

Volume 5 Number 2
March/April 1991

The Skeptic

*The New Age and
the Crisis of Belief*



*The Marie Celeste
Mystery Solved?*

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Hits and Misses

Steve Donnelly

Crystal Balls

'A recent discovery suggests that some form of unknown radiation comes out of domestic electrical power sockets and is very powerful. It probably takes the form of electromagnetic waves oscillating 50 times per second...This "power socket radiation" can only be directly picked up through the top of the head; all the way round just above the level of the eyebrows.' And if you don't believe me then read the article entitled 'Crystal Antidotes to Power-Socket Radiation' published in the latest issue of a New Age magazine entitled *Leading Edge*. But it gets even more worrying: 'Its weakening effect, however, occurs when we eat and drink particular things; water in our food and drink picks up power-socket radiation and then emits a wave-like radiation of its own into our mouths.' This combination of waves in the mouth with those bombarding the head directly can have a very debilitating effect on one's well-being—as any *Skeptic* reader will well be able to imagine—and may be responsible for a wide range of diseases and illnesses including fatigue, insomnia, ME and even MS. The simple solution—other than wearing an earthed metal crash-helmet whilst eating ones cornflakes—is to block off the radiation using nothing other than your quartz crystal (that New Age instrument that otherwise serves to retune your energy field to the frequency of the Cosmos). The additional benefit of using a clear quartz crystal is that it also shields you from geopathic stress radiation which 'comes from underground water and...is at its worst in small concentrated areas where it beams directly upwards' (haemorrhoid sufferers please take note). It can also penetrate electricity cables from substations and then emanate in the home from night-storage heaters, microwave ovens, electric blankets—and granite. The solution is simple: either wear a small crystal around your neck at all times or place a larger one close to the mains fuse box—but don't forget to 'cleanse' your crystal periodically by holding it against your forehead for half a minute. This threat to our health should not be taken lightly as the author of the article is a teacher with a PhD in Zoology and is an expert on butterflies.

Patently Absurd

UK patent applications do not usually provide rich pickings for items for *Hits & Misses*—particularly since perpetual motion machines have not been accepted by the patent office for some years. But a patent granted in December 1986 to Shyam Singha is for a device that no reader of the *Skeptic* should be without. In issue 3.3, Barry Williams discussed pyramid power in some detail but even he had missed the 'Holistic Therapy Flotation Enclosure' as described in UK Patent No. 2144633A. The device is '...a flotation enclosure, particularly for holistic therapy, which

has a substantially pyramidal or conical structure with an internal cavity to receive liquid for flotation of a living body, the structure being largely composed of organic and inorganic material arranged in layers and with an innermost layer of inorganic material bounding the cavity possibly with the interpolation of a seamless lining to the cavity.' If only King Tut had had one of these in his penthouse apartment he might still be with us.

Mint Condition

Next time you have to perform a task which requires an extra modicum of effort or more than 100% of your normal maximum concentration try sticking a Polo mint up your nose. Both the *Guardian* and the *Independent* on 20 February reported on a paper presented at the annual meeting, in Washington DC of the American Association for the Advancement of Science in which psychologists studied the effects of blowing smells at people's faces on their ability to perform tasks requiring sustained attention. Subjects undergoing a 40-minute visual attention test were subjected to a 30 second waft of either mint or lilly-of-the valley fragrance every 5 minutes and performed about 15% better than control groups who received only ordinary unscented air. Other studies, also reported at the meeting, revealed that air fresheners affect people's moods—in business negotiations, people are more likely to reach amicable agreements when the air is filled with pleasant fragrances. But before you rush off to your local aromatherapist, please note that the research also indicated that the precise nature of the smell did not matter—the only important factor was that the subject should perceive the smell to be a pleasant one. So the next time you have a meeting with your bank manager about that persistent overdraft, treat yourself to an extra spray or two of your favourite underarm deodorant.



Devilish Technology

In *Hits & Misses* in issue 4.1, I reported on the Exclusive Brethren, a religious sect whose followers are not allowed to be exposed to modern technology such as televisions and computers. The sect had applied to the Minister of Education for permission to withdraw children of sect members from school lessons which used such technology—a concession which a number of schools had already granted.

The *Independent* on 21 December reported that Tim Eggar, Minister of State for Education and Science in a recent adjournment debate in Parliament had refused this request and pointed out that information technology is a compulsory subject on the curriculum of all state schools: 'We must ensure all children in maintained schools get a thorough and relevant preparation for their working lives... It is vital that young people are fully aware of and competent to use information technology'. The Exclusive Brethren, which has more than 15000 members, believes that TV, radio and computers are the work of the Devil. Mr Eggar went on to express hope that schools would adopt a friendly and helpful approach to the Brethren but he emphasized that: 'Parents cannot exercise a right of veto by withdrawing their children from particular lessons if they disagree with the teaching methods used in those lessons'.



Balls of Fire

A phenomenon which for many years has been regarded as folk lore and treated skeptically by many scientists has recently taken a major step towards scientific respectability. The journal *Nature* on March 13 published a paper by Japanese researchers who appear to have produced artificial ball lightning in their laboratory. Y H Ohtsuki of Waseda University in Tokyo and H Ofurton of the Tokyo Metropolitan College of Aeronautical Engineering produced fireballs with properties similar to those reported for ball lightning by focusing microwave energy into an aluminium cavity. The effect of the microwaves on the air within the cavity was to ionize it and produce various types of plasma discharge which the researchers recorded with a video camera. In general the fireballs lasted for several minutes whilst the microwave energy was being fed into the equipment but some of them persisted for a few seconds after the microwave generator was turned off. In one case a fireball with a

colour varying from white to red and orange passed through aluminium foil and survived briefly outside the cavity. Natural ball lightning is generally reported as appearing as a flaming orange ball, floating through the air and has sometimes been seen to pass through walls or windows and in one celebrated case was observed inside an aeroplane. Skepticism on the part of scientists has not entirely disappeared, however; the *Independent* on 13 March reports Sir Brian Pippard, former director of the Cavendish laboratory, as expressing the view that the phenomenon results from some type of photochemistry rather than the physics of microwaves.

Phantom Ship

It's not unusual for local newspapers to run articles on hauntings, UFO sightings and the like as regular readers of this column will be well aware but the *Hull Daily Mail* excelled itself in this area at the end of last year. In a series of articles by John Macklin subtitled 'Stranger than Fiction', which read like somewhat expanded versions of Ripley's 'Believe it or Not' syndicated column, the newspaper presented (as fact) a series of ghostly tales which included killer fogs, ghostly perfumes and lovers from the other side. One of the tales entitled 'Ghost on the Midnight Watch' concerned the haunting of a ship called the *Roddersley Castle* by George Hall a carpenter who died in mysterious circumstances during a transatlantic crossing in 1947. Following a fall of snow, and despite the fact that he lay dead in a coffin in a locked room and—in the best traditions of *The Twilight Zone*—when the captain opened his coffin for inspection, fresh snow was found on the dead man's boots.

Skeptic reader Ernest Jackson, appalled that his local newspaper should publish such anecdotal articles as serious features, decided to investigate this particular story by checking whether a ship with the name *Roddersley Castle* was listed in either *Lloyds Register of Shipping* or the *Mercantile Navy List*. Unsurprisingly, no entry for the *Roddersley Castle* was found which, whilst not constituting conclusive proof that the ship never existed, renders its existence extremely unlikely. John Macklin's latest book is entitled (including the inverted commas): *The World's Strangest True' Ghost Stories..*

Legal Entity

Finally, it's official. It is possible for a prick to win a court case. No, this has nothing whatever to my views on barristers—a Court of Appeal recently decided that a phallic symbol representing the Hindu god Shiva had legal status and could sue a Canadian bank for the return of a valuable statue. According to the *Guardian* on 14 February, once that had been settled, the court ruled that a 12th century bronze statue which was bought by a Canadian company in 1982 but which is presently in police custody at a London bank should be returned to its rightful owner, the phallic symbol—known as Shivaligham to his friends.

Steve Donnelly is a physicist, a reader in electronics and electrical engineering at the University of Salford and a member of the Manchester Skeptics and the UK Skeptics.

The Houdini File

Number Five

Frank Koval

In letter number 2 in this series, Harry Price's 'exposure' of spirit photographer William Hope was outlined. Houdini's letter of June 6, 1922, refers to Sir Arthur Conan Doyle, the great champion of spirit photography and spiritualism in general. Sir Arthur was certain that the X-ray marked plates had been replaced by other ones, and in the later (October 29) letter to Houdini, wrote: 'I am now sure that there was trickery on the part of the investigators'.

J Malcolm Bird, associate editor of *Scientific American*, comes into the story as he, too, had a sitting with Hope on March 13. He gave Hope no chance at all of handling the plates, and yet 'Psychic extras' appeared on one of them. Bird wrote in *My Psychic Adventures* (1923): 'Substitution of plates or pre-paration of a plate absolutely will not do. Whatever else Hope may have put over on me, he certainly did not put that over.'

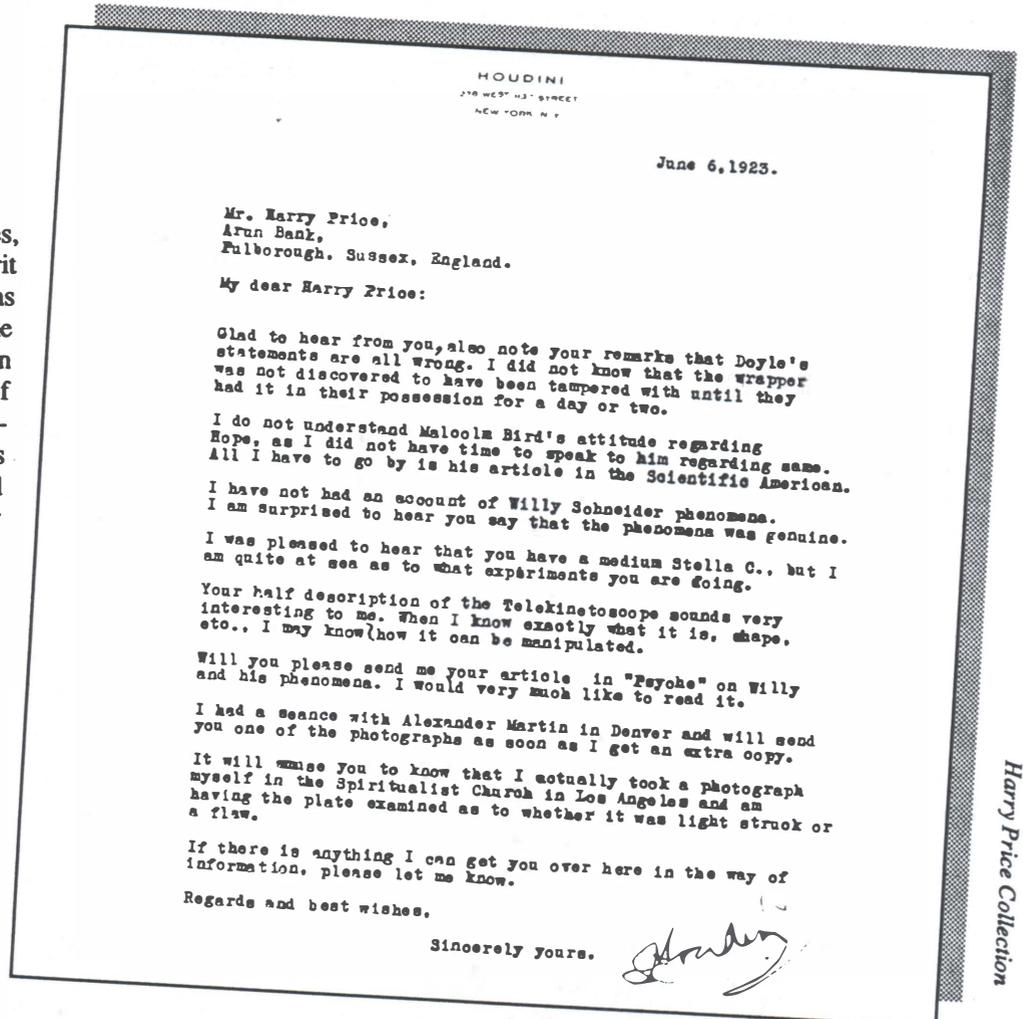
Houdini asks for further description of Price's 'telekinetoscope' which had been used in a sitting with his medium Stella C: 'The instrument consists of a brass cup, five inches in diameter and two and a half inches deep. The cup is mounted on a metal tripod with levelling screws, and has a turned-in flange three-eighths of an inch wide. Around the periphery of the cup, and stamped in the flange are twelve three-sixteenths holes. Placed loosely inside the cup is a contact-maker made of thin sheet fibre, connected with two brass strips to which are fastened the leads (composed of best rubber and silk insulated flex). The whole is mounted on a thick rubber base. When the contact-maker is in situ in the brass cup, a soap bubble is drawn across the top of the cup, thus effectively sealing it. In this condition it is normally impossible to depress the contact-maker (thus completing the circuit), without destroying the bubble. The recording part of the apparatus, connected with the cup by wires, is placed on the table in full view of the sitters. This portion of the Telekinetoscope consists of a small red four-

volt pea lamp, enclosed with its battery under a small glass shade securely sealed to a wooden base making the flex leads'. The wires leading from the cup to the battery and lamp were enclosed in rubber tubing. Price's elaborate protection of the contact-maker looks to me like an example of a magician's misdirection. The whole object is to see if some psychic force could press the contact-maker, so completing the simple circuit and lighting the bulb. Surely, a better precaution would be to protect the battery as well. The recording part of Price's apparatus, which was on the séance table, contains all that is needed to light the lamp.

Now, if inside the rubber tubing the two wires were bared of insulation over part of their length, all that would be needed would be to pinch the tubing for the two wires to touch and thus complete a circuit containing both battery and bulb.

I do not say that this was done, but it does illustrate the weakness of the apparatus.

Frank Koval is a teacher, writer and conjurer and is a member of the Manchester Skeptics



The New Age and the Crisis of Belief

Tim Axon

Towards an understanding of New Age thought

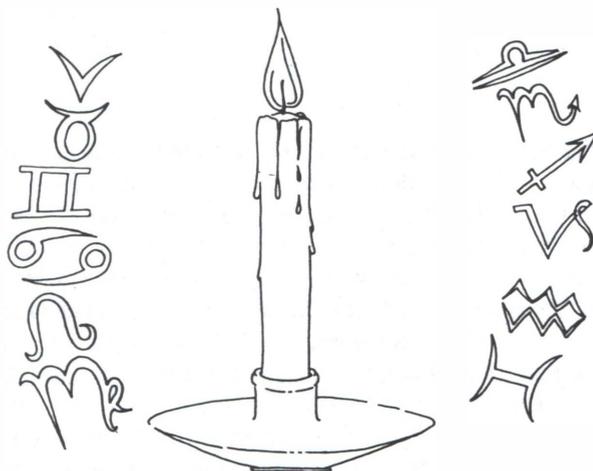
It is often said in skeptical circles that belief in the irrational has been increasing dramatically in recent years and has now reached unprecedented levels. Whether or not this is strictly true, there can be little doubt that belief in the paranormal and the occult is widespread and plays a not unimportant part in the lives of at least a significant minority of the population. Nowadays, such enthusiasms are often referred to under the heading of the 'New Age' and—however one might disapprove of it—the social movement which feeds on and propagates such beliefs must be acknowledged as one of the more significant features of the contemporary cultural landscape in the West.

If the skeptical community is to develop the appropriate strategies that will enable it to challenge irrational or unsustainable beliefs effectively then the origin and nature of these beliefs must be thoroughly understood. This will only be possible by studying such beliefs in their proper historical and cultural context. Yet, so far as I am aware, the history and the sociology of the New Age Movement has received relatively little serious attention from within the ranks of 'organized skepticism'.

As I am neither an historian nor a sociologist by profession it is not my intention to attempt to anticipate the details of what such an understanding might eventually take. But I do want to explore some of the issues involved, more with the aim of opening up discussion and debate than of arriving at some kind of definitive conclusion. In particular, I want to examine how the New Age Movement might be seen as being at least in part a response to what I shall refer to as the 'crisis of belief' that confronts contemporary Western societies. In analysing this crisis of belief I shall to some extent draw freely on ideas deriving from recent debates on modernity and postmodernity on the one hand, and from modern cognitive psychology on the other. My aim is to show that these ideas can help deepen our understanding of the New Age Movement and of the social and psychological forces which have given rise to it.

The New Age Movement

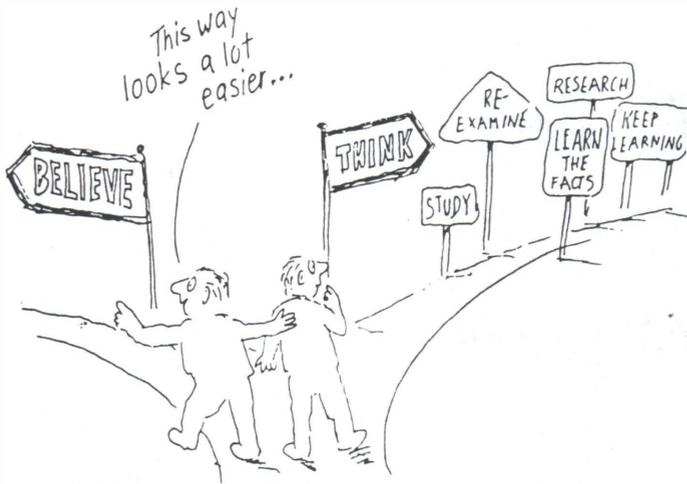
The New Age Movement is notable for its confused and chaotic diversity, and for its tendencies towards eclecticism. Because of this, concentrating only on the paranormal and occult beliefs associated with New Age thought can easily distort one's perception of it as a whole. In fact, the movement is broad enough to incorporate a great variety of themes, including not only the occult and the paranormal but also (amongst other things) alternative medicine, spir-



itualty and mysticism, fringe science, alternative archaeology, various forms of psychotherapy, a concern with 'green' issues, together with elements deriving from feminism and the peace movement. It ranges from the most implausible beliefs concerning, for example, the healing power of crystals, to ideas (like those connected with a concern for the environment) which presumably deserve to be taken rather more seriously. In retrospect, it has to be admitted that placing such a wide variety of beliefs under the single heading of 'New Age thought' may in fact be begging rather a lot of questions. Nevertheless, all these beliefs share a certain 'alternative' character in the sense that they provide an alternative to established knowledge and to conventional ways of behaviour.

Fundamental to the essentially 'alternative' character of the New Age Movement is the fact that it rejects many of the secular attitudes prevalent in contemporary Western societies—and yet it does so without turning instead to some kind of conventional religious belief. On the one hand, although the founder of Christianity is generally regarded with respect, the New Age attitude towards the Christian Churches is largely one of indifference and is on occasions actively hostile. (Eastern religions generally get a much better press). On the other hand, the anti-secular point of view is displayed most clearly by the uniform hostility shown to what is often referred to in New Age literature as 'scientific materialism'.

The New Age Movement is not, however, an anti-science movement as such, and its hostility does not extend to those often controversial areas of science—which include parapsychology, Lovelock's 'Gaia' hypothesis, and various mystically-inspired interpretations of modern physics, for example—which dwell on the fringes of accepted knowl-



edge but which seem in one way or another to challenge the assumptions of philosophical materialism. Nevertheless, the New Age Movement is opposed to what it takes to be the dominant scientific/secular view of the world which sees mankind as living in a random, mechanistic universe devoid of purpose. Instead it promotes a view of the world which is non-materialistic in nature, which allows a place for marvels and for magic, for imagination and creativity, and for a 'spiritual' dimension to life. In short, the New Age Movement is essentially quasi-religious in character—a point which has not been lost on those skeptics of an anti-religious persuasion who often see challenging belief in the paranormal and other New Age beliefs as simply part of a larger project directed against what is taken to be 'religious superstition'.

The Decline of Belief

Although it is difficult to prove such connections, the rise of this quasi-religious movement is surely related to the decline in the status of conventional religious belief in the West over the past couple of hundred years or so: we no longer live in an essentially 'pre-modern' era in which Christianity is the dominant ideological force. The effects of this process of 'secularization' should not, of course, be exaggerated: the influence of Christianity remains strong in many parts of the world, not least in the United States. But few would deny that there has been a lessening in the status and authority accorded to religious beliefs and institutions during this period. Christianity no longer commands the unqualified support of the intelligentsia and, more generally, no longer exerts the overwhelming cultural influence which once it did: Christian belief has come to be seen as 'optional' in a way which previously was not the case.

The decline of religious belief was accompanied by the rise during the course of the nineteenth century of new, secular ideologies—in particular, secular humanism and (far more influentially) Marxism. Despite their many differences these two secular ideologies shared a common, optimistic faith in rationality, science and progress, a belief which can be traced back to the Enlightenment and which formed one of the great themes of the so-called 'modern' period. But on the whole, the often bloody history of the twentieth century

and the ever-present possibility of nuclear and/or ecological crisis have in fact tended to undermine such a faith and have made the nineteenth century belief in the moral and social advancement of mankind and in the unqualified benefits of scientific and technological progress seem in retrospect to have been rather naïve. For this and for other reasons the decline in the influence of Christian belief in the West has not been matched by a concomitant rise to a position of dominance of any alternative secular ideology. Of course, followers of the secular ideologies still exist, but generally speaking they are restricted to small groups which exert little real influence: the secular ideologies are marginalized in much the same way as Christianity often finds itself marginalized in the contemporary world.

The collapse of faith in both the traditional, religious and the modern, secular forms of belief characterizes our era, an era sometimes referred to as the 'postmodern' age (to borrow the fashionable phrase of the gurus of culture). This is an age in which the old forms of belief are unable to sustain a consensus, an age characterized by fragmentation when 'all that is solid melts into air'. Our culture offers no overall message, no larger vision or narrative which might enable people to see their lives in a meaningful way. Instead there is the world, conceived as a collection of facts revealed by science. But these facts cannot be said to have been fused together into a view of the world and of mankind's place in it that really satisfies the human need for significance and meaning. Thus, although the mechanistic conception of reality is by no means an inevitable implication of modern science (and is indeed seriously challenged by it in several respects), the overall impression of the scientific world-view presented to the general public is still predominantly a mechanistic-materialist one in which there is little opportunity for deriving any kind of metaphysical comfort. For many people such a view of the world is extremely bleak, and all the more bleak for the absence of any generally accepted belief system (be it religious or secular) which might serve to ameliorate or modify that view. It is this situation which, I think, the followers of the New Age Movement are reacting against their rejection of 'scientific materialism' and why they are nevertheless sympathetic to those forms of fringe science that seem to have rejected some essential elements of the materialist view of reality.

The Search for Belief

Despite the fragmentation of belief which characterizes our era, there remains a deep underlying need for belief. For, however incomplete and incoherent it might be, we all require some kind of system of belief with which to generate order out of the chaos of experience and to lend a degree of organization to our lives. We all need to be able to make sense of the world. We all need to experience life through the meaningful categories of some belief system, whether that system be religious, political or philosophical in character. Indeed, for those who subscribe to it, such a belief system is the meaning of their lives! For all of us, our beliefs play an essential part in the construction of our personal world (i.e., the world as we experience it). Of course, our

beliefs may not always immediately show themselves in an explicit commitment to a particular ideology but they nevertheless exist under the surface and undoubtedly play a quite fundamental role in our lives. In particular, what we believe (and whether our beliefs are basically optimistic or pessimistic) can have a profound effect on how we feel. Consequently, the belief system which we happen to accept has an enormous impact on the way in which we, as individuals, come to think, feel and act. Moreover, in the absence of any such relatively consistent and suitable optimistic belief system we are likely to experience considerable confusion and emotional distress.

Far from being a trivial or inconsequential observation, this notion concerning the centrality of belief systems to our mental and emotional life forms one of the key themes of modern cognitive psychology and systems of psychology based on this approach (such as Kelly's Personal Construct Theory, for example) provide the theoretical underpinning for the view that belief systems are not just pleasant yet dispensable accessories but actually play an essential role in the proper functioning of the human organism.

It is this human need for belief that turns the contemporary situation consisting in the fragmentation of belief into a true crisis of belief. There is an innate human urge to believe, to construct meaning. Yet our contemporary situation is not characterized by the ascendancy of any particular system of belief: both Christianity and the secular ideologies are to a large extent marginalized. The result is a large class of confused and alienated people who do not really know what to believe in, but who still feel the need to believe in something. Is it therefore at all surprising that many of these people should respond to this crisis of belief by creating their own belief system from the materials that are to hand? Bits of modern science, the remnants of old religions and ideologies, fragments of superstition and half-remembered childhood fairy tales have been sewn together to create the confused patchwork, piecemeal system of belief that is the New Age. Its origins lie in nineteenth century movements like Theosophy and spiritualism, which can themselves be seen as a reaction against the advance of secularization and as a response to the crisis of belief as manifested in that period. But the contemporary New Age Movement is a response to the more urgent sense of crisis and fragmentation which characterizes our own postmodern era.

The 'packaging' (as distinct from the content) of New Age belief is also profoundly affected by the nature of contemporary Western societies, dominated as they are by the driving force of technological change and by the dynamic of the market. As we all know, peddling New Age wares (in the form of books, cassettes and courses, for example) can be a lucrative business. But is it surprising that here, in the capitalist West, New Age beliefs are regarded as essentially commodities to be sold and bought in the ideological marketplace? And is it surprising that, with the rapid growth in the technology of communications (radio, TV, video, mass-market publishing and so on), such beliefs should spread so widely and with such speed, with new fashions and crazes continually flaring up as old ones fade away? New Age

belief has become a product, a consumer item, even an essential component of 'style': it has in fact become a form of 'designer' belief.

The Future of New Age Belief

Of course, as we all know, the problem with New Age beliefs is that most of them are extremely implausible when seen in the light of modern knowledge and, when explored further, can often be shown to be false (or at best unsubstantiated). This is where the skeptical movement in its 'investigative' capacity has such an important role to play in exposing such failings. But, if I am right and the New Age phenomenon is basically a result of an innate human predisposition to believe combined with the effect of certain long-term cultural changes which have been taking place in Western societies over the past hundred or more years, then I think it is doubtful that skeptics will be able to have much impact on the tide of New Age belief as a whole. Nevertheless, one can speculate that the skeptical movement—in its 'missionary' role of attempting to persuade people to adopt a more critical attitude towards such beliefs—may be more effective if it attempts to bend belief away from the more unsustainable and/or damaging manifestations of New Age thought than if it attempts to remove or eliminate such belief entirely.

In the long-term, however, New Age belief is only likely to fade when the cultural forces which produced it have moved on, when the present era gives way to a new era in which new forms of belief finally manage to establish themselves on the ruins of the old. It is far from clear what these new forms of belief might be. Will one of the old religions or ideologies manage to revitalize and renew itself? Will the contemporary interest in green issues be transformed into a new 'nature religion' suitable for the twenty-first century? Will elements of science now located on the fringe eventually come to find greater respectability and more widespread acceptance in the years to come, and form the basis for a new scientifically-legitimated system of belief? Or will in fact the present state of confusion and fragmentation endure into the indefinite future? One can only guess, of course, but if it is the last of these possibilities which proves to be the case then I think it probable that the New Age Movement (or at least something very much like it) will be with us for a very long time to come.

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Dr. Tim Axon is the author of *Beyond the Tao of Physics: Mysticism and Modern Physics—A Reappraisal*, (Tehuti Press, 1988).

The Blondlot Bombshell

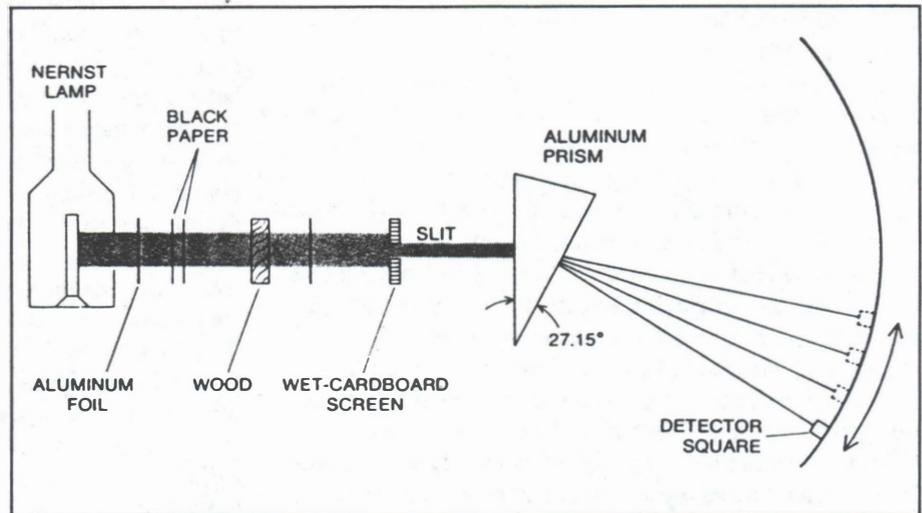
Bill Penny

The rise and fall of N-rays

This is the second of two articles on what is sometimes termed 'pathological science'. The first, in *The Skeptic* 4.6 was on polywater; this article deals with the illusory radiation which rocked French science at the beginning of the century—N-rays.

In 1895 Röntgen discovered X-rays, and shortly afterwards gamma rays and alpha and beta particles were first detected. These discoveries made researchers more willing to accept the existence of new forms of radiation. Without this openness the strange affair of N-rays might never have started. One of the scientists at that time conducting research into the properties of the newly discovered X-rays was Professor René Blondlot (1849–1930), head of the Department of Physics at Nancy University and a member of the French Academy of Sciences. He was a distinguished scientist and an expert in the physics of electromagnetic radiation. His research into whether X-rays were waves or particles (they are now known to be both) by seeing what effect polarised X-rays had on the intensity of a spark, indicated through the increased brightness of the spark that they were waves. But further tests showed that the radiation he was using on the spark could not be X-rays. He concluded that the cause of the visible change in spark brightness must be a new form of radiation which he was later to call N-rays, after the University of Nancy.

It was from this mistaken conclusion that the N-ray affair began. Blondlot next devised a series of increasingly sensitive experiments and devices for the detection of N-rays. The best of these involved phosphors, substances which emit light when struck by radiation. In early 1903, after he had investigated some of their properties, he published details of his discovery of N-rays. Soon experiments to detect N-rays were being performed by scientists all over the world. While most of them failed to detect N-rays at all, researchers in France were discovering many unusual properties of the rays. Some substances opaque to visible light such as wood, paper and aluminium were found to be transparent to N-rays, and Blondlot even used aluminium prisms in his research. In contrast, water was found to be opaque to N-rays. The professor of medical physics at Nancy, Augustin Charpentier, discovered that N-rays were emitted by both living and dead bodies, and if shone on the eyes they improved a person's ability to see in the dark. During 1904 an



increasing number of scientific papers were published on N-rays and their properties.

Outside France many leading physicists were unable to detect N-rays using Blondlot's experiments. Some of these physicists met at the year's meeting of the British Association for the Advancement of Science and decided that one of them should visit Blondlot's lab in Nancy. The physicist chosen was Robert W Wood (1868–1955), Professor of physics at Johns Hopkins University in the US and an expert in optics and spectroscopy. He was also the author of the humorous book *How to Tell the Birds from the Flowers*, and had in the past combated fraud by revealing that some spiritualists were fakes.

It was in September 1904 that Wood visited Blondlot's laboratory. During his three-hour visit he was shown several experiments displaying various properties of N-rays, and he later described what happened in a letter to *Nature* (29 September, 1904). The first experiment involved the effect of N-rays on the brightness of a spark. Wood saw no difference between when the N-rays were concentrated on it and when his hand stopped them. He was told it was because his eyes were not sensitive enough. Wood then asked the others to watch the screen upon which the light of the spark fell, and to say the exact moment when he blocked the rays. Not once were they able to correctly answer, despite having claimed that the change was distinctly noticeable. Next, Wood was shown photographic evidence of N-rays which clearly showed a difference in spark brightness. Wood saw that not only did the variability in spark brightness make accurate work impossible, but the manual control of the multiple photographic exposures was also a source of error. Knowing which photos were supposed to show N-rays, the operator could, in each exposure, uncon-

sciously keep those photos exposed for a fraction of a second longer. At this point Wood still remained unconvinced. It was what occurred in the following experiments which convinced him N-rays did not exist.

In a darkened room Blondlot demonstrated how, with the use of an aluminium prism, a beam of N-rays could be separated into four beams of different wavelengths. These four beams were detected by moving a piece of cardboard with a phosphorescent strip painted down the middle along a curved steel support. Wood tried moving the detecting device along the curve but noticed no change in its brightness. While Blondlot prepared to take some measurements Wood took advantage of the darkness to secretly remove the prism. Blondlot then took the measurements, getting the same values he normally got. Wood replaced the prism before the lights were turned back on. Next, Wood asked if he could move the prism so that Blondlot and colleagues could decide by the use of the detector if it was refracting the N-rays to the left or the right. Three attempts were made but they were not correct even once. They claimed that their failure was due to fatigue.

Finally Blondlot showed Wood some experiments which showed how N-rays improved eyesight. He was taken into a room which was dimly lit so that the hands of a clock on the wall could not be seen. When an N-ray emitter (a steel file) was held close to a subject's eyes, the subject claimed to be able to distinctly see the hands of the clock. After trying—and failing—to see any difference, Wood suggested a test. He chose when to move the file near the subject. Realising that the room was light enough for the subject to see when the file was being moved he secretly replaced it with a wooden ruler of the same size and shape which lay on one of the desks in the room. Despite the fact that wood was one of the substances unable to emit N-rays, the experiment was still a success.

Wood left Blondlot's lab convinced N-rays did not exist and that much of the evidence was purely imaginary. In his letter to *Nature* he described his visit and conclusions. This explained why so many top scientists had been unable to detect N-rays, simply because they did not exist, and it destroyed most of the support for N-rays outside of France. Blondlot responded to Wood's letter by increasing the accuracy of his experiments but he still claimed to obtain successful results. During 1905 he and his supporters began to claim 'it was the sensitivity of the observer rather than the validity of the phenomena that was called into question by criticisms like Wood's.' Similar claims have been made in more recent times in paranormal research. By this time in France N-rays were also losing support because physicists had unsuccessfully tried to detect them using experiments like that suggested in Wood's letter. In 1905 a French science journal published details of an experiment which would definitely show whether or not N-rays existed. Blondlot did not reply until 1906 when he refused to participate in such 'a simplistic experiment...let each one form his own opinion about N-rays' he said.

And they did.

Bill Penny is studying for a higher degree in the North-East of England.

A Catholic Healer

Steve Donnelly

To anyone who has read James Randi's book, *The Faith Healers*, or had the experience of watching a televangelical healer at work in the US, Monsignor Michael J Buckley might well fail to conform to expectations. Although he too claims to be a channel for divine healing, the similarities between Father Buckley and his American counterparts are few and far between. A gently spoken Irishman, he heads the Community for Inner Healing which runs a healing mission based at 'El Shaddai' near Scarborough in the North East of England. The community is based around a small church which is, appropriately, a stable which was converted into a chapel by people who had been healed by Father Buckley.

The healing mission is, however, not just confined to the Scarborough area as Michael Buckley holds healing masses at Catholic churches all over the country. At a recent mass in Bolton, Lancashire, it was clear that the congregation, which was almost overflowing onto the street, was greatly taken by this tall, gentle Irishman with his amusing anecdotes and his caring manner. He heals by gently laying his hands on members of the congregation and telling them to: 'Give your life to God. Stop worrying'. On occasion not only does he cure illnesses but he diagnoses them as well and will tell an individual, for instance that he has cancer.

Even within the Catholic church, however, not everyone is entirely happy with the 'charismatics'. Fellow Irishman, Bishop Kevin O'Brien when he attended one of Michael Buckley's masses in Hull at the end of last year expressed the view that although there was opposition to the charismatic movement, he personally had nothing against it but felt that he himself could not conduct the type of healing service which he had just attended.

It is clear to anyone who has seen Michael Buckley in action, and met some of the people he has 'healed' that attending one of his services can indeed help people come to terms with their serious illness and in some cases may result in a 'cure' for people whose illnesses have a psychosomatic component. Does this imply then that, even though one does not accept that miraculous healing occurs, one should regard this type of healing as a good thing for society? Unfortunately, I believe that the answer must be 'No' on two counts. Firstly a belief in miraculous cures for serious illnesses may result in someone not availing himself of orthodox medical care and relying on spiritual healing alone. Tragically this has already occurred in the US where a child died because his parents used prayer to heal him rather than standard life-saving treatment. Secondly, someone who believes that God has healed him of a serious illness may end up highly distressed and in spiritual torment when he discovers that in reality the course of his illness has not been miraculously diverted.

I also cannot help but be puzzled by the actions of a God who gives someone a terminal illness and then spontaneously takes it away when that person encounters a healer such as Michael Buckley. □

The Marie Celeste Mystery: Solved?

H H Trotti

A New Explanation for the famous Ghost Ship

In early December of the year 1872, a ship was sighted that puzzled the crew of another ship—for no one answered hails or signals. The hailed ship seemed in tolerably good shape, though carrying a limited amount of sail and, when boarded, was found to be suffering water damage as though in a past storm. But the chief question in everyone's mind was—and became for later times: 'What happened to the crew?' For no one was aboard.

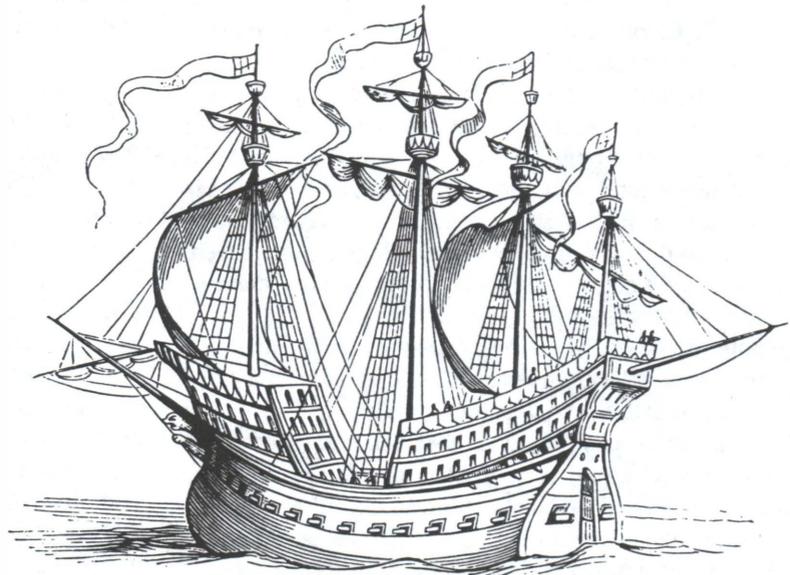
The windows of what appeared to be the captain's cabin were covered with boards and canvas, but a skylight was open and there was water in the cabin. Evidently the ship has passed through a storm in the fairly recent past. But where were the people?

Ships have been found through the ages that sail or float in good shape without a crew. The Roman general Galba took one such event as a good omen for his assuming the purple and becoming emperor. A ship bearing a cargo of arms but having no crew drifted into the Spanish harbour of Dertosa; somewhere between Alexandria in Egypt and the port in Spain the crew had vanished—perhaps, it was contended (according to Suetonius, *The Twelve Caesars*, New York: Penguin Books paperback, 1987, p. 253) the gods sent the ship to make easy the path of Nero's successor. That ancient puzzle was not solved—if the ship was raided and the crew taken into slavery, why were not the arms (of some value in the ancient world), taken as well? In any event, the finding of a ship without a crew, while rare, has been known throughout the ages.

The case of the ship of 1872 became famous: the name was *Mary Celeste* (*Marie Celeste* apparently being a mistake in a British record of this event). *Mary Celeste* was found in excess of five hundred miles from the mainland of Europe, between the Azores Islands and Portugal's coast. She was boarded and taken for salvage, but was impounded by British investigators when she safely made port. A lengthy scrutiny resulted in much suspicion of her rescuers, and a wine stain on deck was mistaken for blood; blood was said to be found on a sword of the captain's, but this was later found false.

Mary Celeste had carried ten persons: a crew of seven, the captain, his wife, and his baby daughter. The ship was engaged in commercial trade, and had carried a cargo of approximately 1,700 barrels of 'crude alcohol'.

Theories of the past included piracy and mutiny. Though



the British remained suspicious of the circumstances, no one was ever tried for a crime, and no proof ever emerged to clarify the events of this strange happening. If we discount various fictional tales and hoaxes, the mystery remains to our time as one of peculiar interest and evident strangeness.

An amusing little story of recent vintage describes a disappearance of a different nature. In an aquarium it was found that a collection of sea creatures was gradually vanishing. A tank holding examples of such would have inhabitants at the end of the day, but be empty the next morning. A careful watch discovered that an octopus was in the habit of climbing out of its tank, working its way to the tanks of other 'specimens', eating them, and making its way back to its own tank before morning. It 'held its breath', or 'held its water' if you prefer, on those peculiar expeditions. Now, since we recall the story of the 'giant' octopus that was found washed up on a Florida beach (as featured, for instance, at the end of a *Scientific American* magazine some years ago), we ask: 'Could a giant octopus have done the deed of disposing of ten people?' Probably not. If such a thing began to take place, at least some would survive in hiding places—and only one person would provide an adequate meal at any one time; therefore we will discount this theory as unlikely. (Unfortunately I do not have the reference to the tale of the octopus in the aquarium at hand, whose interesting expeditions excite our interest, if not our applause.)

The more modern theory of abduction by UFO may be

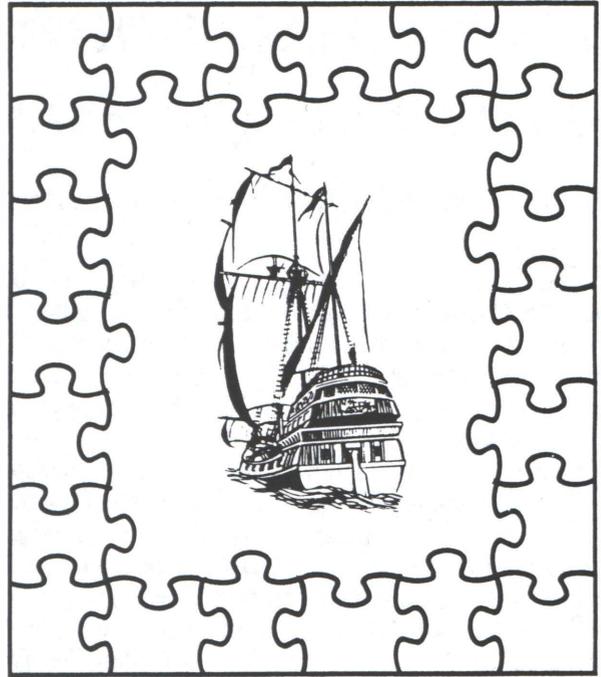
left aside as well, for we may have in our possession the real key to the mystery. Perhaps the cargo contains, not the answer of crew drunkenness, madness and murder that surfaced at the time, but another and perhaps simpler and more mundane answer. An answer that 'lets us down' so that we turn away murmuring: 'Oh. Is that all it was?' Reality can be much less interesting and certainly less exciting than bizarre and astounding possibilities.

The answer to our puzzle may well be found in a book by John Harris (*Without a Trace*, New York: Atheneum, 1981 hardback, Chapter 2, pp. 42-79). His solution (giving credit to a Sir William Crocker for the answer), points to the alcohol carried as cargo. Such barrels had been known to leak and create fumes which could explode if sufficient amounts were involved and a flame or spark caused ignition. The *Mary Celeste* had a hole in the galley floor which gave access for gas to enter the room and find the kitchen stove. An amount of fumes may have caused a small explosion, runs the explanation, and (pp. 78-79) such an explosion would not leave burn marks or carbon evidence of what happened for others to find later. The evidence for this view is that when the ship was boarded the hatches were found thrown open: exactly what would be done if it was decided to 'air out' the below-deck cargo area. Further, evidence was found that a single small boat had been carried on the main hatch, and a lifted rail showed that it had been launched (Harris, p. 48).

The view presented by Harris, then, is that on a possible warning from a small explosion, the captain and crew, suddenly alerted to their danger, threw open the hatches to allow any fumes to escape—and to make certain that there would be no follow-up great explosion, launched the small boat and left the ship to wait out the airing out of the cargo spaces in the hold. In that way they would be away from the ship in the event of a large explosion, and could go back aboard after the wind had cleared the ship of alcohol fumes. (The 'industrial alcohol' was intended to be sent to Italy to 'fortify' wines, but was not good to be drunk by itself. This type of cargo, according to Harris, had been known to explode, and it was likely that the captain of *Mary Celeste* was worried that he was, in fact, riding a sort of bomb.)

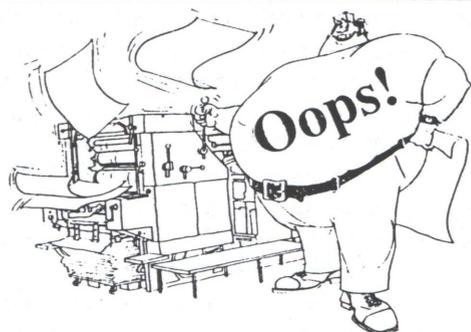
The view presented by Harris is simple, but does seem adequate to explain the mystery ship. In fact, a small quantity of fumes of alcohol could have been smelled by the cook even without any explosion; he could have notified the captain, who then could have ordered the hatches thrown open and the ship's boat lowered to take the ten people aboard away from the immediate neighbourhood of *Mary Celeste*. Did they go too far to be roped to the ship, or forget to rope the small ship to *Mary Celeste* in the event that the wind might pick up and carry the ship that they had left away from them? Even worse, did they tie to the ship with a faulty knot that slipped and left them at the mercy of the ocean as a freshened wind carried *Mary Celeste* away from them more quickly than they could row?

The entire scenario makes pretty good sense. The condition of the ship as found showed that it had passed through some rough weather successfully, but was boarded by those



who discovered it in fine weather (Harris, p. 48). The 'alcohol fumes' solution seems reasonable enough; if the bad weather was still in force as the ship was abandoned, it might be that the storm in some fashion prevented the waiting people from re-boarding the ship, or perhaps in some fashion caused a problem with a possible tow-line. In any case, Mr Harris is to be congratulated on his presentation of this solution. His work already cited also contains good evidence for the reason for various other sea mysteries, and is well worth the reader's attention. Since no trace of the ten people was ever found, writers still exploit the interest inherent in this case, but John Harris seems to have brought forward a simple and possibly true explanation: evidently, if his view is sound, then the sea must have overwhelmed the small boat, and all in it were lost.

H H Trotti originally wrote this article for the *Georgia Skeptic*, from which it is reprinted with kind permission.



Unfortunately, some copies of the last issue of *The Skeptic* (January/February 1991) were incorrectly printed, and had pages missing. We're very sorry, but we can assure you that nothing paranormal was going on! If you received a defective copy, please drop us a line we'll send you a replacement issue straight away. Write to: **The Skeptic**, PO Box 475, Manchester M60 2TH.

Scratching Fanny

Richard Whittington-Egan

The Accusant Ghost of Cock Lane

A small, inexplicable scratching in the wainscoting of a house in Cock Lane, a narrow thoroughfare within the purlieu of Smithfield and the parish of the tolling of the hanging bell of Newgate Prison, was the modest herald of a curious case which was to blossom into a classic eighteenth-century enigma. All London was set, literally, by the ears by the escalating furore of rappings, crashings and scratchings perpetrated by an alleged spirit entity nicknamed 'Scratching Fanny'. No less a personage than Dr Samuel Johnson was to set forth upon intrepid investigation and, in due course, pronounce the prankish poltergeist a great sham, and the whole paradox was to culminate in court, with a man accused of murder by a ghost defending his good repute by counter-charging criminal conspiracy.

To unfold the origami-complex pattern of this 'Cock Lane Tale' we must travel first to Norfolk. There, in 1758, dwelt one William Kent, innkeeper and owner of the post office at Stoke Ferry, who, the previous year, had wed Elizabeth Lynes, daughter of a prosperous Norfolk grocer. Within 12 months she died in childbirth. Her sister, Fanny, who had come to tend her during her confinement, stayed on to look after the child, who soon died, and she remained with the widower. Predictably, they fell in love. Marriage was, however, out of the question. A deceased wife's sister came within the forbidden degrees of consanguinity. They decided to live together as man and wife, and, in October 1759, took lodgings in the Cock Lane home of Richard Parsons, officiating clerk of the church of St Sepulchre without Newgate.

In November, Kent had to attend a wedding in the country. While he was away, Elizabeth, Richard Parson's ten year-old daughter, kept Fanny company, sharing her bed. And that was when, for the first time, the eerie scratchings and knockings were heard. Shortly after William's return, the Kents left Cock Lane. Not only was Fanny by now a good six months pregnant and needing a house of her own, but bad feelings had blown up between Kent, who had lent Parsons, a feckless drunkard, 12 guineas, and Parsons, who having failed to make any effort at repayment, had been informed that the matter was in the hands of Kent's lawyer.

On February 2, 1760, Fanny died, at the new house in Bartlet's Court, Clerkenwell, of smallpox. She was buried in the vault of St John's, Clerkenwell. In the course of the ensuing year William Kent did his best to put his twice shattered life back together. He set up in business as a stockbroker. He married again.

Meanwhile, at the house in Cock Lane the noisy manifestations had, after a lull, broken out afresh, the unquiet spirit which seemed to focus on and around the bed of little Elizabeth Parsons proving more boisterous than ever. Parsons called in a carpenter to dismantle the wainscoting. No

down-to-earth explanation there. Turning his eyelids heavenwards, he humbly prayed the Reverend John Moor, assistant preacher at St Sepulchre's, to bring his spiritual expertise to bear. A code of taps was introduced—one for yes, two for no, a scratching for displeasure. By a system of leading questions, the entity was induced to state that it was the spirit of Fanny, that her 'husband' had poisoned her with red arsenic administered in purl (a popular restorative infusion of bitter herbs and ale or beer), and that she hoped he would hang! The spirit knocking while Fanny was yet alive was said to have been that of her sister, Elizabeth, warning her against Kent. It was a scenario which did not entirely displease the grudge-nurturing Parsons, and one, moreover, which it was his pleasure to bruit abroad. Neither was it exactly anathema to Fanny's brothers and sisters, who were disputatious regarding her will, in which she had devised—bar half-a-crown apiece to them—to William. A caveat was entered to prevent Kent from proving the will in Doctors' Commons, but it stood legally invulnerable.

It was not until January 1762, that Kent saw an item in a newspaper, the *Public Ledger*, and became aware of the 'phantastic' accusation being levelled against him. Horrified by the public scandal, he went promptly to attend a séance at Cock Lane, and hearing the accusations rapped out, shouted angrily: 'Thou art a lying spirit!'

In February 1762, the Reverend Stephen Aldrich, Rector of St John's Clerkenwell, persuaded Parsons to allow his daughter, Elizabeth, to come to his vicarage to be tested by an ad hoc committee of learned investigators, including Dr Johnson. Fanny did not manifest. She had, however, previously promised to rap evidentially on her own coffin if at 1 a.m. the investigators adjourned to St John's vault. They did. She didn't. Then... little Elizabeth was caught in the act of secreting a sounding board of wood in her bed. The Cock Lane Ghost collapsed amid widely echoed charges of fraud.

To complete his already partial vindication, William Kent brought, on July 10, 1762, the affair to the Court of Kent's Bench at the Guildhall. On an information laid against them by William Kent, the Reverend John Moore, Richard Parsons, Mrs Parsons, Mary Frazer (who had acted as entrepreneurial 'medium' at Cock Lane), and Richard James (responsible for the prejudicial insertions in the *Public Ledger*) were charged with a conspiracy to take away Kent's life by charging him with the murder of Frances Lynes. The trial judge, Lord Mansfield, summed up for 90 minutes. The jury took a quarter of an hour to find all the defendants guilty. Moore and James were ordered to pay £588 to Mr Kent. Richard Parsons was sentenced to two years imprisonment and three spells in the pillory. Mrs Parsons got one year, and Mary Frazer six months.

Parsons protested to the end that the knockings were genuine, and it must in all fairness be said that posterity has come to recognise that the Cock Lane manifestations did unquestionably bear the characteristic stigmata of similar outbreaks of poltergeistic infestation subsequently held by serious investigators of psychic phenomena to display the diagnostic hall-marks of paranormality.

Richard Whittington-Egan wrote this article for *the New Law Journal* from which it is reprinted with kind permission.

Wet and Dry Skepticism

John Lord

A slightly damp skeptic speaks out

In the *Skeptic* 5.1 David Fisher stated of his reasons for taking on the role of 'super-skeptic', and called for the wet and dry wings of the skeptical movement to part company. I agree with a great deal of what he says. (He also adds that he suspects only *older* readers will find favour with his arguments. At the great age of forty one, I am not sure whether I qualify). What I do question is whether David's call for schism in the British skeptical movement is necessary. I have three reasons for doubting this.

First, David points out that many paranormal claims are rubbish—and palpably so. Though I am not a super-skeptic, I have to say that he's right. Years ago, I wrote an article for the *Skeptical Inquirer* (Volume V, No. 3), suggesting that the 'open-minded' policy adopted by CSICOP in its terms of reference might just be a touch too liberal. I suggested that *some* of the claims that were made lacked any kind of credibility—worse, they were actually ridiculous. To suggest that skeptics should waste their time investigating such twaddle was foolish. To his credit, Ken Frazier published my piece (it generated no great controversy—a couple of letters to the editor, one to me personally, and a request for an offspring from a Romanian chemist).

When I ponder some of the downright foolish claims which are put about, I like to remember the wise words of the great Scottish philosopher David Hume, who asked 'Does a man of sense run after every silly tale of hobgoblins of fairies, and canvass particularly the evidence?' Certainly not, would be my own response, and so, I imagine, would be David Fisher's. To take one example I instanced in my *SI* piece—the amazing story of Gef. Now at the ripe old age of eighty-four, Gef was living in the Isle of Man, though he had been born in India. He had a number of achievements to his credit: in particular, he could speak some eight or so languages, understand deaf sign language, sing hymns, and was a dab hand at solving crossword puzzles. Nothing very remarkable in that, you may think.

But Gef was a mongoose. For those of you who are acquainted with this story, and know the background, I am sure you will line up with me as super-skeptics, to dismiss it out of hand, without further investigation, as a piece of gross and impudent imposture. There is no quarrel here, I am sure, between David Fisher and myself (indeed, I hope I may say, *ourselves*). Some cases, to put it bluntly, do not

merit serious, open-minded, scientific investigation.

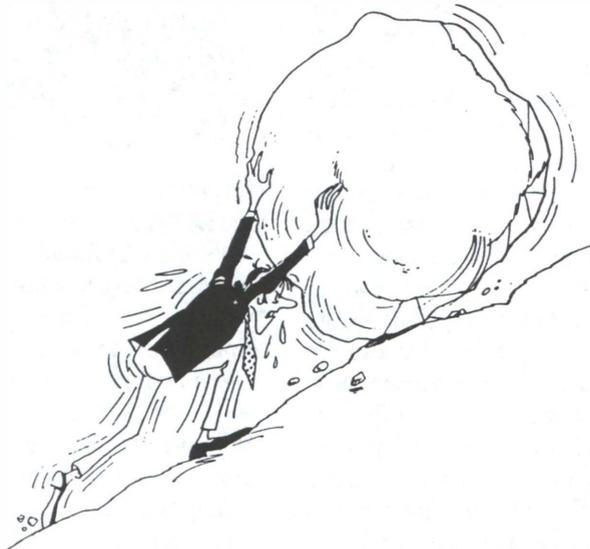
But does this attitude make me a 'dry' skeptic, ready to denounce *all* supposedly paranormal claims as absolute rubbish? I don't think so. Because *not* all claims made are quite so transparently silly as a hymn-singing mongoose. They deserve our reasoned and thoughtful consideration, rather than our ridicule or outright rejection. I certainly don't believe that Stonehenge was built by spacemen, but sure as hell, I'm curious to hear what people have to say about it, even when their ideas are off-beat. Equally, I don't believe that anyone has precognition, but coincidences fascinate me.

There's a positive side to this, too—even for the committed dry skeptic. Just think what delights we should have missed if people had simply laughed to scorn the Bacon-Shakespeare controversy—then we should have been deprived of the Friedman's definitive critical study of the ciphers (*The Shakespearean Ciphers Examined*, 1957). And Lyall Watson's

curious ideas about the 'hundredth monkey' were decisively rebutted in a splendidly acerbic article by Ron Amundsen, which is a model of its kind (*SI*, vol. IX, No. 4). I could cite many more examples of cool, skeptical scholarship. These are not polemical counterblasts—they are fine examples of what real critical thinking can achieve. So, I think I want to say I am dry about some paranormal matters, and wet about others.

Finally, may I suggest that an unwillingness to engage in public debate (on the megaphonic scale, as David puts it) about such issues need not amount to pusillanimity. Some of us lack the necessary talent for confrontational tactics. My own preference is for cold, sometimes ironic, *written* analysis of the claims that are made. This happens to be the medium I feel most at home with. Occasionally, one's adversaries respond, and by their responses, they themselves reveal the inadequacies of their own case (for a recent example, see the *Skeptic*, vol. IV, No. 2 p. 31). There is more than one way to skin a paranormalist, and I hope that David will reconsider his call for a schism. Ultimately, we are all working for the same goals; but there are far too few of us. If skeptics in Britain fragment into factions, then I fear we shall be asking to be ignored.

John Lord is a librarian at the University of London Library.



1991—The Final Crash of the UFOs?

Christopher Allan

Roswell revisited

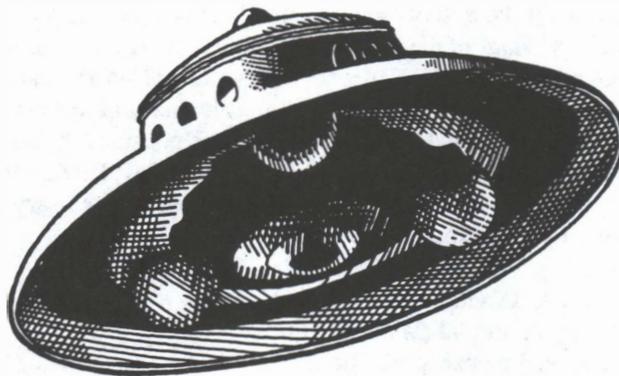
Ufology in Europe has diverged considerably from that in the USA in recent years. Whereas in Europe ufologists have concentrated much more on psycho-social and links-with-folklore explanations and the comparatively new tectonic strain or 'earthlights' theories, in the US the current views are much more oriented towards the Extra-Terrestrial Hypothesis (ETH) and, in particular, two main ETH offshoots: abductions and crashed saucers. Abductions have been written about *ad nauseam* in the literature, so I shall deal only with the crashed saucer fad as it now stands.

Back in 1950 an American author named Frank Scully wrote a best-seller called *Behind the Flying Saucers*, which dealt with the crash of three flying saucers in the south-west US and spoke of little men from Venus being found among the wreckage. It was, of course, all being hushed up by the US government, who had the alien corpses pickled away in secret laboratories. Scully's book caused quite a sensation and some consternation in official circles for a while. Unfortunately Scully's informants turned out to be less than reliable (one was later convicted of fraud over another matter). The book itself was full of scientific howlers and daft imaginings and was eventually exposed as a fake by *True* magazine in 1952.

Despite the constant stream of sightings and investigations by both official and private UFO groups, crashed saucers faded out of the news almost completely until the late 1970s when a ufologist named Leonard Stringfield presented some 20 or so new cases to a UFO conference in 1978. He later published his findings in his *UFO Crash/Retrieval* series of papers. The problem was that all of Stringfield's informants were anonymous military personnel and the dates and places of the alleged events were usually missing. To this day he maintains a strict silence on the identity of his sources. Few ufologists now take Stringfield's stories seriously and it is doubtful if they ever did.

However, in 1980 a new book appeared which rekindled interest in crashed UFOs and which has kept interest alive throughout the 1980s, leading to a big new investigative project and with it the hopes of a final breakthrough in the acceptance of UFOs as extraterrestrial vehicles. The 1980 book was *The Roswell Incident*, by Charles Berlitz and William Moore, who had collaborated on an earlier book called *The Philadelphia Experiment*, a weird story involving the teleportation of a navy ship during World War II.

Actually Berlitz did none of the research on the Roswell book and has long since dropped out of the affair, having



gone back to more esoteric subjects like the Bermuda Triangle and Atlantis, with which he was originally associated.

Perhaps he found crashed UFOs not to his liking. The two men really behind the Roswell crashed UFO story are William Moore and his colleague Stanton T Friedman; through the 1980s they produced several updated research papers giving the latest dope on the case, producing new 'witnesses', gathering new evidence and generally giving the impression that an enormous 'cosmic Watergate' was being conducted by the US government.

What exactly is the Roswell story? Unlike other crashed UFO stories, in this one something *did* actually take place. On day in mid-June 1947, some ten days *before* Kenneth Arnold's famous sighting that launched the modern UFO era, a rancher discovered some strange debris on his ranch near Roswell, New Mexico the night after a severe thunderstorm. He thought nothing of it at first, but some three weeks later had another look and decided to report it to the local sheriff. He had, in the meantime, heard of the first 'flying disc' stories going the rounds, and curiosity prompted him to look again at his discovery and report it, in case it was one of those 'things'. The local USAF base was alerted on July 7 and sent two men back to the ranch with the rancher. They spent one night out in the boondocks, collected most of the stuff, loaded it into a truck and carted it back to the air base some 75 miles away. A short press release was then issued, saying a 'flying disc' had come into the possession of the USAF. No description was given of the said object. The local militia (the few who had seen it) were baffled but, upon orders from on high, immediately dispatched the wreckage by plane to higher HQ at Fort Worth, Texas, en route for Wright Patterson Field in Ohio where technical experts would examine and, hopefully, identify the strange material.

All the above was reported in the local and national newspapers during early July 1947. Brief notices even appeared in the UK, in *The Times* and *Daily Telegraph*.

The FBI was alerted; then a press conference took place at Fort Worth where several photographs were taken of the wreckage. A weather officer at the base was called in, examined the stuff, and at once pronounced it as a wrecked radar target, shaped like a large 3-dimensional six-pointed star covered in tinfoil and attached to a balloon; this was a Rawin target, then used for meteorological purposes and a device unfamiliar to most military personnel, and certainly to people on remote ranches. The planned flight to Wright Field was cancelled and the press sent home. The story was dead and buried, and stood that way for over 30 years.

Then suddenly it resurfaced in 1978 as a result of a chance remark by someone to Stanton Friedman after a lecture on UFOs he gave in Louisiana. One of the USAF officers who had recovered the wreckage finally broke his long silence and told Friedman he had once handled pieces from a flying disc. Friedman told his pal Bill Moore and together they began locating some 90 'witnesses' and building up quite a story of a spaceship that crashed after an explosion on board, with four to six alien bodies being found, strange writing appearing on the object, secret photos being taken, military aerial reconnaissance being done, supersecret high level meetings, phone calls and so on. The FBI were said to be deeply concerned at the time, witnesses were told to keep their mouths shut; also, the rancher was held incommunicado at the local air base whilst the ranch was combed thoroughly by the military under conditions of the highest security.

It was this story that formed the main part of the Berlitz/Moore book and Moore's numerous follow-up papers in the 1980s. Moore and Friedman had a monopoly on the Roswell story until 1988, adding more and more pieces of evidence to their 'cosmic Watergate' as they progressed. To fit in with another, unconnected, sighting they had changed the date of the initial discovery, insisting it was on July 3, not mid-June. They had also linked it to an uncorroborated and second-hand report of another 'crash' story, told to Friedman, which allegedly happened at Socorro, New Mexico; a story which Moore later had doubts about.



Unfortunately, none of the people interviewed could remember the dates, only a handful had seen pieces of the debris and the original rancher had died long before. In fact every person without exception was interviewed no less than 32 years after the event. Nobody has ever been found who saw the UFO crash; even the word 'crash' is a later invention, since the original press reports speak merely of a 'landing' or a 'recovery' of a light instrument.

In late 1988 the Center for UFO Studies (CUFOS) decided to launch a new Roswell investigation. In September 1989 a team went out to the remote ranch site and camped there for five days, hoping to find, after a lapse of 42 years, some fragment of the doomed spaceship. Not surprisingly, they drew a blank. To help fund the expedition, CUFOS issued special Roswell expedition T-shirts. The case soon featured on an 'Unexplained Mysteries' TV program; this produced new witnesses and led to yet further interviews.

Two new investigators, Kevin Randle and Donald Schmitt, have since taken up the role of crashed UFO specialists in the US and, under the auspices of CUFOS, have now interviewed nearly 250 people altogether. If this seems an impressive figure, let readers be assured that only about ten (to be generous) are of any real use, the rest being merely friends, relatives and odd hangers-on, who saw nothing first-hand. Randle and Schmitt have unearthed startling new evidence, all told by these witnesses (42 years afterwards) of even more incredible things: the wreckage was transported to not one but *three* secret locations, involving at least seven B-29 or C-54 cargo plane journeys and resulting in a total weight of the craft of some 50 tonnes (as opposed to the piffling 5 pounds of debris originally reported in the press), bodies were indeed found and whisked off for examination, a huge 500-foot long trench appeared in the desert where the spaceship had crashed to earth, armed guards were put up around the site to prevent onlookers getting too nosy, and other strange things occurred which, says Randle and Schmitt, can only be explained by the recovered object being indeed an alien spaceship that met its fate that night in 1947.

They also say the details are still held in top secret files at the Pentagon; despite persistent USAF denials that it has any secret crashed saucer reports of any kind, classified or unclassified. (All USAF UFO files were declassified and released in the mid-1970s; Roswell does not appear in them).

In general Randle and Schmitt's findings match those of Moore and Friedman. However, Moore was not entirely happy with the two usurpers of his crashed saucer story and, as time went on, became more and more disturbed by their methods, claiming that they had pirated his original research and claimed it as their own. He had presumably realised that with their proposed new book in the offing he would stand to lose financially.

Accordingly he fired an angry 9-page missive at Randle and Schmitt in August 1990, charging them with pirating his (and Friedman's) source material without due credit and permission. He threatened a lawsuit if Randle and Schmitt went ahead with their book. Meanwhile Friedman, who had already joined forces with Randle and Schmitt, became very angry at Moore's outburst and split with him, probably for

good. Friedman accused his former colleague of 'a load of false charges...most based on ignorance of the facts and seemingly delusions of grandeur'.

Since then Friedman has come out with a statement that, while he goes along almost entirely with Randle and Schmitt's ideas, there are still minor points of disagreement, thus he had decided to branch off and write his own Roswell book in conjunction with another ufologist, Don Berliner. Moore, meanwhile, has teamed up with his colleague of MJ-12 fame, Jaime Shandera, to provide yet a third Roswell investigation team (!) running concurrently with the other two groups.

Roswell 'papers' have proliferated in the UFO literature in the US for the best part of two years now, so much so that even abductions seem to have, temporarily at least, taken a back seat. Meanwhile, further developments are in hand. A special 'Crashed Saucer Project' has been set up by the Fund for UFO Research and in July 1990 a conference was called in Washington to gather as much of the 'first hand' testimony as possible and record it on videotape with a view to eventually presenting it to Congress. Indeed, it has been the view of several prominent ufologists that the vast amount of testimony gathered is now so overpowering that both the US scientific community and Congress will soon be compelled to take notice and finally force the military to release their supersecret files and admit that ETH is now a proven fact. With the witnesses now ageing, Friedman says: 'we must work quickly, because we are racing the undertaker'.

However, skeptics need have no fears. Disputes have now arisen about what is depicted in the six photographs

that were taken at Fort Worth in July 1947. The photos show something very much like a damaged balloon and radar target, complete with aluminium foil and wooden beams, but Moore and Shandera still stubbornly claim that the wreckage shown is part of an alien spaceship. Randle and Schmitt, while admitting the stuff shown is merely a wrecked balloon, insist that a deliberate switch was done *before* the photos were taken (the real wreckage having been secretly spirited away by the military). Also, to further muddy the waters, both the photographer and two of the principal ex-military people involved are now revising their statements. A recent witness has even been found who claims to have 'remembered' the crash even though he was only five years old at the time. Friedman is apparently very impressed with his evidence. Randle and Schmitt are not, and claim he is a fake.

If all goes well and there are no lawsuits, there should be two new Roswell crashed saucer books out during 1991 with the prospect of further articles and monographs to come, and with debates continuing for a long time yet. In view of the above, it does indeed look as if the UFOs will finally crash to earth sometime in 1991.

FOOTNOTE

Roswell, New Mexico does in fact have a strong space-age connection. It is where rocket pioneer Dr Robert H Goddard built and launched liquid fuelled rockets during the 1930s, at a time when space travel was still largely a science fiction concept.

Christopher Allan is a former technical author in the computer industry

Crossword Scepticus

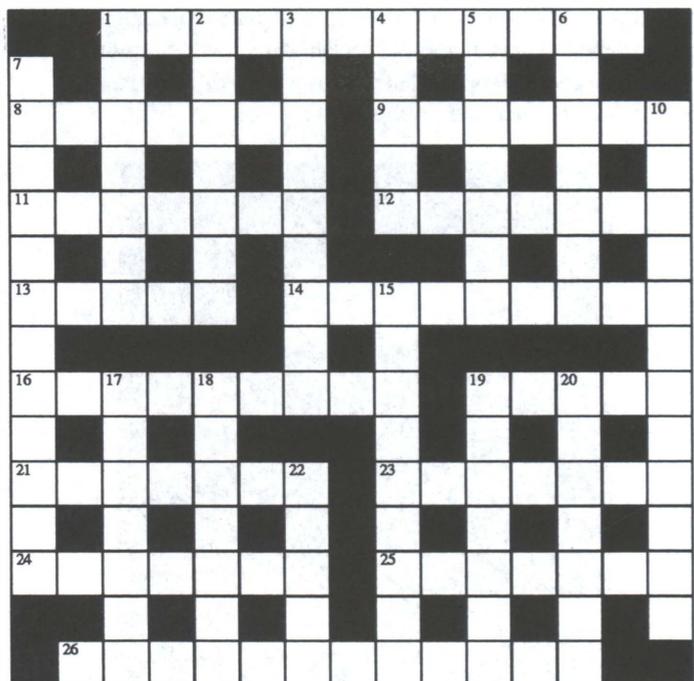
Most of the clues or their answers are related to skeptical matters. Some of the answers are proper names which should be familiar to readers. Send your entries to *The Skeptic*, PO Box 475, Manchester M60 2TH, by 14 April. The first correct entry out of the hat will win a copy of Ronald Storey's classic book about Von Däniken *The Space Gods Revealed*, and a £5 book token.

Across

- 1 Does this medium give the message from McLuhan now? (12)
- 8 Hit Ms Fitzgerald with a thin plate (7)
- 9 Halt interval for make do (4,3)
- 11 Number, not anaesthetic (7)
- 12 Is this pursuit worth the bother? (7)
- 13 Equivocal sound if just over half (5)
- 14 Me agog due to agitation (9)
- 16 Kid, not goat nor tease (9)
- 19 Amidst admist Pergamon galley (5)
- 21 Can backwards French woman engine cover? (7)
- 23 Educated Arab mixes fife end (7)
- 24 Time ere hermit is produced (7)
- 25 Wet idol forms birds' food (3,4)
- 26 A capital treatment for oily practice (12)

Down

- 1 Some ate ice -- all tailless for the corporeal (7)
- 2 Sick bird sounds not lawful (7)
- 3 Acid rites conjure up that which is a plus (2,1,6)
- 4 Set up, turn round, overture (5)
- 5 Cutting off nothing in curving around (7)
- 6 Gesturing writing name (7)
- 7 Veronica Clay collapses, but sees the future (12)
- 10 Do these spirits cause throwing up? (12)
- 15 Dashes, forming part of a message from the ether? (5,4)
- 17 Nuclear mix-up is not transparent (7)
- 18 I mug all bent metal (7)



- 19 Lucerne, in a field (7)
- 20 Allness -- "mon yeti" in a spin (7)
- 22 Throw out: reject, reject head (5)

Heaven and Earth

Michael Hutchinson

In the letters section of the *Skeptic* (Vol. 4, No. 6) amateur astrologer Val Dobson seemed to doubt Anthony Garrett's statement in an earlier edition that 'companies are increasingly looking at birth charts'. 'Which companies?' she asked, 'and can this be proven to be a bad thing?'

Astrologers have been claiming for years that they advise companies on prospective employees. Are these claims bogus? Are astrologers not only misguided but outright liars? In the main, the question of which companies use astrology is going to be a closely kept secret. Who is going to admit to such a 'stupidstition', and which astrologer is going to reveal the names of clients? But there is certainly some evidence, other than astrologers' claims, that companies do use astrology.

In an edition of *Tit-Bits* published some eight or ten years ago Jill Frankham reported on 'British bosses who are hiring staff by the Zodiac'. The first paragraph of her article claimed that 'more and more British firms are checking people's Zodiac signs before taking them on or promoting them'. She also names names. The investment broking firm, City and Provincial, from Wakefield had apparently checked the star sign of their salesmen and found that Scorpios were the best. They subsequently advertised for more Scorpios to join them.

The boss of a West Country mail order company J. T. Cassettes got well known astrologer Roger Elliot to help him find a secretary; a Piscean. He was then considering going into partnership with another Piscean. The editor of the juvenile magazine *I9* also believed that astrology was responsible for her office staff being compatible.

Roger Elliot was reported to have been approached by about 30 firms. He told *Tit-Bits* that businesses in America use astrology quite openly. In addition to giving advice on potential employees, Elliot gave advice on business ventures.

In 1986 another firm using astrology came to light. Canterbury Life Assurance Company in Nottingham placed advertisements for salesmen, but specified that only Geminis, Leos and Sagittarians should apply. The man responsible for the advertisement told the *Daily Mirror* that they had looked at their records and had found that the common factor of those who did better sales than average was these three star signs.

Lewis Jones and I tried to ascertain from the company how scientific they were in their research; perhaps they were on to something. However we were unable to obtain answers to our questions. The only thing we did find out is that the man who placed the advertisements had a copy of Linda Goodman's *Sun Signs* on his desk.

All of these companies are only the tip of the iceberg and we will probably never know just how many there are below the surface. But does the use of astrology in employment selection really do any harm? Of course it does. If astrology dictates that, for example, only three star signs have the right characteristics then an employer is limiting the choice of applicants by seventy-five percent. And it could be worse; maybe only one star sign is compatible. That means that eleven applicants out of twelve are going to be rejected. Okay, if an employer wants to be stupid, that's his or her prerogative. But what about those looking for employment? Would you like to be one of those eleven? A victim of superstitious discrimination?

This reminds me of those who look for romance using astrological recommendations. It seems to me that it's difficult enough to find someone you can live with (or would want to live with you) without cutting down your options quite dramatically. Yes, all of this is harmful and I have nothing but contempt for anyone who encourages it.

When in January last year the *Daily Mirror* had a half page feature promoting crystal power I wrote to the editor pointing out what a disservice they were doing to their readers. I received a surprising reply from editor Roy Greenslade in which he told me 'I agree with you. Let's hope it doesn't happen again'. Well, ten months later it did, only twice as large. I therefore thought that it would be worth writing to Greenslade again to get his reaction.

How time changes people. Now Greenslade says how naïve he must have been in his first month as editor. He tells me—as if I didn't already know—that 'crystal power, astrology and tarot cards seem to attract vast numbers of readers. If one is going to have a mass audience then pleasing most of the people most of the time is obviously paramount—as long as one maintains some standards. In the case of this superstitious nonsense I now take the view that right-thinking people cannot possibly be harmed.' In response to a question I asked him about money being more important to him than discouraging superstition he ended his letter with the claim 'It is not a case of money. It is a case of good sense.'

That too, I am sure, would be the response of the editor of *Radio Times* which has just introduced an astrology column. Could this move have anything to do with fact that *TV Times* contains horoscopes and that a circulation war between the two weeklies has just started? You bet it has!

Michael Hutchinson is a member of the UK Skeptics and British distributor for Prometheus Books.

Psychic Diary

Toby Howard

Company logos have been in the news recently: from the multi-million pound re-invention of British Telecom, to the sad retirement of Nipper the fox-terrier, who for most of this century has cocked an ear to His Master's Voice. Far stranger, however, is the story of the corporate logo of Proctor & Gamble, parent company to such consumer favourites as Ariel, Fairy, and Vidal Sassoon, to name but a few. Here is a trademark with character: an old man's bearded face in the crescent moon, facing thirteen stars, all set within a circle. What does this odd-looking image mean? Who is the old man, why the moon, and why thirteen stars?

The first time the logo attracted attention was in 1980 when the company began to receive telephone calls and letters asking whether the company had been bought by the Reverend Sun Myung Moon. Proctor & Gamble denied this outright. Through 1981, the number of enquiries escalated to thousands, and the accusations shifted towards Satanism: the logo was claimed to be an evil symbol declaring the company's support of a Satanic cult, to which it was allegedly contributing 10% of its annual turnover. Supposedly, at the top of the logo, the old man's hair forms a devil's horn, and the curls in his beard are revealed by a mirror to spell out 666, the 'mark of the Beast'. The thirteen stars, apparently, if joined up by lines in the correct way, also spell out 666. Another claim has it that an executive of the company had admitted the truth of a Satanic connection on a nationwide TV talk-show—*Donahue*, *The Tonight Show*, or *David Letterman*, depending on the version of the rumour, in true Friend-Of-A-Friend urban folklore style. It was even claimed that the Chairman of the Board had sold his soul to the Devil in return for the guaranteed success of the company!

Understandably, Proctor & Gamble worked very hard to counteract the rumours, issuing press releases, instigating legal action and even soliciting the support of leading Christian fundamentalists who announced their faith



The intriguing logo of Proctor & Gamble. Is Satan lurking in our kitchens, or is there a more plausible explanation?

in the purity of the company. But what is the story behind the strange logo? According to Proctor & Gamble, the Moonies and Satanism claims are—to borrow a phrase from Stephen Fry—pure tommy-cock and poppy-twaddle. In fact, the history of the logo is straightforward, and easy to document: it has its origins in a simple sketch of a cross in a circle, used to mark shipments of 'Star Candles', one of the company's earliest products in 1851. Over time, this developed into a star in a circle, and later the single star was replaced by thirteen stars, in honour of the original thirteen colonies of the United States. The final embellishment was the addition of the man-in-the-moon figure, which according to urban folklorist Jan Harold Brunvand was 'a design as popular around the turn of the century as the "happy face" drawing became three-quarters of a century later.' Finally, in 1930 a sculptor was commissioned to create the definitive design we see today.

Still, the rumours periodically resurface. According to a syndicated report of 20 March 1991, Proctor & Gamble has answered more than 150,000 telephone calls and letters relating to the Satanism myth in the last ten years. A recent Kansas court case ruled that a couple accused of spreading this satanic stupidity must pay Proctor & Gamble damages of \$75,000. Small fry, perhaps, to a multinational whose UK operation alone had a turnover of £884 million for 1989/90, but a significant victory against modern ignorance and superstition.

Toby Howard is a lecturer in computer graphics, and a member of the Manchester Skeptics.



Skeptic at Large

Wendy M Grossman

Apparently immortality breeds aggression. Douglas Adams, for example, had an immortal character in one of Hitchhiker's Guide to the Galaxy books. This character, driven to despair by the endless, echoing corridor of Sunday afternoons ahead of him, passed the time by insulting all the people in the universe, one at a time, alphabetically.

The world's three leading immortals, Charles, BernaDeane, and James, also seemed rather aggressive when they turned up on Central TV's Central Weekend programme on February 8. I guess it will take a few centuries for them to acquire a certain perspective on life...

The story goes like this, more or less. Sometime back in about 1960 a gospel minister and former nightclub singer named Charles Brown was very ill for several months, and when he recovered he discovered he was immortal. He married a Seventh-Day Adventist named BernaDeane, and he encouraged her to become immortal, too. (God is part of the death process; did you know that?) They met up with another guy named James Strole. Now the three of them are immortal, and travel around the world encouraging other people to become immortal, too—they claim to have thousands of followers (and before you get depressed about this, remember that CSICOP has tens of thousands of followers). CBJ, as they like to be known, and a synod of their UK followers (who call themselves Together Forever) brought their message to Birmingham on February 8, and Steve Donnelly and I were invited along to be skeptical, live on Central TV.

What's astonishing is that once they start talking about immortality they come out with the same gobbledeygoose that spouts forth from any touchy-feely American pop psychology salesman. Consider these quotes from their book:

'It takes all that we are. 100% of us, to stir and keep each other's lives.'

And: 'Immortality is the deepest intimacy any of us will have.'

The followers who were at Central TV were unquestionably dedicated to CBJ and passionate about the change CBJ had wrought in their lives—but, again, in all the usual ways. They were able to accept themselves better, their marriages or relationships were better—one woman said her relationship with her parents had improved.

Mid-programme, CBJ shifted their ground suddenly and said they were not promising anyone immortality. This is useful cover, in case someone dies—or in case someone decides to prosecute under the Trades Descriptions Act.

So, what are CBJ promising that makes their followers so dedicated? The answer is, freedom from the two deepest human fears: fear of death, and fear of being alone. These immortals are a very cohesive group. In the Green Room, for example, before the show, the group sat in a circle, very

close together. Some held hands, some draped their hands over their neighbour's knee. One had a baby with her—and before you say anything, there is absolutely no point in asking these people how this baby's going to grow up if it's immortal.

Why? Here is an example of their notion of genetics, taken from CBJ's book: 'Science has demonstrated that each cell carries the full image of the total human form.' From there they get to standard stuff: 'This is why the life energy emitted from our cells project what we call an energy body.' How do we know there is a spirit? 'Kirilean photography' (sic).

One could make endless fun of this—but there's no point, because the truth is it doesn't matter what they say. Their followers are not in it for the quotes. In fact, I suspect followers stick around for the warm fuzzies (as we Americans sometimes call these things) and a very powerful promise: they will never be alone again.

Are CBJ dangerous? Eternal Flame is more like a cult than anything else, and one of the programme's guests, Ian Haworth, of Cult Awareness, says he knows families that have been broken up by Eternal Flame. I'm sure this is true—another guest was a man whose daughter's involvement with Eternal Flame has caused problems. On the other hand, families have problems for all sorts of reasons.

BernaDeane said at one point that followers risked nothing—'All you have to lose is your death', she said. It's a good line, and almost certainly one she's used before. It's not quite complete, of course. Followers are strongly encouraged to tithe—that is, donate 10% of their income to Eternal Flame. Followers invest a certain amount of time in what CBJ call 'intensives'—sort of emotional let-it-all-hang-out sessions. And there is, ultimately, the pain of disillusionment.

Or is there? As long as the group stays together, I suspect followers will take the deaths of other followers in their stride: obviously, the deceased's cellular integration wasn't complete. Even CBJ's deaths should be rationalized away: negative energy, perhaps, directed at them by people like us. One can imagine them as time goes on, growing more and more paranoid and hostile to the outside, death-ridden world and, concurrently, more and more co-dependent.

Skeptics have nothing to offer these people—and, sadly, they have nothing to offer us. Because, by God, I wish it were true. I don't want to die. But I don't want to spend my life with CBJ, either. I guess the only answer is to squeeze 10,000 years of living into the time I've got.

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

Reviews



Time flies

Peter Coveney and Roger Highfield, *The Arrow of Time* (W.H. Allen, £14.95).

What could be a more essential feature of our lives than the fact that time flows in a single direction, drawing us inexorably to our ends. We are painfully aware of the irreversibility of existence; we are born, grow old, and die, and can never the reverse the process. It is in this sense that there is an arrow of time, pointing from the past to the future.

Surprisingly, this direction of time is not reflected in the current theories of the fundamental laws of nature. Most fundamental physical theories are time reversible—if a given event is possible, then so is the event run backwards in time. This is certainly true of classical physics and of the theory of relativity. It is also largely true of quantum theory. On the other hand, the sciences which describe more complex systems, such as chemistry and biology, must assume an arrow of time, since irreversibility is an essential part of these systems. Since all phenomena are manifestations of underlying physical laws, the question emerges: how can irreversibility arise from reversible theories?

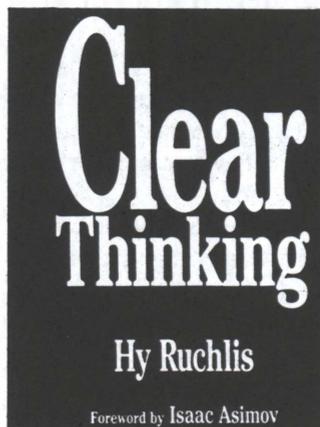
This book is a popular account of some current attempts to answer this question. To prepare the ground, the authors review the notions of time in classical, relativistic, and quantum theory. Next, the authors review ideas about time irreversibility in science, starting with a discussion of thermodynamics and leading on to an introduction of modern ideas about self-organisation and chaos. This includes discussion of how the ideas can be applied to understanding chemical and biological clocks, evolution, and morphogenesis—the development of biological forms (such as the cheetah's spots). The purpose of this discussion is to emphasise the fact that irreversibility is essential to explanations of these phenomena. Finally, in the last chapter, the authors sketch their ideas about how to reconcile these two types of science.

It is a whirlwind tour of a fascinating subject. However, due to the huge range of material that the authors try to present, the book is not completely successful either in presenting the dilemma or in explaining the suggested solution to it. The descriptions of the various topics are written well and are very interesting. The difficulty is in figuring out how each individual topic fits with the others to form the argument. There is really too much material presented too fast. I think the reader will get a taste of the difficulties of understanding the nature of time by scientific theory; I am not sure that they will understand it all.

—Jonathan Shapiro

Perish the thought

Hy Ruchlis with Sandra Oddo, *Clear Thinking: A Practical Introduction* (Prometheus Books, £15.95).



Any book with a title like this deserves careful examination: one can never guess just what will be found lurking between the covers. In fact, this book is a gentle introduction to the scientific method and logic, with some interesting examples of logical fallacies and irrational arguments, illustrated with everyday examples. It is unlikely to contain anything new to a reader with a

good scientific background—unfortunately, this means that almost everybody else will be able to learn profitably from this book. It will, for example, allow a more critical assessment of the pronouncements of salesmen, advertizers, teachers, religious leaders, politicians, and others with a professional interest in misleading the public.

For the most part, this book sensibly concentrates on critical analysis, illustrating errors in thinking and allowing practice at avoiding these errors, rather than trying to assist the creative process itself. This is in line with widely-accepted view that one cannot teach people to be creative, merely encourage and guide them. There are some good guidelines to clear thinking to be found, and even some hints toward thinking which is both clear and original.

The book was originally published in 1962, but has been substantially revised for the 1990 edition. It is clearly and fluidly written, and definitely targetted at teenagers; adults may find the simplistic writing style faintly insulting. Each chapter is followed by a series of exercises, allowing the reader to practice a suitably critical approach to everyday written and spoken material. Generally, these examples are excellent, although the persistent use of North American culture and idiom grates somewhat on the English-speaking reader.

In conclusion, this book is probably to be recommended to young teenagers, encouraging them to take with a pinch of salt the profusion of messages which abound in the modern world. It is also to be recommended to those who have reached adulthood without stretching their critical facilities.

—Trevor Hopkins

The flaws of perception

David Clarke and Andy Roberts, *Phantoms of the Sky: UFOs—A Modern Myth?* (Robert Hale, £12.95).

What is generally referred to as 'ufology' is a not a science, nor a belief system: it is a subculture—or more precisely, a set of subcultures, which overlap in surprising ways. The range of beliefs is wide: some ufologists are convinced that the US Government has flying saucer wreckage in its possession, together with alien occupants, that their outer-space technology has been incorporated in new military hardware, and that the CIA is actually cooperating with aliens in a conspiracy on the grandest scale. Other ufologists scorn these ideas; these are the views of the 'lunatic fringe', they will tell you. Nevertheless, these people may believe that we are constantly being visited by alien craft, and that abductions do occur. Still others draw the line at spaceships, and so on. Whatever views are held, there is no doubt that a huge number of people have invested a huge amount of (mostly voluntary) effort into talking about, writing about and thinking about UFOs. What's going on?

With an introduction entitled 'UFOs—Space Age Folklore' which states '... at the heart of the UFO phenomenon there is nothing tangible to grasp—only people, their experiences, explanations, dreams and beliefs', this book is unlikely to be welcomed by the hard-core ufologist, or indeed the majority of traditional flying saucer enthusiasts. But it should certainly be read. David Clarke and Andy Roberts—both veterans of various flavours of ufology—have produced an excellent and impartial study of the field. They begin by 'advocating scepticism in its purest form', and—with one or two non-ufological lapses—stick to this intention admirably.

In nine entertainingly written chapters, the authors trace the 'UFO experience' from the coining of the term 'flying saucer' in 1947 to the exotic adventures of Budd Hopkins and Whitley Strieber. The way the story develops is fascinating: from 1947 until the late fifties (the term 'UFO' first appeared in 1957) glittering shapes were seen in the sky, either singly or in formation. Then, new stories appeared of craft which had actually crashed, the subject of mysterious government cover-ups. Next came the 'contactee' phase, where friendly aliens (usually tall, blond and beautiful) took humans for day-return trips in their craft, delivering their 'we come in peace to warn you that you will destroy your planet' philosophy along the way. In the 1970s, the aliens turned nasty, and the 'abductions' phase began, with events becoming gradually more sinister.

Clarke and Roberts view these developments as the genesis of folklore, not as a factual record of alien behaviour patterns. As they succinctly put it, 'we cannot study UFOs themselves, only the reports of them, and the ideas of what they may be.' By relating modern UFO reports to the curious 'phantom airships' flaps of the 1890s, the mystery aircraft of World War 1, and the 'foo-fighters' of World War 2, and providing detailed analyses of several cases, the authors make a convincing case for the 'UFO experience' as a fascinating modern cultural phenomenon.

—John Yates

Serving science and mammon

Frank Close, *Too Hot to Handle: The Story of the Race for Cold Fusion* (W.H. Allen, £14.99).

It was always clear that the cold fusion affair would demand a good book detailing the personalities concerned, the science involved, and the interactions between the scientific community and the rest of society. If the claim proved true, the book should explain why the phenomenon took scientists so long to find; if false, how the mistake came to be made, and adhered to in spite of growing contrary evidence. Now that the dust has settled and test-tube fusion has been laid to rest, a respected British physicist, Frank Close, has written the definitive factual account of what actually happened. Less is provided in this book by way of interpretation or context. The physics has been made, in principle, accessible to the layman, although the sheer amount of material will deter all but the most determined of non-experts from reading it fully. The story is told in parallel, so that some material appears in differing contexts. Unfortunately there are no photographs, and a good set would enhance future paperback editions.

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P



On Thursday 23rd March, 1989, the *Financial Times* of London carried an exclusive article suggesting that the fusion of atomic nuclei could take place in a test tube and liberate massive amounts of energy. When the nuclei of lighter elements fuse together, they give products of less total mass than before, and the discrepancy is converted to energy according to $E=mc^2$. This is the energy source of the sun and the hydrogen bomb, and billions of pounds have been spent in trying to arrange a controlled fusion reaction, and create a virtually limitless source of energy. The difficulty is that the nuclei are positively charged, and since charges of the same sign repel, they must move towards each other at great speed in order to overcome this repulsion and approach close enough to fuse under the influence of attractive intra-nuclear forces. This means making the charged gas (or "plasma") hotter than the sun, and confining and maintaining it is tremendously difficult. Had the chemists succeeded with a few hundred pounds worth of equipment where the physicists, to date, had failed with billions? All they did was to break down "heavy" water— D_2O rather than H_2O , where the nucleus of deuterium (D) consists of an extra (neutral) neutron in addition to the positive single

proton of hydrogen—by passing an electric current through it, and thereby infuse the deuterium into one of the electrodes, made of a metal called palladium. Significant heat was liberated in this process, and one operation wrecked a fume cupboard overnight. Only fusion of deuterium, somehow brought about through the proximity of deuterium nuclei within the palladium, was held to be capable of producing this quantity of energy; chemical reactions did not suffice. It was also claimed that free neutrons, a product of fusion, were seen; however, the expertise of the scientists concerned lay in thermal chemistry rather than neutron experimentation.

These scientists were Martin Fleischmann, retired from a professorship at Southampton, with a first-rate reputation; and Stanley Pons, who had originally crossed the Atlantic to work under Fleischmann and was now hosting him at the University of Utah. Their decision to go public on March 23rd was fuelled by fear that a worker at nearby Brigham Young University would break (or had broken) an agreement to publish in coordination. In fact this researcher, Steven Jones, acted with propriety throughout, and the present book unravels how Fleischmann and Pons (F&P) came to think otherwise. Jones was already detecting neutrons—the difficult part—and all he had to do to win was the much easier test for heat. Ironically, Jones was interested in far weaker effects (still plausible today) which never had had energy-producing applications. Here is the first entrance of wider issues: had Jones taken out any patent, F&P would have been unable to do the same for their multibillion-dollar royalty energy scheme. As a result, they acquiesced in their university's desire to "rush it", always a dangerous practice in research.

Following the public announcement and submission of their paper, the scientific community began its attempts world-wide, under intense media scrutiny, to replicate F&P's claim. Early reports were positive, with neutrons reported at one laboratory, heat at another, and tritium (a fusion product) at a third. No single experiment found all three together, though, and other laboratories began to report negative results. The Harwell laboratory in Oxfordshire, which employed Fleischmann as a consultant (and thereby had a head start), stated by May 7th that its comprehensive range of experiments had discovered nothing, and announced an end to testing as rapidly as June 15th. The author of this book was able, at least for a while, to talk to Fleischmann.

Early explanations for the discrepancies involved more exotic forms of fusion. But soon, explanations other than fusion (these are detailed in the book) began to emerge. The electronic mail network linking computers world-wide enabled scientists to publicise and discuss their results at the speed of light, and this played an important role. Those experiments reporting later were more painstaking, and were able to eliminate the errors which had led to the false positives: an unfortunate but inevitable sequence of timing. Fleischmann declined to answer a straight question on whether heat was seen if normal rather than heavy water was used: a simple and obvious "reference" experiment with the instant capacity to disprove the claim. F&P also began to assert, a posteriori, that only certain electrical cells

showed the effect; a hazy explanation followed later still. They were not forthcoming with the precise details of their experiment, enabling them to hint that other experiments might be missing something. They attacked one team for taking data from a film of their laboratory, although they had repeatedly refused to make that same data available. They failed to loan out their "successful" cells for independent testing as agreed. Skeptics may recognise this pattern more readily than scientists.

One vital piece of evidence concerns the proportion of neutrons emitted at different energies. The "peak" energy, at which the most neutrons were emitted, was instantly recognised by neutron specialists as incorrect for the fusion reaction claimed. Later, F&P showed a graph with the same curve peaking at the correct energy. (This curve was in any case the wrong shape.) They never gave a satisfactory explanation of why the change had been made. Close stops short of suggesting that they simply shifted it, and the book in general has an air of having been legally combed. This is entirely sensible given the shocking inducements to litigation within the American legal system, and the willingness of Fleischmann, Pons and the University of Utah to resort to it. At one point a researcher with a simple negative result received a letter threatening legal action: a shameful state of affairs.

The story exemplifies what can happen when the process of science is distorted by external influences, such as royalties and the psychology of individuals. Scientists and their administrators are human beings, and all too fallible; but the methodology of science, when used properly, stood up very well. An incorrect result which arose from unscientific haste was painstakingly and definitively disproved within one year. Close concludes by stating that Fleischmann and Pons are "victims of their own excessive claims". That, and their reluctance to let go.

—Anthony Garrett

God on the box

Steve Bruce, *Pray TV* (Routledge, £10.99).

Pray TV deals with the televangelism movement; it is not likely to appeal to the skeptic *qua* skeptic, as it is rather devoid of the analyses of claimed miracle cures or outright fraud that are likely to titillate such an audience. It is interesting, however, in that it constitutes a workmanlike study of the televangelism movement which is both readable and (curiously) absorbing. From its roots in the grubby backwoods churches of the South to the present Hollywood style presentation of the gospel, Bruce efficiently describes the history and prime-time evangelism, its political involvement, the typical follower who is embroiled in it (people with a low tolerance of ambiguity—hence the absence of liberal religion on the screen), the personalities of those involved in its promotion, and the often disturbing shenanigans that go on behind the scenes. His writing is generally non-judgemental, but wittily acerbic observations occasionally punctuate the otherwise dry narrative.

Televangelism is such big business that discussion of the financial state of the movement is inevitable. It is here that a picture emerges which is distinctly reminiscent of Randi's work, or of Lindsay Anderson's recently televised parody *Glory Glory!* Televangelists have evolved a plethora of ways in which to extract (extort) hard (tax-free) cash from their followers; some continually drench their viewers with begging letters, and regularly adopt the ploy of claiming that 'our church' will go under if money is not urgently received (which is rarely the case). These letters, produced by banks of flashy computers, are fashioned in such a way as to give the impression that they are personalised: the evangelist's signature, which appears genuine, is actually printed. Bruce himself was at the receiving end of such a trick, and his description of the event—which includes copies of the begging letters—makes for interesting reading. But if piling on guilt is considered a bit much, the destitute preachers may be somewhat more benign, and offer gifts in exchange for cash—prayers said, cheap paperbacks and bibles, and so on. For the Christian afraid to go out at night there are even canisters of Mace gas on offer. Just send in your hundred bucks.

This book contains much that gives a distinctly grimy feel to televangelism; there is a fascinating chapter on the downfalls of Jim and Tammy Bakker and Jimmy Swaggart (God, mammon and oral sex). But a nonetheless paradoxical image remains. For all of the dishonesty and squalor, Bruce argues convincingly for the honesty and integrity of most proponents of televangelism. Bakker, Swaggart and others—presumably including Peter Popoff, whose high-tech fraud is surprisingly not mentioned—are seen as aberrations on an otherwise clean (but less than admirable) record; those whom we might interpret as con-artists are portrayed (à la Doris Stokes) as initially sincere individuals who were corrupted by power, money, nubile parishioners, and so forth—although such a charitable assessment could hardly extend to Popoff and his ilk, and the omission of this particular example is a glaring weakness of an otherwise comprehensive study.

— Robin Allen

A wing, not a prayer

John F Schumaker, *Wings of Illusion: The Origin, Nature and Future of Paranormal Belief*, (Polity Press).

The author is a clinical psychologist, and his style is literary rather than coldly logical, so that an exposition of his ideas is not easy. However, his main argument is straightforward, and very interesting.

Working from a position of traditional Scientific Humanism, he takes for granted the fact that our life in the world is often hard, cruel, and uncertain, that death is the end, and that there is no fundamental purpose to any of it. As a psychologist, he also notes that virtually every known human culture subscribes to some official set of ideas that clearly contradicts all the above—these are the 'paranormal' belief systems of the title, under which term he (rather misleadingly) understands both traditional religious and su-

perstitious thought and practice as well as what most of us would consider paranormal—a more suitable expression might be 'irrational', or 'contradicting the hard realities of life'.

He attempts to uncover the psychological factors which induce people to take on board such ill-founded ideas, and his (unsurprising) conclusion is that we need such belief systems to provide us with a sense of security in the face of a hostile Universe, to give us the illusion of meaning in, understanding of, and control over our lives. (Many skeptics would accept this.)

He then proposes, however, that the evolution of our (rational) cerebral cortex has outstripped our emotional ability to cope with our human perception of the world, and that 'culturally induced insanity' is our way of surviving the conflict thus generated; he speculates that 'paranormal' belief systems constitute a kind of socially approved hypnotic trance, generating endorphins (internally produced brain hormones) to allay life's anxieties, and are mediated by the right cerebral hemisphere, assumed to be the seat of emotional experience.

Stated so badly, his ideas may not seem too far removed from the paranormal themselves, and I found it even more difficult to follow his attempts to bring anorexia nervosa and other neurotic symptoms into the scope of his argument. However, he does attempt to give a psychologically plausible explanation of paranormal beliefs, and much of what he says has solid antecedents in the skeptical literature.

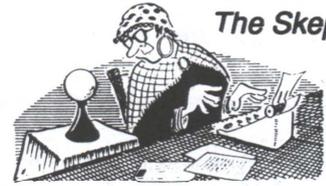
His account does seem to fit certain aspects of organised devotional religion, with its well-known excesses of authoritarianism (e.g., the Inquisition, the Jonestown massacre), and related phenomena such as spiritualism, reliance on divination in everyday life, etc. I would however be interested to see how his ideas extend to other, 'non-paranormal' systems of thought such as Marxism. Also, he does not ask why many such systems have at times inspired great art, ethical standards, and indeed rational exploration of the world we live in (many of the great scientists have held firm religious beliefs).

He does not ask the question why certain people (such as scientific skeptics) should feel no need for 'paranormal' belief systems, nor does he raise the possibility that the latter might reflect some aspects of reality at present unknown to orthodox thought. However, this is an interesting, not to say disturbing, book, even if (skeptical like me) you do not go along with everything in it!

—Mike Rutter

Calling all skeptics!

Two of our readers are interested in meeting up informally with other skeptics in their areas. Carol Sherrard would like to meet skeptics in the Bradford area, and Andrew Phillips seeks fellow skeptics in the Peterborough area. If you are interested, please write to Carol or Andrew c/o The Skeptic, PO Box 475, Manchester M60 2TH.



Letters

Good, bad & paperback

At the risk of sounding pedantic, may I point out that Oxford University Press published a paperback edition of *Science: Good, Bad and Bogus* (reviewed in *The Skeptic* 5.1) in 1983.

On a less nit-picking note, thanks for all of the work you do publishing the magazine—it is badly needed. The 'Super-Skeptic' article was particularly interesting, since I was recently in an argument where I was accused of being overly zealous in my attacks on smoking—admittedly a thoroughly non-paranormal topic! The basic point was the same: how much tolerance should one have? I look forward to reading the correspondence following David Fisher's article.

R Archer
Leicester

Jehovah's Witnesses

Antony Flew's insistence on the hell-less nature of Jehovah's Witnesses' theology (his letter, 5.1; my 'Scientology' article, 4.6) is O.K. by me, but I repeat that it was the report of threats of hell that created the evidence of press double standards vis-à-vis Scientology and other minority religions. And I may perhaps not have used this report if, about five years ago, I had not had an unusually assertive Witness on my doorstep, warning me that failure to submit to Jehovah would have 'eternal consequences'. Which might scare any fragile old lady.

As for the courage of Witnesses in Hitler's extermination camps, to be even-handed one must also mention the courage of various atheist intellectuals in the same camps, whose courage may have been the greater because they didn't have the consolation of believing in a reward of eternal bliss.

John Clarke
Uxbridge

Spontaneous berries

I am sure I will not be alone in writing to you about Donald Room's short piece on creationism in *The Skeptic* 4.6.

Maybe it's because I don't have a first class honours degree in Biology (was that quoted to give him intellectual respectability?), but I really didn't understand the point he was trying to make. And what I did understand I strongly disagreed with.

At the end of the first paragraph he said (quoting Hayward) 'Creation is a matter of faith', and I would agree with him on this. But he then goes on to say that Hayward's creationism 'does not depend on Pseudoscience'. Well if it's a matter of faith it certainly isn't real science.

It is no use saying that Hayward's theory is as 'honest' as Darwin's theory of evolution. I could say, in all good faith, that I believed that all the species that would ever populate this planet preexisted as some kind of 'vapour', and new species only condensed out (i.e., appeared on earth) when there was a suitably similar seed species to trigger their materialism (sorry if that sounds like Sheldrake). This would explain evolution just as neatly as any theory of creationism; but not only does it fit the facts less closely than does Darwinism, it also involves processes and physical states unknown to science.

No one has ever witnessed the creation of anything from 'nothing' above the quantum level (i.e., elementary particles). We are all, however, familiar with plants and animals reproducing; of variation between individuals; of artificial selection; of a fossil record, etc., etc. Doesn't the fact that the garden strawberry appeared in a botanic garden suggest a more mundane origin than through creation? If it was 'created' why did it not appear in someone's fridge, or at the bottom of a pond, or any of a million other

places away from where all the other strawberries were thriving?

It is easy to postulate any number of alternative mechanisms by which natural phenomena might take place. However, simply having a mechanism does not make the theory intellectually respectable. You must also ask 'is there any evidence for it?' and 'considering what we know, is it likely?'

If it was not bad enough that a 'scientist' like Mr Room should be touting such a naïve, question-begging, catch-all as creationism, he implied in his final sentence that 'it would not contradict the evidence' to suggest there was some conscious will behind the creating process. First give me evidence for the phenomenon of 'creation' and the existence of this 'creator', then we can start to discuss things sensibly.

I am all for counter argument and for allowing proponents of the paranormal a chance to state their case, but surely the readers of *The Skeptic* deserve better than this credulous nonsense?

Ian Saunders
Surrey

Hypnosis again

I write in response to H.B. Gibson's letter in *The Skeptic* 5.1. In my letter in the *The Skeptic* 4.4 I neglected to mention that in addition to supervising Dr Hearne's PhD thesis, I also published a one and a quarter page article, on dreams and hypnosis, with Dr Hearne and another associate, Ms B Jackson, 11 years ago. This article is mentioned on p. 88 of my 1981 book and also appears in the bibliography on p. 250. As Gibson has announced, I was indeed reminded by him of this latter fact during a personal phone call to my home. Unfortunately, I clearly misunderstood the spirit of our private conversation and I was sorry to hear of Gibson's disappointment in not finding a letter from me in the pages of the *Skeptic*.

G F Wagstaff
Liverpool

Designer circles

Michael Green, Senior Investigator for English Heritage and co-founder of The Centre for Crop Circle Studies (!) has stated at two lectures I have been to by him that he has been assured by the English Heritage archaeological aerial photography library that a scan of their photographs back to the twenties has revealed no complex symmetrical circle formations or pictograms prior to 1980.

It is not clear whether a *search* has actually been carried out, or whether an opinion is being expressed that if such things *had* been on the photographs they would have attracted attention before now.

It will be interesting to see how far the designs can be elaborated in the future without stretching the credulity of the believers. One presumes that even they have a threshold—teapots, or clear text for example, so the thing is ultimately self-limiting. Regular polyhedra, pentacles and pentagrams, ellipses, ogham and Cretian labyrinths are probably all within the threshold and may be expected!

Roger Morgan
London

Book reviews

Having read David Fisher's 'The case for super-skepticism' in *The Skeptic* 5.1, I find myself in full agreement with him. As he says, why give the miracle-mongers the benefit of the doubt?

As I flicked forward through the magazine I came to the *Reviews* section. I feel that I could summarize the 13 reviews as follows:

<i>The Aquarian Guide to the New Age</i>	Crap;
<i>Together Forever</i>	Crap;
<i>Serendipity</i>	Good;
<i>Out There</i>	Crap;
<i>Whole in One</i>	Crap;
<i>New Age Comes to Main Street</i>	Crap;
<i>The Terror that Comes in the Night</i>	Crap;
<i>Science & Supernature</i>	Useful;

<i>Universe</i>	Very Good;
<i>Science: Good, Bad and Bogus</i>	Good;
<i>Open Your Mind</i>	Crap;
<i>Hungry Ghosts</i>	Crap;
<i>Earth Lights Revelations</i>	Crap.

Why are we reviewing such a high proportion of crap books? I feel safely able to ignore a book called *Together Forever: An Invitation to Physical Immortality* without reading a review of it. I found the review of *Earth Lights Revelations* particularly annoying: a whole page devoted to what is probably a complete sham. Why give the miracle-mongers the benefit of the doubt?

Clive Tooth
London

There are a number of points we consider when we select books for review. The first is related to the sad state of affairs that the overwhelming majority of books we receive for review are pro-paranormal. New books which take a skeptical view are few and far between and most of these are from Prometheus. Whilst we do always try to cover this small number of skeptical books we feel that it is also important to cover some of the pro-paranormal books—and indeed, some of these may be very useful and informative even if the reviewer does not share the writer's beliefs. If you are not happy with our choice of books for review you should see the ones we don't review! Secondly, we choose books which we feel will lend themselves to an entertaining, and hopefully informative, review—regardless of whether it is generally positive or negative. It is perhaps important to emphasize that we are trying to provide a forum in which to critically analyse even bad non-skeptical books. The Skeptic is not aimed specifically at people who are already skeptical. We want to present skeptical viewpoints to people of all shades of opinion, and—who knows—reading a hatchet job on a silly paranormal book might just change some minds!

The Editors

Accurate prediction

I should like to commend Marjorie Mackintosh on the devastating accuracy of her skeptical prediction for March in the last issue of *The Skeptic*. The prediction read: 'French scientists announce an important homeopathic breakthrough: cars which run on the memory of petrol'. *New Scientist* on 16 March reported new experiments by French scientist, Jacques Benveniste, concerning homeopathic water memory. The article didn't mention petrol but this is presumably because the results have been suppressed for commercial reasons.

Amazing, n'est-ce pas?

Phil Newman
London

Typography

As someone who is a self-confessed typography freak I think it is time that the editors decided whether the magazine is to be called *The Skeptic* or the *Skeptic* as I have been unable to detect any consistency in the usage of the two forms.

M N Kerning
Blackpool

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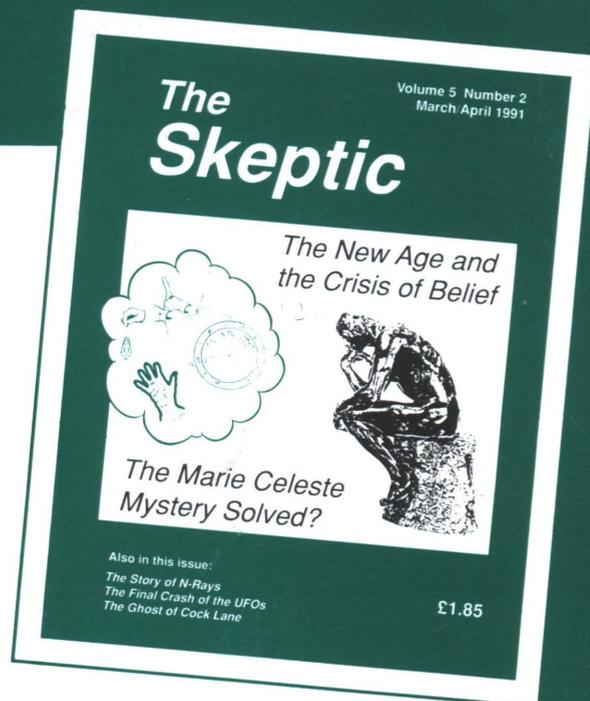
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