildren, which implies that these judgments are not improved by education.

The other major kind of psychic experience is PK, or psychokinesis — the claimed effect of mind over matter. It now seems that this too might be an illusion.

Illusion Of Control

As babies, and throughout our lives, we learn how to control our environment by observing the coincidences between our own actions and the effects that follow. Here again, because we don't understand probability, we can easily think we have controlled something random. This is

Clairvoyants' clues about missing man draw blank

By Brad Walker

Information provided by Nelson clairvoyants about the disappearance of a 21-year-old man seven months ago in the Abel Tasman National Park has proved fruitless.

Department of Conservation officers searched most of yesterday in the Mt Rollinson area after clairvoyants told police where Steven Michael Baker lay dead.

However, the four searchers found no sign of the man's body and Motueka police are now resorting to further interviews of people who were in the area last August.

"Inquiries are continuing, but we will not be conducting other searches for people in the area," Constable Bill Lambie said today.

Changed mind

Mr Baker, from Te Puke, was last seen in Motueka on August 26 when he told friends he planned to walk the park's inland track through to Takaka alone.

The clairvoyants told police Baker had started the inland route at Marahau but changed his mind and took the coastal track through the park. He spent the night at Torrent Bay and then went on to spend a night at the Awaroa Hut.

The clairvoyants said he walked for more than an hour and then slipped off the track falling into a creek far below. He hit his head and landed face down in the water where he drowned, without regaining consciousness.

A DOC spokeswoman said the searchers spent yesterday in the Awaroa area and combed a track behind the hut referred to by the clairvoyants.

Slopes and creek heads in the area were also searched but no trace of Baker's body was found, she said.

The missing man's father, Russell Baker, said the account given to police by clairvoyants contained an eerie reference to a photograph of his son which nobody in Nelson would have known had been hung recently in their home.

The Christchurch Star April 9, 1991

known as the "illusion of control". It can affect everything from feeling you can control the weather to believing your willpower affects the fall of dice.

This feeling of being in control can easily overwhelm logic. The most bizarre example I ever experienced was taking part in a ritual to make the sun riser at dawn on Mid-summer Day. After hours of chanting and processing, when the sun popped up dead on schedule, we really felt as though we had made it happen!

If this is the right interpretation, then, again, we would expect sheep to be more prone to an illusion of control than goats, and this is exactly what is found. In experiments at Bristol University, subjects tried to control a flipping coin on a computer screen. Not only did the sheep think they had more control, even when the coin was random, but they dramatically underestimated the chance rate of success. This would mean that even in a chance world they would still be looking for explanations and concluding "it must be psychic".

This may not be the whole story, and the paranormal may yet exist, but we do not need to invoke it to account for the experiences – they certainly happen and affect people deeply, but it may be all illusion.

Dr Susan Blackmore is in the department of psychology at the University of Bristol and the University of Bath.

Knowing Chance

1. A couple have had five girls in a row. What is their next baby likely to be? (a) boy, (b) girl, (c) either equally likely.

2. What is 1 x 2 x 3 x 4 x 5 x 6 x 7 x 8 (guess rather than work it out mathematically).

3. You are betting on heads on the toss of a coin. After a run of 10 heads are your chances of a win on the next throw (a) increased, (b) decreased, (c) the same?

4. A packet contains 10 mint and 10 chocolate flavour toffees. You pull out 10 and eight of them are chocolate. What are you most likely to get next time? (a) chocolate, (b) mint, c) either.

5. Multiply 8 x 7 x 6 x 5 x 4 x 3 x 2 x 1.

6. You are betting to get heads on the toss of a coin. After a run of five tails is the chance of winning next time (a) increased, (b) decreased, (c) the same?

7. A packet contains pink and yellow sweets in unknown proportion. You pull out 10 and eight of them are yellow. What colour are you more likely to get next (a) pink, (b) yellow, (c) either.

8. How many people do you need to have at a party to have 50:50 chance that two have the same birthday?

9. Using only the numbers one to five make a list of 100 numbers in random order.

ANSWERS

1. b or c 2. 40,320 3. c 4. b 5. 40,320 6. c 7. b 8. 22

If you got questions 1, 3 or 6 wrong you are falling for the "Gambler's Fallacy", believing in the so-called "law of averages".

Questions 2 and 5 are the same but people usually underestimate even more for question 2.

For question 8, people usually give much higher answers but think of how many possible pairs of people there will be.

In question 9, a truly random string should contain about 20 repeats of the same number. How many did you have? (Three in a row counts as two repeats.)

New Age Bad Taste

The Symbol of Infinity

The symbol of infinity is the emblem of those Extra-terrestrials who created Mankind using DNA and genetic engineering. The original Hebrew biblical text refers to them as ELOHIM (those who come from the sky) mistranslated in english by the word "GOD". This explanation of the mystery of God and Life is a part of the Apocalypse (Apocalypse in Greek means Revelation) which has been announced by the prophets of all religions. The Elohim would like to be welcomed officially in an Embassy we will build for them on earth.

This is the oldest symbol known to mankind. It appears in every great tradition, on every continent. For example, it can be found on the Tibetan Book of the Dead, on the tombs of the first Christians, on ancient Hebrew scriptures in Rome, on the west wall of the Cathedral Notre Dame de Paris.

The Star of David represents the infinity of SPACE, that which is above is like that which is below. The Extra-terrestrials, creators of humanity in laboratories have proven scientifically that the infinitely small is reflected in the infinitely great.

The SWASTIKA represents the infinity of TIME. Everything in the Universe is in perpetual transformation. This applies to the infinitely small as well as the infinitely great. Matter has no beginning and no end. EVERYTHING is CYCLIC. As the 18th century french scientist LAVOISIER said: "Nothing is created, nothing is lost, everything is transformed".

Gaia Revisited

The Gaia hypothesis is still being debated in scientific circles, but has been enthusiastically embraced by the environmental movement. The question is, is it appropriate to propose a planetary consciousness for Gaia, the Earth Goddess, or is it of more interest as an ecological construct?

In the late 1960s, James E. Lovelock, an independent British researcher who works in his home laboratory, began to expand an idea that wove dawning public concern about the environment together with a benign mysticism. The original concept can be simply and appealingly stated: all of the animals and plants that inhabit the Earth can be regarded as a single vast organism capable of manipulating the atmosphere, geosphere and hydrosphere to suit its needs. Lovelock named this organism Gaia, the Greek goddess of the earth.

Lovelock, an accomplished inventor, was inspired by his experience designing life-detecting sensors for the Viking missions to Mars. Noticing that the Earth's atmosphere (unlike that of Mars or Venus) has long been far from chemical equilibrium, he proposed that Gaia strives to maintain optimal conditions in the face of changing astronomical inputs, such as the Sun's slowly increasing brightness.

Lovelock's musings have had two consequences. They inspired a quasi-political movement based in London, complete with a publishing arm, that now includes thousands of adherents throughout the US and Western Europe. Indeed, Gaia has almost become the official ideology of Green parties in Europe: it appeals naturally to scientifically innocent individuals who worry about the environment.

"A lot of people who don't believe in science really like Gaia," comments one biologist, W. Ford Doolittle of Dalhousie University in Halifax, Nova Scotia.

Allergic Reaction

Gaia has also triggered an acute allergic reaction among mainstream biologists. Doolittle and Richard A. Dawkins of the University of Oxford spelled out the principal objection. Gaia seems to require that some organisms restrain their reproduction in order to benefit the larger community.

[Gaia] appeals naturally to scientifically innocent individuals who worry about the environment.

Yet natural selection favours genes that increase their frequency. Thus, there is no mechanism for the evolution of organisms that will altruistically sacrifice immediate advantage for some future benefit, unless life has foresight. It does not, Dawkins argued: selfish genes will therefore simply crowd out visionary genes.

In response to such criticism, Lovelock has modified Gaia. In his recent book *The Ages of Gaia*, he offers in place of the original "hard" Gaia, a softer version. The new soft Gaia "has the capacity to regulate the temperature and composition of the Earth's surface and to keep it comfortable for living organisms," but she does not globally optimise – a notion that evolutionists find meaningless. And Lovelock is careful to avoid endowing Gaia with foresight. Nonetheless, Lovelock's 1988 version of Gaia still exhibits homeostasis (meaning that she tends, like a thermostat, to counteract imposed changes).

"The evolution of organisms and the evolution of their environment are tightly coupled as a single process," Lovelock writes. "Self-regulation is an emergent property of this process."

But even global homeostasis is hard for most biologists to accept. The difficulty lies in imagining how to bridge the gap between local effects and planetary changes. An organism that alters its environment to benefit its offspring is onto a good thing – that is why birds build nests. But it is hard to see how such Darwinian nepotism could operate over many generations at continental distances.

Daisyworld Model

In an attempt to answer Dawkins and Doolittle's criticisms, Lovelock has devised an illustrative mathematical model called Daisyworld. The model demonstrates how "daisies" of different colours, subject to natural selection, can regulate the temperature of an imaginary planet even as the "sun"

changes brightness. Dark-coloured daisies proliferate when the sun is cooler and, by absorbing heat, warm the planet: the reverse is true of light-coloured daisies.

Lovelock maintains that Daisyworld proves that Darwinian natural selection can produce global homeostasis. Others disagree.

"Daisyworld is an essentially arbitrary view of how the world works," says James W. Kirchner of the University of California at Berkeley. The model regulates temperature only, he says, because the daisies have contrived and implausible properties. If more realistic daisies are allowed to spring up, then Daisyworld fails to achieve stability.

Lynn Margulis of the University of Massachusetts at Amherst, an outspoken champion of Lovelock's ideas, dismisses the Doolittle-Dawkins criticism as reflecting an ignorance of chemical ecology. She maintains that Gaia can actively regulate conditions, whereas the standard Darwinian view holds that the conditions change by chance and that organisms adapt to them.

Margulis admits that the criticisms of the biological establishment persuaded her, as they persuaded Lovelock, to stop describing Gaia as optimising. She also dislikes describing Gaia as an organism (because organisms do not recycle their wastes). Moreover, Margulis disavows homeostasis because the regulated levels change over time.

"Gaia has caused the discrepancy between what you'd expect on chemical grounds alone and what you actually see," she says.

Stability Vs Change

How might "active regulation" be distinguished from mere influence? One possibility is that it would produce stability. Yet some scientists who find Gaia interesting, such as Stephen H. Schneider of the National Centre for Atmospheric Research, have long maintained that some of the feedback loops that link living things and their environment are likely to be destabilising. Moreover, climate and the composition of the atmosphere have changed drastically since the Earth's formation, and many of the changes were harmful to life. The fossil record is punctuated by mass extinctions.

Margulis acknowledges that there is a problem recognising stability when ecosystems are continually changing, but she offers no solution. So is Gaia just a metaphor or an aphorism like "nature red in tooth and claw"? Only insofar as all science is metaphor, Lovelock parries.

Gaia, now approaching her third decade, does not resemble a living organism: she no longer has foresight, she no longer optimises and (according to Margulis) she no longer maintains homeostasis. What is left to distinguish Gaia from a conventional view of evolution in which organisms generally make the best of what they can get? How could a non-homeostatic Gaia ever be detected?

Is Gaia, then, anything more than the simple persistence of life? If so, she has yet to reveal herself. Her many lay followers, however, seem to be unwilling to hear that the goddess of their temple is nowhere to be found.

Tim Beardsley, *Scientific Amercian*, December 1989

Gaia In New Zealand

Gaia is alive and well in New Zealand, as the following abridged Department of Conservation report shows. It was prepared for a meeting of the Engineers for Social Responsibility by DOC botanist Philip Simpson. The full report is available from DOC.

The Sweet One Hundred

I believe that the Gaia hypothesis contributes in a positive way to the plight of the Earth and its inhabitants. If I need to seek one word as to...why I think Gaia is worth talking about, it is *education*. It is environmental education — Gaia addresses an *ethic*, contributes *understanding* and leads to *action*.

Despite our objective exterior, people are moved by strange inner forces — numbers among them — and there is no number more significant as a threshold of achievement than one hundred. My "Sweet One Hundred" is a tomato, a variety which I have grown on my land in Takaka. It's healthy, it's beautiful, it's delicious and it bears lots of small fruit. It's a tribute to the science of plant breeding to have forsaken corporate pressures and produced something of real value for ordinary people.

It's a change that is sympathetic to Gaia. But I have

chosen "Sweet One Hundred" [as my title] for another reason too, for it reminds me of Ken Keyes's book *The Hundredth Monkey*, a story and line of enquiry that I think is consistent with, and will one day be shown to be an integral part of Gaia theory.

Hundredth Monkey

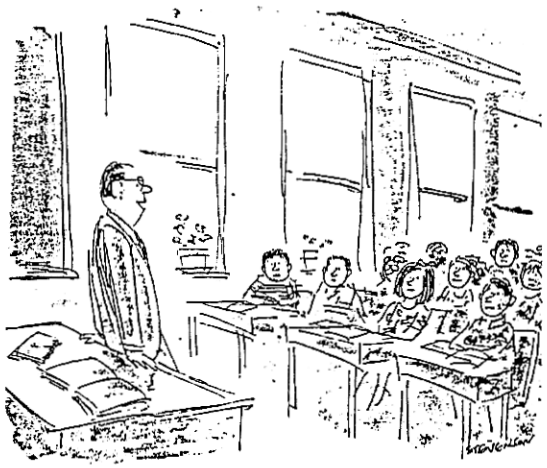
The Hundredth Monkey principle is about the spread or transference of ideas, attitudes or actions without direct contact between the individuals concerned but when a certain threshold of concentration is reached. It is the manifestation of "an idea whose time has come, an expression of Jung's collective unconscious or, in particular, de Chardin's noosphere, the envelope of life consciousness around the earth. It is inconceivable to me that the interconnectedness that is the cornerstone of modern ecological thought and of the Gaia hypothesis does not also involve consciousness.

As a scientist, I am cautious about accepting metaphysical forces as real. I do not wish to mystify the world as a means of resolving problems. Lovelock says in his latest book (1988) that the destruction of the English countryside can be blamed on the scientists and agronomists. I believe these scientists were operating under a particular world view, Science is a tool for social development, not an unconditional search for truth.

I believe that the emergence of the Gaia hypothesis, the Hundredth Monkey principle, Sheldrake's morphic resonance theory and others indicate a desperate need for new ethics, new understanding and new types of action. If this means broadening the perspective of science, I am all for it.

The Gaia hypothesis is a planetary expression of sustainability, a concept now at the forefront of international and national debate.

Such steps are needed because most people lack an ethical or spiritual dimension that identifies them with other living things and the environment at large. Science itself has fostered a separatist ethic by discouraging awareness of connections between disciplines and encouraging concepts of unlimited growth and superiority over nature.



"Today, people, we're going to review our commitment to the planet."

In relation to the need for a new world view, the Gaia hypothesis lays a foundation for changed approaches to understanding ourselves and nature. Gaia is a powerful stimulus for science to investigate ecological connection such as the noosphere and the recently discovered W-waves in plants.

New Zealand's Place

I would like to conclude by asking how the Gaia hypothesis relates to New Zealand and New Zealanders. We are obviously part of the whole, but there are particular aspects of unique importance. Our proximity to the hole in the ozone layer makes planetary geophysiology specially important to each of us. New Zealand has a unique set of physical and biological characteristics which seem to exaggerate human impacts. Extinction of species is exceptionally high as a result of their sensitivity to introduced animals, including people, and the loss of habitat. Forest removal has vastly increased the already high natural rate of erosion in our hills and mountains. In resource use, we have tended to ignore the need for sustainability.

Yet the people of New Zealand are strongly motivated to conserve, in recognition of the uniqueness of our resources, our dependence on them and our isolation from outside problems.

Maori have a conservation ethic at the heart of their world view, and many pakeha have developed a strong sense of place after only a few generations in residence. The sweet one hundred is bearing fruit but only a few of them are ripe.

The Gaia hypothesis provides a foundation for a new ethic on the relationship between people and nature, it provides objective understanding of ecological connections and human impacts, and it provides stimulus and direction for actions – for research, for technology, for sustainability, for personal development.

Dutton Dressed Up As Flim-Flam

Denis Dutton travelled up the Sepik River in New Guinea earlier this year to study tribal carving. He couldn't resist teaching the locals a few tricks.

It was another oppressive, lazy night on the Sepik River. As usual I was sitting in the men's house in the village of Yentchenmangua, smoking (strictly as a social courtesy) a cigarette rolled in pages of the *Sydney Morning Herald*. The Herald is the newspaper of choice when it comes to rolling cigarettes in New Guinea. The local rags, they say, just don't have the same fine flavour.

I could never quite get the hang of rolling a proper cigarette. Mine were always too tight to draw or so loose they fell apart. But the guys would help me, and the pungent smoke did keep the mosquitos at bay.

It was fun to read your cigarette before lighting up. I often had smokes wrapped in the arts section. Once some unlettered local handed me a cigarette that said "Rosenkavalier" along the side; another time I found myself puffing on a review of a new biography of Kafka.

One particular night the guys were unhappy. It has become generally too dangerous for tourists to travel the Sepik alone, and only one tourist boat still comes up the river. If there could be some way that it could be persuaded to stop in Yentchenmangua. Maybe they could sell more of their carvings...

"Why don't you try firewalking?" I suggested. The men were incredulous. What did I mean?

I explained we could build a big fire and I could teach them how to walk across it with bare feet. No magic; once they knew how to do it, they could incorporate firewalking into their traditional sing-sings and perhaps attract money-laden tourists to the village.

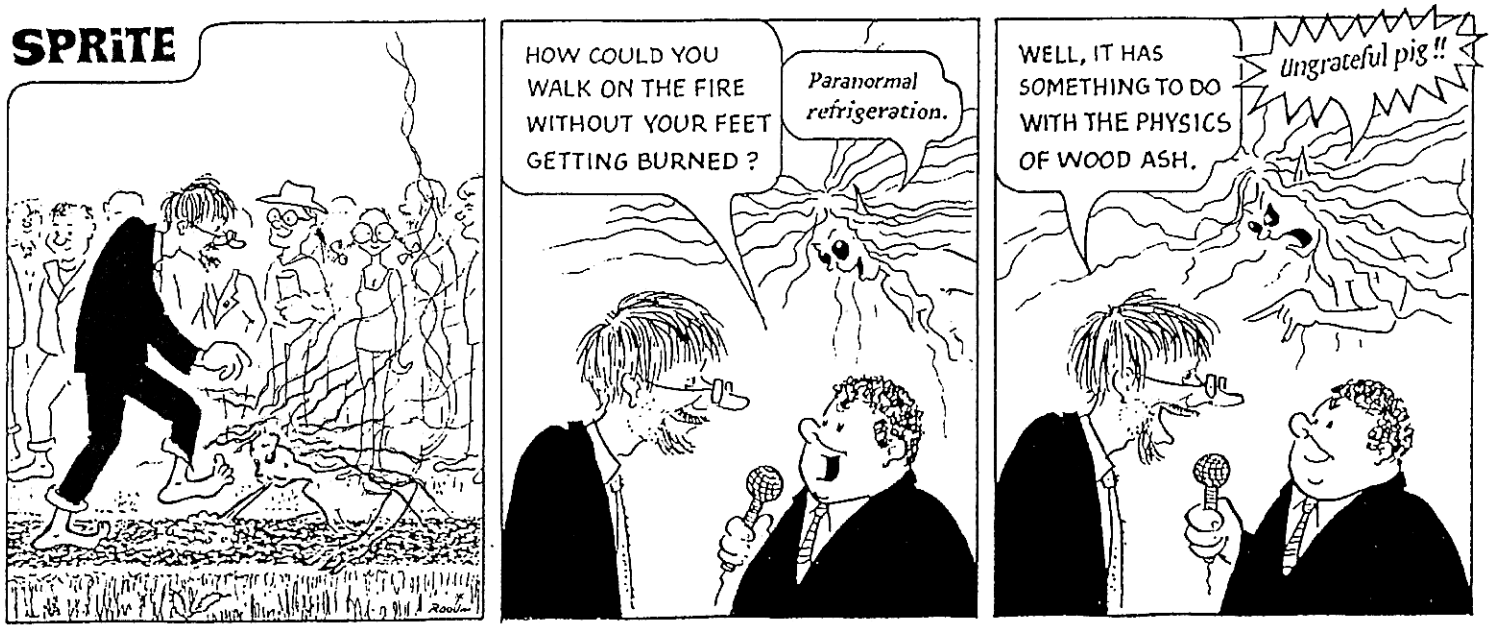
As I spoke, it began to dawn on me that I was perhaps biting off more than I wanted to chew. I was new in this remote village; maybe there were risks in trying something so unusual in New Guinea.

"In a couple of weeks" – I was beginning to sound more tentative – "we'll try it out, maybe."

A couple of weeks, nothing, they shot back. We'll have you show us tomorrow night! I was in up to my neck, or at least my ankles.

I had lived two weeks in Yentchenmangua, but I had not the seen the place so alive as the next day. Leo Sangi, an expert carver, and the village school teacher, Albert, eagerly helped to dig a shallow pit about three meters long and cut down a dead tree. Children helped us collect wood, and we located some disused oil from an outboard motor to give the fire an even start.

Twilight falls swiftly in the tropics, too swiftly that night: I was nervous. An enormous crowd had gathered around the



British & Irish Skeptic, Donald Rooum

fire as it burned down. Where had all these people come from?

I was naturally to lead the way. The flames had disappeared, but the coals were so hot no one could stand next to the pit. Cool and confident in my exterior bearing, inside – as always standing before a fire pit – I was scared to death.

Finally, I stepped off and went over the coals. This was greeted by total silence from the assembled villagers.

"Boy," I thought to myself, "not much fazes these people."

It was just another instance of cross-cultural confusion. The next person over the coals was Albert. When he stepped back onto the grass at the end, he was met with wild cheering and clapping. My own walk, it seems, had so stunned them, they were unable to react. (I modestly recalled reading about Maria Callas, who gave a performance of a Verdi aria that reduced her audience to dazed silence. Callas thought she'd done something wrong.)

After that there was much elbowing to get on to the fire. People who wear shoes have little difficulty firewalking; New Guinea villagers who often go barefoot find it completely harmless. I'm certain an eight-metre pit would have left them unburned.

When the last man had gone over, someone cried out, "Sampella meri!" – *Some woman!* – and it was the ladies' turn. They too crossed the coals with alacrity and the evening ended in a buzz of laughter and animated conversation.

Five weeks later, a few days before I was to leave Yentchenmangua, I sponsored a sing-sing and firewalk for my birthday. A pig was killed and we invited four other villages to join Yentchenmangua in dancing and feasting. Chanted music and dancing began about three in the afternoon and reached its high point at dusk, when the the costumed performers marched across the coals. The crowd was ecstatic.

Yet I was surprised when, after only about a dozen dancers had crossed the fire, the villagers poured buckets of water on the coals, bringing the proceedings to an abrupt halt.

It transpired that visitors from the other nearby villages wanted to walk on the coals as well. Yentchenmanguans, in typical Sepik fashion, were keen to keep firewalking as an exclusive copyrighted ritual, and so doused the fire before anybody else could try.

I have informed the tour company of the amazing Yentchenmangua firewalking – unique in New Guinea! – and I certainly hope they drop in on the village. My letter told no lies, but it didn't reveal every detail of the story, either.

Before leaving, I asked the men what they'd say if an anthropologist ever came by the village and wanted to know about the the mythological origins of Yentchenmangua firewalking.

"Oh, easy," they said. "We'll just tell them our grandfathers learned how to do it from a white god." The locals, I found out, have for years been amusing themselves by telling academic visitors cock-and-bull stories about Sepik history and mythology.

The people of Yentchenmangua gave me some marvelous insights into their carving art. I was happy to return the favour in small part by teaching them how to have fun firewalking – and leading anthropologists down a garden path of hot coals.

Food Fads — Food Follies

By Vicki Hyde

Is a high-fibre, cholesterol-free, non-dairy diet the answer to one's health problems? It may be for some, but for others it can pose a downright danger.

Exhortations to adopt a healthier lifestyle are having a good effect on New Zealanders' eating habits and exercise patterns. They are also tending to encourage a whole host of food fads and fallacies which can present more of a danger than an "unhealthy" diet.

Pamela Williams has seen this. She's had 30 years in the field of nutrition and is president of the NZ Dietetic Association. As deputy chairperson of the NZ Nutrition Foundation, she's been involved in the current campaign to encourage healthy eating habits, seeing it as a means of "putting some common sense back into food".

"Food is one aspect of [people's] lives that they can control and that they are 'experts' in, " Williams says. Unfortunately, changes in family lifestyles and a declining interest in food education has meant that few people really understand more than the basics of nutrition, she adds. Even the 'real' experts have problems, she admits.

"It happens so often that so many of the nutrition trends come from epidemiological studies, " Williams says. "It's easy to find an association using population studies."

The hard thing is proving a causal relationship. Williams recalls one WWII study in the UK where the health of the population was found to be directly related to the decrease in the number of silk stockings worn.

Spurious relationships and sweeping generalisations can cause real problems. In addition, people often take announcements of scientific research at the laboratory level and apply it to food on the plate.

"The science may be correct, but you can't necessarily translate it from the test tube to real life, " Williams maintains.

Fibre Fallacies

The rise in fibre consciousness was one area fuelled by epidemiological studies. Population studies suggested that a high fibre diet improved bowel function and reduced bowel cancers. People were encouraged to increase their fibre intake by eating more grains and cereals.

"When we started saying 'eat more fibre'...we were talking about adults, " Williams states. Fibre was seen as being of particular benefit for overweight, under-exercised adults. Public focus on the fibre issue has meant it's spread a lot further, however.

Williams was dismayed to find one child care centre where the diet was bran cereals, wholemeal toast, raw fruit and nuts. Not surprisingly, she remarks, the children were suffering from diarrhoea as their gut could not cope with the large quantities of fibre.

"Caregivers are often scared into it rather than using their own common sense, " Williams says. It can lead to what she has dubbed "malnutrition in the museli belt", with children failing to get adequate levels of proteins and easily digestible carbohydrates. The elderly are another group who can have problems with too much fibre. Ironically, "healthy" fibre can disturb their absorption of vital minerals, such as zinc.

Vitamin Hype

A great deal of money is spent each year in New Zealand on vitamins and dietary supplements. Much of it goes down the drain, say nutritionists, as most water-soluble vitamin intake is passed in the urine.

One can state quite emphatically that most people will derive no benefit at all from supplements, says the Nutrition Foundation. All the vitamins and minerals required can be provided by standard foods. They admit that it is difficult to combat people's perceptions of vitamins as a means of "balancing" the diet.

"How do you counter a Nobel Prize winner when he talks about Vitamin C?" asks Williams. Linus Pauling's advocacy of the vitamin as a cure for the common cold has gained a broad public following. There is no acceptable scientific evidence to back up the claims. This hasn't stopped 12% of the population taking it in one form or another as a supplement. The problem with taking large quantities of Vitamin C is that the body's biochemistry adjusts to cope with the massive amounts of ascorbic acid. Should the person stop, they often end up with the vitamin-deficiency disease scurvy beacuse their body has be-

come reliant on the high levels of vitamin.

Vitamin B6 has been popularised as a treatment for problems associated with premenstrual tension. Again, there is no accepted evidence for this. The daily recommended allowance is 2 milligrams, but people have been known to take as much as 250 milligrams a day. In high concentrations, B6 affects the nerve endings, causing loss of sensation in the extremities.

Vitamin A is another vitamin often taken to excess. It can be easy to spot, as high levels of carotene tend to turn a person yellow. It's a fat-soluble vitamin, being retained in the liver, and people have died through excessive self-dosing.

"Many of them take supplements without knowing what the dangers are, " Williams observes.

Allergies And Intolerances

"It's a fashionable thing to have a dairy food intolerance, " notes Williams. Concern about fat in the diet and increasing emphasis on allergies has meant that more and more people are adopting non-dairy diets.

Cutting down on fat, such as through using low-fat milk, can be a good thing, but again there is a high degree of misinformation, according to Williams. True dairy allergies affect about 2% of the population, with milder intolerances often occurring for only short durations.

Williams has been particularly worried by a trend for pregnant and breast-feeding women to avoid milk. There is the "urban legend" that if they drink milk, their babies will contract dairy allergies. Williams was also disturbed to see non-fat milk given to geriatric and cancer patients in a local hospital. Most of these people were suffering from a wasting disease and needed the benefits of whole milk. Children, particularly under the age of five, need whole milk as it is an important source of calcium, vitamins A and D, and energy.

There is increasing interest in "raw", untreated milk as a "natural" product that is allergy-free. As with many health claims, there is no scientific evidence for any benefit from raw milk. There is, however, concern about the dangers of contamination in unpasteurised products. Although the provision of raw milk and raw milk products is illegal, they are appearing more often on health food shelves.

One study in the UK recently looked at people's allergic reactions. Drops of distilled water were used to test allergic reactions and, when the subjects were told the water was a substance to which they were allergic, an allergic response resulted. Allergy testing has become a big business in the UK and looks set to do well in New Zealand.

Health Fraud

As a member of the National Council Against Health Fraud, Williams is familiar with many of the claims put forward by health food advocates.

"Somebody is making a lot of money out of people's insecurity and lack of knowledge, " she says. She cites the case of "pond scum" — spirulina alga-based supplements. It would cost over $200 and take 3.5 kilograms of the alga to reach the recommended daily allowances of vitamins and minerals, she states.

"Unfortunately the community doesn't have the scientific background or evaluation to make an informed decision, " Williams maintains. As such, they can be vulnerable to claims clothed in technical language uttered by people of apparent learning. Often scientific language is teamed up with traditional jargon — "free radical scavengers and organ builders" — to provide a semblance of medicinal standing.

It's not just limited to alternative approaches. Nutritionists have been amused to see avocados touted by their marketing authority as a "cholesterol-free" fruit. Avocados are indeed cholesterol-free, but they also have a high fat content.

A less amusing matter has seen the NZ Dietetic Association protest the appointment of a naturopath to the West Auckland health district. The association was concerned at the use of public funding for non-qualified alternative practitioners, particularly given that the naturopath was to provide nutritional advice. It warned of cases where dubious alternative practices had led to people requiring hospitalisation.

Willaims concedes that sometimes alternative approaches have validity, in that many problems respond to time and the placebo effect.

"What concerns me are people, and particularly children, who do not have control over their lives, " she adds. Children and elderly dependents often have no choice in following family food habits. When those habits are based on misconceptions or misinformation, they can suffer unnecessarily. Ω

Vicki Hyde is editor of the New Zealand Science Monthly. this article appeared in the April 1990 issue.

News Front

Failure haunts ghostbuster

By KINGSLEY FIELD and FIONA BARBER in Hamilton

The man at the centre of the "ghostbuster" controversy last night admitted the scheme had fallen apart because of "fundamental mismanagement" on his part.

Kevin Barnard, aged 28, a fourth-year Waikato University student who took the parapsychology study proposal to the Department of Labour for approval, said the buck was stopping with him.

"Someone has got to stand up and say, 'I'm staying with this thing.' Everyone else has gone walkabout," he said.

In a 45-minute interview in the substantial penthouse flat he shares with seven other people on top of the former New Zealand Co-operative Dairy Co building in central Hamilton, Mr Barnard said he was now "flat out servicing debts," in an attempt to pay back the money from the failed scheme.

At least $90,000 was put into the scheme by the Labour Department under its Restart programme after it approved the scheme late last year.

Although Mr Barnard accepts that little was done on the project, it is now $58,000 in debt. Of that, $8000 is owed in wages to nine staff employed to conduct the research.

Mr Barnard said he was trying to establish a correlation between normal medical data and data obtained by Kirlian (aura) photography.

"It was fairly basic stuff, to some extent," he said.

"They [the research staff] couldn't see the point of what they were doing."

He said the initial programme put to the Labour Department was scheduled to run for 12 months.

"But to do a decent piece of research would have taken five to six years," said Mr Barnard.

He said that when he took the initial proposal to a Labour Department employment projects adviser in Hamilton last year, he was told the plan "seemed to fit the criteria — write an application."

It took four or five days to put together.

Mr Barnard said that although New Zealand was basically a Christian society with a belief in a holy spirit it did not want to accept that someone was studying other forms of spirits outside of theology.

He said his own personal research was the only project to be completed, but he did not want to talk about it except to say that it was a piece of computer hardware to conduct parapsychological research not previously undertaken.

"I'm not ready to talk about this one yet. It's been picked up by someone else offshore."

Mr Barnard said he was born in Dunedin, but lived most of his life in Tauranga.

He spent a year at Massey University, studying philosophy, and the past four

Mr Barnard

years at Waikato University, studying philosophy, psychology and "a mixture of subjects."

"I was going to have a crack at completing my degree this year, but I have been flat out servicing debts."

He said he had previously gone bankrupt, running a group of small businesses in Tauranga — construction, cobble-stoning and advertising.

Mr Barnard seemed at ease and somewhat bemused at all the media and public attention.

The Waikato University psychology lecturer named as the chairman of the Kevin Barnard Trust Foundation, Mr Richard Aukett, could not be reached yesterday.

The person who answered his home telephone said Mr Aukett had "left the island" and would not be back for a fortnight.

In the latest "Experts File," released this week by Waikato University, Mr Aukett's specialty subjects are listed as love, sexuality, intimacy, meditation, extra-sensory perception, transpersonal psychology-spirituality, the future of sport and welfare, rebirthing, primal therapy, psychotherapy and the Gaia hypothesis, with research interests of personal transformation through love and spiritual development.

Bethea Weir, education and legal officer of the Northern Clerical Workers Union, said yesterday that the union had begun proceedings under the Labour Relations Act to recover the $8000 in wages owed to Mr Barnard's research staff.

"Although I'm super hopeful of getting it, I doubt very much whether there is any money in kitty."

A senior Employment Service auditor has been instructed to comb the background to the project and results will be included with a review of the other 1177 Restart schemes.

The Minister of Employment, Mr McTigue, wants to know whether there are grounds for legal action.

Sceptics rubbish ghostbusting

WELLINGTON (PA) — The Skeptics Society today rubbished the Labour Department-funded "ghostbusters" scheme, calling it "absurd".

Spokesman Denis Dutton said the project was one of the most outrageous the society had encountered.

"Contrary to what the Labour Department in Hamilton may believe, quantum mechanics is not an advanced kind of auto repair," he said.

"In order to even discuss it you'd require high degrees in mathematics or physics to advanced university level.

"It's our understanding that the participants in this scheme would require IQs of at least 150. Though we have no way of knowing the IQs of the organisers it's quite clear that the people who funded it in the Labour Department don't have IQs of 150," said Dr Dutton.

Average IQs are around 100.

Employment Minister Maurice McTigue yesterday launched an inquiry into the Restart scheme, set up last August with $90,000 of the department's funds to identify ghosts, track them down and photograph their auras.

The project was canned at the end of March.

Dr Dutton said it was not the department's job to fund research as that was better left to universities and the DSIR.

"It's an absurd scheme involving quantum mechanics, kirlian fields. It is very old hat — they simply don't exist as paranormal phenomona.

"We start off to equip people with skills for worthwhile jobs. What would one do after this — palm reading? Clairvoyancy? Levitation?"

SCHEME A PHANTOM, PAGE 24.

Application riddled with mistakes

WELLINGTON

Employment Minister Maurice McTigue yesterday released the 24-page application for the "ghostbusters" Restart research scheme in Hamilton.

Mr McTigue has ordered a full inquiry into the $90,000 payout by the Labour Department on the project set up to investigate ghosts and poltergeists.

The application states all prospective employees would need IQs of at least 150 (genius level) and four or five people would be needed with PhDs, "of which we already have two on our staff."

In spite of this, the application includes many spelling mistakes and nonsensical statements.

Aotearoa is spelt "Aeteroa" or "Aetreroa" in places.

The first page of the application includes a section which says: "Through NZIP (the New Zealand Institute of Parapsychology) a maximum of 12 persons shell (sic) be employed from the long term, unemployed body of Aetrerоa's populous with a mean IQ of 150+. These persons will be devisable (sic) into three teams of fore (sic) persons per team.

"These person (sic) will be thrown to a large exstent (sic) into the deep end in which they will be set the task of investigating the most complex and new areas facing (sic) science today."

One paragraph says: "The individual will not be expected to learn 30 to 40 languages but will instead be working with one of the most advance (sic) (OCR) Optical Cariture Recondition Programs in the world. The Program will take hand or typed data into it and convert it to hexi, then into any other language. However it does not cover many other points to which the individuals will be tough."

Stage three of the project, according to the application, "is to be conduction by the institute in the greater populous of Aotearoa, ie Tarpoos (sic), morai (sic) magic, and there (sic) effect on the community as a hole (sic)."

The department took only 20 days to approve the scheme to employ 10 people as researchers, paying out a six-week wages advance of $20,760. It then provided monthly wage cheques totalling about $70,000 until the scheme was terminated. — NZPA

Seabed find

AP Miami

One of the Bermuda Triangle's deepest mysteries may be solved — high-tech explorers have located what appear to be the wrecks of five Navy planes that vanished off Florida in 1945.

The five TBM Avengers, four of which appear to be in excellent condition, were spotted in 225m of water, about 10 nautical miles off Fort Lauderdale, Florida, said Mr Robert Cervoni, managing director of Scientific Search Project.

"It was incredible, we were filled with excitement," said Mr Cervoni. "We rushed out to the library and tried to read everything we could about the Bermuda Triangle."

The exploration vessel Deep Sea, armed with sonar instruments and underwater cameras, made the discovery in early May while searching for sunken Spanish galleons. The company released the information yesterday after filing their salvage claim in Miami federal court.

Judge Kenneth Ryskamp granted the initial claim, although the Navy has been granted a chance to contest it, said Barbara Locke, a lawyer for the company.

The team's first priority is to send submersible robots down to the site to determine if the planes are indeed the so-called Lost Squadron, which disappeared on December 5, 1945, during a training flight from the Naval Airbase in Fort Lauderdale.

No trace of the planes or the pilots was ever found after they apparently became disoriented over the Atlantic. The disappearance helped to build the myth of the Bermuda Triangle, an area bounded by Bermuda, Miami and Puerto Rico where ships and planes seemed to vanish mysteriously.

Back Out Gracefully

by Russell Dear

An attempt at chiropractic consultancy in Southland schools didn't do too well after their dubious practices were debated by the local community.

Two local chiropractors contacted 30 Southland schools to offer free scoliosis screening for pupils. The following notice was circulated to parents at one school which took up the offer:

We have received the following notice from Dr. J. McKay and Dr. S. Porter – Chiropractors in Invercargill. The screening will take three minutes per child and is free. It is open to all age groups within the school... Scoliosis is a lateral (sideways) curvature of the spine. It affects children's (people's) overall health and development. It may also possibly lead to progressive spinal deformity. Early detection and appropriate treatment are very important.

The procedure for screening is simple: the chiropractor or Nurse looks at the child's back standing and bent forward. Any abnormality noted may mean a problem and the child should be seen for further evaluation. If your child has a possible curvature, you will be notified immediately.

Reading this notice from my child's school, and the follow-up which stated that 155 of the approximately 200 pupils on the roll had opted for screening, gave considerable cause for concern. How could schools consider an offer which was quite clearly an attempt to tout for business? After contacting the school, I felt that the only possible reason was ignorance on the part of the principal and the school's board of trustees.

It is not surprising that such ignorance exists; it is shared by the general public. Indeed, teachers and others in the education service may be forgiven for such ignorance. Among the benefits they may claim under the Education Benevolent Society's health insurance scheme are the costs incurred in treatment and consultations given by chiropractors or those registered with the New Zealand Register of Acupuncturists Inc., the Association of Natural Remedies Inc., the Register of Natural Therapists – Naturopaths and Classical Homeopaths, the New Zealand Homeopathic Society and others.

"What's all the fuss?" you may ask, "It surely can't do much harm." Possibly not directly, but imagine the alarm caused to parents by a follow-up letter suggesting "possible curvature". Especially in light of the statements in the original circular that, "it affects overall health and development" and "it may also lead to progressive spinal deformity."

These are emotive words which play on fear. How many parents would worry if they were notified that their child had freckles (these may also affect overall health and development) or played rugby (which may also lead to spinal deformity)?

Few people understand that chiropractors are only concerned with subclinical scoliosis. According to Southland Area Health Board orthopaedic surgeon Murray Fosbender, in the *Southland Times*, "although four percent of people have some degree of spinal curvature, only three in 100,000 need active treatment. So only a few of the large number of cases of curvature of the spine that may be picked up are going to progress to any significant degree."

There is also no evidence that manipulation or other chiropractic remedies help the curvature.

Through contacting the schools, local doctors, physiotherapists, members of Skeptics, and the *Southland Times*, the issue was well debated locally.

Only those schools which did not seek advice or which acted prematurely took up the chiropractors' offer. Of 30 schools which were approached, fewer than 10 bothered to reply and only three have agreed to scoliosis screenings. Indeed, in light of the debate, even this small number may even be reduced. Either way, local people are better informed about the whole issue.

Incidentally, there is an informative and interesting chapter on chiropractice by E. S. Crelin in *Examining Holistic Medicine* (Prometheus Books, 1989).

Russell Dear is an Invercargill skeptic.

Hokum Locum

Dr John Welch

It's beginning! I have long wondered when our health system would give in to public demands for fringe medicine, and I see that the West Auckland Health District has appointed a part-time naturopath offering alternative or complementary methods for the treatment of smoking, alcohol misuse and high blood pressure and including nutritional advice. This at a time when the Board's own nutrition services are struggling for funding.

We are told that the naturopath's appointment followed an "extensive consultative process" between the West Auckland District Health Committee and the local community. This raises the interesting question of how far do we have to respond to community pressure for the employment of unproven techniques? Current medical practice has a scientific basis and any proposed additional treatment systems such as naturopathy, should have to come up to the same exacting scientific standards.

New Zealand General Practice 26/3/91

In an article in *NZ Women's Day*, Annie Whittle claimed that "she has no doubts" that her rheumatic symptoms are "triggered by increasing electro-magnetic radiation (EMR)" from a local TV and radio transmitter. The article goes on to implicate EMR as a cause of cancer and having "an inhibiting effect on the immune system". Two cases of melanoma and one of hypertension are alleged to "have been made worse or accelerated by the EMR"[1].

This is another good example of the eternal quest of all of us to find some cause or explanation for ill-health or feeling unwell. EMR is given out by nearly every electrical household appliance and these sources are far more important than distant aerials. Ultraviolet radiation (UV) is a far more important health problem in Australasia and is the risk factor for melanoma, not EMR.

Some 85% of all hypertension (raised blood pressure) arises de novo and has no known cause so it is frivolous to attempt an implausible link with EMR. A recent Australian study[2] found that any effect of EMR "would be very slight" and another one of people exposed to radiation from radio, television, satellite and microwave transmission towers showed no evidence of genetic damage[3].

However, a book reviewed recently in *New Scientist* makes the sensational claim that a conspiracy exists to cover up the threat to health from EMR given off by power lines, computer screens (I'm doomed already!!) electric blankets, radar and other military devices[4]. Very little hard evidence is provided and it has become fashionable for fanatics to dream up conspiracy allegations to explain why nobody takes much notice of their excessive claims.

1. Annie Whittle's Fight for Life. *Woman's Day* June 20 1990, p8-9 2. Powerline Argument remains unresolved. *NZ Doctor* 15 April 1991 3. High-frequency radio towers cause no genetic damage. *Marlborough Express* 16/8/90 4. Book review. *New Scientist* 23 June 1990 p45.

In Issue 16, I mentioned the absurd osteopathic technique of cranial manipulation. Readers of a recent article in the *NZ Women's Weekly* will be interested to know that their jigsaw of 29 skull bones are pulsating at a rate of 12-14 times a minute but that "this movement is very tiny and can be felt only by trained (not skeptical!) hands". An osteopath can detect an imbalance in these movements and by massaging the skull can re-establish a "normal cranial rhythm".

The most incredible statement in this farrago of nonsense is that the cerebrospinal fluid (CSF) is "thought to be pumped up and down the spine by the contractions of the skull". The circulation of the CSF has been extensively studied by physiologists and has nothing to do with pulsations of the skull bones which exist only in the fevered imagination of self-deluded osteopaths. If this the best that the *NZ Women's Weekly* can come up with we will have to make them a permanent award for gullible journalism. Their pages will, however, continue to provide rich resource material for psychologists.

Danielle transformed by cranial osteopathy. *NZ Women's Weekly* Sept 17, 1990.

The latest quack fad is the obsession that mercury leaking from dental amalgam is causing illness ranging from multiple sclerosis, arthritis, and chronic fatigue syndrome, to Meniere's disease (a disorder of balance).

This belief can be traced to a study reported in *The Economist*[1] and again in *The Press*[2] where a deterioration in

the renal function of sheep was reported after their teeth were filled with 12 amalgam fillings. My dentist tells me that he would never do more than 3 fillings in one session and I intend to duplicate the sheep study by comparing renal function before and after this number of amalgam fillings in young people.

Amalgam is a complex alloy containing mercury, tin and silver. Since its introduction by the Chinese in 659 AD it has been extensively studied and dentists in NZ would fit about 4 million such fillings per year. Small quantities of mercury are released from fillings but the amounts are small compared with dietary sources and are far less than the amounts required to produce toxicity. Many reviews have confirmed the safety of amalgam fillings[3,4].

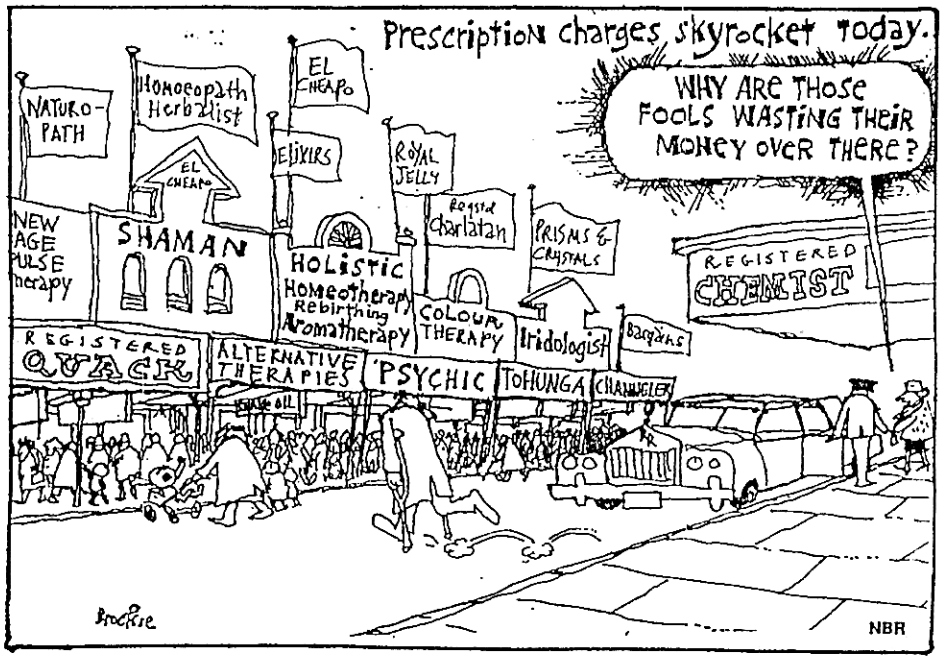
In Tauranga, a Dr Godfrey claims, however, that "many illnesses can be attributed to the amount and condition of mercury contained in amalgam fillings"[5] and quotes examples such as chronic fatigue, myalgic pains, immune suppressive states, coldness, short term memory loss, food allergies and parasthesiae. In fact, none of these are illnesses are diagnoses but are subjective complaints only.

Dr Godfrey rejects research to the contrary as "anecdotal" but I note he goes on to "quote many of his own case studies to support his theories" and asserts "we are living in a toxic soup". Dr Godfrey continues in much the same vein in a letter to the *NZMJ*[6] where he criticises skeptical thinking, invokes the familiar conspiracy theory and says "we might do well to consider that approximately 50% of French doctors...have homeopathic qualifications" and "over 30% of German general practitioners use EAV and homeopathy". So what! All that tells me is that these countries have a lot of self-deluded doctors.

Dr Godfrey runs a chelation clinic and has been treating patients with Dimaval (2,3-dimercaptopropan-1-sulphonate), a mercury chelating agent. The diagnosis of "mercury poisoning" is made on history and clinical presentation (both highly subjective), hair analysis (mercury levels can be either high or low!) and measurement of dental galvanic current by a specially designed dental ammeter. These have actually been tested and readers will be interested in the following reference[4]:

When two of these machines, one from a medical practitioner and one from a dentist, were used independently to measure 37 restorations (ie fillings), it was found that there was no correlation between the instruments' readings. Furthermore, readings could be altered 100% by the presence or absence of cavity varnish, and were also dependent on the prior pH history of the mouth. Large negative readings were also obtained on teeth with no restorations. Whatever these instruments are reading, it is certainly not an index of mercury poisoning.

Anyone treating patients with drugs for mercury "poisoning" that doesn't exist is running a risk of a charge of malpractice. The use of dental "amalgameters" is a scientific absurdity and the NZ Medical Council should prohibit the use of these, Vega testing machines, EAV machines and anything else which is operator-dependent and without scientific basis. Likewise, any dentist who removes amalgam fillings for mercury "poisoning" should be professionally disciplined.



1. Mercury in teeth. No silver linings. *The Economist* Feb 2 1991 2. Safety of mercury fillings questioned. *Christchurch Press* 22/2/91 3. Safety of dental amalgam: an update. *Journal of the American Dental Association*. Vol 119, July 1989 p204 4. Why Amalgam? *NZ Dental Journal*. Vol 87, Number 388 April 1991. 5. Doctor joins controversy over amalgam fillings. *NZ Doctor* 2 April 1991

Dr John Welch is a medical officer with the RNZAF.

Book Reviews

Self-Improvement Courses; Zealand Publishing House, Tauranga

Reviewed by Bernard Howard

Feeling inadequate? No matter in which department you fall short of your ideal, the Zealand Publishing House has the answer to your problems.

Benefit cuts hurting? Scrape together $15 and buy *Think and Grow Rich.* Hubby's attention beginning to wander? *Fascinating Womanhood* will bring him panting to your bedside. Overweight? Worried about your health? No fewer than five books of advice for you, but don't try to follow them all at the same time, they are probably mutually contradictory.

Perhaps you take the longer view, and worry about things beyond the grave? *Life After Death* is yours for $15.

Really, though, why mess about picking and choosing? Aim high, and send a cheque today for all the fifteen books currently advertised by this firm of public benefactors. $219 is little enough to pay for perfection.

♦ ♦ ♦

Do Dogs Need Shrinks?, by Peter Neville; Sidgwick & Jackson, 1991; $24.95

Reviewed by Vicki Hyde

My first reaction on seeing this was "it has to be American", but the British are apparently just as loony when it comes to pet psychology. Neville is a BBC pet therapist and does house-calls "to treat the most disturbed cases".

It seems a little under-handed for a self-confessed dog shrink to use anti-male hormone injections to establish a dominance relationship betwen sparring canines in the same household. Not much psychology involved there. Nor is there much pyschology – or sense – in recommending homeopathic remedies for dogs "needing" sedatives.

Much of this book is restatement of simple, basic commonsense rules. Train a dog using reward, rather than punishment. Mock sexual behaviour is pretty common in the average male dog and not something to get into heavy guilt trips about. You could find shorter, cheaper guides to dog behaviour.

Neville's writing is not particularly good, although the many case histories themselves can be entertaining. Most of them, however, shed more light on the human condition, rather than the canine. I don't think *I'd* worry about my dog if she howled through "Neighbours" – I'd probably join in. But then, perhaps we'd both need shrinks...

NZ Science Monthly, May 1990

♦ ♦ ♦

Touch Wood: An Encyclopaedia of Superstitions, by Carole Potter. Michael O'Mara Books. $39.95.

Reviewed by Denis Dutton

It would be pleasant to be able to say that while this catalogue of superstitions may not have induced belief, it was at least a charming entertainment. Alas, Carole Potter's scissors-and-paste compendium is one of the most tedious reads I've encountered.

Like religions, there is something self-cancelling about superstitions – there are just too many of them. There seems to be hardly a herb, animal, or action that won't bring bad luck, or good luck, or both, and from A to Z, they're all here.

So much of the material is oddly scholastic. Among "the meanings of plants," we find that mushrooms mean suspicion and rhubarb means advice. How we might use such information is left unexplained. If you have a mole on your hand you have a practical nature, but if the mole is on you temple you're sure to have happiness in love. Cloves denote dignity, and saffron means, according to Potter, "Don't overdo." Many cooks would agree.

If you hear an owl hoot, it may foretell death in the family, so to counteract this, wear your clothes backwards and pull out your pockets. Make a wish before you cut a banana. If you find a Y-shaped mark at the end of the fruit, your wish will come true.

The book is badly written, with an uncertain tone that slides between light-hearted irony and half-acceptance. But I suspect a careful reading of it would be an excellent cure for superstition. Seeing the whole motley mess all together makes it hard to accept our own pet superstitions.

There is one claim here I can fully endorse. While I'm not sure if, as Potter reports, it foretells good luck if a bee flies into your house, at least we can all agree with her that it means bad luck to be attacked by a swarm of bees.

Randi Needs Help

The following is a letter dated May 11, 1991 from magician James "The Amazing" Randi to friends, sympathisers, and the skeptical community. It came to us via the international skeptics computer bulletin board.

Uri Geller has announced that he intends to sue me "in every state and in every country." He currently has four lawsuits against me, two of which I have won (at a cost of over $155,000 in legal fees), and one of which he has told me he is bringing in Japan, with one just served on me in California. This latter case concerns two statements I made about him in response to questions by a reporter for the *International Herald Tribune*: (1) Geller has fooled some scientists, (2) His tricks are the same kind that used to be on the back of cereal boxes when I was a kid.

It appears that this is a frivolous lawsuit, and Geller may be using the legal process both to break me financially and to silence me from speaking what I know to be the truth. I have a right under the Constitution to fairly say what I know to be true, and I will not surrender that right.

I have resigned from the Committee for Scientific Investigation of Claims of the Paranormal, since the Committee is always named in the suits, and in order that CSICOP will be spared further involvement in such suits if and when I again mention Geller's name.

This has been a very difficult thing for me to do.

Should these actions continue, I will be forced into silence from my inability to support further legal costs. CSICOP has been silenced, and I'm next, it appears.

I now have no further funds to continue my defense. It has been suggested that a legal fund might be set up for my defense against these harassing actions by Mr. Geller. I hope that can be set in motion.

I'm in trouble, folks. I need help.

James Randi

Rick Moen, secretary of the Bay Area Skeptics has the following comments (while noting that he is speaking only for himself, and specifically not purporting to speak for Bay Area Skeptics, CSICOP, or the Network of Local Skeptics' Groups):

The skeptics' movement owes a monumental debt to James Randi. Now, it is quite simply time to begin paying him back.

Randi was one of the founding members of CSICOP, has been easily its most prominent member, and is to this day perhaps the greatest bulwark of the skeptics' movement. I find it difficult — and dispiriting — to imagine the skeptics' movement without him.

Most skeptics will have been unaware of this series of lawsuits, which has been sapping Randi's time, energy, and funds for the last couple of years, with Uri Geller's vastly greater resources making possible a very effective campaign of attrition.

Gratitude is only one reason why skeptics should help Randi. There's also self-preservation. If Randi can be beaten down this way, you and I may well become quick, easy, and obvious next targets. The time to put an end to this sort of thing is now. Unfortunately, time is short, since at least one of these lawsuits must be answered later this month.

No one else is coming to Randi's defence. It is up to us.

Get The Word Out. There are, of course, the local skeptics' newsletters, but also skeptics have more friends than you may realise. Contact your local magicians' society, members of the press, and sympathetic notables.

Offer On-The-Spot Help. A group of skeptics near a museum of magic have been asked to visit it and acquire Polaroid photos of magic tricks on the backs of cereal boxes, from the time when Randi was a kid. These photos may end up being worth — literally — millions of dollars in court. Also, if you know of sympathetic law firms in your area, please put them in touch.

Encourage Contributions. As I write this, arrangements are being made to set up a trust fund solely for Randi's legal defence.

Fight Back. Is Uri Geller by some chance coming to your area? Do you have perhaps an untapped flair for making picket signs? (Please, be very, very careful and be scrupulously legal, though.)

Organise. Become active in your local skeptics' groups, and encourage those groups to join forces to oppose these sorts of intimidation tactics. Get in touch with your fellow skeptics. Write articles. Participate.

Rick Moen, Secretary, Bay Area Skeptics, 4030 Moraga, San Francisco, CA 94122, USA

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Forum

Who's An Old Bag, Then?

Even the most republican-minded skeptic must admit that monarchical feelings sometimes have their uses. New Zealand was recently visited by Jacqueline Stallone. She arrived in a blaze of publicity, widely airing her views on astrology and other psychic matters.

And then....oh dear, on the *Holmes* programme, several critical remarks about our own dear Queen, culminating in the insult heading this note. From that time, Mrs Stallone has been dumped by the media, and we have heard and seen no more of her nor of her paranormal views.

Who says Royalty doesn't have its uses?

Bernard Howard, Christchurch

Yet Another Logo

I was thinking of the way Canadi<n airlines avoid coming down on either side of the English vs French controversy. Then it occurred to me that we could do the same thing about our spelling, and generate a logo at the same time:

s<eptics

Hugh Young, Porirua

Having It Both Ways

I read with interest the review of the Watchtower Bible and Tract Society book, *Life — How Did It Get Here? By Evolution And Creation*, reviewed by PAB in the December 1990 issue of the *NZ Skeptic*. There are many, many items in this book with which skeptics could disagree.

One which I was very intrigued with is to be found under the heading "Making A Choice". It reads, "The future has already been determined by the Creator". Further down the page we read, "God gave us the freedom to choose whether we would serve him or not". How can we have freedom to choose if the future has already been determined by the Creator?

Alf Hamlyn, Dargaville

Skeptical Agenda

Several NZSCICOP members took part in a four-lecture series on the sceptical view of the world organised by the Wellington WEA late in 1990. The course was put on in response to astrology and other New Age subjects that the WEA had offered in recent years.

There were session on evolution and creationism by Dr Gordon Hewitt, probability and evidence by Tony Vignaux, scientific UFOlogy and crop circles by Fieke de Bock, and a philosophical view of scepticism by Dr Ken Perszyk. The course was well attended and stimulated enough interest that a similar course might be offered again this year.

In December, Paul King attempted to crush the fingers of a number of Wellington members when he demonstrated a mismatch between "knowledge" and "belief". Our reaction times were measured and then our courage and rationality challenged when Paul placed our fingers below a heavy suspended weight which was released in plenty of time for us to react. He didn't have many takers!

Paul emphasised the difficulty of getting college students to think rationally and critically. Members agreed that it was of primary importance to get critical thinking into school, and it was hoped that this theme could be taken up later by the group.

In March, Dr Bob Brockie, a biologist and animal ecologist with the DSIR, spoke on "The Stone-Age and Medieval Hangover".

Bob pointed out how distressingly current remain the old theories about the operation of the universe – demons causing illness and death as punishments, the four-element theory of alchemy and astrology.

He showed how the development of modern scientific methods of healing, tested by clinical trials using statistical techniques and by a rigorous system of peer review still had not eliminated the last traces of superstition. Though they may claim to be the heralds of the "New Age", practices like homeopathy and biodynamic farming are merely residues of these ancient primitive ways of thinking.

Discussion was prolonged, but not enlivened, by an interloper who insisted that ESP had been proved to work by quantum theory. We disagreed.

Tony Vignaux

Going up in Smoke Not for the Sqeamish

"Keep an eye out for an excellent QED [BBC TV] programme on spontaneous human combustion," wrote the Editor of the *British & Irish Skeptic*. That was in July 1989. On 15 February,

1991, TV1 viewers at last had an opportunity to see it.

Starting with the amazing, apparently supernatural burning of a solitary person in a closed room, we were led through a series of hypotheses, scientific tests, computer simulations, and practical demonstrations using animal bones and fat, and even an old armchair. The emphatic conclusion was that the three cases of apparent spontaneous combustion investigated could all be explained straightforwardly on the basis of existing knowledge of the physical world. No yes-butting around, or letting the mystics have the last word.

In all cases, a source of ignition was close at hand – electric fire, gas cooker, and suchlike. Once ignited, the burning clothes on an unconscious person can generate enough heat to evaporate water from the outer parts of the torso, and then act as a wick on which the body fat will burn for several hours. This explains why in many of these cases the limbs are not consumed, while the torso, including bones, is reduced to ash. The heat produced causes fat to be deposited on the ceiling and walls, and plastic objects, especially those in the upper parts of the room, are melted.

Bernard Howard

This tape is available on loan from the Skeptics' Videotape Library Manager, Alastair Brickell, RD 2 Kuaotunu, Whitianga. Please send $4.00 to cover costs.

A Creationist Fable

In August 1989, the Christchurch *Press* published two articles from *The Economist* which were highly critical of "scientific" creationists and their "discipline". The articles sparked a correspondence under the heading "Evolution", which attained Guinness Record proportions – 118 letters, involving 52 correspondents over 86 days.

A persistent creationist, D. H. Karst, cited "bears changing into whales (Nov 28) as an example of an idea he intimated had become part of evolutionary explanation. My initial reaction (Dec 5) was that Karst had found it necessary to resort to ridicule and nonsense. No evolutionist, to my knowledge, has ever suggested that whales have evolved from bears. (The fossil evidence suggests the former arrived some 20 million years before the latter.)

Karst retaliated (Dec 8) with the statement that I was attacking Darwin himself, and proceeded to inform us that "Darwin cites the case of a North American black bear observed swimming with open mouth catching insects in the water". He then quoted directly from *Origin*: "...I can see no difficulty in a race of bears being rendered, by natural selection, more and more aquatic in their structure and habits, with larger and larger mouths, till a creature was produced as monstrous as a whale".

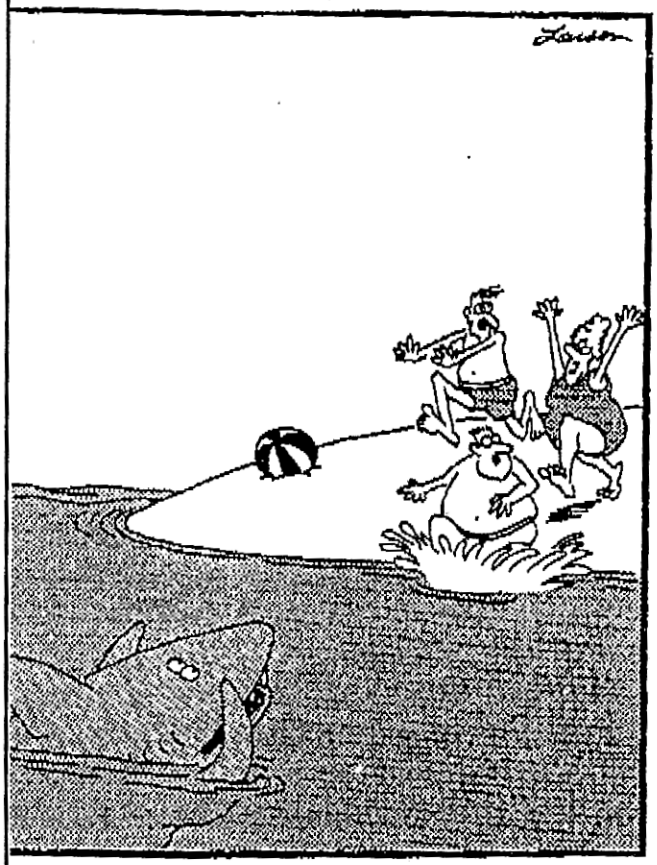
A careful reading of *Origin* indicates that Darwin's main reason for referring to the black bear was to illustrate a peculiar habit which has the potential to provide natural selection with the opportunity to start a new line with a markedly different mode of life. Nowhere does Darwin suggest that bears did in fact give rise to whales.

Karst claimed that Darwin "was forced to delete" the bear scenario from later editions "but that correspondence with colleagues later in life shows he still firmly believed in the bear-whale case". I sought out Darwin's correspondence on this matter.

In an August 1860 letter to a critic of natural selection, Darwin writes:

You object to all my examples. They are all necessarily conjectural, and may be false; but they were the best I could give. The bear case has been well laughed at, and disingeniously distorted by some into my saying a bear could be converted into a whale. As it offended persons, I struck it out in the second edition; but I still maintain that there is no especial difficulty in a bear's mouth being enlarged to any degree useful to its changing habits."

In 1861, Darwin thanked a supported for being "so heroically bold" as to defend his bear illustration. "It is laughable how often I have been attacked and misrepresented about this bear."



"Bear! Bear!"

Twenty years later, Darwin pointed out that the example dealing with the black bear was "omitted in subsequent editions, owing to the advice of Prof. Owen, as it was liable to be misinterpreted; but I have always regretted that I followed this advice, for I still think the view quite reasonable".

It is clear Darwin was only too well aware of the misinterpretations placed on his black bear scenario and, interestingly, encountered a level of ignorance and obstinancy which is still endemic among anti-evolutionists today. The attitude is no better illustrated than in the 1989 *Press* correspondence on evolution.

Warwick Don

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Next Issue:
Organics
Geller vs Randi

Changing Your Address?

We don't want to lose touch with members. Please tell us if you are going to move. It is depressing when our mail to you is returned marked "Gone away, no address".