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N.Z.C.S.I.C.O.P. CONFERENCE

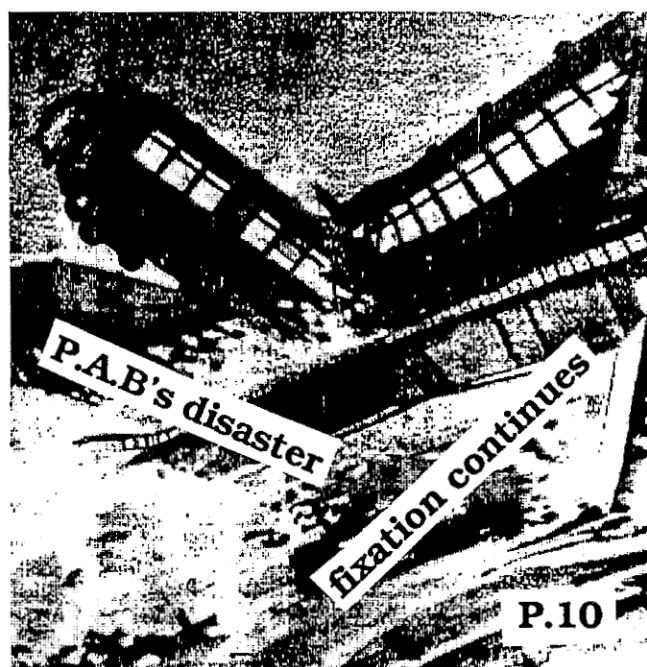
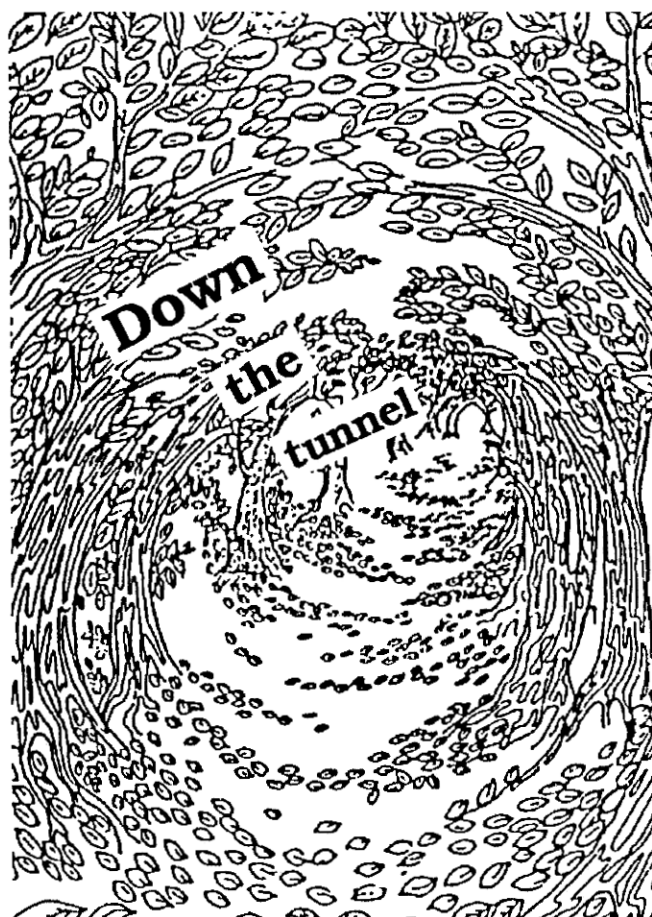
17-19 August 1990,
Massey University, Palmerston North

Paranormality for Fun and Profit

Readers are invited to submit **amazing**, never-before-revealed evidence that there are more things in heaven and earth than Skeptics are normally prepared to admit: e.g.

The Holy Shroud of Christchurch
Un-retouched photographs of the Lake Taupo
Monster (Poie).

The evidence should be submitted at the conference. A small, but tangible, prize will be offered.



Down the tunnel

Sue Blackmore

Is there a scientific explanation for the near-death 'tunnel' experience? This article was first published in the *British & Irish Skeptic* and is reprinted with the kind permission of Dr Blackmore.

Near-death experiences (NDEs) have been widely popularised and a core element of them is the tunnel experience (e.g., Moody 1975). The person seems to rush through a long dark tunnel with a bright light at the end and entering into this light can be a particularly vivid and life-changing experience. I think the tunnel provides a special challenge because it is repeatedly described in similar forms but under varied conditions. It is often claimed as a pathway to another world but a physiological explanation for its consistent form might be possible. I have tried to find such an explanation.

First what is the tunnel like? As early as 1905 Dunbar collected cases of tunnels experienced under anaesthetics and with other drugs. The tunnel is also one of the form constants noted by Heinrich Klüver in the 1930s. He claimed that almost all hallucinations, regardless of their cause, took on similar basic forms; the grating, tunnel, spiral and cobweb. These hallucinations can occur in widely different conditions such as hypnagogic imagery, the auras of epilepsy, migraine, insulin hypoglycaemia and with hallucinogenic drugs such as LSD or mescaline.

More recently Drab (1981) studied 71 tunnel experiences obtained from 1112 reports of unusual experiences. He didn't include voids and black spaces but defined the tunnel as a 'realistic enclosed area of space much longer than its diameter'. He found examples in cardiopulmonary arrest, severe stress, minor injuries and pain, fatigue, fear and migraines, as well as in relaxation, sleep, meditation and hypnosis. Some were associated with out-of-body experiences (OBEs). Tunnels were frequent in serious medical conditions such as heart attacks or mechanical accidents but there were no cases with cancer or stroke. Drab concluded they may be triggered by a sudden change in physiological state. The tunnels were usually dark or dimly lit and nearly half the respondents reported a light at the end. Most described themselves as moving towards it and said it was extremely bright though it did not hurt their eyes.

Although drug-induced tunnels are often described as visions or hallucinations the tunnels near death seem quite real and experiencers are often convinced that they went down an actual tunnel into another world.

Explaining the Tunnel Experience

What kind of explanation are we looking for? My own priorities are that firstly the theory should account well for the phenomenology. This means explaining why there is a tunnel and not something else, why it is like it is, why there is a light at the end and so on—and above all why it seems so real. Second the theory should not multiply other worlds or bodies or vibrations ad hoc. Third it should provide testable predictions and the means for changing and improving the theory by experiment.

This means that untestable occult theories which can

'explain' everything but can never be refuted are not helpful. But this does not mean we should dismiss apparently occult theories without a further thought. Theories are not worthless because they are weird. They are only worthless if they are vacuous and untestable and this is a big difference. Apparently skeptical explanations can also be vacuous and sometimes dismiss the experiences altogether. A successful theory must do neither of these and yet must account for the phenomena as reported. Few manage this.

1. The 'real' tunnel.

Some occult systems describe an actual tunnel which leads from one world to the next but there are many obvious problems. If the other worlds are part of this world then we should be able to measure them or in some way detect their presence but all such attempts have failed (see Blackmore 1982a). On the other hand, if the higher worlds are in some 'other dimension' or different 'plane' then all the problems of any brain-mind dualism are raised. How can anything be said to pass from one world (or plane) to another? Inventing a tunnel between them is no solution. Explanations of this sort give only ad hoc accounts of the details of the tunnel, and shift as new evidence comes along. Thus, they don't make any predictions possible.

2. Representing transition.

A popular alternative is to treat the tunnel as symbolic of a shift in state of consciousness. Crookall (1964) says there are at least three 'deaths' as the physical body, soul and spiritual body are shed to unveil the 'External Self', and the tunnel is a blacking out of consciousness as it passes from one state to another. Green (1968) talks of a representation of a long journey and Ring (1980) a mind shift to a holographic or four-dimensional consciousness of 'pure frequencies'.

This idea escapes the obvious problems of 'real' tunnels but I think in the process it loses all explanatory power. It simply begs the question 'Why the tunnel?' Why shouldn't something else be used: a symbol of transition such as doorways, arches, gates, or even the great river Styx? In fact these other forms do occur later on in NDEs but it is the tunnel which is the core feature of the NDE. It doesn't help at all to say that the tunnel is actually symbolic of something else.

3. Birth and the Tunnel.

Perhaps the NDE is reliving one's birth, and the tunnel is 'really' the birth canal. This theory, popularised by the astronomer Carl Sagan, faces numerous problems. Infants can't perceive the world in a way an adult could recall it. The birth canal is nothing like a tunnel with a light at the end, and in any case the foetus is pushed along it with the top of its head usually emerging first, not its eyes. It takes a vast leap of the imagination to make the two comparable and yet this theory has produced numerous 'New Age' ideas

and techniques.

Its only possible advantage is that it is, at least in some forms, testable. If you are reliving your birth then your actual birth should make a difference. For example, people born by Caesarian section have never been along the birth canal and so, presumably, should not be able to relive it. I carried out a survey of 254 people of whom 36 had been born by Caesarian section. These 36 did not report more or less tunnel experiences than the others; 36% in each group (Blackmore 1982b). A common response to this evidence is to say that the tunnel is not actually reliving your own birth but is a symbolic representation of birth; a move which only takes this theory back to the previous kind.

4. Just Imagination.

To my mind the very worst kind of theories are those which say that the tunnel, the OBE and many other experiences are 'just imagination'. This simply is no explanation at all. It does not explain the specific details (why a dark tunnel with a light at the end and not a bright red window?). It is not really testable, cannot be improved upon by progressive tests and is contentless. At the very least I want a theory to explain why people imagine tunnels rather than anything else. This kind of theory is a sort of false 'skepticism'.

5. Physiological explanations.

Jack Cowan (1982) has suggested that the four form constants, including tunnels, are generated in the cortex. He argued that because we know the appearance of the hallucinations and also the way images on the retina are mapped onto the cortex we should be able to calculate the cortical form which corresponds to any hallucination. Using this mapping he showed that concentric rings on the retina or in the visual world correspond to straight lines parallel to one axis in visual cortex. Straight lines at right angles to those map into radiating lines; straight lines at other angles into spirals. If the lines move, the spirals or rings would expand and contract and expanding concentric rings would produce the impression of moving through a tunnel.

But why should there be moving stripes across the visual cortex? He argues from an analogy with fluid being heated, that when the uniform state of the brain is disrupted by disinhibition (as is known to occur with drugs such as LSD and in anoxia) then stripes of activity will pass across the cortex.

This theory seems to me to have some problems. First it does not account for the fact that NDEs include tunnels but not cobwebs and lattices. It does not explain why people seem to move forwards through tunnels but rarely backwards. Nor does it explain just what those stripes are and why and how they move as they do.

I therefore suggested a far simpler theory which needs no stripes. When the brain is starved of oxygen, inhibition is first suppressed which creates a state of hyperactivity. The cells in the visual cortex will be firing randomly or noisily. Using the same retinocortical mapping we can see that there will be far more cells firing which represent the centre of the visual field and far fewer at the edges. The effect will appear like a flickering speckled world which gets

brighter and brighter towards the centre. It is known that the visual system is biased towards movements in an outward direction and visually perceived movement, especially in the absence of any reference, is easily interpreted as self-movement. (The classic example of this is the feeling that your train is moving backwards when another train pulls out of the station.) In other words, this scintillating speckled world of electrical noise could appear to expand outwards from a brighter centre. Could this be the tunnel?

As a final alternative, Troschianko suggested that if you started with very little noise and it gradually increased, the effect would be of a light at the centre getting bigger and bigger and hence closer and closer. The tunnel would occur as the noise levels increased and would stop either when they decreased again or when the whole cortex was so noisy that the light enveloped it all. In other words, one would have entered the light. It could go no brighter.

To test this theory he wrote a computer program to mimic what gradually increasing cortical noise would actually look like. This simply took the known distribution of visual cells and gradually increased the proportion of them firing (i.e. increasing the brightness). The effect is very much like rushing through a tunnel into an expanding bright light.

These physiological theories all provide other testable predictions. For example they imply that an intact visual cortex is required and if this were damaged (as in some kinds of blindness or stroke) then the tunnel could not be produced. More specifically, someone blind by cortical damage could not have the tunnel but retinal damage would not affect it.

Cowan's theory requires that there be stripes of activity passing across the cortex. This might be related to cortical spreading depression which might predict the speed of the tunnels. My own theory suggests that the more noise, the greater the speed and that faster movement be associated with a larger central light. And the final theory predicts that if the movement is created by the expansion of the central white area then speed is not restricted but the overall change in the tunnel is. In other words, you can only move from a tiny white light to a completely enveloping one. So the faster you move, the quicker the experience will end. None of these have been tested but they could be. Another prediction is that the drugs which produce tunnels should all be those which reduce inhibition, like the major hallucinogens, while drugs which increase inhibition (like Valium for example) should not produce tunnels. So if someone approached death by an overdose of such drugs they should not have the traditional near-death tunnel. Again this prediction has not been tested. All these theories explain why there is a tunnel rather than any other symbol of passage to another world. They explain how the light can be extremely bright but does not hurt the eyes—because the eyes are not involved at all. It can be seen that these physiological approaches to the tunnel experience already account for many of the previous findings and they provide numerous ways of testing them for the future. In this respect they are quite different from all the previous theories I have considered.



Why is the tunnel so real?

This is my favourite question and, like out-of-body experiences, the tunnel cannot be fully understood without considering it. When tunnels appear in drug-induced states they are usually considered to be hallucinatory or illusory (Siegel 1977) but near death and in some other OBEs they seem to be as real as anything in normal perception. Why? To answer this we have to step back to the question of why anything ever seems real. It seems implausible to suppose the perceptual system can easily discriminate input from recalled information when the two are mixed almost from the very periphery. Therefore the system must, at some level, make a decision about which of its representations, or mental models, are 'real' and which 'imaginary'. I suggest that it does this, all the time, by comparing representations of the world and choosing the most stable as the outside world or 'reality' (Blackmore 1984, 1988). Normally, of course, the model based mostly on input is chosen, but the conditions which give rise to tunnel experiences (as well as OBEs) are precisely those in which input is disrupted—either because of damage to the nervous system or because of deep relaxation, meditation, or sensory isolation. In these conditions the input model is no longer the most stable and therefore, according to my hypothesis, whichever model is most stable will take over as 'reality'. If there is noise in the visual cortex producing a tunnel form, and if the input-driven model is also unstable, then the tunnel form will be the most stable model in the system and hence will be chosen as 'real'. This is why tunnels near death, but not in the milder drug-induced experiences, seem real. Indeed they are 'real' in just the same sense as anything ever as real: because they are the most stable model the system has got. I would take one further step from this, although it is not necessary to understanding the tunnel experience. That is to say that these mental models are not something 'we construct'. Rather 'we' are the mental models constructed by the brain. I have argued (Blackmore 1989) that consciousness is simply what it is like being a mental model and the sense of a separate self arises from the construction of a model of a separate self. In other words, the

whole system produces a mass of models of self in the world. In the tunnel experience, the tunnel replaces the model of the outside world. It does not necessarily obliterate the model of self. However, when the tunnel occurs as part of the NDE it may also involve the dissolution of the self model. The dissolution of self is a profound experience with long lasting consequences. I think we can only understand the importance of near-death experiences and the tunnels which they often include if we are prepared to look at these life-changing qualities as well as the physiological basis of the tunnel form. The best kind of skepticism is critical of explanations which are untestable and waffly, vacuous and all-encompassing. But they should not simultaneously deny the impact or importance of people's experiences. I think that it will eventually be possible to have an account of the tunnel which understands its physiological basis but also the significance of the changing mental models to people's perceptions of self. I think it is no exaggeration to say that these experiences can be of a spiritual nature and lead to greater insight into the nature of self and the world. A skeptical approach which rules this out is not being true to the nature of the experiences as people report them. If this approach is right it implies that there is no real tunnel to another world, nor any evidence from the tunnel for survival after death, but the tunnel can be part of a profound and life-changing experience.

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The creme de la Creme

P.A.B.

When Benjamin Creme first visited New Zealand in January 1989, I was overseas. Fortunately, the prophet of the returned Christ decided to pay a return visit.

I arrived for the meeting (Quality Inn, Willis Street 16/2/90) 15 minutes late. A short white-haired man, dressed in light coloured clothes was sitting quite still on a chair on the darkened stage. It had to be Creme, but was he waiting for me to be seated? "Benjamin is being *overshadowed* by the Maitreya. You can join the meditation if you wish", a man explained. I chose to pass the time planning my weekend. However, I noticed the large crowd, some of whom were participating in the meditation, mostly looked normal and there were roughly equal numbers of men and women. This surprised me.

20 minutes later, without announcement, we heard

spoken the thoughts of the returned Christ, a.k.a. the Maitreya. (They were recognisable from texts in advertisements which some years ago appeared in the national press.) The slow speech with frequent pregnant pauses may have been intended to make the thoughts sound significant but only emphasised how nebulous they were. Being near the back of the hall and with less than perfect vision, I couldn't see whether Creme's lips were moving. The accent was certainly not that of a Scot, such as I knew Creme to be. Was the Maitreya being channelled? If so, I was impressed. Later in the proceedings Creme, to my relief, referred to the *tape* we had heard.

If we can hear a tape of the Maitreya why can't we see a photograph of him? Creme said there were photographs and that he would circulate them amongst us. If he did, none

A plain person's guide to Cremism

Cremism, a mixture of esotericism and socialism, is an offshoot from the Alice Baily offshoot from Theosophy.

Its beliefs may be summarised thus:

1) There are spiritual beings who collectively influence the evolution of humanity:

a) They "blend and program" in a "highly scientific" way the energies streaming to earth from the sun and the planets to bring about change for the benefit of humanity;

b) They are, individually, occasionally in incarnation and so teach the rest of humanity directly.

2) This so-called Spiritual Hierarchy includes many famous names. Among them is Jesus of Nazareth, a human being who was "overshadowed" by a spiritual being called the Christ or the Maitreya. Jesus, however, seems to have acquired spirituality in his own right and after being incarnated as, among others, Apollonius (first century), a teacher of American Indians (sixth century), and a teacher of Polynesians (seventh century), he is now present in a 200 year-old Assyrian body and has been living in Rome for the last three years.

3) All world religions posit a further revelation by a great teacher. For Christianity it involves the return of Christ, while Judaism awaits the Messiah, Islam the Iman Mahdi, Buddhism the Maitreya, and Hinduism a reincarnated Krishna.

4) The Maitreya is the World Teacher these religions have been waiting for. ("He appears to Jews as their idea of the Messiah, to Mohammedans as the Mahdi, to Christians as the Christ" Creme, hopefully, claims.) He had been living in the mountains of Pakistan before traveling by jet aircraft to London in 1977. He has built up a following within the Asian community in the East End.

5) The Maitreya's message is "share and save the world". Each country is to make an inventory of its needs and assets, and make over any excess in trust to a UN agency. The entrusted assets will be transferred to countries with a deficit. Creme did not enlarge upon this idea, but it was clear the U.S. (which he seems to particularly dislike) "will have to make sacrifices—it wastes most of the food

of the world". The Maitreya believes consensus is the way of the future, and of the Aquarian age. (It would certainly appear to be essential for this UN scheme.)

6) The Maitreya has to be accepted as the World Teacher if his message is to be realised. At the same time this acceptance has to be freely given. This is the reason why he currently prefers obscurity. Eventually, the Day of Declaration will come when the Maitreya will communicate with (i.e. "overshadow") all of humanity telepathically at the same time as he makes a worldwide non-speaking television appearance. (The development of TV satellite links has been going on so to make this possible.) The television appearance is only a control so that people can see the feeling they get is connected with the Maitreya's person. (People, like myself, who eschew TV will presumably be left in the dark.) Whether this overshadowing is a violation of the individual's free will was not discussed.

7) By joining a transmission group you can, through "a very potent form of meditation", help the process of breaking down the extraterrestrial energies for the benefit of humanity. The groups function somewhat like electrical substations. Joining one enables you to help yourself and the world. Their real significance appears to be that they provide a means of active participation in Cremism.

It would be nice to think Cremism is a reaction to the meism of much of the New Age. Yet, if the material welfare of the world's poor is a genuine concern Cremists seem to be doing nothing practical or tangible about it right now. Cremism is such a monstrous hodge-podge of occultism (the astrological and reincarnation components are much greater than indicated in the above summary) the humanitarian message seems like an afterthought. One wonders why Christians should follow a, if I remember rightly, 400-year old Pakistani rather than a 200-year old Assyrian, and why indeed they should follow either when their scriptures warn them not to. Despite all the learned references, Cremism, as presented at the meeting, seems to be on the same intellectual level as the Aetherius Society's UFO cult. However, I could listen to any amount of nonsense delivered in a Scottish accent. May Creme come yet again.

got to me. The photograph opposite I later found in *New Truth*.

The long evening presumably began at the advertised time of 7.30. Creme started speaking at 8.27. There was an interval during which we were invited to submit written questions. I stayed until 11.43, the latest I could and still catch my last train, but did not hear my question answered. In my notes I recorded at 11.07 intuiting that my somewhat technical question would be ignored.

By not having questions from the floor, Creme avoided being put on the spot. Answering only written questions enabled him to be selective and if necessary he could stall for time. Questions could be "planted", even apparently hostile ones. (Creme, however, is clearly used to hostility, mostly from Christian fundamentalists, and in fairness, I should observe that some of the hostile questions appeared to be quite genuine.)

Creme says he is not preaching; what he is doing is providing information which we can either accept or reject. Some of this 'information' is set out below.

- There will be no third world war. The destructive energies of war are going somewhere else. They are going into changed weather patterns, into earthquakes, and commercialisation based on greed.

- The easing of East/West tensions and the developments in Eastern Europe are due to the activities of the Spiritual Hierarchy.

Comment: *The Economist* of 6/1/90 had a full page advertisement attributing the recent "rise of freedom" to the Maharishi effect.

- There has been a collapse in confidence in the economic system of communism...Communism or socialism hasn't failed—totalitarianism has.

- It was no accident that Christ (Jesus), the teacher for the Piscean age, was symbolised by a fish.

Comment: The name Pisces refers to fishes. A fish was a symbol for Jesus because the initials of 'Jesus Christ, Son of God, Saviour' in Greek spell out 'ichthus', the Greek word meaning 'fish'.

- The Maitreya can be in several places at once, can suddenly appear solidly and then disappear. He is in no danger of assassination. Bullets dissolve in his body.

- *The Kenyan Times* of 11/6/88 reported the Maitreya appeared before a crowd in Nairobi dressed like an Arab and spoke in Swahili.

Comment: While it makes sense for the Maitreya to speak Swahili in Kenya, why should he, a Pakistani living in London, be dressed like an Arab? Could the beard, robe and headdress have been hiding something?

- The Maitreya has slowed down the rotation of the earth and moved it several kilometres nearer the sun—to provide more sunshine in order to grow more crops.

- There is no hole in the ozone layer. It will correct itself in 15 years time—at an informed guess.

- At the time of his crucifixion Jesus' body was one quarter atomic particles and three-quarters sub-atomic particles. After the resurrection he became entirely sub-atomic particles.



MAITREYA... as he has been photographed.

- The Turin Shroud is authentic. It will be authenticated and claimed by Jesus as his own...The image shows coins on the eyes with dates.

Comment: Some shroudists believe they can not only discern coins over the eyes of the shroud image but also part of an inscription on them, enabling the coins to be dated. Ian Wilson, pro-shroud though he is, is very cautious about this putative evidence (*The Evidence of the Shroud*, p129–133).

At the beginning of question-time, Creme explained he would answer with the help of the Maitreya or the answers would be by the Maitreya with the help of Creme. If He had a part in all Creme's pronouncements that evening, I can't help feeling this Messiah leaves something to be desired.

This is your messiah speaking

I am amongst you once more my dear friends. You will see me very soon—each in his own way. Those who look for me in terms of my beloved disciple, the Master Jesus, will find his qualities in me.

Those who search for signs will find them, but my method of manifesting is more simple. Nothing separates you from me and soon many will realise this...

I am all-in-all.

Allow me to manifest through you.

My dear friends, I am hoping to be with you once more...

My teaching shall precede my presence.

When mankind is somewhat prepared my voice shall be heard.

The success of my mission depends on you. You must make the choice—whether you choose to live peacefully as true men or perish utterly.

His & Hers Paranormality: Part 1

P.A.B.

The *New Zealand Woman's Weekly* has been the recipient of a New Zealand Skeptics' Bent Spoon Award. Does *Broadsheet*, "New Zealand's feminist magazine", make a more intelligent response to matters of interest to Skeptics?

The magazine is included in a guide to "Alternative centres" prepared by Sun Energy Communications of Auckland. The guide also lists CORSO, the Cooperative Enterprise Loans Trust and the Cistercian monastery in Southern Hawke's Bay, but the names of virtually all the 201 other "centres" are resonant of the New Age. How does *Broadsheet* fit in this company?

A number of recent articles in *Broadsheet* may provide the answer.

In "Brave New Age, Right?" (November, 1988) Sue Fitchett looks at some of the personal growth therapies.

The article makes the not too startling point that the emphasis of the Forum on the individual and self-interest "seems at odds with 'sharing', the collective 'we' unconscious the New Age is supposed to promise."

To illustrate the ridiculous degree to which some therapies push the notion of personal responsibility we are, perhaps predictably, given an instance of a woman who at aged three had been sexually abused and who during a rebirthing course "had been told she had chosen that abuse, (and) the new guilt had broken her".

One may have misgivings about some of her other arguments. The article claims "There is some evidence of types of self-improvement courses... being used in South East Asian countries to de-radicalise an activist population by making people happier, more self-content and skilled: their cynicism, their dis-satisfaction will be neutralized." However, the evidence for these dastardly schemes is withheld from us. A paragraph expressing sympathy for the critique of capitalist individualism found in B.F. Skinner's *Beyond Freedom and Dignity* (1971) ends with the pointed sentence: "B.F. Skinner's passport was taken off him by the American government." If this is true, B.F. Skinner doesn't see fit to mention it in *A Matter of Consequences* (1983), the third and final volume of his autobiography. (The volume deals with the post-World War Two years—including the Cold War era.) On the contrary, Skinner seems to have been much-honoured and much-traveled throughout this period, and especially so since the publication of *Beyond Freedom and Dignity*.

Fitchett's article is written from a politically "correct" if presumptuous viewpoint. She asks: "As more and more feminists are attracted to the self-growth movements and a number are returning to 'normality', that is, back to the nuclear family, back to heterosexuality, is it possible to winnow the chaff from the grain, get what's good from these movements and dump the apolitical, the reactionary?" Not really. The therapies are hopelessly free-market. Moreover they are deficient in one serious way—they "do not at any point address the question of power—who holds it and

who will continue to hold it—or suggest this should be or could be changed, nor how. A successful woman has to be a superwoman, a successful man has only to be white."

So her article climaxes with a slogan—one she may have seen spray-canned on a wall in Aro Valley. This is disappointing in an article which, as Fitchett explained in a letter in *Broadsheet*'s August 1989 issue, was the result of several years thinking around the issue.

As a consolation it does contain some gems of lib-speak (for example, about the use of the concept of "karma" by the Self-transformation and Rebirthing movements, Fitchett says "This colonising angers a friend of mine who is a woman of colour") and it inspired, in the May 1989 issue of *Broadsheet*, a rejoinder by a New Age advocate, Cushla Dodson, which was simply ludicrous.

Another article in the May 1989 issue, "Being well and Feeling Better" by Pat Rosier, is subtitled "Alternative health remedies under the microscope". This is misleading. Alternative health remedies are not considered in any detail at all. Instead, a lot of questions are asked. (It even questions if the concept of "karma" is "good"! We are told that the questions raised during a discussion at *Broadsheet* included "Who is a charlatan and who isn't? How can you tell?" But not even tentative answers are given. The article says "...there are many genuine people, a lot of them women, working from an honest belief in what they are offering and attempting to make it as widely available as possible". Instead of asking if "an honest belief" is sufficient, Rosier goes on to lambaste the commercial exploitation of this market by what she calls "the profit boys". Perhaps unwittingly, this suggests the consumers are helpless, wimpy wimmen at the mercy of male commercial nous—not the female stereotype the *Broadsheet* collective normally promotes.

The article concludes: "It is really a matter of applying to alternative medicines the same search for reliable information and critical evaluation that we have learnt to apply to the medical industry". Is this heartening? The words "science" and "scientific" are not used once in the article though they may be implied in "reliable information". "Critical evaluation" may imply objective evaluation.

The approach of the *New Zealand Woman's Weekly* to the New Age and the alternative health (and probably any other subject) is in complete contrast to *Broadsheet*'s. A recent NZWW (25 September 1989) has a two page article about a psychic healer who considers rejection in transplant operations to be caused by a lingering spiritual connection between the transplanted organ and its donor. The same issue's "Beauty" section devotes two pages to "Celulite—is there any such thing?" It quotes two sceptics, but gives more space to Professor S. B. Curri of the Centre for Molecular Biology at the University of Milan, "one of the few doctors to go on record stating that cellulite may indeed be different from ordinary fat". The article then proceeds on the basis that, yes, cellulite does exist. Another part of the "beauty" section is headed "Can Aroma Therapy Really

Help?" The answer would seem to be yes.

One is thankful this sort of thing does not appear in *Broadsheet*. One is pleased that in *Broadsheet* New Age claims are being questioned. One is only sorry the debate there is at such a low level.

New Zealand Woman's Weakness

A sequence of eight issues of *The New Zealand Woman's Weekly* have been surveyed in order to assess systematically the paranormal obsession of that magazine. The issues were the top six copies of the pile of NZWWs in the Ministry of Commerce library plus two missing issues (26 February and 2 April) which were obtained elsewhere. Only feature articles or regular columns were examined—not, for example, letters or household hints.

19 February

(A) P.14–17 "He looked at me with such a look of love" (Rosemary Vincent)

Susan Campbell, the mother of the New Zealand victim of United Airlines "gaping hole in the fuselage" accident, sees portents of her son's death in his poetry and bedroom wall decorations.

(B) P.44–46 "Star Quality—it's all in the hands" (Kate Saunders)

A report on a book "Star Palms" by "top palmist" Sue Armstrong complete with prints and analyses of the palms of Stephanie Beacham, Susannah York, Barry Humphries and the late Roy Kinnear.

(C) P.52–53 "Animal Heroes Spurred by 'Psychic Link'" (Kate Saunders)

A report on a book "Psychic Animals, by Dennis Bardens. An 82-year old woman is saved by a seagull, and other stories.

26 February

(D) P.34–35 "Would you believe a cat that TALKS (in Russian)?" (Henry Gris)

(As it is a Russian cat it would be more unbelievable if it spoke in, say, Japanese.) The moggy, General Donskoy, belongs to a freelance parapsychology lecturer and has never miaowed but in the last half of its life has built up a vocabulary of 100 words. The beast's owner is not a ventriloquist. She is "too serious a scientist to use cheap trickery that, in these circumstances, would also serve no purpose whatsoever", says the journalist. The owner claims the cat "has developed a definite extrasensory perception, I think, by following the psychic seminars I hold in this very room every afternoon. He watches me and my pupils in a way which makes me feel he understands everything, not just the spoken word but also our thoughts. I may be an old fool, but I think the General is psychic (sic)". The talking cat is the subject of a paper Dr Oleg Dubnov is to present to the Academy of Sciences. Dubnov is "a noted psychologist specialising in animal behaviour patterns". Dr Vladimir Inyushin, head of Moscow's Deaf Mute Institute, is also a believer.

March 5

(E) P.48–49 "An Amazing recovery... 'Thanks to my dreams'" (Kate Saunders)

Sue Armstrong, a car crash victim dreamed of people healing her. Now she helps others "understand the magic of the message in their own dreams" and has become a professional dream translator—charging \$68 for a personal reading and \$40 for a postal one. This Sue Armstrong is the same age and lives in the same English county as the Sue Armstrong

in (B) above.

March 12

Nothing of Skeptical interest in this issue.

March 19

(F) P.100–101 (Beauty) "Touch and Glow" (Danae Brook & Jackie Kemp)

A precis of the book *Aromatics* by Valerie Anne Wormwood. "Each (concentrated essential) oil has different healing qualities and affects (sic) on our mind and body."

March 26

(G) P.34–35 "Amalgam fillings, mercury poisoning... Is there a link?" (Leigh Parker)

The article is mostly devoted to the claims of "a small group of dentists and doctors" that hundreds of New Zealanders are being poisoned by mercury leaking from fillings. Coverage is given to the conventional view that there is no serious risk, without the matter being examined in depth. The concluding paragraphs are also devoted to the claims of the "small group".

(H) P.54–58 "Ghosts? The Royals take them in their stride" (Sarah Gibbings)

Prince Charles once tried to photograph the ghost of Henry VIII in Windsor Castle (the "special infra-red film" he just happened to have in his handily-placed camera turned out blank), and other stories of ghost/Royal encounters.

April 2

Nothing of Skeptical interest in this issue.

April 9

(I) P.46–47 "How 'normal' are you?" (Tom Crabtree)

Being a little odd means you are "probably in better mental and emotional state than the rest of us". More than half of one page is taken up with a photograph of Shirley Maclaine with a caption saying she believes she was a madam in a previous life and once went hunting flying saucers in Peru.

(K) P.52–53 "Inga is a magnet" (Henry Gris)

The man who brought you the talking cat now brings you a Russian girl who attracts objects made of paper (such as encyclopaedias), plastic (such as ballpoints), as well as plain old metal. Gris claims "a score of Soviet scientists including several members of the Soviet Academy of Sciences have examined Inga and come up with complicated theories none of which made sense to Maria Ketskova (Inga's school principal). 'Our scientists are that way', the school principal shrugged. 'They will never admit ignorance'." Professor Vladimir Volchenko, "noted specialist in energetics at the Moscow Technological Institute", is apparently the only Soviet scholar to admit defeat. The article reports that a journalist has found Inga's hand has to be in a vertical position to exercise its magnetic power, but it also reports Inga has difficulty playing the piano because the keys stick to her fingers. It doesn't mention if she has difficulty reading the newspaper.

Paranormality Quotient (PQ) Analysis.

We can discount (A) and (I) because the paranormal is a minor part of the story, and (G) because the extraordinary claim is questioned, although the article appears biased in favour of it. This leaves 17 pages devoted to articles for which one would be justified demanding more evidence; to which must be added 8 pages of horoscopes and 'Planting by the Moon', total 25. These issues of NZWW had a total of 862 pages, giving a PQ of 2.9%.

An intention to celebrate the New Zealand Sesquicentennial with a series "Great Paranormal Moments in New Zealand History" has been abandoned. Readers may, however, be interested in the following item from "100 Years of News", a publication of the *New Zealand Herald* on the occasion of its centennial in 1963.

1909 Coming of the phantom airship

DUNEDIN, July 27, 1909

EXCITEMENT has been created all over the country by a report that a mysterious light has been seen at night near Stirling, moving about in such a manner as to give the impression that something in the nature of an airship must be manoeuvring in the hills.

At noon on Friday the school children beheld in the air a strange machine which they described as shaped like a boat, with what appeared to be the figure of a man seated in it.

OAMARU, July 30

At eight o'clock this morning Mr H. D. Bailey, a farmer of Kauroo Hill, saw what he describes as a shape like a boat with a flat top speeding along at something like 30 miles an hour. After watching it for some time Mr Bailey ran in to obtain his glasses, but by the time he returned the airship had disappeared over the hills.

The airship was also seen by several people at Maheno and its reality cannot therefore be doubted.

GORE, July 31

Two dredge hands engaged in the night shift on the Syndicate No. 2 dredge were accorded a view of the airship at five o'clock this morning at close

quarters. They state that the ship came down through the mist and circled round the vicinity, and that two figures were plainly discernible on board.

NELSON, August 4

Mars, which is now approaching its closest proximity to earth, scintillated with unusual brilliance last night, giving some observers the impression that the phantom airship reported from various parts of the Dominion contemplated a descent. The news was carried to the theatre, where the Citizens' Band bazaar was in progress, and the building rapidly emptied.

WELLINGTON, August 6

A Waipawa resident gives a circumstantial, but uncorroborated, account of having seen an airship flying over Kaikōra last week. He says it was grey in colour, torpedo-shaped, and contained three men, one of whom shouted at him in a foreign tongue. The machine appeared to be under perfect control and it carried two bright lights.

WAIHI, August 7

Lights were seen hovering over Waihi for two or three hours last night and half the town turned out to catch a glimpse of the "ship" and its aerial navigators. The more imaginative could plainly discern two of its occupants.

This morning a sequel was furnished in the discovery on the Tauranga road of an umbrella-shaped contrivance of tissue paper, which was apparently part of a four-kite parachute, usually described as the "novelty of the season" for garden parties, and sold at the modest figure of sixpence a box.

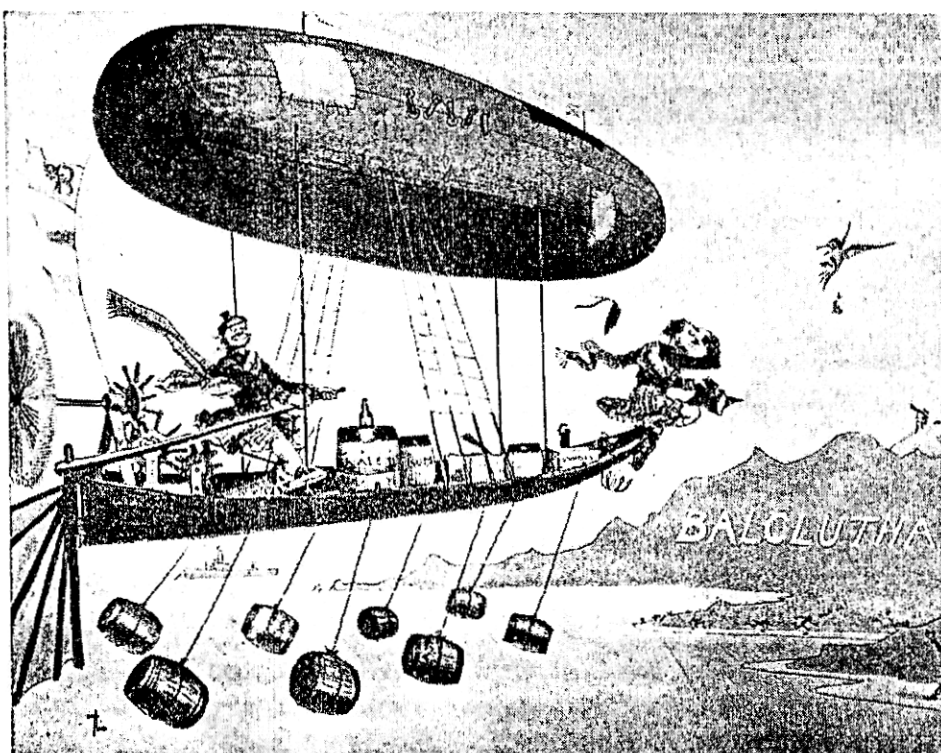
August 7

A resident of Waharoa sends the following account of a personal experience :—

"I had been out to spend a convivial evening with a friend and on my way home I saw a great airship sailing above me. When it was only two feet over my head I quite plainly saw the German Emperor and heard him discussing the native land question.

"Just at this point his German majesty caught sight of me and very rudely put his mailed thumb on his nose point and extended the four other mailed digits toward me. The ship then quietly sailed away in the direction of Berlin.

"I may say that I found an empty whisky bottle next morning, evidently dropped out of the airship."



"Is it possible that an enterprising firm has been running contraband into New Zealand?"
—Cartoon by Trevor Lloyd.

New Truth's Whitianga whittler has cloudy memory

P.A.B.

The *New Truth* articles on the "Disappearing Regiment" were examined in *New Zealand Skeptic* No. 15. A curious sequel to these stories, headed "Mystery clouds hold secret to rail horror!", appeared in *New Truth's* issue of 20 October 1989. After reading the "Disappearing Regiment" articles (25 August and 1 September 1989), Mr Jack Bramley, a wood carver now living in Whitianga, told *New Truth* of three clouds he had seen from Taupo and which had remained in the same position near Mt Ruapehu for the three days before Christmas 1953. In the article the clouds were linked to the disaster which occurred when the Wellington-Auckland express was plunged into the Whangaehu River shortly before 10.30 pm on 24 December 1953.

"During the last three days the sky was completely clear except for three flattish oval clouds which lay alongside the crater lake on Mt Ruapehu.

"The mountain stood out clearly and these clouds sat unmoving for three days.

"Although I recall calling attention to them, to intimate hanky panky with the lake would be to invite ridicule.

"But it was the night of the third day that the crater lake overflowed causing the tragedy of the Tangiwai."

Most people would probably have dismissed the story as preposterous. For the benefit of those who didn't, two matters could have been investigated by *New Truth*, but were not.¹

Clear Skies?

The 1953/54 Royal Visit began at Auckland in the mid-morning of 23 December. There is plenty of photographic and journalistic evidence that it was wet in Auck-

land that day. I recall that day in Napier listening to a broadcast of the Queen's arrival, and the similar weather we were having. Reading *New Truth's* story it seemed to me unlikely the central North Island could have enjoyed clear skies from 22 to 24 December.

The weather forecasts in *The Dominion* for the lower North Island districts generally indicated damp weather for the period 22-24 December. *The New Zealand Herald's* forecasts for "all districts" of the upper North Island (including Rotorua-Taupo) were also wet, with an improvement forecast for 24 December.

Knowing weather forecasts can be wrong, I checked with the New Zealand Meteorological Service for some relevant weather details. Information supplied from the Taupo and Chateau weather stations show the skies were "partly cloudy" or "cloudy" on those dates. No data for sunshine hours were recorded at the Chateau, but on 24 December there was the comment "rain turning to drizzle".

The cause of the Tangiwai Disaster

There is no great mystery about the cause of the disaster. Early on there was apparently the suggestion that a cloudburst was responsible. Given it was a sudden flooding of a river which required an explanation, the suggestion was understandable. However, it was almost immediately quashed. (See *New Zealand Herald* 26 December 1953, page 1). *New Truth* said its predecessor *Truth* never accepted the cloudburst theory, as if that theory at the time of its 30 December 1953 cover story, or even now, could be seriously entertained. The daily press was linking the disaster to water from Mt Ruapehu's crater lake at least as early as 28 December 1953—see *The Dominion* of that date. (There



were no papers on 27 December, a Sunday.)

However, Mr Bramley's claim that the crater lake overflowed is mistaken. The evidence presented at the Board of Inquiry was that the disaster was caused by a sudden escape of water from the Mt Ruapehu's crater lake, the result of the collapse of a barrier to an ice cave on the volcano through which the water in the lake drained into the Whangaehu River. Erosion by water seeping through this barrier of volcanic ash and scoria is believed to have reduced the barrier's strength and "cracking movements in the ice above may have caused it to collapse suddenly".²

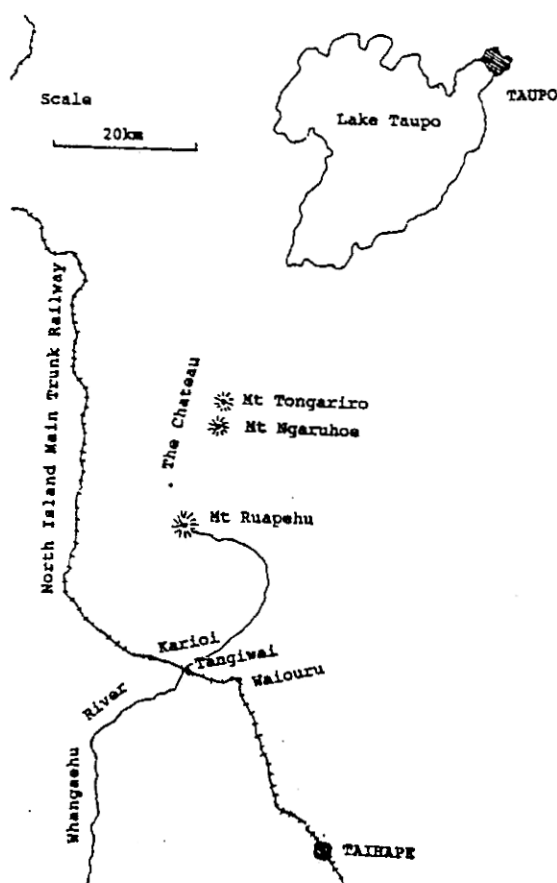
32km downstream, the flood, with added force from its high content of silt and rocks, partly demolished the railway bridge and weakened much of the rest of the structure.

Similar "lahars" had happened at least two times before: in 1859 and 1923.³ There is no suggestion of clouds being involved in these earlier occurrences which, although they involved no loss of life, demolished or damaged bridges. (With due respect to Mr Bramley, there have also been lahars caused by the eruption of water from the crater lake.)

The Stuff of Memories

Reading old newspaper accounts of the disaster gave me direct experience of the ways memory can operate.

Although I was 6 years old when I saw it, I have never forgotten the artist's impression in *The Dominion* reproduced here. While I remember being disturbed by it and my recollection was in some respects quite accurate I find the actual picture more horrifying than the image retained for over 36 years. Another result of my research was the recol-



Perhaps malevolent extra-terrestrial intelligence was involved!

Matt McGlone's article (NZ Skeptic 16, page 4) refers to the delight newspapers take in stories of fate intervening to condemn passengers (or save intending passengers) on aircraft. Conly's book *Tragedy on the Track* records many instances of fatal intervention to do with New Zealand trains and the Tangiwai Disaster may have had more than its fair share of them. Six are referred to on pages 4-5, 9-10, and 25. This does not include the most intriguing coincidence—the flood reached the bridge only 6-11 minutes before the train did.

lection of things which had once impressed a young boy, but nonetheless forgotten—the stories of whole families being killed; the informal visit of the Queen, unannounced to the public, to some of the survivors at a suburban home in Auckland.

I had initially wanted just to check the pre-Christmas weather forecasts, but fascination compelled me to read on through the microfilm of the *New Zealand Herald* at the Auckland Public Library. However, it seemed a stranger force was at work when my eyes came across this item on page 7 of the issue of 28 December.

Strange Cloud Form Observed

(P.A.) TAIHAPE. Sunday

A cloud looming over Tangiwai at the time of Thursday's disaster was of strange formation, clearly resembling the form of a lion ready to spring. This cloud shape stood boldly in an otherwise lightly clouded sky, according to several people who have reported the phenomenon.

It raises some probably now unanswerable questions: Where was the cloud viewed from?; How long was it visible?; Did the witnesses report the phenomenon because they thought it had some possibly significant connection with the disaster?; What is meant by "lightly clouded sky" and how does this relate to the weather reports noted above?

What is clear is that the report makes no mention of the most remarkable aspect of Mr Bramley's story—the clouds unchanging for three days or any other notable period of time. It is also difficult to understand how what was perceived somewhere in the central North Island as a lion about to spring, could have been seen as "three flattish oval clouds" from Taupo.

I am confident, however, the lion was connected with *New Truth's* story. The paper's articles about a cloud abducting a regiment (which also involved multiple, persistent clouds all of the same shape) has merely prompted a somewhat similar tale based on inaccurate recall. To give it a bit of "oomph", *New Truth* added a gratuitous and general reference to UFOs seen apparently siphoning water from lakes. (Whether the UFOs were refuelling, conducting experiments, or simply up to no good, *New Truth* did not speculate.)

Notes

1. The author, Edward Rooney, who gave us the disappearing regiment stories, said 166 people were killed in the disaster. This figure was probably derived from the *Truth* story of 30/12/53, reproduced, in part, as an illustration for his new story. While the death toll was initially thought to be that high, it was actually 151. Mr Rooney's research has been minimal.
2. Conly, Geoff *Tragedy on the Track*, Grantham House, 1986, p40. He is quoting Mr James Healy, Superintending Geologist of the Government Geological Survey, at the 1954 Board of Inquiry
3. Conly: *ibid.*; p62. Curiously, in a quotation on page 42, Mr James Healy, at the 1954 Board of Inquiry gave the dates as 1861 and 1925. Conly does not comment on this discrepancy.

More faulty recall

The recollections by alleged eyewitnesses of things seen long in the past are regularly encountered in connection with paranormal claims. The recent revival of the Roswell (crashed UFO) Incident is a case in point. The Tangiwai Clouds is not the only recent report in New Zealand of a long term "vivid" memory about which one can properly be highly sceptical. And papers more reputable than *New Truth* propagate them uncritically.

Light in the darkness

Warren Barton in the *Dominion Sunday Times* of 18 June 1989, in a story "Survivors remember horror of Tangiwai", reported the account of the driver of a goods train waiting at Karioi, north of the river, for the express to pass.

"He learned about the tragedy from the way station attendant, loaded up his train and chuffed off down to the bridge. 'I'll never forget it. Carriages under the water with the lights still burning'".

Basic research would have revealed most of the following:

1) Six carriages went into the river. Two of them were left relatively intact—the first and sixth carriages to fall. The sixth was partly suspended over the end of what was left of the bridge before the supporting pier gave way. There is ample evidence from survivors that the lights failed shortly before, or after, the carriage toppled into the river. So there could only have been, at most, one carriage with its lights still on.

2) The huge quantity of silt in the flood was one of its remarkable features, and the flood was classified as a "lahar", normally defined as a mudflow. It seems to me unlikely to have been particularly, if at all, translucent.

3) The flood passed very quickly—within 10-15 minutes according to James Healy, the geologist who figured most prominently at the Board of Inquiry.¹ Would that give time for the news to reach Karioi, the goods train to be loaded and then "chuff" the 4 km to the river and allow the driver to see any submerged carriages?

4) Contemporary reports appear to make no mention of submerged lights.

The carriages underwater with the lights still burning is a compelling image; one which many *Dominion Sunday*

Times readers may still have (perhaps along with the thought of what wonderfully robust lighting systems New Zealand Railways employ). However, it seems to be a false one.

A flight of fancy

The recollections of George Burns of Lower Hutt were reported in *The Evening Post* of 10 April 1990. On 10 January 1928 the eight-year old George Burns was one of 10-12,000 people who gathered at Trentham racecourse to welcome the aviators Moncrieff and Hood at the end of what they expected would be the first flight across the Tasman Sea.

According to the *Post*'s report "the picture of the plane's red-hot engine and a lightbulb in the cabin has been etched in his memory". Perched on his father's shoulders "he saw the plane coming towards them at a very low altitude".

The trouble is, despite the extensive coverage in the press of the aftermath to the ill-fated flight, no-one else was ever reported as seeing the plane at such close quarters. And while there were a number of reports of the plane being seen or heard from people all around New Zealand, none were from the expectant crowd at Trentham. The other alleged sightings are intriguing, often inconsistent and possibly an instance of the contagion effect, of which the 1909 airship flap (see page 9) may also be an example. The accepted view is: "It would seem that Moncrieff and Hood never sighted the New Zealand coast—that they were forced down into the sea from 300 to 500 miles from their goal".²

According to Mr Burns, however, the plane never landed because someone bungled the lighting of the flares to guide it in: "Mr Burns' father and the other men who had seen the plane refused to talk about the (bungler's) actions or the discussions that took place afterward, or let him talk about it...for reasons he doesn't want discussed".

Why did the *Post* devote 336cm² (including photograph) to this story? The recent visit of the replica of the first plane known to have crossed the Tasman gave it some topicality. It may have reminded us that aviation progress was once a risky thing, and revived memories of a sad, if largely forgotten, episode in the country's past. It is because the story is largely forgotten that *The Evening Post*'s lack of criticism of Burns' recollection was particularly remiss. It will hearten those who like to think the history books are all wrong.

For his own peace of mind Mr Burns says he wants to find the wreckage of Moncrieff and Hood's plane which he believes is in the vicinity of Upper Hutt. He has searched for it but "it is a very difficult task and his main hope now is that a clairvoyant could give an indication where it might be".

One hopes he gives a wide berth to Mrs Irene Dankbaar, the Dutch-Australian psychic who in 1987 "found" the Colossus of Rhodes.

Notes

1. Conly, Geoff *Tragedy on the Track*, Grantham House, 1986 p42.
2. Jillett, Leslie *Wings Across the Tasman*, A.H. & A.W. Reed, 1953, p30.

Medical roundup

Dr John Welch

Anabolic steroids were in the news during the Commonwealth Games and Dr Michael Kennedy has been studying their use by athletes for the past ten years. His conclusion is that "anabolic steroids have no effect on aerobic sports, such as running and swimming, but may lead to a small improvement in the performance of trained weightlifters." He quotes a 1972 study that showed when athletes were given placebo and told they were steroids, they got stronger and trained harder.

One million people in the US use anabolic steroids whose side effects are abnormal liver function, falls in plasma levels of testosterone and gonadotrophins, decreases in sperm counts, aggression ('roid rage') and psychoses.

This is another classic example of the under-rated and very powerful placebo effect, which, along with self deception, is the basis for many irrational beliefs.

Source: *New Zealand Doctor* 5 March 1990

The American College of Physicians has attacked the pseudo-scientific 'specialty' of clinical ecology and concludes that there is no good evidence for the belief that many patients are suffering from damage to their immune systems from environmental chemicals, food, drugs, or fungi such as *Candida Albicans*.

Source: *Annals of Internal Medicine* 1989;111:168-78

The American Food and Drug Administration has stated recently that over 98 percent of cancer risk is from unavoidable natural carcinogens in the diet and not from pesticides and other pollutants.

Source: *NZ General Practice* March 13 1990

GP News carried a recent article "Allergy Expert Makes the Chemical Connection" in which a visiting Australian psychologist is "convinced food and chemical sensitivities make people feel tired, irritable, aggressive or confused and affect concentration and learning." Naturally, all this is detailed in her book *Chemical Connection*.

What worries me is that a trained psychologist, of all people, should fail to recognize that there is a wide range of human behaviours and far more logical and sensible reasons for feeling out of sorts than food and chemical sensitivities.

This pseudo-science is creating anxiety and exploiting the need of people to seek labels for their problems where none exist. It is time that articles like this were balanced with an opposing view in line with the philosophy that people are entitled to both sides of the story.

Source: *NZ General Practice*

This theme is continued in the new *Adventure* magazine in an article called "Leave Sugar and Chocolate Behind" written by someone from a health food company.

Eating sugar leads to a "see-sawing of our energy levels until finally we get pancreatic exhaustion". Clearly the writer is ignorant of homeostasis and the ability of the body to maintain blood sugar within a very narrow range despite fluctuating dietary intake.

The article continues in much the same vein until the last column..."The essence of harmony is the balance of yin and yang, the duality of life forces. For instance, in a cold environment (yin) I tend towards whole grains, meat

and fish (all yang)."

This nonsense could be dangerous if trampers took it seriously. We have excellent, well-trained dietitians in this country who could have done better had they been asked.

Source: *Adventure* February/March 1990

I was talking recently with a colleague who asked me whether any of my patients had ever told me about their experiences with alternative medicine. One of his patients had for years been sending his urine to a 'therapist' in the North Island who would write back and tell him what colours to use.

It occurred to me a simple test would be to send some urine from a horse and see what kind of report came back.

I was interested therefore to come across a reference to a similar practitioner, Theodor Myersbach, who practised his craft of uroscopy in the 18th century. Despite the hostile attentions of the medical profession who derided him as the 'pisse prophet', Myersbach enjoyed considerable popularity. All of this and more is detailed in a book by Roy Porter: *Health for Sale: Quackery in England 1660-1850*, Manchester University Press 1989, £19.95.

Source: *The Lancet*, September 9, 1989, p635.

In an attempt to counter quackery The Campaign against Health Fraud was recently launched in the UK. The group comprises doctors, lawyers, scientists and journalists and aims to provide the media with an independent assessment of health claims.

The statement that "you can tell a quack by his unwillingness to expose his claims to a clinical trial" is particularly relevant in this country to the practice of Electroacupuncture of Voll (EAV) which was found by a scientific committee to be without scientific foundation. Testing was declined by the doctor in question.

In New Zealand, the medical subcommittee of NZCSICOP has produced 'truth kits' on homeopathy, naturopathy, herbalism, acupuncture and one on iridology is currently in preparation.

Source: *The Lancet*, May 13, 1989, p1090.

The latest revival of ancient remedies is Ayur-Vedic medicine which is being promoted by none other than the Mahareshi Mahesh Yogi. Transcendental Meditation (TM) is used to balance the mind and body and is available from a centre in Christchurch for \$400 plus GST (1987). Panchakarma (rejuvenation programme) costs about \$100 per day and is available in one, three, five or seven day courses presumably depending on the degree of individual senescence.

Readers will remember that TM also empowers its adherents to 'fly' although no one has succeeded in doing any more than a controlled bounce (flop?).

Now the principles of quantum physics are to be applied to Ayur-Vedic medicine. *NZ General Practice's* gushing review of *Quantum Healing* by Deepak Chopra, published by Bantam Books, doesn't quite say how but a key element is "...our prized objectivity becomes inextricably subjective."

Source: *NZ General Practice* October 9 1989.

Are there UFO landing sites at the bottom of your garden?

The following item was sent by Bernard Howard of Christchurch. It appeared in the (Christchurch) *Observer* of 22 January 1990 under the headline "Hagley visits on UFO agenda—claim".

Sceptics may find it hard to believe that UFO's exist—let alone that they may have even landed in Hagley Park.

Dr Jan Pajak of Dunedin not only strongly believes this is fact but was prepared to back it up by pinpointing these landing sites during a weekend workshop held in Christchurch this month.

The free workshop was held in the hope of encouraging new members to join the newly formed Unexplained Phenomena Research Society Inc.

Three branches of the society are already working in Invercargill, Dunedin and Lawrence and Dr Pajak is hoping a branch will be formed in Christchurch.

The society has been established to try and counterbalance the very negative attitude to unexplained

phenomena, Dr Pajak said.

"There are a lot of anti-groups such as the Sceptics Society but there were no pro-groups who had the education and knowledge to give a true picture of unexplained phenomena," he said.

The most common evidence of UFO's is their landing place sites, Dr Pajak said.

"These can be easily found if you know what you are looking for."

To prove his point Dr Pajak took members of his workshop on a walk through Hagley Park and was able to identify four landing sites.

"Because of the UFO's pulsating magnetic field, it leaves a ring of scorched vegetation when it lands. The smallest craft would leave a ring of about 3m with eight burned areas at regular in-

tervals," Dr Pajak said.

The most popular explanation for these markings is that they are mushroom rings.

Dr Pajak does not believe in this theory and believes instead that the mushrooms are in fact an effect of UFO landings and not the cause of the markings.

"When a vehicle lands its magnetic force sterilises the earth which in turn provides ideal conditions for mushrooms to grow," he said.

Some of the clearest landing sites are to be found in the Weka Pass and Dr Pajak plans to take a group to view these sites on January 28.

As well as conducting workshops on unexplained phenomena, Dr Pajak has devoted much of his spare time during the past 18 years to designing his own space-

ship.

The "magnocraft" bears a striking resemblance to the common view of a flying saucer and is capable of flying in the air, into free space, moving underwater and also flying underground at a normal speed of close to the speed of light, claims Dr Pajak.

These facts are based on contemporary physics and Dr Pajak believes he may be able to get government sponsorship for the development of the craft once he is able to produce a working model.

The low-down on "mushroom rings"

P.A.B.

The following may interest those who hesitate at the idea of "mushroom rings" being evidence of UFO landings—or of fairy shindigs.

A single mushroom can release over a billion spores. For a mushroom spore to germinate it must alight in a field with a plentiful supply of nourishment and moisture. The spore sends out a thread which branches into further threads to form a network known as a mycelium. The mycelium radiates out in a circle which keeps expanding as long as there is adequate food and moisture and the temperature is suitable.¹ At the outer edges of the circle the mycelium develops knobs which as they grow appear above the surface as mushrooms.

The expanding mycelium produces an effect cursed by lawn enthusiasts and known as a "fairy ring". A common type of fairy ring has been described as two rings of enhanced grass growth separated by a zone of poor growth or even bare ground.

C.L. Duddington has explained it thus— "At the edge of the ring the advancing mycelium acts upon the organic matter in the soil. Proteins, in particular, are converted into simpler amino-acids, and these are further acted on by soil bacteria, forming salts of ammonia and finally nitrates. The grass benefits from this free dressing of nitrate, and the effect is seen in the increased luxuriance of its growth."²

As the mycelium expands the central area begins to die off. The bacteria which breaks down the protein in the dead mycelium also encourages grass growth, so forming the second ring.

There is some uncertainty amongst botanists as to the cause of the bare patch between the two rings.

"The most likely theory at the moment is that this area of soil is filled with actively growing hyphae (threads) of the fungus, which clog the spaces between the soil particles so that both drainage and aeration are impaired. The grass roots are in a state known as physiological drought: though rain may turn the surface of the soil into a quagmire, none can penetrate to the grass roots... With the lack of water the bacteria in the soil are unable to do their work of breaking down organic matter, so that there is a shortage of minerals for the grass roots to absorb. The grass dies from drought and starvation."³

1. Marteka, Vincent *Mushrooms Wild & Edible*, W.W. Norton, 1980 p7, and *Encyclopaedia Britannica* Micropaedia entry for "mushroom".
2. Duddington, C.L. *Beginner's Guide to the Fungi*, Drake, New York, 1972, p40.
3. *Ibid*.

There goes the neighbourhood!

P.A.B.

With immigration a topical issue, some New Zealanders may be interested in an article in a recent *Omni* (January 1990) which looks at apocalyptic prophecies. In it Mark Harwell of Cornell University's Global Environment Program offers cheer to those fearful of nuclear winter: "Move to New Zealand. It's way the hell south and has 30 sheep per capita. You can survive on lamb chops until the smoke clears out of the stratosphere."

Another academic rather more seriously sees moving to this country as the answer for large numbers of socially dis-

tressed. Dr Frank Johnson, a university lecturer, has written a book *The Janos People* about the abduction of an English family by some extra-terrestrials from Janos (wherever that is). In her recent book *Abduction* Jenny Randles comments that Johnson, "did not help himself by proposing that the inhabitants of New Zealand move off one island and turn the other over to these kindly aliens who, even now, must be getting very frustrated after a decade of being inter-stellar refugees!"

Skeptics' after-dinner speaker finds something to believe in?

The following item was sent by Mr A.S. Hamlyn of Dargaville. It appeared in *The Northland Times* of 23 March 1990 under the headline "Sceptic flabbergasted by Indian holy woman".

Auckland: Arch sceptic Brian Edwards has been left flabbergasted by his meeting with an Indian holy woman, known to her disciples simply as "Mother."

Edwards, who has always proclaimed himself an atheist during his colourful broadcasting career, said he had been given something to think on after what he believed was an extraordinary event during a radio broadcast with Shri Mataji Nirmala Devi.

"I'll have to have a long think about what has happened. It has certainly taken me aback. But whether it will change my views...I'll have to go home and think about it."

Mr Edwards said his extraordinary experience oc-

curred as he interviewed Shri Mataji, 65, in a sealed room on air for Radio Pacific.

Shri Mataji, hailed as a living saint in her native India, and an exponent of Sahaja Yoga, was telling her host about people's inner spiritual force, which she calls kundalini.

It is a power, she says, that manifests itself as pulsations rising up the spine to the crown of the head and as a cool wind on the hands, similar to descriptions in Christian writings about the power of the Holy Ghost.

"I was listening to what she was saying but not really believing it," Mr Edwards said.

"My impression was she was a smart, maternal and intelligent woman.

"Then one moment I had the distinct impression I was holding in my left hand what I can only describe as being a ball of cold air."

Groping for words to describe the experience, Mr Edwards later said it was like a "weightless ball of ice."

"I said to her 'Are you responsible for this?' and she replied she was," he recalled.

"Next I felt the same thing in my right hand and bringing the two together, it was like a football of chilled air in my hands. This was all live on air. I had a feeling of this cold air moving behind my head. That is where it stopped. It didn't reach the crown of my head, which is where the believers think the power resides.

"If I had to try to describe it, it would be like feeling the air on your hands from the airconditioning system in a car—but this was in the studio."

Mr Edwards said the incident had not suddenly altered his atheistic views but it had given him something to mull over for quite some time.

Shri Mataji was in New Zealand for a three-day speaking tour around Auckland. NZPA.

Footnote for the historically curious.

Dr Brian Edwards was a last minute replacement for the scheduled after-dinner speaker at the 1987 NZCSICOP conference in Wellington. After listening to the preliminaries, Edwards in his speech accused the Skeptics of being self-congratulatory. (Although an intelligent person, Edwards seemed to think conference dinners should be an occasion for soul-searching and breast-beating.) In the course of a general lambasting he told us we should believe in something. (Taking the hint, the A.G.M. of the NZCSICOP the following day passed this resolution: "The New Zealand Skeptics affirms its belief in Santa Claus but confesses to lingering doubts about the tooth fairy".) —Ed.

Forum

Implicate order

Michael D.S. Cocks

Experience of synchronicity (co-incidence) has occasioned thoughts on the inter-connectedness of things.

If we attempt to test for the “paranormal” in the laboratory, we are assuming local causes, that is we are attempting to find a causal, albeit “paranormal” relationship between event A and event B.

In 1964 J.S. Bell published a mathematical proof which came to be known as Bell’s theorem. One of the implications of Bell’s theorem is that, at a deep and fundamental level, the “separate parts” of the universe are connected in an intimate and immediate way. The theorem showed that either the statistical predictions of quantum theory or the principle of local causes is false. The Clauser-Freedman experiment shows that the statistical predictions of quantum theory are correct, so therefore the conclusion is plain—“one is led to a new notion of *unbroken wholeness* which denies the classical idea of analysability of the world into separately and independently existent parts” [David Bohm, 1974.] In the “world” Bohm, the well-known theoretical physicist of London University, includes events of consciousness.

But in that unbroken wholeness, ten or twenty-four dimensions are supposed to be necessary for the manifestation of reality as we understand it and it appears that the creator of quantum theory, physicist Werner Heisenberg, argued for other-dimensional orderedness for physical phenomena. Shortly before his death he argued that what was truly fundamental in nature was not the subatomic particles themselves, but the symmetries that lay beyond them.

These fundamental symmetries could be thought of as archetypes of all matter and the ground for material existence. The elementary particles themselves would be simply the material realizations of these underlying symmetries. [p94 Peat, F. David, *Synchronicity, the bridge between matter and mind*, Bantam, 1987.]

Bohm speaks of this other dimension as “the Implicate Order”. A reader wishing to explore these ideas more deeply would be amply repaid by reading Bohm’s *Wholeness and the Implicate Order* 1980.

In this work it is noted that quantum mechanical (subatomic) theory is mathematical in character, and that there is no definite concept of matter in the quantum domain. [p74]

It was only at the end of his life that Heisenberg argued for other-dimensional symmetries. It is this argument however that Bohm is developing when he writes: [p64]

“We ought to be free to consider the hypothesis that the results of individual quantum-mechanical measurements are determined by a multitude of new kinds of factors, outside the context of what can enter into quantum theory. These factors would be represented mathematically by a further set of variables, describing the states of new kinds of entities existing in a deeper, sub-quantum-mechanical level and obeying qualitatively new types of individual laws. Such entities and their laws would then constitute a new side of nature, a side that is, for the present ‘hidden’.”

Bohm admits that the majority of modern theoretical physicists have come to reject any suggestion of this kind. Nevertheless he develops an extension of the mathematical formulae governing quantum-mechanical events, which do not affect the universally accepted validity of their mathematical logic in their application in physical theory. They do however appear to provide a workable mathematical logic for taking cognizance of such hidden variables as may be discovered.

It would seem that Bohm’s logic is acceptable mathematically, but is a long way from being proven. On the other hand Bohm was led to work out his mathematical logic in order to accommodate other important findings in the realm of quantum mechanics. These include—

- Heisenberg’s Uncertainty Principle which seems to demand that the consciousness of the experimenter be part of the experiment with the subatomic particles.

- Bell’s Theorem which demonstrates that either quantum mechanics mathematics is wrong (disproved by the Clauser-Freedman experiments) or the common scientific view of reality is profoundly deficient.

- The Einstein-Podolsky-Rosen Thought Experiment showing apparent faster-than-light communication between pairs of photons flying in opposite directions. Either one of the pair ‘knows’ what the other is doing, or one photon is changing the state of the distant photon. John Bell a British theoretical physicist working at CERN, in Switzerland, first proved this in 1969. Physicists have carried out several experiments on photon pairs and similar systems. All of these experiments have proved the predictions of quantum physics. Their results are inexplicable on the basis of any theory that excludes non-local interactions. An important confirmation are the experiments conducted by Alain Aspect at the Institute of Optics in Paris. [*Scientific American*, January 1988] (As an explanation for this apparent impossibility Bohm suggests that the separating particles are really the same particle seen from the point of view of a higher dimension. [p187]).

Much disciplined thought leads Bohm to conclude that “the explicate and manifest order of consciousness is not ultimately distinct from that of matter in general” [p208] and he notes [p209]:

We introduced the notion of a higher-dimensional reality which *projects* into lower-dimensional elements that have not only a non-local and non-causal relationship but also just the sort of mutual enfoldment that we have suggested for mind and body.

It is not possible to present a proper picture of a complex matter in such a small compass. There is a growing literature and it deserves attention. The purpose of this article is to raise the question whether all the implications of Bell’s Theorem should be taken into account by Skeptics in investigating claims for the paranormal, or whether they

will be dismissed a priori.

Bohm's theoretical mathematics is consistent with the EPR paradox and with orthodox quantum mechanics. Moreover, the EPR paradox, Bell's theorem are nowhere to my knowledge challenged. Skeptic Martin Gardner, in Vol 11, No 2 (Winter 1986/87) of *The Skeptical Inquirer*, notes about Bell's Theorem that it provided for the first time a way of testing the EPR paradox in the laboratory. Many such tests have been made, with even better ones under way. The EPR paradox has been strongly confirmed, at least for short distances; but if QM is correct, the correlation will never be lost as long as the particles continue through space. Working physicists may still shrug and say: "So what? We knew it all along. That's just the way QM works." But the troubling question won't go away. What connects the particles? Bohm has always maintained, with Einstein [against Nils Bohr, as Dugald Murdoch points out in his able book on the subject] that QM is incomplete—that some kind of field [or dimensions], on a level not yet explored, provides the "connectedness" that keeps the two particles in a single quantum system.

We need to mention a further implication of the EPR paradox which is that all particles have been together are always together in the EPR sense. Perhaps beginning with the Big Bang, the totality of particles have this relationship with each other...and with Bohm, mind is an aspect of this totality.

Martin Gardner quotes David Mermin, a physicist at Cornell University, who recently divided physicists into three classes with respect to their attitude towards the EPR: 1) Those who are troubled by it; 2) Those who are not troubled by it, but invent explanations that either are wrong or miss the point by doing no more than restate the formalism of QM; 3) Those who all not troubled, but refuse to say why. The last position, Mermin added, "is unassailable".

I believe that we should join the ranks of those who are troubled by it, leave room in our thinking about the paranormal for an attitude other than mechanistic reductionism.

It seems to me that there are some important pointers in all this for Skeptics scientifically investigating the claims of the paranormal.

1. Laboratory experiments patently are essential to scientific investigation. Laboratory experiments however, assume local causes, and are not geared to take account of an unknown number of distant events beyond the ken of the experimenters in an "unbroken wholeness" where we may have a "higher dimension of reality which projects into the lower-dimensional elements that have not only a non-local and non-causal relationship but also just the sort of mutual enfoldment we have suggested for mind and body."

If the "paranormal" occurs, then Bell's theorem suggests that it occurs as part of this unbroken whole. And if this is the case, it can bring despair to those who would like "scientifically to prove" that "paranormal" events do or do not occur. But if the universe implied by the EPR experiments is real, then it will be hard to distinguish between "normal" and "paranormal". Thus it is arguable that both Skeptics and the parapsychologists of the last 60 years or more, are looking in the wrong direction if they try to dem-

onstrate paranormal events in terms of localised cause and effect.

2. If we were to accept the implications of Bell's Theorem, this would in no way detract from the real accomplishments and successes of Skeptics in unmasking the fraud, credulity and superstition which everywhere abound. But it should make us less dogmatic in believing that consciousness is an activity confined to our brains, more receptive to a differing view of reality.

3. We need to be aware that even physicists frame their theories in the light of philosophies, which by their nature are unprovable. Nils Bohr, for instance, was influenced by Kierkegaard and Hoffding, Einstein was not. Similarly David Bohm is influenced by holistic concepts, while behaviourist psychologists J.B. Watson and E.F. Skinner are influenced by the reductionist determinism of some nineteenth century physics.

Each person must intuitively, or by faith, take a philosophical stand, unprovable in itself. I hope that Skeptics will not become special pleaders for only one out of several valid philosophies.

Natural remedies

(From the London Sunday Times Supplement)

Natural is a useful word if you want to sell health foods, but a dangerous one if you want to stay healthy.

Natural foods and remedies have no intrinsic advantages over unnatural ones—indeed they are often more dangerous. Nature isn't a benevolent matriarch. Most people die of natural causes, and doctors spend a lot of time trying to repair bodies and minds that have been visited by a malevolent Mother Nature. The doctor's job is to protect people from the ravages of an often hostile natural environment and, when protection fails, to try to repair the damage.

Naturally occurring smallpox was driven from the world by unnatural vaccination; natural bacteria that enter our bodies to cause infection are themselves destroyed by unnatural chemicals, injected through unnatural needles.

Doctors learn early on that Nature has no bias. It is neither for us nor against us. Natural laws can be defined as clearly—and work as inexorably—in the spread of an epidemic as in the birth of a healthy baby.

Note on Spelling

My aim, perhaps imperfectly realised, is to use the spelling "sceptical" when referring to doubting in a general sense and "skeptical" when referring to the organised scepticism towards paranormal claims.—Ed.

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In next issue:

The Milan Brych Story

Changing Your Address?

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