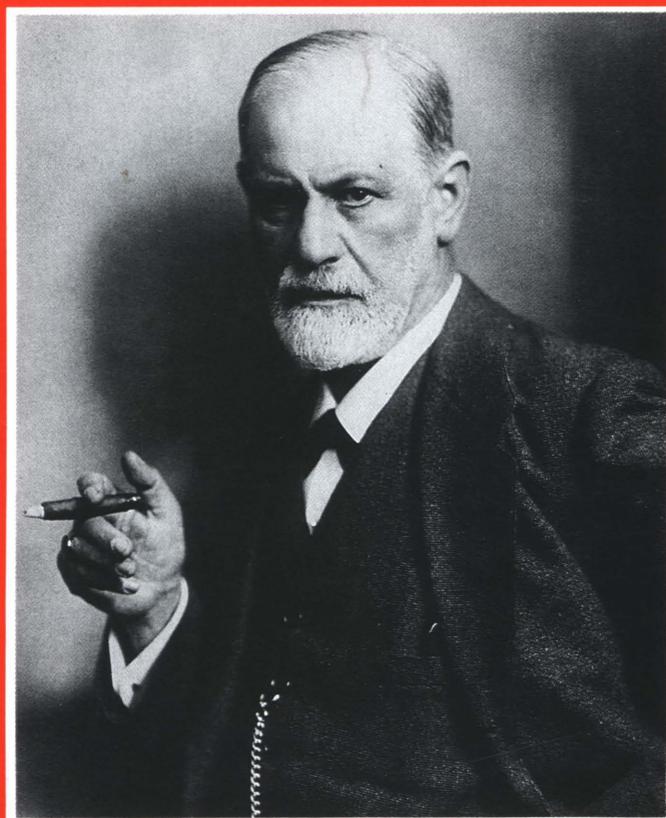


The

Volume 11 Number 1

Skeptic



Psychoanalysis: Fact or Fiction?

Also in this issue

Remembering Carl Sagan

The truth about the Mars Effect

Sleep paralysis or alien abductions?

Runes and the New Age

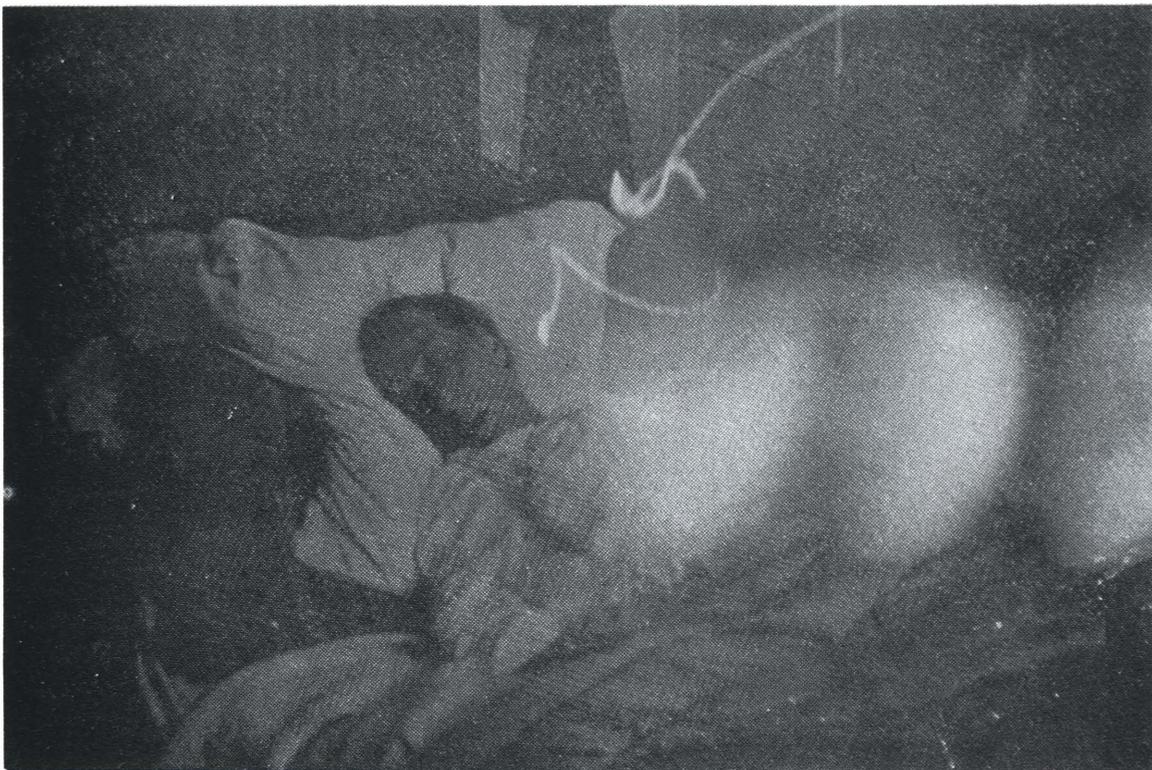
New British skeptical group

X-Files and skeptics

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*Hilary Evans' Paranormal
Picture Gallery*



HIPPOLYTE BARADUC (1850-1909) was one of those rare psychical researchers who seek practical demonstration of their theories. Persuaded that the soul has physical existence, he put domestic tragedy to good use, photographing on their deathbeds both his son Andre, who died early in 1907, and his wife Nadine who died later the same year. He obtained several curious photographs: this one, taken twenty minutes after his wife died, convinced Baraduc that he had successfully captured the image of his wife's soul as it lingered for a while near her corpse.

Contents

Editorial

It's ironic really that just as we are celebrating our 10th anniversary we should run into difficulties with production of *The Skeptic*. An explanation and apology is given overleaf but we would like to reaffirm here that we are still in business and we intend to stay in business.

This (rather belated) anniversary issue is probably a good place to give credit to the many people who have contributed to the magazine since its inception 10 years ago. Other than the pleasure of seeing themselves in print in *The Skeptic*, none of our writers and illustrators receives any reward whatsoever. Although there are too many to mention them all individually, particular thanks must go to illustrators Tim Pearce, Donald Rooum and Nick Kim and (other than the editors) our only regular columnist, Wendy Grossman. Wendy not only founded the magazine but has given her unstinting advice and support since she retired from the editorship, eight years ago. We also thank Hilary Evans of the Mary Evans Picture Library for his contributions of, not only pictures, but occasional articles as well. And, in the background, Dave Martin deserves special thanks for his skillful handling of our subscription database, as do our clipping contributors, proof readers and legal advisors.

The magazine's finances are generally fairly precarious and, on occasion, generous donations have been made by individuals who have requested anonymity. These have made a significant difference to our viability and we should like to express our gratitude.

And finally, we thank you, the reader, for your continued support — even when your copy of *The Skeptic* is more than 6 months overdue!

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Manchester M60 2TH
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Email skeptic@cs.man.ac.uk
Web www.cs.man.ac.uk/skeptic/
Tel 0161 275 6274
Fax 0161 275 6236

Editors
Dr Steve Donnelly
Toby Howard

Finance Manager
Dave Martin

Cartoons
Donald Rooum
Tim Pearce
Nick Kim

Editorial Support
Jane Bousfield
Angela Cernoculschi

Special Consultant
Cyril Howard

Special Projects
Chris Willis

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We welcome contributions.
Please enclose a SAE.

To All Our Readers

Apologies

It won't have escaped many readers' notice that this issue of *The Skeptic* (ironically our 10th anniversary issue) is – even by our usual standards – very late in arriving on your doorsteps. For this we would like to apologise profusely. And to those readers who have written, telephoned or emailed us, concerned that their subscriptions had lapsed or that we had gone out of business we offer a double apology.

Reassurances

Let us, first of all, offer reassurances that we have not gone out of business and are not intending to do so. *The Skeptic* is a unique magazine offering information, views and opinions that are not consistently found in any other publication in this country. If *The Skeptic* did not exist, someone would have to invent it.

The Problem

We have had a problem, however, and we would like to explain the nature of the problem. We believe that we provide a magazine of high quality in both its appearance and content, a magazine that rivals many professionally-produced publications on the newsstands, and one we know that is generally highly thought of by you, our readers. However, although we have help with management of finances, with our subscription database, our legal matters and with proof-reading, the magazine is otherwise entirely produced by the two of us in our spare time. Both of us have been interviewed many times by journalists on matters paranormal and are usually not stumped by any questions they throw at us. The one query that has left us both unable to provide a sensible answer, however, from a journalist aware of the immense amount of time and effort involved in editing and publishing a magazine like this was 'Why do you do it?'. The answer is that someone needs to, but when one considers all the 'good causes' to which one could devote one's time, it is not an entirely rational answer. The problem is that both of us have become busier and busier in our 'daytime jobs' as university academics, with our working weeks extending generally way beyond the standard 40 hours. This would not be a problem if it were not for the fact that, in addition to producing the magazine, we have also to put significant time into the effort to increase our subscriber base as this is an important means (via economies of scale) of keeping pace with increasing printing costs without increasing the price of the magazine. This is probably a good place to remind you that no-one associated with the magazine receives any payment for their services.

The Short-term Solution

Our short-term fix for this problem of overwork is that *The Skeptic* is going to change from a bi-monthly to a quarterly magazine starting with this issue. The magazine will remain otherwise exactly the same and – most importantly – EVERY SUBSCRIBER WILL RECEIVE THE NUMBER OF ISSUES THAT HE/SHE HAS PAID FOR. In other words, if you have just taken out a one-year subscription this will now be extended to an 18 month subscription of the quarterly magazine. Our subscriber

database simply keeps track of the number of issues you have paid for and alerts us to send you a renewal notice when you only have one issue to go. This will remain unchanged. This more relaxed production schedule will enable us to continue to produce the same high quality *Skeptic* as always whilst avoiding anxiety attacks, ulcers and nervous breakdowns.

The Long-term Solution

The long-term solution to our problems of undermanning (underpersonning?) is clear. We need help in three areas.

Situation Vacant: Circulation Manager

Firstly, we are seeking the assistance of someone with skills, knowledge and/or enthusiasm and – all importantly – a little bit of spare time on his or her hands; someone who could devote time and effort to expanding our subscriber base by any (not too expensive) means available. In our experience, when the existence of *The Skeptic* is brought to the attention of readers with an intelligent, rational interest in the paranormal, the take-up rate of subscriptions is high. The difficulty is in bringing the magazine to the attention of such people. This is the job that we would like a new circulation manager to take on. Although this job would be initially unremunerated, we would be happy to negotiate with anyone interested in taking on this all-important function so that a salary could eventually be paid out of increased subscription income.

Situation Vacant: Advertising Manager

Secondly, although, for ethical reasons, we have generally avoided advertising in *The Skeptic*, we have become increasingly aware that this could nonetheless provide important additional income that could be used to improve and develop the magazine. We are seeking a volunteer to help us obtain appropriate advertising and perhaps even to start up a classified advertisement section. As with the job of circulation manager, the job of advertising manager would be initially unremunerated but we would be happy to negotiate an eventual salary based on advertising revenues.

Situation Vacant: Webmaster

Thirdly, we would like to find a webmaster who would be interested in taking over *The Skeptic* web pages which we currently maintain ourselves. The World-Wide Web is likely to be an increasingly important means of publicising skepticism, in general, and *The Skeptic* in particular. We would like to engage the voluntary services of someone with the skills necessary to develop our website into an attractive and informative advertisement for the magazine.

Other ideas

And finally, if you have a good idea for promoting *The Skeptic*, if you have a friendly newsagent or bookseller who would be happy to stock the magazine, or if you have any other ideas that might help us expand our circulation, please write to us.



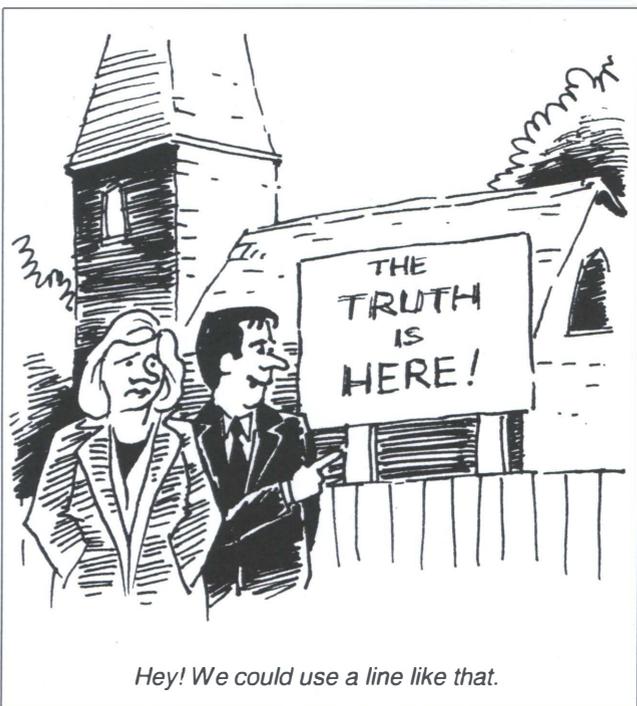


Hits and Misses

Steve Donnelly

The truth is out there

I'm not sure whether the Church of England was just reacting to the worrying (for it) projection of current trends (*Sunday Times* 5 May) that by the year 2002 the number of practising Muslims is set to overtake the number of practising Anglicans, rendering even the title 'the Church of England' somewhat ironic. In any case, some marketing genius hit on the extraordinary idea of widening the appeal of the poor old declining C of E by adopting the slogan from that ever popular TV series the X-Files, 'The Truth is Out There'. The intention was to subtly alter this to 'The Truth is Here' and to display this catchy phrase along with 'images associated with the series' on billboards outside churches as part of the Church's Easter campaign. According to the *Guardian* on 8 March, more than 9 million people watch the X-files every week (a number that is 10 times greater than the number of practising Anglicans) and the intention was to bridge the gap 'between the Church's culture and that of secular society'. Unfortunately, the Churches' Advertising Network did not manage to reach an agreement with 20th Century Fox, which owns copyright to the programme's logo, title and catch-phrase and so the campaign had to be cancelled. Still, I shouldn't worry too much, there are plenty more catch-phrases and images out there - my favourite for the C of E's billboards next year would be a picture of a satanic alien with the phrase 'In Hell, No-one Can Hear You Scream'.



Hey! We could use a line like that.

Tim Pearce

High (Church) spirits

Meanwhile, the Catholic Church seems to have discovered another means of going along with the popular interest in aliens, ghosts and things that go bump in the aisle. According to the *Observer* on 5 January, Father Gino Concetti, chief theological commentator for the Vatican newspaper *L'Osservatore Romano* recently stated that 'communication is possible between those who live on this Earth and those who live in a state of eternal repose in heaven or purgatory. It may even be that God lets our loved ones send us messages to guide us at certain moments in our life'. This certainly differs from views that I have often heard from Christian ministers (although admittedly not Catholic priests) quoting chapter and verse from the bible indicating clearly that communicating with the dead is the work of the devil. Perhaps a knowledgeable reader will let me know what the bible really has to say on this topic.

Belgium's official psychic

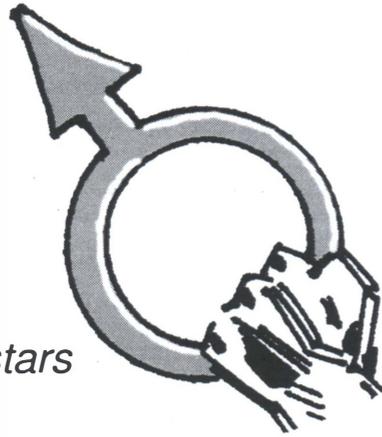
It would seem bizarre, wouldn't it, if Scotland Yard openly arranged tests of psychic mediums and on the basis of the tests engaged one to act as official psychic in a major investigation. Perhaps it is a measure of the trauma that the Belgian people are undergoing following the revelations of paedophile rings, child murders and police incompetence that this is precisely what the Belgian gendarmerie have recently done in connection with their investigation into Belgium's missing children. According to *Le Soir* on 19 February, a major problem for the families of missing persons has been the mediums who arrive 'pendulum in hand, head turned to the heavens, body receptive to [psychic] waves and - all too often - the hand very close to the wallet'. In an attempt to prevent this exploitation, two professors - experts in parapsychology - were given the job of sorting out the mediumistic wheat from the chaff; their tests revealing, thus far, only one medium (who remains anonymous) with apparently 'genuine' abilities. Parents of missing children are invited to send in a possession of the missing child for the medium to use in an attempt to divine his or her location. Whilst I feel certain that even the 'genuine' medium is not going to help locate any missing children, I can't help feeling, nonetheless, that the gendarmerie deserve to be applauded for this strategy which at least has served to prevent the distraught parents from being hounded by hordes of unscrupulous charlatans.

Steve Donnelly is Professor of Experimental Physics at the University of Salford.

The Mars Effect

Lewis Jones

Good sportsmen, bad sportsmen and the stars



IT WAS BACK IN 1955 that Michel Gauquelin first published correlations between the position of Mars and the birth times of sports champions. And for the past forty years, horoscope nuts have been beating skeptics over the head with claims that Gauquelin had 'proved astrology works' (a claim that always displeased Gauquelin himself, who had nothing but contempt for astrology).

Imagine an arc stretching across the sky from east to west, representing the 12-hour journey of an astronomical object. Divide this arc into six sectors, each of 2 hours. Sector 1 begins at the eastern horizon, and sector 4 begins at the highest point of the arc. Gauquelin claimed that athletic champions were born when Mars was in sector 1 and sector 4 more often than chance would allow.

From the beginning, Gauquelin's claims have had a bumpy ride. In 1967 the Para Committee in Belgium tested 535 sports champions and declared that the results were ambiguous. In 1976, Gauquelin carried out another test, and claimed that non-champions were born at the chance rate of 17.17 per cent, but champions were born at 22 per cent in the key sectors (Sectors 1 and 4). Skeptics complained that Gauquelin had not chosen a random sample of non-champions.

In the US, an independent test of 408 American champions came up with negative results. Gauquelin claimed success again with 432 European champions, but skeptics pointed out that he had changed the criteria. Finally, the French Committee of Skeptics (CFEPP) agreed to cooperate with Gauquelin and retest the French sample rigorously. The test has taken 13 years to complete, and has now been published as 'The "Mars Effect": a French test of over 1000 sports champions'.

The Committee took the names of famous sports champions from Le Roy's *Encyclopedic Dictionary of Sports*, and also (on Gauquelin's recommendation) a sports anthology called *L'Athlège*. Checking out the correlations was a lot trickier than you might expect, and accounts for the long delay before publication. No champions were to be included if they were born after midnight on 1 January 1950,

since it was around then that induced labour and caesarean deliveries became more common. Champions had to be French, and to have been born in metropolitan France (as opposed to overseas French possessions such as Algeria). Champions had to have competed at least on the national level.

It had not occurred to me before what a motley collection of activities were encompassed by the word 'sport', and this raises the question of whether it is a unitary concept at all. What abilities would you seriously expect practitioners of these activities to have in common: driving a racing car, bowling, mountain-climbing, shooting, horse-riding?

There were other complications. *L'Athlège* omitted some disciplines that were included in the *Encyclopedic Dictionary of Sports*, and vice versa. And the data in one book sometimes contradicted the data in the other. A check revealed that answers from town halls were inaccurate and incomplete. Registry offices were responsible for the faulty reading of poorly written numbers, there was sometimes confusion between a.m. and p.m., and even between the time of birth and the time when the information was submitted to the town hall. There were dead ends – athletes whose exact birth times could not be



found at all.

The shift between clock time and universal time (UT) varied with longitude and the time of year. In 1916, daylight time was established, and produced another complication. Things became worse in 1940 with the German invasion. Between 9 May 1940 and 1 November 1942, there were two different time regimes in France. During those years, the legal time in the occupied zone was German legal time, two hours ahead of UT. The Vichy government maintained a one-hour difference with UT during the winter, and made summer time two hours ahead of UT (that is, equal to Berlin time).

After making whatever corrections were called for, the CFEPP issued its conclusion: 'There is no statistical ambiguity in the results: They show no evidence for the influence of Mars on the birth of athletes.'

That is when Gauquelin began asking for alterations in the data. He also began the notorious fudging of the categories of what amounted to champions, famous champions, and really famous champions. He asked for 39 names to be moved from one sector to another (changes that would have increased the number of Mars-sector births from 1 to 20). He proposed 79 additions (which would have brought an extra 32 names into key sectors). And he asked for 16 deletions (none of which had Mars in a key sector). He wanted to list champions born in French departments overseas, as well as those born in former departments or colonies (Algeria, Morocco, Tunisia, Indochina). The CFEPP excluded these names. There would have been problems with the constitution of control groups, and with determining the exact geographical location and the time regime of these overseas places.

The CFEPP report ends with a summarising commentary by Jan Willem Nienhuys, a Dutch mathematician and board member of the Dutch Skeptics' organisation Skepsis. He points out that 'the town halls corrected 88 birth dates that were exactly as in the encyclopedias, and this leads one to suppose that about the same number of wrong encyclopedia dates went undetected, and that several dozen date/time combinations were subsequently

wrong. This may seem like a lot, but it amounts to an error rate of less than 5 per cent.'

He also makes the point that Michel Gauquelin and his wife Francoise considered not only sectors 1 and 4 to be 'zones of high intensity', but also sectors 7 and 10, though 'not so high' as sectors 1 and 4. 'Michel Gauquelin also expresses the viewpoint that the rising and culminating high-intensity zones should be extended slightly'. This increased the Mars sector areas by a third. As Nienhuys makes clear, 'Gauquelin did not report all he knew. He preferentially reported names of those who were born in primary or secondary key sectors'.

There were also oddities in the choice of individual performers: 'soccer players who were chosen for the national team only once in their lives (without even taking into account whether that game was won or not) are considered equivalent to individual world champions or Olympic medallists'.

Taking names from reference books brings problems of its own. 'Citations have only limited value: fashionable sports such as skiing get many quotations, and rugby gets many less; and often books will mention a person for reasons other than his achievements . . . Does a small note in the update section about a soccer player (no birthplace, no birth date) changing clubs count as a 'citation'? And what about a *passim* remark to an athlete's brother, sister, or conjugal partner?'

In conclusion, Nienhuys has this to say: ' . . . the whole point of this laborious exercise was to find out what remains of the Mars effect when one starts entirely from scratch, without the help of Gauquelin, and the answer is: nothing. The CFEPP is therefore correct in its conclusion that the French test of over a thousand champions shows no evidence for the Mars effect.'

This is the end of the line. On 20 May 1991, Michel Gauquelin committed suicide, and is said to have left instructions that all of his data be destroyed.

Lewis Jones is a science writer living in London.

Donald Room



Norse Manure

David Hambling

Runes, Vikings and the New Age



BROWSE ANY NEW AGE BOOKSHOP and you'll find sets of the ancient Norse Runes whose magical essence gives them the power of telling the future and protecting from harm. Not many of us take this seriously, but we might accept that it is merely a popularised version of the Norse religion. Closer study shows that the New Age version of the Runes give us much more reason to be skeptical. The Norsemen were a tough race living in a violent age. The term Viking only applies to the raiders who burned and pillaged their way around the European coasts in the 9th – 11th century, but they were just the most extreme exponents of their values. Their leaders were men like Erik Bloodaxe and Thorfinn Skullsplitter, and their elite were the berserkers who worked themselves into a psychotic fury before battle. The greatest honour was to die in battle, as dead warriors spent the afterlife feasting in Valhalla, and everybody else went to the gloomy abode of Hel. The gentler, less macho virtues were not highly rated.

The New Age wants to rehabilitate the Norsemen and show them as people of fairness, honour and hospitality, since it is an article of faith that any primitive people must be more spiritually advanced than we moderns. This sidesteps inconvenient features of their religion. Blood sacrifices were an important part of worship, as noted by an observer in a festival at Uppsala: 'of every living thing that is male, they offer nine heads'. This included dogs and horses, as well as seventy-two human captives. Prisoners of war who were not ransomed could be sacrificed to Odin or Thor; some were drowned, and

really unlucky ones died in a gruesome ritual called 'blood eagle'.

The runes were considered magical and were used for divination as well as carving memorials. According to Norse mythology, the god Odin gave mankind the runes; historical research indicates that they were derived from the Etruscan alphabet. Many of them are recognisable as direct copies of Latin letters: Is = I, Tyr = T, Beorc=B, Sigel=S, and so on. The runes are a recent alphabet, not appearing until the 3rd century BC, and the power ascribed to them is perhaps a reflection of a largely illiterate people's awe of the written word. The Norse practice of 'casting the runes' as a method of divination was recorded by Roman historians. The secret of interpreting the runes was known only to Runemasters who passed this knowledge on by word of mouth. The last of them died in the 17th century, taking the secrets with him.

The modern rune craze was started in 1982 by Ralph Blum's *The Book Of Runes*, which has no connection with the Norse roots, but is derived from the Chinese *I Ching* and the author's imagination (or perhaps that should be 'mystical insight'). The lack of historical records on how the runes were interpreted has not hindered the flow of books on the subject. As Gunnora Hallakarva, a lecturer in Norse Paganism puts it: 'New Age publishers do not generally require high standards of authority or authenticity in the manuscripts they publish'. The lack of any known guidelines for divination means that authors tend to make up their own. One says that it will only work if the runes are inscribed on the wood of a fruiting tree,

another says that the surface onto which they are cast is of great importance, a third that true interpretation depends on an understanding of the bronze-age mother-goddess religion. If any of them are right, then all the rest are wrong. Some books suggest adopting the Norse practice of wearing or carrying runes as protective talismans. This seems bizarre without the religious context: how much protection would a Hindu expect from a St Christopher medallion, or a Buddhist from Jewish phylacteries? 'Pick 'n' mix' is the New Age style.

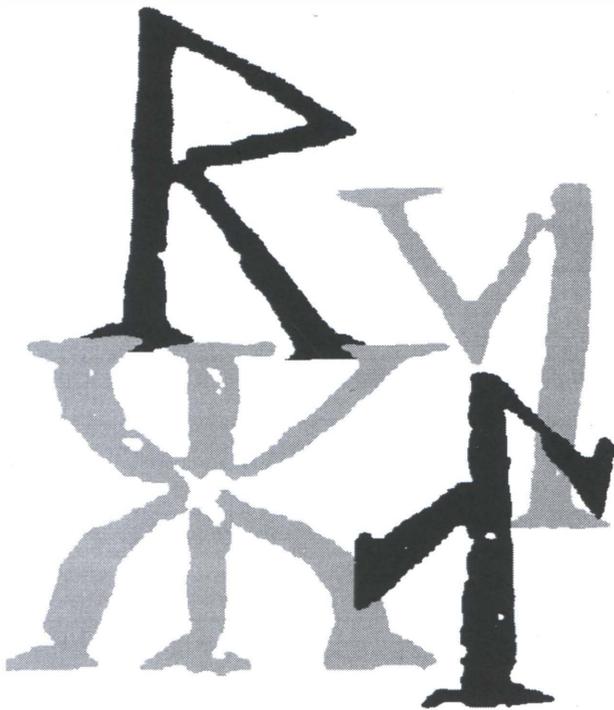
In this psychic car boot sale you can add bits and pieces from Taoism, Native American beliefs, crystal lore, Chinese



De Alphabeto Gothorum.

acupuncture, reflexology, Arthurian myths, West African voodoo, and just about anything else. Of course, you can only take the surface elements because otherwise you might find contradictions to spoil the patchwork of undemanding feelgood beliefs. This plundering of religions and cultures, a sort of trafficking in stolen gods, leaves the Christian King Arthur rubbing shoulders with the Saxon invaders and their pagan runes. He must be turning restlessly beneath the boutiques of Glastonbury.

Regardless of the underlying theory, the important question is whether runic talismans work. They were tested in the field during the Second World War, when thousands of soldiers went into battle wearing the double 'Sigel' rune – symbol of 'good vanquishing evil, clear



vision'. These were the soldiers of the SS, the Nazi's elite. Himmler, the SS commander, resurrected the old mythology of Teutonic blood, with runes as a symbol of their supposed Viking forebears. After their defeat their beliefs were consigned to the dustbin of history.

I do sympathise with some New Age attitudes. Respect for the environment should be encouraged, and the excesses of the consumer culture deserve criticism. But the bogus rune-lore does no credit to anyone. The ancient Norsemen, a fascinating if bloodthirsty people, are presented as a Walt Disney parody of themselves. Their religion is trivialised, their whole pantheon of gods and related beliefs ignored. None of the sets of 'do it yourself' fortune-telling runes and books have any real connection with the ancient art of casting the runes. The only purpose served seems to be to sell something to people who already have a set of tarot cards, turning the runes into just another consumer product.

The New Age is closer to its parent culture than people realise.

David Hambling works in IT and is a freelance writer and researcher. A version of this article was first published in the *Freelance Informer*.

Festive Fifty Prize Quiz Answers

Congratulations to C S Kershaw, of Goole, East Yorkshire, who wins first prize for an almost perfect set of answers to our Festive Fifty Prize Quiz in our last issue. A bottle of suitably bubbly homoeopathic champagne is on its way. And congratulations to Miriam Brazzelli of Aberdeen who wins the second prize, a £20 book token.

As for providing an explanation for the mysterious bent spoons which materialised in *The Skeptic's* offices, we received a number of intriguing suggestions. Here are some of them:

- *A painter was recently due to repaint The Skeptic's offices, but had no implement for opening the paint-pots, and tried using teaspoons. If the walls are newly painted, this hypothesis is true and the painter was ultimately successful. If not, it is still true, but he was not.*
- *There can be no possible rational explanation.*
- *The editors were attempting to eat frozen ice-cream.*
- *One day Skeptic co-editor Toby Howard was so sick of Wendy Grossman's folksinging that he grabbed the spoons she was playing and trampled them in fury. Hearing footsteps, they jumped back to their desks. When Steve Donnelly entered he found the mysterious bent spoons – and they were still warm to the touch!*
- *Evidence of British skeptics' perverted bent of twisting spaghetti using spoons.*
- *No explanation needed: they are normal spoons for eating around corners.*

And now for the answers: 1. Venus; 2. Hindu statues; 3. Both published autobiographies called *My Story*; 4. John Mack; 5. (b), a lighthouse; 6. The Official Loch Ness Visitor's Centre, at Drumnadrochit; 7. Nevada; 8. 'No more things should be presumed to exist than are absolutely necessary'; 9. Mars; 10. Robert Morris, Edinburgh University; 11. IQ tests were originally invented to identify children with learning disabilities so they could be helped (source: Stephen Jay Gould's *The Mismeasure of Man*); 12. They confessed to hoaxing crop circles; 13. Richard Dawkins; 14. Randall Zwinge; 15. Susan Blackmore; 16. None!; 17. Their psychics wrote books betraying their confidences; 18. Ophiuchus (Arachne accepted as an alternative answer); 19. 10 billion years; 20. 6,000 years; 21. Any answer you like!; 22. Partial memories of historical novels and other books she had read; 23. Better than 99%, according to mathematician John Allen Paulos; 24. Any answer you like!; 25. Scully and Muldaur; 26. Warminster; 27. Alfred Watkins; 28. A sculpture made of fluorescent tubes, at London's South Bank, 1979; 29. Sir George King; 30. Martin Gardner; 31. Morag, the monster of Loch Morar; 32. Tuesday Lobsang Rampa; 33. Betty and Barney Hill; 34. Wilhelm Reich; 35. Callanish (Calanais), on Lewis; 36. A lamp in a Soho restaurant, among other suggestions; 37. Bermuda Triangle/P D Q Bach or Barry Manilow; 38. The Dogon; 39. It's up to you, but there is no such thing as Procrustean therapy!; 40. Watermelon/tomato; 41. Sir Arthur Conan Doyle; 42. Isaac Asimov; 43. Borley Rectory; 44. Moriarty; 45. Burton Agnes; 46. Mons; 47. He was going to be 'called home' to God; 48. Madame Blavatsky; 49. Frederick Bligh Bond;

Carl Sagan: An Appreciation

James Randi

I'VE HAD just five real super-heroes in my life: Richard Feynman, Isaac Asimov, Carl Sagan, Richard Dawkins, and Martin Gardner. Last week, the third of those five left us. It's a terrible loss indeed.

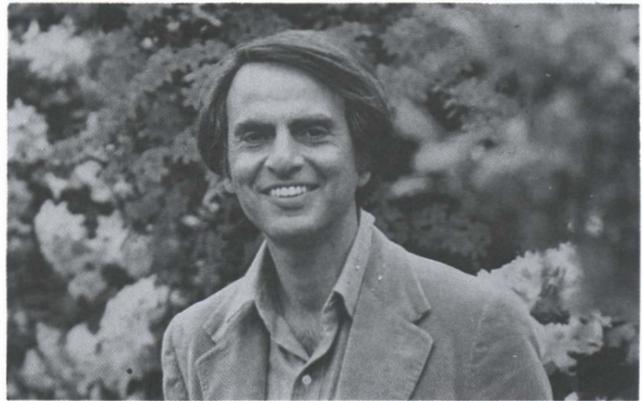
Carl Sagan was, by intended profession, an astronomer. He taught at Cornell University, where he was eagerly accepted into the tenured staff after Harvard University rejected him because of his high public profile. Carl sought that profile, fought for it and earned it, and we are all the richer for it. Early in his career, he took on the awesome task of being an 'explainer' to the public, and thus expanded his influence far out of the classroom and into the minds of many who would never have had the opportunity of hearing his thoughts. Some 400,000,000 persons, internationally, saw his 'Cosmos' series on television, and I cannot count the number of people who have told me that their first exposure to the beauty of science came to them by this means. Carl was a man with the personality, the zeal, and the consummate ability to bring to the public he served, the excitement of discovery and the need to bring proper, critical, thinking procedures to bear on problems.

During his public lectures, which were always well attended, he displayed great tolerance of what others might have considered to be inane or juvenile enquiries. In so doing, he recognized the unsettling fact that most non-academics (and even a too-large percentage of them!) are quite unaware of how the real world works. Faster-than-light travel, ESP, religious miracles, and other spurious phenomena seem, to the uninformed, as plausible as rain and puppy-dogs, and Carl gently tried to point out the errors in thinking that could give rise to that condition.

Many months ago, when I received for review a bound-galley copy of his last book, *The Demon-Haunted World*, it came with a note cautioning me that the finished MS would be significantly different. It was. What eventually appeared in print had significantly stronger terminology and language than the first draft, and as I noted this fact, I could not help but wonder whether the author had sensed that this might well be his last statement to the world. Regrettably, it was.

I urge you to obtain this book, and to pay close attention to what he had to say to us all. He says it eloquently, forcefully, kindly, and effectively. And it has seldom been stated with such genuine concern for those he's now left behind.

The ailment that took him from us was of a very rare variety. He rather relished that aspect of his illness, and with great fortitude set about showing that he was not going to surrender easily. Though an apparently very successful bone-marrow transplant from his sister brought him immediate and dramatic relief, he went into relapse



and finally succumbed to pneumonia. Until the very last, he exhibited bravery and optimism. Just two weeks before he died, he appeared on a TV interview looking pale and exhausted, most of his hair lost to the therapy he was undergoing, but the beaming smile undimmed.

Carl Sagan was fond of explaining to his audiences how the early elemental components of the stars transmuted into more complicated substances and eventually provided the material that could combine into life-forms, saying that we are all 'made of star stuff'. While his colleagues could – and often did – sniff at such un-ivory tower language, the idea got across, dramatically and charmingly. And Sagan himself was made of very fine star stuff, that is evident.

The jacket of his last book features this quotation, surely one of the most moving and compelling selections of material from the man's work:

... I worry that, especially as the Millennium edges nearer, pseudoscience and superstition will seem year by year more tempting, the siren song of unreason more sonorous and attractive. Where have we heard it before? Whenever our ethnic or national prejudices are aroused, in times of scarcity, during challenges to national self-esteem or nerve, when we agonize about our diminished cosmic place and purpose, or when fanaticism is bubbling up around us – then, habits of thought familiar from ages past reach for the controls.

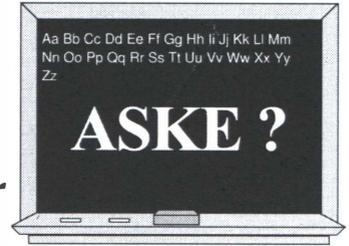
... The candle flame gutters. Its little pool of light trembles. Darkness gathers. The demons begin to stir.

Well, another one of those candles has gone out. The burden now falls on us to provide as much light as we can generate, to banish the darkness and make sure it does not triumph over us. If you ever doubt that your voice is needed to bring a little rationalism or truth to others who may need it, re-read that quotation. The demons must not be permitted to rise. We owe that much to the memory of this fine man.

James Randi is a magician, and a highly active skeptical investigator and writer.

Time to ASKE questions

*On the birth of a new UK skeptical organisation,
Toby Howard talks to co-founder Wayne Spencer*



OVER THE LAST twenty years, there has been an explosion of skeptical activity worldwide. Today, at least thirty countries have an organised skeptics group of one kind or another, and in the USA, perhaps as testimony to its reputation as the Nutter's Homeland, more than thirty individual states have their own skeptical organisations.

Here in the UK, in spite of the best of intentions by a number of expert skeptics over the years, organised activity has proceeded in fits and starts. Perhaps it's something to do with being British, but it's proven very hard to get busy people together from around the country and coordinate them to actually do things.

Coming up to date, it's exciting and encouraging to see new faces on the scene, and the emergence of a new group, the Association for Skeptical Enquiry (ASKE), which holds the promise for an upturn in UK organised Skeptical activity. Wayne Spencer, a co-founder of ASKE, agreed to answer a few questions about this latest venture into UK skepticism.

Tell us something about yourself, and your co-founders.

We're quite a diverse group of people. For example, we include a university psychology lecturer, an industrial scientist, a money advice worker, a computer contractor, two engineers, a hospital operating department practitioner, a retired librarian, a safety training officer, a post-graduate physicist, a science graduate currently acting as a homemaker, and a designer of computer hardware and software who works from home because of health problems. I myself am a civil servant.

What motivated you to put ASKE together?

Two main factors have prompted us to act. The first is our desire to see more done to counter the widespread uncritical promotion and acceptance of pseudoscientific and paranormal claims. The second is our dissatisfaction with the disheartening and unproductive isolation in which many skeptics find themselves.

Are you funded externally by anyone – the CIA perhaps?

Initially we will be supported solely by funds provided by our members. We propose, however, to explore the possibility of securing external funding, for example from one or more of the various Public Understanding of Science schemes operated by the Royal Society. If anyone has any ideas or proposals concerning funding, we should very much like to hear from them.

How many members do you have?

We have only recently started distributing membership application forms. Including yourself, some 25 people have so far said they wish to join.

Do you have a committee?

We have a steering committee made up of 5 members: Anne Corden, Mark Gould, Michael Heap, myself, and Tony Youens. This committee will administer the association until our first AGM in around a year's time; thereafter the committee will be elected by the members.

What are your aims and principles?

For the time being we propose to adopt the following aims and principles:

1. ASKE is committed to the application of rational, objective and scientific methods to the investigation and understanding of ideas, claims, and practices, especially those of an extraordinary or paranormal nature.
2. ASKE is committed to challenging the uncritical promotion of beliefs and claims which are unsupported or contradicted by existing objective and scientific knowledge.
3. ASKE opposes the misinterpretation and misrepresentation of science for purposes which deceive the public.
4. ASKE supports the objective evaluation of all medical or psychological techniques offered to the public and opposes the uncritical promotion of techniques which are unsupported or contradicted by existing scientific knowledge.
5. ASKE supports all efforts to promote the public awareness of the rational and scientific understanding of extraordinary and paranormal claims.
6. ASKE is committed to a rational understanding of the reasons and motives which underlie the promotion and acceptance of irrational and paranormal claims and beliefs.
7. ASKE accepts the right of individuals to choose for themselves their beliefs about the world. I should stress, however, that these aims and principles, together with the other aspects of ASKE's constitution, are subject to democratic ratification by its members. This will probably take place at our first AGM.

What do you hope to achieve?

Initially, we hope to foster a greater exchange of information, ideas, comradeship and encouragement between skeptics, which in turn should help to promote new practical initiatives on the part of individuals and groups of individuals. We also hope that in time we can promote a wider public awareness of skeptical points of view and a greater involvement in the skeptical movement on the part of scientists, scholars and others. If all else fails, we hope our efforts will at least lead to a few more friendships amongst skeptics.

How do you propose to bring this about?

One of our first steps will be to compile a directory listing the names, addresses, contact details, interests and expertise of our members. This will be circulated to all members in the hope that it will encourage consultation, advice, discussion, debate, plans for action and idle conversation. We also produce a bi-monthly newsletter, *The Skeptical Intelligencer*. We intend this to serve as a forum for members of all levels of expertise and experience to circulate information, comments and ideas. To encourage contributions, there will generally be no peer-review prior to publication, and editorial intervention will usually be minimal.

Will you hold regular meetings?

As our membership increases, we hope to see local meetings and informal social gatherings arise. We would also like to be able to present regular public talks and workshops on relevant subjects. Here as elsewhere, much will depend on the energy, enthusiasm and ideas of the association's members.

In the meantime, we are trying to arrange for Professor Stanley Jeffers to give a talk on his work on the parapsychological hypothesis that the mind can directly affect subatomic events (Professor Jeffers gave a similar talk at the 1996 World Skeptics Congress). If all goes well, this will take place in London sometime in the last two weeks in June. We also propose to stage a conference on skepticism in about a year's time.

Will you perform tests?

ASKE will not as an organisation express opinions or conduct tests on specific claims and claimants: in such matters members will always speak and act as individuals. However, if the association accumulates sufficient funds, we should like to finance independent research by suitably qualified experimental scientists and others.

What about work with the media?

We will be compiling a list of expert members who are willing to answer media queries on subjects within their areas of expertise. We also propose to do what we can to encourage programme makers to produce more skeptical material.

If nothing else, we should like to explore the possibility of forging mutually beneficial relations with student film-makers in colleges and universities. We hope that the knowledge and experience possessed by our members will prove an enticing and stimulating resource for this group of people.

Are there any specific areas of 'skeptical inquiry' on which you will concentrate? Is there anything off-limits?

Our aims and principles are reasonably broad, and we hope that we can stimulate rational and critical debate on a wide variety of issues. No specific subjects have been ruled out of bounds.

Are you a humanist or anti-religious organisation?

Our aims and principles do not refer to religion and we do not require members to adopt any particular standpoint with regard to it.

What is your relationship with The Skeptic magazine?

Until very recently none of the people who produce *The Skeptic* have involved themselves in the process of creating ASKE. We hope that in future there will be more in the way of communication and mutual support. Certainly we do not wish to do anything that might harm Britain's principal skeptical publication.

Will you work with the established European skeptical groups?

We have made some preliminary enquiries concerning membership of the European Council of Skeptical Organisations, and a decision as to whether to apply for membership will be made shortly. *The Skeptical Intelligencer* also hopes shortly to begin a series of approved and authorised translations of articles originally published in various European skeptical publications.

What is your relationship to CSICOP?

The work of CSICOP has doubtless inspired many of our members. However, to date we have had no discussions with CSICOP and we are entirely independent of it.

What does the future hold for ASKE? Are you thinking big? A CSICOP-style 'Centre for Inquiry' building perhaps?

At present we are concentrating on fairly modest goals. However, as ASKE grows, we shall certainly raise our ambitions. We shall see how it goes.

How does someone go about joining ASKE?

Skeptics interested in joining ASKE can obtain an application form by sending a SAE to our Secretary, Anne Corden, at 15 Ramsden Wood Road, Walsden, Todmorden, Lancs OL14 7UD. Membership costs £10 per year, which includes a subscription to the newsletter.

Are all members expected to be active?

Of course the association needs active members. However, members can regulate their activities entirely as they please. If some members prefer merely to read the newsletter and support the association from afar, we shall certainly not object.

Do you accept anyone as a member?

Potential members must broadly agree with the aims and principles of the association, but beyond this there are few requirements and we hope to attract a broad spectrum of skeptical enquirers. Scientists and non-scientists, academics and non-academics, long-time skeptics and new skeptics, young and old, men and women, British and foreign nationals, we are keen to welcome all these and more.

The steering committee does reserve the right to refuse an application for membership. However, this will only be exercised in extraordinary cases. For example, if you claim to be the channel for a deceased Native American, we may wish to discuss your application with you in some detail.

Wayne Spencer, a civil servant from Todmorden, Lancashire, was interviewed by **Toby Howard**, co-editor of *The Skeptic*.

Jackie and the Aliens

Susan Blackmore

Does experiencing sleep paralysis mean you've really been abducted – or could you have been watching too much television?

THE FAMOUS 1992 Roper Poll claimed that 3.7 million Americans have probably been abducted by aliens. Questions like 'Why Americans?' aside, this is a startling claim, and from a reputable polling organisation too.

I imagine most people think that the pollsters asked thousands of people 'Have you ever been abducted by aliens' and huge numbers said they had. Not so. In fact a representative sample of 5,947 adults was asked eleven questions of which five were 'indicator' questions: if you answered 'yes' to at least four it meant you had probably been abducted. These critical questions concerned sleep paralysis with a sense of presence, missing time, unexplained scars, experiences of flying, and seeing lights.

This strange procedure was decided upon because two of the authors, painter Budd Hopkins and historian David Jacobs, had worked for many years with nearly five hundred abductees and noticed that many of them reported these experiences. The dramatic conclusion of the Roper Poll is reached like this: out of the 5,947 people interviewed, 119 (or 2%) had four or five of the indicators. Since the population represented by the sample is 185 million, the total number of probable abductees is 3.7 million.

To be fair there are reasons not just to ask 'Have you ever been abducted?'. First, people may be unwilling to answer and, second, they may have forgotten their abductions – as the aliens clearly intended them to do. So this question might provide an underestimate. However, the Roper Poll does not solve the problem.

Many scientists have (perhaps sensibly) chosen to ignore the poll and its stunning claim. But given its wide publicity, I wanted to explore a little further.

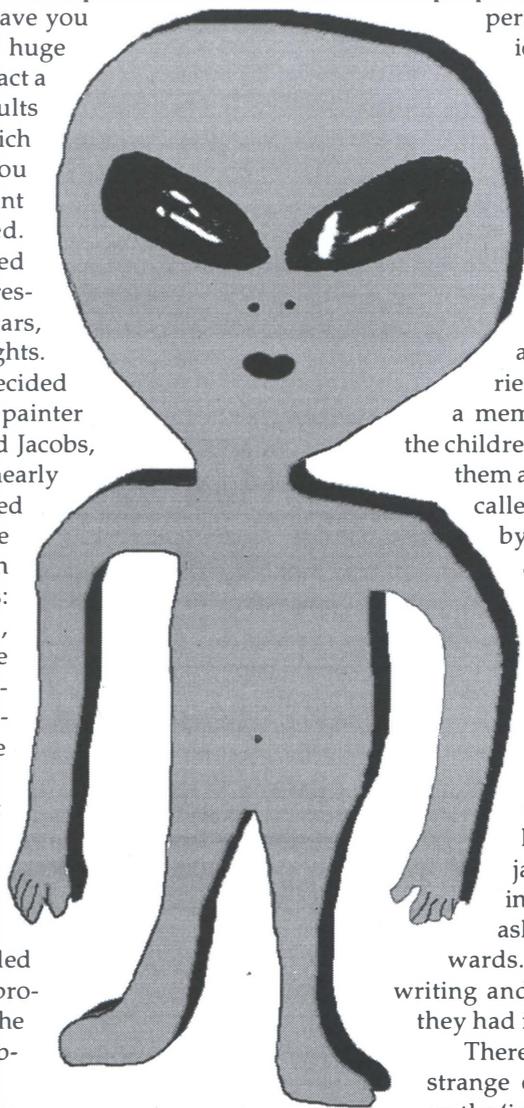
There seem to me to be two main hypotheses. Either the 3.7 million people really have been abducted, or they

have simply had a collection of interesting psychological experiences; most importantly sleep paralysis. Now, real abductees ought to know a lot more about aliens and abduction experiences than ordinary mortals. So this makes a test possible. If the first hypothesis is true then

people who have more of the indicator experiences should know more about aliens and abductions. If it is not true they should not – indeed in this case you might expect knowledge of aliens to be related more to watching 'The X-files' than having the requisite experiences.

I decided to test this using children and adults here in Bristol. In case there is some truth in the claim that many people are abducted and then forget the experience, I used what I hoped would be a memory-enhancing method. I relaxed the children as much as I could and then read them a 'bed-side story'. In the story, a girl called Jackie is visited in bed at night by a strange alien who takes her into a space craft, examines her on a table, and brings her back unharmed to bed. The story includes such features as travelling down a corridor into a room, being laid on a table, seeing alien writing on the wall and catching a glimpse of jars on shelves. I left out many crucial details, such as what the aliens looked like and what was in the jars (half-human/half alien foetuses, in case you don't know) and then asked the children about them afterwards. They also had to draw some alien writing and draw me a picture of the aliens they had imagined.

There were several questions about strange experiences including four based on the 'indicator' questions: 'Have you ever felt as though you left your body and could fly around without it?', 'Have you ever seen unusual lights or balls of light in a room without knowing what was causing them, or where they came from?', 'Have you ever woken up paralysed – that is, with the feeling that you could not



move?' and 'Have you ever woken up with the sense that there was a strange person or presence or something else in the room?'. A further question asked how often they watched TV programmes about aliens and spaceships.

In all I tested 126 school children aged 8-13, in classrooms in their Bristol schools, and 224 first year undergraduates aged 18+, in three large groups. The results were clear. Large numbers of both adults and children reported most of the experiences, in fact rather more than was found in the Roper poll. The percentages are shown in Table 1. These confirm how widespread are experiences such as sleep paralysis and the sense of presence. Having the experiences did not correlate with knowing

	Adults	Kids
Ghosts	14%	33%
OBE	35%	33%
UFOs	8%	28%
False Awaken	83%	57%
Sleep Paralysis	46%	34%
Presence	68%	56%
Lights	17%	28%

Table 1. Percentage answering 'Yes' for each experience

more about abductions. The questions about aliens were scored and the score compared with the number of indicator experiences. There was no correlation in either children ($r_s = -.03$, $n = 101$, $p = .78$) or adults ($r_s = .07$, $n = 213$, $p = .29$). This score was also compared with television watching and here the correlation was significant for adults ($r_s = .20$, $n = 217$, $p = .003$) though not for children; that is, those adults who watched more of the TV programmes got more of the details right.

I collected some wonderful pictures of aliens. Interestingly only 12 (12%) of the children drew the typical 'grey' and 17 (8%) of the adults. The rest included everything from shapeless drooling blobs to mega-complex machines. Drawing a grey was also not related to having the indicator experiences.

Of course these findings can never prove that there are no real abductions taking place. What they do show is that knowledge of the appearance and behaviour of abducting aliens depends more on how much television a person watches than on how many 'indicator experiences' he or she has had. If you ever believed that nearly 4 millions Americans had been abducted by aliens, you might now start having your doubts.

Reference

Hopkins, B., Jacobs, D.M. and Westrum, R. (1992) *Unusual Personal Experiences: An analysis of data from three National surveys conducted by the Roper Organization*. Bigelow Holding Corporation, Nevada.

Susan Blackmore is a psychologist at the University of the West of England

A more detailed report of this study has been submitted for publication in the *Skeptical Inquirer*.

The Skeptic Anniversary Top-Ten Survey of Paranormal Phenomena of the Decade

In reverse order:

10. Most irrelevant use of astrology: Sky Sports hiring Mystic Meg during the semifinals and finals of the 1996 US Open Tennis Championships to tell us about the players what anyone who had been watching the previous day's coverage would have known.

9. Most useful lesson the Duchess of York could learn from Hillary Clinton: make sure your psychic counselors are dead. (Late in 1996, the Duchess's psychic published a confide-and-tell book about their relationship; Hillary Clinton revealed early in the year that she was in the habit of calling up the spirit of Eleanor Roosevelt when she wanted advice.)

8. New British pseudoscience most likely to endure: cereology, the study of crop circles. Admissions by hoaxers have not deflected the UFOlogists, dowsers, healers, and weather cranks from continuing to believe that the universe is trying to tell us something.

7. Most wasted opportunity for psychics to get rich quick: magician and paranormal investigator James Randi's \$1 million prize on offer to anyone who can demonstrate paranormal powers under proper observing conditions.

6. Government programme that has done the most to undermine public understanding of statistics: the National Lottery.

5. Most inventive Creationist explanation of why the Earth appears to be billions of years old, instead of the 6,000 years they believe the Bible states: the speed of light is slowing down.

4. Most unproductive use of the Internet: Uri Geller's \$1 million challenge to Internet users to bend the spoon in the transparent safe in his home. Users logged on to Geller's Web site to watch the spoon via a digital camera. If it bent, they got to do it all over again by telephone and then in person in front of Geller and a representative of his insurance company. Prediction: the primary beneficiaries of this exercise will have been the phone companies and Geller's insurance company.

3. Most unwanted US import: belief in alien abductions.

2. Most unwilling control group: Transcendental Meditation, whose members claim to lower the crime rate in areas where they have established permanent settlements. Although the TMers have been established in Iowa for many years, the safest place to live in America, (according to CNN) is Amherst, New York, home of the Committee for Scientific Investigation of Claims of the Paranormal (CSICOP), the world's largest and oldest skeptical organisation.

1. Resurrection, the proof: the reappearance of belief in angels.

Back in Time

Russell Dear

The story of a rather unorthodox cure



A LONG TIME AGO I had a back problem. Hauling out old fence posts or wrestling young unbroken horses, both necessary activities on our farmlet, were sure to result in excruciating and incapacitating back pain. Unfortunately the farmlet didn't provide enough financial support, so on occasions I attended my regular job teaching in a fragile condition with a distinct lean to the left.

Like many people I searched avidly for the holy grail of back relief. Over the years I had tried a motley collection of cures – from a selection of embrocations and foul-smelling horse liniments to all manner of orthopaedic supports (including the elastic corset my wife had used during her last pregnancy).

None were successful, although the corset did have the advantage of reminding me of what I shouldn't do by clamping me rigid and showing me what I couldn't do. I'd even visited osteopaths, chiropractors and the like, shelling out dollars for the promise of relief.

At that time the vet was a regular visitor seeing to the various racehorses and broodmares on the place. One week he might be dosing for worms, the next gelding a colt, or he might be taking blood samples after a race, or giving iron tonics. He certainly had an impressive armoury with which to get the best out of any horse.

One of his favourite remedies for stimulating or building 'white muscle' – although I've never been sure what that is – was liquid selenium. He swore by it, and not just for horses. Apparently he had been supplying half the local farmers with the stuff to cure their bad backs, and had built up a loyal supporters' club. One afternoon I espied the vet with my wife – the horse trainer at our place – discussing one of the runner's performances. As I limped across the yard to join them I was not surprised to see him break off the conversation, look at me knowingly, and call across, 'Bit of back trouble, Russ, eh?'

'No, no, mmm . . . well, just a twinge, Jim.' I muttered in reply (I've always been one to suffer in silence).

'Some twinge,' he replied disbelievingly. 'You look like one of those windswept pines down by the beach, leaning away from the weather.'

'Yeah, well. It's no bother really. I hardly notice it.' I lied.

'You know what you need, don't you?' He continued. 'Selenium. It's good for white muscle. Put you right in no time at all. I can get you some cheap. As much as you need. Give it a go and see what you think.'

'No, no.' I protested. 'I'm fine thanks Jim. It just needs a bit of rest.' I tried to change the subject.

My wife didn't say a word. She knew how grumpy I could be on the subject of backs, especially when anyone proffered advice. She waited patiently for the intermission to end and the conversation to revert to horses.

'Well, just give me a call if you should change your mind,' Jim offered finally.

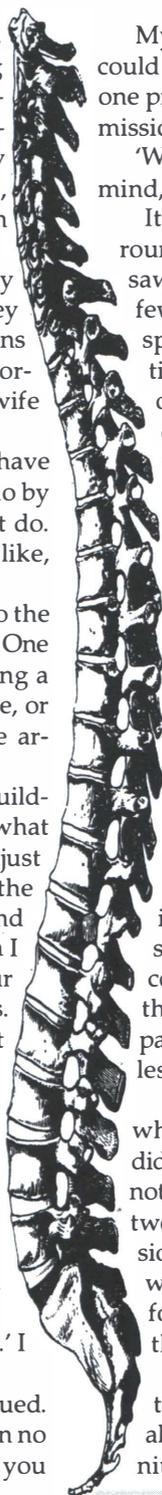
It was a couple of months later that I finally got round to trying selenium. I'd been cutting down and sawing up a couple of old pine trees by hand. After a few days of that I was in real pain, my back muscles in spasm, and walking like a plank with legs. My patience finally gave out. I couldn't face another month or so of hanging on to supports whenever I needed to cough or sneeze. Before work that morning, I limped towards the shed containing veterinary supplies. Searching along the top shelf among the sulphanilamides, bone supplements, and coccidiosis prevention I found the plastic bottle of bright blue liquid labelled 'selenium'. I studied the label, running my finger down the list of recommended doses. I can't remember the details but there were measures for typical ewes, weaner pigs, full-grown sows, adult boars, cattle, ponies, and so on. I judged myself to be the equivalent of an adult boar and swallowed the two or three teaspoonfuls recommended.

Less than an hour later I was in a briefing at work. The boss seemed to be carrying-on more than usual and I wasn't feeling too well. I had this sort of queasy feeling. Finally, the boss concluded his remarks. Feeling worse and conscious of a shrill buzz in my ears I staggered, still askew, out of the staff-room, across the corridor and into the men's toilets. Leaning against the wall over the urinals I retched continuously and painfully for what seemed hours but was probably less than a minute.

To cut what is becoming a long story short, the whip-crack set up in my back by the retching really did for me. If I had had back pain before it was nothing to what I experienced then. I spent the next two weeks flat on my back under medical supervision, on painkillers, and desperately hoping no-one would ask me how it happened. The pain continued for three months, tapering to discomfort by the end of that time.

The good news is that the event finally convinced me that common sense is the only way to go with backs, although my wife occasionally insists that it was the selenium that cured me – one way or another.

Russell Dear is a retired teacher and writer living in Invercargill, New Zealand.



Psychoanalysis: Fact or Fiction?

In this prize-winning student essay, Susan Crawley examines the continuing impact of Freud's theories on modern psychological thought

TO MOST PEOPLE, psychoanalysis and its creator, Sigmund Freud, are synonymous with psychology [1]. Yet Freud was by profession a neurologist, and psychoanalysis stemmed from his attempts to explain hysteria, a condition characterised by physical symptoms which make no neurological sense. Using his observations of clients and his own self-analysis as a basis, Freud went on to develop a comprehensive theory of human functioning encompassing the structure of the mind and personality, the stages of development and explanations of psychopathology, together with a therapeutic intervention.

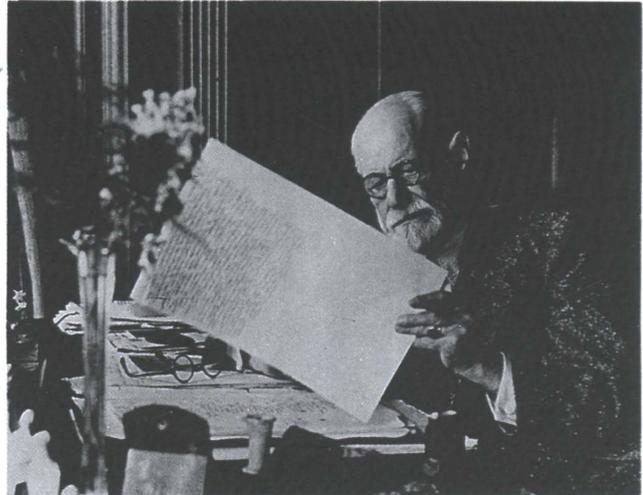
While many of Freud's ideas have entered literature and the arts, as well as everyday language (phallic symbols, Freudian slips and so on), within the realms of academic psychology Freud has been the subject of much criticism, chiefly on the grounds that his theories are unscientific. Similarly, psychoanalysis has been claimed to be an ineffective treatment.

Psychoanalytic theory has been modified and revised by others, most notably Jung, Adler and Melanie Klein, but this article will examine what is wrong with psychoanalysis as it was originally conceived by Freud, since this has attracted the most criticism. Psychoanalysis will be taken to mean Freudian theory as a whole and therapy. I'll begin with a brief overview of the key concepts of psychoanalytic theory.

One of Freud's major assumptions, psychic determinism, was that all behaviour has a cause (is 'determined') and that cause is to be found in the mind, or psyche. Before Freud it had been assumed that human behaviour resulted from rational choice, but Freud proposed that much of our mental lives is unconscious and the reasons we give for our behaviour are merely rationalisations or justifications, because the real reasons are hidden from us.

Freud spoke of three levels of consciousness: the *conscious mind* (those thoughts and feelings of which we are aware), the *preconscious mind* (material which can be accessed by conscious choice) and the *unconscious mind* (which cannot be directly accessed by the conscious mind). Freud did not 'discover' the unconscious – references had been made to it by Shakespeare and German philosophers – but he was the first to see it as a dynamic force.

To Freud the unconscious is a repository for painful memories and conflicts which unknowingly remain there to exert an influence over behaviour and to cause psychopathology. The idea of conflict is a key element of



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psychoanalysis. It also appears in Freud's postulated 'tripartite structure' of personality. Here the ego attempts to mediate between the competing instinctual desires of the id for immediate gratification, and moral constraints imposed by the superego and society. Instincts (more correctly translated as 'drives') are another key concept which appear in Freud's 'psychosexual stage' theory of development.

Freud argued that throughout our lives we are motivated to satisfy our basic drives, and in particular libido (sexual or life energy). The stages represent changes in the expression of libido coupled with changes in the mind – thus the term 'psychosexual' stages. Each stage produces related conflicts which if unresolved cause problems later in life. Although Freud outlined five stages covering the life-span, he placed greatest emphases on the first three stages occurring in childhood: oral, anal phallic (famous for its Oedipal conflicts). Childhood experiences are seen to affect adult behaviour, especially those painful experiences which have gone unresolved and lie buried in the unconscious mind. Unlike Piaget, who produced a stage model of development from detailed observations of children, Freud did not work with children. The one exception appears to be 'Little Hans', but even this well-known case was examined via correspondence with the child's father.

Freud produced his theory over many years, continuing to revise it in the light of his own observations rather than in the light of scientific developments or valid criticisms from colleagues, both fundamental scientific practices. Although Freud was at his best defending his theories [2] he did not welcome criticism and broke with former colleagues, most notably Jung and Adler, as a result. William James (cited in [3]) wrote in a letter that Freud 'made on me personally the impression of a man obsessed by fixed ideas'.

Dissent from colleagues or patients was labelled 'denial' (an ego defence mechanism) and this was in turn

taken as evidence for his ideas, which were seen to be too painful to be accepted and therefore denied.

Psychoanalysis also contravenes other accepted scientific principles. Science is traditionally concerned with both the explanation and the prediction of observed events. Freudian theory, which has been described as little more than a narrative, is better at explaining things retrospectively rather than predicting events, which makes it very difficult to test. To give one example of this, 'reaction formation' – a defence mechanism whereby someone consciously thinks or feels the opposite of what he or she truly thinks or feels – means that either alternative can be explained and neither predicted.

Freud thought of himself as a scientist and had trained in experimental science during the time he spent working in Brucke's physiological laboratory, but he dispensed with the need for empirical methods with regard to psychoanalysis. His theories were based on a bias sample (neurotic middle-class Viennese women) and he wrote up his case notes later, possibly selectively. He did not use his observations to generate testable hypotheses and rejected quantifications and statistical analysis. Indeed, in a reply to Rosenzweig (cited in [4]) who had written to Freud of his attempts to study repression experimentally, Freud wrote:

I cannot put much value on these confirmations because the wealth of reliable observations on which these observations rest make them independent of experimental verification . . . still it can do no harm.

One key factor which is often used to delineate science from non-science or pseudoscience, is Popper's 'falsification criterion' (cited in [5]). Popper argued that while a theory cannot be proved to be *true* – it might be disproved by events of tomorrow – it can be shown to be *false* by a single observation. Now it is the accepted practice to express scientific hypotheses in such a way that they can be tested and in principle refuted.

Much psychoanalytic theory is vague, with many interrelated concepts, and thus difficult to test. In addition, Freud constantly revised his theories, without always refuting what he had said earlier. Thus they appear to lack internal consistency. The theories also contain non-obvious connections. An example of this is that to Freud behaviour is determined, never random, so that (for example) people go into banking as a profession because they are anally fixated. To follow the logic behind this assertion requires a number of leaps of inference: people derived pleasure from the retention of faeces during the early anal stage; they may become fixated at this stage if conflicts arise; they become parsimonious later in life and will derive pleasure from saving money and so choose to work in a bank.

Another shortcoming is that the evidence used to support a theory is often dependent on the theory in a circular fashion [2]. For example, evidence for the symbolic meaning of dreams comes from accepting that dreams have a hidden or latent content, and evidence for this in turn comes from the symbolic meaning of dreams.

Freud too made use of metaphors drawn from Greek myths (Eros, Thanatos, Oedipus) to express his ideas. While he is not alone in his use of metaphors – cognitive

psychology currently uses a computer metaphor – Freud's were rather more simplistic. Perhaps too, for twentieth century readers who perhaps see Greek myths as good stories but untrue, his choice of metaphors strains the credibility of the theories.

Eysenck, a strong critic [4] of psychoanalysis, suggests that Freud was protecting his theory by phrasing it in such a way that made it difficult to test. He goes on to say that while this lack of empirical support does not prove the theory to be wrong, it casts serious doubts on its value. Kline [6] agrees that on balance Eysenck's arguments that psychoanalysis is unscientific are sound, but he does not feel this is sufficient grounds to reject the whole idea. Rather, Kline suggests, the theory should be broken down and restated in a testable, refutable form.

Unfortunately many such attempts have failed to provide empirical support, while others have succeeded either by overlooking simpler explanations – Hall's evidence for the Oedipus complex in dreams, (cited in [6]), or by invoking the concept of reaction formation to reverse non-supportive findings. An example of the latter was by Kline himself. Scodel (cited in [6]) had attempted to demonstrate that dependent, orally fixated men would prefer women with large breasts, but Scodel found them to prefer small breasts. This – according to Kline [6] – in fact supported the theory, since an unconscious presence for large breasts would (due to reaction formation) be expressed as a preference for small. Thus either choice can be used to support the theory, while the theory cannot predict which will be chosen. In both respects this is not unscientific.

A major concept in psychoanalysis is repression. Although Freud used the term to mean slightly different things at different times, it is most generally understood to represent the process by which painful or disturbing thoughts, memories or impulses are forced into the unconscious mind from where they continue to exert an influence over behaviour, although the person is unaware of their presence. Repression is seen to be an unconscious process, unlike suppression whereby material is consciously put out of mind.

The reality of such repressed memories is the focus of the current ongoing debate over reports of recovered memories of child sexual abuse. It is clearly important that existence of repression is verified or refuted, but this has proven to be very difficult, and supportive evidence is anecdotal rather than experimental. Researchers, for example [7], have demonstrated that it is possible to implant false memories of non-existent events, but it would be totally unethical to attempt to implant traumatic memories of the type thought to produce repression. However on the basis of clinical case studies, many psychologists are prepared to accept that traumatic memories can be forgotten though not necessarily by the mechanism Freud proposed [7, 8].

Repression figures largely in Freud's theories of psychopathology, and his psychoanalytic interventions. After a period spent working with Charcot, Freud came to believe that hysterical symptoms were manifestations of repressed unconscious conflicts and that relief could be brought by recall of this unconscious material. In order to access this material, Freud used free association and the interpretation of parapraxes (Freudian slips), resist-

ance and dreams, which Freud called 'the royal road to the unconscious'. Unfortunately, interpretations of this kind are clearly subject to selective interpretation and are inherently unfalsifiable. Studies have shown that dreams are influenced by the day's activities and current anxieties, but in a fairly direct, straightforward way (Hobson & McCarley 1977, cited in [1]). Also rather than being disguised wish-fulfilment as Freud proposed, dreams are often a direct expression of wishes [6].

Freud also believed that the repression of infantile sexual desires lay behind 'childhood amnesia', the inability to remember the first years of life. This is now a recognised phenomenon, and Freud deserves credit for being the first to document it. However it is now believed to be better explained by the immaturity of those areas of the brain involved in memory processes, together with a lack of language to encode memories.

Freud noted that many of his neurotic female clients reported that they had been sexually abused as children and he came to believe that child sexual abuse might underlie neurosis. The public outcry this caused eventually encouraged Freud to abandon his theory of incestuous seduction. Instead he proposed that children are ill-equipped to deal with Oedipal feelings and sexual urges and so invent gratification. The unfortunate consequence of this about-turn was that when incidents of abuse were subsequently disclosed they tended to be relegated to the realms of fantasy. It was only in the 1960s and 1970s when it became clear that child sexual abuse is indeed widespread that people began to question whether Freud was right in the first place and had been wrong to change his mind, perhaps to save his own neck.

However, while it is true that childhood abuse can lead to psychopathology, this is by no means the only cause, and it is wrong for therapists to pressure clients into remembering instances of abuse or to take denial as evidence, something of which Freud himself was guilty. In his notebooks Freud described how he dealt with those patients who were unwilling to confront traumatic memories (Freud, cited in [9]):

We must not believe what they say . . . We must repeat the pressure and represent ourselves as infallible, till at last we are really told something.

The distress his clients experienced when memories were recovered, and their denials, convinced Freud that these were real, yet later Freud himself came to conclude that they were fantasies. There is a lack of research to show whether the recovery of memories does bring relief in the way Freud proposed. In a critique of psychoanalysis Grunbaum (cited in [3]) argues that neither Freud nor any of his successors has ever proved a cause-effect link between either a repressed memory and later neurosis, nor between a retrieved memory and subsequent cure. According to Grunbaum, this lack of causal relationships makes the foundations of psychoanalysis 'very wobbly'. It also raises the question as to whether psychoanalysis is an effective treatment.

Freud himself opposed the idea of clinical trials with control groups [6], and Eysenck [4] claimed this set back the study of psychology and psychiatry by some fifty years, since they failed to develop earlier into proper scientific disciplines. Reviews of the literature by Eysenck

(1952) and Rachman (1971), both cited by Hines [1], failed to show that psychoanalysis is superior to placebo therapy. Eysenck found a 44% recovery rate with psychoanalysis compared to 66% for no treatment at all, which led him to conclude psychoanalysis does not work. It achieves nothing that would not happen spontaneously. However Eysenck did include those patients who had dropped out of therapy. It is perhaps worth considering that, while they may be correct, both Eysenck and Rachman come from a behavioural background and may not be totally unbiased. Bergin (1971, cited in [5]) reviewed Eysenck's evidence, and concluded that if different criteria were used for 'improvement' the success rate rose to 83%. However in a meta-analysis of outcome studies (Smith & Glass 1977, cited in [5]) both behavioural and cognitive therapies were shown to be more effective than psychoanalysis. In addition psychoanalysis is a prolonged expensive procedure, which according to Eysenck is best suited to young, attractive, verbal, intelligent and successful persons (the YAVIS effect) who tend to have a favourable prognosis. More difficult cases, Eysenck reports, tend to be excluded from therapy by psychoanalysts.

In conclusion, Freud broke new ground in his attempts to give a complete picture of human functioning but in doing so he dispensed with the need for empirical support, and as a consequence psychoanalysis has often been justifiably criticised on the grounds that it is unscientific. Much of the theory is non-falsifiable or difficult to test, and without these standard procedures the theory is difficult to evaluate. The lack of experimental evidence does not make it necessarily wrong, but casts doubt over its value.

Almost certainly in the psychology of today, psychoanalysis would not have achieved the position that it did without empirical support. This has to be seen as the chief factor in what is wrong with psychoanalysis.

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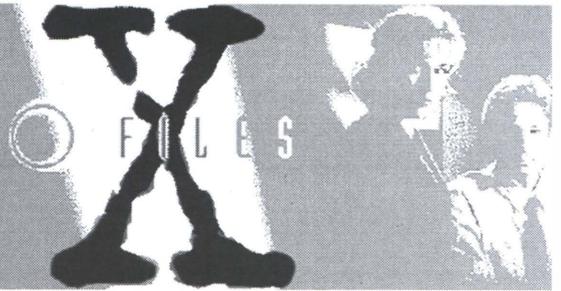
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Susan Crawley is a final year undergraduate student at Goldsmiths College, University of London. This article is based on the winning essay in a competition open to students taking the final-year option course in 'Psychology, Parapsychology and Pseudoscience' run by Dr Chris French.

X-Files for Skeptics

THE X-FILES

Arthur Chappell



WITH THE POSSIBLE EXCEPTION of *Tractor Parts Monthly*, it is difficult to find a magazine or newspaper that isn't swept up in the *X-Files* phenomenon. While much of the hype concerns the sex-symbol status of the programme's stars Gillian Anderson and David Duchovney, there is a growing trend in questionable reports tying the *X-Files* to actual supposed occult/supernatural events. Programmes like *Strange But True?* fully deserve to be trashed for their credulous one-sided non-skeptical presentation, but the *X-Files* is not working to promote the same agenda. Far from it.

The *X-Files* is first and foremost a fictional programme, in the tradition of *Doomwatch* and *The Invaders*. It concerns a small team of FBI agents investigating unsolved, and unexplained cases involving possible paranormal/supernatural activity. The team comprises of Agent Fox (Spooky) Muldar (Duchovney) who is keen to see mysteries in even conventional cases, and Agent Scully (Anderson) a very skeptical medic, who is there primarily to stop Muldar going off the rails too often. The programme does have some pro-occult pretensions, but these are mere plot devices. We see vampires, ghosts and UFOs once in a while, but the programme is just as likely to be cynical. In the episode called 'Quagmire', a Nessie-like lake-dwelling monster called Big Blue is the chief suspect in a series of brutal killings. The culprit turns out to be an ordinary alligator. Big Blue is only seen in the distance as the disappointed investigators drive off and the credits roll, completely missing the phenomena they've dreamed of.

Neither of the stars of the show believe in the occult in real life, as they confirm in recent *Starburst* magazine interviews. Gillian Anderson even admits that she has been briefed not to laugh or smile if she can avoid it, while in character. The programme aims quite simply to push its most ludicrous storylines towards us with a straight, deadpan humour. It takes established occult stories and drives them to the point of absurdity. In *Fearful Symmetry*, the standard cliched reports of alien UFO abduction are given a unique twist. The abductees are pregnant zoo animals, including an elephant.

The *X-Files* production team have of late tried to broaden the appeal of their show, and to shake loose of the pro-occult lobby which tries hard to get them to peddle its own new age philosophy. The stories written by Darin Morgan for the third season have been particularly criticised for the open levity they give to the show. The definitive *X-File* for skeptics has to be Morgan's 'Jose Chung's From Outer Space'. Questioned by researcher, Chung, on their role in a celebrated UFO case, the various witnesses give him totally contrary accounts. One even remembers seeing the ET smoking a cigarette. The *X-Files*

investigators prove little more co-operative. Muldar wants to stop him writing a skeptical book altogether, and Chung dismisses him as a lunatic. Scully seems confused on various essential details. It transpires that the abductees were being set up for a hoax by government officials working to a covert plan, but were then captured by real aliens or a separate group of hoaxers along with the people conspiring against them. The various witnesses are then badgered by sinister, enigmatic men in black, who may be from the government or from another world, (men in black are a popular UFO myth). The sinister men in black insist that the witnesses start to believe that they only ever saw the planet Venus and not a UFO. Enter a man who deeply wants to be kidnapped by aliens, and regrets missing the potential abduction that has occurred. When he sees the *X-Files* team, he actually believes that they are men in Black, and argues that Scully is a man in black trying unconvincingly to dress up as a woman (a delightful joke at the expense of Gillian Anderson's sex-appeal).

The *X-Files* carries a note of scorn that is quite healthy. The producers almost gave the part of the leading Man in Black to the country singer, Johnny Cash (it has been his nickname for years), but they chickened out at the last minute. With such obvious humour, can anyone seriously take the *X-Files* as pro-occult propaganda? The *X-Files* is science fiction hokum at its best. It asks what kind of world this would be if every old wives-tale, urban myth and phantom hitchhiker legend was true. This simple premise is taken to its extreme limits.

There is a wider issue at stake here. If we dismissed all creative talk in fictional literature and film of occultism, we would have no *Dracula*, *Frankenstein* or Hans Christian Anderson. It is fun to imagine the absurd. The *X-Files* turns reality inside out in the same way that Lewis Carroll did. They take oft-told genre stories and stand them on their heads. In 'Squeeze', the classic whodunnit detective story cliché is explored. The murder victim is found alone in a room which is locked from the inside. Many detective story writers have come up with elaborate escape plans for the villain, and why not? After all, he couldn't just crawl through the letter box could he? In *Squeeze*, the contortionist liquid rubber-boned villain Eugene Tooms crawls in through just such inaccessible spaces. Just for once, can't we have a programme that lets us play with such delightfully gruesome impossibilities? Let's leave the *X-Files* alone and stick to criticising real claims about the paranormal.

Arthur Chappell is a writer and Secretary of Greater Manchester Humanists.



Psychic Diary

Toby Howard

A tangled web of Independent Thinkers

ARCHIMEDES PLUTONIUM washes dishes at Dartmouth College, New Hampshire, USA, and has an intriguing, and highly original theory about the universe, which he calls 231 Plutonium Atom Totality:

Look in a quantum physics textbook or a chemistry textbook for pictures of what an electron looks like. An electron is many white dots surrounding a nucleus. This is commonly called the 'Electron Cloud'. Now, look at the night sky and replace those shining galaxies with the white dots of an electron cloud. And there you have the Atom Universe theory in a picture.

It is rather hard to summarise Mr Plutonium's ideas: he appears to believe that the whole universe is a single Plutonium atom; and that a single atom of Plutonium also exists at the centre of his brain. Presumably based on the principle that the more it explains the better the theory is, the Atom Universe explains, among about 200 other things, the following [all sic]:

- the cosmic abundance of chemical elements.
- the inverse fine-structure variable of 137 proton to electron mass ratio.
- uniform cosmic blackbody 2.71 K microwave background radiation.
- disproves Bio-evolution and replaces it with Superdeterminism-Progression.
- states that General Relativity is a fake theory, an algorithm at best.
- shows that the theory of Biological Evolution from Darwin onwards is a sham, an algorithm at best.

In short, Mr Plutonium says, the theory 'Unifies all the sciences and maths and everything else'. He is surely onto something. Also note that the theory reveals 'an optimum strategy for chess'. Garry Kasparov and some IBM programmers might be interested in that.

Called 'the definitive mad scientist' by US fringe-watcher Donna Kossy, Mr Plutonium is in a field of his own. Eager to report his theories correctly, I had hoped to interview him for this article, but sadly all my emails to him went unanswered. But perhaps this is understandable. As he says on his Web page:

My Emailbox is the least important to me, due to pranks, emailbombing, salespitches, and forged subscription lists I have had to come to a stark modus operandi. I usually trashcan-unopened much of my email. I find trashcan-unopened as the only

manageable solution to unwanted email for it takes a fraction of a second of my time whereas the best of filters take minutes. The mailbox not only can waste your valuable time but can set you in a bad mood where your mind dwells on the email whereas that time should be spent on something constructive. Thus, trashcan-unopened is my answer to email in large part.

If he can be 'Archimedes Plutonium', maybe I could be 'Trashcan Unopened'. It has a certain ring.

Mr Plutonium is one of many people whose views might, to many of us at least, appear a little strange. These are the 'Independent Thinkers', as Patrick Moore so courteously refers to them in his classic book *Can You Speak Venusian?*. The Internet and the Web have given Independent Thinkers an unprecedented opportunity to disseminate their views. No longer hampered by the costs of publishing and distributing their pamphlets, Independent Thinkers can reach the on-line masses for the very modest outlay required to hook up with an Internet Service Provider to host their Web pages. And, unconstrained by paper and printing costs, they can write the billions of words needed to do their theories justice. The Web pages describing Mr Plutonium's ideas, for example, run into the hundreds.

To keep track of Independent Thinkers on the Web would be a full time job, should you be so inclined, and I was delighted recently to discover a subscription service which brings summaries of the World Weird Web straight to your mailbox. Realising the political incorrectness of the term 'crackpot', the service instead brings you news of 'psychoceramics'.

Although Independent Thinkers may forever be denied access to the laboratories of mainstream science, it doesn't bother them that much. As Mr Plutonium puts it:

I will insure that I will never be belittled with the title of Ph.D., the title of Professor of Physics, when I am already the King of Physics, and all of Science. For I was ordained by the Atom to knight those persons who are physicists, or engineers, etc, like myself.

You tell them, Mr Plutonium.

Toby Howard is a lecturer at the University of Manchester, and a freelance writer.

You can explore Mr Plutonium's insights starting from his page www.dartmouth.edu/~atom/, and join the psychoceramics list at psychoceramics-request@zikzak.zikzak.net. Unwired readers might like to check out Donna Kossy's book *Kooks* (ISBN 0-922915-19-9), an amazing compendium of psychoceramic jiggery-pokery.

Skeptic at Large

Wendy Grossman



Looking forward and looking back

WE HAVE MADE IT into our second decade. Savour that sentence, folks, as keeping a small-press magazine going for that long is no small achievement, and represents an enormous and sustained effort by Toby and Steve for the last eight years. While you're writing them those congratulatory birthday cards, you might also spare a thought for HAL, the computer in 2001, who celebrated his birthday on January 12, 1997, and celebrated it by appearing on the cover of *Wired*. It seemed so far away in 1971, when I saw the movie for the first time in Statler Auditorium at Cornell University.

Sadly, 1996 ended with the announcement of the death of Cornell's own Carl Sagan, who I narrowly missed having as a professor during my student years there (his astronomy class met at 9:05am three days a week, and my lifelong difficulty with getting up early what you might call intervened). So 1996 wasn't a very good year for skeptics: we lost Isaac Asimov, too.

Sagan's death and the release of his new book, *The Demon-Haunted World*, reminded me that I haven't read many of Sagan's books since the couple I read in the mid 1980s. It seemed a shame, I thought idly while looking the book over, that he shouldn't have had the benefit of the royalties from my buying them while he was still alive – a narrow view, but one that reflects the fact that I only ever met him once, very briefly, on the streets of Ithaca in front of Mayers, the local newsstand and smoke shop. And then it occurred to me that appreciating people is a much nicer thing to do while they're around to enjoy it.

So, this is for Martin Gardner. I have many times dated my involvement with skeptical matters to a lecture/demonstration I saw James Randi do in January, 1982; he blew me away because he had techniques for testing beliefs that had always seemed doubtful propositions but which I had never before had any way of refuting. But it was not Randi who made me interested in CSICOP. For me that was Martin Gardner (although I was also impressed that Isaac Asimov and Sagan were Founding Fellows).

Gardner was a great hero of my 9th and 10th grade math teacher, Nancy Rosenberg, who was not your standard-issue purveyor of geometry and trigonometry. She was entertaining, original, and a little wacky: I well remember the morning she came in falling over herself with laughter over the book she'd been reading the night before and, swearing us all to secrecy, read us the first chapter of *Portnoy's Complaint* so we could appreciate

what she'd found so hilarious. This is, for anyone who doesn't remember the book, the chapter on mothers and masturbation. In her mathematical moments, she had ideas for a series of animated films to illustrate principles of geometry, and gave me the lifelong habit of using the Greek character θ (theta) to stand for Thursday.

My first year in her class, she had us set up a small Christmas tree and decorate it with flexagons and paper polyhedra (mine, I remember, was an icosahedron). The directions for making the flexagons, small paper constructs you make out of strips of paper divided into triangles and fold into flat, compact hexagonal shapes, came from one of Gardner's *Scientific American* columns. If you colored them correctly and pasted down the ends of the strips, you could flex them so that differently colored faces emerged. As some faces came up more frequently than others, it was a challenge to work out the pattern of flexing that would bring up the rarer ones. This was, by the way, long before the Rubik cube had everybody fiddling with colored things.

She taught us another game: Nim. This was a simple affair in which players could design their own boards of matches or marks on paper, and according to some simple rules remove or cross these out. The one forced to take the last ones loses. My father and I used to play Nim on paper place mats in restaurants while we were waiting to be served.

I remember reading several of Gardner's books of mathematical puzzles and diversions after that, but knew nothing about his career as a critic of the paranormal until after the 1982 Randi lecture, when the friend I attended it with handed me a copy of *Science: Good, Bad, and Bogus*, and said that CSICOP had sent it to him for background reading. I seem to recall he made me give it back, but a copy is on my bookshelf, along with several of the games books, *Fads and Fallacies in the Name of Science*, and a few others, along with Douglas Hofstadter's books, which credit Gardner as an inspiring influence. My mathematical education was, I'm sure, an important reason why I was able to read and enjoy *Gödel, Escher, Bach*.

I'm sure that Gardner has influenced far more people than I will ever know about, though I can include easily every math professor I knew at Cornell, most skeptics, and half my Net friends in Britain. So, from all of us: thank you.

Wendy Grossman is the founder of *The Skeptic*, and a writer and folksinger.

Reviews



Myths and mysteries

Jenny Randles, *The Paranormal Source Book* (Piatkus, £14.99)

Jenny Randles needs no introduction to followers of the paranormal. Each chapter ends with a recommendation of further reading, and Ms Randles recommends no fewer than sixteen of her own publications in the book.

Each chapter of the book takes a single subject and attempts to cover it in detail. Subjects are tackled in alphabetical order and range from alien abductions to ball lightning, from precognition to life after death. Each section contains a definition, a historical review, advice on what to do when one experiences the phenomenon, how to research the phenomenon, recent occurrences and a list of sources.

The book purports to 'steer a path between the myths and the mysteries'. Unfortunately, the steering seems to be somewhat biased, and, to this reviewer's mind, tends to concentrate rather more on the myths. There's a lot of tired old stuff here. We have the Roper poll dragged out to show that '... several million (alien) abductees may exist ...', We have quantum physics represented as paranormal, and, of course, the 'mystery' of Roswell. Among those quoted are Erich Von Däniken, George Adamski, and David Icke, though, to be fair, Carl Sagan, Sue Blackmore and Hilary Evans also get a look in.

Despite finding nothing in this book that in any way changed my view of the paranormal, this could be a genuinely useful volume. It contains a good deal of background information, and names many individuals and organisations who have contributed, in one way or another, to the sum of knowledge about the subjects in question.

I, for one, will keep it on my bookshelf as a valuable source of information about publications, societies and sources, as well as further reading. But I shall also ensure that volumes such as Randi's *Flim Flam* and Mike Hutchinson and Simon Hoggart's *Bizarre Beliefs* are close by.

— Mike Walsh

The magic of science

Anthony Aveni, *Behind the Crystal Ball* (Newleaf, £20)

If a member of the Azande people puts a stone in the fork of a tree to keep the sun in the sky or rubs an area infected with ringworm with chicken faeces, what is he or she doing? Trying to directly control external events or simply alter internal states, to express a wish or create a particular frame of mind?

This and other questions about the theory and practice of magic are the subject of Anthony Aveni's book which, if not quite the 'Complete and stupendous exploration of magic and the occult' claimed on the cover, is often thoughtful and informative. Is it also successful in its declared aim of demonstrating that science and magic once existed comfortably side by side, parted company but may be about to tie the knot again? Well no, it is not. Science has displaced magic not merely because of the power it gives us to predict and control events but because the scientific method allows us to continually update and refine our knowledge of the world. Magic, as this book makes painfully clear, remains frozen and static, its practitioners forever rummaging around in the past for 'new' knowledge.

An inhabitant of 14th century Europe or the Roman Empire suddenly transported forward to the present day would find the current fashion for crystals, channelling, geomancy and divining quite familiar; a physicist or biologist from only a century ago would find much to marvel at. Of course, the historical and cultural significance of magical thinking are interesting topics in their own right, as *Behind the Crystal Ball* ably demonstrates. What it does not demonstrate is that magic tells us anything worth knowing about the world now or that we should regret its relegation to 'the darker side of history'. Having said that, this would make a useful reference work and has a wide ranging bibliography.

— Mike Hutton

Dumb numbers

John King, *The Modern Numerology: A Practical Guide to the Meaning and Influence of Numbers* (Blandford, £8.99)

The author of this bizarre book appears to neither know nor care what level he's writing on.

His topic encompasses light mathematics, arcane history, and metaphysical claptrap, and he leaps from one to another like a scalded wallaby, leaving you breathless with non-sequiturs. Here's a random example:

It is unusual to have [the number] 1 as a dominant life number. 1 is like the "Go" in Monopoly: the player collects £200 for passing it, but its real purpose is to lead into the game proper. 11 is a prime number, the two digits of which yield 2 when added . . . Esoterically, 1 is visualised as a great White Flame, as a stone from which living seed miraculously springs . . .

The book starts with the history of number – the introduction of the concept of 0 by the Arabs, the Pythagoreans'

struggle with square roots, and so forth. Thence to light mathematics.

He has surely had his work checked by a real mathematician, for although he never writes anything actually incorrect, he teeters so close to the edge that his naivety is both painful and funny:

'The largest number is, of course, infinity.'

'Although it is not obvious, the number of possible bridge deals (2,235,197,406,895,366,368,301,560,000) is actually related to *e*.'

and my personal favourite:

'pi has been calculated to about 16 million decimal places *and there is no sign of the number ever ending*' [my italics].

Two pages on the mathematics of pi are followed by the observation that the number 153 is also important because it is the number of fish which St Peter caught in the Sea of Galilee.

Despite the author's deprecation of 'vague astrological descriptions, plagiarised and adapted to numerology' the last few chapters amount to just this.

The letters *Margaret Thatcher*, we learn, recalculated according to King's system, amount to 691 – a prime, signifying strength of character and leadership. *John Major* amounts to 463, 'which may be a lesser prime, but is still a prime nonetheless'. *Bill Clinton*, with the prime 311 as his total, easily outclasses *Ronald Reagan* '(615 = 3 x 5 x 41)' and so on, and so on.

'Some day', King suggests 'I shall persuade some distinguished university to give me a grant to conduct a study correlating people's ideas of their lucky numbers with the numbers generated by gematria interpretation of their names'.

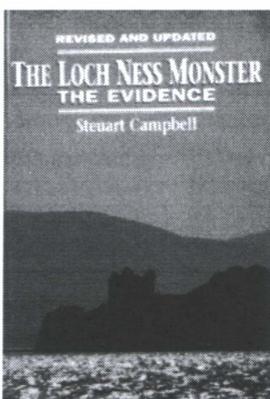
I doubt it.

— Martin S Taylor

Desperately seeking Nessie

Stewart Campbell, *The Loch Ness Monster: The Evidence* (Birlinn, £6.99)

As a child in the early 1950s, I had no doubts that the Loch Ness Monster was a myth. Any five-year-old with a modicum of nous knew that the only place one was likely to encounter the giant beast was in the pages of the *Beano* and similar periodicals.



Then, around about the early 1960s, attitudes to the creature began to change. Sightings were suddenly taken seriously. Expeditions were sent to the Loch with expensive equipment to try and find the beast. Naturalists postulated as to what kind of creature it might be, and even the great Sir Peter Scott argued for its existence. I began to read of eyewitness accounts from apparently sane and sober adults and to see photos published in

the press. Perhaps I'd been wrong to scoff. After all, with all that evidence, how could I deny the possibility of the monster's existence?

Well, this book (updated in 1996) is specifically concerned with evidence. In particular Campbell examines the physical evidence in the form of photographs, film, video and sonar. Some reference is also made to eyewitness accounts but the author affords these little significance as conclusive scientific evidence. On reading the book, the reader is immediately struck by the paucity of available pictures and sonar traces of the creature. Campbell lists twenty-one above-water still photographs, twenty-six pieces of film, one video, nineteen sonar contacts and five underwater photographs. And all this in over sixty years of searching. On balance, as he points out, this is an astonishingly low figure, given the number of full-time Nessie watchers around the Loch, not to mention the hordes of tourists visiting the area every year, a disproportionately high number of whom will be carrying some form of camera equipment.

Campbell supplies lists of the photos, films etc, then discusses them in some detail. He also includes useful information concerning the way photographs can be interpreted and explains the different types of sonar array, and what they are capable of detecting. Unfortunately he is selective in which cases he discusses, and gives no explanation for his omissions. This, to my mind, somewhat weakens his arguments. A single line explaining the reason for each case not discussed would have sufficed. That having been said, his arguments are cogent and persuasive, and by the end of the book, none of the evidence considered has been shown to conclusively prove the existence of the creature, or even to suggest that further investigation is warranted.

Campbell also devotes a chapter to other lakes supposedly inhabited by monsters in various parts of the world. This is a somewhat superficial examination, however, and in no way justifies one of his conclusions that 'If N(essie) does not exist, there are no monsters in any lake in the world' (page 116).

Despite these faults, this is a useful book for anyone interested in the Nessie phenomenon. However, it is by no means as well-structured and argued as Ronald Binns' excellent *The Loch Ness Mystery Solved* (Prometheus).

— Mike Walsh

Science without sense

James S Perlman, *Science Without Limits: Toward a Theory of Interaction Between Nature and Knowledge* (Prometheus, £25.50)

This book's aim is to examine the 'role of the scientist in the process of understanding the world'. The history of science is recounted in nine stages, with many more chapters of theory and opinion. In my view, the book is badly focused, incoherent and badly written. I grudged the time I spent reading it, and cannot recommend that it be bought.

One problem is that Perlman's concept of 'science without limits' is far too narrow. All of his examples come from astronomy and physics. Beyond the odd mention, one would hardly guess that other sciences exist. He also neglects many aspects of the role of the scientist,

such as ethical, political, industrial and military considerations. On these two grounds alone the book would be unsatisfactory, but there is more.

The book is mostly ill-written, with a style that often seems to lapse into badly explained lists. Sentences – and sometimes whole paragraphs – make little sense. When Perlman is analysing specific cases of scientific advance the explanations are lucid and informative. However, the rest of the book is unclear, and towards the end it seems to disintegrate completely. Chapters are basically lists of points, and I could see little in the way of a coherent argument.

The book relies on rather old sources. On average, references and further reading are thirty years old, and few are less than five years old. One entire chapter, according to a footnote, is based on a teaching unit written nearly 50 years ago!

My feeling is that Perlman should have taken a few months more and clarified exactly what he wanted to say. Failing that, the editors in the publishing firm should have made sure that the work was completed properly. The result, alas, is testimony that neither was done.

— Martin Bridgstock

Selling wellness

Deepak Chopra, *Perfect Digestion* (Rider, £7.99); *Boundless Energy* (Rider, £7.99)

Deepak Chopra is Executive Director of the Sharp Institute for Human Potential and Mind/Body medicine in La Jolla, California. The Institute is devoted to the practice and teaching of Ayurvedic medicine (a system of healing said to have originated in India thousands of years ago) and these two books purport to offer an Ayurvedic approach to problems of the gastrointestinal tract (in particular Irritable Bowel Syndrome) and Chronic Fatigue.

Both books follow a pattern common to many books offering an alternative healing system to scientific medicine. There is some simple human anatomy and physiology (generally accurate, if often wildly over-simplified) together with some sound but entirely unoriginal advice on how to maintain a healthy lifestyle and then a detailed description of the principles and practice of the system being put forward.

The problem with this approach is that there rarely seems to be any logical connection between the two parts. This is certainly true of these two books and at the end this reader at least was left wondering 'why not just take the advice on diet, sleep, exercise and stress reduction and forget the philosophical intricacies of Ayurveda?'

Perfect Digestion for example, discusses at length the 'governing agents' or Doshas, called Vata, Pitta and Kapha, the 'qualities of intelligence' in food, the six tastes that correspond to these qualities and the influence of the Doshas at different stages of your daily biorhythm. Interspersed with all this we are advised to 'Eat in a quiet atmosphere', 'Always sit down to eat', 'Avoid overeating', 'Rest quietly after your meal' and 'Stay away from foods which have caused problems in the past'.

All quite sensible, but nothing that could not be found in dozens of other popular books on nutrition – although I am still perplexed by 'It is best not to read while sitting on the toilet'. Much of *Boundless Energy* simply reiterates the topics covered in *Perfect Digestion*, offering the same mixture of dietary advice, yoga-type exercises, meditation and Ayurvedic oil massage as a counter to stress and fatigue. There is a cursory treatment of Chronic Fatigue Syndrome (or myalgic encephalitis) which concludes with the suggestion that anyone who thinks they have the symptoms should seek medical advice. Anyone seeking to treat CFS with diet therapy would do well to read a 1993 report from the Harvard School of Public Health's Department of Nutrition which warned that the benefits of such therapies are as yet unproven and sufferers should stick to a diet plan based on 'sound nutritional principles and common sense'.

At only 120-odd pages each these books are not good value for money and anyone wanting to know more about Ayurveda need only buy one of them.

— Michael Hutton

Can a comic book be dull?

Sue Stack, *Cosmo and his Search for the Meaning of Life* (Findhorn Press, £4.95)



This comic book by an Australian teacher has all the New Age phrases and concepts any devotee might fall for. There are instructions on how to see your aura, or to find the body chakras. Near-death experiences rival explanations of the inner mean-

ing of the New Physics. Nor are acupuncture, reiki, rolfing or herbal remedies missing from the long list of adventures the characters get into. They further engage in mind reading, telepathy, meditation, and ESP.

The plot concerns Cosmo the koala with his friends Kev the kangaroo, Poss the possum, Elmar the ostrich, and Joe the crocodile. I know what animals these are supposed to be because we are told. There are two other characters, Bruce whom I can not identify as anything other than a Tasmanian devil and Spike, who may be a squirrel. This should tell you that the drawings are neither very good nor really funny.

We know Cosmo is out to find the meaning of life, because we are told. Indeed the book is strong on talk about peace, love, and care for the earth. The quest is for world consciousness and a connectedness to the whole universe. Unfortunately the whole is neither funny nor surprising, but preachy. When the companions find 50,000 year old scrolls in a cave, it is time to bail out.

— Wolf Roder

Mind science

Stephen Mithin, *The Prehistory of the Mind: A Search for the Origins of Art, Religion and Science* (Thames & Hudson, £16.95)

Any new book about the mind should do at least one of the following: (1) describe some new set of relevant facts or (2) account for some meaningfully circumscribed set of facts with a new theory.

The world of 'mind science' is full of intriguing, even astonishing facts. For example: here is a remarkable, little known fact: some congenitally, profoundly-deaf people, who develop schizophrenia in adult life, report auditory hallucinations. Many (most?) such observations are not explained by any of the currently competing theories of mind. Since mind-science is encumbered by serious practical (not to say ethical) problems in seeking to perform experiments to test hypotheses, such facts – from a wide base of sources – are a crucial resource.

The Prehistory of the Mind, a tour of the archaeology of mind science and the conclusions it may help us reach, is an intelligent piece of 'popular science' – an accessible, scientifically sound volume. The main thesis of this book is that archaeologists have a material contribution to make to the study of the human mind. To understand a thing, we would like to know whence it came. Where that thing is the human mind, this is surely even more the case. (It is, of course, possible to live a perfectly happy and successful life without a shred of interest in, or knowledge of, biology, evolution, paleontology, or embryology – but not all folk are comfortable with such blindness to one's origins.) So, we would like to know how this bizarre thing the human mind came into being. Moreover, perhaps we cannot be said to have truly understood – explained – the mind unless we have also explained the various data points that mind-archaeology digs up. Mithin even argues that archaeology offers clues to the fundamental nature of the human mind that would otherwise remain hidden from psychologists, philosophers, and others who might ignore pre-history. Thus, the archaeology of the mind is both a problem and an opportunity (I have perhaps been in the US too long already).

This intelligent book, while not a great masterpiece, offers an enjoyable gel of smart, wittily presented ideas, suspended among unusual facts.

— Nick Beard

Odd bods

Frank O'Neil, *The Mammoth Book of Oddities* (Robinson Publishing, £4.98).

This sounds as though it should be an enormous book, and indeed it has over 500 pages. However, it isn't really all that big: each page is significantly smaller than an average paperback. It's a tubby little book, directed at 'The world's most bizarre, weird and amazing facts and feats'. What's more there is not a single case of the paranormal among them.

The text consists of hundreds of small sections, each about a page long. These are gathered into chapters of

about 40 pages, with titles like 'Legal Oddities', 'Medical Oddities' and of course 'Sexual Oddities'. However, the ones that made the deepest impression on me were in the chapter 'Culinary Oddities': I had just had a good meal, and some of them nearly made me throw up. We learn, for instance, that Dean William Buckland (1784–1856) thought that vole was the worst thing he had ever tasted – until he encountered the taste of gently boiled bluebotles. Then there are details of toasted dung-beetle, cat dung coffee and the Sourtoe Cocktail (champagne with an amputated human toe in it). I held on to my dinner, and boldly kept turning pages.

At the back, a small section called 'sources' lists where O'Neil got his facts from. Unfortunately, the sources are in alphabetical order, and there is no way of telling which sources yielded which facts. A further irritation is that there is no index, which renders the book hard to use for reference. I think I spotted two entries on St Simeon Stylites and two on a Victorian con-man.

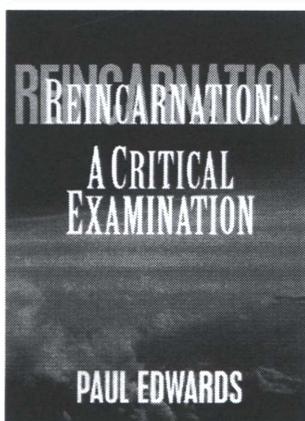
There is, of course, no discernible plot or underlying theme to all these facts, and after a while a kind of numbness sets in, which only something outstandingly bizarre can break. For example, I burst out laughing at President Kennedy's famous speech of 1963 to an enthusiastic German crowd. He told them 'Ich bin ein Berliner' but this means, 'I am a jelly doughnut'. Presumably the crowd knew what he meant.

Strictly, this book has nothing to do with skepticism, because there is absolutely no claim that anything here is paranormal. Indeed it shows that the real world is so bizarre that the paranormal is just not needed.

— Martin Bridgstock

Life goes on

Paul Edwards, *Reincarnation: A Critical Examination* (Prometheus, £24.50)



Paul Edwards states in his introduction that he has attempted to evaluate all arguments for reincarnation and Karma, and demonstrate that the evidence is worthless. It is true to say that the book examines an enormous body of work on reincarnation.

Edwards begins by summing up the main beliefs about reincarnation and Karma, and giving an overview of the basic theories behind these ideas. He then moves on to a discussion of more recent claims of reincarnation. He starts these by evaluating claims that child prodigies and déjà vu experiences may be the result of reincarnation. Given the aims discussed in the introduction, it will be no surprise to learn that the author dismisses these claims, along with every other he mentions.

Edwards then moves on to an examination of hypnotic regressions, in particular the 'Bridey Murphy' case, which used to be the strongest case for reincarnation. It is in this section that Edwards first demonstrates a recurring theme in the book – targeting the work of a re-

searcher, and making continual references to how flawed it is. While he may be performing a valuable service in alerting people to poor research, his point is often lost as his criticisms appear increasingly petty. Much of the latter half of the book is taken up in this style, with particular condemnation being awarded to Dr Elisabeth Kubler-Ross.

Edwards gives an excellent review of the reincarnation literature, and has, in many cases, presented extremely convincing arguments in favour of his point of view. The main problem that I had with this book was the author's writing style. At first, the heavy sarcasm he employs in order to make a point is amusing, but it quickly begins to irritate. The author also seems to believe that logical thought is only possible if it coincides with his own views – on several occasions he dismisses claims simply because he does not feel that they are sensible.

In general, this is an interesting book with a thorough review of evidence, but its impact is weakened by the rather self-satisfied tone that the author has unfortunately chosen to adopt.

— Emma Greening

Prophet and loss

Kevin McClure: *The Fortean Times Book of the Millennium* (John Brown Publishing, L9.99)

The end of the world is nigh! Very nigh. July 1999 to be precise. Or should that be 2000? Or 2001? Or even 2016? Or 1991 – hang on, haven't we already missed that one? And wasn't the world supposed to have ended in the year 1000 anyway? It all depends who you believe.

Kevin McClure's book is a fascinating study of end-of-the-world prophecies from Biblical times to the present, most of which contradict each other in every conceivable way. Personally I have a sneaking sympathy with the ones which claim the Antichrist is a computer – next time my word processor won't respond or my e-mail gets irretrievably scrambled maybe I should try typing '666' and see what happens. Then again, according to other seers, the Antichrist could be Bill Clinton, Bill Gates, the Pope or any one of various Chinese or Russian leaders – take your pick. The only thing these people seem to have in common is that they're all male. Does this mean Christ will return as a woman this time round? Now there's a thought.

McClure's book is admirably open-minded, and the huge amount of research he's done is impressive. He guides the reader through a mass of prophecies whose authors range from Biblical figures to New Age gurus and televangelists, taking a look at Merlin, Nostradamus and a host of less well-known figures along the way, some more respectable than others. It's amazing how many failed prophets have already predicted that the world would end well before 1996. It's even more amazing that so many of their followers still believe in them.

More seriously, McClure has uncovered some disturbing links between certain modern 'prophets' and right-wing politics, notably anti-Semitism and so-called 'White Supremacy' movements. It's sad to see genuine religious beliefs being abused to promote racial hatred. Then again this is nothing new, as history has proved time and time again from the Crusades onwards. McClure says, 'Where I can, I'll try and challenge people like this in future: I hope some of you out there might join me if the chance arises'. Skeptics, take note and follow.

—Chris Willis

Bookwatch

Some recent books of interest to skeptics; some titles are skeptical, some pro-paranormal, some in-between. Watch for full reviews in future issues.

Medical Curiosities

Robert M Youngson
Robinson, £6.99

Following on from his previous book *Medical Blunders* (reviewed in our last issue), Youngson racks his memory and the archives for examples of the medically bizarre. At times hilarious, at others deeply shocking. A great read.

Lo!

Charles Fort (Revised by X)
John Brown, £9.99

Fort's third book, revised by someone with the unlikely (but, we are told, entirely legal) name of 'X', and with an introduction by John

Michell. Great for dipping into, and as iconoclastic as you like, but Fort, with his sometimes mystifying prose, remains hard going.

The Book of World Religions

John Bowker
Dorling Kindersley, £25

A stunningly-illustrated coffee-table study of major faiths around the world. Bowker paints a fascinating picture of popular mass religious belief, with all its similarities and incompatibilities. A masterpiece.

Fairies

Janet Bord
Michael O'Mara, £15.99

Janet Bord doesn't deserve the subtitle 'Real Encounters with Little People', which the publishers have daubed on her book. *Fairies* may not look like promising reading for skeptics, but Bord's historical and

contemporary research makes for interesting reading.

Deception and Self-deception: Investigating Psychics

Richard Wiseman
Prometheus Books, \$25.95

A collection of articles covering the psychology of deception, psychic fraud, and mediumistic trickery. The 'psychic'fraternity will hate this one.

UFO 1947–1997

Hilary Evans & Dennis Stacy (Eds)
John Brown, £16.99

The Complete Book of UFOs
Jenny Randles & Peter Hough
Piatkus, £6.99

50 years of UFO culture. Evans & Stacy's book is a serious work with contributions by 30 UFOlogists. Randles and Hough cover similar ground, but in a more populist style.

Letters



Really useful

The following is an extract from South West Water's *The Really Useful Handbook*, recently circulated among householders in this area:

Reduce the temperature of the water in your hot water tank. You will save on energy costs and on water as you will not have to add so much cold water to cool it for use in baths and basins.

Unless I am mistaken, if you take your bath at the same level and temperature as before, tweaking the thermostat will save you nothing whatever!

Or are SWW helping their customers to 'tap' into the paranormal?

**John Wallington
Torquay**

Thank you

Enclosed, please find my cheque for £500, to help you along in your great cause of exposing fakers.

If as a result of your various stories, you may have saved one human being from getting involved in the 'cult' tragedy in California or similar, all your efforts are worth it.

**Name and address withheld
London**

The Skeptic is a not-for-profit magazine, and we are always extremely grateful to receive donations from readers. – The Editors.

Nasty things

I've read *The Skeptic* for several years and am well pleased with the topics it has covered. Jim Josefsson (Letters, *The Skeptic* 10.4) may be annoyed that the big delusions of the major religions are avoided but they are very well covered elsewhere and I, for one, would not wish to see duplication. *The Freethinker* (47 Theobalds Road, London, WC1X 8SP) has been debunking religion for over a

century. I find that this and *The Skeptic* provide good coverage over most aspects of human gullibility.

What has clitoridectomy to do with skeptical thought? This topic has been well covered by *The New Internationalist* (PO Box 79, Hertford, SG14 1AQ), an international magazine specialising in aspects of world poverty, inequality and development. Yes, it is appalling: if Jim feels very strongly about it perhaps he should join one of the pressure groups that are trying to stop this barbarity.

There are plenty of nasty things in the world but I do not wish to read about them in *The Skeptic* out of context. Surely Wendy Grossman's article in that issue was a brilliant example of the way that many nasty things can be included in an appropriate manner.

**Peter Lancaster
Maldon, Essex**

School books

After hearing ('Skeptical Books for Christmas', *The Skeptic* 10.5/6) how everyone was converted to scepticism by reading a particular book, for example James Randi's *Flim-Flam* – has anyone ever tried to get anything of that sort onto the curriculum? Think of the good this could eventually do . . . and if creationists can do it why not sceptics . . . ?

**Helen and Charles Goodwin
by email**

Science fiction

Thought you may be amused to know that the branch of W H Smith in Hemel Hempstead has a wonderful display in its book section.

Boldly presenting, above a book stand, a title (8 inch green text – you can't miss it) 'SCIENCE FACT'. Underneath, the collection of books includes Erich von Däniken's *The Return of the Gods*, two new books on

Nostradamus (*Secrets of* and *New Revelations*) and a couple of books on Government conspiracies to do with aliens etc. There was one token 'real science' book: Steve Jones's *In the Blood*.

It would seem that millenium fever is paraded as fact.

**Simon Dickerson
by email**

God's reward

In *The Skeptic* vol 10 nos. 5&6, Steve Donnelly refers to a study which suggests that elderly Christians who attend church are healthier than those who stay at home to worship. He ridicules the idea that this is God's reward to church-goers, and suggests that it is because active religious participation promotes good health.

Might it more simply be because old people who are too ill to attend church, don't?

Martin S Taylor

Wanted

Do any readers have (or know where to obtain, any of the following on video:

(i) BBC1 'Everyman: Science Friction' on *Creationism* (Tx 08/09/96);

(ii) BBC1 'Everyman: Science Friction' on *Miracles* (Tx 22/09/96);

(iii) the BBC1 series *The Ascent of Man* by J. Bronowski from 1973 but last broadcast in '86 or '87.

I am happy to refund copying and postage costs and cost of blank tapes etc.

Please contact: Ian Carstairs, 38 Brabourne Rise, Beckenham, Kent BR3 2SG. Tel: 0181 650 4610

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