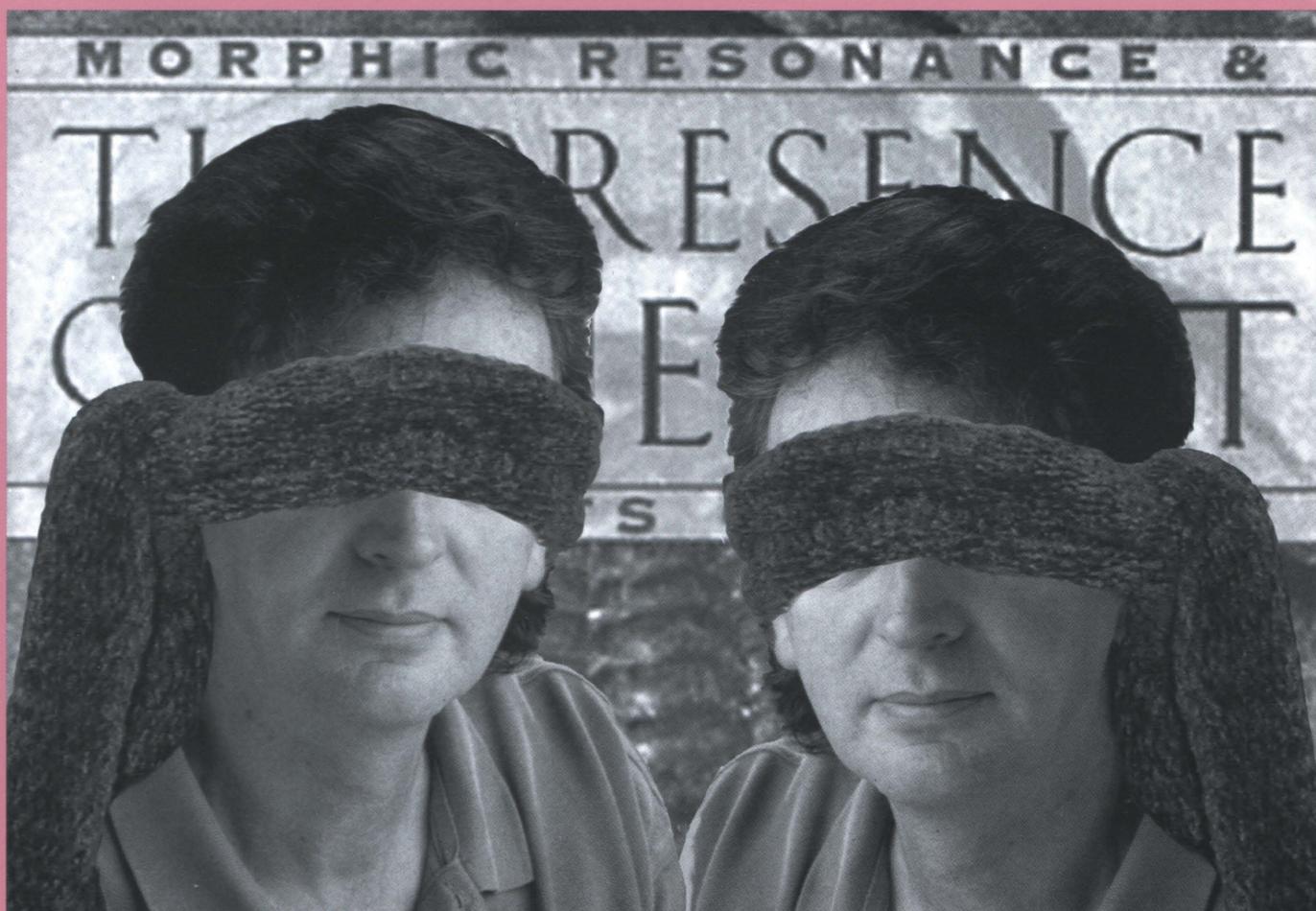


*The*

Volume 12 Number 2

# *Skeptic*



## ***Rupert Sheldrake – Morphic Fields and Double Blind Experiments***

*Also in this issue:*

*The unpleasant world of Revisionist historians*

*Hilary Evans on the “abduction” hypothesis*

*The ups and downs of biorhythms*

*Plus: News • Book Reviews • Comment • Humour*

# Hilary Evans' *Paranormal Picture Gallery*



## The one that got away. . .

**O**n a June day in 1962, fisherman Colmaro Orsino, of Bocca di Magra, Italy, was surprised to see this mermaid come swimming past. Regrettably, for him and for marine biologists, with a swish of her tail she swam away too rapidly for him to get his hook into her.



## . . . and the one that didn't!

**T**hese fishermen of Aden, back in the 1920s, were luckier in their fishing, but there was a catch to their catch. Doubtless as manatees go it was a fine specimen, but when it comes to looks, it doesn't compare with the genuine article . . .

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Email [edit@skeptic.org.uk](mailto:edit@skeptic.org.uk) if you are available to help  
with interim chores



# Skeptic in Chains

Wendy M Grossman

## Urban myths and deadly curses

**A**T THE FIRST “Skeptics in the Pub” gathering – and I can recommend these third-Thursday-of-the-month meets to anyone based in London – one of the audience members got talking about the Usenet newsgroup alt.folklore.urban, of which she’s a long-term member. This is, of course, the newsgroup that focuses on all those wonderful tales of the vanishing hitchhiker, the guy who wakes up in a bathtub full of ice to find an incision in his back and a note telling him to call 911 (American for 999) in a hurry or die, and the dog in the suitcase that gets stolen.

There are a lot of these tales, and they sure do make the rounds. The dog in the suitcase – briefly, the owner of a large dog is faced with a disposal problem in a small city apartment and is advised to bring the dog in to the RSPCA in an old trunk, which is stolen by someone who offers to help the dog owner carry it – was told me as truth by a friend who swore it happened to one of his mother’s patients. I don’t think my friend believes me still when I tell him it’s a common tale and one that’s been catalogued by the folk such as Jan Harold Brunvand who collect these things.

The woman at the pub night said oh, yes, it isn’t until you get two or three people together each telling the same tale that they realise they’ve been barking up the wrong bathtub full of ice. What happens then, is anger.

At you.

For some reason, people regard anyone who casts doubt on a cherished belief as a party-pooper. I can understand why it’s fun for parents and kids to play with belief in Santa Claus, the Easter Bunny, and the tooth fairy. But it’s difficult to understand why, say, explaining that astrology doesn’t have any validity when scientifically tested and is actually invalidated by the precession of the equinoxes is thought of as making trouble and being generally unkind. Lots of truths aren’t pleasant to hear, but are in the long run kinder than falsehoods on the same subject would be. But somehow we’re to blame.

The thing I notice is that a lot of people don’t really at heart believe what they think they believe. For example, in mid-February, I appeared on *This Morning with Richard and Judy* to chat about ghosts and curses and other such evil things. With a muted cacophony of screeches playing in the background behind us, I was handed a glass box belonging to one Graham Wylie, and asked to open it.

Now, about the box: it contains a 10-inch (or thereabouts) human-appearing skeleton. I’d seen it before, though not close-up, when in early 1998 Mike Howgate, Steve Donnelly, and I all converged on Central Weekend on the same night. Wylie was there, too, and during the

course of the programme, both Donnelly and Howgate not only opened the box but actually touched the skeleton. (On invitation, of course: I wouldn’t want you to think they were being rude or forward.)

Now, I knew that both Mike and Steve had survived this experienced undamaged, and I told Wylie as much. But that didn’t stop him from claiming that anyone except him who opened the box would die within ten days. The skeleton is, according to him, that of an 18th century sailor named William Jones (of course); the sailor was cursed at some point, and his body shrank from his normal height of five-foot-ten down to the size we see today in the two or three years that remained before he died. Judy in particular seemed very impressed by this skeleton, and made a point of moving her chair several feet away while Wylie handled and opened the box (he apparently has some affinity with the skeleton, or so a couple of mediums told him, and that’s why he can open it with impunity). So then they handed me the box, and I opened it.\* Heavy atmosphere in the studio, presumably everyone agog at home, your basic wow! TV.

The thing is, no one there can seriously have believed I was in any danger. If I had walked into the studio and said, I believe in mind over matter, and I have perfect faith that drinking this glass of hydrochloric acid will not harm me, and to prove it I’m going to drink it on your show this morning, no one would have allowed me to do such a thing. If I owned a box I seriously believed killed people who touched it, I would not be dragging it around TV studios where anyone could get their hands on it, I’d have it stashed in a safe place where no one could touch it, like the last surviving samples of smallpox.

At heart, Wylie himself doesn’t even believe it. After the show, he came over, arm outstretched to shake hands. “I’m sure our paths will cross again,” he said. “What are you saying?” I asked him in my best New York Jewish style. “You – you’re the one who’s saying I’m going to be dead in ten days.”

“Maybe sooner,” he said, with a smile.

Sorry to disappoint. I must do better next time. <Lightning thwack>

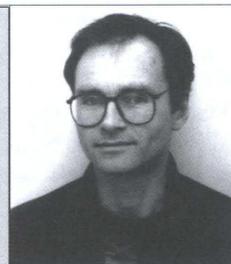
**Wendy M Grossman** is editor of *The Skeptic* and a writer and folksinger.

\*Anyone who dares risk the shrunken sailor’s curse can see a picture of Wendy Grossman holding the deadly box at: <http://www.skeptic.org.uk>

Thanks for production help to Scott Campbell, David Morton, Rachel Carthy, Marc LaChapelle, and Richard Hall.

# Hits and Misses

Simon Brophy



## Mum's gone to Iceland

Those of you who occasionally buy provisions at Iceland – a chain of supermarkets specialising in frozen foods – may be aware of their loudly touted policy of not selling foodstuffs made from, or containing, “genetically modified” ingredients.

Some rival supermarket managers take a very different view, as the April 1999 issue of *Pharmaceutical Marketing* showed, when it reported on the response received by concerned customers when they wrote to the supermarket chain Somerfield to complain about its policy on GM ingredients. Stephen Ridge, a quality assurance executive from the chain wrote back: “While I have every sympathy with the position you have decided to take, i.e. avoiding any genetically modified foods, I regret to say that in the near future you will starve.”



Tim Pearce

## Fangs for the memory

The *Ship of Fools*, a Christian and startlingly skeptical Web site (<http://www.geocities.com/~ship-of-fools/>), has been reporting on a new wave of dental alchemy in which people leave prayer meetings with, they say, brand new gold fillings. The Web site reports molar miracles in locations from Toronto to Tulsa, and readers are report-

ing that similar transmutations have occurred as far afield as Argentina and Mexico. Even Britain is in on this act, with similar reports coming from Bath and Croydon.

One claim the site points out failed spectacularly was that of the president of Canada's only Christian TV station, Dick Dewert. The *Canadian Globe and Mail* reported on 22nd March that he had assured viewers during a fundraising telethon that extensive prayer had netted him a gold tooth he'd never had before.

But journalists like to make trouble, and the newspaper went on to report that Dewert's long-time dentist, Dr Jack Sherman, reminded his patient the following day that in fact he'd put the filling in about ten years before.

Skeptics may remember similar claims a few years ago by a roving practitioner who charged for his no-drill work and warned audiences they might not see any difference in their fillings for two to three weeks – long enough, in other words, for him to have left town and cashed the cheques. This time, though, people are reporting that the colour of their fillings changes while they watch in mirrors. Less familiar may be 1950s preacher A A Allen, who made similar claims back when he was working.

*Ship of Fools* figures the phenomenon should be short-lived, as it has been the other times. Skeptics may be less sure, since these things seem to go in cycles that no amount of debunking by personal dentists bearing records showing the dates and types of the fillings (do people really forget drilling that easily?) can disrupt.

The Toronto Airport Christian Fellowship, one of the groups whose members are reporting the phenomenon, has been quoting *Psalms* 81:10 in support of the miracle: “Open wide your mouth and I will fill it.” Which reminds me entirely of the schoolboy joke about the pastor who offers to deliver a sermon on any subject of interest to the congregation. When he receives the reply “constipation” he opens the bible to the appropriate page and reads out “And Moses took the tablets, and went up into the mountains.”

## “Like a cake left out in the rain. . .”

From time to time readers may spend a few hours of their own time and money surfing on the Internet looking for nuggets of interesting information. (Apparently, if you do this in your boss's time, and with his/her money, this is called ‘multi-slacking’ – unless, of course, the subject is relevant to your work, or turns up by accident . . .) However, I digress. While surfing one day at the computer, I came across a Web site (<http://www.berk.com/~lessemf/personal.html>) advertising itself as “The EMF Safety Site.” Here you can purchase “EMF Shielding Devices.” These include Silver Lining Garments – under-

pants made from aluminium foil – available in small, medium, large, extra-large and extra-extra large, adorned with the slogan “Surround what you want to protect!” One may also buy “The Cybercap™” with the slogan (I kid you not) “Sunglasses for your brain™.” There is a picture of an affable-looking chap, and his small son, both wearing baseball caps. We are reliably informed that the hat is made from sophisticated metallized fabric with extremely high reflective characteristics. Potential purchasers will be pleased to know that the “EMR waves actually bounce off the fabric with little or no absorption, and no electric discharging.” This is very comforting – cheaper imitations have a tendency to short-circuit in the rain, and fry the wearer’s ears off. For a short while I thought that this might actually be a spoof – look at the first part of the URL – but then I remembered that the word ‘berk’ has no meaning in the USA – evidently. In fact, the “berk” in the message is short for Berkshire, a mountainous area of New York State and berk.com is run by the local telephone company.



Tim Pearce

## Swallow your own smoke!

Readers of medical journals were treated to the agreeable spectacle of a learned publication eating its own young on March 25th. The editors of the highly regarded and greatly esteemed *New England Journal of Medicine* had presumably commissioned and peer-reviewed the paper by Jiang He and Suma Vupputuri *et al* entitled “Passive Smoking and the Risk of Coronary Heart Disease – A Meta-Analysis of Epidemiologic Studies.” The predictable conclusion of this particular exercise was that passive smoking causes a small increase in the risk of heart attacks.

However, the *NEJM* had also presumably commissioned the leading editorial which was a blistering attack on the technique of meta-analysis in general, and its use in the Jiang He paper in particular, by one John C Bailar III, MD PhD, of the University of Chicago. The good doctor summarises: “Therefore, I regretfully conclude that we still do not know, with accuracy, how much or even whether exposure to environmental tobacco smoke increases the risk of coronary heart disease.” Nothing like the sound of toes being shot off, eh, chaps?

## Around in circles

Wendy Grossman writes that crop circles are back in business after a few years off for good behaviour with the news that Laurance Rockefeller is planning to spend an undisclosed amount of money to fund the UK’s largest-ever survey of the cerealogical phenomena. He has already funded the creation of a large crop circle database, accessible via the Web.

Rockefeller, one of the billionaire Rockefellers whose family fortunes were made in the oil business early this century, is apparently interested in research into UFOs and other unexplained phenomena (according to the BBC).

What isn’t clear is why he should be interested in crop circles, which seem to have been fairly well explained already, what with hoaxers coming forward and ‘fessing up to their night-time crop circle-creating activities and skeptics able to make crop circles to fool the most expert cerealogists. But perhaps he’s merely interested in cornering the market in this unusual type of art before the artists die and the prices shoot way up.

## Tea

Brooke Bond is at it again. Wendy Grossman writes that back in 1987 or thereabouts the company ran off a series of cards to package with its loose PG Tips tea that showcased various mysterious phenomena – live toads trapped inside stones, you know the kind of thing.

Now, they’re pushing tasseography, the “ancient” art of reading fortunes in tea leaves. This is education for anyone who wonders how that worked: you drink the tea and squint at the leaves remaining in the cup. You match the shape you think they are to one of the symbols on the card, and read off your fortune. Trouble is, these days if the milk in the tea isn’t obscuring the leaves, the tea bag is. So Brooke Bond has come up with a solution: you place the card over the cup of tea, and the steam makes the symbols appear on the card. No muss, no fuss, just remember which of the symbols you saw and decode them from the table on the back side of the card.

On our way out to a Skeptics in the Pub meeting, using the two cards in our 1kg of tea we got: an ant (success by work), an ear (unexpected news), a fork (a decision), a telephone (an important call – presumably as opposed to the drivel we mostly get); and (twice) a fish (luck, travel). We’ve got to hand it to BB on this one: how ever did they know we keep fish?

**Simon Brophy** works for a pharmaceutical company in a role which is part technical, part commercial, part stand-up comedian and part bass-guitar.

# Blind Belief

**Rupert Sheldrake** discusses the role of double-blind experiments for skeptical enquiry in the physical and biological sciences

**I**N SCIENTIFIC RESEARCH, as in everyday life, “our beliefs, desires and expectations can influence, often subconsciously, how we observe and interpret things,” as a recent article in the *Skeptical Inquirer* expressed it [1]. In experimental psychology and clinical research, these principles are widely recognised, which is why experiments in these subjects are often carried out under blind or double-blind conditions. There is overwhelming experimental evidence that experimenters’ attitudes and expectations can indeed influence the outcome of experiments [2].

In single-blind experiments, an investigator does not know which samples or treatments are which. But when human subjects are involved, as in medicine and experimental psychology, double-blind procedures can be used to guard against the expectancy of both subjects and investigators. In a double-blind clinical trial, for example, some patients are given tablets of a drug and others are given similar-looking placebo tablets, pharmacologically inert. Neither researchers nor patients know who gets what.

In such experiments, the largest placebo effects usually occur in trials in which both patients and physicians believe a powerful new treatment is being tested. The inert tablets tend to work like the treatment being studied, and can even induce its characteristic side-effects [3]. Likewise, experimenter expectancy effects are well-known in experimental psychology, and also show up in experiments on animal behavior [4].

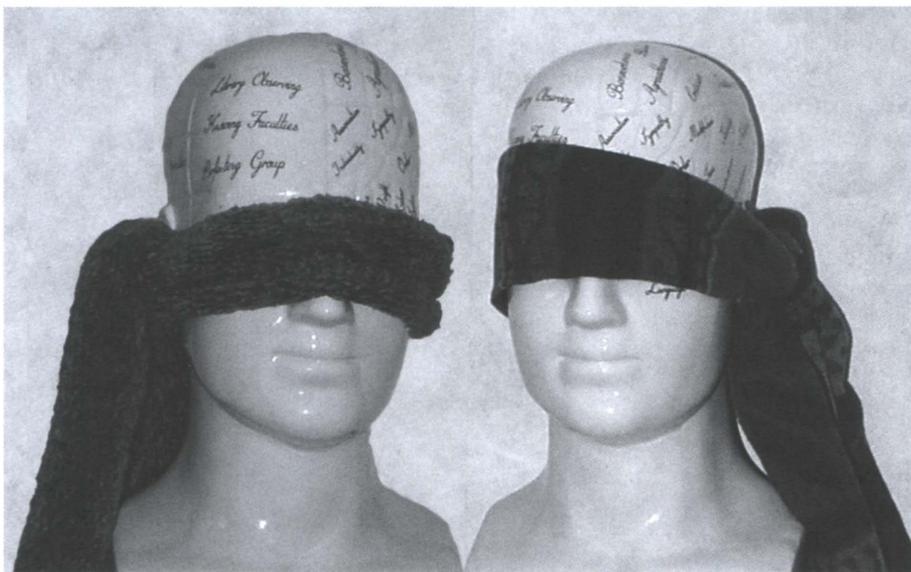
In a fascinating historical account, Ted Kaptchuk has shown that blind assessment first began in the late eighteenth century “as a tool for fraud detection mounted by elite mainstream scientists and physicians to challenge

the suspected delusions or charlatanism of unconventional medicine” [5]. Some of the first experiments were carried out to evaluate mesmerism, and were literally conducted with blindfolds. They took place in France at the house of Benjamin Franklin, the American minister plenipotentiary, who was head of a commission of inquiry appointed by King Louis XVI.

The use of blind assessment had been adopted by homeopaths by the mid-nineteenth century, and by the end of that century was taken up by psychologists and psychical researchers. But it was not until the 1930s that the potential of blind techniques combined with no-treatment control groups in clinical trials was widely recognised by mainstream medical researchers, and only after World War II did blind assessment in randomised controlled trials become a standard technique.

In medicine and psychology, blind experimentation began as a deterrent against the unconventional, but its general importance has been recognised for orthodox research; it has been internalised. Although researchers in unconventional medicine and their sceptical critics have been aware of the possible effects of expectation and belief for over two hundred years, and conventional medical researchers and psychologists for decades, how widely has this awareness spread throughout the scientific community? What about the beliefs and expectations of experimenters in other branches of science? No one seems to know how important they might be. There seems to be a tacit assumption that scientists in orthodox fields of inquiry are immune from the general principle that “beliefs, desires and expectations can influence, often subconsciously, how we observe and interpret things”.

I have attempted to quantify the attention or inattention to possible experimenter effects in different fields of science by means of two surveys. The first survey was of experimental papers recently published in leading scientific journals, including *Nature* and the *Proceedings of the National Academy of Sciences*. In the physical sciences, no blind experiments were found among the 237 papers reviewed. In the biological sciences, there were 7 blind experiments out of 914 (0.8%); in psychology and animal behaviour, 7 out of 143 (4.9%); and in the medical sciences, 55 out of 227 (24.2%). By far the highest proportion (but the smallest



sample) was in parapsychology, 23 out of 27 (85.2%). [6]

In the medical journals, out of the 55 reports involving blind methods, only 26 (11.0% of the total) represented double-blind trials. The other 30 employed single-blind methods, with one or more of the investigators carrying out blind evaluations or analyses. The majority of the papers did not involve blind methods. (The journals surveyed were the *American Journal of Medicine*, *Annals of Internal Medicine*, *British Journal of Clinical Pharmacology*, *British Medical Journal* and *New England Journal of Medicine*.)

The second survey was of science departments at 11 British Universities (including Oxford, Cambridge, London and Edinburgh). It confirmed that blind procedures are rare in most branches of the physical and biological sciences. They are neither used nor taught in 22 out of 23 physics and chemistry departments, or in 14 out of 16 biochemistry and molecular biology departments [7]. By contrast, blind methodologies are practised and taught in 4 out of 8 genetics departments, and in 6 out of 8 physiology departments. Even so, in most of these departments they are used occasionally rather than routinely, and are mentioned only briefly in lectures.

Only in exceptional cases are blind techniques used routinely. This survey revealed three examples. All three involved commercial contracts, according to which the university scientists were required to analyse or evaluate coded samples without knowing their identity.

When academic scientists were interviewed for this survey, some did not know what was meant by the phrase "blind methodology". Most were aware of blind techniques, but thought that they were necessary only in clinical research or psychology. They believed that their principal purpose was to avoid biases introduced by human subjects, rather than by experimenters. The commonest view expressed by physical and biological scientists was that blind methodologies are unnecessary in their fields because "nature itself is blind", as one professor put it. Some admitted the theoretical possibility of bias by experimenters, but thought it of no importance in practice. And one chemist added, "Science is difficult enough as it is without making it even harder by not knowing what you are working on".

The assumption by most "hard" scientists that blind techniques are unnecessary in their own field is so fundamental that it deserves to be tested empirically [8]. Not just in psychology and medicine but in *all* branches of experimental science we can ask: can the expectations of experimenters introduce a bias, conscious or unconscious, into the way they carry out their procedures, make observations or select data?

I suggest the following empirical investigation. Take a typical experiment involving a test sample and a control, for example the comparison of an inhibited enzyme with an uninhibited control in a biochemical experiment. Then carry out the experiment both under open conditions, and also under blind conditions, with the samples labelled A and B. In student practical classes, for instance, half the class would do the experiment blind, while the other half would, as usual, know which sample is which.

If such tests show no significant differences, then for the first time there will be evidence that blind techniques

are unnecessary. On the other hand, significant differences between results under blind and open conditions would reveal the existence of experimenter effects. Further research would then be needed to find out how the experimenters' expectations were influencing the data.

The more independent investigations, the better. It cannot be healthy for the supposed objectivity of regular science to rest on untested assumptions [9]. This is an inquiry in which the critical skills of sceptics could play a major role. The use of blind methodologies, pioneered by sceptics in the field of unconventional medicine, has now been internalised within medicine and psychology, resulting in improved rigour and a more sophisticated awareness of the effects of experimenter bias. The so-called hard sciences have largely escaped sceptical enquiry, but there seems no good reason why they should continue to be granted this immunity.

Perhaps it will turn out, after all, that "hard" scientists need not bother with blind techniques. They may indeed be exceptions to the principle that "our beliefs, desires and expectations can influence, often subconsciously, how we observe and interpret things". On the other hand, they may be like everybody else, including researchers in psychology and medicine.

I would be grateful to hear from any readers who are able to conduct experimental investigations on this subject.

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# Skeptical Stats

1. Proportion of cases exorcist Bishop Corrado Balducci told the Vatican were genuinely possessed: **5 or 6 per 1000**.
2. Number of words in the OED devoted to the Devil: **about 13,000**.
3. Sale price of Conan Doyle's "Cottingley Fairies" cameras: **£13,000**.
4. Percentage of articles published in medical journals that meet scientific standards: **5**.
5. Cost, per room, of interactive online report on the Feng Shui of your home: **£11**. (We note that the site, [www.online-fengshui.com](http://www.online-fengshui.com), was unable to accommodate the piano in our bedroom or the TV in our office, but perhaps for that you need to pay the full **£200** fee for a personal visit.)
6. Cost of full-day home visit plus 30 minutes email or telephone follow-up from Dulwich-based healer, aura-reader, telepath, and dowser Brian Snellgrove: **£600 plus costs**.
7. Number of detergent-free washes the £11.95 magnet-containing Wonderwash Laundry Ball is guaranteed for: **500**. (The UK distributors says that the magnet is so powerful that it makes the water pass through the fabric with such force that it lifts the dirt off, and you don't need soap.)
8. Year investors believe there will be demand and a realistic price for space tourism: **2025**.
9. Amount Applied Space Resources expects to be able to charge for a pea-sized moon rock: **\$200**.
10. Number of visitors to endangered "Stonehenge on Sea" tree circle ritual site in Norfolk since its discovery in January 1999: **5,000**.
11. Number of points on the human body recognised by accupuncturists: **1500**.
12. Length of time it took scientists in Chapel Hill, NC, to read the smallest known genome of an organism, the microbe *Mycoplasma genitalium*, with 470 genes: **three months**.
13. Number of apparently superfluous genes out of those 470: **150**.
14. Standard quoted number of Americans who die per year from food poisoning, drawn from 1994 research based on a mathematical model, not actual cases: **9000** (actual researcher's number **8982**)
15. Alternative number, sourced from similar research at the same time: **522.7**.
16. Number of trichinosis deaths assumed in 14's mathematical model, per year: **1000**.
17. **Actual** number of trichinosis deaths reported to the CDC, 1988–1998: **1**.
18. Number of annual food poisoning deaths claimed in *USA Weekend*, January 23, 1998: **10,000**.
19. Percentage of Americans who believe Jerry Falwell is crazy, after Falwell's attack on the Teletubbies: **83**.
20. Estimated size of Heaven, according to Billy Graham: **1500 cubic miles**.
21. Number of broadly different scenarios produced by 6 psychics asked by *The Globe* to divine how JonBenet Ramsey was murdered: **5**.
22. Number of saints canonised by Pope John Paul II in his 21-year tenure: **283**.
23. Number of saints canonised from 1592 until the beginning of John Paul II's reign: **302**.
24. Number of miracles now required for sainthood: **1**.
25. Number of illegal castrations performed on voluntary patients by Edward Bodkin of Indiana, USA: **5**.
26. Number of years Bodkin was sentenced to spend in jail for practising medicine without a license: **4**.
27. Number of Elvis Presleys living in Scotland: **19**.

**Sources:** 1 *Daily Telegraph*; 2 *Daily Telegraph*; 3 *Amateur Photographer*; 4 Richard Smith, editor of *British Medical Journal*, *Guardian*; 5 [www.online-fengshui.com](http://www.online-fengshui.com); 6 [www.cix.co.uk/~lord\\_bryan/Who\\_we\\_are/who\\_we\\_are.html](http://www.cix.co.uk/~lord_bryan/Who_we_are/who_we_are.html); 7 *Woman's Own*; 8 *Independent*; 9 *Discover* magazine; 10 *Independent*; 11 *Discover* magazine; 12,13 *Business Week*; 14–18 *Columbia Journalism Review*; 19 *Free Inquiry*; 20 *Free Inquiry*; 21 *Skeptical Inquirer*; 22, 23 *Daily Telegraph*; 24 *Independent*; 25, 26 *USA Today*; 27 *Guardian*.

Skeptical Stats compiled by **Wendy Grossman** and **Rachel Carthy**. Please send contributions (with source) to [stats@skeptic.org.uk](mailto:stats@skeptic.org.uk) or to *The Skeptic* (stats), PO Box 475, Manchester M60 2TH.

# Abductions that Never Leave the Ground

*The concluding part of a investigation by Hilary Evans into the reality – or otherwise – of the “alien abduction experience”*

**T**HAT REAL AND IMAGINARY abduction stories are not easily distinguished is amusingly illustrated by the case of John Mack, professor of psychiatry at Harvard Medical School and arguably the most academically distinguished individual to get involved in the UFO phenomenon: Donna Bassett was a 37-year old writer/researcher from Boston who became concerned about Mack’s procedures – she had heard complaints that he was “strip mining” the stories of emotionally distraught people and failing to help them with follow-up therapy. After reading books and articles on UFO abductions, Bassett went to Mack with an elaborate story of other-worldly experience.

Mack put her through three hypnotic-regression sessions, and she joined his abductee support group. He lent her UFO books, and asked her leading questions which reflected his preconceptions. The sessions were held in a darkened bedroom in his house. Among the events Bassett recalled was an encounter with Kennedy and Khrushchev on board a spaceship during the Cuban missile crisis. She said Khrushchev was crying – “I sat in his lap, and I put my arms around his neck, and I told him it would be OK”. Hearing her tale, the professor became so excited that he leaned on the bed too heavily and it collapsed. Subsequently, Bassett revealed that her story had been a fabrication: yet despite its wildly improbable character, it had been received unquestioningly by the professor [39].

Mack is far from being the only researcher to be deceived by false evidence. The history of science is dotted with scientists who failed to distinguish a hoax from the real thing. Nevertheless, for abduction researchers, the moral is plain. They are in a situation involving, on the one hand, story-tellers who may be fantasising, either deliberately like Bassett or unwittingly like Betty Hill’s subjects, and on the other, therapists who may not be able to distinguish fantasy from fact. The least one can say is that this a very unstable situation.

It is in the light of this that we should consider the case of Christi Dennis. Every year, psychology professor Leo Sprinkle mounts a conference at the University of Wyoming at Laramie. Most attendees are abductees and contactees, with a sprinkling of observers. In May 1981, one of the speakers was a college student, housewife, and mother named Christi Dennis, from Arizona. She told how she been confined to bed after a car accident, practising spiritual exercises such as OBEs. One day she suddenly had the impression that there were otherworldly entities in her room. She found she could talk with them. Subsequently she was somehow transferred to another environment, evidently on another planet, where she met a female entity about 2.5 metres tall who gave her

instruction. Dennis gave a detailed and coherent account of her experiences; she told how she was assigned a room which contained, among other things, a TV set where she could watch TV from earth from any period in time; and much other sophisticated gadgetry. Her presentation was lucid, sensible, impressive.

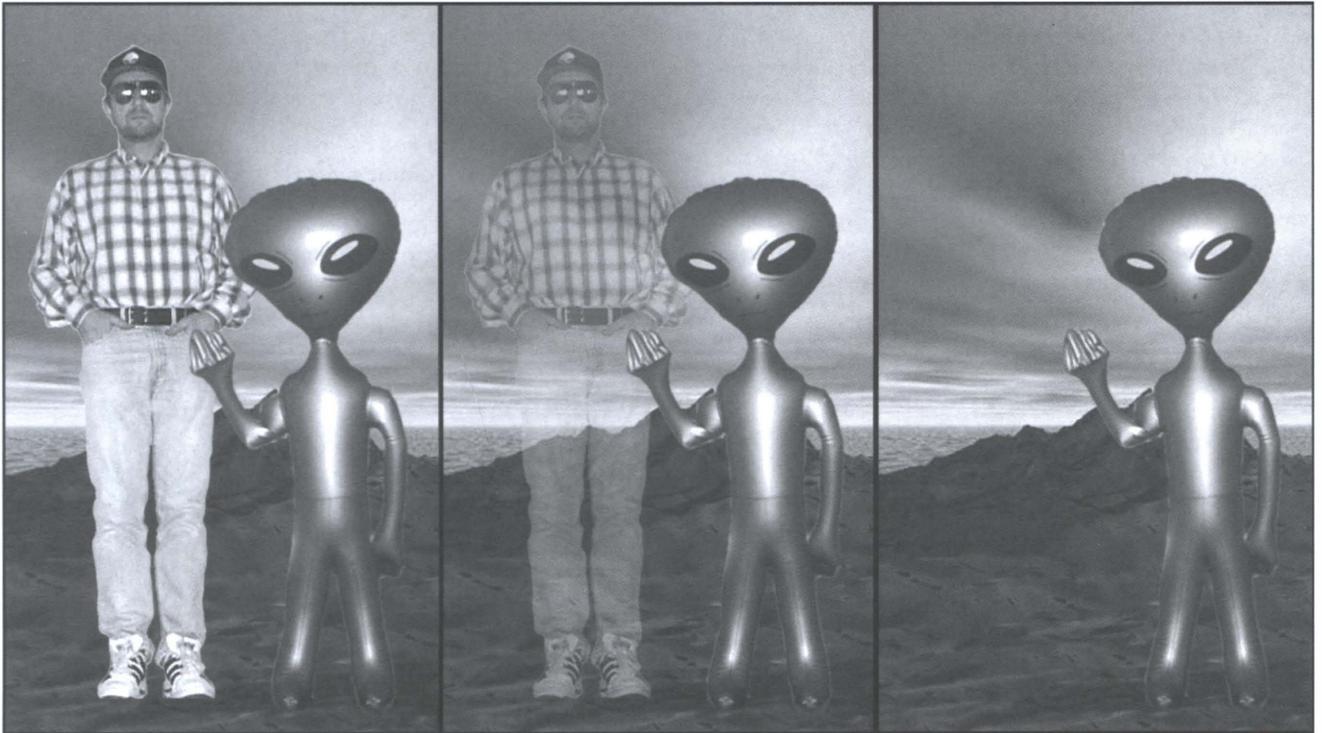
The following year, she wrote a letter to Sprinkle, in which she confessed: I am not a contactee. I have never had an extra-terrestrial experience! The stories I have told and the book I have written are nothing more than fair science fiction. From her letter it was clear that this was no simple, sensation-seeking hoax; rather, it was the outcome of some kind of spiritual crisis. Dennis had projected herself into this imaginary scenario as a way of externalising her internal predicament.

No less interesting, though, was Sprinkle’s attitude. He commented: “I must confess that I am as puzzled by Christy’s recent statement as I am puzzled by her original statements. I do not know the sources of her original data and information; but I do know that she demonstrates in her behavior some of the characteristics of us UFO contactees”. In other words, Sprinkle perceived the same behavioral characteristics in this imaginary abductee as in the supposedly “genuine” abductees he had studied [40].

Note that “us”, by the way; Sprinkle is one of several investigators who in the course of their investigation of abductees discovered that they were themselves abductees. “I claim to be a UFO contactee as well as a UFO observer” [41]. Another leading investigator, Raymond Fowler, made a similar discovery while investigating Betty Andreasson: “In *The Watchers* I will move from being an independent observer to that of a participant in the UFO abduction phenomena. Personal hypnosis sessions confirm youthful memories of encounters jolted from my mind when first confronted with Betty’s childhood UFO experiences” [42].

Edith Fiore is one of several clinical psychiatrists who have found that their patients’ troubles are alien-related. Just as child abuse protagonists are apt to say, “if you feel you may have been abused, then you probably were”, so Fiore warns her readers: “any anxiety reaction experienced while reading this or any other book on UFOs or Close Encounters of the Fourth Kind is a strong indicator [that you are yourself an abductee]” [43].

Well, I, for one, experienced anxiety reactions while reading her book; however, my anxiety was less for myself than for a society which can license such people to practise their therapy on unwitting patients. Fiore alone is justification for the title of Philip Klass’s book *UFO’s: a Dangerous Game*.



## From fantasy to hallucination

Even from the handful of cases presented here, it is evident that there are a wide variety of circumstances in which people will fantasise. Betty Hill refers to stories in which the abductee claims "They made me pregnant and later they returned and took the foetus". Good population control, she remarks, but adds: "However, all the women I have met agreed that sometimes in their past they thought they were pregnant and then found out they were not. Most women have this thought sometime in their lives" [44]. Put this fantasy into the context of an alien encounter, as in the prevailing cultural climate any woman might do, and we are halfway to an abduction story.

One of the problems is that fantasy is often associated with hallucination; and to many psychologists, especially in America, hallucination indicates a pathological condition. If you see a ghost or the Virgin Mary or an alien visitor, you are hallucinating; and if you are hallucinating, you must be mentally afflicted in some way.

In Europe and Australia we tend to be more flexible. We know sane people can hallucinate if circumstances are appropriate. Moreover, we are learning that the triggers can be of many kinds. Consider the case of Colombian cowman Anibal Quintero. In 1976 Quintero told investigators how a luminous egg-shaped vessel, lighting up the ground all around, landed close to him near his cowsheds. A number of people emerged, including three long-haired women. They caught hold of him, and though he knocked "at least four or five of them" down, they overcame him and took him into their spacecraft – or so we presume, for he was unconscious at this stage. When he came to, he found himself being massaged by the three females. They were naked, and behaved so provocatively that he started caressing one of them; she responded enthusiastically, and in no time they were making love. He described her as very hairy, with short legs, no navel, but very attractive, even if she communi-

cated in noises like the barking of a dog. Afterwards he was given an injection and everything went black. He woke to find himself lying on the grass, while dawn was breaking. He was able to show investigators marks on the ground where the spacecraft stood, but no other evidence [45].

However, there is an interesting additional aspect to this case: his wife told the investigators that he had come home from work that evening in an unusual state, throwing himself down into a hammock where he had fallen asleep. Shortly after, a violent thunderstorm occurred. Quintero woke, feeling queer, as though something was about to happen to him, and dashed out of the house. When the storm eased off, he walked towards the cowsheds, with something "heavy" and "difficult" about his movements, and a feeling that he was "controlled by some inexplicable external force".

None of this makes much sense if what then occurred was a surprise visit by real physical aliens. On the other hand, it makes good sense if Quintero was one of that category of people who are strongly affected by meteorological conditions. Israeli scientist Felix Gad Sulman has estimated that one person in three is "weather-sensitive", some more acutely than others [46]. For such an individual, it is by no means rare to be put by an oncoming storm into an altered state of consciousness, in which hallucination may readily occur.

To diagnose that this was a triggering factor in Quintero's case is, I admit, no more than speculation on my part. On the other hand, the synchronicity of thunderstorm and abduction seems a curious coincidence and demands an explanation of some sort.

Another area of potential psychological explanation is the condition of being "fantasy-prone", to which psychologists reckon about 5 percent of people are liable; the criterion is that they are more liable than the rest of us to fantasise, to the point where they are unable to distinguish fantasy from reality [47].

Basterfield and Bartholomew have proposed this as an explanation for abductions, but tests have not confirmed this [48]. However, Kenneth Ring has shown that people who claim encounters with aliens do indeed have a significantly different psychological profile from the norm. He thinks we are justified in labelling them "encounter-prone" even if we cannot specifically label them fantasy-prone [49].

My own feeling is that we are only on the threshold of understanding the ability and proneness of human beings to fantasise. In a sense, we are all fantasy prone to some degree. Some more than others: there are people who spend most of their lives in fantasy worlds of their own, ranging from persecution paranoia to an obsession with Elvis Presley. For most of us it's intermittent only; but the potential is always there. Drugs, bereavement, diet, hypnosis, stress – all, given favourable circumstances, can push any of us into an altered state. And in that altered state we will be more suggestible, more open to hallucinations and fantasy experiences ranging from abduction by aliens to possession by the devil [50].

Some, no doubt, are indeed mentally ill. But not necessarily, and certainly not all. A widow doesn't have to be sick to see the image of her dead husband; a climber lost on a mountain doesn't have to be mentally ill to hallucinate a rescuing guardian angel. Scott Rogo, investigating the Tujunga Canyon abductions, put it more strongly: each time an abduction experience is uncovered, a psychological inquiry into the life of the witness should indicate that he or she was undergoing a life-crisis at the time or was recovering from a psychological trauma [51].

While "life-crisis" may be a rather strong expression, I would certainly think that the state of mind of an abductee at the time of his/her experience would be a valuable clue towards interpreting their story. I recall that, many years ago, British abductee Alan Godfrey was angered by my suggestion that some such situation in his life might have triggered the event he claimed to recall under hypnosis. Since then, though, he himself has come to question the reality of the incident: "It seemed real but it might have been a dream" [52].

Because the abduction experience is often traumatic, it is reasonable to think that the events which lead to it must be profound. But if I am right in proposing that the experience is the result of destabilisation of the experiencer's mind, this can be effected by very trivial circumstances. In October 1973, American housewife Pat Roach had an abduction experience. She was a single parent (divorced) with seven children. They had moved home that day, and at nightfall their belongings were still unpacked all round them. That night they sensed the presence of a prowler who had been reported in the area, though her seven-year old daughter said, "It wasn't a prowler, Mama, it was a spaceman". A year or so later, she came to suspect there had been more to the incident than she had supposed: this led to her being hypnotised, and under hypnosis she recalled a full abduction story [53]. But to be abducted by aliens on your first night in a new home is quite a coincidence; it seems reasonable to wonder whether, as in the Quintero case, a simpler explanation is that the event was a fantasy, precipitated by circumstances – in her case, the hassle of moving home with a bunch of kids.

I think the last word should be with Betty Hill. She tells how a woman once came to her because she wondered if she might have been abducted [54]:

She and her husband had been driving by a lake when she saw a UFO coming towards them. At that moment, their car had a flat tyre, so her husband got out to change it. She could not remember what happened next. Her husband changed the tyre and they continued on their way. When she asked her husband what had happened, he asked her, What do you mean? So she didn't say anything, but later she asked me if I thought she had been abducted? I suggested they wait and see what happened in the future.

She became a friend. I took her skywatching. She could not distinguish the differences between planes and UFOs. She told wonderful stories about her early life in Germany, Russia, Paris. At one time she had been to England, where she became a witch. She was an artist, her house was full of her paintings. The only part of all this that was true was that she had lived in Germany. She never went to Paris, Moscow, England. She would buy paintings and paint her own name over the artist's name. I was fond of her: life was never humdrum when she was around. But every morning when I woke up I reminded myself not to believe a word she said [54].

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# Rewriting the Past

## *Dene Bebbington on the self-styled “revisionists” who deny the terrible historical reality of the Holocaust*

**I**T IS RATHER TRITE to point out that memory, besides being a most remarkable facet of human personality, is fallible. Few are probably aware, though, that there is a group of people who wish to deny that a well-known historical event occurred. Thus they attempt to assassinate the individual and collective memory of those who have borne witness to history. The event in question is one of the most well-researched and documented periods of modern history, and is commonly known as the Holocaust: that is, the genocide by the Nazi regime during World War II of millions of civilians simply because they happened to belong to certain groups – Jews, gypsies, and homosexuals.

Those who question the Holocaust call themselves “revisionists”; they not only question the conventional historical account of the Holocaust, but often deny that it happened at all. Thus, the word “revisionist” is really a misnomer when applied to them. In reality, they are deniers. True revisionism uses the historical method, something which is lacking in the approach of deniers, who rely more on rhetoric and ad hoc rationalisations to promote their cause, rather than having a coherent methodology. It is possible to speculate about the motives of such people, and it does seem as though some degree of anti-Semitism is a common factor, and also in certain cases a desire to whitewash the Nazis’ actions.

The denier landscape is a varied one, ranging from individuals to ostensibly scholarly committees and publications. However, what most of these people have in common is a belief that the Holocaust is a propaganda hoax, and that the comprehensive and congruent evidence (eyewitness testimony of perpetrators/survivors/bystanders, Nazi documentation, physical remains of gas chambers, and so on) has been fabricated in what would be a monumental conspiracy on the part of Jewish people and the wartime allied powers. Pierre Vidal-Naquet describes this eloquently in the preface to his book [1]:

Between memory and history, there can be tension and even opposition. But a history of the Nazi crime that did not integrate memory – or rather, diverse memories – and which failed to account for the transformation of memories would be a poor history indeed. The assassins of memory chose their target well: they are intent at striking a community in the thousand painful fibres that continue to link it to its own past. They have launched against it a global accusation of mendacity and fraud.

### Yet another conspiracy theory

The accusations of lying and fabrication of evidence are straightforwardly put by the prominent Canadian “revi-

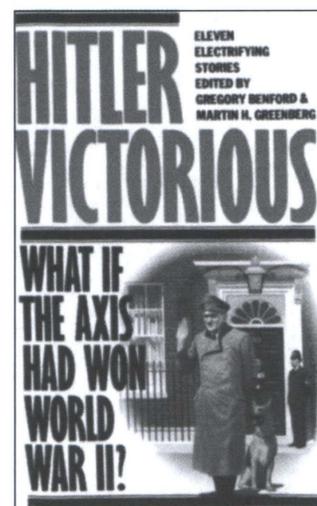
sionist” Ernst Zundel. On the eponymous “Zundelsite” Internet Web site this sweeping accusation of mendacity is explicit [3]:

“Why would so many people lie?” is the question invariably put to Revisionists. Some lie because it is quite profitable. There is no business like Shoah Business, said one Jewish observer some years ago in a candid moment. Others lie because it is helpful to Israel, or for any of thousands of other perfectly understandable reasons. Lying, or mythologizing, is a common human trait according to Joseph Campbell. Many others among the testifiers are not lying. They believe sincerely in what they proclaim about the gas chambers, about having seen them, about having seen the victims, about having seen the smoke rise from the stacks, etc. etc.

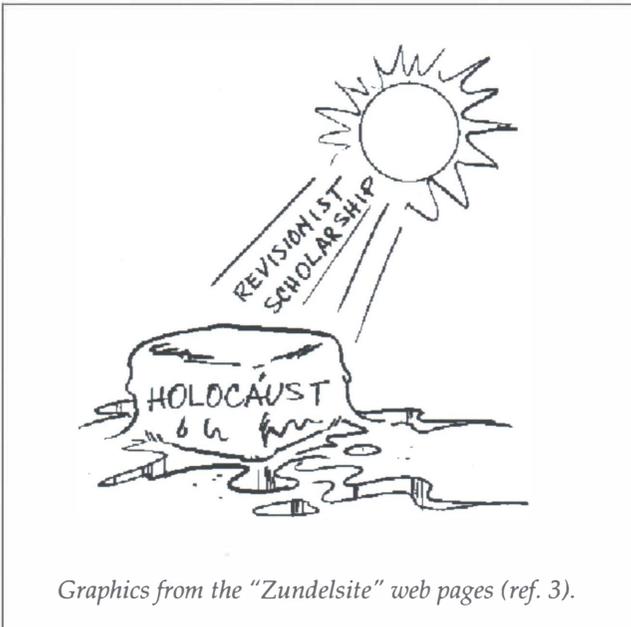
Others add to this view the complicity and willing participation of the wartime Allies, in particular the Soviet Union, in fabricating the massive amount of documentary evidence from the Nazis themselves. What is always apparent though is that beyond the hand-waving rhetoric and a few isolated examples, there is no thorough attempt to substantiate the accusations of lies and fabricated evidence.

### What’s in a name?

What is quite remarkable about the “revisionists” is that they are often sensitive to being described as deniers, even though this is an accurate description of their standpoint. They try to explain their position, but, ironically, in doing so make it obvious that Holocaust denial is the correct term to use. An example comes from Greg Raven, the editor of the *Journal of Historical Review*, which purports to be a scholarly journal about history.



*Unlike “revisionist” literature, the works in this volume of alternative history short stories are clearly identified as fiction.*



Graphics from the "Zundelsite" web pages (ref. 3).

This is what he says [5]:

First, I do not deny the Holocaust happened. Let me repeat that. I do not deny the Holocaust happened. For the purposes of this discussion, I am using a fairly generic definition of the word "Holocaust", which is "the murder of six million Jews as a central act of state by the Nazis during the Second World War, many in gas chambers." If anyone has a problem with this definition, I invite you to provide your version. Second, here is what Holocaust revisionists REALLY say: The Jews of Europe suffered a great tragedy before and during the Second World War. Many were mistreated, and many died under horrific conditions. However, a) there is no evidence that the Nazis had a plan or policy of exterminating the Jews, b) there is no evidence that there were homicidal gas chambers for murder [sic] Jews, and c) the figure of six million Jewish victims is an exaggeration.

It is commonly understood that the Holocaust was the deliberate programme of extermination carried out by the Nazis against millions of Jews and others, using various means such as homicidal gas chambers. The "revisionist" position as a whole can be reasonably summarised by the following principal arguments:

- Survivor testimony is mendacious and cannot be relied upon.
- Testimony of Nazi perpetrators is unreliable because they were tortured by the Allies.
- Incriminating Nazi documentation is forged or can be otherwise explained away.
- The homicidal gas chambers did not exist, and so none of the concentration camps were extermination camps.
- Millions were not killed because the victim remains haven't been procured to prove such an allegation, particularly in regard to the actual numbers of victims.
- Those killed by the Einsatzgruppen (mobile killing squads in Eastern Europe) were just communists and partisans.

- No written order by Hitler for the extermination of the Jewish people has ever been found.

I will take a brief look at these principal arguments.

For some people it seems to be taken *a priori* that Holocaust survivors are lying because they are inherently untrustworthy (anti-Semitism often appears to be a factor in this view) and have ulterior motives. Added to this is the claim that the perpetrators' testimony is not to be believed because it was gained through torture, but evidence is put forward for this claim only in a few specific cases. When the occasional piece of evidence surfaces that casts doubt on certain aspects of an individual's testimony, the mistake of generalising from the particular is usually made.

There is a substantial amount of documentation from the Nazis themselves which forms part of the historical evidence. It is a common claim that this documentation must have been fabricated by the wartime Allies, especially the Russians. This claim tends to come from a foregone conclusion about history rather than from any evidence of fabrication. It is noteworthy that actual evidence for this kind of conspiratorial activity is not forthcoming. I have even seen one "revisionist" assert that some minutes from the Wannsee conference were probably forged, but if the minutes are genuine it doesn't matter because the person who wrote them was drunk and so cannot be taken seriously. This, not untypical, kind of rationalisation gives an insight into the mindset of "revisionists".

The gas chambers are a particular focal point for the "revisionists" and some have asserted that if it can be proved that the chambers are not what history says they are then in fact there was no Holocaust. Several explanations have been put forward by "revisionists" for what the gas chamber buildings really were; some examples are delousing chambers, air raid shelters, and storage facilities.

Some "revisionists" who find it difficult to dispute that people were killed in the Holocaust have pointed out that the death tolls cannot be accepted because there has been no comprehensive attempt to recover and count all the victim remains. This is true to some extent. However, mass graves have been located and it would probably be an impossible forensic task to find and count all the remains, especially of those who were cremated. Other methods have been used to estimate death tolls, for example demographic statistics and Nazi records of people transported to concentration camps.

In Eastern Europe, where many people were killed by the Einsatzgruppen, the contention of some "revisionists" is that the people killed by these squads were in fact communists and partisans. However, the reports that the Einsatzgruppen sent back to the Nazi hierarchy clearly distinguish among Jews, communists and partisans. Faced with this evidence, one strange argument sometimes used is that the numbers of deaths stated in these reports were probably exaggerated to please superiors.

There is no explicit written order by Hitler saying something like "I, Adolf Hitler, order you to commit genocide on the Jewish populations". It has been argued that the lack of such an order means the Holocaust could

not have occurred. A real sceptic would be aware that absence of such an order doesn't mean that the events did not occur: absence of evidence doesn't *ipso facto* mean evidence of absence. Also, requiring such a written order to exist is based on a simplistic view of how the Nazi regime functioned.

## Scholarly institutions?

If you believe you have uncovered a massive fraud or conspiracy about a widely accepted subject, what do you do? You set up an Institute to give your marginal and disingenuous ideas an aura of scholarly respectability – or, at least the cynics amongst us might think that! Just as some creationists founded the Institute for Creation Research (ICR) so some Holocaust “revisionists” founded the Institute for Historical Review (IHR), a not entirely accurate name since the predominant focus of this body and its publication, *The Journal of Historical Review*, is about the Holocaust and related issues surrounding World War II, Jewish people, and Holocaust denial. You might expect that an organisation like the IHR would be composed primarily of historians. However, this is not the case. Some of the individuals involved are academics and a few even have a background in history, although many do not.

There is also the recently renamed Committee for Open Discussion of the Holocaust (previously known as Debate). What is quite interesting about this group is that they publish their material on the Internet and have run advertisements in American college newspapers, but its members are rare participants in the free and open debates that occur in the area on the Internet where the main discussion of the topic of Holocaust revisionism takes place [11].

## The Leuchter report

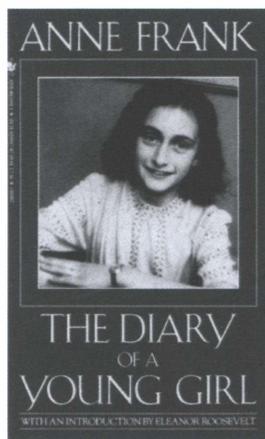
The gas chamber is perhaps the main icon of the Holocaust, and constitutes a focal point for the supposed scepticism of “revisionists”. Indeed, some of them maintain that if there were no homicidal gas chambers then there cannot have been a Holocaust. Given that the testimony and documentary evidence for the existence and use of the gas chambers is not sufficient for them the demand has been for forensic proof.

In 1988 Ernst Zundel was being prosecuted in Canada for a second time: he was accused of instigating anti-Semitism by disseminating material about Jews and the Holocaust that he allegedly knew to be false. As part of his defence, he paid the engineer Fred Leuchter, who had reputedly done work on American execution installations and hence was deemed to be an expert on execution technology, to visit Auschwitz to get samples for a forensic examination of the gas chambers. After surreptitiously obtaining chemical samples, Leuchter duly released his report, which asserted that the buildings known as the gas chambers couldn't have been used for such purposes. This report was subsequently much vaunted and widely circulated by “revisionists” who believed the Holocaust was now scientifically refuted. Besides the fact that Leuchter had been dishonest in representing his claim to be an execution expert [2] his report shows a lack of knowledge of both history and chemistry.

We only have to look at the summary [9] to see that his conclusions are absurd and based upon a fundamental ignorance of the topics being discussed [10], and at the trial he was testifying in it was shown that he didn't have the relevant expertise to make judgements on the gas chambers [2]. The report asserts that the capacity of the gas chambers was not sufficient to account for the posited six million death toll. Besides the fact that his estimates of capacity are misleading, the death toll due to the gas chambers is not considered to be 6 million. In fact the figure of 6 million represents an estimate of the number of Jewish people killed by all means during the Holocaust. Estimates of the death toll at Auschwitz range between approximately 1 and 1.5 million.

Leuchter then goes on to state that since the traces of poison gas in the gas chambers are lower than those found in the delousing chambers (for killing insects in clothes) then this too means that they couldn't have been used for mass murder. Although at first sight this argument seems to be plausible, the concentration and exposure to the poison gas required for delousing is significantly greater than for killing humans. Other conclusions in the report are just as specious and incorrect; such as the potential danger of explosion from the poison gas, and the protection needed by personnel handling it.

## Anne Frank's diary



Holocaust denial also has an interest in casting doubt upon wider aspects of this historical event so as to suggest that almost everything related to and supporting the conventional historical account must be false, and deliberately so. A typical example of this is *The Diary of Anne Frank* [6], which several people have alleged to be a literary and literal fraud. The prominent French “revisionist” Robert Faurisson has written extensively about the diary [7] and

by analysing supposed inconsistencies and implausibilities in Anne's account has concluded that the diary is a literary fraud perpetrated by her father, Otto Frank. Faurisson's analysis of the diary is not the work of a sceptic, but rather of someone determined to find grounds for a preconceived conclusion. To do this he selectively quotes the diary and relies on arguments from personal incredulity.

Other criticisms involve the differences to be found between the original manuscript and the versions of the diary that have been published. There are indeed some differences, but this is only to be expected due to editing, a practice hardly unknown in the publishing world.

In the late 1950s, Otto Frank appointed a literary agent in America, Meyer Levin, to look into producing a play based upon the diary, and he wrote a script for this purpose. Eventually the production rights were given to other playwrights, and this led to Levin's engaging in litigation asserting that they had plagiarised his material. The result of this legal action was an award of damages to

Levin, but the Supreme Court later set the jury decision aside, and eventually Frank and Levin made an out-of-court settlement. Even though there is no suggestion that Levin wrote the actual diary in the legal case mentioned, Holocaust deniers have used this case to disingenuously allege that the diary is not authentic and was written by Levin.

One item of denier folklore that is especially resilient to logic and facts is the accusation that the original diary manuscript is not genuine. The primary argument is that the manuscript contains some writing made by a ball-point pen, and that such a pen which would not have been available when the diary was written. This is true. After the war, Otto Frank made minor changes in the text for the purpose of editing, and these were written in ball-point pen. The diary has been submitted to extensive forensic analysis by the Netherlands State Institute for War Documentation, and was declared genuine [8] in the sense that the writing is Anne Frank's and that the materials used were available at the time it was written.

## Pseudo-Historians

A common refrain from Holocaust "revisionists" is that they are merely sceptical people questioning a commonly believed hoax because they are concerned about truth. Like other conspiracy theorists they consider themselves to be a relatively small group of people who have an insight that allows them to see through to the real truth where everyone else has been hoodwinked; this even though the evidence for the Holocaust is comprehensive, convergent, and accepted by the historical community. Of course, one must apply scepticism where appropriate. Holocaust denial, though, is not about scepticism but instead has some aspects in common with other pseudo-intellectual endeavours like Creationism. That is, it often relies upon a poor understanding and knowledge of the subject being attacked; rhetoric; hand-waving in the form of ad hoc rationalisations; arguments from personal incredulity; and even dishonesty.

An Auschwitz survivor once described the deniers and their ilk as negators of truth [4]. This is sadly true, as witnessed especially in places such as the Internet where commonly debunked canards resurface with disconcert-

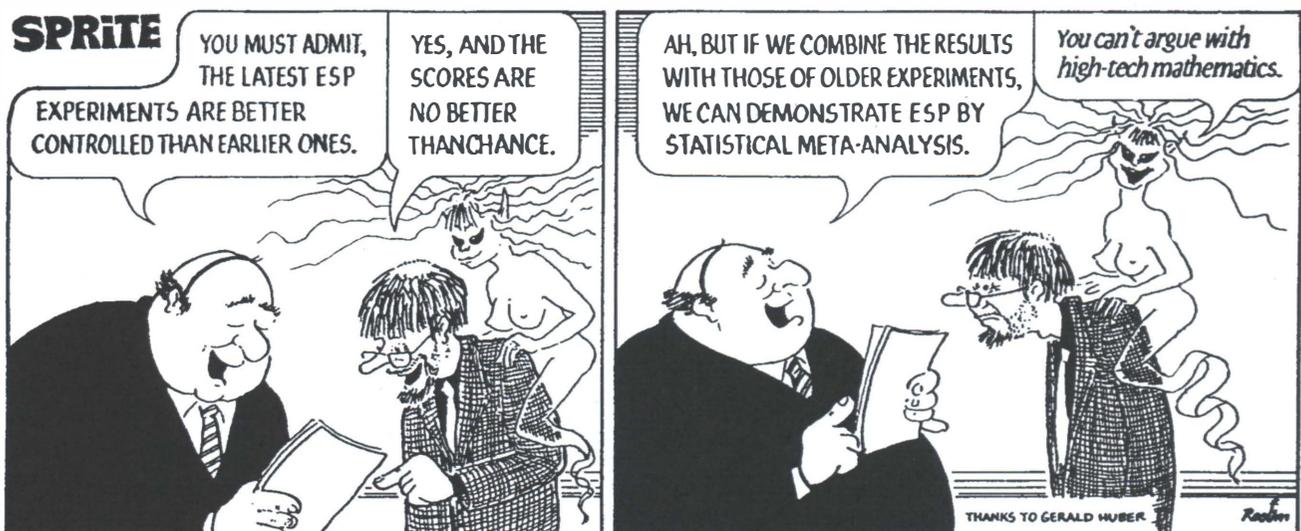
ing persistence. In this respect, there is a similarity between Holocaust denial and themes such as Creationism. Indeed, some specific Creationists have been known to repeatedly to disseminate known falsehoods about evolution, and in the same way "revisionists" continue to spread falsehoods about history.

There is actually more evidence for the Holocaust than many other historical events, and we must wonder if the "revisionists" apply the same methods and demands for stringent proof in regard to history in general. I think the answer is likely to be no, since their interest in the Holocaust appears to have little to do with a real desire to determine historical truth. After all, if their methods were used elsewhere it would be quite possible to doubt the existence of almost any historical event.

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# You Got Rhythm?

## Terence Hines on a fad that faded

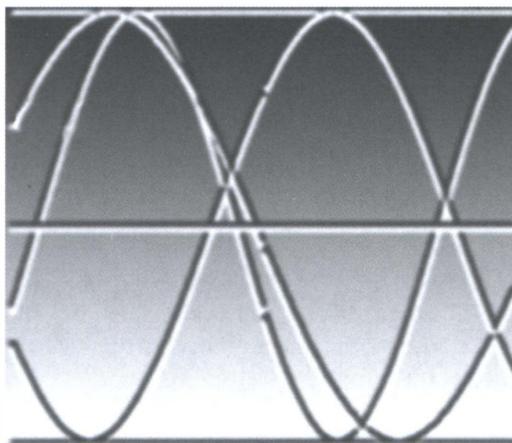
**B**IORHYTHM THEORY was a popular fad that ran from the late 1960s through the early 1980s, with a peak of interest in the late 1970s. The theory held that many aspects of human behaviour were strongly influenced by three different biorhythms, each of which was set in motion at the moment of birth. There was a 23-day physical, a 28-day emotional, and a 33-day intellectual rhythm. The first half of each rhythm's cycle was said to be the "up" portion, on which performance was enhanced. The second half was a "down" portion, during which performance was impaired. Days on which a cycle crossed the midline from up to down or the reverse were called "critical days," and on such days performance was supposed to be especially bad. The worst sort of day of all was the triple critical day, when all three rhythms changed position on the same day.

The popular books touting biorhythm theory offered as "proof" of the theory's reality long lists of wonderful events (that is, sports records) that took place on "up" days and similar lists of terrible events (that is, flying your aircraft into a mountain) that took place on down or critical days. Of course, these books neglected to report cases of pilots on critical days who flew their planes without any unfortunate incidents.

One feature of biorhythm theory set it apart from systems like astrology that also claim to be able to predict the individual's future. Biorhythm theory made quite specific predictions about performance on specific types of days. For example, it was widely predicted that accidents would be more likely than chance to take place on critical days. Since critical days make up only about 21 percent of all days, analysing accident records should reveal, if biorhythm theory is valid, that significantly more than 21 percent of accidents fall on critical days. Studies of accidents routinely showed that the number taking place on critical days was just as expected. One study examined 112,560 accidents and found no biorhythm effects. Another failed to find evidence for biorhythms in a sample of 13,258 accidents.

In fact, from 1970 to 1997 over 130 studies of biorhythms were performed. These were either published or reported in masters' theses or doctoral dissertations. I have recently published a long article (*Psychological Reports*, 1998, 83, 19–64) that reviews these studies in detail. As expected, the great majority failed to find any significant effect of biorhythms on a welter of different measures, ranging from accidents, suicides, days of death, and heart attacks to sports records, moods, birth dates, and school test scores.

On occasion, a study would claim to have found evidence supportive of biorhythm theory. Such studies, when evaluated closely, were found to suffer from various statistical problems, some of which would have been hu-



morous had they not so obviously revealed statistical ignorance on the part of the studies' authors.

For those interested in further details, copies of my paper are available free of charge by writing to me at the Psychology Department, Pace University, Bedford Road, Pleasantville, NY 10570-2799, USA, or by email to [thines@fsmail.pace.edu](mailto:thines@fsmail.pace.edu).

**Terence Hines** is the author of *Pseudoscience and the Paranormal: A Critical Examination of the Evidence*, published by Prometheus.

### CSICOP Research Scholarship

The Committee for the Scientific Investigation of Claims of the Paranormal and The University of Hertfordshire are pleased to announce the creation of the "CSICOP Research Scholarship."

This three year scholarship will fund a PhD student to carry out research related to psychology and skepticism. Possible topics could, for example, include: the critical evaluation of evidence for the paranormal; the psychology of deception, lying and fraud; eyewitness testimony and the paranormal; the psychology of belief in the paranormal; the media and the paranormal; communicating science to the public.

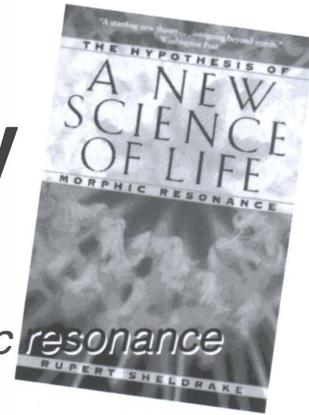
This research will be conducted under the supervision of Dr Richard Wiseman at the Psychology Department of the University of Hertfordshire (UK). Dr Wiseman currently heads a research unit specializing in the scientific examination of alleged paranormal phenomena and related topics. The Unit has a well established record of research and postgraduate training programme. The University is located just North of London, is well equipped to support research students and has an excellent record of PhD completion.

Applicants should have a good first degree in psychology or relevant discipline, and be able to demonstrate an interest in skepticism.

Further details can be obtained from Dr Richard Wiseman, University of Hertfordshire, College Lane, Hatfield, Herts., AL10 9AB. Direct tel: 01707 284628; Direct fax: 01707 285073; Email: [psyqrw@herts.ac.uk](mailto:psyqrw@herts.ac.uk).

# When is a Field Theory not a Field Theory?

*Matt Colborn on the strange story of morphic resonance*



**M**ORPHIC FIELDS seem to explain so much! They've been cited as the agency behind the origin of form in embryos, the swarming of ants and the flocking of birds.

Rupert Sheldrake, the theory's originator, describes them as fields which have an action across space and time and which have a sort of memory for both physical form and behaviour patterns. 'The morphogenetic fields of the foxglove species' explains Sheldrake, 'are shaped by the influences from previously existing foxgloves' [1]. Such 'memory fields' could also explain why successive generations of rats seemed to learn a maze more rapidly than their parents [2].

But many scientists are suspicious of the whole idea. Why assume that an unknown field, or system of fields, can explain such phenomena? Sheldrake's case for his morphic fields is made on careful philosophical grounds, despite what his critics may claim and indeed, as we will see, many of his arguments against simplistic mechanistic theories for how form arises are mirrored by other writers. However, we'll also see that his specific theory of morphic fields has problems.

Some people have objected to the very idea of morphic fields extremely negatively. The then editor of *Nature*, John Maddox, called Sheldrake's *A New Science of Life* "A book for burning" [3]. Morphic fields, the critics say, are magical [4]. They are not needed because collective behaviour, from atoms to anthills, can be explained in terms of 'emergent properties'. Emergent properties are attributes of groups of things, which emerge from the interactions of individuals in that collective. They are things that you couldn't predict from just looking at the behaviours of individual group members.

Sheldrake's theory is based upon a need to rethink reductionist biology, in particular the notion that genes are the master-controllers of development and behaviour. Other writers have in fact expressed similar doubts. They differ, as Sheldrake himself acknowledges [5], in using emergence and complexity, rather than new fields, as a basis for their objections to the gene-centred view. An example is the work of Brian Goodwin who has also worked on the origins of form in organisms. In one of his books, Goodwin states quite clearly how his ideas diverge from Sheldrake's: "His fields are non-physical, whereas the concept of the field used to describe pattern formation in biology... refers to spatial organising activities that involve clearly defined physical and chemical processes, though combined in a way that is distinctive to the living state" [6].

What Goodwin is saying is that there is something that is unique and special about life, but that it isn't an

unknown field, and should indeed be seen in terms of emergent properties and matter's organisation.

Goodwin has also commented that the problem with Sheldrake's theory is that it invokes fields which are entirely independent of matter or energy. There are problems with 'the dualism ...[Sheldrake] introduces into science in the form of energetic and non-energetic fields' [7].

Known fields, like a television signal, can carry information, as morphic fields are supposed to, but they also exist as energy. Sheldrake's fields have an effect upon matter but they are not energetic. The theory leaves itself open for criticism because it introduces a non-material element into the universe. This is difficult for many scientists to accept because all other processes in the universe are either tied up in matter in some way, or they are energetic. This doesn't make morphic fields impossible, but more unexpected, and so less likely.

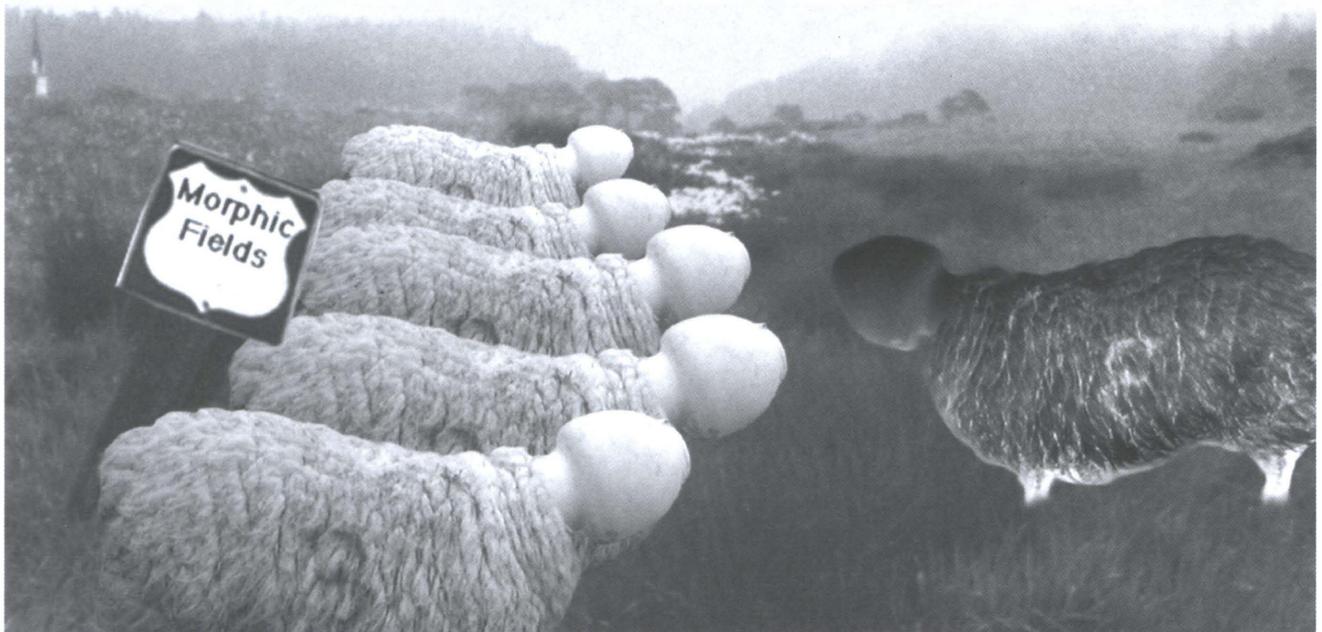
But perhaps emergence has been overestimated as an explanation. As Sheldrake himself has pointed out:

When so many principles and physical fields have been introduced in order to account for the properties of atoms and sub-atomic particles, the conventional assumption that no new physical principles or fields come into play at levels of organisation above that of the atom seems remarkably arbitrary [8].

Roger Penrose makes a similar point when arguing that some aspects of consciousness might not just be "emergent properties", but might be the result of a fundamental property of matter. He uses the example of gravity's effects on light. "There is no way," he writes, "that it can be regarded as an emergent or secondary phenomenon" [9]. Mixed up in biological processes, there might indeed be new physical principles at work which have perhaps been explained as 'emergent properties' before now. One of the advantages of the theory is that it makes unique predictions about morphic resonance's actions on matter. These can be tested.

Unfortunately, it is with experimentation that the morphic fields theory runs into serious difficulties, as many of the results of experimental tests are unpromising. Rose and Sheldrake collaborated on an experiment testing for morphic fields. Rose was left in no doubt about the results, which he had predicted to be null. "When we ran the experiment," he stated, "I was proved right – to my satisfaction and to that of other researchers in the field" [10].

Sheldrake disputed the conclusion, and the best that can be said is that the results were ambiguous. This conclusion can be extended to some of the experiments reviewed in Sheldrake's own books [11]. Zoltan Dienes



The Real Food Club/SED

found a positive result in the first run of his experiment [12]. This was a psychological test which involved making subjects decide whether a word they were presented with was real or a non-word. The idea was that if morphic resonance was true, non-words would be spotted more quickly as more subjects saw them in the tests and the 'habit' of spotting was compounded by repeated exposures to the same non-words through morphic resonance. Dienes was, however, unable to replicate his original result, and other researchers have had similar findings [13].

Another researcher, Suitbert Ertel, has produced a review of the experimental results from a range of studies [14], and concludes that the results are constantly negative. Sheldrake has responded by saying that the experiments which have done so far might have used insufficient subjects, that there might be too much 'noise' to see a morphic fields effect [15]. This means that any morphic resonance would have a much weaker effect than was originally proposed. Be that as it may, the experimental case for morphic fields is at present unconvincing.

Sheldrake's books address problems which are difficult to answer in a purely 'reductionist' frame of mind, but I think he underestimates the power of 'emergent properties' to explain some of the things he finds puzzling. And faced with the lack of promising experimental results concerning morphic fields, 'emergence' will continue to be a powerful explanation in biology. This is not to say that Sheldrake's warnings should be ignored, or that experiments looking for unusual field effects should be discontinued. On the contrary, our ignorance about nature should compel us to keep looking for new explanations for puzzling mysteries, and should also encourage us to question our assumptions. These ideas are of value, if for no other reason than that.

*Thanks to Zoltan Dienes and Suitbert Ertel for their help and advice in writing this article.*

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## Philosopher's Corner

Julian Baggini

### *On the delicate balance between thinking and acting*

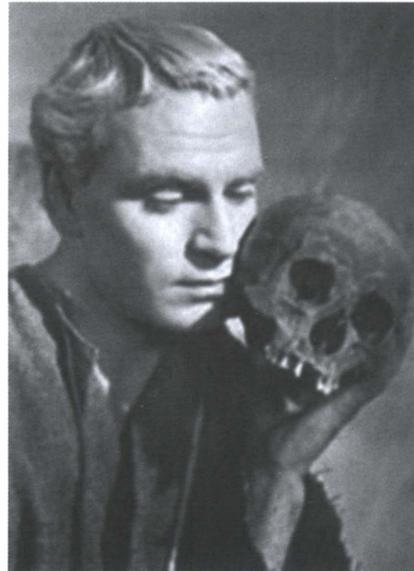
**P**HILOSOPHERS, LIKE SKEPTICS, consider it a good idea to think a bit before accepting anything as true. While we may think this is obviously a sensible way of going about things, critics charge that this makes us useless, passive individuals. If our walls collapsed, they imagine we'd say, "Why bother rebuilding them? They probably don't exist anyway". If it came on the news that a meteorite was heading for where we live, while everyone else fled for cover, they think we would shrug our shoulders and say "I ain't going nowhere until I've seen it for myself". We shouldn't be so sceptical and questioning, they say, because the more we think about things the less we actually get done. As Hamlet soliloquised:

And thus the native hue of resolution  
Is sicklied o'er with the pale cast of thought.

The stereotype was most brilliantly captured in the famous Monty Python sketch, where a team of German philosophers play a team of Greek philosophers at football. When the whistle is blown to start the match, instead of kicking the ball, all the players walk around, stroking their beards. Don't think – kick!

As *Hamlet* is often taken to be a case study in how thinking prevents action, let us look at what the real lessons of *Hamlet* are. There is, in fact, a good case to be made that Hamlet was right to think before launching into his revenge. First of all, remember that Hamlet is told of his father's murder by the visitation of a ghost. As any half-decent philosopher would tell you, seeing is not believing. We would hardly think it advisable behaviour for someone to murder solely on the basis that they'd seen a ghost who had told them to do so. Hamlet, therefore, sets about trying to confirm whether or not the ghost's claims are true. To do so, he hatches a plan to present the king – the alleged murderer – with a play that parallels the alleged murder of his father. The king's reaction to the play confirms the ghost's story, and Hamlet is then resolved to seek his revenge.

Hamlet's lack of action is thus commendable. It is simply not true that the best thing to do is always to act first and think later. In fact, in many of Shakespeare's other plays, we see the tragic consequences of acting on hearsay or prima facie evidence without seeking to establish whether it is true or not. The tragedy of *Othello* is that he falls for the deceit of Iago. If only, like Hamlet, he had stopped and thought, "Hang on. Desdemona seems sound to me. Maybe Iago's having me on". And in *Romeo and Juliet*, if only Romeo had stopped to check if Juliet were really dead before taking his own life! That would have been the Hollywood ending. In *Hamlet*, the irony is that the one time Hamlet acts without thinking first, he



actually ends up killing the wrong man, Polonius. This unreflective action is what leads to the plot by Laertes and the King to kill Hamlet, and the bloodbath that is the play's final scene. So much for decisiveness!

On the evidence of the Bard, therefore, thinking less and acting more is a disastrous policy. Of course, if

our only reason for believing this were the complete works of Shakespeare, the case would be incomplete. But I think it is easy to see how the principle is mirrored in life. For example, it is often noted that many bad laws are enacted when they are hurried through Parliament in reaction to events. The less reflection and rational scrutiny a bill receives, the more likely the resultant law is a bad or unworkable one. On a more domestic note, the old refrain, "Marry in haste, repent at leisure" strikes a chord.

Yet still people seem to think it is better to believe something or do something than suspend judgement. Be an atheist or be a theist, but just don't sit on that fence called agnosticism. Skepticism and philosophy are thus despised because they encourage people not to rush to take up a stance. But as another poet, Yeats, put it:

The best lack all conviction, while the worst  
Are full of passionate intensity.

The point is simply that there's no virtue in acting unless one acts correctly. Those who criticise the cautious of conviction would no doubt prefer it if we were all like the manager of the city trading firm, who ticked off one of his minions for not getting enough done. "You've only done three deals all morning – Johnson over there's done twelve". "But", complained Jones, "Johnson made a loss on every one". The manager retorted, "Well, at least he's doing something".

**Julian Baggini** is editor of *The Philosophers' Magazine* ([www.philosophers.co.uk](http://www.philosophers.co.uk)). A four-issue subscription to *The Philosophers' Magazine* costs £11.80 (UK) and can be ordered on (0171) 538 8288.

# Rhyme and Reason

Steve Donnelly



## Grey is good

**A**T FIRST VIEW, the profession of scientist would seem to be a perfect complement to the extramural activity of skepticism (at least in the CSICOP/anti-paranormal meaning of the word). But in practice there are tensions between the two activities that crop up in a number of different contexts. For instance, when asked to participate in TV or radio chat shows, the skeptic is included in order to express a particular point of view; the programme perhaps features someone who has seen a ghost or a UFO and the skeptic's role, as far as the programme's producer is concerned, is to say "rubbish!" The last thing the producer wants is reasoned dialogue which results in the ghost/UFO spotter coming over to the skeptic's point of view or vice versa. Nowhere was this more apparent to me than when, a few years ago, I participated in a TV chat show with a well-known spiritualist medium and shared a platform with an evangelical Christian minister – both of us "opposing" the medium. However, it was clear from discussions in the green room before the show that if I had had to declare sympathies with one or the other they would have gone to the medium. At least her beliefs were non-judgemental in the sense that she was happy to welcome believers of all religions to her brand of spiritualism. She may have been misled and even downright wrong in her beliefs but give me wrongness any time in preference to the work-of-the-devil, scriptural self-righteousness espoused by the Christian minister. At the other extreme of belief, I have also shared a TV platform with a secular humanist whose stance on all issues that hint of anything beyond atoms-and-molecules materialism is indeed one of crying "rubbish!" (and, in this sense is maybe exactly what the TV producers are seeking). Forget any evidence, she knows that her position is right, regardless. On this particular occasion, we were "opposing" an entirely reasonable member of the Society for Psychical Research who has spent a lifetime seeking ghosts (and thus proof for life after death, in which he believes) with no success, to date. Once again, my sympathies lay entirely with my "opponent" rather than with my "ally".

There is, of course, some similarity between the activities of the experimental physicist and those of the skeptic: if my PhD student tells me of the conclusions of his latest experiments, I will try to pick holes in his experimental procedures ("how do you know it was not an artifact of your apparatus"), and I will try to find flaws in his reasoning ("are you sure this is the only possible conclusion that can be drawn from your data?"). Likewise, if you tell me of your sightings of the Virgin Mary, I will query your observations ("are you sure it wasn't a trick of the light?" or "what had you been smok-

ing or drinking?") and will also query your logic ("how do you know it was the Virgin Mary and not just some other woman dressed in a blue frock and a wimple?"). But the TV skeptic rarely gets a sufficient number of sound bites to pursue such logical pathways and is generally reduced to the status of wet-blanket, naysayer.

You see, for me the critical component of anybody's claims of *anything* is the quality of the evidence. Of course, we all have sets of prejudices that we have built up over the years, but the role of the scientist is to do his or her damndest to put aside the preconceptions and judge the probability of hypotheses based on the evidence – followed, of course, by watertight reasoning procedures. Whether the issue is a PhD student's scientific results, the existence of angels or the advisability of the introduction of genetically-modified organisms into the food chain, the method for arriving at conclusions should be the same. (The latter example is particularly interesting as it is generally assumed by friends who know of my scienceskepticism that I will be "in favour" of GM foods. In reality, I simply await the evidence – bearing in mind that conventional modification of genes by breeding has produced broccoli, poodles and Prince Charles).

Our universe is a complex one, and despite the wishes of most religious leaders, some secular humanists and all TV producers of morning and late-night chat shows, it is not reducible to issues that are purely black and white. Instead, there is a sliding scale and the best answer to any contentious issue usually lies somewhere in the dark and light greys. For instance, primarily because of the lack of much experimental evidence in its favour but also because of its implications for our understanding of science, on a sliding scale from 0 (utter bollocks) to 100 (indubitably correct), I would place homeopathy at about 0.00000001. But never at zero, as one can never say with certainty that a latter-day Benveniste will not one day carry out properly conducted experiments that demonstrate the existence of water memory.

The only difficulty, of course, when "opposing" the absolutist paranormalist on a TV chat show, is that anything that may be seen as wavering from the fully black end of the scale will be exploited as weakness. In this sense, the skeptic and scientist can never win; with the choices being to appear indecisive and noncommittal on the issue under discussion or to be dogmatic and certain to the point of arrogance.

Perhaps, like the politicians, skeptics should abandon evidence and reason and appoint some good spin-doctors.

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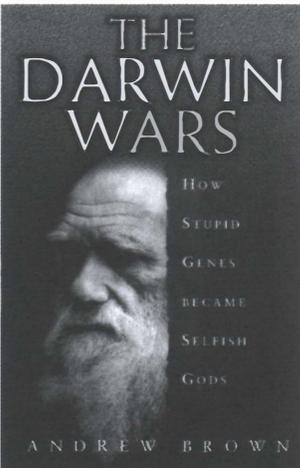
# Reviews

## CAMP FOLLOWERS

### The Darwin Wars: How Stupid Genes Became Selfish Gods

by Andrew Brown

Simon & Schuster, £12.99, ISBN 0-684-85144-X



Few scientific controversies have reached the public to the same extent as that on the scope and meaning of evolutionary explanations in studies of human behaviour. Catchwords such as “sociobiology”, “selfish genes”, and “memes” will remind many readers of heated debates among popularizers and interpreters of evolutionary biology.

Andrew Brown summarizes these debates in a both fair and thoughtful way. He divides the combatants into two camps, that he calls Gouldians (after Stephen Jay Gould) and Dawkinsians (after Richard Dawkins). The Dawkinsians are sympathetic to sociobiology and, more generally, to the use of evolutionary biology in studies of human nature. The Gouldians are suspicious of any such interpretations of evolution. There is also a rather strong political component in the controversy. Most of the most prominent Gouldians have a background on the Left, whereas some sociobiologists have used evolutionary biology in support of the classic right-wing standpoint that human nature precludes social equality.

These controversies have, of course, nothing to do with the battle between science and creationism. The Gouldians and the Dawkinsians stand united against that and other forms of outright pseudoscience.

Brown does an excellent job in disentangling science from interpretation, and he criticizes both sides of these debates so effectively that for the first 170 pages I found no reason to classify him into either of the two camps. But towards the end of the book he comes out with a strong indictment of the Dawkinsians. Although himself an atheist, Brown is appalled by the militant atheism and the lack of religious tolerance that he senses in the writings of Dawkins and some of the other Dawkinsians.

Popular science has more to do with “religious needs” than some of us might wish. Brown has an interesting answer to the old question why there is so little popular chemistry. What the readers want, he says, is science that appears to answer religious questions. Physics, cosmology, and biology, that dominate the popular science



market, have all been successfully clad in pseudo-religious garb. Chemistry is too mundane to be useful for that purpose.

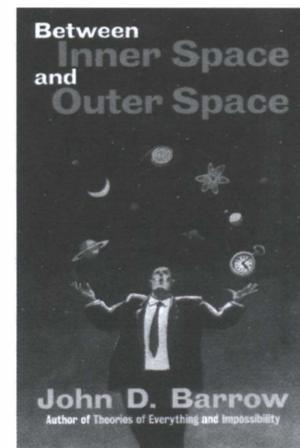
Sven-Ove Hansson

## SEEKING THE UNIVERSAL

### Between Inner Space and Outer Space

by John D Barrow

Oxford University Press, £18.99, ISBN 0-19-850254-0



It is easy enough for a skeptic to dismiss the claims made by adherents of the paranormal and pseudoscience, bolstered by confidence in the self-evident truth that the universe operates strictly according to the laws of nature. But what happens if you start to probe more deeply, into the very nature of reality and human attempts to comprehend it? This is John Barrow’s territory.

An astronomer and mathematician, Barrow writes engagingly about mind-bending questions, like, ‘Why is the universe mathematical?’, ‘What is the nature of time?’ and ‘Can there ever be a “theory of everything”?’ While ultimately being no more able to answer the questions than the rest of us, he is lucid, comprehensible, and thought-provoking as he dextrously leads his readers around a maze of puzzles and paradoxes.

This particular volume is a collection of 42 articles and book reviews, culled primarily from newspapers and magazines published between 1980 and 1997. They have been melded together, in a quite clever if rather contrived fashion, in ten thematic sections, each with a short introduction.

The level of writing varies according to the original medium of publication, and there is repetition. Barrow’s most cherished ideas crop up over and over again. The 16 book reviews, especially those ten or twenty years old, were just too dated to capture my interest. By compensation, many of the other pieces struck me as well worth collecting.

For a flavour of what you can expect from John Barrow, consider this intriguing conclusion: ‘one could claim that, if a religion is defined to be a system that contains unprovable statements, than not only is mathematics a religion but it is the only religion able to prove itself to be one.’ Surely food for skeptical thought!

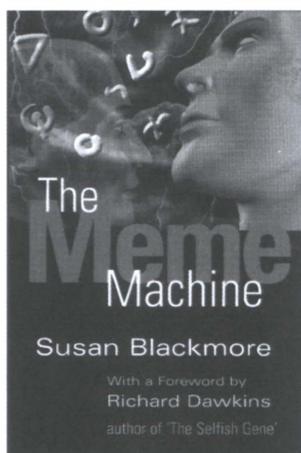
Jacqueline Mitton

## MY MEMES AND I

### The Meme Machine

by Susan Blackmore

Oxford University Press, £18.99, ISBN 0-19-850365-2



In this stimulating book, Susan Blackmore claims that the most important step in human evolution was when we learnt to mimic one another. As in biology, "from a simple beginning endless forms most wonderful have evolved": the mimicked ideas, or memes, have taken over and twisted us for their own ends, directing our efforts to their own dissemination.

As well as dealing with the more straightforward examples of crazes, fashions and advertising ditties, Blackmore presents a powerful argument that memes – and humans' evolved responses to them – are responsible for human intelligence, religion, language, altruism, the recent breakdown of sexual taboos, the perceived sexiness of pop singers, the RSPCA and all human civilisation and technology (including, I suppose, the kitchen sink). Furthermore, free will and the self are illusions brought about by a 'pack of memes'. It's as bold and all-embracing a theory as you're ever likely to read, so never bores, especially given the clarity and humour of the prose.

This book is bound to raise your eyebrows, or even your hackles, at some points. I would quibble that 'normal' biological adaptation seems a better explanation for some of the features of the mind that Blackmore ascribes to memetic adaptation. Creativity, for example, sounds like suicide for a selfish meme – why should a replicator want to create competitors?

However, Blackmore seems not in the slightest dogmatic about her ideas. She details the predictions of memetic theory and suggests experiments that could resolve clashes between memetic and other theories of culture.

She also makes some intriguing prophesies about the behaviour of ourselves and our memes in the increasingly information-rich world we live in. Richard Dawkins' foreword is a helpful introduction to the history of memetics, and altogether *The Meme Machine* will be a valuable addition to anyone's meme pool.

Louise Johnson

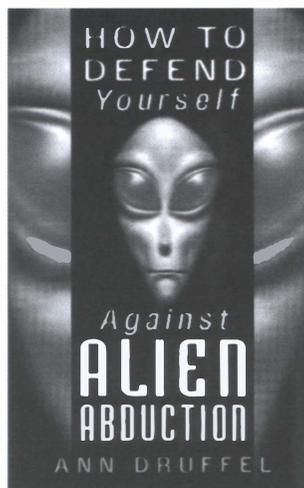
## SLEEP TIGHT

### How to Defend Yourself Against Alien Abduction

by Ann Druffel

Piatkus, £8.99, ISBN 0-7499-1941-8

Do you wake at night paralysed, terrified and feeling that something alien is nearby?



If you do and are familiar with the concept of sleep paralysis, you probably conclude that you are the victim of a natural, if unpleasant, physical effect.

But if you are sure it's aliens come to get you, this book offers you techniques for fighting back. Nine methods are described. Whether they work, I can't say.

But while the author's desire to give 'experiencers' mental ammunition with which to defend themselves is laudable, how much greater would be the relief if those affected understood that their experience was just a very disturbing, but entirely human, phenomenon?

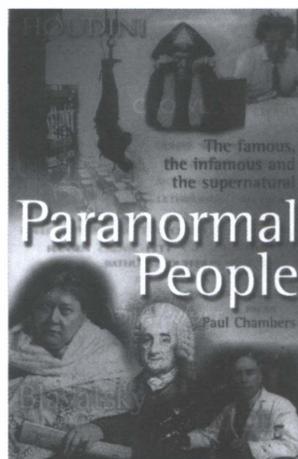
Marjorie Mackintosh

## THE SAME BUT DIFFERENT

### Paranormal People

by Paul Chambers

Blandford, £16.99, ISBN 0-7137-2711-X



This is a collection of short commentaries on the lives of people involved in a wide variety of paranormal phenomena.

Famous cases such as Home and the Fox sisters are included, as well as lesser known figures such as an artificial ghost named Philip and Arnold Paole the vampire. All are presented in an enthusiastic and entertaining manner.

One of my favourite cases is that of Gef the Talking Mongoose. Gef (yellow body like a ferret and the head of a hedgehog, in case you were wondering) only seemed to appear when the 13-year-old daughter of the haunted family was around, and perhaps by coincidence the daughter's lips tended to move whenever Gef's high pitched voice was heard.

In his introduction to the book Paul Chambers assures the reader that he will adopt an even-handed approach to all the cases included. He certainly makes an effort to do this, as pro-paranormal and sceptical arguments are outlined for each paranormal character. These arguments are however rather brief and tend to underplay sceptical explanations in favour of sensationalist pro-paranormal viewpoints.

The lack of any real discussion or conclusion can be irritating or amusing, depending on one's mood. In short, expect entertainment and you won't be disappointed, expect critical evaluation and you will.

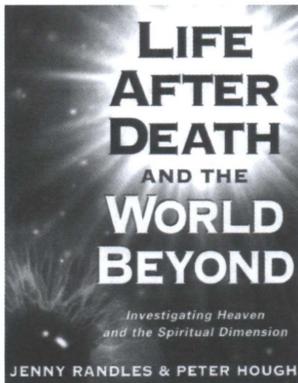
Kate Holden

## THE 50% AFTERLIFE

### Life After Death and the World Beyond

by Jenny Randles and Peter Hough

Piatkus, £12.99, ISBN 0-7499-1802-0



Another popular, nicely presented (give or take a few misprints) assemblage of largely anecdotal evidence, ranging from NDEs to TV images from Beyond, via Marian apparitions and mediumship. Despite the subtitle, there is no "investigation" beyond occasional assertions of the book's "objectivity" – well illustrated by the comment that an Afterlife "is at

worst a fifty-fifty possibility" (cf. either I'm a Dutchman or I'm not – it's a fifty-fifty possibility) or by the authors categorical statement that Michael Bentine "was a gifted psychic" but expressing some scepticism about an American medium's claim that Abbott and Costello are continuing to make movies in Heaven.

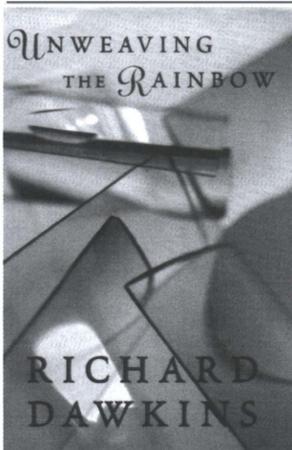
John Gillies

## BARCODES IN THE STARS

### Unweaving the Rainbow

Richard Dawkins,

Allen Lane, £20, ISBN 0-713-99214-X



There are few scientists around today with Richard Dawkins' talent for writing clearly and coherently about their subject. Dawkins has the ability to tackle some of the most complex subjects and explain them in a way that is easily accessible to the layman. Indeed, such an ability is central to the basic tenet of this book, which seeks to prove that there is a poetry in science that is equal in beauty to that employed by the poets themselves, and that

the use of analogies and metaphors in scientific writing is a means of stimulating the reader's imagination, thus facilitating understanding.

Dawkins' own speciality is genetics, but that doesn't stop him tackling a myriad of other subjects in this book. In 'Barcodes In The Stars' he explains how Newton's literal unweaving of the rainbow led to the discovery of spectroscopy and the subsequent advances in astronomy that followed.

'Barcodes In The Air' discusses sound and related wave forms, and explains the importance of decoding frequencies. In 'Barcodes At The Bar', Dawkins shifts his attention to DNA fingerprinting providing an explanation of how and why this recently discovered forensic

technique works. He goes on to tackle the paranormal, encouraging critical thinking and inventing his own word, PETWHAC (Population of Events that Would Have Appeared Coincidental) to try to explain the part that coincidence plays in explaining what would otherwise appear to be paranormal phenomena.

Dawkins believes that bad metaphors and muddled reasoning are the enemy of good scientific understanding. As well as attacking the radical feminist opinions about science and the simplistic nature of the Gaia hypothesis, he spends some time, rather surprisingly, criticising the writings of Stephen Jay Gould. Gould's metaphors, he explains, are often muddled, particularly in the field of evolution, and he gives examples of what he considers simplistic reasoning by Gould. Stephen Jay Gould makes an unexpected target, considering all the claptrap that Dawkins might have chosen as examples of bad science. His point, however, is that a writer as erudite and as popular as Gould could potentially do a great deal more damage than a lesser writer, since most of his work is carefully thought out and well-written. Dawkins returns to his speciality in the latter part of the book, discussing both selfish and co-operative genes and the part they play in the process of evolution. The final chapter looks at the evolution of the human brain and discusses a number of possible catalysts that have played a part in this process.

This book is, as you would expect, very well written, and Dawkins practices what he preaches in his use of language and metaphor to explain otherwise complex processes. The problem, though, is with the theme of the book, which this reviewer found rather difficult to pin down. In choosing as his theme the poetry of science, Dawkins allows himself to hold forth on a wide range of unrelated topics. Fascinating as his subjects are, I could find little coherence between them and, at the end, I didn't feel that any specific point had been made.

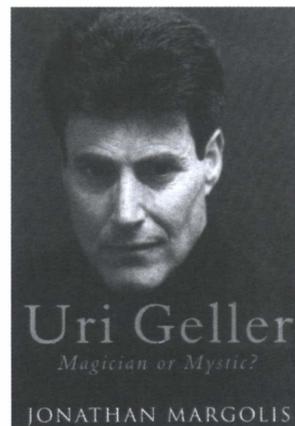
Treated as a series of essays on scientific and pseudoscientific topics this is an excellent book, and makes a useful addition to the skeptic's collection. Whether it achieves what it sets out to do, to prove that there is poetry in science, is, however, open to question.

Mike Walsh

## MAN OF MYSTERY

### Uri Geller: Magician or Mystic?

by Jonathan Margolis



Orion, £18.99, ISBN 0-75281-006-5

The title of this book is odd as Uri Geller is no sort of a mystic. The more important question is: has he genuine supernatural powers, or is he an illusionist?

The author of this book writes a fairly straightforward account of Geller's life, concluding that the evidence for his possessing real

paranormal powers is “utterly compelling, if not completely conclusive”. The evidence is an avalanche of anecdotes and (rather vague) accounts of scientific experiments. According to Geller himself, he has no idea exactly how the powers work.

My own verdict on the evidence produced by Margolis is “not proven”. Any psychologist – or magician – knows how desperately vulnerable humans are to deception. Scientists – used to dealing with inanimate objects – are just as defenceless. Therefore, the evidence may be “compelling” for Geller’s special powers, or just a sad record of human weakness.

The portrayal of skeptics is worrying. They all receive negative ratings. Randi, in particular, is portrayed as a dunder-headed, frenzied fanatic. Magicians are said to doubt Geller’s powers because of jealousy, skeptics because they are dogmatic. Margolis says:

I suspect that a hundred years from now the sceptics will seem in retrospect like superstitious primitives who missed the big picture, rather than Prometheus-like bringers of light in an age of gathering paranormal darkness.

I doubt it. The sheer triviality of what Geller does – bending spoons and stopping watches – undermines a belief in the supernatural nature of his powers. Despite dark hints in the book about Geller’s great feats for the Israeli military and international companies, there is nothing in the book to invalidate a thoroughly skeptical stance toward Geller.

Martin Bridgstock

## A THOMAS THAT DOESN'T DOUBT

**Vital Signs: A Complete Guide to the Crop Circle Mystery**

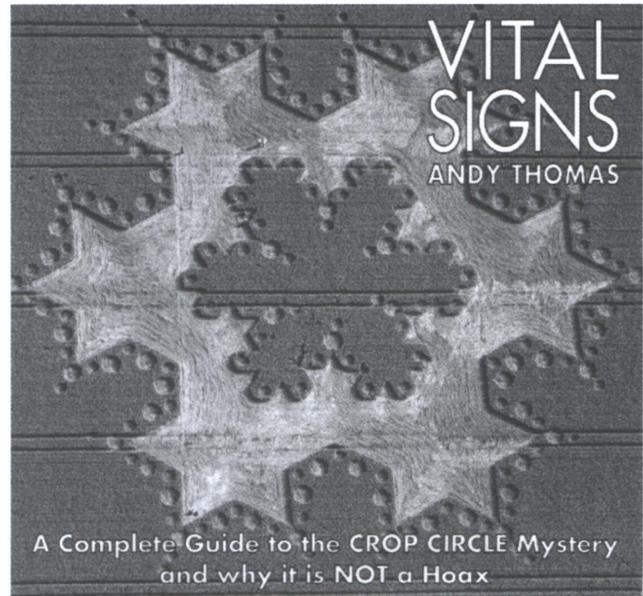
by Andy Thomas

S B Publications, £12.95, ISBN 1-85770-155-0

One day, when I finally get around to penning my seminal and long overdue tract on the pernicious social effects of bogus experts and avocational commentators on the paranormal, I shall seriously consider setting aside a chapter or three for a close analysis of this book, the latest offering on that most visual of phenomena, crop circles.

By then, no doubt advanced in years, ultraconservative in nature, bitter at my squandered youth and hugely anal in temperament, I should have the patience, free time and indulgent nursing staff necessary to enable me to catalogue in detail the persistently slipshod reasoning, depressing paucity of imagination and breathtaking, at times misanthropic proscriptions of human nature and ability that characterize Andy Thomas’s take on the subject; and I dare say that several hip replacements and a Zimmer frame will have long put an end to my circle-making career, inspiring added rage against the ageing process and preventing me even from being charitable towards Thomas for the fawning admiration he showers, albeit innocently, on formations I helped manufacture.

I can see it now: there I shall sit, dribbling and incontinent, orificial tubes a-quivering and medicated bed-bath



pending as I open up yet further columns in my spreadsheet: “Acceptance of Ludicrous Designs as Genuine... Supposed Inability of Homo Sapiens to Function at Night... Pointless, Premature ‘Theorising’ [Part Fifteen]...” What vibrant, throbbing terrain I intend to chart in my dotage.

But for now, I can’t be bothered.

Which, as far as the readership of this periodical is concerned, is probably a Good Thing. I shouldn’t be too hard on Thomas; *Vital Signs* is a typical book of the genre, no more nor less, simply setting out to prove that black is white and incidentally warning us that there are lots of nasty folks out there who’d like us to believe differently.

It treads essentially the same argumentative paths as its predecessors and, like them, surely merits a Menckenesque horselaugh rather than an in-depth nit-pick.

It’s pure tosh, if enthusiastically delivered. Buy it for the splendid photographs, and hope that Thomas puts some of his royalties towards a copy of my book.

Robin Allen

## THE INNER WORLD

**From Other Worlds: the Truth About Aliens, Abductions, UFOs and the Paranormal**

Hilary Evans

Carlton, £14.99, ISBN 1-85868-514-1

This is a better book than its garish presentation suggests, asking good questions. Why does the Virgin Mary usually appear only to one person, why do spirits play hard to get when skeptics are present, why do extraterrestrials land in remote areas ...?

Evans makes significant points about the *War of the Worlds* scare: the play’s events would have taken far longer than its length; people “saw”, “smelt” and “felt” things; and things bearing no resemblance to anything in the production were reported. Ancient structures were within the capacity of contemporary technology; ancient drawings similarly have mundane explanations. Roswell “is a magnificent example of myth-making”: no two ver-

sions matched, witnesses were contradictory, and many allegations were incompatible.

There is a swift whizz through famous contactees – Adamski, Bethurum – and abductees – the Hills, Walton, Strieber, Napolitano. . . Turning to the insubstantial, Evans discusses ghosts, spiritualism, other worldly photographs, channelling etc., maintaining a suitably sceptical stance throughout. He describes an experiment in which volunteers, hypnotised into believing they had been abducted, very convincingly described imaginary experiences.

His attitude is summed up in a picture caption: such experiences “tell us more about the inner world of our hopes and fears than about anything occurring in the real world”.

Ray Ward

## DOWN THE TUNNEL

### The Near-Death Experience: A Reader

by Lee W Bailey and Jenny Yates (Editors)  
Routledge, £14.99, ISBN 0-41591-431-0

This is an interesting and valuable collection of 24 readings on the phenomenon of near-death experiences (NDEs).

As regular readers of *The Skeptic* will know, NDEs are often reported by individuals who are revived from the brink of death (or even individuals who only thought that they were on the brink).

Accounts typically include one or more of the following: a profound sense of peace, an out-of-body experience (during which the individual may later claim to have picked up information from remote locations), moving down a dark tunnel towards a light, meeting with a being of light, a life review, and finally a return (often unwanted) to the physical body. Recently, greater attention has been focused upon the minority of cases which are perceived as negative, including reports of feeling lost and alone in an infinite void, or even reports of hellish torments.

Few serious researchers doubt that such experiences occur. Considerable controversy surrounds how they should best be interpreted. Two types of readings are offered in this volume. The first consists of personal accounts of NDEs, including those of Carl Jung, Dannion Brinkley, Peter Sellers, Eddie Rickenbacker, and George Ritchie.

These make fascinating reading and reinforce the idea that the NDE shows considerable variation across individuals in addition to various common themes. The second type of reading considers the various interpretations which have been proposed including biological, psychological, philosophical and religious.

Virtually all of the big names in NDE research are represented here (including Raymond Moody, Kenneth Ring, Bruce Greyson, Karl Jansen, and Susan Blackmore) and the reader gains a full appreciation of all the major arguments and issues involved.

Inevitably, given the wide range of different approaches, readers will find some chapters more readable and interesting than others (I found the psychoanalytic stuff particularly dull), but the editors are to be congratulated upon putting together a collection that represents all shades of opinion.

Christopher C French

## EVENT REVIEW

### The Royal Statistical society's "Parapsychology and the Paranormal" Afternoon, Tuesday 9 February 1999.

Welcoming outsiders to a fascinating – if troubled – field like parapsychology is never the easiest of tasks. The subject covers not only the complexities of human perception and mis-perception but also some of the most difficult issues in human experimental science. Yet this is just what the Royal Statistical Society's "Parapsychology and the Paranormal" afternoon set out to do.

The first two speakers dealt primarily with how the limitations of perception might be mistaken for "psi". Dr Christopher French of Goldsmith's College, London, started the talks by giving some definitions of the paranormal. Then he highlighted the high public belief in such phenomena. He went on to ask why this might be so, giving some possible psychological reasons, or cognitive biases, which might make people think that they have had psi experiences.

Dr. Caroline Watt, from Edinburgh, continued in this vein with a discussion about coincidence. This approach – to look at "pseudo-psi" first – might seem unusual to someone new to the field but it worked because it provided a good, cautious, background to the assessment of "real" psychic claims.

These are problems regularly faced by the University of Hertfordshire's Richard Wiseman. Much of his talk looked at the work done by the Perrot-Warwick unit at Hatfield, which includes the critical evaluation of many psychic claims and claimants. This brought him to his experiments with Marilyn Schlitz on remote staring, which had shown an "experimenter effect" in two side-by-side experiments run by the pair; Wiseman's results being negative, and Schlitz's being (barely) significant.

Replication difficulties also arose in Dr Deborah Delanoy's lecture about the ganzfeld meta-analysis. She ended with a quick preview of the forthcoming paper by Julie Milton, and others, which seemed to show no overall "Ganzfeld effect" for the 1991-6 studies. This is a serious problem for parapsychology, which has often relied upon the technique to demonstrate psi effects.

In short, the afternoon gave a critical, but fair, look at the current state of parapsychology. Several members of the society reacted to it with interest as many of the problems with the meta-analyses and "experimenter effects" are common to more mainstream areas of statistics such as those in medicine.

My only criticism is that so many of the big questions – such as the Milton meta-analysis – were only touched upon, at the end, without being properly assessed. But perhaps this was inevitable given the recent nature of these results which are already proving highly conten-

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# Letters



## Skeptic in action

I enclose a copy of the reply I have just received to a complaint I made to the ITC about a TV advertisement by the *Daily Mail* for its horoscope supplement by Jonathan Cainer (mentioned, I notice, in *Skeptical Stats* last issue). Having complained several times before about astrology features on BBC programmes, particularly "A Date With Fate," the daytime astrology-based programme last summer, I was used to receiving polite, dismissive letters, and didn't really expect anything more this time. What a treat it was, then, to get a result. OK, so it wasn't banned on the grounds I had named in my telephone complaint, but at least they will have to tone this twaddle down next time.

You will see from the ITC summary that they apparently had only one complaint – mine, I guess. Where were all the other skeptics, I wonder? Perhaps if you mention this little victory for sanity in the magazine it will encourage others to take up the pen (or phone) in anger. There are bound to be other such advertisements and programmes in future, and a sackful of polite but forcefully worded complaints will surely have more impact than my solitary efforts. Even though I'm a novice at the letter of complaint, I can thoroughly recommend its therapeutic benefits. It certainly feels much better to pour out your venom on the page rather than sitting and seething at the ever-swelling tide of paranormal lunacy on the box.

**John Hall**  
Liverpool

*The accompanying letter from the ITC noted that the advertisement in question offered "your own 40-page horoscope – written for you by top astrologer Jonathan Cainer" and that the horoscope was supposed to be based on an individual's hour and place of birth, and produced by Cainer and his*

*team using a computer. While the ITC disagreed that the claim that the horoscope would predict "what the future may hold for you" breached its guidelines, which allow only "fun" horoscopes or other readings that are not personalised, it did consider that the request for time and place of birth fell foul of the no-personalisation rule. The advertiser countered this by claiming that there was no interaction between the production of the horoscope (i.e., by computer) and the subject, but the advertisement was ruled unacceptable for further transmission.*  
– wg

## What's in a word?

I read somewhere that there is a difference in the definition of "skeptic" between North America and Britain, with the British definition being something closer to agnostic, not holding a definite belief in the absence of supporting evidence, whereas the American definition is closer to one who disbelieves, a disbeliever. Is this so? I just read a piece in a newsletter criticising "total skepticism" where the author seems to be using the latter definition, a definition which does seem to permeate the American *Skeptic* magazine. Is it different in the UK? I'm very skeptical of this latter kind of skepticism, as it seems to me to be very unskeptical of its own belief system. That kind of skepticism of even one's own beliefs is my idea of total skepticism, and I don't think it's necessarily a bad thing. An awful lot seems to depend on how the term is defined and applied.

**Eric Pettifor**  
by email

*Perhaps other readers would like to comment. My own interpretation of being a skeptic is closer to what Mr Pettifor here calls the British version – that is, keeping an open mind and not drawing conclusions until the evidence arrives to support them.* – wg

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**Jim Pratt**  
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## Skeptics in the Park

Meet 13:30 (1:30pm) on August 22nd, at Regents Park, Clarence Gate, for the first skeptics' picnic. Bring your own food, drink, and homemade UFO.

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