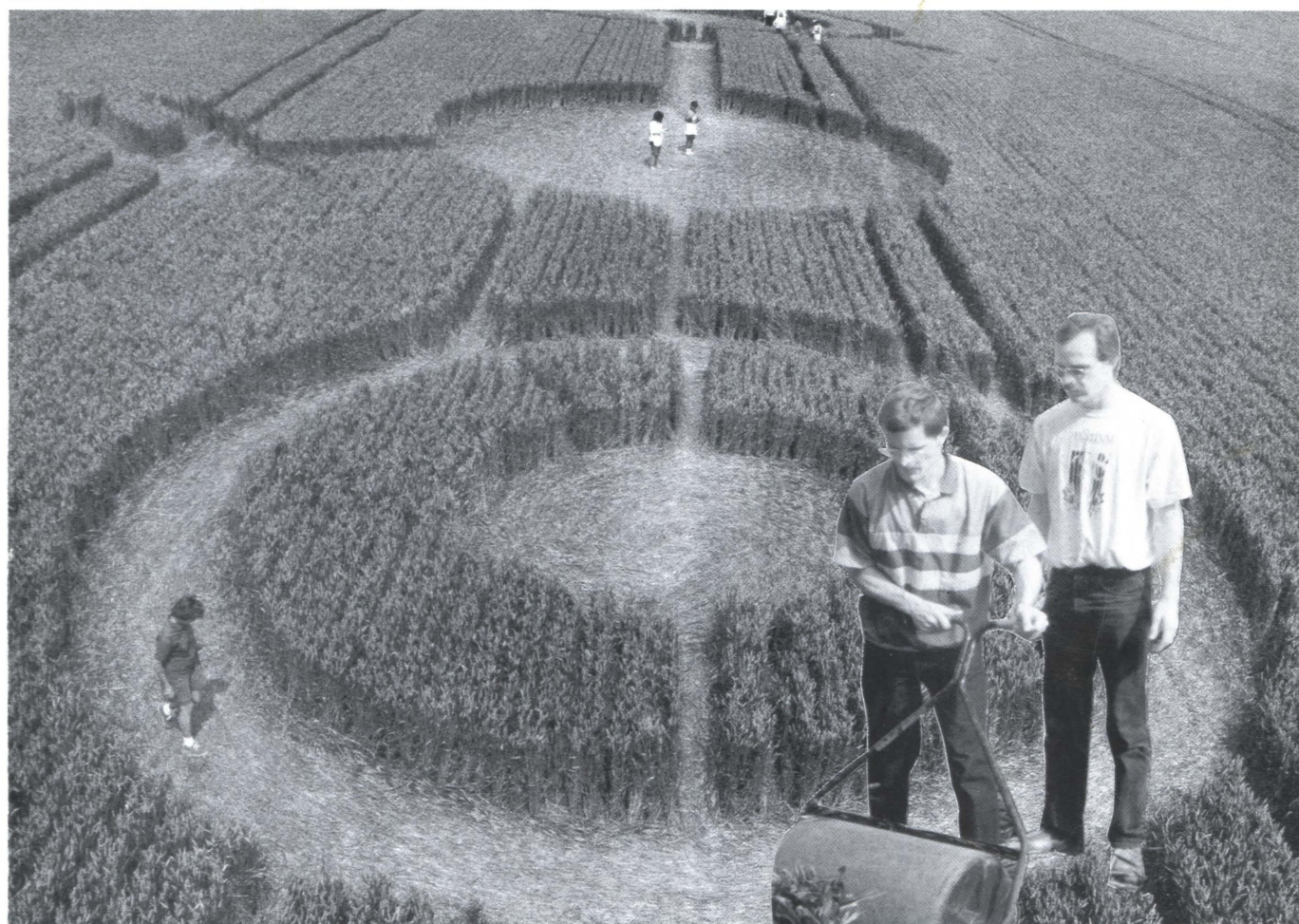


Volume 5 Number 6
November/December 1991

The Skeptic



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CONTENTS

Volume 5, Number 6: November/December 1991

4	Hits and Misses Steve Donnelly
6	Seeing is Believing? Sue Blackmore
8	Ask Professor Mesmo Psychic problem page
9	The Summer of '91 Martin Hempstead
16	Assessing Evidence John Lord
20	The Struggle of Alternative Medicine for Recognition Wim Betz
23	Skeptic at Large Wendy Grossman
24	Reviews Including review of 3rd EuroSkeptics conference
30	Letters

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Hits and Misses

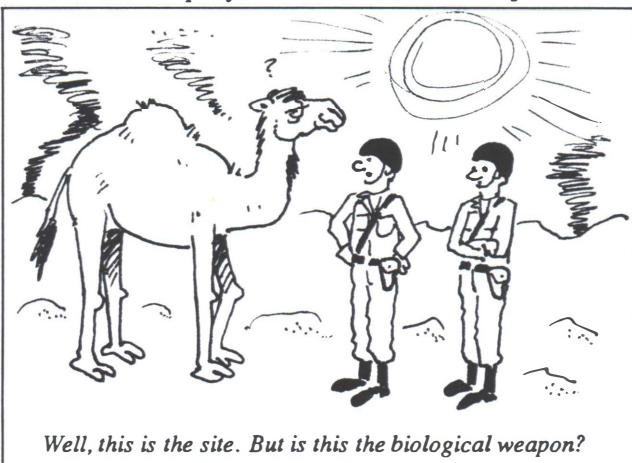
Steve Donnelly

Geller's goolies

In an exclusive interview on the BBC television programme *Saturday Night Clive* on 2 November, Uri Geller disclosed—to the astonishment of skeptics everywhere—that he does not have ferromagnetic testicles. This startling revelation followed a demonstration in which he debunked a conjuring feat that had been demonstrated by James Randi in his *Psychic Investigator* series earlier in the year. Geller, first of all, stripped off to his underpants (but without removing his shoes and socks) and then made a ship's compass, which had been supplied by the BBC, deflect *without any physical contact*. This demonstrated clearly that the hypothesis of conjuring skills—which James Randi led us to believe was required to explain the feat—was, in fact, entirely unnecessary. Uri Geller showed clearly that the compass could be deflected by *simple psychic powers alone*. Geller, who earlier in the segment, had revealed that he could not make love through a television camera, ended the interview by claiming 'If my goolies were magnetised it would be even a bigger phenomena than bending those spoons'.

Oxymorons

An article in the *Guardian* on 20 November confirmed once again that the expression 'military intelligence' is a contradiction in terms—especially in the US. It appears that US Army officers who are members of a UN inspection team inside Iraq are looking for two biological weapons sites that have been pinpointed for them telepathically. The telepaths in question are a group of former military intelligence officers who have set up a psychic research consultancy, PSI Tech. President of the company, Major Edward Dames claimed that 'The UN teams found that the barrel had run dry on conventional intelligence' and so, presumably, they scraped the bottom of the barrel and came up with PSI Tech. Major Dames further revealed that the six telepaths in the company are not natural psychics but have all been rigorously trained to 'unlock the data base' inside their unconscious minds. The company chairman is retired Major General



Albert Stubblebine who was head of US Army intelligence in the early 80s and whose nickname was 'spoonbender' due to an unsupported spoon which visitors reported seeing floating close to his ceiling. The spiritually powerful combination of the astrologically-timetabled President Reagan (and her husband Ronnie) with a psychic head of army intelligence undoubtedly helped contribute to the peace and stability in the world today.

Fateful Fatima

An Italian journalist claims to have discovered one of the most closely guarded secrets in the history of religion—the last (and most important) prophecy of Fatima. On 13 May 1917, and on each subsequent month until October of the same year, three young children claimed to see a woman who identified herself as the Virgin Mary. In the first prediction the Virgin reportedly said that two of the children were soon to die (they died within the year) and in the second it is claimed, amongst other things, that she predicted the end of World War I, the start of World War II and (see below) the conversion of the USSR to Christianity. The third prediction, however, was reputed to be too horrific to reveal and in 1943 the Vatican ordered the third child, Lucia, to put the prediction on paper and swore her to secrecy. According to the *Weekly World News* on 18 June 1991 the secret remained secure until journalist Mario Soluri, a man who 'knows a lot of people' managed to get his hands on it earlier this year. For those Euroskeptics (in British political commentators' meaning of the phrase) who feel that 1993 is going to be a bad year for Britain because of changes within the European Community, let me reassure you. If what Mario Soluri has to say is correct you won't even notice the EC changes. For instance, 'A great plague will befall mankind in 1993. Nowhere in the world will there be order and Satan will rule the highest places, determining the way of things.' As if this were not bad enough, 'A huge war will erupt. Fire and smoke will fall down from the sky' (echoes of Nostradamus). But worse is yet to come as 'The waters of the ocean will turn to mist and the foam will rise to tremendous heights and everyone will drown. Millions and millions of men will die from hour to hour. Whoever remains alive will envy the dead'. Doesn't sound a lot of fun.

This all seemed fairly convincing until 27 September when another article on Fatima appeared in the *Wall Street Journal*. Although this article agrees that the last Fatima prophecy is widely believed to deal with Armageddon it focuses on a more positive aspect of the prophecies than does the *Weekly World News* article. Apparently, the second prophecy included a warning that 'a future Soviet Union would cause a great deal of trouble but would one day be converted to Catholicism through the prayers of believers'. For many Fatima fanatics this prophecy is now coming to pass with churches being reopened all over the former USSR.

All I can say is that the conversion needs to proceed apace if all 280 million inhabitants are to become Catholics before Armageddon in 1993.

Another bloody miracle

Portugal may have its Fatima but when it comes to miracles few countries can hold a candle to Italy. The essence of a miraculous relic is, of course, that it is miraculous, so that when John Calvin pointed out in the 16th century that there were enough fragments of the True Cross to fill a large ship, Roman Catholic theologians claimed that the miraculous True Cross could be divided indefinitely—presumably increasing in volume with every division. This property resulted from the fact that the blood of Christ had been spilt on the wood of the cross. But it is not only the blood of Christ which is deemed to have miraculous properties—highly holy haemoglobin is to be found in the blood of many of the early saints. Amongst these is St Januarius, the patron saint of Naples, a phial of whose blood has been kept in Naples cathedral for more than 500 years. Eighteen times every year since 1389, the blood which is normally congealed, has been observed to miraculously liquefy when handled by religious leaders. Unfortunately, as is so often the case, a number of spoilsport Italian scientists have now come up with a mundane, boring explanation that could account for the blood's remarkable properties. In a letter to *Nature* on 10 October, Luigi Garlaschelli from the University of Pavia and colleagues from the S. Paolo hospital in Milan suggested that thixotropy may be the answer. Thixotropic substances are gels that temporarily turn to liquid when perturbed in some way—for instance by stirring or vibrating. Using only substances that were freely available in the 14th century the scientists prepared a gel which closely resembled the appearance of the relic blood and which—all importantly—reversibly turned to liquid when handled.

Of course, only tests on the relic blood could decide the truth of the matter but, in any case, if the 'blood' in the sealed phial was found to be a gel made from $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$ and CaCO_3 , then this would simply be evidence of a miraculous transformation some time in the 14th century.

No sweat

Continuing with the subject of bodily fluids, a British company is offering the smell of sweaty male armpits to debt collection agencies so that it can be incorporated into bills that literally get up your nose. According to the *Irish Times* on 26 October, the secret lies in a pheromone called androstenone which is a component of the sweat which men produce from their armpits and groins and which gives off a chemical 'aggression' message. David Chaddock, the director of Bodywise, the company marketing the substance, suggests that when sprayed upon bills, or incorporated into the printer's ink, it can have a subconscious effect on the recipient of the bill making him or her more likely to pay. The bill will give off a subliminal message saying 'This letter comes from a person who means business, who is not to be messed with'. Bodywise holds a patent on the substance, Aeolus 7, which was obtained after conducting a trial in Australia in which 1000 bills, half of which were

treated with the substance, were sent out to customers of a firm selling mail-order cosmetics. It was found that 17% more people receiving smelly bills paid up than those who were sent untreated bills.



Save your Bacon

According to a story which originated with the Associated Press news agency and which appeared in newspapers in the US on 15 October, a New Age group wants to dig up a historic church graveyard in Williamsburg, Virginia. It hopes to find a vault which it claims contains writings that can save the world and prove that Francis Bacon wrote the plays of Shakespeare. The Reverend Marsha Middleton who leads the Ministry for the Children—a small loose-knit group based in Santa Fe—contends that, if the writings are not found by the year 2000 (maybe this is out by 7 years), world order will collapse. The church in question, Bruton Parish Church, obtained a restraining order after members of the group entered the cemetery and dug a large hole to look for the vault. The Ministry for the Children, for reasons that are not entirely clear, believes that Francis Bacon's lost writings were buried at the church and that they include his plan for a perfect society and proof that he wrote Shakespeare's plays.

Spiritual healing

The poor but honest wing of the spiritual healing movement in Britain gained a new foothold in the NHS by staging its largest ever public test. It is holding free clinics—20 in all—in various parts of the country and suggests: 'Come and see whether we're a con—you have nothing to lose but your ailments'. According to the *Guardian* on 11 October, the National Federation of Spiritual Healers was founded 36 years ago to clean up the image of healers and to rid the movement of charlatans. The break for spiritual healers came in 1985 when (unlike, for instance, osteopaths) the government allowed GPs to use or prescribe spiritual healing on the NHS and today some 42 doctors belong to the Federation. I should simply like to echo the sentiments of Wim Betz elsewhere in this issue and ask that, in a spirit of egalitarianism, therapies such as Fleur Aromatherapy, Weikang Electro-Membrane Pain Relief, Radionic Hair Analysis and Indian Head Massage also be made available through the NHS.

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

Seeing is Believing?

Susan Blackmore

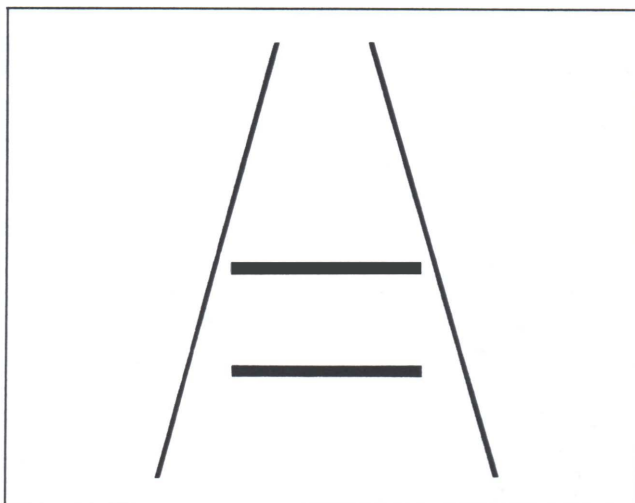
Are psychic experiences illusions?

There have been lots of surveys of psychic experiences and beliefs in Europe and the USA and according to these about half the population believes in paranormal phenomena of one kind or another. The main reason people give is their own psychic experiences and belief is highly correlated with having such psychic experiences. So why are psychic experiences so common?

I think we should not look on psychic experiences as some kind of mental aberration or mistake people make, but as a natural consequence of the way our minds work. They are a kind of illusion that naturally occurs when we try to make sense of a complicated and unpredictable world.

I am here defining psychic experiences as any experience which is interpreted by the experient as psychic or paranormal. I am not making any stipulation about whether anything paranormal does or does not happen. If the person interprets it as paranormal then I call it a psychic experience. The issue of whether paranormal events ever do occur is quite a different question and one I am not going to tackle.

The comparison I want to make is with visual illusions. In both visual illusions and psychic experiences the experience is real but the origin lies in internal processes, not peculiarities in the observable world. Both arise from cognitive strategies or heuristics which are usually appropriate but under certain circumstances give the wrong answer. For example, visual illusions may occur when depth is seen inappropriately, like in the famous "railway lines" illusion. The top line looks longer because the brain automatically interprets the lines receding into the distance. In this case the top line would be longer. You cannot make this illusion go away by looking hard at it, intellectually arguing with yourself or screwing up your eyes (you can reduce it a bit by



turning the page around). Similarly psychic experiences may occur when it is inappropriately assumed that a cause is operating or an explanation is required when actually it isn't. Like visual illusions, these experiences cannot be argued away and they do not occur because you are stupid. Rather the reverse, they occur because the brain is doing its job of trying to make sense of the world.

I have divided these kinds of illusions up into five types.

1. Illusions of connection.

Experiences of telepathy, clairvoyance and precognition imply a coincidence which is "too good to be just chance" (such as dreams which come true). Some people just shrug and assume it was a chance coincidence but others find the coincidence too compelling and look for a causal explanation. If none can be found they may start looking for one and, if they cannot find one, end up invoking ESP. Two types of error may be made here; treating connected events as chance or treating chance events as connected and of course in the real world both inevitably occur. It is only the latter that produce ESP experiences. From this I predicted that people who more frequently look for explanations for chance coincidences (i.e. underestimate their probability) are more likely to have psychic experiences.

Although much is known about the heuristics people use to make probability judgements and the factors which affect them, there has been little research relating these to the paranormal. At Bristol University (Blackmore and Troscianko, *British Journal of Psychology*, 1985, 459-468) we found that sheep performed worse than goats on various probability tasks. For example in a coin-tossing computer game subjects guessed how many hits they would be likely to get by chance when 10 were expected. Sheep estimated only 7.9 and goats 9.6. We called this the "chance baseline shift" and it was clear that sheep suffered from it more than goats.

2. Illusions of control.

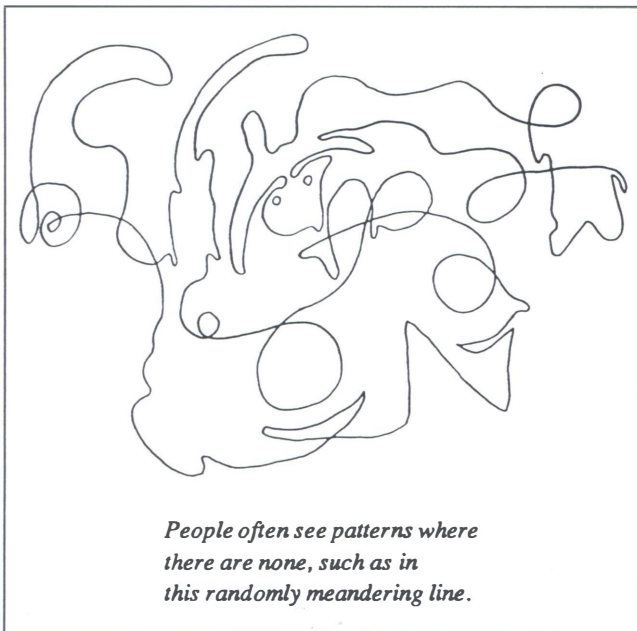
Where the coincidence is between a person's own action and an external event the assumed cause will be personal control or PK. Psychologist Ellen Langer first called this the "illusion of control" and it is known to appear in many tasks which appear to be skilled but are actually chance. If psychic experiences are illusions we might expect them to come about through this illusion of control. As expected there is research to show that sheep are more prone to this than goats in both psi and non-psi tasks, for example in a computer coin-tossing task we used at Bristol, and in tests carried out in Zurich by Peter Brugger and his colleagues.

3. Illusions of pattern and randomness.

All sensory processes involve extracting pattern from noise. Again two kinds of error can occur; failing to detect patterns which are there and seeing patterns which are not. An example of the latter is shown below—most people will see patterns or forms in the figure which is simply a randomly meandering line. People may also search for a cause for patterns which are not really there, and, finding none, turn to the paranormal. I predicted that people who make this kind of error are more likely to have psychic experiences and believe in the paranormal.

One way of investigating this is by what is called “subjective random number generation” or SRG. When asked to generate a string of random numbers people typically avoid repetitions of the same digit (Wagenaar, *Psychological Bulletin*, 1972, 65-72). This is related to the “Gambler’s Fallacy”; e.g. imagining a string of reds must be followed by black. ESP experiments are often equivalent to SRG and have been shown to have the same bias.

Brugger, Landis and Regard (*British Journal of Psychology*, 1990, 455-468) showed that sheep were more likely than goats to avoid repetitions in this kind of task. Indeed they found this effect in several types of task. On the other hand Troscianko and I at Bristol failed to find this in our early experiments. I therefore carried out further experiments this year with a student, Katherine Galaud. We compared SRG for different numbers of choices, predicting that repetition avoidance and sheep-goat differences would be greater for lower probabilities. This we did not find and nor did we confirm Brugger’s finding. So we are planning further experiments to explore this.



4. Illusions of form

A large part of perception entails recognising objects or forms in complicated stimuli. This too can entail two types of error; seeing things that are not there and failing to see things that are. Again, you cannot avoid making errors, shift your criterion one way and you will make more of one type, shift it the other and you will make more of the other. You can never be accurate all the time.

The relevance to the paranormal is that possibly those people who are more likely to see forms when none are present are also those who see apparitions or ghosts or seek paranormal explanations when none are required.

In another recent experiment, this time with a student, Catherine Walker, we tested this idea. And we also tested the idea of differences in accuracy versus criterion. Sheep might simply be less cautious in saying they see forms than goats with the same accuracy for discriminating them, or they may actually make more errors.

We gave 50 subjects a Belief in the Paranormal Scale and an object identification task in which they were very briefly shown a whole series of pictures ranging from barely identifiable blobs to clear outline shapes of leaves, a bird, a fish and an axe. After each presentation subjects were asked whether they could see any shape or not and, if they could, what shape it was. We predicted that sheep would report seeing forms earlier in the series than goats (that is they would have a lower criterion) but would not be more accurate in identifying the forms. This is just what we found. Their scores on the belief scale were correlated with the number of forms they said they saw but not with the number of correct identifications. Although other interpretations are certainly possible (and need investigating) these findings fit the idea that paranormal belief is encouraged in those who more often see form in ambiguity.

5. Illusions of memory

Selective memory may make coincidences appear to occur more often than they do - a factor in reporting psychic experiences that was pointed out as long ago as 1886 by Gurney, Myers and Podmore in their classic study of “Phantasms of the Living”. It is now known that meaningfully related events are selectively recalled and people misremember their previous predictions to conform with what actually happened. If psychic experiences can sometimes be illusions of memory then we would expect that sheep would be more prone to such effects than goats. This has not, to my knowledge, been tested yet and this is something I hope to explore in further research.

Some conclusions

These five illusions may be the basis for many spontaneous psychic experiences and because they are so common may generate belief in the paranormal. The tendency for sheep to show these effects more than goats is at least suggestive evidence that this is so. Of course it must be remembered that this has no bearing on psi experiments with adequate target randomisation and hence on the laboratory evidence for psi. The findings simply suggest that we should expect to find a high incidence of psychic experiences and widespread belief in the paranormal whether or not psychic phenomena occur.

I think one of the exciting prospects for skeptical inquiry into the paranormal is going to be gaining a greater understanding of how these experiences come about—and to do this we can leave on one side the thorny issue of whether genuinely paranormal events ever do occur.

Susan Blackmore is a psychologist at the University of Bristol.

Ask Professor Mesmo

Britain's leading metaphysical pure mathematician divines the answers to your psychic problems

*Professor John Aloysius Mesmo is a brilliant academic (according to his entry in *Who's Who in Metaphysics*) who is convinced that his training in pure mathematics renders him immune to the tricks of illusionists posing as mystics.*

His early work on the topology of knots gave him valuable insights into the psychology of the psychic and enabled him to extend his highly original (if not highly regarded) work into the domain of metaphysics. It is in this area that he has made his major impact on society with major works (self-published as a series of pamphlets) on ectoplasm, animal survival, spoon-bending, water memory and anti-gravity for beginners.

Although, he is said by a close acquaintance to be devoid of a sense of humour he always smiles for his portrait



Professor Mesmo Replies

I have just closed one of my many notebooks on this disturbing trend. Now I shall open yet another page for you and your companion Zitz. Your case is one of many where innocent rock fans are led down a path from which few ever return. Only last week I led a raid on a tabernacle choir who were recording backward chanting 'sound bites' for the latest *Headless Chicken* album. No doubt they would be added to the master recording in the dead of night and work their havoc amongst other 'virgin' head bangers. I hear that gospel singers are queuing up to carry on this clandestine trade. Modern rock groups have tried to explain and introduce the fascinating concepts of the macabre and occult to an youthfully exuberant audience. They use highly refined audio/visual techniques combined with blood and thunder psychodramatics. Yet still some detractors are not happy unless we all go round banging tambourines and singing 'Hallelujah'. This backward chanting 'virus' has claimed some victims. Unfortunately, many rockers have been seen at Billy Graham rallies and at record shops purchasing Cliff Richard albums. Many have handed in their 'Death's Head' fan club membership cards. Please do not rebuff them, but give them your sympathy—they are but victims of of mind-bending and brain-washing of a type formerly only carried out carried out by the psychocorps of the KGB. As for you and Zitz—I suggest an invigorating outdoor Rock concert. Try the *Monsters of Rock and Satanism* at Knobworth. Once you experience again the interminable waiting for groups to appear, the cold and wet with continually muddy conditions underfoot when walking two miles to the urinal and the disgusting organic food, you will soon find any remnants of chanting knocked out of you. All this, coupled with the distorted and deafening acoustics will ensure your complete safety from the seditious subliminal influence of 'backward chanting'.

Dear Professor

I'm a dedicated Heavy Metal fan who is interested in devil rock but I've been really freaked out by the backward chanting I've heard on some of the most popular discs by well known groups like *Meathead*, *Goatpractice*, and *Satans' Scum*. Like all 'air players' I like to experiment with my records, rubbing them with emery paper, making them into ash trays or playing them backwards to improve the sound quality. Me and Zitz were playing the last track of *Meathead's Xenophobic Blood Feud* when we suddenly had this notion to play the track backwards. Well, we heard this eerie message over the 40 watts per channel Timosake megaspeakers—'Be kind to your neighbours'—**** me, that's what it sounded like! After we tried that record we had to try some others and we fell into a habit. Soon we were hearing this stuff when the record was playing forwards! Other records had backward chanting that was equally weird 'Bless this house' and 'More blueberry pie please Mommy'. I think I'm going mad. Even Zitz is looking halfway humanoid. It gets me that we cannot pursue our innocent pursuits without some goody-goody two shoes coming along to spoil it. I'm afraid that Zitz will go off and join a monastery, and I have invited two Jehova's Witnesses in for tea and cucumber sandwiches!! What's wrong with listening to racist, sexist psychotic rock!? It hasn't done me any harm, except that I've gone deaf in one ear. Things are getting so bad that I sent my 'originals' to the cleaners. Please help me.

Blade and Zitz

Professor Mesmo

The Summer of '91

Martin Hempstead

All you need to know about crop circles

This is an edited version of a talk given by the author at the fund-raising dinner of the Third Euroskeptics Congress, held in Amsterdam, 4–5 October 1991.

I am a member of the Wessex Skeptics, named for an ancient kingdom in the south of England and at one time ruled over by a famous skeptic, King Canute, who, like skeptics today, is frequently misunderstood and maligned. In vainly ordering the waves of the sea back, and getting rather wet in the process, he was not demonstrating his vanity and lack of touch with reality, but trying to get it through the heads of his sycophantic courtiers that there were limits to even his power.

Wiltshire is a county in the Wessex region, and one that has become very familiar to us over the past couple of summers, as we have investigated the crop circles which have become all the rage there. It is a pretty, rural county of rolling hills and country roads, shared between the farmers and the British Army, and—despite the army—rather peaceful and bucolic. The prettiness and remoteness of Wiltshire and the presence of numerous features in the landscape attesting to neolithic activity—including Stonehenge—seem to have made it attractive to a breed of person favourable to woolly paranormal musings about history and earth energies. It is in the heart of this deceptively quiet countryside that paranormal theoretical entities multiply wantonly, quite without decent necessity, and the bold skeptic venturing here leaves Occam's razor behind, preferring to borrow his chainsaw.

Here, and in neighbouring Hampshire, where I live, crop circles—although the complexity of patterns makes the term entirely inadequate—have been popping up for more than a decade, allegedly confounding strenuous efforts by experts and 'scientists' to explain them. Crop circles are characterised by crisp edges, complex layering of the fallen crop—which may be wheat, oats, barley, rape or even beans—and minimal damage to the plants. The patterns frequently appear overnight, and there are said to be no traces to indicate the passage of anyone—or anything—to or from the circles.

Enormous interest has been generated by these things, and the national newspapers have filled many column-inches with stories about them. The interest was initiated by a few frantic experts, and attracted further 'researchers', so that the area around Marlborough in Wiltshire was during the summer crawling with activity from sunset to sunrise. It was getting so that an

honest hoaxer could hardly go about his or her trade without disturbance from some 'circle-spotter'.

These experts fall mostly into one of three groups: CERES (Circles Effect Research), run by Dr Terence Meaden, which subscribes to the theory that some circles are formed by 'plasma vortices', spinning masses of ionised air [1], and the rest are hoax. (I will, I am afraid, consistently lapse from correct usage, whereby I should say 'artifact' instead of 'hoax,' since the latter prescribes the motivation behind the product—our particular interest is primarily in whether crop circles are or are not artifacts, and we know little about possible motivations). The second of the groups is CPR (Circles Phenomenon Research), run jointly by Colin Andrews and Pat Delgado, who seem to believe in no theory, but are firmly convinced that it is a mystery and no explanation is adequate; finally we have the CCCS (Centre for Crop Circle Studies), to which almost everybody else seems to belong.

Although this motley bunch have little in common, they do share one motto, which is repeated so often we recognise it as the territorial call the crop circle enthusiast: 'no human being could do this'. I am reminded of a scene from *Ghostbusters* (a marvellous movie, incidentally, and one that I recommend to all without hesitation), when the three heroes, following up an account of an apparition, happen upon a column of books stacked almost to the height of a man amongst the shelves of the New York Public Library. The more scholarly of the trio, a serious parapsychologist, played by Dan Ackroyd, observes 'vertical book stacking, just as in the XYZ case...' (or something like that), to which his cynical partner, played by Bill Murray, replies 'yes, no



Martin Hempstead interviewed by National Geographic

human being would stack books like that!’

Crop circle investigators actually take this kind of argument seriously. They have all declared the crop patterns impossible to fake. In one case, Meaden declared an eyewitness account impossible to invent, even though it contained no corroborating evidence and no details that did not already exist as speculation in the public domain [2]. These people, who constantly demand openmindedness from the rest of the world, spend half their lives circumscribing the abilities of the entire human race. We skeptics are often accused of arrogance—this is probably true in some cases, since we are, after all, only human—but the attitude that allows people to make sweeping statements about what other people cannot possibly do smacks of great hubris. Remember, these statements are not based on violations of some law of nature, these are based on the appearance of fallen corn and the field in which it is found. Remember Von Daniken: he didn’t say, ‘Wow, these ancients were smart—I can’t figure out how they got such a smooth facade on these temples’; instead he said, ‘I can’t figure out how they did it, therefore they couldn’t have done it, so they must have had extraterrestrial help.’ In most cases the crop circle experts cannot say that they have tried hard, or even at all in some cases, to simulate the circles. So they are actually saying: ‘I can’t imagine how it is done, because I don’t think any of the methods I can think of could work, so it must be impossible.’ Of course, the general public watching on the 6 o’clock news doesn’t get the full, shaky reasoning—they are treated to the *ex cathedra* statement from TV-accredited experts that these things cannot be artificial.

Mr Andrews and his pal Pat Delgado have been unrestrained in the techniques they bring to bear on the problem. They have used dowsing [3], like many others in the field; they have invoked mystery upon seeing peculiar marks on photographs of crop circles and hearing unexplained noises. In one example, a ‘mysterious’ white mark in the centre of a circle photo in their first book becomes upon enlargement an even more mysterious white disk [4]. In fact, this feature looks suspiciously like a sheet of paper lying in the centre of the circle. The pair have even used spagyric analysis, a dubious technique involving crystallisation of the residue of organic material after a harsh processing—it was invented 3 centuries ago, and popularised by Sir Kenelm Digby, the same man who condensed sunlight and invented the sword salve, a curative material applied to the weapon that had inflicted the wound, not the wound itself. With the results of this last method, they claimed to have detected an alteration in the molecular structure of the laid corn, creating alarm that the grain was dangerous and should be excluded from the food chain.

Terence Meaden, on the other hand, is a man who scorns talk of the paranormal, although he does seem to have used dowsing as a diagnostic indicator of a genuine circle, whatever that is. His claims that ‘plasma vortices’ are a reality rest on little published evidence, and what he has published is mostly in his own journal, *The Journal of Meteorology* or in self-published books. Occasionally Meaden permits himself the luxury of an *ad hominem* attack on his critics. In the first paragraph of one of his scientific papers Meaden

stated [5]:

This has helped to confirm that aside from a low number of obviously faked circles, the evidence is overwhelming in favour of a natural atmospheric origin for the circles effect, and it is certainly the case that all truly open-minded, unbiased people who have properly studied the facts accept that this is so.

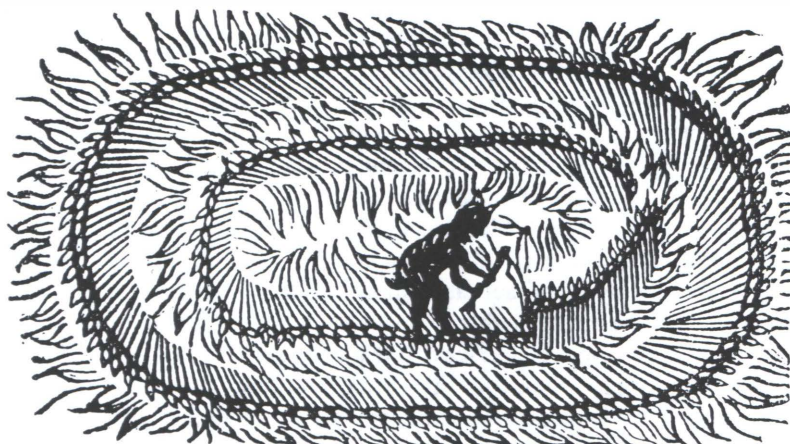
Little detailed and comprehensive information about crop circles has been made public, so anyone who lacks the time and resources—and the disciples—to examine them closely and collect measurements is unable to assess the judgements these experts broadcast so frequently. We do not know if the dimensions cluster around certain values, or the dates of appearance around certain days of the week. CERES has publicized an analysis claiming that crop circles cluster around hills [6]—which would be qualitatively consistent with generation of plasma vortices by trailing vortices—but I find this analysis unconvincing.

The Wessex Skeptics first got involved in the whole confusing business last summer. We visited a few crop circles, but not, unfortunately, fresh ones, and quickly realised that we would make little progress in this manner. Although aware that serious criticisms against all theories of non-human origin had been made [7], we were initially and naively least dubious about Meaden’s theory. However, we quickly lost confidence in it when we got to Wiltshire.

Meaden has a problem not shared by the other experts. His theory, being physical, has to meet natural constraints—or so you would think—while the others, having no theories, are not put out by any amount of contrary evidence. As long as some part of their mystery is unassailed, they are happy. We got to Wiltshire, and were stunned by the Alton Barnes pictogram, which was one of the first of the truly complicated shapes to appear—it was many tens of metres long, a string of circles and corridors. Our astonishment at its appearance was only exceeded by our surprise at Meaden’s declaration that it was genuine [8]. But he had no choice, for he could find no difference in structure between it and the simple circles. We were highly dubious, because we noted that the axis of the pattern was aligned along its length not just to the tram lines—lines made by farm machinery as it runs through the field—but to the seed lines themselves, which are often a mere 10 cm apart! This was a characteristic shared by too many other patterns to be a random occurrence, and we could see no strong reason why a powerful plasma vortex supposedly acting over a second or less should delicately orient itself in this fashion.

Fortunately for Dr Meaden, he found a way out of such difficulties. He invented hypotheses, which were posed qualitatively and thus difficult to test. Initially he denied that many patterns were aligned but later claimed that the earth in the tramline was compacted, and had a different conductivity, thus—somehow or other—aligning the vortex, which is, after all, electrically charged.

It seemed to us that the plasma vortex theory required that the patterns should have occurred before the public interest in them. Meaden agrees with us, because he has assiduously sought accounts of crop-circle-like phenomena from historical records. One of his more well-known examples is the mowing devil [9]. Presumably because it is



The Mowing Devil, from a 1678 woodcut.

inconsistent with his theory, he ignores the fact that the accompanying picture shows the corn to have been cut.

In our opinion, an obvious place to look for old crop circles would be in aerial archaeological photos—after all, they are collected over a range of seasons in the search for features of similar size, in the same regions of the country. We contacted some aerial archaeologists—the half dozen who replied were unanimous that they could not possibly have missed crop circles, and that they have only been seeing them recently.

We wanted to carry out an exhaustive—and exhausting—look at the thousands of photos that have been taken since the 1930s, but time constraints have thus far limited us to several hundred taken in the right season over a couple of spots which have proven attractive to crop circles over the past ten years. We could not see the recent photos, but found no circles at all—only one circular feature in fact, which turned out to be a barrow. Even this limited survey might crudely suggest that an average season pre-1980 had less than 1 crop circle per 100 square miles, even ignoring the fact that these sites were recently crop circle rich. Our preliminary conclusion—which really should be reinforced by a thorough search—is that crop circles, at least in their present profusion, are not old. Ironically, a search such as the one we contemplate is the only approach likely to give Meaden's theory real support, if crop circles could be shown to have existed before any whisper of media interest had arisen.

In 1990, Meaden was scathing of suggestions that the frequency or complexity of circles might be increasing [10]:

Some commentators query the increasing complexity of these formations. But are they becoming more complicated? Are plain circles being embellished by pranksters? Such facile questions belie the intricate matter which is the circles effect.

He has now accepted this feature, and recognises the need to account for it. Once again, hypotheses—including the solar cycle, the ozone hole, long hot summers and changing agricultural patterns—have been entertained by him and his followers to explain the changing frequency. I am surprised they don't mention the decade-long reigns of

powerful conservative rulers in Britain and the US—but then, perhaps a period of laissez faire favours the hoax hypothesis! Lacking a quantitative basis, the theory cannot be tested on these grounds, but we can see that plasma vortices are strange beasts. They can be turned on or off by slight large-scale climatic change, even though they are apparently short-lived micrometeorological phenomena. They are sensitive to crop strains and farming methods. On the other hand, they can strike oats, barley, rape, beans, wheat, at many stages of their life cycles and from May to September, and can even appear in grass, snow and sand!

Impatient with our lack of progress, we finally decided this summer on a high risk strategy. This was to hoax our own circles, and see if the experts could tell the difference. This was high risk, because failure might prove

nothing more than our own incompetence, yet discredit the skeptical viewpoint.

First we had to practise the techniques. With the assistance of *National Geographic*, in England to make a film about crop circles, we rented a field from a friendly farmer (a rare commodity in Wiltshire these days) and made a pictogram. In broad daylight, on a sunny Saturday afternoon. We were buzzed by planes, helicopters and microlites. Even this level of observation did not stop certain members of CCCS declaring it genuine—in fact one gentleman did so when overflying it a couple of days later. Other members, while aware the main pattern was artificial, became convinced that a ring had appeared mysteriously some time later outside our main circle. Furthermore, this ring was said, darkly, to be 'too narrow to be made by trampling.' In fact, it was made just that way, and only minutes after the main circle. I am still not sure that we have convinced them all that we made it!

What were our techniques? [11] Mostly simple and obvious ones, really. A bit of string held by a central person while another described a circle. Trampling, sticks and rollers to lay the corn. Sighting on a distant object to make the straight corridors. We found that it was not especially difficult to get through the corn without leaving a trail, particularly if you walk along the seed lines and turn around every metre or so to re-entangle the plants by brushing them gently with a stick. We concluded that a garden roller was the best tool, since if used with care it would lay the corn without unnecessary damage. We determined to try again, this time for real.

Fortunately, we were successful, though not at first. Our first attempt was thrilling, and performed without the farmer's permission (we did send the farmer compensation anonymously a week or two later). We wanted to see if hoaxing was possible under the pressure of fear of being caught; we also wanted to avoid asking a farmer to lie, as he or she would need to do if the test were to be effectively blind to the experts. We picked a field on top of a hill near Marlborough. It was a beautiful, crisp night, and the sky was clear with a full moon. Every sound frightened us. Many

cars passed, causing us to spend much of our time crouching down in fear of detection. We got hot, tired and frustrated—our chosen field was muddy and had very deep tramlines. We changed our plans, dropping our elaborate pattern and doing just a huge circle with a ring and a small circle some way off. And we were rumbled—a car stopped! Some people got out, but they soon left, and we thought we had got away with it. Only later did we discover we had been spotted. As we squatted in the damp at the edge of the field, waiting for our getaway car we were filled with undeserved euphoria at our imagined success. It truly was a beautiful night, and we were rewarded for our endeavours by the sound of a female fox screaming its chilling, almost human, cry.

Even though we were discovered by circle watchers, and word got around very fast, we were not stopped or apprehended, which was interesting in itself. Some members of CCCS did not get the news in time, and declared the circle genuine. Many members of the public were impressed, and a few unwitting dowers found their rods stirring.

Why crop circles should dowse is unclear—something to do with earth energies or ill-defined electromagnetic anomalies, apparently. I have witnessed the replication problems of the dowsing technique at first hand. At Alton Barnes last year, I watched with some amusement as a couple of dowers compared notes in one of the circles. The woman had found a distinct vortex, and her rods were whirling to back her up, whereas the man had found the same spot to be devoid of activity, and his pendulum hung limply. That dowsing is so heavily implicated in circles ‘research’ is just a symptom of the subjective nature of these investigations.

But I digress. Chastened with failure, not because our circle had failed to meet the experts’ criteria but rather because they were not forced to work blind, we were a bit lacking in eagerness to try again. But the despondency soon passed, and we started plotting again. We were to be filmed for the TV program *Equinox*, and we decided to get the permission of a farmer this time. We were lucky enough to find just the man we needed—someone who would be willing to dissemble to all and sundry and be convincing with it!

Once again, things started off badly and moved further and further from our well-laid plans. We had scouted the terrain beforehand, checked the tramlines and prepared an appropriate plan. But when we got there, we found that much of the field had, ironically, been laid low by wind damage, and we had to redesign fast. Our problems were doubled when the TV crew did not maintain an appropriate demeanour for the situation; they barged through the corn, interviewing us as we worked and flooding the field in light. Since Wiltshire was infested with circle spotters, we were sure we would be found out. As if to make sure that even if the TV crew failed to give the game away, word would still get out, we accidentally left some string in the field. Fortunately, the farmer removed this the next morning.

We were again despondent; one of us had laid the corn the wrong way, pointing towards the centre of the circle, and the TV crew had trampled through the corn. We were sure that we had made a crude hoax, and that nobody would be

fooled by it. Boy, were we wrong! We were still guilty of overestimating the objectivity of the experts.

It took a while for the experts to find it, because it wasn’t visible from the road, but within two weeks we had proven that it was possible to mislead the experts, including some who had so far remained immune from the taint of error. Busty Taylor of CCCS found it genuine, and emphasised the departure of the large central pattern from true circularity as the mark of authenticity.

Terence Meaden, who had publicly resisted the possibility that he could be mistaken in his judgement of circles, not only found our fabrication credible, but that it ‘fit perfectly the scientific theory I have been putting forward for the last ten years,’ and was ‘100% genuine.’ [12] He stressed how many hoaxes he had seen, and marvelled at the classic layering patterns (another mark of authenticity, according to the experts). He was interviewed in the circle, and brought reporters to see it. A medium flown in from Paris by a producer from Paramount found the energies overwhelming—she developed a headache and had to leave. Dowers’ tools went wild in the circle. (Of course, we can’t deny that a lot of psychic energy may well have been trapped in the circle—there was quite a lot of cursing and swearing the night we made it!)

This was not the first time the experts had been misled—Delgado and Andrews have several times in the past been wrong in their claims that circles are genuine [13]—but it was the first that we knew of for Terence Meaden, and proved that the features alleged to be impossible to simulate were in fact quite easy to reproduce. We are now of the firm opinion that there is no substance to the experts’ claims that they can distinguish a category of circles for which hoaxing is impossible.

Admittedly, we have never entered a ‘fresh’ circle, one that has had no sightseers. We have been told by Meaden of a complete absence of collateral damage in these cases. If this is true, we could probably not reproduce them with our present techniques. We always found a small number of damaged plants, in which the stalk was bent in more than one place. On the other hand, damaged plants do not prove hoaxing—in one field, for example, we observed that even in stands of fresh corn some of the plants were damaged. Moreover, it is always possible to remove them, if one is sufficiently patient.

So this was the situation at the end of August—we knew that the experts could be fooled, and had as far as we could tell no method for reliably distinguishing ‘true’ circles. We had preliminary evidence that crop circles had not existed for very long. We also knew that our organisational skills needed a little polishing!

Then, on 9 September, the *Today* newspaper dropped a bombshell on the tightly knit little world of the crop circle experts [14]. It published a story in which two men, Doug Bower and Dave Chorley, claimed not only to have been hoaxing circles for years but actually to have started the entire craze, basing their idea on some UFO hoaxes in Australia in the 1960s. They backed up their claims by making a pattern into which Pat Delgado was lured by the newspaper. He not only fell for it, he raved about it [14]:

In no way could this be a hoax. This is without doubt the most wonderful moment of my career. What we are dealing with here nobody in the world understands. We are left with the fact that these crops are laid down in these sensational patterns by an energy that remains unexplained and is laid down by a high level of intelligence.

When informed of the hoax, he reacted with characteristic humility:

They are to be admired in the way they have conducted their nocturnal escapades which made it look as though there was a real intelligence that we don't understand. From this simple prank developed one of the world's most sensational unifying situations since biblical days ... this is a lesson to us all that we should look and listen to the beautiful and small things in life.

Thus was exposed by far the most public of Delgado's errors, and it has cost the credibility of crop circles dearly. This is somewhat paradoxical, of course, since Bower and Chorley's confession is not necessarily inconsistent with Delgado and Andrews's postulates of superior intelligence and unknown forces!

The story told by the two putative hoaxers rang true, and the reporter claimed they had a lot of corroborative—although circumstantial—evidence. Several national newspapers and the broadcast media picked up the story, although the TV networks carried it without reference to the article. Consequently Delgado and Andrews were able to walk into a circle they knew the two men had made and declare it, on camera, an 'obvious hoax' without Delgado being challenged on his previous statements. Well, yes.

Nevertheless, the wagons were circled to fend off this assault. Delgado retracted the statement of complete capitulation attributed to him by the press, prompting *Today* [15] to respond 'come on, Pat, admit you were had'. Andrews continued to assert there were unfathomable mysteries—for example, the alleged impossibility of making a mature rape circle, since the stalks break however you try to bend them. Not so, if you do it right, it takes a little time, but then there

aren't that many crop circles in rape.

CCCS claimed they had filmed a circle in formation, although this is yet to be shown to the world. And George Wingfield, member of CCCS, launched charges of a government cover-up [16], aimed at discrediting crop circles in the eyes of the public. There was damning evidence for this. The copyright of the first *Today* story was assigned to MBF services, which people like Wingfield know is a cover for the government secret service (maybe they should have just signed it MI5—that would doubtless have proved it wasn't the secret service). Finally, in what sounded like a case of sour grapes, CCCS began to hint that the police should deal with the hoaxers.

The CCCS response prepared for the press is clear about their views concerning hoaxing. They put the following arguments against claims that all circles were artificial [17]:

The crop circle phenomenon has been under systematic study for 12 years, beginning in 1980. Over this period, something like 2000 events have been recorded... Many events have been very complex and very large. Some circular events have been larger than 300 feet in diameter. Some linear events have been as long as 250 feet from end to end. If this is the work of hoaxers, their dedication and energy is little short of marvellous. Simple events would have been enough to satisfy the ordinary malice of hoaxers; the exuberance of what we have seen needs much further explanation.

The first two points are obviously irrelevant to the argument, while the third is more interesting. It is—essentially—claiming an understanding of human nature sufficient to rule out hoaxing, which later is described as 'far more implausible than any other hypothesis.' We can observe in response that human beings are always surprising, but perhaps we can go a little further. Bear with me while I indulge in a little Voodoo statistics. Suppose that a fraction f of the population is sufficiently motivated and skilful to fake crop circles (we have seen that the skill need not be rare). Suppose further that, on average, every individual inclined to hoax knows another n people sufficiently well to discern, perhaps after casual conversation about crop circles, a kindred spirit. If we demand two hoaxers to make a team, then a population of N will have approximately Nnf^2 teams, if N is much larger than n . Bower and Chorley claim about 200 patterns, or 10% of the total. Let us assume that a population of 1 000 000 is available to fake circles, which seems an underestimate. Let us compensate, and say that all teams are as productive as Bower and Chorley, so we need 10 teams. Then we need:

$$nf^2 = 10/1\ 000\ 000 = 1/100\ 000$$

If n is 10 (not, I think, unreasonable) then f is 1/1000, and only one in one hundred people will know a potential hoaxer well ($nf = 1/100$), and even then may not spot that potential. To rule out hoaxing, therefore, you must claim to understand human nature rather well at the 1 in 1000 level—in other words, you need to have intimate acquaintance with many hundreds of people. Arguments against hoaxing that rely on assertions about its 'incredible' scale are thus unlikely to be based on knowledge.

I have spoken briefly with Doug Bower, who seemed a pleasant enough chap, and very amused at the discomfiture of the experts. Bower and Chorley's comments about the

Mary Evans/G.T. Meaden



Pictogram at Stratton St. Bernard, Wiltshire.

reactions to their circles are illuminating [14]:

We heard this bloke Delgado had reported them...He started saying they had been done by a 'superior intelligence'—we liked the sound of that. We laughed so much that time we had to stop the car and pull into a lay-by because Doug was in stitches so much he couldn't drive. Even if we were clumsy and caused a mess, they were still so keen on dismissing that humans had done it that they explained it away by saying, 'Oh, the first onlooker must have done that.'

On the whole, the hoaxers' story seems credible, although there are details that would bear checking. Nevertheless, if what this duo say is true, then they are responsible for starting what may rank as the biggest amateur hoax in peacetime history. Any offers for candidates who can rival their achievement?

So what is our conclusion about all this? We think there is no firm evidence, and certainly none that has been made publicly available, which is inconsistent with 100% hoaxing. The apparent confession of the initial hoaxers has the potential to clear up much of the mystery, although some may remain—for example, who made the other 90% of crop circles (assuming the reported total of 2000 is accurate), and how did Doug Bower find a wife who would let him stay out until the early hours of the morning every Friday night for 5 summers, and never once ask him what he was doing! (The answer, actually, is not uncommonly heard from English housewives—for many of them, 'Friday night is boys' night out.')

Much of the remaining mystery resides in that class of paranormal phenomenon which will be so familiar to you all—malfunctioning cameras, strange noises, unexplained illnesses [18]. None of this evidence is really available for inspection, and most of it is unlikely ever to be explained. We tend to discount it. CERES has collected 20–30 eyewitness accounts; some are not explicit observations of the formation of a circle, others are unambiguous. Unfortunately, there is no way to determine the truth of such claims, and the prior expectation of fabricated stories seems quite

high. After all, the media made the subject sensational in 1990, and even offered monetary rewards for explanations of crop circles. They were thus effectively trawling the entire adult population of Britain for accounts of observations, offering fame and fortune to respondents. With tens of millions of people in southern England and ample precedent for hoaxed stories, for example in the field of UFOs, fabricated accounts of crop circle formation seem inevitable.

The burden of proof that crop circles are anything but hoaxes is now well and truly on the shoulders of the experts, but don't hold your breath. Can we draw any lessons from what appears to have been a decade-long fiasco? Well, we can use it as an illustration of poor investigation. The episode has been a classic display of this, with a long list of errors and weaknesses, amongst which are:

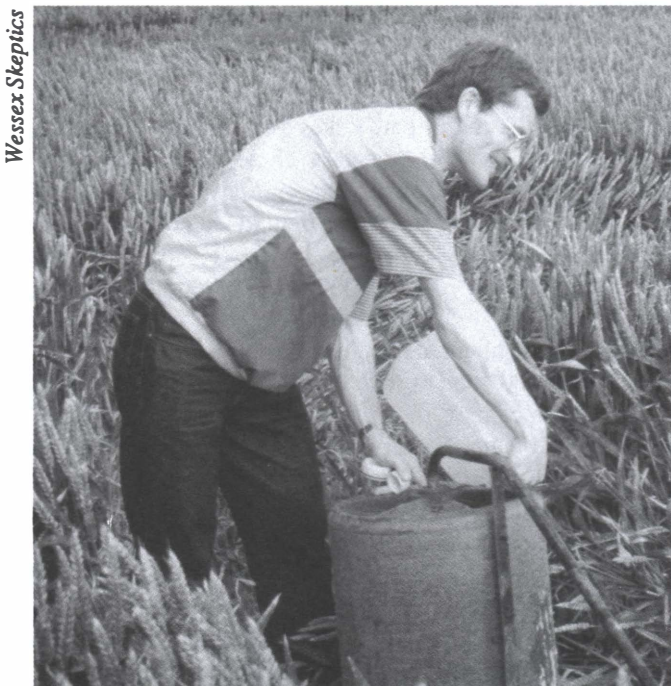
- Appeals to authority
- Unchallengable statements
- Use of subjective techniques to gather evidence
- Publication through the mass media, avoidance of the usual scientific channels
- Untested assumptions of competence
- *Ad hoc* bandages for defective theories
- Allegations of cover-up
- *Ad hominem* attacks on critics
- and so on and so on.

Mostly the crop circle experience has just been a bit silly. However, there are worrying aspects, not the least of which has been the role of the media.

The broadcast and print media have carried frequent items about crop circles. Delgado and Andrews and Meaden have appeared on TV and radio, usually on different programs, and almost invariably they are up against no one more qualified than an ill-informed interviewer who seems to know nothing about science and allows them to present themselves as thoughtful, knowledgeable and careful investigators. Rarely have critical scientists been brought on, and when they have it is often to criticize Meaden, who considers himself in the scientific arena.

Delgado has said 'it is as though orthodox physics and science have been on trial for the last ten years and have failed to produce an answer.' [19] Well, if this is a trial of science, it is a trial in absentia, and it is not surprising that there has been no answer. I see no indication that there has been any attempt to apply the scientific method, no rigorous testing of hypotheses. Instead—and this applies to all the major protagonists—there has been a haphazard accumulation of what might loosely be called 'data,' and the construction of vast and shaky edifices of speculation. This applies even to Meaden, whose latest concoction is a theory that megalithic circles were constructed to immortalise crop circles [20]. He now invokes this as proof of crop circles in prehistory! Empty of content as this theory may really be, it has turned out very popular. Recently, when I was putting our viewpoint to a farmer, she silenced me with a completely unexpected 'well, why is Stonehenge round, then?'

What could the media have done? They certainly couldn't force scientists to investigate crop circles, in which most of them took no real interest. But they could have found some to challenge the quality of the experts' evidence and ques-



Robin Allen

tion glib references to electromagnetic forces, dowsing and mysterious energies. In talking to one journalist, I got the feeling that this omission might not always be malicious, that journalists could not identify the matter as a pseudoscientific one and that they had little choice but to accept the experts at face value. They are actually glad of conflicting views; it makes for good entertainment. That, of course, is the other problem. Rarely do the media examine issues like this thoughtfully, and they do not keep stables of their own experts in science and pseudoscience as they do in economics and politics. Skeptics must not only investigate the issues, they also have to work hard to get themselves and their viewpoint noticed. But it is possible. I was lucky enough to be on TV suggesting hoaxing as an explanation last year the evening before Delgado and Andrews were taken in by a hoax during 'Operation Blackbird', their surveillance effort. And when Bower and Chorley broke their story, we were able to seize the chance and put our point across in a handful of newspapers and on BBC local TV.

Far more daunting is the challenge to get thoughtful coverage of the issues. Too often, one has but a brief moment to summarize a complicated position. How the British public will ever come to understand and respect the scientific method without detailed exposure of the issues is unclear to me. And they need this understanding and respect for the scientific approach. Probably, like me, you feel that environmental issues are important. If so, you may agree that the Green movement is doing a lot of good work bringing attention to the issues. Unfortunately, in Britain, green matters, like health, seem to attract and nurture careless and wishful thinking, along with an antiscientific attitude. Holders of such views, some of whom have seen crop circles as a cry from Mother Earth, ignore the facts that, although science and technology may have facilitated and sometimes brought about environmental abuse, along with their benefits, they have also given us the power to know what is happening to the environment and—perhaps—to correct it.

My heart sinks when I think of the damage that I fear has been done to the public understanding of science by media coverage of the crop circle fiasco. It sinks further when I think that in one hundred years' time, some convinced patron of the paranormal will write whatever passes for a book [21], and a chapter will be devoted to the Wessex Crop Circle Enigma of the twentieth century. These circles mystified scientists, the author will say, and have never been satisfactorily explained, even to this day. I find my only consolation in the hope that the growing and vigorous skeptical movement that started at the same time—speaking in quarter centuries—will have made its mark, and there will be plenty of late 21st century skeptics to say just where the author has gone wrong.

Notes

The other members of the Wessex Skeptics involved in the investigations were: Robin Allen, Bertrand Desthieux, David Fisher, Chris Nash, Matthew Trump. With thanks to: Paul Adams, Debra Chesman, Chris Cutforth, Kate Fielden, Mike Hutchinson, Martin Pitt, Juniper, VECA.

Since this article was written, the Wessex Skeptics have

been contacted by Dr Meaden, who has informed us of a change in his position; he no longer believes that the pictograms are genuine products of plasma vortices, and now thinks that all but a subset of the simpler patterns are the result of human activity. A survey of aerial photographs would be a promising line of investigation. Dr Meaden is also now of the opinion that information apparently obtained by dowsing is unreliable.

1. See, for example, *The Circles Effect and Its Mysteries*, G.T. Meaden, Artetech 1990 (2nd edition).
2. 'Shock Encounter as a Circle is Born,' *The Mail On Sunday*, 25 August 1991.
3. For example, pp. 164–165 in *Circular Evidence*, C. Andrews and P. Delgado, Bloomsbury, 1989.
4. *Circular Evidence*, p.92.
5. G.T. Meaden, *Journal of Meteorology*, Volume 16 Number 159 (May–June 1991), p.163.
6. Analyses of the relationship between crop circles and hills by David Reynolds and Andrew Hewitt have been referred to in *The Crop Watcher*, available from Paul Fuller, 3, Selborne Court, Tavistock Close, Romsey, Hampshire SO51 7TY. See, for example, number 6 (July–August 1991) pp.30–32. I have seen Reynolds' analysis (private communication), which lacks any control, does not define its terms carefully and fails to demonstrate any departure from a chance relationship. Reynolds apparently does not realise that any two sets of features randomly distributed will show a sharp peak if one plots a histogram of shortest distances between one type of feature and the other.
7. D. Fisher, *The British and Irish Skeptic*, Volume 4.2 (March/April 1990), pp.15–20.
8. G.T. Meaden, *Journal of Meteorology*, Volume 16 Number 158 (1991) p.127.
9. G.T. Meaden, *New Scientist*, 23 June 1990, p.47.
10. G.T. Meaden in 'Circles Research I' (report of proceedings of Oxford Polytechnic conference, May 1990, Editor, G.T. Meaden), p.24.
11. A method using a roller was discussed by Thierry Pinvidic (VECA), *Science et Vie*, no. 878, November 1990, pp. 28–42.
12. 'Farmer's hoax beats a boffin,' *The Sport*, 3 September 1991.
13. See *Sunday Express*, 30 July 1989, for initial report on Delgado and Andrews' enthusiastic endorsement of 98 circles at Haye-on-Wye; *Wolverhampton Express and Star* for their retraction after the publication of the information that a farmer had made the circles to encourage grouse to settle (date unknown; reference taken from *Crop Circles: A Mystery Solved*, P. Fuller and J. Randles, published by Robert Hale.)
14. 'Men Who Conned The World,' *Today*, 9 September 1991, pp. 1–2, pp. 11–12.
15. 'Come on, Pat, Admit You Were Had,' *Today*, 10 September, pp. 4–5.
16. Wingfield made these allegations on the Granada TV programme *Up Front*, 20 September 1991.
17. CCCS public relations response to *Today* story; private communication.
18. Strange goings-on—see, for example: *Circular Evidence*, p.150 for Busty Taylor mysteriously tripping over barbed wire, pp.172–73 for litany of compasses, microphones and cameras behaving strangely. Also Meaden, Conference report: p.41.
19. *Crop Circles—The Latest Evidence*, C. Andrews, P. Delgado, Bloomsbury, 1990, p.77.
20. G.T. Meaden, *Goddess of the Stones*, Souvenir Press, 1991.
21. To be published.

Martin Hempstead is a physicist and a member of the Wessex Skeptics.

Assessing Evidence

John Lord

The dangers of over- and under-describing

If you look along my bookshelves at home, you'll find a whole section devoted to 'The Paranormal'. But if you take a closer look, you'll find that it doesn't just encompass things like ESP, UFOs, and poltergeists—it also covers books on frauds and swindles, on dubious and pathological science, on rumours and propaganda. The nub of all these topics is, I would suggest, the idea of *evidence*, and our response to that evidence—what is it worth, and how to we assess it? Now, we hear a good deal about evidence—it crops up in numerous different places, most obviously in the law, where evidence given on oath is central to the idea of a trial, and in science, too, where scientific evidence can, or so it is said, prove or disprove a theory.

In recent months, all of us have had our attention focused quite sharply on the idea of evidence and testimony. The case of the 'Birmingham Six' has concentrated our minds wonderfully on the value of scientific tests and the reliability of expert witnesses. The Gulf War has, with its minute by minute news coverage, shown us just how volatile the 'facts' that journalists are supposed to deal with really are. In war-time, this is especially so; for nearly half a century, the expression 'the fog of war' has been a familiar one. No one, in the heat of battle, is really quite sure what is going on, and those neat maps in the history books, with the battalions drawn up to face each other in a convincing static array, are at best a half-truth. But any news story is surrounded by fog. Have you ever sat down one morning with all the newspapers, and followed through all the major news stories of the day in them, comparing their different versions? When I was an undergraduate, over twenty years ago, I tried doing just that. In between lectures, I would wander down to the Junior Common Room, and go through them all. I kept it up for a week—it was a dispiriting experience, and I have never quite regained my confidence in the press. I am not blaming the newspapers, however—that's just the way news is. Names are wrong, stories become garbled, people's ages are inaccurate. It is all part of what we might call the fog of news. In the rush to get the story out—to present the 'facts'—assessing the evidence will always take second place.

What I shall now offer is not a comprehensive anatomy of the problems involved in assessing evidence, but a note of some of the pitfalls, and some case studies of how evidence can give rise to problems—and not only in paranormal cases.

First, consider just some of the difficulties that we have to take into account when we try to assess evidence. We shouldn't need to be told that memory is fallible, but how often do we forget! And when memory fails, there is a very human tendency to fill in the details with what we think ought to have happened. Stories grow in the telling: the Prince Regent was famous for believing, years after the event, that he had led a cavalry charge at the Battle of Salamanca, despite the fact that he was nowhere near the battlefield. He would tell anyone who would listen (and, because he was the Prince Regent, most people had to) about his astonishing feat of arms. But it never happened.

It is no secret that testimony can be warped by re-telling, not just, as in the case of the Prince, by the same person, but when it is retailed to others, and onwards from them. The law is especially cautious of 'hearsay evidence', and generally excludes it: what you saw can be entered in evidence; what someone *told* you that they saw cannot. Anyone who has ever played the party game of Chinese whispers (where you whisper a sentence into the ear of the person sitting next to you, and it then goes around the circle, until the last person repeats the sentence—much to the astonishment of the other participants) will be familiar with the difficulties.

Witnesses can be unreliable—they can, to put it bluntly, lie. They can also make honest mistakes. When the great Scottish philosopher, David Hume launched his attack on miracles, he put forward the proposal that the probability of a miracle's occurring should be weighed against the probability that the person claiming to have witnessed it might have lied, or at the very best, have been mistaken. Knowing what we do of the natural order of the world (including the tendency of people to be untruthful or mistaken), Hume was always inclined to believe that the witness was at fault. A similar attitude underlay Thomas Jefferson's celebrated dismissal of the idea that meteorites might exist: 'I had rather believe that two Yankee professors had lied, than that there are stones that fall from the sky'. Jefferson was wrong, of course, but that does not mean to say that Yankee Professors are always models of veracity.

Now psychical research has always had more than its fair share of liars—there is so much fraud in this field that it amounts to a sort of time-honoured tradition. But there are also many cases of genuinely mistaken reports. Eyewitnesses are certainly fallible. Psychologists have carried out many experiments in this area, which quite clearly show just

Mary Evans/Harry Price Coll.



Harry Price

how bad we are at making observations, and reporting them back accurately.

But the psychologists did not get there first! To their credit, some psychical researchers had already carried out some investigations in the area of eyewitness testimony, with especial reference to séance room phenomena. As early as 1887, Hodgson had written of the difficulties involved in giving a true account of what had happened at a slate-writing séance (in which the medium would cause writing in chalk to appear on the inner side of a pair of slates which were clamped together). And in 1932, Besterman set up a fake séance, and then questioned the participants on what they recalled having witnessed. Even though half of them had been told of the deception, the results were astonishing. As every conjuror knows, human beings are very suggestible [1].

Yet we do have to rely on evidence that people give us about the world—we cannot simply ignore it, and rely solely on our own senses (there is a large philosophical argument lurking here, one which I do not have space to discuss). Many people accept the Baconian model of science—that scientists simply look at the world, note some interesting similarities and regularities, and posit a hypothesis to account for them. They then devise an experiment which will demonstrate the hypothesis, and run the experiment a few times. When it has worked more often than not, they are (so the story goes) supposed to say that the hypothesis is confirmed, and has the status of a theory. In other words, observations come first, and theory much later. But really, this just reduces the scientific enterprise to a series of particular observations. Science is much more than the noting of individual bits of testimony. In the twentieth century, the thrust—from both philosophers *and* scientists—has been towards theory as the essential feature of science, not observations or testimony.

Even when we have allowed for these matters, I think

that, in assessing evidence, we run across two quite separate problems. First, there are those claims where the conclusion is hastily drawn ('jumping to conclusions'), or where it does not stand up (there is an equally, or even a more, plausible alternative explanation). Secondly, there are some claims—and this applies especially in paranormal contexts—where the claims, as they stand, simply cannot be assessed, because of the way that they are presented. Either we are given insufficient information to allow us to evaluate them, or we are given the information in such a way that it prejudices the view that we take of it.

Let's begin by looking at cases where conclusions are drawn too hastily. You can find a lot of these cases in matters of health and medicine. In fact, I'd like to draw attention to what I think may be a new phenomenon: the health correspondent. Every newspaper now seems to have somebody called a 'health correspondent', whose job it is to report on medical matters, from heart transplants to homoeopathy. And you can guarantee that any recent experiment or epidemiological study that comes up with some information about your health (and how it can be improved) will be picked up by them. We are fast approaching the point when we can say with complete authority, that everything is harmful. I can actually recall reading that one medic had pronounced the taking of showers as hazardous, because if the jet of water was too powerful, it might cause brain damage!

Skeptics usually become irritated by bogus health cures. But what really angers me is bad arguments being produced in order to tell us what to do. One fairly recent scare concerned lead in petrol. Now I am certainly not going to say that I think that atmospheric lead pollution is a good thing—it isn't, and the more we do to reduce it, the happier I shall be. Some years ago, reports on the problem were commissioned from experts [2]. These reports were closely reasoned, level-headed, and intelligent. Did anyone *really* read them, I wonder? Because if you look at the response that appeared in the press, to say nothing of the saloon bar, crude causal connexions were being made with a frightening disregard for the evidence.

We were told that children living near urban motorways were less intelligent than children who didn't, and moreover had higher levels of lead in their systems. The conclusion was obvious—if you live near a motorway, then your children have a greater chance of suffering from brain damage than if you don't. The argument is an easy one. You live near the traffic fumes, so you get more lead, so you grow up to be less intelligent. But will the facts really bear that interpretation, and *only* that interpretation? The answer is no. Despite the facts that the official reports stressed that crude causal conclusions should not be drawn, that it is precisely what happened in the case of certain newspaper correspondents.

Now I don't want to reopen here the whole controversy over nature versus nurture, over whether genetic inheritance or environmental upbringing is the vital component in an individual person's make-up. I think that this crude dichotomy really gets in the way of our unravelling a very difficult question (in fact, I'm not even sure that the question is the right one to ask in the first place). For we can essay alternative explanations for what, to many, might

seem unexceptionable conclusions. I don't say that I believe that what I am going to put forward is the *right* explanation for the findings, but I say that it is no worse than the 'standard version'. Perhaps, just perhaps, people who are among the poorest members of our society tend to live in the less nice areas of our towns and cities. Perhaps those people are less committed to encouraging their children in early life. They do not read to them, or value learning and education. They cannot afford, or do not choose, to have books about the house. The children do not sit down indoors in the evenings, to get on with their homework. No, they play outside, near the busy roads, where they inhale a great deal of lead fumes. But their more fortunate middle class counterparts are busily amassing a wealth of knowledge, and the techniques necessary to survive the ordeal of intelligence testing, and in their leafy suburbs, are less likely to inhale great quantities of lead. The facts are not in doubt: one group has a higher lead level than the other, and that former group is also in general less intelligent. But was the lead the cause, or do both the lead and the low achievement have a common cause? I am not making a political point here, merely an ecological one. I confess I do not know the answer, but I do not think that some journalists should have been quite so ready to jump to the conclusion that they did.

There are other similar cases. A few years ago, it was noticed that perinatal mortality rates were worryingly higher in some parts of the country than in others. The statistical evidence really could not be doubted, but what did it prove? To some, it was clearly a case of class discrimination. People living in poorer areas were receiving much worse health care than those who lived in 'nice' districts. This was, of course, a scandal. But did it necessarily have to be that way? Not really, because the facts will bear another interpretation. It is known that, in general, mothers-to-be from poorer areas have a much less consistent record of attending ante-natal clinics than their better-off counterparts. One purpose of these clinics is to check up on progress and on the growth of the foetus, and to detect potential problems at an early stage. If the monitoring process is worth anything at all, then it ought to be the case that the mothers who participate in it have a greater chance of bearing healthy babies than those who don't. And there are other factors too, which also have a basis in social class: smoking, which is known to have an effect on the foetus, is commoner among women in social classes D and E. And I have only anecdotal evidence here, but I do know several women who have entirely abstained from drinking alcohol during their pregnancy—all were 'middle class'. I should be interested to see some research on changes in lifestyle among pregnant women, related to social class. I shouldn't be surprised to find that such research gave a clue to why perinatal mortality is so high in poor, inner city areas.

In producing these arguments, I am not intending to be politically controversial, and certainly not party political, but I do want to say that some findings that have come out of research in areas like health are by no means as easy to interpret as some journalists and politicians would like us to believe. There is often the possibility of an alternative reading, that would explain the facts in a very different way.

Let me now turn to the second kind of case that I mentioned, and also, at last, to a consideration of paranormal matters. Here, reports of cases often suffer from two particular sins of description. They can be underdescribed, and they can be overdescribed. I have coined these two terms myself, and you are entitled to an explanation of them. By 'underdescription', I mean the failure to include important details in the report which might help the reader to evaluate it more closely. By overdescription, I mean the tendency to inflate the account into something much bigger than the actual bald facts will sustain—a tendency to hyperbole, and to the assumption that the matter which is being reported *is*, without further quibble, genuinely paranormal.

I should like to illustrate these types by referring to just one tiny case, a rather old one. Nonetheless, large claims were made for it. It comes from Harry Price's celebrated (or notorious) investigation of the haunting of Borley Rectory [3]. Now Price was not inclined to be modest about Borley—his first book on the subject was actually called *The most haunted house in England*. A large claim to make, perhaps, but Price, who called Borley 'the best authenticated case in the annals of psychical research' was prepared to go one better—he instanced one phenomenon which he singled out as 'almost the strangest' of the many 'remarkable phenomena' which took place during the course of his investigations. Here is what he says (it appears on page 233, under the running head 'A BELT-LIFTING PHENOMENON'):

What *did* happen concerned Mr. Mansbridge—and his wife—and the following is an extract from his log: 'Sept. 5 [1937]. Arrived at the Rectory at 7.30 p.m. ... The only unusual thing that happened as we (Kerr-Pearse, my wife and myself) stood talking on the first-floor landing [was that] ... *my wife felt the end of the belt of her coat lifted and dropped again*. The material is too heavy to be lifted by any ordinary draught, and the movement was so definite as to make her look down at it.

Well, as strange phenomena go, this is hardly stirring stuff. Can we make anything of it? Can we assess it critically? We can try, but ultimately, I'm afraid, final conclusions will elude us. Why? Because Price, in giving us an account of this case, both overdescribes and underdescribes it. He overdescribes when he exaggerates its 'strangeness', as in the following passages: 'Speaking of remarkable phenomena, the one recorded by Mrs. F.A. Mansbridge is almost the strangest. She had the belt of her coat lifted and dropped again by an unseen hand. The movement was quite definite.' (p.128). And later, referring to some inscriptions, 'But surely, using a lead pencil—even using it intelligently—is not a more wonderful phenomenon than Kerr-Pearse being locked in the Base Room while he was having his supper; or the lifting up of Mrs. Mansbridge's coat belt; or ... [etc.]' (p.151). Even more dramatically, Price notes in an Appendix to the book that 'Mrs. Mansbridge had her belt lifted by an invisible presence' (p.249).

Now this really will not do—Price, by the very manner of his presentation is signalling to us that a paranormal interpretation of this case is the only correct one. All that happened was that the belt went up, then went down again. Price, on page nine of his book, insinuates the idea that he is 'utterly sceptical as regards "spirits"', but feels no compunction about attributing all this belt-lifting stuff to 'an



Borley Rectory in 1929

unseen hand' and 'an invisible presence'. You can almost begin to feel the hairs on the back of your neck begin to tingle!

But Price is really foisting an interpretation on us here—how does he *know* it was a hand, when it was unseen? Why not a ghostly foot, a spiritual walking stick, or even an ectoplasmic tentacle? And why was it unseen? Was it actually there, though invisible (if so, how did anyone know that it was)? Was it merely unnoticed? And did the hand *really* lift the belt—implying that there was some kind of intelligence directing it, or did the belt just catch on something (a hook, or a nail, or a splinter) for a moment? Compare these two sentences: (a) 'The belt of my coat was lifted and dropped by an unseen hand'; (b) 'The belt of my coat caught on something for a moment'. It is obvious that (a) is dramatic and exciting, whereas (b) is merely dull, boring and mundane—who would care to investigate such stuff? The idea of an animated hand wandering about in ghostly fashion is not an uncommon one in supernatural fiction—Sheridan Le Fanu, William Hope Hodgson, W.F. Harvey, and A.N.L. Munby have all used it. It has become part of the folklore of a haunted house, and Price seems to be happy to be a part of that tradition.

So Price is definitely overdescribing—he oversells what is really a rather trivial and unimpressive incident, conjures up a ghostly presence that is responsible for it, and effectively shuts out any attempt to give a normal explanation. But when we attempt a critical examination of the case, perhaps with a view to offering a normal explanation, what happens? We immediately run into difficulties, because as well as overdescribing, Price has also underdescribed. There isn't enough information there to allow us to arrive at a firmly-grounded conclusion.

I suppose that the most glaring thing about this case is that, as Price presents it to us, it is only told at second-hand. Price quotes Mr. Mansbridge's report verbatim, but at no point anywhere in the book does he actually give us Mrs.

Mansbridge's own account—indeed, he doesn't even give us so much as a clue that he had asked her for her own account of the incident. If this is 'almost the strangest' occurrence in the 'most haunted house', which constitutes the 'best authenticated' case there is, then skeptics may conclude that they have little to worry about.

The second point concerning underdescription is that no one actually tells us what they really saw. Did all three witnesses gawp down in astonishment as the belt rose into the air, like a sort of miniature version of the Indian rope trick? Or did Mrs. Mansbridge merely look down in irritation when she was impeded by the belt's catching on something, and the gentlemen noted her annoyance, though they had no idea of what had caused it? We don't know—Mansbridge doesn't tell us; Price, if he did make enquiries, doesn't say, and the chances of anyone's being able to find out, half a century on, is remote in the extreme. You can carry out a little experiment here into the nature of what Price is pleased to call 'belt-lifting phenomena'. Just try standing up while you are wearing a coat. Ask a friend to approach you from behind, unseen, and lift your belt and then drop it again. What do you feel? When I tried it, all I felt was the buckle of the belt knocking against the back of my leg when the person let it go. Nothing more than that—I was not aware of its having been lifted, nor of its being held in the air, parallel with the ground. The only point at which I became aware that anything had happened was when it actually hit my leg. What did Mrs. Mansbridge feel? What was her experience, and what did she think of it? We are not told.

Because Price has underdescribed, we are not in any position to offer a definite explanation of the belt-lifting, but I must say that the evidence, as it stands, does not convince me. There are many other paranormal cases I could analyse in similar minute terms. And they would all fall apart on detailed, critical scrutiny. It is not so much that 'such things are impossible', but that the evidence just will not support the claims that are made. Next time you read an account of some paranormal occurrence, look out for overdescription and underdescription. You won't go unrewarded.

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Note:

An earlier version of this article was read at the meeting of the London Student Skeptics on Monday, 11 March, 1991.

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The Struggle of Alternative Medicine for Recognition

Wim Betz

A European perspective

Acupuncture In Belgium

In Belgium the examination, diagnosis or treatment of patients on a regular basis by anyone who is not a registered doctor or dentist is illegal. This does not prevent many laymen from nonetheless practising alternative medicine illegally as an alternative practitioner will, in general, not be prosecuted unless a specific complaint is made against him or her.

In autumn 1990, two organizations of acupuncturists (including qualified doctors as well as lay practitioners) petitioned the Minister of Health and handed over to him an extensive file. The case that they presented was essentially that:

- acupuncture responds to the needs of the people.
- acupuncture by doctors and laymen should be practised only by practitioners trained or recognised by the acupuncturists themselves.
- acupuncture should not be the domain of doctors only (the majority of acupuncturists are laymen).
- discussion of the scientific basis of the methods is not relevant since their success is ample proof.

They proposed a programme for training as laid out by the North-West Institute of Acupuncture and Oriental Medicine—a programme that they claimed was recognised by the state of Washington in the USA.

The minister called a meeting of the deans of all the medical faculties in Belgium during which he asked them to organise the academic training of acupuncturists and rendered the idea more tempting with a promise that considerable financial support would be provided. Following the meeting, a mixed committee was appointed to look into the matter and at the end of their study the universities refused to organise postgraduate training in acupuncture. One of the members of the committee put a question to the ministry that they had some considerable difficulty in answering: 'On what grounds was acupuncture favoured whereas other alternative therapies that are at least as scientific and popular were not considered?'

In the name of all exorcists and faith healers, I protested against such favouritism. Nothing has since been heard of this initiative.



Homoeopathy and the European Community —The Chanterle Proposal

In 1965 and 1975 the EEC laid down very strict rules for the registration of medicines in the countries of the EEC. (Directives 65/65/EEC and 75/319/EEC, and also 89/341/EEC). Very extensive and conclusive proof has to be given of the effectiveness of a medicine under very precise conditions and any undesirable side effects have to be highlighted. These measures have created more than a mild panic amongst manufacturers who have been producing old-fashioned patent medicines for a many years, but do not have the means to carry out the research which would be necessary to register their products under the proposed regulations. Other protesters were the homoeopathy practitioners who, for very obvious reasons, would face big problems meeting the demands of proven efficiency. They have lobbied for these directives to be adapted to the special properties of homoeopathic medicines and holistic treatments so to dispense them from the burden of scientific proof. Their main argument was that the different regulations applied by the various countries were an obstruction to free trade.

They were successful in that that a review of the directives was ordered by the Council, and the matter was delegated to the Committee for the Environment, Health and Consumer Protection as principal advisory organ. In addition the committees for Economic, Monetary and Industrial Affairs and for Agriculture, Fishery and Development of the

Country were appointed co-advisors. The Belgian Euro-MP, Mr Chanterie, was appointed as reporter. On 23 March 1990 a document was prepared for review by the advisory committees who also added some amendments to the proposal. The whole document (proposal and the amendments) was presented to the European parliament and was approved almost unanimously (only one vote against) on 13 June 1991.

It is interesting to take a look at some remarkable excerpts from this document. (Note that since I could obtain only the texts in Dutch and partly in German, my English translation may not correspond literally to the official English version).

The Proposal and Amendments (excerpts)

The Introduction

Considering that...homoeopathic medicine is officially recognised in some member states and only tolerated in some other states...it nevertheless is widely prescribed and used in all member states even if not always officially recognised it is desirable, taking into consideration the special properties of those homoeopathic medicines such as the very low concentration of active substance and the fact that conventional statistical methods for clinical trial are scarcely applicable, that a simplified method of registration should be adopted, for those homoeopathic medicines that are commercialised without mention of therapeutic indications and in a non-dangerous presentation.

Freedom of choice of therapy has to be guaranteed. Allopathy, holistic medicine, and homoeopathy are to be considered as different and often complementary approaches each of which has its merits. Given that, in some member states, holistic medicine plays such an important role in alternative medicine, the interests of patients who choose it have to be guaranteed. Even for homoeopathic medicines that mention a therapeutic indication, the registration has to be granted taking in to consideration the special properties of homoeopathic medicines. Holistic medicines registered in an official pharmacopoeia are to be treated on the same basis as homoeopathic medicines.

The Articles of the Proposal

Art 1. Homoeopathic medicines ... are made from substances that are called homoeopathic primary substances (grondstoffen). Homoeopathic medicines contain homoeopathic substances in a dilution of at least 1/10.

Art 2. On the label should be clearly written: "Homoeopathic Medicine".

Art 3. The proof of therapeutic action (i.e. efficiency) as required by art. 28 section 1.b. of directive 75/319/EEC is not required of those homoeopathic medicines.

Art 6. A member state has the right to refuse the registration of homoeopathic medicines in its territory...but nevertheless will be compelled to permit the use of homoeopathic medicines registered in other member states....

Art. 7/1. The homoeopathic medicine has to be commercialised in such a dilution that it is absolutely not dangerous *per dose*.

Art. 7/2 The homoeopathic medicine has to contain the

warning: "if the symptoms persist, seek the advice of a competent homoeopath".

Art. 9. The following items must be formulated within 5 years:

- A European pharmacopoeia
- Directives for the legal practice of alternative medicine
- Measures for the payment by the social security of homoeopathic treatment and medicines.
- The organization of official training and education.

Art. 10. The member states have to comply with this directive not later than 31/12/92.

This text was approved by the European parliament on 13/6/91, and then presented to the Council for further approval. The explanations (toelichting) and justifications for this proposal also contain some very interesting views:

- A survey made in 1987 for the EC in 9 countries by a Mr Sermeus of the Belgian Consumer Association, showed that between 7 and 25% of the population seek the advice of an alternative therapist at least once a year. (In another document they mention 18 to 75%). In decreasing order of importance the survey showed homoeopathy, acupuncture, manual therapies (i.e. osteopathy and chiropractic), herbal medicine, massage and paranormal healing and holistic medicine.
- People with higher educational qualifications make between 35 and 60 times greater use of those methods than the general population (?)
- One of the causes for the controversy between allopathic and homoeopathic medicine is precisely the fact that classical medicine is not willing to accept the proofs offered by the homoeopathic doctors. Scientific articles about homoeopathic medicine are only very rarely accepted by orthodox publications. There exist very extensive lists of publications that prove the efficiency of homoeopathic medicine as well as holistic medicine.
- It is in complete contradiction with the philosophy behind those methods to conduct the types of test used for allopathic medicine. Instead, test methods that are current in homoeopathic schools should be used.
- The fact that conventional medicine cannot understand the working of homoeopathic medicine and holistic medicine does not mean that they don't work. Tens of thousands of homoeopaths and holistic practitioners and millions of patients are more than sufficient proof of their efficiency.
- The right to practice homoeopathic and holistic medicine should be regulated to prevent non-experts from gaining part of the market.
- Homoeopathic and holistic medicines should be given opportunities equal to those of allopathic medicine and, in order to guarantee the freedom of choice of therapy for the patient, the health insurance systems should not be allowed to differentiate between holistic and homoeopathic medicine and conventional medicine.

(Note: There is also an almost identical proposal for veterinary medication that will not be discussed here.)

In August 1991 the European Committee made some changes to the proposal. Some articles and amendments were rejected. These included the following:

- All mention of practising medicine, medical education, reimbursement of medication—these were rejected because they clearly surpassed the limits of the mandate which was the free traffic of medicines.
- Those sections that took too openly the side of certain traditions in medicine. The Committee's aim was to keep a neutral position in the controversy between conventional and alternative medicine.

In addition, to avoid the over-extension of the simplified registration this should remain the exception rather than the rule and, for instance, all medications which require injection into the patient are barred from the special procedure. The same goes for any products that might be dangerous for the patient.

Nonetheless the following items still remain:

- Taking into consideration the special properties of those homoeopathic medicines such as the very low concentration of active substance and the fact that *conventional statistical methods for clinical trial are scarcely applicable*, a simplified method of registration should be adopted for those homoeopathic medicines that are commercialised without mention of therapeutic indication and in non-dangerous presentations and concentrations.
- Homoeopathic medicines must be made from basic homoeopathic substances (*grondstoffen*)
- The application file must clearly describe the nature and production of the basic homoeopathic substance, and the homoeopathic character has to be demonstrated by a *substantial homoeopathic or holistic bibliography*.
- Medications that cannot use the simplified registration procedure of art. 7 must prove that their effectiveness *conforms to the basic principles of homoeopathic medicine and holistic medicine*.

The Belgian Consumers Association

In October 1990 the Belgian consumers' organisation published an article about health products and devices that were clearly quackery in which they protested about them and warned against them. The article also surveyed the amazing extent of their use and the satisfaction of the customers using them. In Belgium these products represent a market of 10 billion Belgian francs (£150 million) in a population of 10 million.

In September 1991 the same organization published the results of a survey of the use of alternative medicine (homoeopathy, acupuncture, chiropractic and osteopathy) and concluded that the population makes extensive use of these therapies and that the level of satisfaction is high. The consumer association concluded that a refusal to recognise these alternative treatments was hypocritical and, given the degree of satisfaction experienced by consumers, that there was no valid reason to keep on treating alternative therapies so badly. They further concluded that official recognition

should be mandatory and that the treatments should be financed by the national health insurance.

They did not seem to be aware of the contradictions between the conclusions of the two surveys!

Conclusions

This article has detailed a number of examples of actions intended to give legal status to unscientific therapies and these are linked by a number of common factors. For instance, all of the actions were made under the guise of protecting consumers who demand such therapies and who should have a right to good quality alternative medicine. In addition, the furnishing of reasonable proof of effectiveness is not deemed necessary since popular success of a given treatment is regarded as proof enough. An important point is that some particular methods are chosen for recognition on the basis that—by ill-defined criteria—they are, in some way, more scientific.

In my experience the promoters of alternative medicine, in most of its forms, are very honest people and their motives are sincere and in some cases highly idealistic. They want to help the underdog in a just fight against the Moloch of academic, conventional medicine. Protests on behalf of science are dismissed as being of limited vision, representing corporate interests or the desire to maintain a monopoly or even as mindless fanaticism.

The best way to counter these demands seems to be to go along with their reasoning. Ask the supporters of alternative and complementary medicine on what basis their criteria for good quality are founded. If they say that the success of their techniques is proof enough, point out that there are hundreds of other alternative therapies that have very enthusiastic fans. Amongst these are earth ray shielding, Japanese exorcism (Mahi-Kari—a personal favourite) and many, many others. In the name of free trade and free choice of therapy ask them on what grounds the more esoteric alternative therapies are excluded. Defend the underdog—it should be all or nothing. If any serious progress is made on the path to recognition of some therapies with the exclusion of others we must officially and vehemently protest the violation of our right to free choice of treatment. I myself intend to demand that gemmotherapy and oenotherapy—treatment by precious stones and by good wine—be made available to me with all expenses paid by my national health insurance. I am ready to present a file of scientific literature on the subject (the bookstores are full of them) and a users club is in the making.

In the name of free trade and free choice I demand that there is no discrimination between different types of alternative treatment! I exhort all skeptic organizations of the EC, and all interested skeptical individuals to write urgently to their Ministers of Health, their MPs and their Euro-MPs insisting on fair play and equal treatment for all alternative therapies.

Wim Betz is a member of Skepp, the Flemish-speaking Belgian Sceptics organization, and is a professor of medicine at the Free University of Brussels. The text of this article was presented at the 3rd EuroSceptics conference in Amsterdam on 4 and 5 October 1991.

Skeptic at Large

Wendy M Grossman

Irritation with irrigation

One of the problems for skeptics is that the field is so limited. It seems like we go round and round in circles: parapsychology, psychics, spiritualism, New Age, astrology, UFOs, on and on. Of course, there's no reason why we can't branch out a bit. Fuzzy reasoning is fuzzy reasoning, whether it's applied to the paranormal or to more commonly accepted cultural myths.

It seems to me it was about a year ago that I saw reviews of *Cadillac Desert*, by Marc Reisner, appearing in the UK press, although the book was actually published in the US in 1986. I finally found the book on my last visit to the US. *Cadillac Desert* is one of those rare books which you think must be the product of endless years of passionate research. Lovingly written, it rivals the world's finest books in its use of language and vivid imagery. It also details one of the most scandalously irrational misuses of natural resources known to man, affecting the lives of millions of people. I long to write the screenplay. The western half of America is what they call 'near desert'. However, settlers, moving westward across the continent, thought they could solve this problem. Till the soil, they believed, and the climate would change; 'Rain follows the plough', went the folk saying. For a time, it seemed as though they might be right. Just as the natural cycle of terminal and chronic illness can make people believe they have been healed by ineffective treatments, the natural cycle of rain and drought made the settlers of western America believe that they had conquered the land. When they found out they were wrong, they set themselves to mining groundwater—a resource Reisner calls as precious and irreplaceable as oil. At the rate they were going, he says, the water that took thousands of years to build up would be gone by the end of the century. The next step was water projects. All those famous dams, built one after another from the 1930s onward: Boulder, Hoover, Grand Coulee, and many, many others. In one area of California, people actually fought a small war—with guns—over the allocation of water rights. By now, there are no rivers left in western North America that haven't been dammed, diverted, or developed; one even runs backwards. Many myths contributed to this extravagance, which, by building expensive projects and selling the water at prices far lower than cost, laid the foundations of today's trillion-dollar national debt. When Europeans settled North America, they came with the presumption that the climate wasn't actually very much different than the one they had at home. There was, for a time, a theory that similar latitudes perforce

had similar climates. Even the dams themselves generated a special mythology: that we could conquer Nature and the desert. Dams became a religion to the people—the Bureau of Reclamation and the Corps of Engineers—who built them, to the point where even after all the good sites were gone the building continued. Dams were built beyond reason, on sites that were doomed, with costings that could never be paid back. Then there is the myth of the small farmer, who needs that water to survive. In fact, the farmers who benefited from this artificially cheap water tended to be little people like Standard Oil. Artificially cheap water led to profligacy, the growing of such water-demanding crops as rice, and the founding of large western cities. We laugh at Los Angeles because they believe in things like the New Age and flee their city whenever Nostradamus predicts an earthquake. But in fact LA's entire water supply passes over one of the more vulnerable areas of the San Andreas fault. When, or if, the Big One comes, LA's entire water supply will almost certainly be cut off. The city is huge, rich, important, and unbelievably precariously balanced. These days, the talk is of bringing water down by aqueduct from Alaska—more than 1,000 miles north of LA. The energy consumption of such a project alone is immense. But water projects win politicians—particularly western politicians—votes. One of the biggest political mistakes President Carter made, says Reisner, was to declare a 'hit list' of all the water projects he wanted to cancel. This list, Reisner believes, contributed as much to his defeat by Reagan as the Iranian hostage crisis. The history of water management in the US has every kind of faulty reasoning known to man or skeptic, from mythology, to dishonesty, to absolute unwillingness to admit a mistake. The lives of millions of people depend on giving up their most cherished myth, that man can reclaim the desert. But there's more than that, says Reisner: desert civilizations have failed throughout history. The reason? Salt, which accumulates in the land as the irrigation water evaporates. In the western US, he says, it's happening already.

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

While conducting in-depth research for *The Skeptic*, Toby Howard has unfortunately become temporarily trapped in a higher astral plane. *Psychic Diary* will return in the next issue of *The Skeptic*.



Reviews

Puns and protons

Judith Stone, *How to Tell a Proton from a Crouton: An Amateur's Guide to Science* (Angus & Robertson, 1991, 160pp., pbk, £4.99)

Judith Stone was a self-confessed scientific illiterate. This collection of essays results from her attempts to vanquish her ignorance. The subtitle is misleading, since this book is hardly a guide to science. It is more one person's journey through some of the by-ways of American science and technology. The essays cover a variety of topics, including getting oneself mummified, how to manipulate people using odours, building better mousetraps, and talking to gorillas.

The book begins on a low note, with a description of a survey which showed that fewer than 6% of Americans qualified as being scientifically literate. I suspect the situation is hardly better in this country. Can people *really* believe that Cher's real name is Chernobyl? On the other hand, the last essay in the book ends on a high note, describing a street astronomer in New York City, and the excitement of passers by when they view the planets and stars through his sidewalk telescope.

This book has a light-hearted style, and the essays are amusing and informative, although hardly deep. It is only fair to warn potential readers about the puns: they are awful, truly awful, and rate a high Groan Factor. I will not quote any here, to protect readers of a sensitive disposition.

The author writes about her knowledge of science that 'I haven't totally vanquished my ignorance, I've just stopped being so damned proud of it.' If only more people could be persuaded to stop being proud of their ignorance of science.

—David Martin

A waste of words

Dawson Church & Alan Sherr (Eds), *The Heart of the Healer* (Arkana, 1990, 212pp., pbk, £6.99)

The Heart of the Healer is yet another tired, ignorant and clichéd diatribe about the spiritual failings of modern medicine. It does not deserve to be read by anyone other than those unfortunate folk like me who occasionally agree to review such things. It would be unlikely to be read by anyone sensible, except for the marketing bonus of a Royal connection. Here is a collection of articles with the added respectability of an 'essay' by HRH Charlie. I have always felt that Britain would be better off without a Monarchy.

Remember the joke about the difference between a maths department and a philosophy department? It goes like this:

the maths department has pencils, paper, and wastepaper baskets. The philosophy department just has pencils and paper.

The Prince opens the volume with a reprint of his ridiculous speech to the BMA in 1982. He recounts the dreary view that the primary reason for doctors' dismissal of much that goes under the banner of alternative therapy is professional jealousy. The BMA compiled a report in response to the accusation, and were then criticised for being negative when there was found to be no evidence to support the claims of the alternative scene. Charlie goes on '...modern medicine perhaps loses sight of the patient as a whole human being...' (yawn) and makes a plea for the recognition of the value of healing. Paracelsus (16th century medic) is the example of choice, apparently, who was a renowned healer. According to Charlie, 'Paracelsus maintained that there were four pillars on which...healing rested. The first was philosophy, the second astronomy (which we might call psychology...)' (*sic*) The others were alchemy and virtue. Does Charlie really believe that we might call latter day astronomy psychology? (Or even astrology, which is probably really what he meant.)

The rest of the book has a very high 'wholeness ratio', where most paragraphs bore on about essential oneness, spiritual potential, attunement and related drivel. A recent correspondent to *The Skeptic* noted that it carries many reviews of 'crap books.' This one certainly falls into that category.

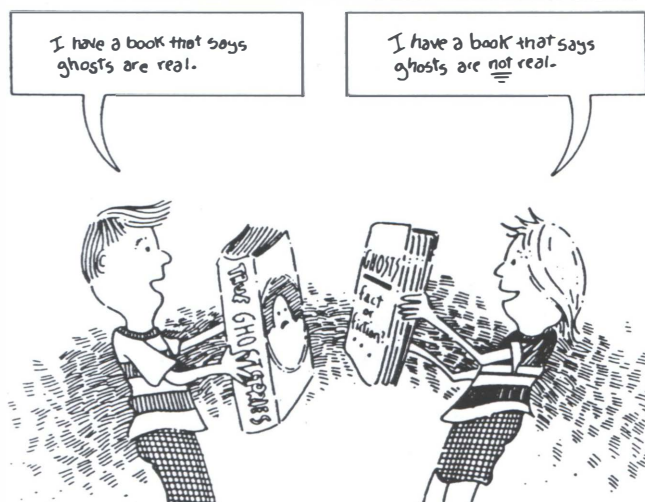
There is a serious point though, apart from the amusement such nonsense can offer. Some of the people in this book are engaged in health care. One of them writes 'In my work I frequently use therapeutic touch, the laying on of hands experience of balancing and attunement of the body's energy fields' and 'we contracted to do some visualisation work, which eventually put him in touch with his inner 'messengers'.' What can we do to protect patients from such pompous, unquestioning practitioners? Have they never heard of trials? Of experiments?

Next time you hear someone talking about medicine, doctors etc, and they refer to 'doctors playing God' (or whatever variant is chosen) please do the following: roar with laughter, pointing out the unbelievable ignorance and old-hattedness of using such a pathetic, miserable and boring cliché. Then find someone worth talking to. For whatever faults doctors may tend to have, belief in an innate, magical healing power is rarely one of them. That's a claim for the people who write awful books like this.

—Nick Beard

Science for kids

James A Haught, *Science in a Nanosecond: Illustrated Answers to 100 Basic Science Questions* (Prometheus Books, 1991, 10pp. pbk, £8.50); Dan Barker, *Maybe Yes, Maybe No: A Guide for Young Skeptics* (Prometheus Books 1991, 80pp. pbk)



James Haught's book gives very concise and clear answers to some of the science questions children might ask. Questions such as: Why is the sky blue? How fast are you moving when you sit still? What is the weight of the air pressing on you? What is light? How do the continents move? How does the body store its energy? Haught writes that 'pictures teach in a nanosecond' (hence the book's title), so one or more drawings are given with each answer. One page is given to each question, with the questions covering many topics in chemistry, physics, biology and geology. Though the book is aimed at children it will probably be useful for parents for the concise answers it provides to questions they may be asked.

The major defect is the book's lack of an index or contents page. It will not replace a good reference book or science question and answer format book but might be useful to get in addition to these. (For those who were wondering about the earlier questions here are summaries of his answers for the first three. 1: Because the air scatters the blue light from the sun. 2: 1.3 million mph. 3: More than 10 tons.)

Dan Barker's book, *Maybe Yes, Maybe No* tries to encourage young children to be skeptical of unusual claims. The first half is a cartoon strip with comments above the cartoons. It tells the story of a girl who is skeptical of her friends' claims about a ghost. After investigating the evidence of moved dishes and night time noises all but one of them accepts that there was no ghost. The rest of the book uses both cartoons and stories to show the rules of clear thinking and good science. The six rules given are:

- Check it out.
- Try to repeat it.
- Try to prove it wrong.
- Keep it simple.
- It must make sense.
- Be honest.

This is definitely not a book for those who want their children to have an unthinking acceptance of religion, because the author lists miracles with ESP, UFOs, astrology and other things skeptics do not accept because of a lack of proof.

—Bill Penny

Soggy science and murky magic

Serena Roney-Dougal, *Where Science And Magic Meet* (Element, 1991, 214pp., pbk, £10.99)

About halfway through this vastly entertaining book I realised what it reminded me of; does anyone out there remember the James Burke programme entitled 'Connections' from a fair few years ago? In that programme, Mr Burke twisted my brain in a knot whilst connecting together a host of scientific discoveries, some involving a mastery of logic and deduction that my then young mind was often left stranded.

Where Science And Magic Meet is of a similar vein, though if you spot much worthwhile science in it you deserve an award. Ms Roney-Dougal has attempted to tie together the last hundred or so years of parapsychology, 'New Age' theory, magic, fairy lore, witchcraft, Eastern mysticism, electromagnetism and feminism; and indeed succeeds in a grossly naive but interesting manner.

She begins with the usual lambasting of modern science which she argues has reached a point where it no longer provides any truth or certainties. Her evidence for this death-knell of rationalism is the current favourite of 'New Age' pseudoscience—quantum physics. The principles of 'uncertainty' and 'non-locality' are held as proof that magic is possible and it is further argued that as the human brain works on quantum principles, then ESP and PK are both logical and natural.

Such giant and implausible leaps of logic characterise much of the book, and needless to say, the evidence for such awesome pronouncements is conspicuous by its absence.

She goes on to review parapsychological research and refers to it as 'The Scientific Study of the Tools of Magic'. All the old sacred cows are dug up to illustrate the great advances that have been made in this field—Rhine, the Ganzfeld studies, dream experiments, remote viewing, metal bending, mediums, and psychic surgeons. All are accepted at face value and the comment made about fraud is that it may actually improve psi powers! She argues that mediums and psychic surgeons especially, use tricks to get the audience in the right frame of mind. If the audience then believe strongly, this 'allows the atmosphere to become so charged that it allows the psychic realm to manifest' (and there was I thinking that mediums cheated because they were dishonest).

From quoting other people's badly conducted experiments, our spirit guide goes on to excite us with some of her own research on the pineal gland. This small gland in the brain is linked with the 'Yogic Chakri' system, the 'Chakras' being energy nodes linking the physical with the spiritual; the pineal gland relates to the 'Anja Chakra', or the psychic centre. The proof of her discoveries is provided in terms of neurochemistry—particularly the brain chemicals serotonin

and melatonin which are chemically similar to LSD; her explanation of all this will baffle the layman and induce great hilarity to anyone with a grounding in physiology. For instance, her assertion that the blood/brain barrier is 'a skin or membrane which goes right around the brain and protects it from unwanted chemicals in the blood' is so embarrassingly wrong that I had to struggle to stifle my laughter.

Most of the 'connections' come together in the chapter on Earth energy. She ties together geomagnetic anomalies and UFO's; and the electromagnetic field of the Earth is provided as the explanation for many weird and wonderful things such as hauntings, poltergeists, psychic abilities, healing, auras, ley lines and dowsing. We are warned of the dangers of electricity which she holds to be responsible for the decline of magical powers in recent times. The inability of modern mediums to produce ectoplasm and make the table float about the room is also cited as a result of the psi-inhibiting power of electricity!

The final pieces of the puzzle come together in the chapter about 'The Fairy Faith'. Such elementals as feys, banshees and pixies are described as being real and are referred to as beings who 'direct the magnetic currents of the Earth'. We also learn that it is they who are responsible for the recent bout of crop circles! Well, I'm glad that's one mystery solved! Ms Roney-Dougal ends her work with a plea for natural magic to be accepted as the way to save the planet from all the negative vibrations which are the result of people denying their inherent psychic spirituality. We are all exhorted to worship the 'Goddess' ('Mother Earth'), and male readers are warned that 'any man who says he worships the goddess must first learn to love women, to hear women, to consider women, and so shall he help to renew the Earth for women are closely in tune with the Earth, in harmony with Nature.' I am afraid that Ms Roney-Dougal has (unlike James Burke) created a jigsaw consisting of pieces which are from a variety of different puzzles and has cast them together with little concern for their correctness of fit. Her temple of new wisdom is constructed from pillars made of soggy paper.

—Nick Neave

Contrary to Reason?

Stanley Jeyaraja Tambiah, *Magic, Science, Religion, and the Scope of Rationality* (Cambridge University Press, 1990, 187pp., pbk, £9.95)

Rationalism vs irrationalism; science vs pseudoscience; naturalism vs supernaturalism; scientific thinking vs magical thinking. Skeptical literature often makes use of such dichotomies when attempting to characterize the differences between what skeptics and their opponents believe in. All skeptics accept that there must be some sort of distinction between legitimate and illegitimate knowledge. Nevertheless, if they are employed too loosely, such simple dichotomies can easily degenerate into nothing more than convenient sticks with which to beat the opposition. In truth, terms like 'rationality', 'science' and 'magic' are far more problematic than is generally supposed. Skeptics should there-

fore welcome this interesting and thought-provoking book for the light it sheds on the true content and significance of these commonly used terms.

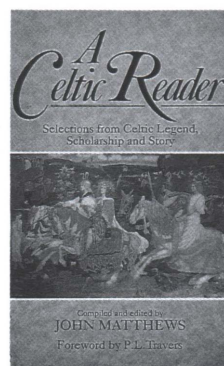
Professor Tambiah's approach is basically that of a social anthropologist but he is clearly very widely read and sensitive to developments in other disciplines as well, including sociology, history and philosophy. He describes the historical development of the notions of 'science', 'religion' and 'magic' and points out that these terms need not be universally appropriate, cross-culturally valid categories. He rejects the now rather old-fashioned view that the 'magic' of so-called 'primitive' societies represents merely a form of 'failed' science (or a kind of prescientific thinking), stressing instead the internal coherence and rationality (in their own terms) of primitive beliefs and practices. This leads naturally to the question as to how one can translate and assess the cultural products of one society in terms of the conceptual framework belonging to another, such as our own. The interpretation and assessment of the beliefs and practices of another culture comes to be seen as perhaps more a process of (as I would put it) 'negotiation' between one's own cultural perspective and that of the other, rather than being simply a matter of providing an unproblematic description together with a rational evaluation ('rational', that is, as judged by the standards of Western scientific thought).

This approach seems reasonable to me provided we temper its relativistic tendencies with a realist commitment to an independently-existing reality which, we may suppose, is simply conceptualized differently by different cultures. In my opinion, Western rationality may be superior to alternative forms in terms of the ability to predict and control, but other cultures have developed systems of thought and ways of life which have an interest and perhaps a validity all their own. This book tends to support such a view and in so doing rightly challenges all forms of cultural parochialism.

—Tim Axon

Celtic tales

John Matthews (Editor), *A Celtic Reader* (Aquarian, 1991, 320pp., hbk, £14.99); Deike Rich and Ean Begg, *On the Trail of Merlin* (Aquarian, 1991, 208pp., hbk, £15.99)



John Matthews believes that the Celtic tradition, 'far from fading with the passage of time, grows stronger as the years go by'. Perhaps he is right. Many artists, certainly, feel themselves to be inextricably linked with Celtic heritage. Of course, to talk about myths and legends and tales of the Gods is a red rag to many hard-line skeptics, who feel that to mention King Arthur and the Holy Grail in

any context other than the Monty Python film is a colossal waste of time.

However, when you are dealing with ancient stories, the real area of study is *people*: what they *want* to believe, and what they *need* to believe. The Celtic tradition is particularly rich in fables, lore and poetry, and *A Celtic Reader* is a fascinating collection of ancient tales and modern scholarship. John Matthews is well known for his work on King Arthur, and here he presents an eclectic mixture of original source material and commentary, although the latter is sometimes too technical for the lay reader, and one wishes for more sympathetic copy-editing.

Deike Rich and Ean Begg's beautifully illustrated and practical book makes a perfect complement to Matthews' sometimes (albeit with the best of intentions) obscure collection. Subtitled 'A guidebook to the western mystery tradition', *On the Trail of Merlin* takes the form of a conducted pilgrimage around all the main sacred sites associated with Merlin and many aspects of Celtic tradition. The journey covers England, Wales, Scotland, the Isle of Man, Ireland, Brittany and Spain and map references and travel hints are provided for all the sites.

Before setting off, rucksack at the ready, one might wish to consider the question of whether a historical Merlin actually existed. According to the authors: 'the answer has to be that we don't know'. One must admire their frankness! There are many, however, who have few doubts about the matter. Nikolai Tolstoy, for one, in his *The Quest for Merlin* (Hamish Hamilton, 1985) makes a convincing case for Merlin's historicity. The thrust of the book to hand, however, is more deeply rooted in the spiritual and emotional satisfaction (the 'zen of pilgrimage') to be gained in a quest to correlate ancient myths and legends with palpably real hills, grass, streams, fountains and caves. Whether you have only a vague interest in the Celtic tradition, or are a regular reader of the *Book of Taliesin* and the *Mabinogion*, I guarantee that the combination of beautiful photographs and informative text will have your walking boots twitching in no time at all.

—John Yates

The way of the shaman

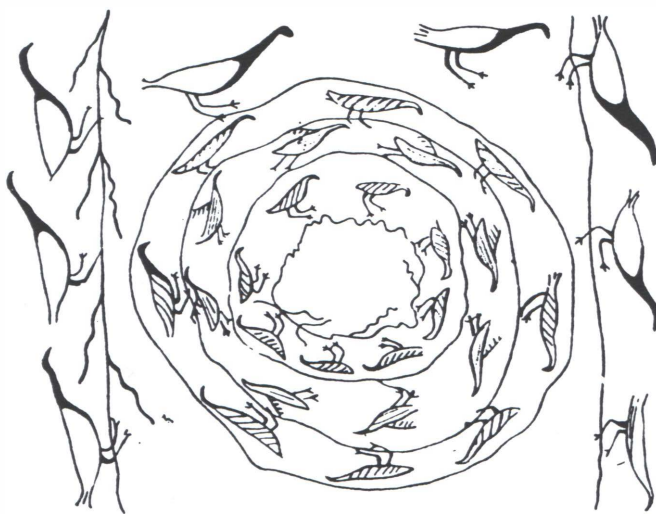
Roger N. Walsh, *The Spirit of Shamanism* (Mandala, 1991, 188pp., pbk, £7.99)

Shamanism is an ancient cultural phenomenon, thousands of years old, which is found from Siberia to South America, and is currently attracting a great deal of interest among New Age Devotees. Shamans are carefully trained to enter altered states of consciousness, using ascetic practices, rhythmic dancing or drumming, or drugs such as mescaline (from the peyote cactus), amanita or psilocybe 'magic' mushrooms, or yage (the banisteropsis vine).

Freed from the bonds of flesh, Shamans journey into spiritual realms, fighting forces of evil that attempt to hinder them, and seeking gifts of wisdom and healing from Gods and other spiritual advisors. In addition, they may also practice psychic healing when not in trance.

The Shaman may enter the underworld via a tree-root or hole in the ground (Shades of Alice!), or ascend a tunnel of light to the celestial regions. There are obvious similarities to traditional spirit (trance) mediumship, and 'out-of-body' and 'near death' experiences, as well as meditative techniques such as Jungian active imagination.

The author discusses evidence that Shamans are not (as has been suggested) mentally ill—they seem to be in control of their visionary states, and are fully aware of (and competent in) everyday reality. He sets out an interesting table of similarities and differences between the states of consciousness involved in shamanism, mediumship, and eastern forms of meditation. The role of imagery in psychological and physical healing is a topic of great current interest, and this book gives a fascinating account of traditional practices that may still have something to offer.



The assistant spirits of the Tunguska shaman.

However, I should have liked to see a rather more critical approach to the subject generally; in an extensive bibliography, I found no mention of standard skeptical works on any of the relevant topics. The author seems to take for granted that ESP, psychic therapeutics, and trance mediumship (spirit channeling) are genuine at least some of the time. He acknowledges the occasional occurrence among shamans of trickery, especially in the area of psychic healing, but falls back on the excuse that, if it helps the patient to believe, it must be alright. I was intrigued to find that in the end he turns to the placebo effect, rather than supernatural powers, to account for such healing as actually takes place; I can't help feeling that taking sugar pills must be a lot easier (and cheaper).

—Mike Rutter

Short, but sweet

Pete A. Sanders, Jr., *You are Psychic!* (Rawson Associates, 1990, 274pp., pbk, £12.50)

No I'm not!

—Toby Howard

The Third European Skeptics conference—organised by the Dutch group Skepsis—took place in Amsterdam at the beginning of October.



The third

European Skeptics conference took place in the elegant (and fairly expensive) Park Hotel in Amsterdam on Friday 4 October and Saturday 5 October. It was well attended with an audience of more than 100 for many of the lectures and—despite our feelings about European unity—Britain was well represented with eight attendees (including the odd American writer/folksinger). A prerequisite for being a skeptic in these sceptered isles appears to be to have the initials M H. Four of the eight British delegates had these numerologically significant initials and, of these, Michael Howgate, Michael Heap and Martin Hempstead presented papers at the meeting.

The conference began on the Friday afternoon with a talk by Paul Kurtz (Chairman of CSICOP) entitled 'Psychology, Religion and the Paranormal: the Key to Understanding the Paranormal is in the Eye of the Beholder'—the long title serving as a reasonably accurate summary of the lecture. The following talk by Dutch physicist J Hilgevoord was a fairly complex discussion of quantum mechanics and its lack of relevance to the paranormal. The next talk—by

Wim Betz—concerned alternative medicine in the EC and an article based on this presentation is to be found on p 21 of this issue. Physician and political scientist S F Hartkamp followed after the coffee break with a discussion of whether the state should interfere in paranormal matters. The session ended with a talk by British psychologist, Michael Heap, entitled 'Science in Everyday Life' in which he discussed a method of psychotherapy which encourages people with certain psychological difficulties to think about their circumstances in a more scientific manner.

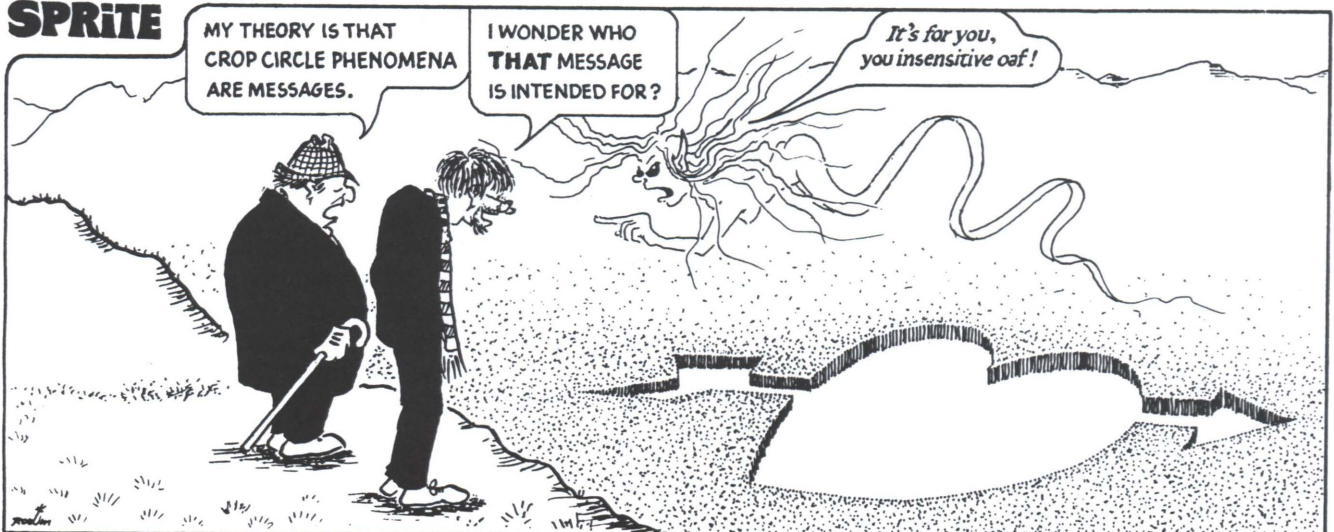
By becoming 'better scientists' in their everyday lives some patients found that conditions such as depression and anxiety improved.

The experiences of the Wessex Skeptics in the cornfields of Wiltshire this summer entertained the conference delegates at the fund-raising banquet on Friday evening. Poor Martin Hempstead was the cabaret and had the invidious task of talking whilst everyone else ate, drank and made merry. (Martin's entertaining and personal account of 'the Summer of 91' can be found starting on page 10 of this issue).

For many years, statistical data, concerned with astrology, compiled by French psychologists Michel and Francoise Gauquelin have posed particular problems for skeptics. Although the vast bulk of the Gauquelins' analyses clearly indicated that astrology does not work, some data indicated a clear, above chance correlation between the position of the planet Mars (and to a lesser extent, Jupiter) and the birth time and date of eminent members of certain professions. The effect was particularly striking for eminent sportsmen, but subsequent work by other researchers indicated that the effect was strongly present only in some European data.

It was, therefore, with great interest that I attended the Saturday morning session of the conference which was entirely devoted to the Mars effect. Three papers were pre-

SPRITE



sented respectively by Dutch researchers, Piet Joengbloet, Carl Koppenshaar and Cornelis de Jager and all three set out to demonstrate that the apparent relationship between eminence and the position of Mars in the heavens could be explained without resorting to an astrological hypothesis. In particular it was proposed that—when examining births over a limited duration—daily and yearly fluctuations in frequency of births will give rise to a spurious correlation between birth rate and the position of Mars. Unfortunately, although I understood how this could give rise to an apparent Mars effect in a general population, I did not understand how this effect would correlate with eminence.

However, a short presentation by Francoise Gauquelin made it clear that this type of spurious possible correlation had been considered and had been eliminated by their statistical methods. Mme Gauquelin offered to continue to collaborate with skeptics, in an attempt to find a satisfactory explanation for the data. The following unsheduled speaker was Göttingen University psychologist Suitbert Ertel who doubted whether the Dutch approach, based on computer simulation, was an adequate means of explaining the Mars effect. This session, though interesting, did not yield any definitive explanations for the Mars effect and, until such an explanation is found, I feel that the Gauquelin data has to be acknowledged by skeptics as an anomaly for which—as yet—we have no unequivocal explanation.

The afternoon session continued with a though-provoking talk by Terence Hines (author of 'Pseudoscience and the Paranormal' in which he presented the controversial opinion that modern psychotherapy is little different from the

practices of witch-doctors—at least in terms of outcome. Presumably Michael Heap—whose paper on the previous day was concerned with the use of psychotherapy—did not share this view, but any argument was confined to private discussion.

In the next talk French skeptic, Claude Benski, presented details of a course which he runs at the University of Grenoble in which students, dealing with paranormal topics, formulate hypotheses, test them and eventually propose explanations of their findings. Unfortunately, I had to leave for the airport after Benski's talk and as a result missed the final three speakers. These were, respectively, Michael Howgate of the London Student skeptics on creationism, Amardeo Sarma of the German group GWUP on some recent dowsing tests (with negative results) carried out in Germany and Dutch skeptic, Rob Nanninga, on collaboration between skeptics and parapsychologists.

Overall, this was an interesting meeting and I was very pleased to have been able to attend it. However, it did very much have the feel of an academic conference—indeed most of the participants were university academics. I would have preferred a conference which was perhaps more down-to-earth and with more appeal for the general public—perhaps along the lines of the annual AAAS or BAAS meetings which serve to popularise science. Nonetheless I would urge all readers to attend the Euroskeptics conference next year (in Milan) and—failing that—to make certain that you come to (and perhaps help organise) the 5th conference which will take place in the UK in 1993.

—Steve Donnelly

Prometheus Books Prize Crossword

by Skepticus

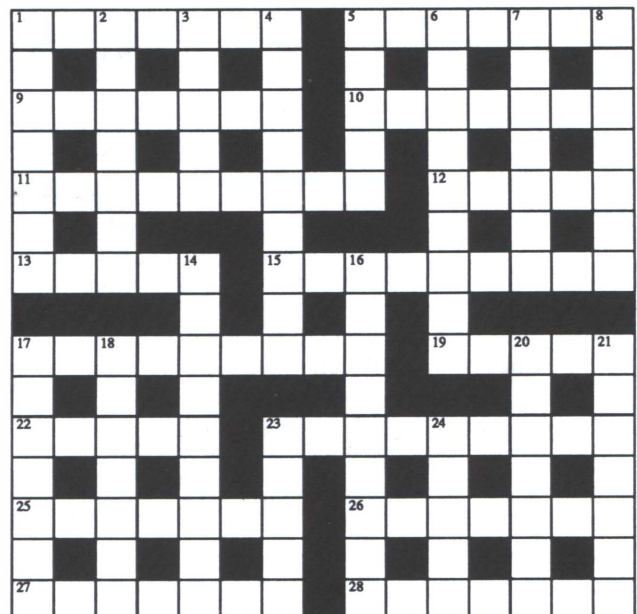
Across

- 1 The answer is in your hands (7)
- 5 Doing this, the answer is unlikely to be in your hands (7)
- 9 Detonate – retired policeman gets point (7)
- 10 Not healthy – what the witch has planned (3,2,2)
- 11 What good skeptics should be doing to silly beliefs (9)
- 12 Quiet seaman! Look! Picasso!(4)
- 13 Dispose of money obtained from starting price at finish (5)
- 15 Mind chat? (9)
- 17 Exhibited deadly psi (9)
- 19 Managed spiritual establishment, or a cattle area? (5)
- 22 What you may get on a high plane if it is cold (5)
- 23 Had reason to believe crazy Des cut ESP (9)
- 25 Excited noise from foremost wit Terence (7)
- 26 Volume of transport? (7)
- 27 Desires confused lives (7)
- 28 I vented angrily, it's plain to see (7)

Down

- 1 Philosophical doubt shortens 1 Ac. a mite, adding small relation (7)
- 2 Support sixth sense? Zero use (7)
- 3 Part of Trotsky's moves (5)
- 4 Attraction between people? Or molecules? (9)
- 5 Acting, taking two points from 5 Ac. (5)
- 6 Guardian, for example, stuck on barrier. You stick it up (9)
- 7 Iron bit circling the earth (2,5)
- 8 A pseudoscience? No, a hard rock science (7)
- 14 Deed at leg over for passed responsibility (9)
- 16 Done stole pointer! (9)
- 17 Fit red right into wanderer (7)
- 18 To see them, drink them (7)
- 20 Famous, but unskilled (7)
- 21 Squirrels away the object, and the id is bewildered (5,2)
- 23 Types or mistypes stores without point (5)
- 24 Heathen nuisance conceals mental weariness (5)

The sender of the first correct entry to be picked out by Chief Red-Eye, our Spirit Guide, will win a copy of CSICOP Fellow Kendrick Frazier's new book *The Hundredth Monkey, and Other Paradigms of the Paranormal* (Prometheus Books) which includes essays by Carl Sagan, Isaac Asimov, Martin Gardner, Ray Hyman, Paul Kurtz and James Randi. Send your entry to *The Skeptic* (Crossword), PO Box 475, Manchester M60 2TH, to arrive no later than 10 January 1992.





Letters

Clever boys?

I was particularly interested in Wendy Grossman's 'Skeptic at Large' (*The Skeptic*, 5.5), since she was dealing with a book I had already read (*Brainsex* by Moir and Jessel). She remarks that the authors claim that '... no matter how scientists worked to remove the bias... boys still scored higher.' The topic under discussion is IQ tests. Now it happens that I used to administer such tests as part of my duties when a deputy head, but when I read this comment of Wendy Grossman's I was puzzled. I distinctly remember that the instructions on the test I administered told me to subtract an amount (as I recall about 3) from the scores of girls at age 11 to make the comparable with boys of the same age. The reason given for this was that boys' scores on IQ tests go on improving for some years after 11 while those of girls do not. I couldn't remember Moir and Jessel making any such claim as Grossman alleges. I was sure that since it clashed with my own experience I would have noticed it.

I have now had the opportunity to consult *Brainsex*. On page 13 of the hardback edition (published in 1989), the authors remark that many IQ tests seem to be 'biased' in favour of one sex or the other and that Wechsler, and others, attempted to eliminate such sexual bias without a great deal of success: 'Even so, sex differences stubbornly emerged ... Wechsler even came to the conclusion from a series of sub-tests that it might be possible to demonstrate a measurable superiority of women over men in general intelligence (page 14).

I think you will agree that this can hardly be squared with Grossman's version. What are we to conclude? That Grossman is so blinded by rampant feminism that she sees bias where no bias exists? That she tells lies to bolster an argument? Or merely that she reads too fast and too

carelessly, and the tube is not the best place to carry out academic study? *Hypotheses non fingo*; you will have to make up your own minds about why she should have so blatantly distorted Muir and Jessel's text. For myself I content myself with quoting the number one tenet of the careful journalist: 'Always verify your references'.

M S Ruddock
Banbury

Grossman replies:

I think I must have been thinking of the passage on page 89–90, where the authors discuss attempts by researchers at Johns Hopkins to, as the authors put it, 'iron out any alternative social or environmental factors' that might contribute to their findings that boys scored better than girls on math IQ tests. My comments were a slight over-simplification. My point was, however, that I find it astonishing that anyone could take IQ tests seriously as a scientific indicator of anything (this is not sour grapes; I tested 179 at age 14). Read Stephen Jay Gould's brilliant *Mismeasure of Man* for an explanation of the history and development of intelligence testing and you will understand why. A new book to be published shortly in the US may also be of interest: *The Mismeasure of Woman*, by Carol Tavris, a psychologist at UCLA and a Fellow of CSICOP.

Wendy Grossman

Unitarian skepticism

Rachel Winston asks rhetorically (*The Skeptic* 5.5, page 26), 'What church encourages critical questions of the tenets of its beliefs?'. The answer, which Ms Winston does not anticipate, is 'Unitarian'.

This denomination has a living tradition which draws from many sources, including humanist teachings which counsel us to heed the guidance of reason and science, discard-

ing fuzzy 'miracles' and warning against idolatries of the mind and spirit.

Ms H Behringer
London WC1

Synchronised Cycles

I keep reading in books and magazines (the latest example is in September's *Company* magazine) that women's menstrual cycles are linked to the phases of the moon, and that women who live in the same household have synchronised menstrual cycles. But is this true? None of the books and articles ever give any source for this dubious data. They simply produce it as well established fact.

However, the female cycle is, as I understand it, 28 days, while the moon's cycle is 29.5 days. Close, but not that close. Moreover I have never met anyone who actually had this cycle. It is a mean, not a median or mode.

On the second point, I have lived in several households with other women and have never experienced synchronised menstruation. When periods coincide it is just that: coincidence. Nor have I ever met anyone else who has experienced it.

I would be pleased to know if any readers know the scientific source, if any, for these two ideas. Or are they just other instances of the 'fact' that everybody knows which turns out not to be true?

Susan Deal
Sheffield

Universal experience

I know that what I shall write will be greeted with derision, so at least please applaud my courage!

I once had what is commonly known as a 'mystical experience' which seemed to support David Bohm's belief in a holographic universe. I appeared to be in All, and All in me.

No, I am not 100% convinced that the experience had ultimate validity and am prepared to accept that it was just the serendipitous but intrinsically meaningless chance combination of brain chemicals. Nevertheless, it was the most intense experience of my life, ecstatic and dynamic, and I would like to experience it again!

Vivien Gibson
Ealing

Funding trouble

I must say that I was rather disappointed to see, in *The Skeptic* (5.4), an advertisement for the 'James Randi Defence Fund', at the end of Steve Donnelly's article on Randi. This I find quite inexcusable, as it indicates clear bias in the magazine. After all, we don't know which party is 'right' or 'wrong'—it's eventually going to be up to a court of law to decide.

The Skeptic shouldn't attempt to help one party or the other; this sort of attitude could well lead to the magazine being labelled as an 'Instant Debunking' publication.

In due fairness to Geller (whatever you may think of him), I do think that you ought to print a similar advert for Geller's Defence Fund. Incidentally, I neither support nor oppose Geller; I just want to see fair play.

Robin Lindsey
Peterborough

This inconsistency has also been pointed out by other readers. In Hits & Misses in the same issue, however, I did give an address from which further information about Geller's side of the whole sad business could be obtained. It is probably worth pointing out here that the only views which I hold concerning Uri Geller are that I do not believe that his psychic abilities have been conclusively demonstrated and I do believe that his purportedly paranormal performances can be replicated by professional conjurers.

Steve Donnelly

No miracles please...

Dr Peter May ('The Documentation

of a Miracle', *The Skeptic*, 5.5) is blinded by his faith to the fact that Jesus cannot have performed any miracles (even if such things were possible). The Law of Moses forbade anyone to test God by performing miracles (Deut 6:16), and the story of Jesus' Temptation shows that he accepted this injunction (Matt 4:7). He may have believed that, as Messiah, he had supernatural powers, but he dared not use them!

In fact, careful research has shown that the Gospel accounts of miracles are either mistaken or contrived. Jesus did not turn water into wine (wine was watered), he did not walk on water (this was a common belief of the time), he did not feed several thousand with a few loaves and fishes (the original text has been misread) and he did not cure anyone of an illness (he always made it clear that people had to heal themselves).

Dr May's lack of success in finding miracles is consistent with the notion that 'changes in the very nature of things' are as impossible today as they were in Jesus' day.

Steuart Campbell
Edinburgh

Fundamental mistake?

In the short article 'Loco in Lowestoft' published in *The Skeptic* 5.5, Jean Dorricott described how her husband, recognising a speaker at a creationist meeting as a senior social worker, alerted educational welfare officers 'to the strong fundamentalist leanings of the man'. I regard this as a deplorable action which has more in common with McCarthyism than with open-minded scepticism and am horrified that *The Skeptic*, by publishing the article, appears to endorse such an action.

Jim Kelly
Birmingham

We do not make any attempt, in general, to impose our views, as editors, on the contributors to the magazine. We do try to encourage a rational and intelligent look at psychic phenomena but we are happy to consider articles from believers in the paranormal, hard-line skeptics

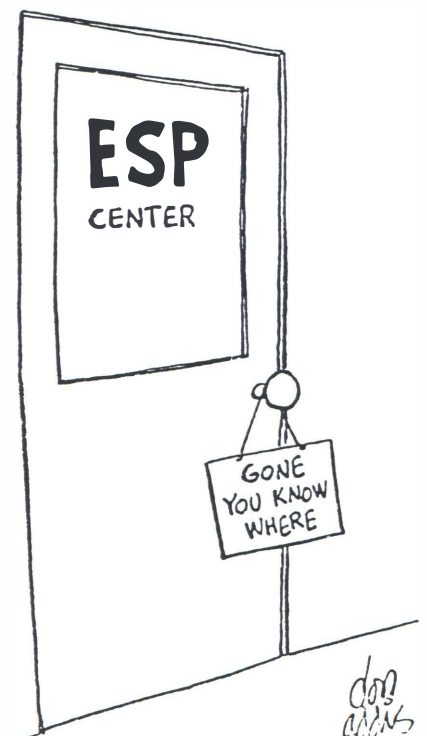
and from all shades of believers in between. Jean Dorricott's article expressed her views and described her actions and those of her husband. Publication of the article does not, in any way, imply that we endorse the idea that skeptics should 'alert' employers to the beliefs of their employees.

The Editors

Come to the The London Student Skeptics Yuletide Party 16 December 1991

Our 16 December meeting will feature a video show of an episode from the *James Randi: Psychic Investigator* series, followed by discussion and our Yuletide Party. Enter the LSS raffle and win a bottle of champagne!

The party will be held in Room 3C of the University of London Union building on Malet Street, at 7.30 pm for 8. All are welcome! Contact Mike Howgate, The London Student Skeptics, Malet Street, London WC1E 7HY, for details, or telephone 081 882 2606.



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Back issues

Volume 1 (1987)

1-4 Out of print.

5 Abductions in perspective (Hilary Evans); Magicians, mediums and psychics-1 (David Alexander); Carl Sagan's universe (William Steele); Science vs. pseudoscience-1 (Peter O'Hara).

6 Creationism in Australia (Martin Bridgstock); Noah's Ark founders on the facts (Stephen Moreton); Hunting Nessie (Steuart Campbell); versus pseudoscience-2 (Peter O'Hara); The Royal Nonesuch of parapsychology (H.B. Gibson); Predictions for 1988.

Volume 2 (1988)

1 Geller's sailboat (Frank Koval); Magicians, mediums and psychics-3 (David Alexander); Knock: some new evidence (David Berman); Telepathy: a mechanism? (Gordon Gray); Alternative medicine (Michael Heap).

2 Doris Collins and the Sun (Wendy Grossman); Paul Kurtz interview-1 (Wendy Grossman); State of the art (Frank Chambers); S.G. Soal: master of deception (Chris Scott).

3 Findhorn (Steuart Campbell), Paul Kurtz interview-2 (Wendy Grossman); The case against ESP (Anthony Garrett); Telepathy: a mechanism? No! (Steve Donnelly); Recognizing pseudoscience (Sven Ove Hansson).

4 A Thorn in Geller's Side (Michael Hutchinson); (Wendy Grossman); UFO days (Steve Donnelly); Comparative astrology; dreams and visions of survival (Antony Flew).

5 Is There Antibody There? (Richard Kay); Dowsing (Denys Parsons); The saints and martyrs of parapsychology (H.B. Gibson); UFO hunt (Marcel Hulspas).

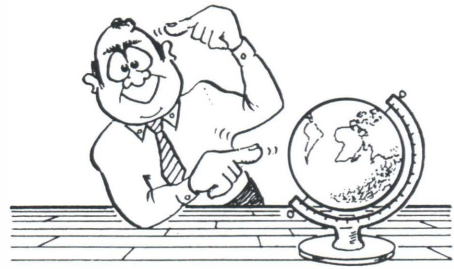
6 Bristol Psychic fair (Hocus Pocus); The incredible Mr Newman (Frank Chambers); Predictions for 1989 (Marjorie Mackintosh); Joe Nickell on the Shroud of Turin.

Volume 3 (1989)

1 Firewalking in Indonesia (Chris Wright); Randi in Manchester (Frank Koval); Complacently irrational or irrationally complacent? (David Fisher); Alternative medicine (Nick Beard); The paranormal on radio.

2 Perpetuum mobile (Anthony Garrett); Joseph Newman followup (Frank Chambers); My psychic odyssey (Mike Rutter); Cosmic crystal crankery (Stephen Moreton); Some rational and irrational feedback (David Fisher).

3 The Committee Against Health Fraud (Nick Beard); Pyramids, pyramyths and pyramidiotis (Barry Williams); Near-death experiences (Sue Blackmore).



4 Remembering Richard Feynman (Al Seckel); Two unpublished Feynman stories; The world of weird HiFi (David Fisher); The lessons of 'cold fusion' (Dave Love); A new test of religion? (Anthony Garrett); Eye-to-eye with iridology (Hocus Pocus).

5 Elementary, my dear mystic (Medawc Williams); Science vs Religion (Barend Vlaardingbroek); Scepticism: universal or occasional? (Antony Flew); The Nullarbor UFO mystery—solved (A.T. Brunt).

Volume 4 (1990)

1 Hypnosis and the occult (H.B. Gibson); Hypnosis: fact or fiction? (Lewis Jones); The myth of leylines (Medawc Williams); Romancing the stone (Tom Ruffles); Debate: the case for PSI (John Beloff); the case against PSI (John Maddox); Predictions for 1990; Skeptical quiz.

2 UFOs over Russia (Tom Ruffles); The Moses barrier (Lewis Jones); On coincidences (Clive Hunt); Gullibility and the appliance of science (Gerald Haigh); Crop circles: circular arguments and straw men (David Fisher).

3 Denizens of another world (Dave Langford); A skeptical look at astrology (Anthony Garrett); The sign of the RAM (James Gorman); Why do people believe in the paranormal? (Jean Dorricott); The art of fakery (Mike Howgate).

4 Past life regressions: fact or fantasy? (Melvin Harris); The Houdini file (Frank Koval); Return to Silpho Moor (Roger Ford); Science, fringe science and pseudoscience (Comelis de Jager); Psi and the skeptic (John Lord).

5 Stephen Fry on paranormal Piffle; Meta-analysis: For (David Fisher) and Against (Jessica Uts); Creationists at large (Jean Dorricott); UFOs on the telephone (Dave Love); Management pseudoscience.

6 The man who invented UFOs (Roger Ford); The new demonology (Andrew Belsey); Reflections on past life regressions (Michael Heap); What is scientology? (John Clarke); Polywater (Bill Penny); Crossword.

Volume 5 (1991)

1 Paul Daniels interview; Canals on Mars (Sean O'Brian); Nostradamus and the Middle-East crisis (Allen Lang); Potty training (Ian Woods); The case for super-skepticism (David Fisher); Skeptical predictions.

2 The New Age and the crisis of belief (Tim Axon); The Mary Celeste mystery – solved? N-rays (Bill Penny); Wet and dry skepticism (John Lord); 1991—the final crash of the UFOs; Crossword.

3 Why not to test a psychic-1 (Lewis Jones); Speaking in tongues (David Christie-Murray); Passing the torch (Ian Woods); Another look at Scientology (Allen Hunt); Sharp blades or sharp practice? (Harry Edwards).

4 James Randi interview (Steve Donnelly); Why not to test a psychic-2 (Lewis Jones); The inside-out cosmos (Bill Penny); *The Freethinker*: 1881-1991 (William McIlroy); More light on Medjorje (Hilary Evans); Dualism, ESP and belief (Carol Sherrard); Crossword.

5 The Documentation of a Miracle? (Dr Peter May); Psychics and semantics (Mike Rutter); Smith and Blackburn: hom-swagglers extraordinaire (Martin Gardner); Spirits at large (Lucy Fisher); Thicker than water (Bernard Howard);



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