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The Skeptic



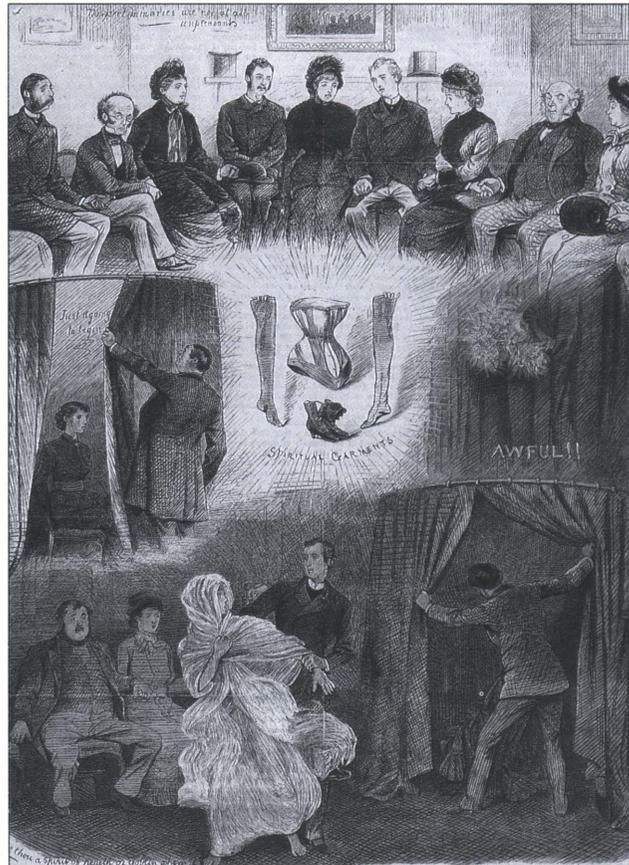
Can the hands heal?

Also in this issue:

Pseudoscientific archaeology
Comets and the end of the world
Life after death
The Mary Celeste mystery

£1.85

Hilary Evans' *Paranormal Picture Gallery*



Mary & Marie: two interesting materialisations

Part Two: Marie, the corset-wearing 12-year old

Not long after the state visit of Mary Queen of Scots, the popular séances of Florence Cook (whose previous spirit visitor, Katie, had been rather devastatingly discredited by Mr Volckman in 1873) began to be visited by Marie, the spirit of a girl who had died at the age of twelve. Among those who were impressed by her were Sir George Sitwell and his friend Carl von Buch. What impressed them was that Marie, while wearing the traditional white robes, had a corset on underneath: if it was surprising that a spirit should wear a corset, it was particularly so in a 12-year old spirit.

They said nothing at the time, being polite gents: but on a subsequent occasion they had with them an engineer named John Fell, and doubtless it was his earthy influence which drove one of them to catch hold of the materialising adolescent, while the other pulled aside the curtain of the cabinet where the medium herself should have been sitting entranced. Only she wasn't: just her clothes were. Florence, alas, was pinioned in the arms of the investigators.

Hilary Evans is co-proprietor of the Mary Evans Picture Library, 59 Tranquil Vale, London SE3 0BS

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Sorry if we've missed anyone out! Please keep the clippings coming!

Hits and Misses

Steve Donnelly

Booby buggies

The pace of modern life in New York is such that busy executives cannot always find time to fit in their weekly psychotherapy sessions—but predictably, an enterprising psychologist has come up with a solution.

According to a report in the *Daily Telegraph* on 15 October, Dr Ursula Strauss, a biomedical psychologist, has kitted out four Chevrolet vans with leather couches and set up a company by the name of Mobile Psychological Services which offers transport from home to office (or anywhere else) and a counselling session at the same time. In this way the busy modern stockbroker can profitably use time spent in the city's infamous traffic jams. A wooden partition separates the driver from the therapist's consulting room and also houses a clock—an important instrument when sessions cost \$175 an hour (rising to \$225 in the new year).

Despite the fairly stiff prices, the 'psycho-vans' as they have come to be known are doing a roaring trade with more than fifty regular customers and there is already talk of franchising the business.

Pentium penance

For people in need of someone to talk to, but who cannot afford an hour in a psycho-van, the Catholic Church has always offered its own psychotherapy, in the form of ten minutes in the confessional booth with a sympathetic priest. However, even this traditional institution is not immune to the influence of modern technology.

Although no-one to my knowledge has yet suggested mobile confessional vans, a Canadian lecturer and self-styled 'Father Interactive of the Order of Binary Brothers' has designed the Automatic Confessional Machine (ACM). According to the *Sunday Telegraph* on 25 September, this computerised device consists of a six-foot black perspex kiosk with a red neon cross on the roof. Inside, is a keyboard and a computer screen displaying a menu of the seven deadly sins each of which is broken down into subcategories, enabling a sinner to locate his exact sin in a matter of seconds. Clicking on the sin then results in the system printing out the appropriate penance. According to the inventor Father Grey Garvey, 'There is a long tradition of paying for salvation and the ACM slots neatly into that. It takes American Express and Visa; all you have to do is enter your PIN number'.

In a month that has seen the publication of the Pope's book *Crossing the Threshold of Hope* in which he emphasizes traditional values, it seems unlikely that the ACM will replace the wooden confessional box and human priest in the near future.

Fashion tips

The fashion amongst some young people for putting decorative rings through every imaginable part of the body (and some unimaginable ones as well) may just be the tip of the iceberg—or finger. An article published in *The Face* magazine sparked off a storm of protest when it identified the up-and-coming fashion trend as amputation of non-utilitarian parts of the body such as earlobes, little toes and the tips of some fingers.

In an article in the *Daily Telegraph* on 25 September, even Tim Woodward, a practising sado-masochist and editor of the fetishist magazine *Skin Two* claimed that 'There must be guidelines—this is going too far'. However, the trend—through tattooing and body piercing—towards amputation may not simply be motivated by beauty and a desire to be at the cutting edge of fashion.

The *Telegraph* article claims that many of the people involved in 'branding and scarification' are linked to the Modern Primitive movement that originated on the West Coast of the USA. Members seek spiritual enlightenment through pain, and their mutilated bodies provide a diary of the experiences they have been through. Although these type of practices seem abhorrent to most of us, it should be borne in mind that mutilations have been part of many cultures and religions throughout history and, for instance, male circumcision is still carried out for religious reasons by both Muslims and Jews.



Tim Pearce

Acid test

If you were thinking of spending money on either conventional or alternative medicines for complaints as diverse as arthritis, coughs, memory loss or varicose veins, before making your purchase you might wish to take a look at a

book recently advertised for sale in a number of newspapers (my example comes from the *Guardian* on 26 September). The book, entitled *The Vinegar Book* claims that the eponymous household product can be used in 300 different ways including health improvement, pain relief and as a general-purpose cleaner. The advertisement tells us that vinegar was used as a healing dressing on wounds in biblical times and that Hippocrates, considered to be the father of medicine, treated his patients with vinegar in 400 BC—so who are we to argue?

Although I decided not to spend £12.95 on the book (even though I would have received a free copy of *Brain and Health Power Foods*) I did take careful note of the claims in the advertisement. I have to say that the idea that vinegar 'calms nausea' seems odd for a substance used as an emetic—although I suppose vomiting does calm nausea, in a way. And, whilst liberal application of the stuff to the face will 'protect and beautify my skin', this could be offset somewhat by the subtle whiff of Eau de Chip-shop to which my nearest and dearest would be subjected.

Cryptic messages

I am occasionally telephoned by a gentleman by the name of William who believes that God leaves evidence of his existence anywhere that information is stored or manipulated. Subtle messages are thus encoded into works of literature, computer databases and even the very structure of languages themselves. One example that comes to mind from one of the telephone conversations is the expression 'Je suis' ('I am' in French) that contains within it 'Jesus' and 'I' in English—can this just be a coincidence?

Well William's argument may well be furthered by the contents of a letter in the *Daily Telegraph* on 30 September in which the writer points out that on 24 September, less than a week before the tragic sinking of the ferry *Estonia*, the *Telegraph* crossword (number 21,362) contained the following solutions: 'passenger list'; 'Hood (HMS)'; 'master mariner' and most uncannily of all, 'Estonia'. This is not the first time that the *Telegraph* crossword has produced paranormally derived messages; in 1944 many solutions to the crossword were, unknown to the compilers, code-words for the D-Day landings—at that time still in the future.

Anyone looking for a new means of foretelling the future (Nostradamus, Tarot cards and crystal balls being a bit passé) could do worse than to seek the hidden message in the crosswords from our daily newspapers.

Time travel

According to Japanese physicist Michio Kaku, it may one day be possible to construct the favourite device of science fiction writers, the time machine. In yet another clipping from the *Daily Telegraph*, this time on 21 September, Dr Kaku discusses new solutions to Einstein's equations that appear to allow the possibility of time travel and refers to the numerous articles recently published in learned journals on this theme. Physicists and mathematicians are apparently busy attempting to determine what the conse-

quences would really be of an individual travelling back in time and killing his grandfather prior to the conception of his (i.e., the traveller's) own father.

One slight problem with the technology is the large amount of energy that is needed to bend 'the spacetime continuum' and thus enable time travel. Unfortunately, this far exceeds the capabilities of any energy sources on earth—time machine engineers would need to harness the energy output of a star or some other convenient astronomical source. However, some theoreticians are fairly sceptical of time travel for other reasons and Stephen Hawking, with his tongue firmly in his cheek, has claimed to have experimental proof of the impossibility of time travel in the fact that we have never been visited by time tourists from the future.



Tim Pearce

Alien alarm

Finally, for anyone looking for a gift for the person who has everything, an article in the *Cambridge Evening News* on 16 November could point you in the right direction. Apparently, a new self-defence kit to guard against any kind of interference by aliens has gone on sale in the USA. The Schwa's Alien Abduction Defence Kit includes a device that contains xenon which allegedly glows red when aliens are within one mile. (What, equal sensitivities to all species of alien?). I am in the rather fortunate position of using xenon (an inert gas) in my research and so far have not noticed any red glow.

However, one can't be too careful and I am writing this column in a motel near Chicago (modern technological miracles will ensure that it arrives electronically in Manchester for typesetting, a week or two before my return). I will therefore go hunting in my local Illinois shopping mall and attempt to purchase a Schwa's kit... On the other hand, if the media here are to be believed, venturing outside to the shops could greatly increase my chances of being abducted by aliens...

Steve Donnelly is a physicist and a reader in electronics and electrical engineering at the University of Salford.

Fantastic Archaeology

Howard Wellman

Archaeological fantasy and the nature of the evidence

ATLANTIS, Bronze Age Celts voyaging to America, extra-terrestrial travellers building pyramids in Egypt and Mexico, Noah's Ark on Mount Ararat. How do you debate or refute someone who has read a book or seen a video claiming 'incontrovertible archaeological proof' about these? How do you determine whether these claims are based on solid archaeological reasoning?

Archaeology, like any other academic subject, has its adherents and camp-followers who make extravagant or extraordinary claims based on data and paths of reasoning considered invalid by professional archaeologists. Like other scientific fields, there are ways to examine the data and the hypotheses propounded in order to evaluate the validity of these claims.

Kenneth Feder [1] argues that proper reasoning in archaeology, as in any other science, requires a knowledge of proper scientific method. Archaeologists should use both inductive and deductive reasoning in data collection, hypothesizing, hypothesis testing, and deriving theories. A second important tool for Feder, especially in evaluating extravagant claims with little supporting data (and let's be honest—a lot of 'legitimate' archaeology is based on very little data, and a lot of conjecture) is Occam's Razor, the supposition that given multiple interpretations, the simplest is often the likeliest.

One thing that makes archaeology particularly susceptible to misuse by fantasists is the archaeologists' openness about the uncertainty of their own statements. Persons who misunderstand the nature of archaeological data may then feel that any wild conjecture they invent that fits the evidence is just as good an answer as that suggested by the archaeologist. So what distinguishes good archaeological arguments from bad?

One of the most important concepts in archaeology is context. Archaeology is not about stone axes or bronze knives: it is about where that axe was found in vertical dimensions within the site (stratigraphy) which may suggest chronological divisions within the site and in horizontal dimensions (associations) to contemporaneous artifacts which may aid the archaeologist to label the collection of artifacts as part of a tomb or a trash-pit. An artifact 'floating' in time and space with no supporting context is meaningless, or just plain misleading.

Feder [1, page 83] illustrates the importance of context with the case of Mystery Hill in New Hampshire, USA. This group of enigmatic stone structures are claimed by some 'pseudo-archaeologists' to be the remnants of a Bronze



Mary Evans

Age Druidic cult centre (one of many such purported prehistoric Celtic sites in New England). The rule of archaeological context would require the presence of other Celtic artifacts (pottery, bronze implements, etc.) in horizontal association with the structures, and more recent American Colonial materials stratified vertically above them. All that has been found in controlled archaeological excavations are Colonial American artifacts below and in horizontal association with the structures. The Colonial context of the stone structures is all important; similar structures can be found on Colonial farms across New England—such as root cellars, lye pans, and crushing stones. No druids here, just their immigrant Yankee descendants some 2000 years later!

A similar problem arises in the controversy over the age of the Sphinx [2] where a geologist has claimed on the grounds of weathering patterns that the Sphinx must be about 10,000 years old. He ignores the documentary, architectural, and archaeological context which dates the Sphinx to the more widely accepted date of ca. 5,000 years old. By ignoring data which contradicts their own hypotheses, scientists and pseudo-scientists alike invalidate their own reasoning.

Another common mistake of pseudo-archaeologists is the confusion between analogy and homology. Logicians will tell you that analogy is the weakest form of argument; it is also the weakest form of archaeological proof. Both the Egyptians and the Maya built pyramids. It has been argued by any number of pseudo-archaeologists that this similarity proves some form of contact between the two cultures, while blissfully ignoring any questions of chronology, function, or context. By resting their claims on one fact of analogy alone, the fantasists have built extremely flimsy hypotheses. It is known from documentary sources and archaeological evidence that the Egyptians were build-

ing their pyramids circa 3000 BC. Similar investigation proves that the Maya pyramids were built circa AD 800, at which point the Egyptians had built no pyramids for over 3000 years! Egyptian pyramids were designed and built primarily as tombs while Maya pyramids were designed and built primarily as temple platforms, any tombs later incorporated during subsequent building phases. If travelling Egyptians built the Mexican pyramids, where are the Egyptian wall paintings, the glass and metals used on the Nile, or the Egyptian hieroglyphics? Using arguments of analogy, one could argue that Eskimos and Watusi are related cultures because they both use drums made of hide stretched on wooden frames!

Many of the common tools of archaeologists are misunderstood and misused. Radiocarbon dating revolutionized archaeology in the 20th Century by allowing archaeologists to assign 'absolute' (keyed into a known calendrical system) dates on many artifacts or associations of artifacts. Prior to this, most dates were 'relative' dates, where artifacts were known to be younger or older than other artifacts, but none of these series could be placed on a calendar. The problem arises from this confusion: radiocarbon dates are not precise pages marked on a calendar, they are probabilities that the age of the artifact falls within a range of dates. A proper radiocarbon date consists of a number together with an error factor, such as 1000 BP +/-75. The '75' is a statistical measure called the standard deviation, which means that the object being dated has about a 96% chance of coming from 925 to 1075 years BP (Before Present, which is defined as AD 1950). Without that standard deviation, a radiocarbon date is meaningless. Other things can make a radiocarbon date invalid or misleading: the technique is no good for dates prior to about 60,000 BP; and because of the statistical nature of the dating technique, one date is insufficient. Multiple dates calculated from the same object and preferably from several associated objects are needed to capture a statistically accurate value.

Another common error is the misuse of stratigraphy. Archaeology depends on the Law of Superimposition: if things are piled one atop another, the one at the bottom is older than the one above it. All well and good, but this does not mean that one can induce how old something is by how deep it is buried. When we know nothing about the rate at which sediment is deposited, we can't assume, as some pseudo-archaeologists do, that a lot deeper means a lot older.

Some pseudo-archaeologists reveal themselves through common tactics, many of which are repeatedly pointed out by Feder [1] and Williams [3]. Untrained observers, or people with preconceived notions of what they want to

find, will often make claims beyond the scope of the data at hand; they hope that speculations presented forcefully will become facts in the mind of the reader. Feder claims that many 'pseudo-archaeologists' also rely too much on deductive reasoning alone; they collect data, work this into a theory, and stop there without taking the crucial step of seeing if their theory predicts any other facts that they could then test. Pseudo-archaeologists make other common errors, especially getting primary facts wrong (generally through a misunderstanding of the nature of archaeological investigation) and the selective use of out-dated information as supportive data for their own theories.

Finally, archaeologists and anthropologists must constantly fight against letting their own cultural biases affect their interpretation of the data. Authors such as von Däniken insist on interpreting what they see through their own cultural 'filters'. Feder [1] notes that when von Däniken looks at the famous Maya carved tomb lid from Palenque, he sees a man at the controls of a space-craft. A Maya, steeped in his own culture, reading the iconography of the carving, sees his king climbing the tree of life which grows from the mouth of the Earth-monster. This iconography can be read by anyone willing to take the time to learn Maya glyphs. What would that Maya make of a crucifix if he had no knowledge of Christian iconography? Is it a scene of torture, or one of redemption?

I would recommend that anyone wishing to look into this subject in any more depth consult two books: *Frauds, Myths, and Mysteries: Science and Pseudoscience in Archaeology*, by Kenneth Feder, and *Fantastic Archaeology: The Wild Side of North American Prehistory*, by Stephen Williams (see bibliography).

Both authors are professional archaeologists and teachers. Both books treat the same subject: the nature of fraudulent, misinformed, and pseudo-scientific archaeological claims and the people who make them. Both authors note their early exposure to fantastic archaeology through books on Atlantis or Mu, and their final rejection of these and other theories after they learned the proper application of scientific reasoning, and reading books by archaeologists who used those methods.

Feder's book is wide-ranging, covering such cause célèbres as the Cardiff Giant, Piltdown Man, hyperdiffusionism (ancient Europeans in America), Atlantis, psychic archaeology, and Creationism, among others. If for no other reason, read this book for the concise and well-documented examinations and debunking of all these subjects.

Williams' book covers similar ground, but he focuses on the rich and varied history of frauds, hoaxes, wild theorizing, and the development of scientific archaeology



in the United States from its founding to the present day. Like Feder, Williams gives scholarly background for his subject: this is an excellent introductory book for information on Ignatius Donnelly, Madame Blavatsky, and a constellation of lesser-known American proponents of fantastic archaeology. Williams focuses on the people who make the claims, their background, sources of inspiration, and most importantly, their historical and cultural context. Like Feder, Williams notes that most fantastic archaeology is based on the hardness of myths, and the passage of such ideas as Atlantis into belief systems (reaching almost cult status) that are typically unshaken by scientific data.

In sum, it should be remembered that archaeology, like any other academic subject, has its own rules for evaluating arguments. Just because the facts can be shoe-horned into a theory does not make that theory valid. Skepticism

and adherence to logical thinking are just as necessary in a 'soft' science like archaeology as they are in hard sciences like astronomy or physics.

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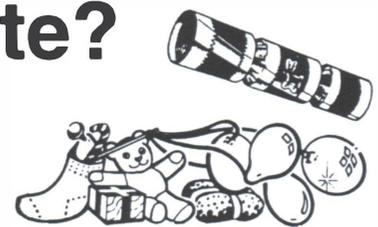
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What is There to Celebrate?

Tom Ruffles

How Christmas can pose a problem for atheists



WITH CHRISTMAS FAST APPROACHING, it is once again time for atheists to have to contend with the snide remarks of Christians: 'Well, if you don't believe in Christmas, why are you celebrating?'.

Few atheists are as dedicated as Bernard Shaw, who nobly ignored Christmas altogether, and for whom 25th December was a working day no different to any other. Anyway, he lived in a different age, without TV advertising and the subtleties of mass marketing.

The hype is so insistent that it is difficult to ignore it completely. It is all too easy to feel guilty about criticising the commercial manipulation, especially when children are involved. After all, just because I feel strongly that Christmas is a fraud, that is no reason to impose my view on my children, who may have principled reasons for celebrating the festival, over and above the obscene mounds of presents they will receive.

In my own way I do participate in the general celebrations. I possess an old card issued by the National Secular Society in their 'Heretic Cards' series. It features a cartoon of Shaw with the caption 'Courage, Friend! We all loathe Christmas; but it comes only once a year and is soon over'. A photocopy, suitably enlarged, is always used as my contribution to the decorations at work. Yet despite this gesture, I am considered a party-pooper. Why are atheists regarded with such disfavour?

There are a variety of reasons, but a major one is that atheists are deemed somehow to be immoral. There is a feeling that adherence to religious beliefs is essential to the moral development of a child, a viewpoint forcefully expressed by certain right-wing politicians. This is presumably the reason why many fair-weather Christians are still keen to see their children brought up in the Church (leaving aside Sunday School as a device for disposing of them for a

couple of hours after lunch!)

Of course it is fallacious to assume that a religious background is necessary to develop an ethical sense. If morality is interpreted as 'right living', or the ability to be sociable with one's fellow creatures, then there is no necessity to adhere to religious principles in order to be moral. A Christian and an atheist might both work for Crisis at Christmas, and nobody be able to tell them apart. It might even be argued that an atheist, courageous enough to declare the fact, is more moral than a so-called Christian who goes to church only for baptisms, marriages and funerals.

In any case, the term 'atheism' covers as wide a spectrum of belief as does Christianity. At one end there are what might be characterised the orthodox atheists, following in Shaw's footsteps. At Christmas, their children would not receive presents, there would be no decorations, and dinner would be nothing out of the ordinary. This would be a difficult line to pursue in many households.

Then there are the more liberal types, who, while pointing out the fact that the early Christians hijacked a pagan festival, and that Jesus is only one in a long line of virgin birthers, can take a relaxed view, arguing that everybody is entitled to a little fantasy (only Christians take it too seriously). Whether these liberals are being intellectually dishonest is something for them to decide. It is a balancing act between self-respect and keeping the kids happy.

Whatever their approach, it is certainly true that atheists feel isolated at any time, and especially during the dark days of December. Shaw was wrong about Christmas, at least in its current state: it may only come once a year, but it seems to last forever.

Tom Ruffles lives in Norfolk, and is conducting PhD research at the University of East Anglia.

Don't Point That Comet at Me!

David Bradbury

Millennarian madness

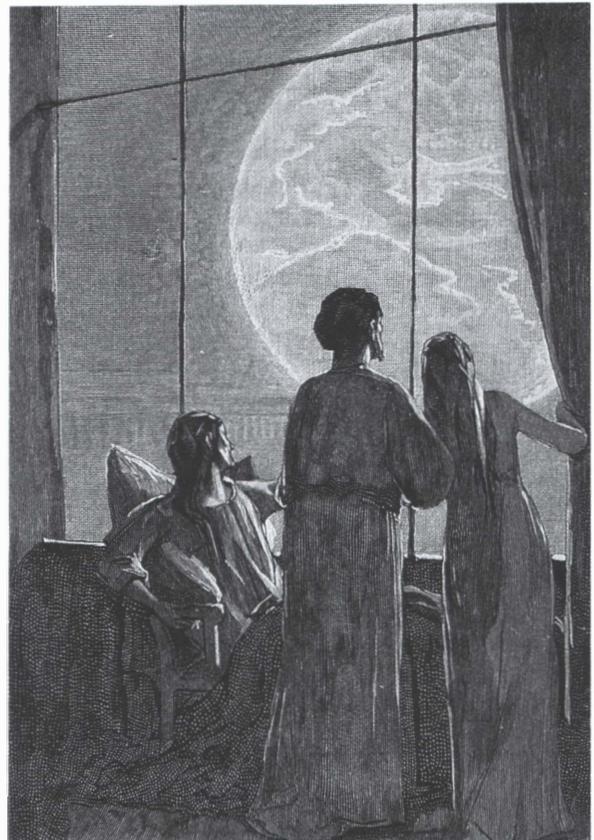
IN A RECENT EDITION of *The Skeptic*, Toby Howard wrote about some of the more 'unusual' items that arrive in the post, and this is why the magazine uses a PO box number (*The Skeptic*, 8.1). In particular he mentions letters and articles with dodgy, punctuation and LOTS OF CAPITALS. Imagine my surprise and delight when I found such articles (well, adverts actually) appearing in the national press.

Although the only adverts I have seen myself have been in *The Guardian* and the *Independent*, apparently others have been placed in local London newspapers and *City Limits*. They consist of densely typed messages from Sister Marie Gabriel, who also refers to herself as 'Astronomer Sofia Richmond'. They predict dire consequences: the Earth is due to be hit by a large comet (later amended to a fragment of a comet) unless we all beg God for mercy and mend our ways by—amongst other things—banning alcohol, reducing crime by copying Saudi Arabia's legal system, and destroying violent and sexually explicit books and videos.

In the first set of ads Richmond predicted that the impact of Shoemaker-Levy on Jupiter's surface would be seen from Earth, and a giant fireball would erupt from Jupiter and destroy Earth unless we repent. She also predicted that Shoemaker-Levy was in fact Halley's comet, and would be identified as such by more mainstream astronomers. It will come as no surprise to *Skeptic* readers to learn that neither of the above has taken place. Interestingly, however, she did predict that 'There will be a new leader in Britain... in July 1994'. Tony Blair did indeed become the leader of the Labour Party after July 1994, and of course in later adverts this is trumpeted as a demonstration of Richmond's God-given powers. It's worth remembering however that John Major has been on a knife edge for much of the year. So barnum statements like those above should be taken with a large pinch of salt.

However, never one to let facts get in the way of her 'prophetic accuracy', due apparently to the fact that 'God has placed a PROPHETIC TELESCOPE [capitals in original] inside her mind'. Richmond now claims that a piece of Shoemaker-Levy missed Jupiter and is now heading our way. This is the 'second part of the cosmic day of judgement', we are told, and is a warning that if we don't clean up our act we will 'face extinction'.

So much for the hype, what are the facts? Shoemaker-Levy was discovered on 18 March 1993. The comet is in



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Earth's last inhabitants watch the comet approach

orbit round Jupiter with a period of around two years. The 'string of pearls' which hit Jupiter were the fragments of a single body which was pulled apart by tidal forces during a close approach to Jupiter when it came within 71,400 km of the cloud-tops. The comet is periodic since before it fell into Jupiter's gravitational field its orbit was contained entirely within our solar system. Because of Jupiter's gravitational pull there is no chance of any stray fragments hitting the Earth.

Now, of course, it is the case that objects from space do hit the Earth. These usually come from one of two sources: firstly from comets which follow an orbit round the Sun which crosses the Earth, and secondly from the asteroid belt. Most asteroids follow an orbit between Mars and Jupiter but all of these asteroids are perturbed, occasionally by each other and more regularly and dramatically by

Jupiter. As a result some find themselves in orbits that cross that of Mars or even (and most importantly from our point of view) Earth. Most of these burn up in the atmosphere. Of those who get past that, most meteor strikes are unrecorded since they land on parts of the Earth's surface which are uninhabited (and around seventy percent is water, don't forget). Obviously, if a large piece were to land in a major city there could be large numbers of casualties. But before you all rush out to buy a reinforced umbrella, remember that a ten metre body typically has the kinetic energy of about five nuclear warheads of the size dropped on Hiroshima, and the shock wave it would create can do considerable damage, even if nothing but comparatively small fragments survive to reach the ground. So there's not a lot you can do.

However, such statements about the end of the world and the second coming are not restricted to this particular case. It's a historical fact that as a millennium approaches, people tend to get the jitters. The end of the tenth century, for example, was greeted with much disorder and strife, as people were convinced that the second coming was due to occur at any time. It looks as if a similar sense of nervousness and uncertainty will strike those of a religious disposition this time around. Of course, the reasons why the end of millennium jitters will strike are different this time. Although, a thousand years on, we have largely shed some of the more outlandish superstitions and beliefs of our ancestors, religion and superstition still have a great deal of influence. One only has to see the range of 'new age' literature on sale in bookshops to the way in which the Catholic Church wielded its power at the recent Cairo population summit to see that. In a world of increasing uncertainty many will still cling to the rock of superstition as a way in which they can try and see what will happen next. Religious fundamentalism, with its simplistic notions and easy solutions, looks particularly attractive in times like these.

A key part of Christian fundamentalist theology is of course the idea of the second coming and all the trials and tribulations that go along with it. Each sect claims that only they are the chosen ones whilst the rest of us are doomed to an eternity of hell and damnation. This is negative advertising in its most extreme form: buy the wrong type of washing powder and your whites may not be too bright. Don't go to our church and it's an eternity of torment without hope of release.

The smarter fundamentalists, however, don't set deadlines like 'The end of the world will happen on...', preferring instead to use the notion of 'rapture'. According to Christians, a description of the 'end times' appears in the Book of Revelation. All you have to do, therefore, is check what the Bible says and compare it to what is going on except that... er, Christians have been saying that 'we are now in the end times' for over a thousand years now. Of course if your theory doesn't fit the facts you ditch the theory. Right? Wrong. What this means is that the second coming could occur at any time (even while you are reading this article).

So watch out for Satanic influences like bar codes, Proctor & Gamble (some people allege that 666 is hidden



in their corporate logo), heavy metal music and so on. To me the most obvious target is Manchester United—they've got the Prince of Darkness in their logo, have been doing well as the millennium approaches and if any group of people look more like followers of evil than some of their fans then I have yet to see them!

But back to Sofia Richmond. To end this article I was going to delve into the murky world of investigative journalism to try and discover where the money was coming from for those newspaper adverts. In the end I bought a Sunday paper only to find that an *Observer* journalist had beaten me to it. Nobody, it seems, has approached Sofia Richmond with serious money. Sad really.

(Many thanks to those who have sent me information used in this article, particularly about astronomy, of which I know very little, so thanks to Andrew Norton of the Open University Physics department for that. Also thanks to Toby Howard, Wendy Grossman and Mike Hutchinson.)

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The Ultimate Question

Antony Flew

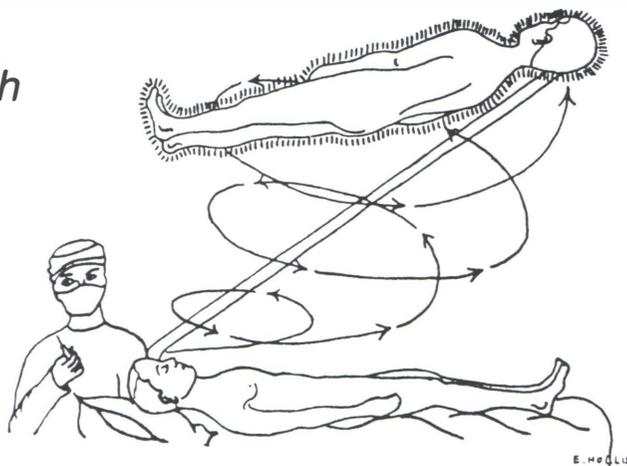
The problems of survival after death

IN HIS 'DISSECTING THE SOUL', (*The Skeptic*, 7.6) John Clarke confronted what he sees as 'The ultimate question: are we corporeal or ethereal?' His lively treatment was bound to stimulate further thought.

Mr Clarke starts by insisting upon the crucial truth that the posthumous survival of one of my bodily parts which was never to become conscious could be of no personal interest to me. None of us on our deathbeds could reasonably derive consolation from the news that our—say—appendices were to be bottled in formaldehyde and preserved indefinitely. Clarke takes the moral to be that 'You are a consciousness, which is obvious, really'. It ought not to be, for two reasons. In the first place, because it carries the intolerably paradoxical implication that if a person ever ceases to be conscious—by falling, for instance, into a dreamless sleep—then they must simply cease to exist. (This, by the way, was the classic, commonsensical objection pressed against Descartes for claiming that he was essentially a thinking thing—by which Descartes meant a conscious thing.) In the second place, because to be conscious is to be possessed of a particular characteristic; namely, consciousness. But it makes no sense to talk of a characteristic without something for it to be a characteristic of. What should be obvious is: not that we are consciousnesses, whatever that might mean; but that we are members of a sort of being which typically are in fact conscious for a large part but by no means the whole of their lives.

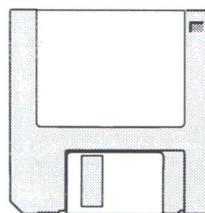
After giving us his definition of 'consciousness' Clarke goes on to consider 'near-death experiences, or NDE'. Suppose, in his example, that 'You're on a hospital bed, and the doctors are looking worried. You float up to the ceiling, and observe your body on the bed'. After meeting with your 'dear old Uncle Jack who died in 1976' you become 'suddenly aware that something is pulling you back, and you wake up on the hospital bed, with a worried surgeon bending over you...'. This imaginary NDE begins with an OBE, or Out of the Body Experience. But notice, as Clarke appears not to have done, that neither NDEs nor OBEs have any claim to constitute evidence for the paranormal save when and in so far as the people who have them seem thereby to be producing information, which they could not have acquired by any normal means. The claim is that such information is the product of an exercise of some kind of Extra-Sensory Perception (ESP).

Notice next that everything in the present imaginary NDE which is said to have happened, before you (the



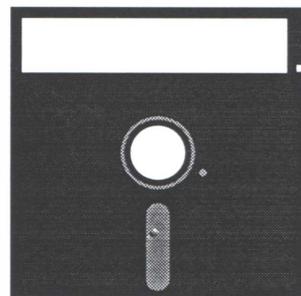
patient) 'wake up on the hospital bed' is something which should have been described as happening not in reality but only in a dream. And the fact that some patient dreams of seeing himself lying on his hospital bed, provides no warrant whatsoever for concluding that he really is an ethereal or altogether immaterial being who actually could be detached from his body and actually could observe that body from a position external to it.

Suppose that one day we do find that we have to allow that some OBE patients do during their dreamed excursions acquire information which they could not have acquired by any normal means. This admission still does not commit us to conceding that any excursions did actually occur. For what, by the hypothesis, we have to admit is that the patient has produced information which he could not have acquired by any normal means; information, that is to say, acquired through some kind of ESP. Given this, it would be a gross violation of the principle of postulational economy to conclude that the extra-sensory percipient must



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have been not the hospital patient himself, but some freshly hypothesized ethereal person.

Clarke presented a forceful empirical case against the suggestion that people may survive their own deaths, albeit as conscious albeit ethereal or immaterial beings. For instance: 'Destroy the brain, as in death, and it seems as if you do indeed wipe out all memory and personality for keeps'. Fair enough. But in addition to objections of this kind which Clarke deploys there are also strong but much less familiar conceptual objections.

One of these concerns the possible content of the memories of these hypothesized survivors as opposed to the mechanisms which might enable them to remember. For, as Clarke rightly insisted, if these hypothesized survivors are to be aware that they are truly the same people as us, then they will need to be able to remember doing and feeling and thinking many of the things which we actually did and felt and thought.

They must, that is to say, be able to remember that they are the same people as did or felt or thought whatever it was. So what does it mean to say that a person at time two is the same as a person at time one? Well, what is a court deciding when it decides that the prisoner in the dock is indeed the same person as the person who committed the crime of which that prisoner is accused? In practice the evidence, however compelling, is always and necessarily more or less indirect. But the fundamental question which has to be answered, on the basis of whatever evidence is available, is one about continuity. Suppose there had been, as there never are, witnesses to the crime who pursued the criminal, never letting him out of their sight until they and he entered the courtroom. Could those witnesses to the crime point to the accused and assert, truly, 'Thou art the man'?

If so, then they would be asserting that he was the same person, the same flesh and blood human being as did the deed; and he, presumably, can remember that he is indeed the same person as did it. But now, what is it about the hypothesized survivors which is supposed to provide content to their claims to be the same conscious beings as specific former flesh and blood persons? There has to be something: not only to provide continuity across periods of unconsciousness, but also to make room for the possibility of erroneous memory claims. For unless there is something providing continuity across periods of unconsciousness, later conscious beings will be at most similar to and not the same individuals as any predecessors. And if all memory

claims made by these hypothesized survivors are to be rated as necessarily true, then every such surviving conscious being might with equal truth claim to be any, or indeed every, former person. Which is absurd.

The only way to produce a survival hypothesis which is even conceptually coherent is, therefore, to postulate that the possibly surviving conscious beings are to be composed of a new and of course so far undetected kind of stuff. This heroic suggestion is by no means entirely new. In the days of Marxist-Leninist domination Soviet and East European parapsychologists usually hoped to find new kinds of matter and/or energy which would enable them to extend rather than directly challenge the established materialist world-view. For very different reasons the makers of the movie version of Noel Coward's *Blithe Spirit* presented supposedly surviving spirits as shadow people, who detached themselves (still fully clad) from normally solid characters at death, and who then, sometimes visible and audible to some of the still living characters and sometimes not, continued to participate in dramatic action.

One humanly interesting but scientifically irrelevant attraction of this heroic postulation is that it opens the way to others which would constitute belated justification for attributing sexes—or, more fashionably, genders—to hypothesized surviving conscious beings. Such attributions to spirits, which are by definition immaterial, are quite egregiously inept. The fact that they have been—and still are—as near as makes little matter universal, does much to explain why so few people seem to recognise that, if any conscious beings are to be truly said to be the same people as former flesh and blood people, then there has to be some substantial continuant linking the predecessor person to the supposedly surviving conscious being.

Antony Flew is the author of *The Logic of Mortality* (Blackwell) and editor of *Readings in the Philosophical Problems of Parapsychology* (Prometheus).

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The Mary Celeste Revisited

Alan Hunt

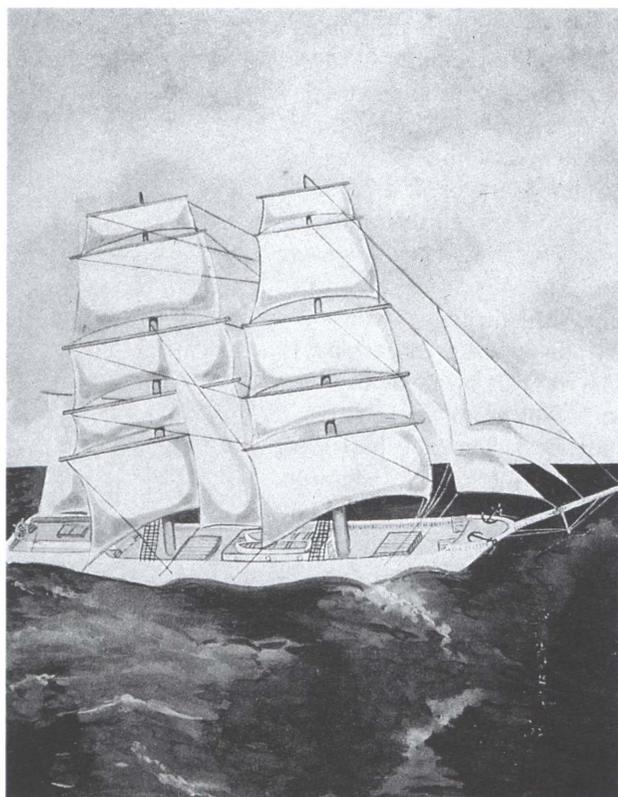
A further look at the mystery which refuses to go away

I CANNOT UNDERSTAND why Brian Haines writes in his article on the *Mary Celeste* (*The Skeptic*, 7.6), that the whole story is total fiction. He then goes on to demonstrate that this is not so. While it is perfectly true that there was no such ship as the 'Marie Celeste', the *Mary Celeste* remains nevertheless a considerable mystery of the sea.

Despite Haines' judgement that no-one would have heard of the mystery if it had not been for Conan Doyle, I am not so sure. Haines refers to the original story, eleven years after the event, which appeared in the *Cornhill Magazine*, in January 1884. It is a matter of interest that this was published anonymously, because Doyle was at that time a practising doctor and it was a matter of professional etiquette that a doctor's name should not be used as the author of a work of fiction in a magazine. The story reappeared later in Doyle's name, in a collection of fictional stories, under the title of 'The Captain of the Polestar'. The tale is such a farrago of nonsense that it is difficult to understand why it should ever have been taken seriously. It is true that the story did introduce the ship's name as the *Marie Celeste*, and the plot depends upon the ship having a sole survivor who later tells the story, a motive that was repeated in several subsequent accounts, which claimed to give the true story of the abandoned ship.

A genuine unsolved mystery remains. It is surely extraordinary that a ship in reasonably good shape should have been abandoned by her crew for the hazards of a small boat in the open seas. It is surprising to realize today how small these ocean-going sailing ships really were. The *Mary Celeste* was little more than 100 feet long with a tonnage of approximately 280 tons. The brigantine left New York Harbour on 5 November 1872 with a cargo of 1700 (or 1701) barrels of alcohol. This would not have been drinkable.

The master of the *Mary Celeste* was a Captain Briggs who was a part-owner of the ship, possessing one-third of the shares in a small consortium which owned the ship. The captain's wife and small daughter were aboard along with a crew of seven. It has been reported that on the night before leaving New York, Briggs and his wife dined with a Captain Morehouse of the *De Gratia*. The seamen were old friends. During the loading of the *Mary Celeste* the long boat which, normally, hung on davits over the stern, was damaged. One small boat remained which was lashed on top of the main hatch.



Mary Evans

The *De Gratia* left New York a week later, its first port of call being Gibraltar, the same as that of the *Mary Celeste*. On 5 December, the *De Gratia* sighted a ship in difficulties. Getting no response, three of the crew boarded the troubled ship, which proved to be the *Mary Celeste*. It was deserted. There were no lifeboats, and there was water in the hold. It was decided that the water could be pumped out and the ship sailed to Gibraltar, the purpose being to collect salvage. The *Mary Celeste*, with its crew of three, arrived at Gibraltar on Friday 13th, one day after the *De Gratia*. The claim for salvage was referred to the Admiralty Court, the President of which was a Queen's Advocate by the name of Solly Flood, who suspected an insurance fraud. Three months later, salvage was awarded but at approximately one fifth of the value of the ship and its cargo. Some plausible solutions may be summarised as follows:

1. There was a criminal conspiracy to perpetrate an insurance swindle.

2. There was a mutiny. The Captain, his wife and child, and the Chief Mate were killed and thrown overboard. The mutineers abandoned ship and for obvious reasons never later revealed themselves.
3. The *Mary Celeste* was abandoned in a state of panic.

It makes most sense to me to seriously consider informed opinion of the time rather than wild theories concocted by non-experts at a much later date. Such commentators have nearly always given Solly Flood a bad press. It is my guess that Flood was nobody's fool. He had a good knowledge of the kind of skulduggery that could happen on the high seas.

The last chapter in the history of the *Mary Celeste* was its deliberate wrecking in 1884 in an attempted insurance fraud. Flood seems to have considered solutions (1) and (2), and the enquiry at Gibraltar dragged on for three months. It is possible that Flood believed that some of the missing crew would appear alive. The strongest argument against Captain Briggs being involved in an insurance fraud is that he was part-owner of the *Mary Celeste*. This is not so simple as it sounds. He had probably borrowed the money for his third share in the syndicate owning the *Mary Celeste* from a man named Simon Hart who is later quoted as part-owner. The owner of the other two thirds was a Captain J H Winchester, who went to the Gibraltar enquiry to protect his own interests. Winchester, after giving testimony at the enquiry during an adjournment, went to Cadiz ostensibly for pleasure, giving the impression that he would return to Gibraltar. Captain Winchester turned up in New York a month later. The family of the missing Chief Mate Richardson thought that either a mutiny, or a criminal conspiracy, held the clue to the disappearance of the crew. It should be remembered that it was an age when ship-owners often sent men to sea in 'coffin' ships hoping to claim insurance.

Following the completion of the inquiry, the *New York Sun* of 12 March 1873 stated under the headline 'The Abandoned Ship', that the explanation was 'No Mutiny but a scheme to defraud the Insurance Company'. A reporter claimed that the *Mary Celeste* had been improperly cleared and sailed under false colours after leaving port. Reference is made to the proceedings of the enquiry of a ship or vessel 'supposed to be the *Mary Celeste*'. It seems unbelievable that those who boarded the *Mary Celeste* did not seem to identify the ship until they had boarded her. Was her name not painted on the stern? No evidence was given that she was flying the United States flag, and no mention is made

of the flag in the detailed inventory.

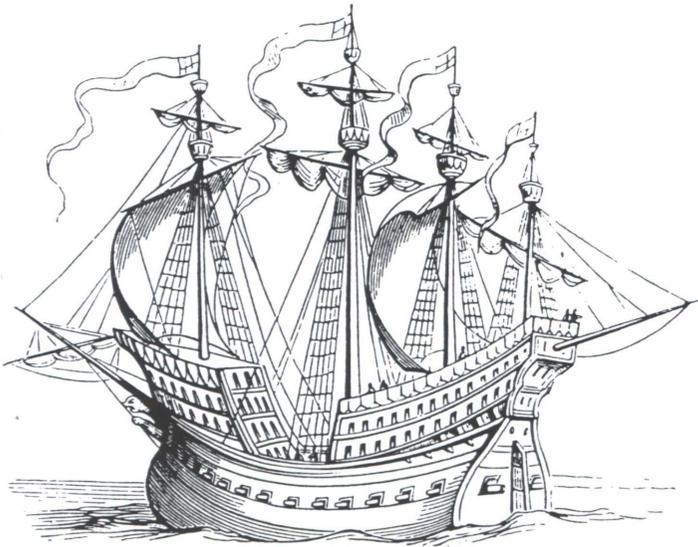
The enquiry took such a long time that Captain Morehouse decided that his cargo should be delivered to Genoa. He put Deveau in charge of the *De Gratia* while he remained to fight the salvage claim. Deveau was of course one of the principle witnesses, whereas Morehouse had remained on the *De Gratia*. Although Deveau did return to Gibraltar this was not true of one of the crew who had boarded the *Mary Celeste*. He was said to have damaged his back while unloading in Genoa and was not fit to return. Solly Flood was furious. He could not believe that the *Mary Celeste* had remained on course after being abandoned on 25 November. He was aware that Briggs and Morehouse were old friends. The Naval historian J G Lockhart has said that they dined together the night before the *Mary Celeste* left port. There would seem to be evidence to support some kind of insurance swindle.



The evidence to support a hasty abandonment of the ship seems even stronger. Missing from the abandoned ship were the chronometer and sextant, as well as a navigation book. The boat that had been lashed to the main hatch had been taken. Flood could not believe that an unmanned ship could have remained on course for eleven days. But what if the log had not been kept up to date? If the weather was bad the crew may have been so busy that they intended to make the log up later. The skeleton crew on the *Mary Celeste* did not make up the log until they neared Gibraltar. All the evidence supports the idea that the *Mary Celeste* was abandoned in a hurry. Although the Captain's navigational instruments had been taken, the bulk of the crew's personal possessions had been left behind. This suggests a hasty leaving, or a belief that they would return, or both. It is likely that the

small boat was attached to the *Mary Celeste* with the intention of returning when the immediate danger was over. We know that the ship's boat was not attached in the normal manner. We might guess that at some point the towing rope snapped leaving the unfortunate occupants adrift in the open sea.

There are two theories to explain the sudden desertion of the larger ship. The most usual of these is that Captain Briggs feared an explosion might occur. The cargo of alcohol may have become volatile. This sometimes happened when ships of such type passed through varying temperatures. A process called 'dunnage' could occur, when ice melted in warmer temperature and released fumes. This was accompanied with loud crackling which might be mistaken for fire below. One hatch at least had been removed on the *Mary Celeste*; it may have been deliberately



removed to allow fumes to escape, or been blown off. Captain Winchester supported the alcohol fumes theory as did the widow of Captain Morehouse when quoting her dead husband's opinion in 1926.

The other theory to explain the hurried leaving of the ship is that the *Mary Celeste* became 'becalmed' and was in danger of being carried onto rocks by treacherous currents. Captain Morehouse has also been quoted in support of this theory as has Captain James Briggs, the brother of the missing captain.

Should it be thought unlikely that an experienced captain would leave a larger boat for the open seas in a small boat, it is interesting to consider that in 1919 the schooner *Marion Douglas* was abandoned off Newfoundland yet managed to cross the Atlantic, and was towed in for salvage after being found off the Scilly Isles. Even more recently, and more amazingly, a Greek tanker, on New Year's Eve 1978, was thought to be in trouble. Thirty-seven of the crew took to the boats and perished in the sea. Three members stayed on board and survived.

There is another point of interest. The mystery of the abandoned ship is older than the *Mary Celeste*. As we have

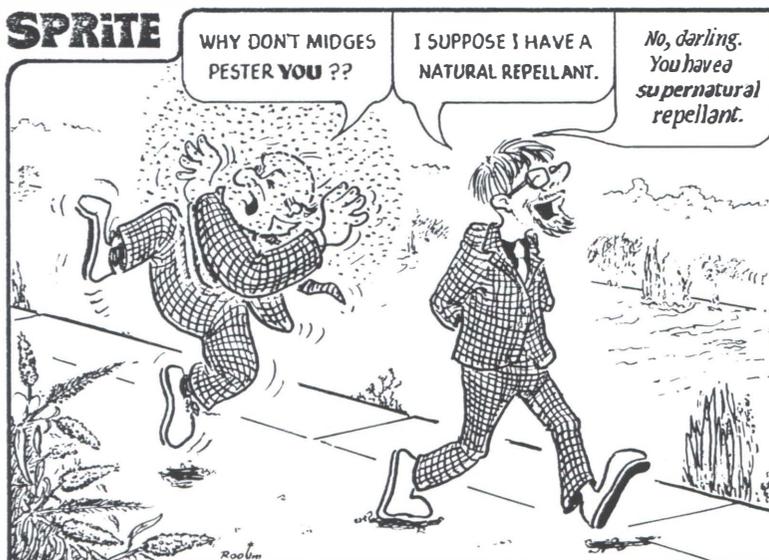
today 'urban myths', so there are traditional myths of the sea. *The Times* of 6 November 1840 is said to have reported that a large French vessel, *The Rosalie*, was found abandoned by a coaster, on or about 26 August. The greater part of her sails were set and she did not seem to have sustained any damage. The cargo was still in perfect condition although there was about three feet of water in the hold. This is about the same as in the case of the *Mary Celeste* although this may well have been average for the typical sailing ship. There was a cat, some fowl and a canary on board. Everything pointed to a hasty abandonment of the ship, no member of the crew being on board. The truth of this story may be doubtful but it does seem to indicate an earlier example of a myth which is later echoed by the *Mary Celeste*. The recent version was circulated by the indefatigable Charles Fort. Lawrence Kusche, in his *The Bermuda Triangle Mystery—Solved* reveals that Lloyds of London could find no record of such an incident, neither could the Musée de la Marine in Paris.

We are left with the tantalising possibility that the story of the deserted ship had been told in the bars in the ports where seamen gathered for many years before 1872. Did a group of conspirators take this myth and give it a spurious reality in an ingenious attempt at an act of piracy or an insurance fraud?

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Allen Hunt is a writer living in London. He has worked as a Civil Servant at the Dept of Education and Science, and as a part-time lecturer at the City University and the Working Man's College.



Can the Hands Heal?

Michael Stanwick

A skeptic questions the basis of claims for Therapeutic Touch

IN THERAPEUTIC TOUCH (TT) 'as commonly practised, the TT practitioner is said to direct healing energy through his or her hands to the subject for the purpose of helping or healing ... TT achieved its effect by an interaction of energy fields between the practitioner and subject' [1]. It must be noted however, that TT does not involve physical touch. Practitioners say that TT involves 'phases that can be broken down into steps that ... can fit into the nursing process' [2]. These phases are:

Centreing: becoming 'focused' in a 'calm, alert and open state'.

Assessment: becoming 'quiet' and listening with your hands by passing them three to five inches above a patient so as to pick up variations in the 'energy field' that signal an imbalance in the field. This is done quickly because it is an intuitive process.

Clearing: using hand motions over the 'patient' and concentrating where there are field imbalances.

Intervention or balancing: controlling and directing the 'living field energy' so as to reorder the system and the 'living energy field'. The practitioner feels his or her self a complete part of the whole process.

The term TT and how it relates to nursing practice was first invented by Dolores Krieger, a professor of nursing at New York University (NYU), and defined by her in the *American Journal of Nursing* [3]. However, the conceptual framework on which Krieger's ideas were built was initially developed by Martha Rogers, the dean of the NYU School of Nursing, and described as a nursing model in her *Introduction to the Theoretical Basis of Nursing* [4]. Rogers' ideas became known as the 'theory of unitary man' or the 'science of unitary human beings'.

Krieger taught her own ideas to students in a Master degree programme called 'Frontiers in Nursing'. One of her students was Janet F Quinn, who is an Associate Professor and Senior Scholar of the Centre for Human Caring (CHC)—an affiliate of the University of Colorado Health Sciences Centre School of Nursing. In 1982, Quinn 'advanced TT one step further ... demonstrating that physical contact was not necessary for a healing effect to occur' [5]. This form of TT is called by practitioners, 'Non-Contact Therapeutic Touch', or NCTT.

The CHC, under the directorship of Dr Jean Watson, has an international affiliate here in the UK called The Scottish Highlands Centre for Human Caring, based at Raigmore Hospital, Inverness, under the auspices of Dr



Mary Evans

Valentine Greatrakes, Irish healer (1803)

Betty Farmer. Another contemporary of Krieger's is Jean Sayre-Adams, an American RN with an MA in Holistic Studies from the University of California, San Francisco. Sayre-Adams, who studied with Krieger at NYU, is now based here in the UK and is the founder and director of the Didsbury Trust which claims to be 'developing TT based on accredited and well-established programmes ... now being taught by the Trust in nursing schools, post-basic education departments and nursing development units' [2]. Sayre-Adams also features prominently in a section on TT in a *Nursing Times* supplement on complementary therapies [6]. She also authored an article, for the nursing periodical *Nursing Standard* [2] in which she made these claims:

1. Modern physics can now be equated with eastern mysticism in supporting a holistic view of the universe.
2. Many other disciplines—such as biology, psychology and philosophy—are supporting this idea.
3. This theme can be found in nursing as exemplified by the theories of Martha Rogers.

A description of Roger's theory followed:

1. As well as every other living thing in the universe, human beings are made up of energy.
2. Humans and the environment are exchanging energy with each other in an ongoing, simultaneous fashion.
3. Universal order is the force inherent in all energy fields.

Atomic physics was stated to be a discipline in which an observer can influence the properties of the observed objects and this equated with eastern mysticism where, also, this relationship involved the observer and his or her consciousness. Sayre-Adams then states that this interaction is the most important feature of quantum mechanics.

So, now that she has linked eastern mysticism with Roger's theory (and by implication, TT) she then states TT also includes a 'human facilitator'—the nurse—who can 'observe and repattern the energy field of his or her patients'. The phases or steps inherent to TT were outlined (see above) and followed by reports of some research with a final comment about the Didsbury Trust. After discussion with Mike Hutchinson of the UK skeptics and Bela Scheiber of the Rocky Mountain Skeptics (USA)—who are involved in an ongoing critique of TT as reported in the *Skeptical Inquirer* [7]—I managed to collate enough information on TT to formulate a reply, with my wife, to the *Nursing Standard*. After substantial abbreviation, what follows is what went to print [8]. It should give some idea of the approach we took. (References have been included for sources cited.)

We are very surprised by various claims made in the article 'Therapeutic Touch: a nursing function' [2].

If it is believed that 'nurses practising TT can project, direct and modulate energy based on the nature of the living energy field and ...repattern the energy field', where is the evidence? Is there any publication in a reputable peer-reviewed scientific journal which demonstrates the existence of an 'energy field interaction'? Further, the Grad [9a,9b,9c] and Smith [10] research cited by Sayre-Adams [2] involves laying on of hands, not TT, which is itself a misnomer since it does not involve physical touch. She then cites Krieger's study [11] of haemoglobin levels in people who have received TT, but according to Kramer [12], 'the change in haemoglobin levels have never been demonstrated to be linked to any energy fields of any kind'.

A further study by Krieger [13] was described by Bullough and Bullough [14] as 'poorly conceived and methodologically poor'.

Finally, she says 'numerous studies by Quinn have been published since 1987'. How many? What were the results? Were they published in peer-reviewed journals? If so, which ones?

Sayre-Adams replied [15] with more unsubstantiated claims as well as ad hominem arguments:

1. Our comments were more revealing about us than about TT.

2. The body of evidence supporting TT is extensive.
3. Some energy and discipline could have been used by us in conducting a literature search of articles on TT which have been published in peer-reviewed scientific journals.
4. Evidence from the *Skeptical Inquirer* (SI) is not a demonstration of academic research rigour.
5. SI is not a reputable peer-reviewed scientific journal.
6. The tone of our letter shows why people across the country, in their millions, are turning to alternatives for help and healing.
7. She would make available a compendium of some of the research published in such journals.

We replied [16]:

We take exception to Jean Sayre-Adams' ad hominem arguments regarding SI.

When new ideas such as 'energy field interaction' are postulated and positively related to scientific fields of inquiry, it is perfectly legitimate to ask whether there is any primary research whatsoever, published in refereed scientific journals. Discussion of such research by scientists and other skeptics then continues in related, unrefereed journals. We posed a number of questions which remain unanswered. Where is the evidence for the existence of the living energy field? Where does it originate? Where is the evidence that anyone has the ability to manipulate this energy field? Is there any primary research published in refereed scientific journals demonstrating the existence of the above? Where is the evidence?

To date I am still awaiting the list of research. However, as Alan Shipley of the Rocky Mountain Skeptics (RMS) states, skeptics are not advocating or promoting 'the legal abolishment of the belief in, or private practice of, TT'. Nor are skeptics 'saying that no aspect of TT is valid'. It is only when 'a testable claim is made in the name of science, and is promoted as a scientific 'fact' that the nature of that evidence must be questioned'. Finally he adds, 'skepticism in the final analysis is a tool that nonprofessionals have at their disposal to demand quality evidence from those claiming to be professional.'

Of further concern to me however, is Sayre-Adams claim [2] that TT is being taught in nursing schools, post-basic education departments and nursing development units and it is with this claim in mind that I now turn to the efforts of the Colorado Skeptics and the RMS in particular.

Readers of the SI will be aware of the RMS' 2-year effort to convey their concerns regarding the scientific issues surrounding TT as it exists at the Colorado University (CU) Health Sciences centre. Hence, before the UK connection is tackled, it would be pertinent to see what precedent the CU sets with reference to the promotion of TT in nurse education institutions.

The conclusion to the RMS efforts was a report, issued by an Academic Relevance Review Committee on 16 December 1993, suggesting the Chancellor and the Dean of the School of Nursing should appoint a special committee

of investigators, well-versed in the scientific method and from different disciplines, to carefully examine TT. On 6 July 1994 their report was issued. Briefly, it concluded that although no scientific evidence exists to validate TT, the teaching of TT is protected by the academic freedom set forth by the Regents and therefore classes would continue. However, 'in terms of the underlying scientific basis of TT, its proponents need to ...seek empirical validation.'

The CU School of Nursing issued a reply which agreed to bring together engineers and physicists to conclude if TT classes and treatment have scientific validity.

The question raised by the promotion of this alternative therapy is: Is TT being promoted using the good names of respectable educational institutions when it hasn't been demonstrated to be scientifically valid, 'promises questionable benefits and may delay proven, effective therapies' [17].

As Linda Rojas, a registered nurse, of the RMS stated 'I'm sure we can all agree that minimally, nurses need scientifically-validated standards to provide the public with the best possible care ... This is a consumer issue. What is ultimately at stake here is the delivery of quality nursing care' [17].

Until the results of the UC research programme unfold, then the alleged promotion of TT in UK nurse education institutions as an issue of skeptical interest, from my point of view, will be delayed. However, the *Nursing Times* (1994) [18] has recently published a cover feature on 'healing' (another term for TT), together with an extensive list of references, with a view to generating informed debate. I am now involved in a search for these references with a view to replying with a detailed analysis of them.

For those interested in this topic or who may wish to become involved with correspondence regarding the latest publications concerning TT and nursing [18], I list a reference list below, some of which may be obtained from me care of *The Skeptic*.

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The Skeptic goes homoeopathic

Although it may appear to a skeptic's eye to be absent from these pages, this issue's Psychic Diary column is actually here. However, it may be hard to see since it is published according to the principles of Hahnemann's homoeopathy. Its usual page has been infused with the 'effect' of the words, rather than the words themselves. The more substantial allopathic version of the column will reappear in the next issue.

Spam-Can Totality

Trygve Lode

The true nature of reality

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THE NATURE OF THE UNIVERSE is simple—the entire observable universe is actually a single can of Spam: what we call the universe may be more accurately described as the ‘Spam-Can Totality’.

Sure, you say, the fact that the entire universe is a gigantic can of Spam seems intuitively obvious, but just how strong is the hard physical evidence for the Spam-Can Totality? The answer is, of course, overwhelming; here are just a few proofs of the Spam-Can Totality:

(1) The first two subshells of an atom’s electron shells are called the ‘s’ subshell and the ‘p’ subshell; the first two letters of ‘Spam’ are ‘s’ and ‘p’—coincidence? I think not!

(2) The mathematical constant *e* is approximately 19/7—but the letter ‘s’, the first letter of Spam, is the 19th letter of the alphabet and a can of Spam weighs 7 ounces! *e* is equal to the number of the first letter of Spam divided by the weight of Spam!

(3) ‘Spam’ has four letters: four is equal to 2+2, 2*2, and 2²; four is obviously a representation of two twos—and 22/7 (two twos divided by the weight of Spam) is almost exactly equal to π—yet another fundamental physical constant!

(4) In proof 3, we showed how the length of the word ‘Spam’ is a higher resonance of two—yet, incredibly, nondivergent forces such as electrostatic and gravitational forces decrease EXACTLY as the SECOND power of the radius!

(5) According to the ancient science of numerology, words correspond to numbers according to the rule a=1, b=2, c=3, and so on. Using this technique, we find that the number of ‘Spam’ is 211—and, incredibly, the mass of Spam in grams is 198. Now, 198/211 is equal to 0.938—which is the mass of the proton in GeV!

(6) Lincoln had a secretary named ‘Kennedy’ and Kennedy had a secretary named ‘Lincoln’!

(7) In addition to the standard seven ounce size can of Spam, there are also larger, twelve-ounce cans available. While the seven-ounce cans are a long rectangle, the twelve-ounce cans are closer to being square—and twelve squared (144) minus seven (7) yields 137, the reciprocal of the fine structure constant! Only by accepting the truth of the Spam-Can Totality can one understand the true meaning and significance of the fine structure constant!

The Spam-Can Totality is the ultimate reality of the universe. Only by comprehending Spam can we hope to comprehend ourselves. Black holes are a hoax—because the universe is a can of Spam, only pink holes can exist!

Only through Spam—the unification of physics, chemistry, and biology—can we understand the physical nature of the universe! The ubiquitous microwave background is, in fact, left-over energy from the original COSMIC CANNING EVENT!

Matter is composed of fundamental quanta of Spam—while antimatter is none other than discrete quanta of anti-spam, also known as ‘Vegetarian Spam’ or ‘Tofu’! The reason matter predominates over antimatter in the Spam-Can Totality can be seen by looking in almost any grocery store—not only does Spam sell better than Tofu, Tofu expires in a matter of a week or two, while the expiration date on a can of Spam is years, even decades in the future!

The fact that the earth is made of matter—discrete quanta of Spam—explains everything about the earth, from its structure to the mechanisms of continental drift and sea floor spreading. If you leave the contents of a can of Spam on your counter for a few days, it will automatically form a crust—much like the earth’s!

Soon, this crust will form cracks, just like the mid-Atlantic ridge on our own planet, and things will begin to grow on it—just like the development of life on earth, only with greater speed, owing to the fact that the earth is somewhat larger than most cans of Spam. Even the growth of the higher animals will be simulated in this Spam microcosm, through the process of Spontaneous Maggot Materialization (patent pending)!

Note that the Spam-Can Totality paradigm does not actually contradict the postulated existence of black holes. The severe gravitational tidal effects found in the vicinity of a black hole will readily rip one half of a virtual particle pair away toward the black hole, leaving only its mate in the observable part of the universe. Particle pairs which have as one element a particle which carries the fundamental Spam quanta as an observable aspect turn out to be ideal both for observing this tidal effect and for proving the existence of black holes.

Simply place a can of Spam, or even a small part of a can of Spam, next to some other arbitrary matter grouping, such as filet mignon, tofu jambalaya, or gourmet ice cream. The arbitrary matter grouping will always be whisked away first, leaving the can of spam alone in the observable universe.

May Spam be with you.

The Reverend Doctor Trygve Lode is a member of the Church of the SubGenius.

Skeptic at Large

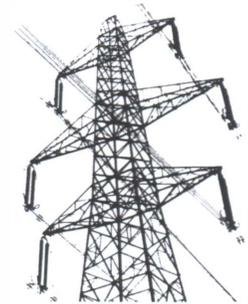
Wendy M Grossman

Allergic reactions

BACK IN JANUARY, the *Independent* published an article by Caroline Richmond, co-founder of Healthwatch, on the subject of a multiply allergic clutch of people in Texas. For anyone who missed the article and the following BBC program, 'When the Canaries Stop Singing', this was a group of folks who isolated themselves rigorously from the modern environment, wearing undyed clothing, hanging the mail to air on clotheslines in the backyard to get the print fumes off it, drinking filtered water, and breathing from oxygen cylinders. The most extreme cases lived in carefully constructed bubbles.

I remembered this when I was reading *Allergies and Aliens*, by Albert Budden (Discovery Times Press). In this book we have a group of allergic people who are hypersensitive to electricity—oh, and lights, sounds, and smells. Some of them develop asthma; others can't wear watches or synthetic fibres because their bodies build up so much static electricity. On top of these unpleasantnesses, they tend to have frightening psychic experiences—anything from abduction by aliens to mysterious night visitors. What's the similarity? The Texas lot trace their sensitivities to incidents involving chemicals—spilled solvent (allyl caproate), living in a mobile home, breathing polluted city air. The Budden lot trace their problems to incidents involving electromagnetic fields—living near electric pylons, for example. (Budden's idea of 'near' is as much as 750 meters (that is, nearly a mile) away. Even more interesting is that one of the doctors Budden quotes as an expert—Dr Jean Munro, described as 'Britain's leading authority on EH [electrical hypersensitivity] and multiple allergy'—is also cited by Richmond as the 'clinical ecologist' called in to diagnose a British sufferer. This is the sort of stuff that gives allergies a bad name.

When I first visited Britain, in 1977, warnings to people who invited me for dinner that I was allergic to peanuts, nuts, soybeans, chick peas, and lentils were greeted with undisguised scorn. Allergies, I was given to understand by my prospective hosts, were one of those fanciful ailments hypochondriacal Americans imagined themselves to have. It was really just an excuse not to eat things you didn't like. Fortunately, none of them pulled a stunt like the one that was inflicted on a friend of mine: knowing he was allergic to cheese, a dinner host of his served it to him deliberately, without his knowledge. (He was sick all over his host, by way of retaliation.) And let's not forget the girl who died of eating a piece of lemon meringue pie because, unknown to her, the crust contained crushed peanuts. Her death has, at last, made people in this country aware that these things can be real and serious.



None of the seriously allergic people I know see aliens... However, my crowd were generally born with them. Mine surfaced when I was only days old. Budden and Richmond are talking about people with 'acquired allergies'. But why should these be different? According to Budden towards the end of the book, food allergies are no different from electrical hypersensitivity in stressing the body and making the allergic person sensitive to psychic phenomena. Logically, therefore, you would expect that born allergics would start to show some of the same symptoms. But Budden never tackles this. Not that these people aren't miserable: they almost certainly are. But are they unable to go out because they are allergic to everything they meet, or are they just scared and projecting their fear onto external objects? The medical experts Richmond quotes reject the notion that these patients have medical problems; rather the suggestion is that they have psychiatric problems. One doctor came up with the nice term 'toxophobia' to describe the syndrome. It's hard not to draw a similar conclusion about Budden's clearly disturbed case studies, who have hallucinations, are awakened by mysterious night visitors, and lose blocks of time (like the 'missing time' syndrome that Budd Hopkins viewed as evidence that his followers had been abducted) from their lives.

Others of the symptoms Budden describes are less wildly out-of-this-world, but no easier to understand—and not just because the book is illiterately written and copy-edited (there are no spaces after periods or commas, which makes reading it a chore, and the spelling is execrable). For example: Budden sees giving up smoking overnight as an indication that the person has an acquired allergy to cigarette smoke. Similarly, he talks about hypergraphia—the legitimate psychological condition of writing down obsessively everything that happens to you—as evidence of electric hypersensitivity. If Alan Clark had only known...

Budden himself is described in the jacket blurb as having taught science in 'many' state schools after working for the Scientific Civil Service for three years. He has been investigating case studies for fourteen years, and is a member of the Environmental Medicine Foundation. The good news is that this book is only the beginning: an extended version is planned for spring 1995. In the meantime, if you're wondering whether you're one of these people, Budden includes a quiz for investigators to administer. First question: 'Are your eyes sensitive to light?'

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

Reviews



Bad Science and sloppy research

Richard Milton, *Forbidden Science: Suppressed Research That Could Change Our Lives* (Fourth Estate, 1994, hardback, 264 pages, £14.99)

While many aspects of society have developed and expanded traditions of tolerance and freedom of speech, Richard Milton argues in this book that big-money science has developed 'many of the trappings of a banana republic dictatorship'. He maintains that it is unaccountable to the general public and discussion of the subject is taboo except 'by its high priests'. To illustrate his point, Milton cites numerous examples of scientists engaging in apparently irrational or dishonest behaviour to close off discussion and marginalise proponents of certain kinds of claims. Milton's range of examples greatly overlaps topics of interest to skeptics: parapsychology, cold fusion, astrology, creationism, etc.

Skeptics themselves come under heavy fire from Milton. He dismisses CSICOP as a 'crusading' and 'inquisitorial' organization which does not live up to its own standards. As evidence, he cites C E M Hansel's position that the conceptual possibility of fraud in any parapsychological experiment is sufficient to dismiss it, but does not bother to note that this position has been strongly rejected in the *Skeptical Inquirer* by both Ray Hyman and James Randi. Milton brings up the notorious 'Mars Effect' affair, but his reliance on an erroneous account by Jerome Clark leads him to confuse the Zelen Test (conducted by Michel Gauquelin to test the Belgian Comite Para's theory about the cause of the 'Mars Effect') with the CSICOP-conducted US test. While the conduct of some CSICOP folks was less than exemplary in this affair, some critics have greatly distorted the record and ignored crucial facts in an attempt to make it out to be the scandal of the century. (CSICOP's failure to tell its side of the story has no doubt contributed to what success this tactic has had.)

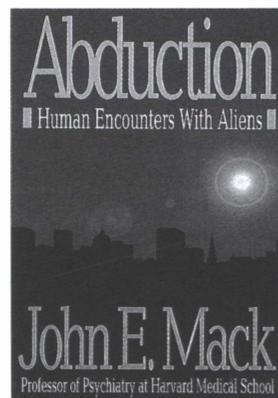
Milton is an entertaining writer with interesting subject matter, and his book has raised some questions in my mind about just what the scientific evidence is regarding a number of controversial issues. This is counterbalanced, however, by Milton's almost total reliance on secondary sources. On issues where I have considerable knowledge of the primary sources (e.g., the 'Mars Effect'), it is clear that Milton's knowledge is superficial and one-sided. (The same flaw is endemic in what I've seen of Milton's earlier book, *The Facts of Life*, which uncritically relies on young-earth creationist literature, much of which is at the crackpot level.) This leads me to a strong suspicion that the same is true of the areas where I lack knowledge.

Milton makes some important points about uncritical acceptance of appeal to scientific authority, the role of big money in science, and the occasional use of bad arguments within science. But these points have all been made better elsewhere (e.g., Robert Bell's *Impure Science*). Milton also does not seem to recognize the value of conservatism in science or the distinction drawn by Henry Bauer (in *Scientific Literacy and the Myth of Scientific Method*) between frontier science and textbook science. These flaws deeply mar the book, and the book should be read with a critical eye and a willingness to engage in further research before accepting Milton's claims at face value.

—Jim Lippard

Harvard abductions

John E Mack, *Abduction: Human Encounters With Aliens*, (Simon & Schuster, 1994, hardback, 432 pages, £16.99)



Hundreds of people, in the USA and elsewhere, report being abducted by little gray aliens, who levitate their victims through walls and windows into spaceships. The abductees are subjected to medical and sexual experimentation, perhaps intended to create a hybrid gray-human race. Probes are inserted into sinuses and genital areas, tag-

ging devices are implanted and removed, and various scars are created in the process. In some cases, the aliens express concern over the Earth's future, and use symbols to transform the abductees' consciousnesses before returning them, regenerated, to the workaday world.

The author of this book, a Harvard professor of psychiatry and Pulitzer-prize winner, has worked with over 80 individuals who (spontaneously or under hypnosis) describe such traumatic experiences, with obvious Freudian and Jungian overtones. The only problem is that he believes them!

So, is a new paradigm about to overthrow the old, Western materialist world-view? The author seems not to have undertaken strictly controlled experiments, relying instead heavily on unsupported anecdote. He discusses such UFO sightings as the American Airship 'flap' a century ago, and the contemporary Travis Walton case, without acknowledging that the former has been exposed as a hoax, and grave doubts have been cast on the latter by

impartial investigators.

Mack is committed to a shamanistic world-view, having experimented with Grof's holotropic breathwork as well as Tibetan Buddhism. A disciple of Budd Hopkins and David Jacobs, who pioneered the use of hypnosis to aid abductees' recall of traumatic and invasive alien encounters, he nevertheless finds positive, growth-oriented elements in his subjects' experiences, reminiscent of the more benign and 'Aquarian Age' findings of Leo Sprinkle.

There are frequent references in the text to The Dalai Lama, Shamanism, Tibetan Buddhism, Rupert Sheldrake, and pro-abduction writers generally, but no mention of any remotely skeptical works.

Many of the subjects cited have esoteric interests such as Castaneda, Buddhism, Tai Chi, and so on (for example, Chapter 12), and some have had extensive exposure to UFO literature and films. Again, many have a history of strange experiences—ghosts, fairies, UFO encounters, imaginary playmates, out-of-body experiences, and so on, in some cases going back to childhood. Many psychologists explain such phenomena in terms of cryptomnesia—visions and voices from within—based on material seen or heard and worked up into realistic hallucinations by the subject's unconscious mind.

Such hallucinations may be produced by disturbances in the temporal and adjacent limbic lobes of the brain—triggered by stress or fatigue, in people who are by no means mentally disturbed, but who may have fantasy-prone personalities, perhaps reflecting childhood trauma.

In particular, the twilight state between sleep and wakefulness may give rise to hypnopompic visions, sleep paralysis, a sense of alien presences, and sexual fantasies (such as incubi and succubi) with details taken from the prevailing culture. Indeed, many of the subjects mention feelings of paralysis during encounters with aliens in their bedrooms, often 'passed off by parents as dreams' (for example, pages 77, 119, 143, 179, 221), and abduction events 'which ended back in bed' (for example, pages 99, 120, 245).

Other psychologists, such as R A Baker and M T Orne, point out that hypnosis is no guarantee of factuality, and that fantasy-prone individuals may confabulate events that never happened, to comply with the demands of the experimental situation. In one well-known demonstration of this effect, A H Lawson and W C McCall showed that hypnotised subjects asked to describe an (imaginary) UFO abduction came up with the same general features that are mentioned throughout the literature as genuine.

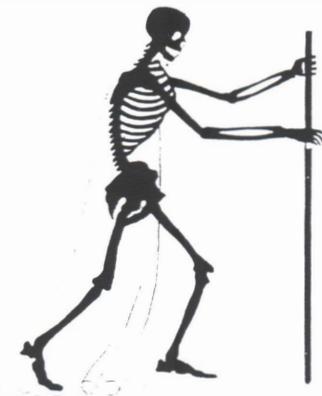
As one subject puts it, 'if you can't trust a Harvard professor, who can you trust?'. A good question. *TIME* magazine (25 April 1994) reports that one of Mack's subjects, Donna Bassett, was actually a 'mole' who just made up an abduction story, which the author apparently believed. Could he have been fooled by others, perhaps out for free publicity?

UFO accounts abound in our culture, especially in the media. I even saw one on my breakfast packet of Rice Krispies this morning, with the caption 'Free Alien Inside'. So there you are!

—Mike Rutter

The eyes have it

J H Brown, *Spectropia, or Surprising Spectral Illusions, showing Ghosts Everywhere and of Any Colour* (Griffith & Farran, 1864; facsimile edition by Pryor Publications, 1994, paperback, 48 pages, £4.99)



For most of 1994, and until Ian Botham's autobiography appeared, the three top-selling hardback books in this country have been the *Magic Eye* series of random-dot stereograms. Love them or loathe them, these infuriating images are everywhere, as are the people squinting and cursing at them. The popularity of optical effects and illusions certainly isn't a

new phenomenon, but the random-dot stereograms are soon bound to lose their novelty and become half-remembered, like kaleidoscopes, picture postcards with winking-eye faces, holograms and 3D comics.

The book at hand deals with yet another kind of optical effect: persistence of vision, and it is a super book. We are presented with drawings of spirits, ghouls, witches, and ghostly forms, and invited to stare at each picture for a short time, then turn our gaze to a blank surface such as a wall or ceiling. There, we see a crisp but ghostly floating image in the complementary colours of the original. The effect is actually very striking, and great fun. And it works straightaway, every time, which is more than can be said for those infernal stereograms.

But what makes this book of particular interest to *Skeptic* readers is its rather surprising *raison d'être*: originally published in 1864, at the height of the spiritualist craze, it sets out to explain the mysterious shapes people report observing in the séance room, as being due either to deliberate deception, or to artifacts of the way our eyes work. The author, J H Brown, makes his position quite clear at the outset:

It is a curious fact that, in this age of scientific research, the absurd follies of spiritualism should find an increase of supporters; ... The modern professor of these impostures, like his predecessors in all such disreputable arts, is bent only on raising the contents of the pockets of the most gullible portion of humanity, and not the spirits of the departed, over which, as he well knows, notwithstanding his profane assumption, he can have no power.

Mr Brown's thesis is that people who 'see ghosts' are seeing nothing but effects caused inside their own eyes. In addition to the easily demonstrable persistence of vision effects, he describes how we may see images of our own retinal blood vessels, and invites us to perform 'Purkinje's Experiment', where a lighted candle passed slowly before the eyes reveals the blood vessels 'not unlike branching trees'. Some vessels may stand out more than others, or we may see just one or two fleetingly. If the circumstances are right, Mr Brown argues, we may extrapolate these images

into the outline of a human head, or a stick-like body and limbs. Then there are 'muscae volantes', little pieces of cell and other debris that float around inside the eye, which again may appear to be images of objects external to the eye.

Mr Brown was clearly a man with a mission, and his book is as fresh to read today as it must have been in 1864. Pryor publications should be congratulated for adding this curious and pleasant book to their catalogue of facsimile editions. Highly recommended.

—Les Francis

Sloppy media

Linda Williamson, *Mediums and the Afterlife* (Robert Hale, 1994, paperback, 186 pages, £6.99)

This was a difficult book to review, mainly because it came across as rather religious in nature, but seeing as the author is a practising medium at a spiritualist church, I think that was probably the intention. It is of course difficult, and often rather dangerous to attack the religious beliefs of others, and so I shall try to limit my appraisal of this book to a general description and evaluation of its contents.

I shall begin by saying that the book does not attempt in any way to present a rounded and critical view of spiritualism and mediumship, but is instead Linda Williamson's personal account of her own beliefs as a practising medium. Briefly, over eleven chapters Ms Williamson outlines her faith in the survival of the soul after death, and the apparent ability of certain individuals to communicate with these dearly departed spirits, and she presents 'evidence' which serves (in her eyes) to back this up. Thus, we are treated to a potted history of spiritualism/mediumship which focuses on many of Ms Williamson's contemporaries and friends. Due reverence is thus accorded to the likes of Stephen O'Brien, Rosemary Brown, Rita Taylor and Doris Stokes, and several of their ghostly experiences and noted mediumistic success stories are presented.

In further chapters we are treated to the mysteries of the séance room and discover the rich talents of Florence Cook, and the oft mentioned D D Home, who (as always) is described as 'the most amazing medium of all time'. Other chapters discuss the phenomenon of ghostly voices being heard on cassette tapes, and a whole section is devoted to ghosts who, we are informed, are trapped spirits. Fortunately, we soon become familiar with the work of medium Phillip Seth (part-time car park attendant) who has the kindly task of rescuing the trapped spirits, and sending them on their way.

Sadly, a whole chapter is devoted to the rather dangerous and disturbing practice (in my eyes at least) of supposed spiritual healing. Undue prominence is given to psychic surgeon José Arigo whose shabby con-trick is accorded the reverence it does not deserve. We are in fact informed that Arigo has been examined by scientists on many occasions, and none of these investigators... 'discovered any sort of trickery or could provide an explanation for what they saw', so that's you told James Randi! Closer to home, is a description of Londoner Stephen Turoff who

gains his supposed curative skills from the deceased Dr Kahn, his successes we are told are... 'inexplicable by any rational means'. May I beg to differ.

The most entertaining part of the book is the chapter devoted to the deceased souls' descriptions (or lack of them) of the afterlife. It is here that the sceptical or unconvinced reader could be persuaded otherwise, for surely if some discarnate soul could provide some wondrous description, or some foolproof piece of evidence of life after death, then who would not dare disbelieve? Sadly, such an opportunity is wasted, Ms Williamson informs us that such descriptions are often vague and evasive, because, she explains, those who communicate from beyond the grave are '...limited by the confines of language, which does not contain words subtle enough for what they want to convey...', which seems a fairly convenient way to me for the medium to avoid either using their imagination or to head off difficult and pertinent criticisms.

This is not a book for the sceptic as it adds nothing to the debate of whether there is some form of life after death. It seems to be aimed squarely at one who is likely to believe already, and can be relied upon not to ask any embarrassing questions. I also got the feeling that much of the book is a thinly disguised advert for contemporary mediums and healers like O'Brien and Turoff. On the whole, the evidence presented for a life after death is sloppy and uncritical. I found it rather amusing that CS-ICOP is referred to as 'CICOPS' throughout, and we are informed that this organisation has a journal called 'The Skeptic'. If Ms Williamson can't get these two simple facts right, why should we believe in anything else that she says?

—Nick Neave

Modern ghosts

Richard Dalby (Editor), *The Virago Book of Ghost Stories, Volume 2* (Virago, 1994, paperback, 318 pages, 1994, £6.99)

Ghost stories told by friends are only ever related in a conspiratorial manner late at night after several drinks too many. Like many folk tales, the events recounted always occurred to a friend of a friend and are never verifiable. In this information-laden age such ghost stories have lost much of their power; the horror in a traditional, fireside ghost story is little when compared to the inhumanity we know people are capable of. A book of such pallid spectres would be a tedious collection indeed. Fortunately most of the tales in this fine book are not fireside chillers; the modern ghost story is very different from its staid predecessors.

The book consists of tales by twenty-seven different female writers of this century. The least successful stories in this collection are those which follow the accepted conventions of the ghost story, the honourable exception being E Nesbitt's wonderful 'No. 17' in which despite all the elements of a standard ghost story being present (the roaring fire, a group of inebriated travellers, a horrible death) the dénouement is completely unexpected.

The most common theme of the stories in this book is

that of loss and regret; this is most plainly illustrated by Jean Rhys's 'I used to live here once'. The wistful tone of the title perfectly captures the melancholic recognition of a lost time.

Many of the tales in this collection are not an easy read—the skill of the writers makes the pain of their characters too raw. Perhaps the best example of this is A S Byatt's, 'The July Ghost' which despite (because?) being written in the third person movingly illustrates the anguish of its main character, a bereaved mother: 'He is—was—a most likeable boy'.

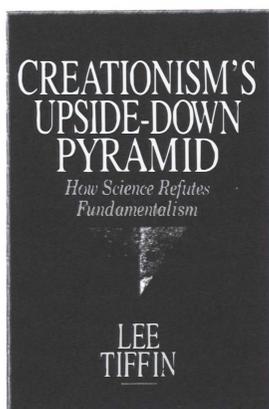
If a ghost story is to be successful it is essential that the reader believes in the characters and locations described. Consequently all the writers in this book take care to ground their tales in reality and thus all the stories in this book are very descriptive. This is clearly seen in Daphne du Maurier's, 'The Pool'. Her tale is one of the most disturbing in the book and much of its effect arises from the way in which she perfectly captures the languid oppressiveness of a close summer's day ('The hot day spun itself out like a web'.)

I thoroughly recommend this book as the perfect antidote to excessive good cheer! It is too dense to be read happily in one sitting and should be considered as an occasional treat. Sceptics need not worry that this is a credulous collection of tales of the supernatural; in the modern ghost story, ghosts are an optional extra.

—Toby O'Neil

Inversion creates incontinence

Lee Tiffin, *Creationism's Upside-Down Pyramid: How Science Refutes Fundamentalism* (Prometheus Books, 229 pages, hardback, 1994, £25.60)



The enigmatic title of this book refers to a sequence of assumptions made by creationists—concerning the three periods of an alleged biblical flood—which when arranged, would each be analogous to a stone of an inverted pyramid. But why inverted? Because, says Tiffin, creationists construct their view of nature by starting with a single postulate—

the belief that biblical scripture describes accurately the geological and biological origin of life—upon which they place further conjectures. When completed, this is intended to 'constitute overwhelming scientific knowledge'.

Tiffin concentrates primarily on the single issue of the creationist version of the Genesis flood—especially its first period, the pre-flood era, because a direct consequence of that is an 'earth "science model" which would have made life impossible' and hence further creationist arguments about geological and biological evolution become fatuous.

In part one, Tiffin provides a brief overview of creationist tenets inherent to their 'flood science', as espoused by Henry Morris and John Whitcomb et al., of the Institute for Creation Research in the United States. He begins by critically examining the claims for a young age for the earth, the distribution of water and the manipulation of both continental and oceanic crust so as to conform and support biblical flood narrative. Further chapters deal briefly with 'flood geology', the origins of plants and animals and the conditions aboard the Ark for example. By discussing the creationists' claims for each topic, in the light of current knowledge from mainstream science, Tiffin makes evident their logical absurdities. Part one ends with an analysis of the methods by which creationists deliberately manipulate scientific statements to support their conjectures, a description of their social agenda and a discussion of leading creation fundamentalists attempts to rewrite the Genesis flood story and the reactions that has invoked.

Part two begins with a brief overview of the methodology of science and then Tiffin launches into a more rigorous quantitative analysis of creationist claims, made in part one, using current mainstream scientific knowledge. This could be a more demanding section, even for the informed lay reader, so Tiffin has laid out the scientific information and arguments in a clear style aided by, in most cases, well labelled, simple diagrams and tables as well as an appendix of 'energy absorption bands for atmospheric water vapour' at the end of the book.

Part three provides a discussion of the fundamentalist agenda for education and politics and their attack on the US constitution with reference to the separation of church and state.

This book aims to 'counter the influence of religious zealots and at the same time stimulate appreciation for genuine science' and overall I think Tiffin has succeeded. Each chapter is fully referenced although the inclusion of a comprehensive subject index would have been helpful. Creationism's Upside-Down Pyramid inevitably stands in the shadow of A N Strahler's masterly *Science and Earth History* (Prometheus) which, at £41, is in my view a better buy. However, if you want a less complex, introductory text on the nature of creationism and as an example of the debunking of creationist arguments, using the single issue of the Genesis flood story, go for this one. The fact it is based on the American experience doesn't detract from its merits—it diagnoses creationism as an incontinent pseudo-science because its arguments just don't hold water!

—Michael Stanwick

Witchcraft from A to Z

Doreen Valiente, *An ABC of Witchcraft* (Robert Hale, 1993, paperback, 377 pages, £7.99)

I often find that the blurb on the back cover of a book usually turns out to bear little resemblance to what the book is actually about, but to my surprise and delight, the blurb on the back of this book provides a very accurate assessment of its contents. This excellent little book presents,

in alphabetical order (ranging from 'Airts', to 'Zodiac'), just about everything that you could possibly want to know about witchcraft. For those of you who thought that witches belong firmly in the 16-17th centuries, or in tatty horror films (and I was one), you couldn't be more wrong. Doreen Valiente obviously knows her stuff (she has been a practising witch for more than 30 years), and has provided an in-depth and scholarly overview of the origins and development of witchcraft and the Wicca religion, ranging from the ancient Greeks to modern day. Just about everything is covered, from broomsticks, cauldrons, and magic herbs to werewolves, and is all described in a very readable manner. The layout of the book gives an almost textbook style impression, and I suppose that it could be almost described as such, but don't assume that makes it dull, because it certainly isn't.

Another line of the blurb describes the book as seeking to '...be a serious contribution to the study of a subject too long obscured by prejudice and sensationalism', and once again the nail is planted firmly on the head, as the book dispels many of the prejudices concerning witchcraft. I was fascinated to discover that Biblical references to witches were often mistranslations. The most famous of which is the one in Exodus which everyone knows as 'Thou shalt not suffer a witch to live'. Apparently, the correct translation for this oft-misused quote is 'Thou shalt not suffer a poisoner to live', a bit of a difference I am sure you will agree. Such references to witches were in fact introduced into the authorised version of the Bible produced during the reign of King James I, in order to gratify the monarch who fancied himself as an authority on witchcraft.

Other myths concerning the Black Mass (not a witchcraft rite at all) worshipping the Devil (witches worship Pan), a witches coven must consist of 13 persons (any number less than 13 can form a coven), and the supposedly most famous witch of all—Aleister Crowley (he wasn't a witch). A lot of the prejudices stem from organised religions who come in for a bit of a hammering, and not before time too. Valiente points out that organised religions are happy to use magical rituals of their own, but are quick to persecute the rites of witchcraft. The wholesale slaughter of a great many innocent people throughout the ages, because they allegedly practised witchcraft, is laid squarely at the door of the Christian Church. The author makes a special point about the actions of the current crop of fundamentalists, and about the supposed incidences of satanic ritual abuse and murder, which is accorded the due skepticism it deserves.

On the whole, if you are seeking a sleazy large print book full of human sacrifice, Devil worshipping, and photos of bums in the moonlight, this book is not for you. If you are looking for a solid and thought provoking historical and sociological description of an ancient religion, and the folklore and myth that attends it, then you will not be disappointed. Though the ardent skeptic may find several things (such as astrology, hypnotism, and ESP) to get irate about, these subjects are part and parcel of a belief system that is fascinating from both a cultural and a psychological perspective.

—Nick Neave

Without confirmation?

Carl Nagaitis & Philip Mantle, *Without Consent* (Ringpull Press, 1994, hardback, £16.99)

The dust jacket describes this book as 'A comprehensive survey of missing-time (*sic*) and abduction phenomena in the UK'. Most of the book is taken up with the accounts of various people who claim mysterious experiences, interspersed with occasional pieces of analysis and comparison by the authors.

The experiences described by the subjects have a lot in common. A typical account includes the following elements: 1. The subject sees a UFO, usually from a car on the road; 2. The car mysteriously breaks down and then restarts; 3. The subject arrives home to discover that between one and three hours have mysteriously disappeared; 4. Hypnotic regression uncovers memories of an abduction by alien beings.

The accounts of these abductions are very detailed, frequently involving a tour around the space ship and a medical examination.

The accounts are all presented in a fictionalised third-party style strongly reminiscent of the *Readers Digest*. They have been put together by the authors from the files of other UFO investigators, either members of the British UFO Research Association (BUFORA) independent investigators, or members of other UFO groups. It does not appear that the authors actually contacted any of the subjects in their book.

Taken at face value the accounts seem compelling. Various ordinary and honest people describe inexplicable events. These events have much in common, but vary widely in detail. Plainly (say the authors), Something Is Going On.

But when you look at the accounts with a more questioning eye, wanting to know more than the brief descriptions in the book, things become less certain. In one case Ms Rosalind Reynolds had a close encounter, and was later hypnotised by an investigator from a local UFO group. According to Ms Reynolds, 'a bright beam of light came into the room, the video recording was wiped out, and all the clocks stopped'. This is a remarkable event in itself, but we are not told the identity of the hypnotist or any other witnesses. The authors do not even seem to have contacted them to see if they back up Ms Reynolds's remarkable story. This pattern is repeated throughout the book: reports are always attributed to 'an investigator' or 'a hypnotist', and no attempt is ever made to locate other possible witnesses, even when a UFO appears 100 feet over a busy main road at rush-hour.

Some of the cases appear to be little more than accounts of vivid dreams, but are still taken perfectly seriously. The subject awakes from sleep and sees a UFO, or is abducted by aliens. There is no corroborative evidence. In one case the subject reported having received a blow on the head in a school football game immediately before an encounter with a UFO. Hypnotic evidence is also treated as perfectly reliable. Research showing the unreliability of hypnotic memories is never mentioned.

The authors never seem to check any other sources of information to see if they agree with the reports given by the subjects. Yet even casual checking can show up discrepancies. Elsie Oakensen reported an encounter in 1978. In her account, the A5 near Daventry is described as dual carriageway. My oldest map (Ordnance Survey 1985 road atlas) shows it as single carriageway. David Thomas of Pwllheli in Wales reports being taken outside the solar system to a 'Mother Ship' via Jupiter and Saturn. Yet those two planets were 90 degrees apart in the sky at the time.

Overall, I find the evidence presented in this book unconvincing.

—Paul Johnson

Thank your lucky stars

Rosemary J Peel, *Astrology and Heredity, The Thread of Life* (Blandford Press, 1994, paperback, 128 pages, £6.99)

Rosemary Peel is a housewife who developed an interest in astrology as a result of a book that was given to her by a friend. She read this particular text fully expecting to finish and confirm that astrology really doesn't work. Instead the further into the book she got the more convinced she became that there was something to astrology and in particular the hereditary nature of astrological signs in families. It is this hereditary nature of star signs and the characteristics they create in individuals that are the focus of this book.

The first six chapters deal with the general nature of astrological signs and their interpretation. Do not expect this to be sufficient text to understand astrological charts since most of the information is given in summary form and is related to how this is used in the later chapters to identify the linkages between family members in their astrological charts.

The general introduction to the signs and how they can be grouped into two polarities (opposites) precedes the section on the planets and their relationship between where they are dispersed in the various signs of the Zodiac. Traditional star charts look at the sign in which the sun is found at birth. The author suggests that this is not the only factor to be considered and that all the planets need to be placed on the star chart to give a true representation of an individual's chart. It is the placement of the planets in each star sign that give a fuller picture of an individual and his tendencies.

In addition to the planets the book deals with the personal points and houses and how these factors are used in birth-chart analysis. Finally the reader is given a brief introduction to Aspects and Harmonics—the interconnection of the function of two or more planets or points when viewed from the earth. It is the combination of all of these factors and their interpretation that leads the author to explain the hereditary nature of astrological signs.

The basic premise that our parents pass on their star sign traits is discussed. The simple premise that we are a 50:50 make up of our parents is used as the basis for research into the heredity of astrological signs and how

they are passed down through generations. On the basis of detailed research into her own family we are drawn to the conclusion that there are three distinct but interconnecting factors. These are degrees of signs and overlays, personal planets and aspect harmonics. This supposition is studied in details by reviewing the authors own family going back two generations. Each individual has their chart analysed and referenced back to their parents and the common strands identified.

The author suggests that astrology should be given a much needed facelift. If we can link our star signs to those of our parents, then our star signs are not just a random occurrence and the challenge we face is to understand these linkages and how they affect our families. It is hard to be convinced by the evidence presented since it is all based on a single family.

—Dr Nick van Terheyden

Spooked

Jenny Uglow (editor), *The Chatto Book of Ghost Stories* (Chatto and Windus, 1994, hardback, 479 pages, £16.99)

Ghosts are an important part of every culture, giving generously of their time to the living, be they biblical characters, ancient Greeks or Hamlet. On Halloween we all bring out our dead, partly because we enjoy it, partly to deal with our fears and bereavements, and partly to help us (like Hamlet) to cope intellectually with the injustices of history: 'On twelfth night the dead walk, and on every tile of the house a soul is sitting, waiting for your prayers to take it out of purgatory'. They account for the things that go creak and bump in the night, and they conjure up our own deaths. They can even console us. Ghosts are creatures of the night, appearing at dusk and departing—even if their work is unfinished—at dawn. Children enjoy dressing up as ghosts and envy the real ghosts, who can walk through walls.

Is Hamlet a soul in purgatory, to be pitied and helped by the living, or a hellish figure bent on murder and ruin? Is the ghost of his father a classical ghost of revenge, or a projection of Hamlet's own betrayal by his mother?

Jenny Uglow, who has already given us the *Virago Book of Ghost Stories* and *Virago Victorian Ghost Stories*, enjoys collecting ghost literature, has chosen hundreds of excellently readable excerpts, and writes lucidly and entertainingly about the topic in her introduction. This is a perfect book to give or receive as a present. There is plenty of material from the ancient world, from the world's folklore—with some particularly interesting material from Australia—and from Freud, Emily Bronte, Dickens, Walter Scott, Yeats, Virginia Woolf, and many Victorian women writers. Ms Uglow adds with regret that cost has reduced the amount of recent, and presumably copyright, material in the book; but *Ghostbusters* make an appearance.

The book is divided into sections, and Skeptics with a capital S will turn to that called 'Is there anybody there?' Here puzzled thinkers tackle the question of why people believe in them. Did she employ a ghost writer? I think not.

—Caroline Richmond

Letters



'Chi' can be useful

Andrew Brice (*The Skeptic*, 8.4) described several reasons why martial arts practitioners are prone to believe in 'chi' or 'ki'. I think there may be one more that is powerful. That is, it may actually help to imagine that there is 'chi'.

Suppose, for example, that you want to keep your arm, leg or spine perfectly straight. It may help to imagine the chi flowing smoothly along the arm, up through the top of the head, or whatever. Or suppose you wish to intimidate your opponent. The actual power may depend on facial expression, sounds made, and bodily position, but imagining chi flowing from your body may help you to get all these just right—without you necessarily knowing how.

Imagery and movement are intimately linked not because 'mind' affects matter' or because of any mysterious powers, but because brain and body are part of the same system. Learning to imagine carrying out a skilled movement actually helps to do so. Imagining a flowing force may help too. I think this may be a reason for inventing chi.

It might be better still if people could imagine chi without actually having to believe there was really such a thing. I don't think this is impossible, I last did judo 25 years ago. What do any martial arts practitioners think?

Susan Blackmore
Bristol

Under the umbrella

I once spent more than 2 years practising Karate, trying to get fit, but saw no evidence of 'chi', 'ki', or any other of the 'mysterious energies' discussed by Andrew Brice in his interesting article 'Mysterious Energies and the Martial Arts' (*The Skeptic*, 8.4).

What I did come across, however,

were a large number of people who simply enjoyed bashing other people senseless, for the sheer hell of it, and who exploited 'the Martial Arts' as a convenient umbrella under which to legitimise their violent tendencies.

Jack Johnson
Hartlepool

Rights and duties

Yes, the whole question of rights seem to offend some people deeply (M V Evans, Letters, *The Skeptic* 8.4). 'Why' is an interesting question, as in a rough and ready way rights and duties can be defined as opposite sides of the same coin. Generally speaking 'A' has a right when 'B' has a duty so to act/or not to act, so that A can do or is facilitated in doing the acts which are claimed to be under the right. Most sane people recognise that all rights have duties entailed with them (including but not limited to the duty to respect the right of B when, if the positions are reversed it is A's role to forbid or allow); also, that one does not make a case for a right by merely claiming it in a loud voice.

Once that is clearly understood, what is there to get annoyed about?

Read Ronald Dworkin's—a professor of law—*Taking Rights Seriously* and *The Principle of Law* to see that it is not only amateurs like me who find some value in the concept of rights.

D M Sherwood
Port Talbot

Normal IQ

I think that Ms Vos Savant, with her silly book on Fermat's theorem, has shown that high IQ doesn't mean much.

However, I take exception to Colman's and Stretch's contention that IQ should be normally distributed. It is of course impossible that all empirical distributions are normal. For instance, body weight is

roughly proportional to the cube of body length. How could both be normal? The distribution of income in any country is usually far from normal, as is 'lifetime number of papers' among scientists.

In *Science* (29 September 1978, Vol. 201, p. 1177–1186) D D Dorfman explains that Burt's 1961 tables of British distribution of intelligence are far too perfectly normal. Dorfman displays a strongly skewed distribution of the US Army Alpha test scores, and shows 104 empirical distributions of height and weight to deviate strongly from normality.

Actually, the science of statistics took off when, back in 1890, biologist W F R Weldon asked mathematical physicist Karl Pearson for help with skewed distributions of the shrimp sizes in the bay of Naples. So saying that naturally occurring distributions are normal, is betraying the roots of statistics.

Why should we assume that any measure of mental agility 'is determined by numerous independent random variables'? None of the underlying variables has ever been identified, let alone that they are 'numerous', 'independent' or 'summands' or that they are more or less identically distributed with finite variance (one of those minimal conditions).

J W Nienhuys
Eindhoven
The Netherlands

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