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The ***SKEPTIC***

A rational look at pseudoscience and the paranormal in the British Isles

Stephen Fry on Paranormal Piffle

Meta-analysis: for and against

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Hits and Misses

Steve Donnelly

Ever Decreasing Circles

Any reader of newspapers, listener to radio or watcher of television uninterested in the mysterious phenomenon of crop circles would have been well advised to take a long vacation overseas during this year's summer silly season—perhaps in Iceland as I understand that they are untroubled by the phenomenon there. For a few weeks it seemed as though not a single arable acre of these sceptered isles was devoid of at least one circle of flattened crop, if not annuli, dice-like formations and, more recently, patterns resembling large pregnant hieroglyphics. At the 'respectable' end of 'circleology' is Terence Meaden with his plasma vortex theory of circle formation, whereby electrically charged whirlwinds are responsible for all of the above with the possible exception of the hieroglyphics. At the other extreme, however, according to the *Guardian* on 6 July, are the druids who favour the dark power of ley lines and some UFO enthusiasts who regard the circles as flying saucer footprints or intelligently directed energy by creatures unknown.

Operation Blackbird set out to provide the definitive explanation with a purportedly £1 million, day-and-night-vigil on a likely field in Wiltshire. And, lo and behold, on the night of 24 July the automatic infra-red cameras captured mysterious dancing lights over the crops. And in the morning a complex formation of apparently 'genuine' rings had appeared, to the great excitement of the investigators. But the excitement was rather short-lived. Normally, close inspection of a circle, often using a dowsing rod, is required before hoaxes can be distinguished from the real McCoy but this time the wooden cross and ouija board game which had materialized at the centre of each circle provided subtle

circumstantial evidence as to their origin. After a suitable pause for reflection, the circles were declared a definite hoax. According to circle 'expert' Colin Andrew, reported in the *Daily Mirror* and elsewhere on 26 July, 'This hoax was totally irresponsible—only funny for about ten seconds'. And so the mystery remains unsolved. Undoubtedly, the most endearing theory of circle formation is the one involving hordes of hedgehogs rotating in unison but the most probable explanation still seems to me to be widespread, infectious hoaxing. (See the *People* on July 29 for a step by step guide to circle fabrication as practiced by Fred, who—equipped with stilts, a ball of string, a thin steel rod, a papier-maché tube and a small roller—has been making circles in cornfields for more than 47 years.)

Perhaps the last word on the whole issue should go to Jonathon King, the farmer who owns the Operation Blackbird cornfield: "I just wish somebody would go and capture the bloody Loch Ness monster and get all these people off my land!"

Heavy Metal Trial

In 1985 Raymond Belknap and James Vance, 18 and 20 years old respectively, shot themselves on a merry-go-round in Nevada. Before he died three years later, Vance signed an affidavit that he had made a death pact with Belknap after listening to an album entitled 'Stained Class' by the British rock group Judas Priest. The *Independent* on 23 July suggested that, 'Cynics might say that suicide is mandatory after listening to Judas Priest classics such as 'Some Heads Are Gonna Roll' and 'Eat Me Alive' but goes on to report that the parents of the boys are suing the Birmingham based group for \$500 000 for responsibility in their sons' deaths. The case hinges around the purportedly subliminal messages hidden in one of the songs on the album which have been revealed by sound engineer William Nickloff using a large amount of high technology sound processing equipment. The parents claim that the youths killed themselves during a drugs and drinks binge after being affected subliminally by the words 'Do it. Do it' in the song 'Better by You, Better by Me'. Expert testimony will be presented by both sides as to whether the human brain is capable of absorbing subliminal auditory messages. According to the *Observer* on 22 July one of the chief prosecution witnesses will be William Brian Keys a 'self-styled guru of subliminal messages who discovered the word "Sex" hidden in the dots on a Ritz cracker.'

The parents also claim that a line in another song in the album is an attack on God and therefore inspired by Satan. Claims of links between Satanism and rock music are fairly frequent in the American Christian fundamentalist commu-



nity which is conducting a long-running campaign against the 'Devil's Own Music'. The heights of idiocy were reached in 1986 when two Ohio evangelists claimed that the theme song from the television programme 'Mr Ed the Talking Horse' was laced with Satanic messages.

Prince Charming

Meanwhile, back home, readers of the *Guardian* on 25 July were no doubt relieved to learn that Prince Charles is 'not a loon' and no longer wishes to be pigeon-holed by the media as a 'freakish pseudo-Buddhist, grazing on organic vegetables'. He made the appeal in a videotape of a speech sent to a conference held by the Royal College of General Practitioners on problems in inner-city medicine. He had intended to appear in person but a broken arm had prevented him from attending the conference. His injury had served to remind him of 'the skills of surgeons and anaesthetists, the benefits of modern drugs and the compassion of the nursing staff. But the healing of both mind and body was necessary for successful medicine.' Continuing on a familiar theme, our future unloony monarch went on to suggest that well designed buildings could help healing by lifting the spirits.

Underground Ghosts

It is not only commuters who wait impatiently on the platforms of London's tube stations for their late night trains. Apparently, this particular means of transport is also popular with visitors from the other side. According to *Tubeline* (and they should know) Winston Churchill has joined the gaggle of ghosts sighted on the underground in recent times. Belinda Betts, from London's Transport museum who is collecting Underground ghost anecdotes says that she can find no connection between our former PM and the station, Queensway, where he was sighted. She suggests that as Winston was rather fond of 'a tippie or three' that he might have had a few drinks and lost his way (more than 50 mg of alcohol per 80 mls of ectoplasm, perhaps). Although I have nothing personally against the great man I would certainly rather meet my first ghost in the Linares palace in Madrid, Spain. According to the *Sunday Express* on 3 July, a shapely female ghost is liable to appear to visitors in the dead of the night and plead "Take off my dress"—or "Take off my petticoat" if you prefer the *Wall Street Journal* as a source of fantastic facts.



Eternally Hopeful

An article in the weekend *Guardian* on 26-27 May highlighted a sect whose beliefs could serve to put both doctors and complementary practitioners onto the unemployment register. The Eternal Flame sect, in keeping with a lot of other religious groups, offers its devotees eternal life—but in the here-and-now rather than the hereafter. The London wing of the sect meets each week in the Columbia Hotel in London to 'share the experience of their immortality'. According to Richard Norris, an astrologer and (potentially unemployed) alternative therapist from London 'Being immortal is terribly exciting, a wonderful adventure. People just like meeting up to share the experience'. It seems that being immortal is 'like living a concept', the concept being that 'we create everything, including the time we choose to die. People tend to die when their death urge exceeds their life urge'. British Immortals who, it is claimed, number in their thousands, come from all walks of life and many of them follow the teachings of Sondra Ray a former nurse who runs courses with titles such as 'How to Be Chic, Fabulous and Live For Ever'. Immortals believe that death is simply a bad habit (although how something which most of us experience only once can be described as a habit is not clear). They claim that by removing our 'cultural programming' and 'parental patterning' and the Bible's limit of three score years and ten, every human being has it within him to live forever. For anyone whose non-functioning of bodily organs is confined to a limited area, however, two Immortals, Misha and Zbynek Zahalka, run 'Healing Sex' workshops, aimed at teaching us 'how to achieve ultimate intimacy' and 'how to release death from our sexual organs'.

Do You Believe in Miracles?

It is not every month that the prestigious science journal *Nature* and the . . . well, not very prestigious newspaper, the *Sunday Sport* cover the same topic but in July the fascinating subject of miracles was covered by both publications. The zoologist, Professor R J Berry in the Commentary section of *Nature*, wrote that 'Miracles are not inherently impossible or unbelievable, and acceptance of their existence does not necessarily involve credulity, but does involve recognizing that science has limits'. The science in question, in the *Sunday Sport* article was geology but it is not certain that Professor Berry had read the article before writing his piece for *Nature*. Without wanting to involve any credulity and totally recognizing that science has limits, the *Sport* reported the remarkable fact that a huge image of 'World Cup Soccer Hero Paul "Gazza" Gascoigne' had mysteriously appeared, etched into the surface of the White Cliffs of Dover and may be the result of freak 'climatic weather conditions' or a huge wave of psychic energy. The 100 foot high image was captured on film by a football fan who believes that it is a sign that England is going to win the World Cup in 1994 (now that *would* be a miracle!).

Steve Donnelly is a physicist, a lecturer in electronics, a member of the Manchester Skeptics and the UK Skeptics, and co-editor of the *Skeptic*.

Quis Custodiet Management Consultants?

Anthony Garrett

A business pseudoscience

Pseudoscience is not confined to less reputable research into the paranormal, or the other fringes of science. It crops up everywhere and commerce is no exception.

The 1980s saw the rise of a new profession: management consultant. If a manufacturing company exists to make and sell widgets, its management tells the rest of its workforce what to do in order to create widgets now and in the future, and keeps the workforce happy; and increasingly today imports management consultants for advice. Management consultants, therefore, are people who tell people how to tell other people what to do.

Nothing wrong with that. Bad management causes many a company to fail, and anything which can help it is worthwhile. Disinterested advice is particularly valuable and is easier to accept. But who are the management consultants? A friend of mine, with no commercial experience, is just completing a PhD in mediaeval history and will then commence training in a large management consultancy. Training is largely practical and on-the-job, which means that soon he will be telling people who have been in industry all their lives how to run their companies. Of course, his training will be overseen by experienced colleagues; but what, in turn, was their background? A disturbingly large proportion of graduate management consultants are recruited without ever having worked for the kind of companies they advise (or any kind of commercial enterprise at all) and have never had the crucial check of taking direct responsibility for their proposals. As management consultants, their positions are not on the line anything like as closely, and they never gain the chance to learn which proposals are implementable and which are unrealistic. And a manager, protesting at a consultant's advice, will be accused of atrophying into one particular mind-set and of reluctance to take the necessary medicine, even if it turns out to be snake oil. The connection with commercial reality is weakened, and there is no short-term counter-mechanism.

The assumption in accepting graduates for consultancy training is that management is a science with well-defined laws. What it really is, is a branch of that most complicated of subjects, human psychology. The diversity of situations met in management is beyond summary in airport-bookshop aphorisms; while there are good and even great management consultants (such as W. Edwards Deming, the man who taught the Japanese when post-war America wouldn't listen), most of the best are busy running their own companies, and

their detailed expertise is not summarisable in any book. Like all really complicated subjects this one has to be learned through practice, and meaningful practice involves individuals taking direct responsibility for their decisions.

Of course, good management is crucial to a company; and management consultancy is capable of fulfilling a valuable role. What I am suggesting is that the proportion of effort, time and money which management puts into managing has fallen far too low by the side of the effort it expends on itself. Management consultancy diverts the effort in an alarmingly efficient manner: commissioning a consultant's report gives an illusion of action and increases self-importance, both aims of most managers. Meanwhile, companies become top-heavy and under-managed.

How did this come about? I suggest that the role model is the City. Here is an institution which generates none of those basic consumer goods which improve the quality of life and whose acquisition is a prime purpose of having money. (Working properly, particularly by accepting long-term views, it would help create a climate favourable to their production.) By merely moving money around, the City does not generate any global wealth, but it does earn a huge amount of commission for the country in which, by historical fortune, it is situated. This localised illusion of general wealth creation has encouraged means to become ends; and so it is with management consultancy. Many finance companies have expanded into management consultancy in recent years.

More generally, those professions whose effect on wealth creation is secondary are now valued by salary far more highly than those whose effect is primary. Power without responsibility invariably corrupts, and this negative influence should be taken into account when assessing the economic worth of the City.

Economic systems move in cycles, and eventually the givers of bad advice will go to the wall as the primary industries they service find themselves with less spare cash. That this can be achieved without too big a downturn, and that not too many companies suffer from bad advice or inflated fees in the meanwhile, seems unlikely; but it is something publicity can help.

Dr Anthony Garrett is a physicist at Glasgow University and a former member of both the Australian Skeptics and the UK Skeptics.

The Houdini File

Number Two

Frank Koval

As well as being keen book collectors, both Houdini and Harry Price were prolific writers, and so quite naturally, each sent the other his latest publication. In Houdini's letter of August 18, 1922, he thanks Price for two copies of the book *Light*. This was Houdini's shorthand title for *Cold Light on Spiritualism 'Phenomena'*, Price's first published work in the spiritualist field, issued in 1922.

Cold Light was an exposure of spirit photographer William Hope. Price had the Imperial Dry Plate Company prepare some specially-marked photographic plates for him. The plates were partially exposed to a beam of X-rays through a lead foil stencil. The marking would thus show up only when the plates were developed.

During the sitting with Hope, Price opened the packet of plates in the dim red light of a darkroom and placed two of the plates in a dark-slide. This was then handed to Hope, and Price claimed that he saw Hope exchange it surreptitiously for another one.

Two photographs of Price were taken in the studio and they then returned to the dark-room. Price developed the plates himself and found that the first negative was a conventional portrait of himself, but the second carried a 'spirit extra' of a young lady at his side. But, there was no sign of the X-ray marking on either of the plates. So, Price concluded that Hope had substituted his own plates, one of which already had the 'spirit extra' on, for the marked ones.

HOUDINI
278 WEST 113th STREET
NEW YORK N.Y.

August 18, 1922.

Mr. Harry Price,
Arun Bank,
Pulborough, Sussex,
England.

My dear Harry Price:-

Yours of the 5th to hand with the two books of "*Light*".
Thanks for same.

I am mailing you copy of the review in the New York Tribune of the reissue of "*Revelations of a Medium*", and I am also mailing you under separate cover, my book on "*Paper Tricks*" with my compliments.

The "sitter" I sent to Hope got excellent results. A strange thing - in today's mail I received a letter from Sir Arthur Conan Doyle telling me that it was discovered that an exposure of twenty seconds obliterates the Ex-ray marks on the plates. What do you say about this, and if I am not mistaken it was discovered that the plates you received back was of a thinner type than what you brought. I am very anxious to hear from you regarding this new explanation, as they always seem to find some way around for evidence.

I am mailing you a spirit photograph of one of the greatest Americans in history which you may add to your collection. I am experimenting and know that eventually I will obtain some really nice results.

Kindest regards and best wishes,

Sincerely yours,

EH:JLD

Houdini

Harry Price Collection

Sir Arthur Conan Doyle's point that an exposure of 20 seconds (which was the case in the Hope sitting with Price) would obliterate the X-ray marks was incorrect.

Houdini's book on paper tricks which he sent to Price was, of course, Houdini's *Paper Magic*, published in April, 1922.

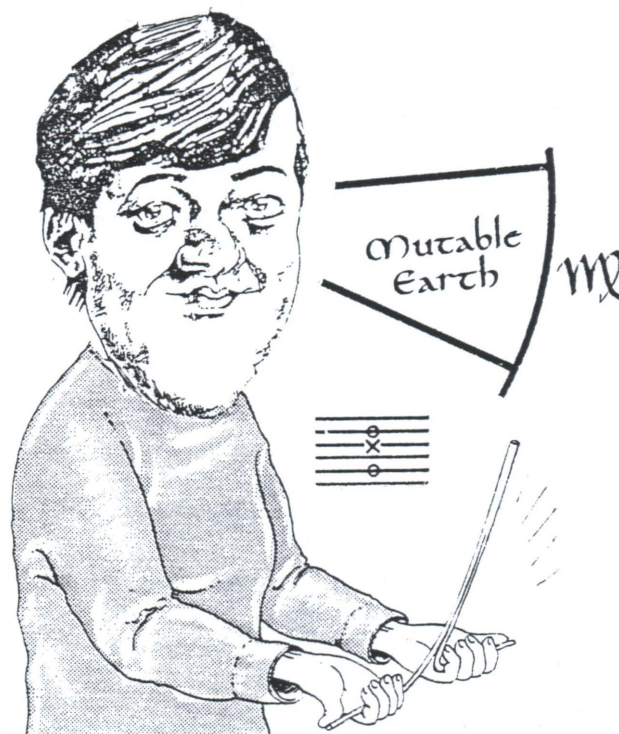
Revelations of a Spirit Medium is mentioned again in Houdini's third letter to Price, and so I will delay comment on this until next time.

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

A Panoply of Paranormal Piffle

Steve Donnelly meets Stephen Fry

For anyone possessing a television, a radio or, for that matter, the Friday edition of the *Daily Telegraph* it is difficult to avoid Stephen Fry's pugilist's nose, mellifluous tones and dry wit. The actor's art does not give much scope for personal opinion but in his writings Fry's irreverence for the irrational, his antipathy for the antiscientific and his intense disdain for daftness become apparent. In the *Listener* in December 1988, for instance he wrote 'It's extremely unlucky to be superstitious for the simple reason that it is always unlucky to be colossally stupid...' It was in the context of this skepticism, unusual in actors who are generally regarded as a superstitious lot, that Stephen Fry agreed to be interviewed by the *Skeptic*.



It was perhaps appropriate on arriving at the Groucho Club for the interview that our conversation began with an unintentional spot of comedy. This resulted from the fact that I could not initially persuade the reels on my (borrowed) cassette recorder to turn round. The first recorded phrase of the interview was thus '... and you are an electrical engineer and you don't quite know how to operate a cassette recorder...'. But then (I suspect unusually for actors) Fry is quite at home with technology and is a keen user and programmer of Apple Macintosh computers. It would be tempting to think that this was perhaps natural for someone whose father is a physicist and a computer buff but, in fact, his father's scientific, mathematical and musical abilities had the effect of initially pushing Fry away from these areas: 'From an early age—and without wanting to be too psychoanalytic about myself—I think I probably gave up on things that I thought I could never compete with my father on. So I became far more interested in the arts and gave up piano lessons as soon as I possibly could—at the age of about eight—and went round claiming I had a maths block. But after I'd left Cambridge when I was a bit more grown up I became very interested in computers—I got an early BBC micro and then bought a Macintosh the year they came out and began programming and discovered I didn't have a maths block at all.'

Although he was a student at Cambridge at the end of the seventies (1978-1981) this was a few years after the infatuation of the student community with Eastern religions. And although his mother's family was religiously Jewish and his father's family Quaker, western religion did not feature greatly in his upbringing either:

'I had a sort of vague yen to go into the church when I was about 15 or 16—I rather fancied myself in a cassock—but I think, generally speaking, I have always inclined towards what is loosely called liberal humanism. I've never really been strongly drawn to anything religious. This is not to say

that I can't be drawn towards anything spiritual which is not the same thing at all. But I've always, for as long as I can remember, had an irritation with things superstitious. I have a great belief in reason—the world is so remarkable and extraordinary anyway that to try and find things that are subject to no testing, no logic and no reason is ugly. The world is far too mysterious a place in its own right to try to add mysteries.'

Although he read English at Cambridge and took no science courses Fry nonetheless has a sympathy for science which is unusual in arts graduates, and does not feel that a scientific understanding of the world reduces our appreciation of it:

'Just as there is nothing intrinsically dry and unspiritual about science, similarly there is nothing intrinsically mystical and irrational about the study of literature. Indeed, when I was at Cambridge we were going through the great structuralist debate and a lot of people were saying that the trouble with structuralism is that it is a rather scientific method, so that at linguistic levels you actually have complex formulas for the description of phonemes and so on. They felt that English should be about your response to a text, and there is of course room for that, but my view has always been that you don't find the Lake District less beautiful just because you happen to know about the rock structure underneath it. If anything, geologists may even find it more beautiful because they see what Eliot might call the skull beneath the skin, which gives them a greater sense of the beauty of it. Similarly I have no patience for people who say that Shakespeare was ruined for them by having to study it at school; a further understanding of something never ruins its beauty.'

At this point Stephen Fry paused to blow his nose and remarked on the fact that for many years he had felt that he was immune to colds as he never seemed to catch them. Unfortunately, a few days previously, the Cosmos had responded to this false confidence by giving him the granddaddy of all colds—and in the acting world having a cold brings its own problems:

'I would say the worst thing about being in a play is the moment you get a sniffle like I've got now, and you're in your dressing room, suddenly there is a knock on the door and you hear:

"Stephen, hello it's Lucy here. I heard your cough and there's a wonderful little man in Camden Passage who does Bach wild flower remedies. Here's his card."

"Yes thank you"

And then there's another knock:

"Would you like to borrow my crystals?" somebody else says. And it continues:

"Knock, knock"—"I've got four piles of vitamins. Here's a bottle of vitamin C there's one of vitamin B, one of vitamin D and one of vitamin K, which not many people know about."

"Get out!", I cry. "I've got a cold, for God's sake leave me alone, I don't want your crystals, I don't want your homeopathy, I don't want your little weird spongy trace element pills that melt on your tongue. I don't want any of this drivel, I just want a handkerchief!"

But he does proffer an explanation for this type of almost superstitious belief in unproven, quack remedies or formulae for self-improvement that seem so popular amongst actors and perhaps more particularly amongst actresses:

'One of the explanations is that actresses careers are very difficult. They have to rely so much on their personal appearance, on their health, and on their skin quality, that they're desperate for anything that they think might even have a 0.01% chance of making them fitter, or look better or glossier.'

Fry, himself, however, did not avail himself of a unique opportunity for self-improvement which he had seen on a TV programme:

'I was so staggered when I saw some television programme about an American who is genuinely producing jeans with crystals sewn into a special gusset because he believes the crotch is the centre of consciousness and that the crystals resonate with some cosmic frequency. He's making a fortune out of people buying jeans with bits of mineral in them.'

As a lone skeptic in the midst of a generally credulous community of actors and actresses, an easy course of action might be to keep one's views on homeopathy, astrology and psychic powers to oneself. Stephen Fry, on the contrary, expresses his views and expresses them forcefully. Andrew Lloyd Webber has a long-weekend party at his house in Newbury every year and often organizes a debate in the evenings. One year Fry was asked to propose the motion 'Sydmonton (the name of Lloyd Webber's house) Believes that Astrology is Bumf' and was seconded by John Selwyn Gummer (of mad cow disease fame). The motion was opposed by no less a personage than Russell Grant who was seconded by the woman who taught TV's cuddliest astrologer

his mystical arts. Fry began his speech in blunt terms: 'I said that not only does Sydmonton believe that astrology is bumf, it believes that it is crap, it's a crock of horseshit, that it's bullshit.' But this rhetoric was followed up with some good skeptical entertainment as Fry had asked his agent to obtain 'serious' astrological readings based on information given to a number of astrologers about him, Hitler and various other persons. He proceeded to amuse the gathering by reading these totally inaccurate personality profiles thereby somewhat weakening the opposition's argument.

Astrology is clearly a subject about which Fry has strong feelings (to be expected in a Sagittarius): 'The constellations are all based on the parallax from which we view them so that it is totally arbitrary when we say that a particular constellation looks like, say, a pair of scales. Then to say, given that from this particular point of view this particular constellation looks slightly like some scales, someone born under it therefore is balanced is just the most insane thing you've ever heard. Or to say that someone born under Gemini, the twins, displays some kind of split personality, it seems so clear that this is just nonsense. And then people say "It stands to reason you know . . ." It stands to all kinds of things, but reason is certainly not one of them.'

He recently participated in television programme on Channel 4 called *Star Test* in which celebrities are interviewed by a computer. The interviewee is alone in a studio with the cameras operated remotely and is asked by an electronic voice to select a topic and then to select a number from 1 to 5. So far so good—but the next question asked of him was 'what is your star sign?'—not a good question to ask the man who once said, in an interview with the *Independent*, that the length of his penis was likely to reveal as much about his personality as his star sign (—and no Freudian will disagree with that!).

'... And so I refused to say anything and just stood up—you're supposed to sit down—with the cameras following me, and spoke angrily about astrology for about 2 minutes. I expect they'll cut this bit because I went on and on and on and on . . .'

Fry, when confronted with the there-are-more-things-in-heaven-than-are-dreamt-of-in-your-philosophy school of logic, stresses the word 'dreamt' and insists that he also dreams of heffalumps, unicorns and tolerable estate agents. However he does accept that it is possible for people to have a significantly greater sensitivity to certain stimuli than most of us and that this can lead to, for instance, an apparent ability to dowse for water. 'I was in the South of France recently where a friend of mine who is a great skeptic, Douglas Adams (author of *Hitch-hiker's Guide to the Galaxy*), has a house. Now, all of Provence is desperately short of water, it's the worst crisis they have ever had. If you want water you have to ring up for the water lorry and pay a vast amount of money to have your tank filled. It really is very, very bad. And he was talking to a chap who looks after a lot of houses belonging to English people in that area who was saying "well you either pay for the lorry each time it comes or you can have someone to come and dowse". And indeed there are dowers in Provence who make a fat living out of finding water for people. Now, goodness knows I certainly

don't believe that a mystic power comes out of the earth but I do believe in hyperaesthesia and I know of a great many people who are able to read signs in a semiotic way; who are able, for instance, to see someone talking and know that he is lying simply because they are so good at reading signs that most of us don't notice. Similarly, someone who is experienced in the kinds of places where water is likely to be, may well see patterns in the plants or geology of the area that indicate the presence of water—perhaps at a subconscious level. But he may genuinely believe that the water is influencing his dowsing twig. So I won't dismiss dowsing because, in my view, anybody who can make a decent living by dowsing, amongst people as naturally cynical as the French, in an area where water is so rare must have some talent for finding water. But I don't for a moment believe that there is any outside agency which is making the twig move'.

Another esoteric art for which Fry has a certain respect—but without believing that there are any mystical elements to it—is the use of randomness to help gain insights into oneself or into problems: 'I think the use of the aleatory in life is rather good. The *I Ching* for instance—which I don't actually think any Chinaman believes to be particularly mystic—is a rather useful way of confronting anything. But the thing that you must do is think of the question you want to ask, ultimately, yourself. In fact, you can use any random event. For instance, you may have an important decision to make and what you can do is concentrate on the first thing you see out of the window—which could be a sparrow. You look at this sparrow with the question in your mind and anything the sparrow now does—via the natural patterning and metaphorical symbolizing abilities of the mind—will help you to come to grips with the problem. Essentially, you have the answer yourself but you just want to be shown an authority for it. Everyone needs a sense of some authority behind what they're doing it, no-one wants to think of himself as being entirely alone and self-determining. In reality, of course, the real authority comes from oneself but we search for something to sanction what we're doing and rather reasonable things like the *I Ching*, ultimately, turn the authority back to oneself by the way in which one is obliged to frame the question.'

Tolerant of oracles and dowsers, vociferous in his opposition to astrology and quackery—but what is Stephen Fry's particular *bête noire* amongst the mindless, mystical menagerie?

'I suppose the one that really gets me going probably more than most is what the Greeks used to call metempsychosis—what we now call reincarnation. It doesn't take much to realise that even at the rate at which we are increasing as a population, there are still many more dead people around than there are living ones. Therefore there is a surplus of dead people so that they can't all be reincarnated—except as wasps perhaps, rather than WASPs. So I would love to hear one of these fatuous people who claim they've been around in previous lives just for once having lived in a period of time or as a person that wasn't dramatically interesting. Why must they all have been a serving maid to Cleopatra or caught up in the persecution of the Jews in York or something that is so easily researchable, so pointlessly predictable?



And the other thing that really annoys me is the people who claim to have seen ghosts. They nearly always—because they think its going to impress you more—tell you about it in a rather matter-of-fact tone of voice. Whereas, if I was going to even vaguely begin to believe that someone had seen a ghost, I would expect them to be absolutely staggered because it turns upside-down one's whole preconception about what the physical universe is.' He leaned forward and gesticated with his cup of cappuccino. 'If I dropped this and it went upwards, I would be talking about it for the rest of my life. I wouldn't just dismissively say "Yeah, it's interesting—I let go of this cup and it fell upwards—would you like another cup of coffee?" And similarly with ghosts. Seeing a ghost would overturn everything you understand about the universe around you. You would have to be excited about it. Yet the person who recounts his experience pretends he's bored with it. How can you take it seriously? The whole paranormal panoply gets me going. It's all such ineffable piffle, isn't it?'

I couldn't have put it better myself.

The Indian Skeptic

For an entertaining and skeptical view of the paranormal from an Indian perspective, read *The Indian Skeptic*. Annual subscription (12 issues) \$12, from B. Premanand, 10 Chettipalayam Road, Podanur, 641 023, Tamilnadu, India.

A Hole in the Head

Jean N Dorricott

Creationists and APEmen in Lowestoft

Perhaps you don't know that when ancient man (ably assisted by Raquel Welch) roamed the earth, his life was made more perilous by fire breathing dinosaurs. Evidence for this lies in an unexplained cavity in the skulls of some dinosaurs, and the widespread legends of dragons from Europe and Asia.

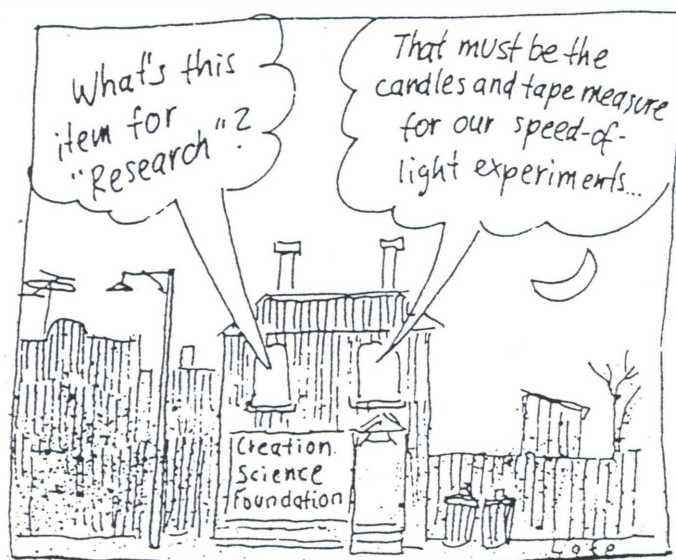
This gem of information was related to a small but fascinated audience in Lowestoft public library lecture room in June, by Dr Rosevear PhD, C Chem, FRSC, Chairman of the Christian Science Movement. Outside the rain poured down and the great winds blew, as if in support of his theory of the yearlong Flood of Noah, during which all the earth's sedimentary rocks (including those formed under desert conditions) were laid down. So inclement was the weather that only 18 people struggled damply through the wet streets to hear him speak on the downfall of modern science due to the infallibility of the bible.

Lowestoft had been promised this intellectual treat since January 1989, when a local optician stated in the weekly Lowestoft Journal that evolution is rubbish, not logic. I leapt to the defence with a short letter—and the ensuing correspondence from many different writers carried on for three months (it was a dull winter for news in Waveney that year!). The outcome was a promised visit from Dr Rosevear in March, which had to be cancelled due to illness.

Reasoning the Creationists would have another bite at the cherry, I joined the CSM to keep informed of personnel movements and to collect some of their literature. I also read up a selection of books on the American experience. Various queries resulted in helpful contacts with the Association for the Protection of Evolution, and a meeting with one of the APEmen.

When Dr Rosevear informed us the postponed visit would take place this June, I went into action and contacted by previously prepared letter all the science departments in our local High Schools and College of Further Education, and the various mainstream churches. Interest was very small—but enough, as it turned out. The mainstream churches were indifferent on the whole as they find no problem in assimilating evolutionary theory into Christian teaching, and have no truck with the CSM literature produced for Sunday Schools (Our World, published by Creation Resources Trust). One of the High Schools showed particular concern as the staff had experienced pupils querying evolutionary theory at GCSE level because it 'contradicted the bible'. There are a couple of large fundamentalist free church groups in this area which attract young people.

So, on this wet June evening, we few gathered together to hear why Science is Wrong. The presentation of the talk was poor, partly due to a mislaid slide projector, but the general style was the usual one of casting doubt on radiometric dating methods, and making out that scientists are all at each other's throats, quite incapable of coming to rational conclusions about anything. Mention was made of Barry Setterfield's work on the decrease of the speed of light which changes the age of the universe from several billion years to a few thousand. This intellectual *tour de force* seems to have been conceived by Setterfield working on his own at home, and due to family illness he is unable to reply to the various criticisms of his figures. From CSM pamphlet 262, we learn that by using values for the speed of light, c , from Roemer's time (1675!) to the present, and by using a graph whose y axis starts at 299800 (no units given), Setterfield can draw a curve, in which c , when extrapolated back to 4000 BC, reaches infinity. (In the actual graph it merely approaches a very large number. A recent lecture given to the Stanford Research Institute is reported by CSM to have received warm applause, careful and lengthy discussion and no protests. However, SRI have now withdrawn their initial support due to pressure from 'certain quarters'. Furthermore, discussion with astronomers (unnamed) indicated that the curve did not follow a cosec^2 formula, as Setterfield initially deduced, but would take the form of the square root of an exponentially damped sinusoid. i.e., at some periods of time the speed of light would be zero. I assume this is astronomer's code for 'rubbish!' Which is printed in the CSM leaflet in error.



There are many interesting conclusions to be drawn from Setterfield's work. From $E=mc^2$ creationists can deduce that if c was faster in the past, then radioactive decay would also be faster, so allowing us to alter all our radiometric dating to fit in with an earth created about 6000 BP. However, according to Alan Lewis and Michael Howgate of APE, stellar energy production would have raised by a factor of at least 5×10^{22} , resulting in super pyrotechnics just as God said 'Let there be light'. And the poor newly formed plants and animals would have died immediately from radiation sickness, bombardment by super-dense molecules, intense solar radiation and having bones too thin to hold their own weight. The CSM assure us the world was very different before Eve spoilt it with her Sin of Disobedience—and if Barry Setterfield is right, it certainly was completely different from today.

The liveliest part of the evening was the constant interruption of the speaker by Alan Lewis of APE, who kindly came up from London with his partner for the meeting. He has had considerable dealings with CSM, and they were dismayed when he turned up. (However did he find out about their meeting?) When Dr Rosevear made a false statement or misrepresented what scientists put forward, then Alan interrupted him—there were a lot of interruptions! At one point he even corrected Dr Rosevear's misunderstanding about animal feeding habits, and was thanked by the highly embarrassed speaker. Eventually Mrs Rosevear left to phone the police, but she had no support from our Lowestoft force who have better things to do than sit in on creationist meetings.

The APE strategy had two valuable effects. First, it put Dr Rosevear off course, and the talk became even more wildly muddled. Secondly, it ensured that the tape recording made by the faithful would be completely useless in spreading the creationist gospel.

Unfortunately the 10 nonscientific church members present accepted everything the speaker told them, reasoning that as he is a scientist and a Christian, he would relay accurate scientific information. They assumed Alan was a godless sinner out to destroy God's kingdom—and at similar meetings in less peaceful surroundings, Alan has received physical rough handling. It was valuable to have 7 other scientists present, who could raise more issues, and question time was dominated by their objections. One inquiry was whether Dr Rosevear discounted all the work done by thousands of scientists over the past hundred years, and he actually admitted this was so.

After the gathering broke up in some disarray, the supporters of evolutionary theory retired to the nearest local for a far more interesting conversation with Alan Lewis about the problems of dealing with these odd groups of religious fanatics. He has followed their fortunes for some years so is conversant with all their theories.

While one cannot open closed minds, one can at least raise doubts, and it may be worthwhile emphasising, when dealing with this sect, that any organisation which takes the moral high ground, as the CSM claim to do, should be extremely careful that they do not deliberately misrepresent scientific discoveries. I discussed this with Dr Rosevear. Both he and his wife are charming and courteous people, and how they can countenance deception I cannot understand.

I pointed out that in their literature they claim that those who support evolutionary theory also support racism, pornography and lawlessness; that they still publish a pamphlet reporting that Dr Colin Patterson, a senior palaeontologist at the Natural History Museum in 1981, holds anti-evolutionary views, although Patterson has strongly denied their interpretation of his talk; that in their children's literature they produce drawings of dinosaur and human footprints in Cretaceous rocks in the Paluxy river bed, while admitting to adults both sets of footprints are dinosaurs. If readers of the *Skeptic* come across creationist literature, it may be worth while writing to the CSM asking for further explanation, as a useful time-wasting device.

We should also be aware that while mainstream churches are unlikely to support creationists, in Britain at any rate, they may not be prepared to make active protest. Their attitude would be that the job of refuting creationists lies with scientists, and that by highlighting these events the creationists may receive too much media coverage. Professor Derek Burke, the Vice Chancellor of the University of East Anglia, who has had considerable dealings with the American creationists over the years, wrote to me that it may be better to boycott such events as they tend to lead to public controversy and such groups are unimportant fringe movements of no consequence. They have a more active following in the USA and Australia—and some connections in Germany and parts of eastern Europe.

We are pleased the importance of CSM in Lowestoft is minimal, in spite of the interest shown last year, and we hope the hostile reception they received will discourage their return to this area.

Jean Dorricott is a housewife, mother of three and part-time home tutor to sick pupils of 14-16 years old. Her scientific training was in biology.

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Pig's Ear Into Silk Purse?

David J Fisher

A polemic against the use of meta-analysis in parapsychology or, indeed, in any -ology

This is intended to be the opening salvo of a broadside directed against the technique known as meta-analysis. This method is widely used in medicine, psychology, and sociology, and has also seeped into psychology. Thus, parapsychologist John Beloff referred to it during the recent Liverpool University debate [1], and skeptical psychologist David Marks mentioned it during the execrable *Stories in the Night* TV series. Both experts (from opposite camps) suggested that meta-analysis had revealed evidence for the existence of psychokinesis. However, I doubt this evidence since I doubt the validity of the method used to analyse it. I contend that meta-analysis is not, as some have suggested, a 'new and important discipline' but rather 'a form of lunacy', as others have opined.

Apart from presenting a general introduction to meta-analysis, I shall try to keep my objections as few as possible as the rejoinder—an article by Jessica Utts in defence of meta-analysis follows this article. On the other hand, I have plenty of ammunition in reserve for use on future occasions; should meta-analysis not be sunk by this first onslaught.

WHAT IS META-ANALYSIS?

Engineers have recourse to a seemingly magical technique which allows them to make accurate measurements of small 'signals' in the midst of random 'noise' of far larger magnitude. For instance, the deflection of a bridge which is caused by a single test load can be measured without stopping the normal traffic flow, and in spite of the random loads imposed by wind gusts, etc. All that an engineer has to do is to repeat the test over and over again and average the corresponding readings. This works because he knows the precise manner in which he has caused a single parameter (the test load position) to vary. All of the other effects are either random, and thus cancel out in the long run, or cycle with an easily identified and allowed-for frequency. A striking visual analogy is a long-exposure photograph of a stationary subject in front of a waterfall. The subject stands out starkly against what appears to be a huge pile of featureless cotton wool.

Those who work in the fields of medicine, psychology, and sociology think that they have discovered an equally 'magical' method for analysing *their* data. It is based upon the older concept of the 'meta-experiment', where repeated samples are taken (with replacement) from the same population, but has been refined in order to produce the trendy so-called statistical technique known as 'meta-analysis'. The name, meta-analysis, was coined in 1976 by the educational psychologist, Gene Glass [2].

In terms of popularity among 'soft' scientists, meta-analysis has taken off like a rocket; without seeming to encounter any of the 'consumer resistance' [3] or checking procedures which usually confront new methods. By 1987, 91 meta-analytical studies had already been carried out in the clinical field alone [4]. On the other hand, meta-analysis remains to this day essentially unknown [5] to chemists, physicists, engineers, and other 'hard' scientists.

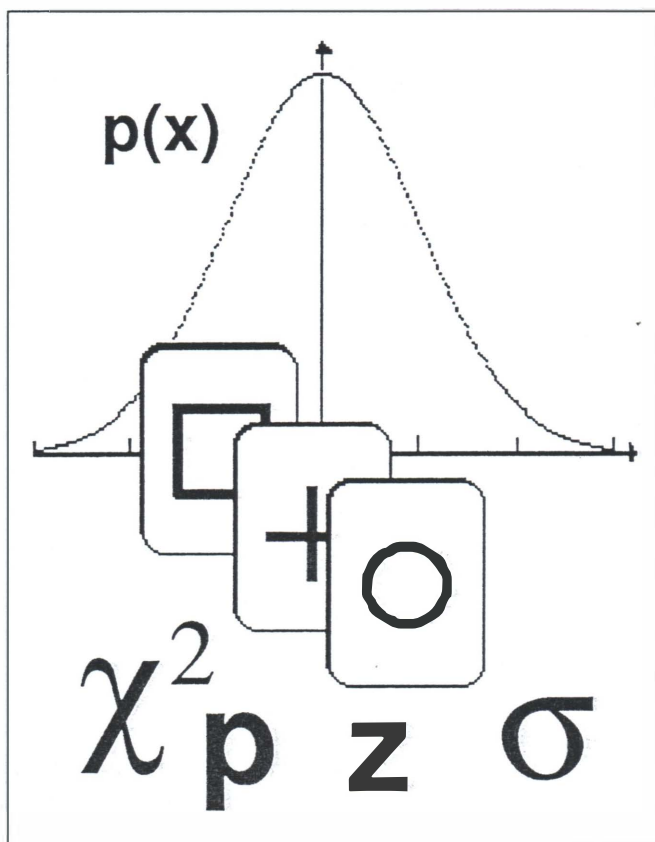
When I first heard about the technique, I imagined that it was a very clever and original method. When I eventually looked into it (out of pure curiosity), my immediate thought was that if Glass was selling meta-analysis as a 'technique' then he would be contravening the Trades Description Act; or perhaps not, for his own description [6] of meta-analysis is that, 'it is not a technique; rather it is a perspective that uses many techniques of measurement and statistical analysis'.

Non-mathematically minded readers who feared that meta-analysis was going to turn out to be too complicated a subject to treat in *The Skeptic* need fear no more. What the above statement translates into is simply that, 'given a lot of inconsistent conclusions from many different reports, one can get a better idea about what is really going on by lumping all of them together' [7]. This seems to be a reasonable assumption, in a view of the engineering example. Surely, by summing the results of many different studies, any common tendencies will be reinforced more and more. Or will they?

For the mathematically minded reader, I should briefly explain that meta-analysis is no more than the application of standard statistical methods and tests (Fisher, Winer, Stouffer, chi-squared, Student's, etc) to the overall results of separate studies rather than to the individual data points of a single study. One might, for instance, meta-analyse simply by adding the chi-squared values which were obtained in separate studies [8].

Those readers with any knowledge of the fundamental assumptions which underlie such tests will immediately (and quite rightly) worry about whether conditions such as independence, which were implicitly assumed to hold when formulating the above tests, still hold. A fundamental question is whether any parameter, under the typically 'messy' conditions of an experiment in the 'soft' sciences, can ever fully emulate the test load in the engineering example. Or, returning to the photographic analogy, will the subject of the photograph also be a vague blur?

I believe that it will. Indeed, I contend that meta-analysis (particularly when applied to paranormal studies) is simply a



'formalised' version of the paranormalist's view that a lot of separately valueless anecdotes must mean, when taken together, that 'something' is going on. I contend that the theoretical basis for meta-analysis has never been seriously questioned or adequately tested, that the use of meta-analysis in parapsychology is meaningless, and that its use in medicine, psychology, and sociology is possibly inimical to physical health, mental health, and the fabric of society. I suggest that meta-analysis has crept under the mental guard of those who should know better, and has 'bought off' any residual suspicion in researchers by being 'transparently' easy to use. It is the perfect statistical tool for those who do not like mathematics.

I would further argue that computer 'stats' (statistics) programmes have been a disastrous innovation for the 'soft' sciences (and especially parapsychology). Data is now typed into computers which respond by spewing out analyses (garbage in, garbage out?) which include every known statistical parameter and measure. I suspect that most users of 'stats' packages are doing something which may have the form but not the content of statistical analysis. As when the 'brilliant detective' in a Hollywood film is seen to be playing chess on an incorrectly oriented chessboard, there may merely be the illusion of incisive analysis but no real substance. The use of meta-analysis meshes perfectly with facile computerese.

I must admit that I criticise the tin god of meta-analysis with some misgivings, because the method has been used more often to *debunk* the paranormal than to support it. For instance, a few years ago it was reported [9] that there was, 'no evidence for commonly held beliefs about the effects of a full moon'. This is just the result which is gleefully

publicised by skeptics. Unfortunately, this was a meta-analytical result. If I am correct in my objections, this is one baby which would have to be thrown out with the bath-water. Likewise, leading skeptics like Ray Hyman would have to cease to use meta-analysis to support their criticisms [10] of ganzfeld data.

SOME OBJECTIONS

It should be borne in mind in what follows that meta-analysis is called upon *only* when it has proved to be almost impossible to 'separate the signal from the noise' or, when it has been possible, individual studies have disagreed with each other with regard to the direction or magnitude of some trend. This is as true for such topics as 'the effect of aspirin upon the heart attack recovery' or 'the effect of handedness upon lifespan' as it is for the 'the effect of thought upon a roulette wheel'. What is really in question here is whether valid new information can be obtained simply by massaging indecisive old data.

It is easy to find objections to meta-analysis, as books which promote it often guiltily bring them up themselves. The authors then paper over the cracks with assurances that the problems are recognised and dealt with. I am not convinced that they are.

Most objections centre around the basic problems of ensuring unbiased representative samples and statistical independence. With regard to the second point, for instance, the test load in the engineering example would be statistically independent if it were a normal anonymous vehicle which interacted only with the bridge and not with other vehicles. It would not be independent if it was driven by a woman in a low-cut dress (weak interdependence) or by a nude woman (strong interdependence).

The precautions which are taken in individual studies may be faultless. This does not mean that the same is true of the meta-analysis. One has wandered willy nilly into a whole new ball-park, and I hold that there is now enormous scope for:

1. **Bias:** Firstly, meta-analysis is retrospective research with no stopping criterion. That is, the work to be considered can be chosen *post facto* to produce a desired result, or one can cease to include studies when the desired result is achieved.

Selectivity is a serious sin but, even if one digs out every published study of some purported correlation, there remains enormous scope for bias in that scientific journals tend to filter out reports of zero correlation; even scientific journals tend to be ruled by the 'man bites dog' principle. There may be thousands of unpublished reports, indicating zero correlation, that are hidden away in desk drawers. The published reports of a given correlation are then definitely a biased sample, and probably a statistically unrepresentative one as well. Just like the craftily worded advertisement which refers to 'nine out of ten cat owners *who expressed a preference* . . .', it means nothing if the sample consisted of just 10 opinionated respondents in a population of some millions of don't cares.

Note that some over-enthusiastic devotees dare to invert this argument and claim [1] to be able to divine the number of unreported studies which reside in desk drawers. In my opinion, this is black magic; not statistical inference.

2. **Interdependence:** The very nature of the scientific milieu

militates against true statistical independence. There will always be more or less hidden networks of loyalties and shared beliefs which make studies, carried out by apparently independent teams, less than unconnected. This problem is recognised even in very mundane cases: such as the standardisation of the calibration of testing devices or test pieces between various laboratories. In order to avoid bias due to hidden sympathies, previous test results are often circulated in 'round robin' form.

In the case of meta-analysis, one of those who has tried hardest to circumvent hidden dependences is Thomas Chalmers. In his 1987 meta-analysis of medical meta-analysis [4], he went to extreme lengths to disguise the sources of the studies: cutting up papers in order to separate the experimental technique from the corresponding result, and re-photocopying in order to suppress other cues. Indeed, it

was just the sort of effort which Targ should have put into his remote-viewing experiments [11]. Chalmers found that there remained some unexplained factor which produced variability in replicated trials. That is, meta-analysis did not lead to a definite conclusion about meta-analysis.

These objections apply even to the meta-analysis of fairly reputable subjects. When one considers parapsychology, where fraud is not uncommon, the idea of using this inherently dubious technique to get at the truth is laughable. Should one include Soal's work, with its hundreds of thousands of questionable data points, for instance? Should one use Rhine's results, often affected as they were by poor randomisation, sensory cueing, and incorrect mathematical analysis?

I think that it is clear that meta-analysis is no substitute for the performance of further studies using larger and better-controlled samples. Apart from the already bad reputation of parapsychology, serious dangers are posed in other fields due to the likelihood that cost-conscious suppliers of funds may prefer the use of meta-analysis to the greater expenses of new studies, or the possibility that an unscrupulous drug company may stop research as soon as meta-analysis furnishes a commercially favourable result.

A PARTING SHOT

Hardened defenders of meta-analysis will doubtless be familiar with the above objections, and will probably have plenty of wallpaper for the cracks. A more devastating means of sinking meta-analysis would be to construct a counter-example which gave a clearly ridiculous result when meta-analysed.

Here, rapidly cobbled together, is just such a counter-example. Better ones (involving fancier statistical measures and methods) are under development.

The data in the box are not contrived and actually turned up in a different, but very commonplace, setting. Here, it is mischievously suggested that they are test results for a new drug and an old drug; comparison studies of which have been reported in 5 different publications by 5 different groups over a number of years. Tests of the old drug naturally involve larger data-bases because this drug has been around longer and is already in use, and the data also naturally tend to mount

up from paper to paper. In the last column, the data from the 5 separate papers have been crudely meta-analysed simply by summing corresponding entries. Note that the results of the individual studies are wildly inconsistent; just the sort of situation which cries out for meta-analysis.

Is there not something very peculiar about this table? I leave it to any onlooking meta-analysts to (a) spot the peculiarity, (b) explain it, and (c) ask themselves whether meta-analysis can ever be fully 'proofed' against the possibility of this peculiarity, or some other one, arising unnoticed in practice.

NOTES

- [1] J Beloff, *British & Irish Skeptic*, 4(1) (1990) 18.
- [2] G V Glass, *Educational Research*, 5 (1976) 3.
- [3] For example, the technique known as Bayesian analysis has had a much rougher reception and is still looked at askance by many academics.
- [4] T C Chalmers *et al*, *Statistics in Medicine*, 6 (1987) 733.
- [5] Neither Chemical Abstracts nor Physics Abstracts have ever indexed any meta-analytical papers in these disciplines. More worryingly, neither the *Journal of the American Statistical Association* nor *Nature* appear ever to have reviewed any books on the subject of meta-analysis.
- [6] G V Glass *et al* *Meta-Analysis in Social Research*, Sage Publications, 1981.
- [7] Consequently, meta-analysis also masquerades under the names of 'overview method' or 'pooling method'.
- [8] F M Wolf, *Meta-Analysis—Quantitative Methods for Research Synthesis*, Sage Publications, 1986.
- [9] J Rotton, I Kelly: *Mercury*, 15 (1986) 73.
- [10] R Hyman, *Journal of Parapsychology*, 30 (1985) 76.
- [11] D F Marks, *Nature*, 320 (1986) 119.

Dr David Fisher is a scientific editor and writer, convenor of the nascent Wales and West Country Skeptics and secretary of the UK Skeptics. He was recently described in an article in the *Independent* as being at the dry end of the Skeptics movement.

AN AWKWARD EXAMPLE FOR META-ANALYSTS
(Which is the better drug?)

	1963	1970	1972	1987	1989	Total
Old Drug						
Patients tested	149	2986	3594	18364	20862	45955
Patients cured	13	1783	2918	14488	4343	23545
Success rate (%)	8.7	59.7	81.2	78.9	20.8	51.2
New Drug						
Patients tested	45	2224	884	5140	864	9157
Patients cured	2	1134	704	3907	122	5869
Success rate (%)	4.4	51.0	79.6	76.0	14.1	64.1

Use Hammers for Nails And Corkscrews for Wine

Jessica Utts

In defence of defensible statistical methods

Lest I become the target of the ammunition David Fisher claims to have in reserve for anyone who refuses to sink with his first onslaught, let me start by saying that I am no devotee of meta-analysis. On other occasions, in fact, I have played the role of the critic [1]. What I will staunchly defend is the proper use of statistical methodology. It is in such defence that I am responding to Fisher's article.

Contrary to what Fisher would have us believe, meta-analysis is not a single statistical technique. Rather, it is a set of techniques, some new and some familiar, for summarizing a collection of studies in a quantitative manner. Adding the chi-squared values from separate studies is one example of a familiar technique, and there are situations (no doubt rare) for which it is appropriate, and others for which it is not.

Ironically, my response begins by agreeing with most of Fisher's arguments. But, rather than defending them as criticisms of meta-analysis, I must point out that they are simply a rehashing of problems statisticians have been trying to caution users of statistics against for years. They are problems whether one is doing statistics on data from a single subject, a single experiment, or a multitude of experiments.

For example, the 'awkward example for meta-analysts, we are left to ponder at the end of Fisher's article is an extended example of what statisticians call "Simpson's Paradox" [2,3]. It is the classic argument given to students of statistics when they are warned against collapsing contingency tables. It ceases to be a paradox when one recognizes the problem: throwing away information can lead to misleading results. In Fisher's example, when the results are combined over all the years (and thus the new drug appears to have a better success rate than the old) one loses the information that success rates for both drugs were wildly different from one year to the next. In particular, in 1989 neither drug had a very good success rate compared to the previous three years. Since the old drug was used so prominently in that year, the overall success rate for the old drug is heavily influenced by the 1989 results, whereas the overall success rate for the new drug is not.

A proper analysis for the data presented by Fisher would begin by asking what research question prompted the data collection in the first place, and how the data were collected. Suppose the question of interest was the difference in proportions cured with the old versus the new drug. Further, suppose that a different random sample of people with the disease was randomly assigned to take the two drugs each year. It would

then be a misuse of statistical methods to simply combine the data over all years as if they came from a single sample, as Fisher has done in the last column of his table, because the samples were taken from different populations. For instance, the overall health of the population could have been much worse in one year than another, or the strain of virus causing the disease could have changed.

One way to meta-analyse this data set would be to compare 'effect sizes' from year to year. An effect size is a measure of a difference that has had the influence of sample size removed. In this case, a measure of effect size for a given year would be the difference in cure rates for the two drugs, divided by the standard deviation for a single trial. This is equivalent to the z-score for the difference in the two cure rates, multiplied by the square root of the sum of reciprocals of the sample sizes.

The results of this meta-analysis are presented below, along with the more traditional z-score and corresponding p-value for a two-tailed test.

Year:	1963	1970	1972	1987	1989
Effect size:	0.16	0.18	0.04	0.07	0.17
z-score:	0.94	6.27	1.05	4.43	4.77
p-value:	0.35	0.00	0.29	0.00	0.00

There are several interesting things to notice about this analysis. The first one is that the z-scores are quite misleading. The 1963 data resulted in a 'non-significant difference' in cure rates, and yet the effect size in 1963 is almost as large as the largest one. This discrepancy arises because hypothesis tests are extremely dependent on the sample sizes used. A very tiny difference will be 'significant' if the sample sizes are large enough, whereas a moderate sized difference can lead to the conclusion of 'no significant difference' if the samples are small.

Another interesting feature of the analysis is that the years 1963, 1970 and 1989 resulted in similar effect sizes, whereas the effects in 1972 and 1987 were considerably smaller. In other words, the effect sizes are not homogeneous across time. The comparative effect of the new and old drugs cannot be measured without taking the year (and corresponding circumstances) into account.

Finally, it can be seen that the old drug had a higher cure rate than the new drug every single year. Yet, under the traditional reliance on z-scores to tell the whole story, a very

Some basic ideas of statistics

♣ The results of experiments involving counting things, such as patients cured or Zener cards correctly guessed, are generally not well-defined, suffering fluctuations from trial to trial. However, as you increase the number of items counted, the relative size of the fluctuations decreases. Various **statistics** can be used to help decide whether results are 'significant'—that is, that they are unlikely to arise by chance in the absence of the reputed effect.

♣ For instance, if you correctly guess the results of two consecutive coin tosses, you are *not* entitled to think yourself psychic, because you have a 25% probability of doing so without the aid of psi. Typically, results are said to be **significant** (or 'at the 95% confidence level') if, roughly speaking, there is only a 5% probability of getting the same result *without* the effect you're testing for; this latter probability is called the **p-value**.

♣ The **standard deviation** is a measure of the observed or expected fluctuations of a set of measurements, about their average value, and depends on the number of things you test. It increases only like the square root of this number so that the **accuracy** of a properly-conducted test increases with the number. This effect is expressed by the **z-score** statistic, which can be regarded as giving the position of an individual measurement in the scatter. A **p-value** can be deduced from the **z-score**; its value depends on whether the test is **one-** or **two-tailed**, according to whether you consider effects in either direction to be significant or not—for example 'psi present' or 'psi missing', or either drug better than the other.

♣ The acceptance of a theory is based on the overall extent to which the test data deviate from the result which would be expected in the theory were true. The **chi-squared** statistic gives a measure of which results have a particular form, and is obtained by summing the squares of the individual deviations, each divided by the corresponding expected value.

confusing picture may well have developed. The following scenario would not be unlikely. A new drug was developed in 1963 that was cheaper than the old drug for the same disease. The two drugs were compared, and it was found that their cure rates were not significantly different ($z=0.94$), so the new cheaper drug was recommended. The company marketing the old drug, in order to defend its product, called for a new study. The 1970 study was conducted, and showed that the old drug was overwhelmingly superior to the new drug ($z=6.27$)! The inventor of the new drug was not convinced, and called for a replication of the study, which was done in 1972. To his delight, it showed once again that there was no difference between the two drugs ($z=1.05$). Deciding that the result from the second experiment must have been in error, since it was clearly not replicated, physicians continued to use both drugs.

Fifteen years later, in 1987, the company marketing the old drug found a cheaper way to manufacture it. As part of an advertising campaign, they decided to do an experiment to reconfirm that the cure rates were the same for the two drugs. To their amazement, they found that their drug was now superior ($z=4.43$)! Two years later in 1989, a cure had been found for all but one particularly nasty type of this disease, so sales of both drugs dropped steeply. Remembering what had happened in 1972, the manufacturer of the new drug challenged the 1987 results and called for a replication. To their dismay, the result was replicated ($z=4.77$), and the new drug was taken off the market.

Versions of this scenario are not uncommon. The end result is substantial confusion about whether or not there 'is an effect.' Arguments tend to focus on whether or not a

particular result was 'replicated' in the next study. Often, the second study has smaller sample sizes than the first. All of this confusion stems from the fact that many social scientists do not appreciate the extent to which p-values are tied to sample sizes.

The confusion can be eliminated, or at least reduced, but looking at the magnitude of the effect in each study instead of the p-value. This is the direction in which meta-analysis has taken us, and in my opinion it is a long-overdue change in focus. There are meta-analytic techniques that propagate the reliance on p-values, and I am a strong critic of those methods. One such method is 'vote-counting', in which the evidence for or against a phenomenon is based on the proportion of studies obtaining significant results. However, the majority of meta-analytic techniques focus on retaining the information from individual studies and looking for trends and differences in effect sizes across studies.

I believe that parapsychology is one field for which certain meta-analytic procedures are particularly suited. The misunderstanding of traditional hypothesis testing has played an important role in polarizing scientists into those who think there is evidence for psi and those who think there is not. Even some statisticians, who should know better, are lured into thinking that evidence for psi will be absent until someone can come up with 'the repeatable experiment'. This is simply wrong. Any situation in which there is noise mixed with the signal cannot be guaranteed to produce a 'significant effect' in any one experiment. For instance, I have shown elsewhere [1] that if psi was operating to increase the per trial hit rate to 33% (where chance was 25%) then an experiment based on 30 trials (a typical Ganzfeld experiment) would only show a 'significant effect' 15.6% of the time!

A much more relevant question to ask when examining the evidence for psi is whether or not there is a consistent magnitude of effect when measured under tightly controlled and similar conditions by different experimenters. It is only through meta-analytic techniques that this question can be answered.

As my penultimate theme, I would like to address the extent to which two specific criticisms in Fisher's paper are handled in meta-analyses of psi research. The first is the so-called file drawer problem, in which one imagines that results are biased because only the significant studies are published. The way this problem has been addressed in parapsychology is to suppose that there are such studies, and then to calculate how many of them there would have to be to negate the effects of the published work. That generally has turned out to be an impossibly large number. For example, a meta-analysis of random number generator experiments [4] found that there would have to be 54,000 studies in the file drawer to account for the results.

The second criticism I would like to address is the one suggesting that meta-analytic techniques are meaningless when they combine low quality studies with others. In the meta-analyses of which I am aware in parapsychology, great care is taken to evaluate the quality of each study. The extent to which effect magnitude is related to study quality is considered and documented. To date, if there is a relationship at all it appears that the higher quality studies result in higher magnitude effects, contrary to what the criticism implies.

In summary, like any other set of statistical techniques there are useful applications for meta-analysis and there are some situations in which it can and has been misused. To denounce the entire set of techniques because there are some inappropriate applications is akin to denouncing hammers because they don't do well for opening wine bottles. Statistical methods are easy to misuse and misinterpret. The lesson from Fisher's article should be that those who do not understand statistical methods and their proper application should not try to base conclusions on them.

NOTES

- [1] J. Utts, *The Ganzfeld Debate - A Statistician's Perspective*, Journal of Parapsychology, 50 (1986), 393-402.
- [2] E.H. Simpson, *The Interpretation of Interaction in Contingency Tables*, Journal of the Royal Statistical Society, Series B, 13, No. 2 (1951), 238-41.
- [3] C.R. Blyth, *On Simpson's Paradox and the Sure-Thing Principle*, Journal of the American Statistical Association, 67 (1972) 364-66.
- [4] D.I. Radin and R.D. Nelson, *Evidence for Consciousness-Related Anomalies in Random Physical Systems*, Foundations of Physics, 19 (1989), 1499-1514.

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Hering's Law

Bill Penny

Homeopathy is more than just dilute solutions

In the *Skeptic* 4.3 Steve Donnelly commented on the use in homeopathy of massive dilutions. A less frequently commented upon aspect of homeopathy is Hering's Law. This was named after its discoverer Constantine Hering (1800-1880) one of the leading nineteenth century American homeopaths. The following information on this law comes from *Homeopathic Science and Modern Medicine—The Physics of Healing with Microdoses* by Harris L Coulter.

Hering's Law is built upon the homeopathic belief that illness in a body is always general, never local, because the whole body is believed to be involved in the attempt to regain health. Therefore a person can suffer from only one illness at any one time, though the illness may have many local manifestations.

Hering's Law holds that as a disease goes from an acute to a chronic form the symptoms move about the body, from the surface to the interior, from the lower part to the upper and from the less vital organs to the more vital organs. Homeopathic treatment tries to reverse this movement, getting the symptoms of the disease being treated to reappear, but in reverse order.

A consequence of this is that homeopathy regards mental illness as just an extreme form of disease because the symptoms are high up and deep inside the body and in the brain, the most vital organ. All diseases have mental and physical aspects, the former being more prominent in mental illnesses, hence homeopathy uses the same methods to treat mental illness as it uses to treat physical illness.

Another consequence is that eruptions and diseases of the skin are regarded as beneficial, because they indicate that the disease is passing to the outside of the body. So using drugs to suppress a skin eruption is believed to cause the symptoms of the disease to take a more chronic form.

In conclusion I think that the negative consequences of the above beliefs could conceivably be quite serious for some of those believers suffering from skin problems or mental illness. By delaying visiting a doctor their medical condition could worsen.

Finally am I the only person to be struck by the similarity of this forcing the disease to the outside of the body with the old practice of driving demons out of the body to cure the afflicted?

Bill Penny is a graduate student who lives in the North East of England.

UFOs on the Line

Dave Love

Flying saucers might be just a phone call away...

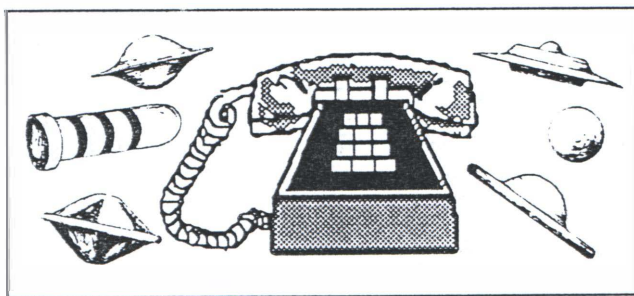
I'm not actually given to phoning 0898 numbers you understand (you know, the 38p/minute, 25p/minute off peak facilities which cover a multitude of sins, or so the advertisements would have you believe.). According to my local paper such sins seem to include DOMINATION (frequently), SUSPENDERS, LEATHER ... Ccalm down at once! Most are 'strictly adults only' and/or 'XXX HOT'. Once you've got suitably steamed up by all this, it's time to call cuddly Russell Grant, who promises to astrologise your ideal partner for you.

Well, the lure of those three little letters was finally too much. No, not XXX, something much more alluring—UFO! There are at least two possibilities for the fetishist looking for DOMINATION by SPACE ALIENS in SUSPENDERS. Such callers may be a little disappointed, though, and would be better advised to stick to Rocky Horror Show parties.

If you care to call 0898-654-637 you can hear *UFO Line* 'with Phillip Mantle reporting' in his charming northern brogue. The presentation is far from hurried, but I suppose that's in their interest since you're the one who's paying. *UFO Line* is the 'news and information service' of the Independent UFO Network. After an introduction about the IUFON, and how it holds no fixed ideas and seeks to investigate 'as objectively as possible', we get the current items of interest which are 'UFOs from behind the ever-crumbling Iron Curtain' ("But Minister—", "Quiet Bernard!"). This news is all from Hungary—several rather far-fetched accounts including one from a policeman who was confronted by humanoids (but unfortunately no investigation was made). Further news from Hungary is promised, but a Budapest *Sunday Sport* must be due to appear soon, which may be cheaper than *UFO Line*. The spiel concludes with advertisements for a talk in London and an IUFON conference in Sheffield [see the review on page 28 of this issue—Eds].

Jenny Randles presents the other line, *UFO Call* (0898-121-886). This one is sponsored by BUFORA, the British UFO Research Association, and again starts with a statement of their lack of pre-conceived ideas etc. The presentation is more polished, apart from some odd breaks in the tape. This seems to be the red rose version of things, with reports from the North West in contrast to the apparent South Yorkshire base of *UFO Line*. The first topic concerns red and green lights in the North West sky. BUFORA is satisfied that this was a meteorite shower, but 'some UFO groups have outspokenly refused to accept this diagnosis', we're told darkly. Whether they favour little green (and red) men or some other cause like aircraft, we don't learn, but the implication is the former.

This report, like many others to BUFORA, apparently, was 'channelled via the Jodrell Bank Radio Telescope' (which I previously thought was only used as a receiver!). I have heard this Jodrell connection made to sound highly official in the past; whether it is I doubt, but I can imagine the radio astronomers would be quite happy to have someone to deal with such reports so that they can get on with more productive extra-terrestrial studies and not be accused of a cover-up.



There is a report from Blackburn of a 'classic disc-shaped object with windows rotating around the sides' seen by security guards, investigation of which is still underway (by their employers?). After an explanation of why Mr Someone-or-other had seen an orange vibrating moon on his hols in Corfu ('temperature inversion'—tell me something about UFOs for my 25p/min!), we get on to crop circles, in which BUFORA are apparently very interested. I don't know why though, since they align themselves with Meaden's explanation (see this journal, issue IV.2 and letters, IV.3) rather than the 'classic disc-shaped object' cause, although circles are 'linked with glowing UFOs'. Whether such glowing merely arises from the young farmers' tractor lights after their annual dance and booze-up or some meteorological cause, well... Apparently the phenomenon has now reached these parts, with one near Burtonwood (off the M62) which I must look out for. We're told this is going to be a bumper year for them after all the publicity they have received. Sounds like grist to David Fisher's mill to me. If California, UK (see *The Skeptic* IV.2) is coming to these parts I hope it brings the climate along.

By the way, both these lines are supposed to be updated about once a fortnight or whenever something interesting happens. But now—back to those SUSPENDERS! ...

Dr David Love is a physicist at the Science and Engineering Research Council's Daresbury Laboratories, and Chairman of the Manchester Skeptics. He now lives in fear of receiving his phone bill.

It's all in the Cards

Medium Rare

You too can be psychic! Well, almost...

This effect takes some preparation and you have to be sneaky to pull it off. But it is mind-blowing—and you may even fool a magician if one happens to be present. It is the perfect psychic feat for an event where you do not know people.

You begin with some nonsensical chatter about how some people can look into the future. These premonitions may not happen very often but when they do, you tell everybody, we could be wise to pay attention to them, because it might be possible to avert certain tragedies and other misfortunes.

You then say how this type of experience has only happened to you rarely, but that last night you had a very strange experience you would like to share with the group. At random, you ask a stranger if they had a similar experience last night. Regardless of what they say, you proceed.

First, ask this person to think of any playing card in a normal deck. Make sure they deeply concentrate and mention some mumbo-jumbo about 'getting in touch' with some mystical inner center. When they have mentally chosen their card and named it aloud, you draw from your pocket a deck of cards. Taking them out of their case, you fan them face up for all to see. You continue fanning until the chosen card is seen. This card is very carefully laid on the table face up. Once this is done, you turn over the top card to show that a name is written on the back of it. 'I had a name come to me last night with such force that I spent much time pondering it,' you say. 'After several hours of deep thought,' you continue, 'I also saw very clearly in my mind a specific playing card.'

As you begin turning over more playing cards, you explain that to check out this premonition, you began writing the names of people on the backs of playing cards. People will see that each card has a different name written on it. Do this slowly and deliberately, avoiding all fast or suspicious moves. After a dozen or so names have been displayed you put the pack of cards back in the box and put it into your pocket. At this point you ask your volunteer her name. When she gives it, ask her to turn over the card on the table and everyone will see her name written across the back. Draw this moment out with enough silliness and your credibility will skyrocket. The turning of the card will make you a bona-fide psychic!

What will make the trick work, however, is some advance preparation. Get two identical decks of cards. With one deck take out all the *even black* cards and the *odd red* cards. Shuffle them thoroughly and place them face down on the deck. Set it aside. With the other deck separate out the *odd black* and *even red* cards and treat them the same as the other deck. This means that the first deck will



have odd black and even red cards on the bottom 26 cards of the deck; deck two will have even black and odd red cards on the bottom 26 cards of that deck. Next you place random names on the backs of the top 26 cards of each deck. This leaves the backs clean on the bottom 26 cards of each deck.

During the party, you secretly learn the name of a stranger (be sure to get a name that is not one of those you wrote on the backs of the cards in your prepared deck). Before you pull this con, go into the host's bathroom and write this person's name on the back of the 52 blank back cards—the bottom half of each deck. Put the decks in separate pockets but remember which pocket contains which cards. When the volunteer names her card pull out the correct deck and do your stuff.

Medium Rare is a Revered Master of the Occult, Arcane, and Esoteric.

This article is reprinted with the kind permission of Psientific American, the newsletter of the California-based Society for Rational Enquiry.

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Fortean Times is a journal of news, notes, reviews and references on all manner of strange phenomena and related subjects and philosophies, continuing the work of **Charles Fort**. Each 80 page issue is crammed with articles, news clippings, art, cartoons and letters. Subscriptions (4 issues): UK £8 (overseas £9/US\$16); Sample/single issue: UK £2 (overseas airmail £3/US\$5). Write to: **Fortean Times**, 20 Paul Street, Frome, Somerset BA11 1DX, UK.

Skeptic at Large

Wendy M. Grossman

The silly season has arrived with a vengeance. The BBC is watching Colin Andrews watch crop circles. Prince Charles is telling the BMA they shouldn't be so suspicious of alternative medicine. Meanwhile, the IRA has killed a Catholic nun. Bishop Cahal Daly, interviewed on the BBC breakfast news, quivered with rage over the killing of an innocent woman 'at the beginning of her dedicated life'—and what was really noticeable is that no one challenged Daly on the subject of his own contributions to Northern Irish divisions. It is, after all, Daly who is taking the British government to court over 100% funding of multi-denominational schools in the North, and also Daly who fired a priest whose views he disagreed with and whose outspokenness on political issues he couldn't tolerate.

To return to Prince Charles: the editor of a prominent science journal recently told me he considers the Royal Family to be a pernicious influence on the country, partly because people believe their lightest pronouncements. In this case, the Prince complained that the MBA rejected even well-conducted, reliable tests of alternative medicine if the results seemed to contradict their orthodoxy. My question is, where are all these reliable tests? Has Prince Charles been privy to scientific results access to which has been denied to scientists? If so, let the experimenters come forward and submit their tests to the normal scientific process of peer view.

My suspicion is, of course, that Prince Charles couldn't tell a well-conducted test from a book about the Bermuda Triangle. This is all right: no one expects him to be a scientist. What is difficult to forgive is that he doesn't seem to know he's not. One has to assume that his protected position in life has kept him insulated from the real-world experience that might teach him how limited his understanding really is. The

Royal Family is prevented constitutionally from making political statements; perhaps this should be extended to prohibit them from making scientific pronouncements. And he should remember: the more exalted your position is, the more careful you should be about what you say. Someone may believe you.

And so to crop circles. I used to think Terence Meaden's stationery whirlwinds sounded like a good possibility. Then along came the most recent rash of 'circles': troughs, rectangles, skeleton key shapes . . . The BBC pictures on 24-25 July were so over the top that they strained my credulity to breaking point. I now firmly suspect that it's got to be humans.

After all, this is the simplest explanation. And what is the counter-evidence? That there are hundreds of them every year. Well, are there? Who's counting? Not the media, who seem to be simply reporting what they're told—only dedicated crop circle hunters like Colin Andrews or Terence Meaden. Who is checking up on their list of locations or their circle count? In all fairness to the media, now that I've been working in publishing a bit, a lot of sensational reporting probably happens because of time pressures: lots of good material or useful information doesn't get published simply because it didn't come in in time to write it up before the deadline.

Anyhow, I'm sure out there somewhere there are some people laughing themselves sick at the expense of the BBC.

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



Psychic Diary

Toby Howard

It's no good. I can't keep it from you any longer. I possess paranormal powers: extrasensory perception, telepathy, remote viewing, precognition and dowsing, to name but a few. This is not an idle claim. On the contrary, I can convince even the most hardened skeptic (no names, no pack drill) by proposing a simple controlled experiment. Blindfold me securely, deprive me of hearing, smell, touch and taste, put me in a Faraday Cage and propel me down an unknown street in an unknown town in an unknown country—all chosen at random, of course. And if there is a second-hand bookshop in the vicinity, I will find it. *Paranormally.*

I'm not sure whether it's a good or bad sign that most of my collection of books with a skeptical slant have been previously owned by other people. Sometimes it's puzzling. Why would anyone ever want to get rid of Philip Ward's magnificent—and often hilarious—*Dictionary of Common Fallacies*, for example? Or Martin Gardner's *Fads and Fallacies in the Name of Science*? On the other hand, *UFO Magic in Motion*, one of Arthur Shuttlewood's portraits of wacky Warminster in the seventies, probably propelled *itself* off the original owner's shelf, to head through the *n*th dimension to the second-hand bookshop where it was to lay in wait—for me.

'Remainder' shops also perturb my psychic vibrations (and consequently interfere with my wallet). Although, surrounded by mountains of books that just won't sell, one can feel the creeping presence of the *Spirit of Naffness*, there are often surprises. A recent trip to a local shop yielded not only a volume from William Corliss' extraordinary 'Sourcebook' series—essential reading for anyone with a tendency to feel blasé about Nature's marvels—but also John Dale's study of Prince Charles' paranormal pre-occupations, *The Prince and the Paranormal*. The trouble is that these rare gems are often hidden under ten tons of *Modesty Blaise's* and ancient *Gray's Anatomy's*. And on the subject of the mysterious, why is it that remainder shops always have closing down sales, but never actually close down?

As a rule of thumb, the worse the book, the more awful its cover. Take *Jesus Christ, Heir to the Astronauts*, for example (see illustration). I rest my case.

If you can't judge a book by its cover, you can always try the title. Almost by definition, the paranormal looms large in the realm of odd titles: *Levitation for Terrestrials*, *Spirit Rapping Made Easy*, and *Scientific Proof of the Existence of God will Soon Be Announced by the White House!* That last one seems almost plausible, but the exclamation mark is a dead giveaway. Or take the slim volume I have in front of me, for instance: *Phone Calls From*



the Dead. No messing about here. The back cover blurb is breathless: 'A woman received a call from a friend—an urgent call for help at exactly 10.30 pm—the exact moment he was pronounced dead at a local hospital! A couple held a 30-minute conversation with a friend phoning from a nursing home. She had died that very morning! A woman phoned a friend after a troubling dream. A few days later she phoned again to find the woman had died six months before!' Actually, communicating with the dead by phone is easy: have you tried getting through to Directory Enquiries lately?

But these examples are small fry. For some *really* weird books, the ultimate source is Russell Ash and Brian Lake's marvellous *Bizarre Books* (Sphere, 1987). I dare you to walk into your local library and ask for those deadly serious works *Scouts in Bondage*, *Fish Who Answer the Telephone* or *A Pictorial Book of Tongue Coating*. And beside the inspired *Cooking with God*, my dog-eared copy of *Astrology in the Kitchen* pales into insignificance.

Poor old Elvis. By all accounts his last years on earth were pretty miserable, but death brought no escape if you believe Hans Holzer's classic study, with its dreamy cover and dreadful title, *Elvis Presley Speaks*. Maybe Elvis should team up with Tom Patterson, whose *100 Years of Spirit Photography* features some amazing examples of blurry post-graveyard pics. David Bailey he ain't. But don't forget that those Eternal Curtains of Blackness will close for us all eventually, and we really ought to try and prepare ourselves for whatever lies beyond. Has anybody seen my copy of *Sex After Death*...

Toby Howard is a lecturer in computer graphics, co-editor of *The Skeptic*, a member of the Manchester Skeptics, and a latent bibliomaniac.

Heaven and Earth

Michael Hutchinson

Just how can we judge the level of belief in the paranormal among the general public? Let's look at the most recent opinion polls. A poll conducted for the 1987 Channel 4 programme *Is There Anybody There?* produced the following figures:

- 60% said it is possible to communicate by telepathy
- 59% think that certain houses have ghosts
- 59% believe that dreams can foretell the future
- 45% think that there are people who remember previous incarnations
- 30% accept that the dead can send us messages

A total of nearly nine out of ten people believed strongly in at least one of the above phenomena. I have compared the above figures with those contained in the 1989 book *Are You Normal?* which Toby Howard reported in the last issue of the *Skeptic*. The book claims to give details of what 60,000 British adults think about a wide range of issues, including the paranormal. Their figure of 60,000 might be misleading though, for it isn't clear that this number of people were asked about all the subjects covered in the book. Their reported percentages for our purpose show that: 25% believe in ghosts; 40% accept some form of survival after death. This subdivides into over 50% of women and about a third of the men interviewed; 25% believe in reincarnation; over 50% believe in telepathy, again with more women than men tending to do so; Over 50% believe in predictions; 23% believe in horoscopes, women being twice as likely as men to believe what they read about their 'stars'; 25% have paid to have their fortune told; 20% think that flying saucers are real. Oddly enough, only about 35% believe in hypnosis, a figure which surprises me. I would expect it to be much higher, nearly 100%.

As you can see, these polls show two contradictions and two similarities. In the first, 59% believed certain houses have ghosts, but in the second only 25% believed in ghosts. 45% believed that people can remember previous incarnations in the 1987 poll, but only 25% believed in reincarnation in the second poll. The figures for telepathy and predictions are fairly close. *Are You Normal?* didn't give precise figures, but actually said 'over half' believed in these phenomena.

Turning to the media, with my keen interest in paranormal subjects I notice media coverage which anyone not so interested might miss. Such people might end up with a completely different picture. Until the beginning of 1990 the BBC probably broadcast the greatest number of paranormal programmes, but then Thames Television made a

series of nearly twenty half-hour programmes, each dealing with a single subject. Each programme included a 'skeptic'. Outwardly a non-biased programme, the introductions were clearly partisan with statements like 'Welcome to *Stories In The Night*, a series which takes a major look at the paranormal, an area which often leaves science lost for an explanation.' And one of the so-called skeptics argued that a medium doesn't obtain information from the dead—but by using ESP. Enough said?

Many UK newspapers and magazines—especially women's magazines, which is perhaps why more women than men tend to believe—carry stories about ghosts, psychics, astrologers, and alternative medicine. With the exception of the latter, stories in newspapers are mainly confined to the popular tabloids like *The Sun* and *The News of the World*. The next trend is probably going to be the use of psychics to answer peoples' personal problems. The magazine *Me* has such a column called 'Susan King's Psychic helpline.'

In my opinion, the worst offender in promoting belief in the paranormal is the London radio station 'Talkback Radio'. Specialising in news and talk programmes, the station devotes at least three hours a week, and perhaps as many as five or six hours, to the paranormal and alternative medicine. One of their most popular programmes involves a 'psychic counsellor', who I have heard advise some women to give up their boyfriends and others to move abroad. At one time he gave medical advice too, but after a complaint from me, the IBA and LBC told him to stop doing so. The Editorial Director of the station wrote to tell me that there is 'a place for a little more lighthearted amusement' and that their listeners are 'intelligent enough to make up their own minds on these matters'. But with absolutely no skeptical voice on the station, I wonder how they can be expected to do so.

I have also taken a look at my own trade, book publishing. The UK trade magazine *The Bookseller* considered New Age publishing so significant that in March last year it included two articles on the subject. Although reference was made to 'a life-enhancing trend that look set to become a sales phenomenon', one bookshop buyer reported 'a very clear decline in interest in the occult area'. This apparent contradiction might be a question of semantics; what is meant by 'occult'?

With all this promotion, it is not surprising that the opinion polls have shown a fairly high level of belief in the paranormal in the United Kingdom. *Are You Normal?* says that 'the notion of the paranormal is strong.' Skeptics have a lot of hard work to do to redress the balance.

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

Parts of this article were adapted from the author's talk at the European Skeptics Conference in Brussels on 10 August 1990.

Reviews



One reborn every minute?

Hans TenDam, *Exploring Reincarnation* (Arkana, £7.99).

This book offers a wide-ranging survey of the literature on and evidence for reincarnation. There is an extensive bibliography (15 pages), listing works in at least eight European languages. TenDam ranges across cultures and throughout history, covering religious and cultist beliefs, as well as recent, empirically-based work (that of Ian Stevenson, for example).

TenDam stresses the evidence from recall of past lives, and from hypnotic regressions. There is a great deal of speculation, much of which I find unconvincing, but the range of his survey is certainly impressive. The book also contains a lengthy discussion on 'past-life therapy' (TenDam trains psychotherapists in this technique, which is not unlike Freudian psychoanalysis, except that the repressed trauma is to be found in a past incarnation, rather than in childhood). I am less than happy about the value of this treatment, I must confess.

TenDam's book makes a useful starting point for anyone who wants to read their way into the vast literature on this subject. But readers should be warned that he gives a very partial view of the evidence, and his treatment of philosophical matters is tendentious—in one place it is factually wrong. The book would best be read in conjunction with Professor Antony Flew's Gifford Lectures, *The Logic of Mortality* (Blackwell, 1987), which will provide a valuable corrective to some of TenDam's more exuberant flights.

—John Lord

Having fun with free flight

Keith Harary and Pamela Weintraub, *Have an Out-of-Body Experience in 30 days and Lucid Dreams in 30 days* (Arkana, £3.99).

Keith Harary (formerly known as 'Blue') was one of the pioneering subjects in the early research on out-of-body experiences (OBEs) at Duke University. He has now turned to making money out of psychic ventures (like playing the silver futures) and is director of the Institute for Advanced Psychology in Los Angeles.

I had rather expected these two books to make unfounded claims and try to convince people that they can 'really' travel to distant places, pick up information, control other people's minds or bring things back from afar. In fact I was wrong. They are both fun books, laying out an interesting month's program of mental acrobatics and varied exercises to train yourself to have OBEs and lucid

dreams.

The basic principles are sound, including many of the standard methods like dream incubation and keeping a dream journal for lucid dreams, and relaxation and visualisation techniques for OBEs. Others are more idiosyncratic. Even if you don't ever have the OBE you seek you may enjoy an 'advanced' exercise like this one: 'Before you and your partner separate (this is to be a shared OBE exercise) ... pick out some favourite sexual thing to do, such as slowly stroking your partner into increasingly powerful multiple orgasms, or tickling your partner lightly all over with a ...' I'll leave you at this point to read the book yourself.

Some lucid dream researchers are currently claiming that inducing them can be harmful. They might worry that there are no warnings or cautions in these books but they have no real evidence to back up their fears.

I think anyone who wants to follow a formal schedule of training could do worse than buy these books. They provide lots of ways of expanding your mental abilities, and although they hint at 'real travelling' and possible psychic powers, there are no outrageous claims that these are really possible. So—go and try some free flight! (Actually they cost £3.99 each).

—Sue Blackmore

The man-made guru

Mary Lutyens, *The Life and Death of Krishnamurti* (John Murray, £16.95).

Jiddu Krishnamurti, 1896–1986, was picked out and educated by the Theosophical Society as the coming World Teacher (a spiritual leader of great power who was to inaugurate a New Age of human development), and in 1911 the Order of the Star in the East was formed by Mrs Besant with him as its chief; then, in 1929, at a meeting attended by thousands of devoted followers, he dissolved the Order, gave back the large gifts of money and property that had been donated to it, and urged them to find their own way of enlightenment.

Krishnamurti spoke of Truth as a pathless land, which could not be approached by any organisation or sect. To the end of his life he described his mission as being to set people free, not to institute new organisations or dogmatic structures, and he urged people not to make him into an authority figure, but to think everything out for themselves—sentiments that at least seem honest from a skeptical viewpoint. Although he advocated meditation, he always refused to be considered a guru or meditation teacher—in fact, when he met the Maharishi (of TM fame), he quickly ended the conversation.

Although he refused to be drawn into the (spiritual!) power-politics of the various factions within the Theosophical Society, which are detailed in several (unintentionally) funny passages, he seems to have retained, perhaps unconsciously, his early Theosophical training—including perhaps a belief in the Masters who were thought to guide Human destiny.

Some would say that, in spite of his renunciation of the title, he still saw himself on one level as the World Teacher, in however unorthodox a sense. His teachings continue to be spread in books and tapes, and by the schools and foundations he set up. He was a very gentle and humane man, and stressed that violence in society could only be tackled by ending violence in the individual's own mind; the method he advocated seems very like the practice of mindfulness in Zen Buddhism—just watching the mind's activities in order to transform them. None of his followers seem to have properly tested his ideas in practice, however, so as skeptics we have to keep an open mind—or try them out for ourselves.

—Mike Rutter

Running after poltergeists

D Scott Rogo, *The Poltergeist Experience* (Aquarian Press, £7.99).

This book consists of a collection of rather brief accounts of older poltergeist cases, together with more extended accounts of some recent examples, including a few investigated by the author himself. But as it is a reprint of a book originally published in New York in 1979, the author has been unable to benefit from the more systematic treatment of the subject which Gauld and Cornell gave in their 1979 monograph [1].

The book gives a representative selection of the sort of events encountered in poltergeist cases, which almost invariably centre around a young person with social or psychological problems. Typically in the presence of the subject, items of furniture are moved, and smaller objects thrown about, but witnesses never seem to see how these effects are produced. Rogo argues that they are brought about by the psychokinetic (PK) powers of the subject, but as he bases the evidence for the existence of PK on Rhine's work with dice—to say nothing of Nina Kulagina's powers—those familiar with Fraser Nicol's criticisms [2], for example, are unlikely to endorse Rogo's views.

Like other 'spontaneous' phenomena, the evidence for poltergeist activity is virtually entirely anecdotal, and suffers accordingly. Investigators (including Rogo) never seem to witness any unambiguously paranormal incident; and most cases conclude with the subject being caught in, or admitting to, trickery. The argument that subjects are just 'helping out' when the genuine phenomena are beginning to fade seems even less convincing in the poltergeist context, than in the case of professional mediums (for whom it was originally formulated) who at least have a living to earn.

The principal shortcoming of this book is that it fails completely to address serious criticisms of many of the

cases recounted, including Hall [3] on the Wesley case, Podmore [4] on the Bealings case, Prince [5] on the Amherst case, Coleman [6] on the Bristol case, and so on. Again Rogo has given almost a parody of Lambert's physical theory [7], even though it accounted for a striking example of a pseudo-poltergeist in Wisbech [8] some years ago. Clearly poltergeist episodes are the result of an unusual concatenation of circumstances, and when parapsychologists attribute everything to PK, they are not exercising sufficient imagination, as the seven-year investigation of the case of the phantom clock [9] neatly illustrates.

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—Michael Coleman

Watching the detectives

Joe Nickell, *The Magic Detectives* (Prometheus Books, £5.95).

The Magic Detectives seems to be written for children and young teenagers—perhaps from about age 10 onwards. As an 11-year old, I found it a very enjoyable book, with UFOs, psychics, haunted houses and many more extraordinary things all turning out to be frauds.

There are clues in every story that help you to solve the 'magic mystery' and, just in case there aren't enough, you also get the solution at the end of each story. I found it fascinating to read about the way some people make money out of tricks like bending spoons against tables when nobody is looking. These secrets are all revealed in the book.

The stories about similar things aren't all together in



the book so that you jump around from one subject to another which is fun. Some stories are really horrible: for instance *The Cinder Woman Mystery* is about a lady who seemed to just burst into flames during the night. When the morning came she was just a pile of ashes! Mr Nickell says that some people think this was a case of Spontaneous Human Combustion (he calls it SHC) but he thinks that she dropped a cigarette when she fell asleep in her armchair and that her body fat (she wasn't thin) helped to make the fire burn so that she was burnt to a cinder by morning. I preferred the less horrible stories, though, and my favourite ones were entitled *Lady the Wonder Horse*, *The Geller Effect* and *The UFO Explosion*.

Mr Nickell keeps his stories quite short so that you don't get bored. First of all he tells the story and then he looks to see if everything in the story is as it seems. At the end of each tale he asks questions like 'What do you think?' and 'Can you explain how this might have been possible?'. I like this because you feel as if you are trying to solve a puzzle. At the end of each story if you turn the book upside down Mr Nickell gives you the solution.

Although the book costs £5.95 (which may seem quite expensive for a children's book) I think that, for an unusual book which makes you think and which has more clues and mysteries than a *Secret Seven* story or a *Nancy Drew* mystery it is worth every penny.

—Alison Donnelly

A long way after Darwin

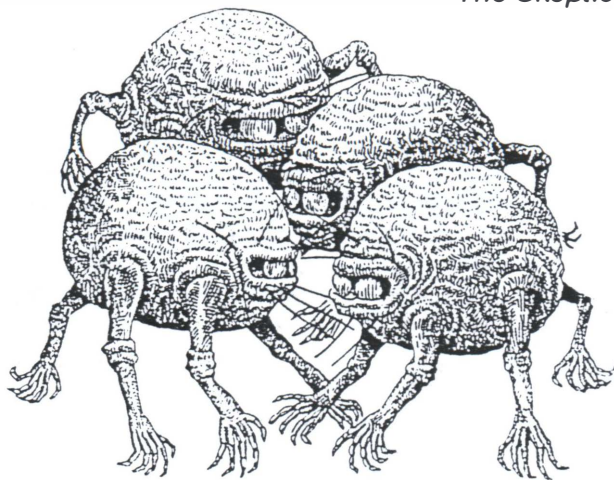
Dougal Dixon, *Man After Man: An Anthropology of the Future* (Blandford, £14.95).

Dougal Dixon's *After Man: A Zoology of the Future* (1981) was an exhilarating exercise in non-fact speculation, presented as a popular text of 50 million years hence. The quirks of evolution and selection pressure become alarmingly vivid when today's stable-seeming species are seen as mere transitional forms. One colourful section imagined a long-isolated bat colony, diverging to fill all available niches: vaguely seal-like divers, flightless plains predators hunting by sonar, and so on.

In that book, interfering humanity was assumed to have long since become one with the dodo and *Tyrannosaurus rex*. This time Dixon contemplates not merely what evolution might do to us but what, armed with the toolkit of genetic engineering, we could quite rapidly do to ourselves.

Which brings future possibilities queasily close to home, as changes in 'mere animals' did not. An adapted vole of 50,000,000 AD is less bothersome than the reminder that we might not be so very stable or special. Long ago, H G Wells in *The Island of Dr Moreau* and Jonathan Swift with his Yahoos both played with this instinctive dread. *Man after Man* works it out in imaginative, sometimes depressing detail.

Like an SF author contriving a setting where his beloved plot will work, Dixon fudges his speculations somewhat. If human descendants could be made aquatic, one agrees they might resemble the imagined creature here (not something I'd care to meet in a dark swimming pool),



Without sound, communication in space must be by touch, using their sensitive whiskers.

but would such engineering actually be performed? SF often speculates about adapting people for spaceship life—the major visible change usually being extra hands replacing feet to aid zero-gravity agility, as in Brian Stableford's and my *The Third Millennium*—but Dixon goes further with a genetically and surgically revamped 'vacuumorph' designed to work in space without protection. Would we really opt to manufacture a slave race of these grotesques in their spherical exoskeletons (sorry—a speciesist remark), reliant on high technology to keep them alive, and unable to live on Earth? Well, we're a funny lot ... but spacesuits seem more economical.

The biggest question-begger of all is the idea of repopulating a polluted Earth with adapted humans who lack intelligence. Dixon forces this card on us because intelligence mucks up the selection process he plans to display (a bright race adapts the environment and not vice-versa). Plain-, tundra- or tree-dweller, social animal, symbiote: *Homo dumbo* is convincingly shown as changing and diversifying to fit every handy niche. The initial premise once accepted, this is good, striking stuff—imaginary developments vividly illustrating real science. (As for unreal science, I note two passing references to 'telepathy'. One actually denotes communication/control by direct nerve contact—perhaps feasible. The other: a specialized social human with remote-viewing powers so great that eyes and ears have atrophied? Naughty, naughty.)

This is a superior coffee-table production, illuminating and fun rather than strictly realistic. Buy it as a present, not as a textbook.

—David Langford

The return of the fairies

Joe Cooper, *The Case of the Cottingley Fairies* (Robert Hale, £11.95).

In the Summer of 1917, in the Yorkshire village of Cottingley, two young girls (cousins Elsie Wright, 17, and Frances Griffiths, 10) took two photographs of fairies, whom they had often seen playing in the greenery around the local beck. Both girls were known to be imaginative

and artistic (Elsie had in fact studied at art college, and had later worked in a photographers' studio), and so a hoax was reasonably assumed.

The girls' mothers developed an interest in Theosophy, and in 1920 the photographs came to the attention of the Theosophist, Edward Gardner, and Sir Arthur Conan Doyle, who both accepted them (on the advice of experts) as genuine, and encouraged the girls to take three more. All five pictures appeared in the *Strand* magazine, and started a controversy that would last for over 60 years.

In 1921 a medium, Geoffrey Hodson, visited the girls. No photographs were taken, but plenty of 'nature spirits' were seen—on the astral, of course. In a 1976 Yorkshire Television interview, however, the ladies admitted that they had pulled Hodson's leg by pretending to see fairies which he then also claimed to see. They were also very evasive, as they had been in a 1971 BBC *Nationwide* interview, as to the authenticity of the fairy photographs.

In 1978, James Randi and some other CSICOP members subjected the photographs to computer image-enhancement techniques, and decided that they were fakes; some of the fairy figures had in fact been traced by Fred Gettings, a writer on the occult, to story illustrations in a children's book, *Princess Mary's Gift Book* (1914). In 1981 Frances finally admitted that it had all been done with paper cut-outs and hatpins, and both ladies then confessed in newspaper interviews. Frances died in 1986, and Elsie in 1988.

This book provides a fascinating look at human gullibility, and should be of interest (and an awful warning!) to believers and skeptics alike.

—Mike Moran

Caution: Genius at work

Tom Graves, *Inventing Reality* (Gateway Books, £4.75).

'Have you ever wanted to be really original—to be more creative? This novel book describes how the minds of geniuses work—how new inventions are often born.' Thus lies the back cover of a curious book subtitled *Towards a Magical Technology*, which you will no doubt find in your favourite occult bookshop.

As a certified inventor and genius, I was interested to see whether he had got it right, so I read the book right through, which was a mistake. The eighty-eight pages include five full-page cartoons, a number of numbered blank pages, and an egregious amount of blank space at the bottom of almost every page, so reading it can't be said to be a difficult task from the physical point of view. The problem I had was to find out what exactly it is about. Graves is very good with italics, with non-sentences, and with the use of those dashes (what are they called?) that are considered to be acceptable substitutes for actual punctuation these days. As the author of *Dowsing: Techniques and Applications*, *Needles of Stone*, and *The Elements of Pendulum Dowsing*, he is well-prepared to provide anecdotes to illustrate his points. I have to give you some quotations to illustrate why it is so difficult to find out what he is talking about:

- *A coincidence, it seems, has either no meaning at all, or far too much meaning.*
- *If someone asks you whether some event 'was real or a coincidence', the proper answer would be 'Yes'. Learning a skill is a magical process.*
- *Things have not only to be seen to be believed but also have to be believed to be seen.* (Very popular, used many times.)
- *Every one is always right, but no-one is ever right.* (sic)

Many sources are used for his foggily-presented arguments that we must accept that true reality is not limited to the reality of 'scientific' things that can be measured and predicted. Alternative medicine, fire-walking, psychokinesis, poltergeists, channelling, metal-bending of the Geller variety; all are put forward as proven, useable tools which should be considered on an equal level with scientific analysis and experiment.

The only item in the book which intrigued me was the reference to 'the "man in black" who handed over the design for the Great Seal of the United States'. Can any reader give me a source for this? As for the rest, it seems to be purely fatuous reasoning, using quotations from many questionable sources, to support the thesis that not every 'practical technology' is amenable to scientific study.

The interesting bibliography which, by the way, is counted among the numbered pages, includes *The Hitchhiker's Guide to the Galaxy*, a book called *SSOTBME* by Anon, Fort's *The Book of the Damned*, *The Grammar of Cookery*, *Tao Te Ching*, *Zen and the Art of Motorcycle Maintenance*, and two books by himself.

—Frank Chambers

Hedgehog logic

Stephen Jay Gould, *An Urchin in the Storm* (Penguin £5.99).

'The fox knows many things,' said Archilochus, 'but the hedgehog knows one big thing.' Very profound, but what does it mean? Stephen Jay Gould, palaeontologist, evolutionary biologist and author of *An Urchin in the Storm* admits that it's 'basically uninterpretable'. Gould, for some reason, believes that we 'Europeans' refer to hedgehogs as urchins. In the context of his book, Gould claims that the way of the hedgehog (a.k.a. urchin) is the way of coherence, whilst the way of the fox is flexibility. Coherence, we are told, is the common theme of the book. The storm in the title refers to muddled thinking, perverse thinking, and wrong thinking of all sorts.

As Gould turns the scorching searchlight of his criticism on authors of subjects ranging from evolution, social history, and geology to politics and health care, the reader might begin to wonder whether they are in the hands of a fox in hedgehog's clothing.

This book starts with a preface which vilifies book reviewers. '... for critics I care the five hundred thousandth part of the tithe of a half farthing,' said Charles Lamb.

While for Gould: 'so many book reviews are petty, pedantic, parochial, pedestrian...' There follows a collection of eighteen essays inspired or precipitated in each case by one or more books. In many cases the books reviewed are themselves reviews of books. A case of: 'Larger fleas have little fleas, upon their backs to bite 'em. And little fleas have lesser fleas and so ad infinitum'. In view of the fact that Gould has ignored his own warnings, this reviewer ('ad infinitum', no doubt) will continue.

The first chapter, 'How Does a Panda Fit', takes as its seed a review of *The Giant Pandas of Wolong* by George B Schaller and others. This is an—apparently orthodox—study of the way Pandas have become adapted to their bamboo environment. Gould attacks the authors for propagating a self-fulfilling argument. Pandas live in and eat bamboo, the authors seem to argue, therefore all aspects of panda biology must be adaptations to this lifestyle. If a panda has no body fat ... then this is because this is an adaptation to their stable food supply. Surely, argues Gould, another possibility is that pandas would be fat if they could, but they cannot derive enough calories from their low grade food they eat (bamboo). This 'adaptationalist' fallacy is exposed frequently in the following chapters.

In Chapter 2, 'Cardboard Darwinism', Gould leads a three pronged attack on sociobiology. He applauds Philip Kitcher who takes on the great guru of the synthesis of behavioral and genetic evolution E O Wilson, and, in his book *Vaulting ambition* meticulously dissects his examples and arguments until there is nothing left. He cheers as Anne Fausto-Sterling (in *Myths of Gender*) exposes sociobiologists suppressing evidence which does not fit with their neat theories. Fausto-Sterling is the Fairy Godmother to the 'null-data' points: the Cinderella of scientific papers: never written up or published. She has found sufficient to seriously cast doubt upon the authenticity of such accepted sociobiological paradigms of the genetic basis of sexual differences as brain lateralisation and visuo-spatial co-ordination.

Finally, Gould denounces Bettyann Kevles as she falls into the old adaptationist trap of 'it's there therefore it's an adaptation' in her book *Females of the species: sex and survival in the animal kingdom*.

This book is a distillate of the adversarial competition which characterises the limping progress of orthodox sciences. This is in striking distinction to the quacks and charlatans whose 'theorems' are taken as dogma by their gullible disciples. However, some (perhaps more naïve) skeptics will be shocked to find so many of the planks that make up the orthodox platform riddled with rot.

You will not necessarily agree with all of Gould's criticisms, and I suspect you will be frustrated by the absence of the texts on which his essays are based. If so, then well and good, for critical or obsequious, a successful review is one which makes you go and buy the book. Like this one.

—Michael Leahy

Events

'Phantoms of the Sky' UFO Conference, Sheffield Central Library Theatre, 14–15 July 1990, sponsored by The Independent UFO Network.

Unfortunately I was only able to attend the conference on the first day, and so my review must be selective. However I did gain a few insights which I hope may be of interest. The speakers I missed on the Sunday were Elsie Oakensen, from Northamptonshire, giving an account of a personal UFO experience, Paul Devereux, the author of the books *Earthlights* and *Earthlights Revelation* speaking on the topic 'Earthlights and Ufology', and the second lecture by the well known American author Bud Hopkins speaking about 'UFO abductions'.

The conference was attended by about 200 national and international delegates, and they very nearly filled the theatre. After the opening welcome address by Philip Mantle from the Independent UFO Network, first to speak was Andy Roberts. Roberts, by the way, has written a book in collaboration with Dave Clarke called *Phantoms of the Sky*, after which the conference itself was named. Andy and Dave are hardnosed sceptics who have no belief at all in the spaceship and alien monster ideas about UFOs. Instead, they believe them to be the modern counterparts of the age-old stories of fairies and demons. Andy went to some lengths to retell some of the stories of fairy abductions and missing time experiences reported by everyday people from the past, and he compared them with the UFO tales of today. They did indeed have a very familiar ring about them and some of the parallels drawn were remarkable, even down to the little things which some UFO proponents take as evidence of a real experience: for example, the bright lights, strange signs on doors and unearthly music. Even mass sightings of strange men and animals have all happened before, and taking the stories in the context of their times, they are no different in their basic contents to what we hear today. Andy and Dave suggest that within us all are the makings of such tales if we happen to get the right triggers at the right time, and that people having such experiences do *not* necessarily need a trip to the psychiatrist. At the conclusion of his talk Andy had to face some very hostile questions from a portion of the audience who didn't seem to share his ideas. One man said that he didn't come all the way to Sheffield just to be told that UFOs were nothing more than a matter for psychology!

The next speaker was Peter Hough, chairman of the Manchester UFO Research Association (MUFORA) who gave an account of the 'Ilkley Alien'—an alleged sighting of a UFO and its occupant on Yorkshire's Ilkley Moor. This resulted in a photograph being taken of the entity and an abduction account being later retrieved under hypnosis. This is a 'classic' case in all its details: photo very underexposed together with camera shake, compass needle reversed after the meeting, missing time from the memory of the 'contactee', and even the late night call at his home

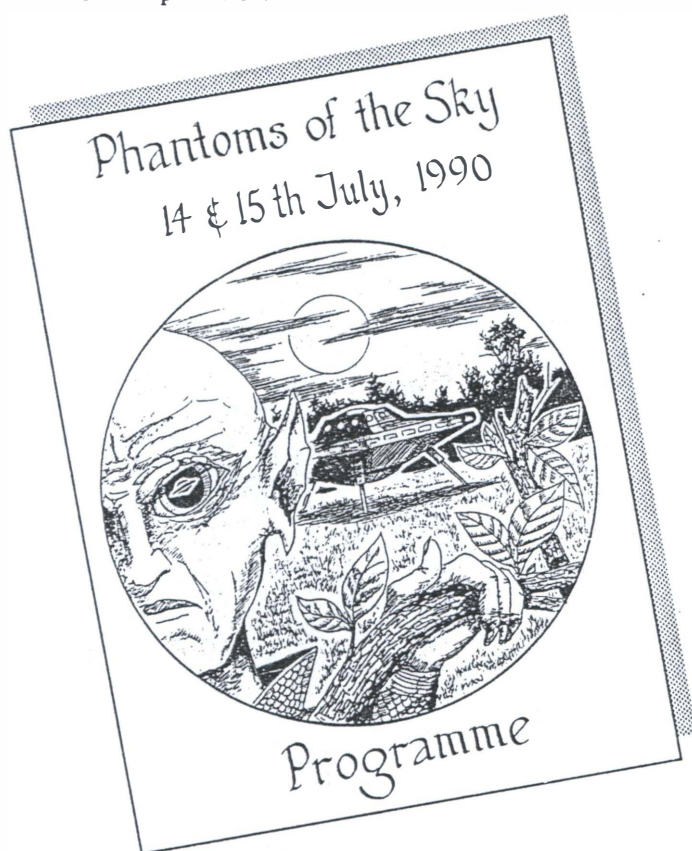
by two men who said they were from the MOD asking him questions (later the MOD denied ever having heard of him). I was not very impressed by the story or the photo which showed *something* on the moor—but that's about all. An expert at UMIST said that such a reversal of the compass could be achieved by anyone in their kitchen or garage if they knew how. As Peter Hough said, the whole story stands or falls on the photo, which so far has not been improved much by computer enhancement, so the jury is still out. It may be, but I think I'll put a few bob on a 'hoax' explanation.

for thirty years and I can't remember exactly how I got them—perhaps it really was aliens and not barbed wire!

On Hopkins' own admission, people who believe, or have been persuaded to believe, that they have been (or are regularly being) abducted by aliens have often undergone a deep change in their attitude to life. For example, seeing certain shapes may remind them of their alleged abduction experience. What is happening here? Are the stimuli serving as reminders of real physical experiences, or are they in fact stirring subconscious fears and anxieties, which are modified to fit the 'abduction' scenario? If, as Andy Roberts says, all these things are just 'phantoms of the mind', perhaps there might be some danger in getting people to accept them as actual occurrences? Hopkins himself inadvertently gave some support to this view. He read out a letter he had received from a woman who had read one of his books. She was having trouble getting her three and a half year old daughter to bed at night. The child had a fear of something but couldn't tell her mother what it was. The mother 'instantly related' to Hopkins' book and was writing to him asking if he could see her child and get the alien abduction story out of her, so she could come to terms with it. I've always thought that every child has a fear of awful something happening to them while they slept at some stage of life—I know I did. Would you tell your three and a half year old child 'Yes there is a bogey man who will get you when you're asleep, but don't worry you can tell your analyst what he did to you in the morning'?

I was disappointed that I could not attend the next day of the conference, since there seemed to be a few more sceptical speakers listed. However, I think it's clear that at least in some quarters, Ufology is at last getting away from the view that all UFOs are spaceships and is looking for more down-to-earth explanations, and that can only be a good thing.

—Chris Wright



After the refreshment break Bud Hopkins gave the first of his two talks on UFO abductions. His style of speaking involved showing a lot of slides in rapid succession and relating some of the details of the alleged abductions in a breathless 'gee whiz' manner. It soon became clear that all his case histories relied entirely on the testimony of the people involved and that the truth of the matter was decided by whether you believed them or not. Hopkins believes them. He also believes that thousands of people are being abducted by aliens who look just like the one on the front cover of Whitley Strieber's book *Communion* and who perform strange medical examinations on their victims. According to Hopkins, the scars left by these examinations are the best evidence that the abductions actually do take place. Indeed, he goes further than that by saying that anyone who has a scar on his body and can't remember how it got there was probably abducted. He has hypnotized people who have had the scars for as long as thirty years and under hypnosis the abduction story came out. He showed a lot of slides of the scars, but to me most of them looked like the scars that I've had on my body

UFO Brigantia

UFO Brigantia is the journal of the Independent UFO Network (IUN). It is published bimonthly and has 32 well illustrated pages. This magazine is a must for all serious researchers into the UFO phenomenon.

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Letters

Bird's-eye view

Crop Circles (Vol IV No 2). I've grave doubts about the vortices theory. Reasons: I've seen hundreds of vortices ('willy-willys' in Australia). Never seen one that just stayed put and rotated. Their bases wiggle (cf, tornadoes) and they wander around. So there should be far more zig-zag lines, wonky ellipses, cigar-shapes etc than perfect circles. But there ain't. Just wind-streaks, mostly.

Also, as the vortices theory requires crops and hilly ground, preferably, there should be lots in the Chiltern Hills. I flew over them for several years and for the past seven have extensively walked them. No crop circles in their ample fields, that I've spotted, anyway. And there are few vortices at night.

Historical data should be obtainable from the millions of flying hours the RAF put in, during the war, over our crops. (Put in 500 myself—never saw a circle). But will ask the Air Crew Association and report back.

Empirical solution? Why not ask the Army, as night-scout training, to get bods armed with image intensifiers and mini searchlights to hide, overlooking suitable crop fields, at night? Thus able to spot hoaxes, UFOs or vortex-circles forming, then spotlight the culprits.

L J Clarke
Uxbridge

Evolution vs. creationism

I am fascinated by the long running battle by Christian fundamentalists first to get the teaching of evolution banned in state schools in the USA and, later, to get equal treatment for

'Creation Science' in the schools' curriculum. (Anyone similarly interested will find intriguing the 28 page summing up in Dorothy Nelkin's book *The Creation Controversy* of the arguments, for and against, by District Judge W S Overton in a trial over Arkansas Law 590 (1981). His conclusion was that 'Creation Science' was not science).

Half a century earlier was the notorious Tennessee Monkey Trial of 1925 when a teacher (Scopes) was convicted of teaching evolution in a state school. A brief reference to this earlier trial in Michael Pitman's *Adam and Evolution* seems to be more favourable to the creationists than other brief references to the trial I have seen elsewhere.

I should like to judge for myself. Can any of your subscribers tell me where I can find a verbatim (or at least a full) account of this earlier trial? Mr Pitman may be correct in claiming that the scientific issues did not receive any sensible discussion, but I gather there were some entertaining and even hilarious exchanges!

G F Cooper
Bristol

Fact and fantasy

As a recent reader of *The Skeptic* I have the same thoughts as when I read the *Skeptical Inquirer*: what is the reason for people's beliefs in the paranormal and supernatural? I think a phrase from Eric Stockton's letter in the last issue is a key: 'This is impossible because I would not be able to understand it.' Extend this to 'I do not understand it, therefore it happens because of the supernatural', and you get the underlying thought process. Why should anyone think like this?

Maybe the answer partly lies in what is presented to us in childhood as real and unreal, and how the distinctions are drawn. Most children's tales are fiction and very many stimulate and stretch the imagination; especially gripping are tales of mythology, fairy tales and science fiction. Without these imaginary worlds life would be very dull for a child and they would grow up very unimaginative, but they are also well aware that these stories are not real and not part of the world we live in.

However, at some time they will be told by adults that there really are ghosts, gods, spirits and demons, horoscopes work and other such irrational beliefs. Many will be led to believe, *and told that it is a virtue to do so*, that there is a God who is an all-powerful being. How then do they decide whether He-Man is real or not? Is *Lord of the Rings* as true as the Bible? Are there really flying saucers?

Combine this with an education system which is more concerned with learning facts and testing memory than teaching people to think and work things out for themselves, and you have the perfect recipe for a sound belief in the supernatural, paranormal, religion and other irrational beliefs!

A S Edwards
St Andrews

Angry, but wiser

Almost every week in my local paper I see adverts for 'Psychics and Mystics Fairs'. Not long ago my curiosity got the better of me and I visited one. At three o'clock on a Saturday afternoon it was packed out. I spent some time browsing among the pendulums, crystals,

amulets and goodness knows what else, and chatting to the stall-holders, all of whom seemed very friendly, and quite normal. I think I'd been expecting to see witches flying round the ceiling! Seeing the popularity of the aura, tea-leaf and palm readers, I decided to throw caution to the winds and went to have my palm read. After about twenty minutes I emerged somewhat shaken, and ten pounds worse off. It was not the very generalised positive predictions about my life that Madame Whatshername made (*you will find a lifelong close attachment very soon*, etc etc) that bothered me. What upset me was the way she claimed to see the spirit of my deceased father standing behind me while we talked, and the fact that she concentrated on what is a sensitive subject for me. She could see that I was upset.

Afterwards, I discussed the incident with my partner, who is a confirmed sceptic, and discovered a point of view that I had not really encountered before. As we went back in detail over what the psychic had asked and how I had responded, it became gradually clearer to me that I had not had a 'psychic' reading at all: I had had a *cold* reading, and I had in fact supplied a lot more information about myself than I had intended to. Whether or not the 'psychic' genuinely believed she was 'tuning into my vibrations' or whether she was a faker, I cannot say, but for me the natural explanation is far more palatable than the supernatural version.

Although the whole incident left me feeling angry and manipulated, I am wiser as well. Keep up the good work, sceptics!

Barbara Huston
Manchester

My past life

I read with interest the article by Melvin Harris about regression as evidence for re-incarnation (*The Skeptic*, IV.4). I believe firmly in

re-incarnation. My own knowledge of my incarnation immediately proceeding this one was with me in my early childhood. As an adult some of my memories have been checked and found to be correct. This was done without hypnosis or regression.

I have had experience of regression and have either turned up nothing new or something particularly convincing to me. For example a fourteenth century life in the Steppes of Russia should, I feel, produce in me some knowledge of the language and dialect spoken. This I have been unable to recall.

Just as in this life I need a trigger to help me recall events I don't see why such a trigger should be denied when dealing with previous incarnations. One has to be scrupulously honest with oneself and one's surroundings in order to remember accurately. It doesn't bother me one jot if nobody else believes I died as Edith Noville Buckley in June 1946, because the proof is within me. I know I did.

Call it what you will but the rumblings of the overactive imagination of a bored person it is not. I haven't time to be bored and am far too busy to indulge in fantasy.

Wynne M Simister
Oldham

Eye witness

I am currently a PhD student of Chemistry at the University of St Andrews, and I have absolutely no axe to grind regarding UFO sightings. I would like to relate to you an incident which happened to me four years ago and which as a student of science I found interesting, for it seemed to me to explain a certain number of UFO stories that are circulating in our society.

I was walking our dog on the sandhills close to my parents' house in Ainsdale, Merseyside. The weather was sunny with broken

cloud, and it was early afternoon. I came over the top of one of the sandhills, looking southwards and saw an incredibly bright sphere of light. At first I assumed that it was just a plane from the RAF base close by, but as I watched it, it shot all over the sky at very fast speeds and turned in incredible angles, often seeming to reverse directly the path it had 'flown' without any noticeable acceleration or deceleration. It had all the hallmarks of the classic bright light that shoots all over the sky and has entered UFO mythology. I have to admit that it did occur to me that perhaps I was seeing a UFO, as I could not catalogue its behaviour as that of any object I knew that flew.

However, during one of its 'hovering' instances I noticed that it wasn't in fact hovering, but jiggling slightly and as I did so it shot off, *but* in the direction that my eye was inclined to go. It dawned on me that whatever this object was, my eye movement was controlling its flight! I spent a number of minutes 'moving' the sphere of light around the sky, until a cloud's shadow passed over me and the sphere disappeared, only to reappear when the cloud passed on and the sun was once more in my eyes. I continued playing with the light until it appeared to burst and disappear.

It seemed to me then, and now, that I had a small bubble in the fluid that sits on top of the eye and acts as a lubricant between the eye and eyelid. This acted as a lens to focus the sunlight onto my retina as a sphere of light and when it burst, it caused the 'UFO' to burst too.

I would like to emphasise that what I saw was extremely real, in the sense that if I hadn't made the connection between the fact that it was my eye movement that caused it to jump around, I would probably come to the conclusion that I had seen a UFO.

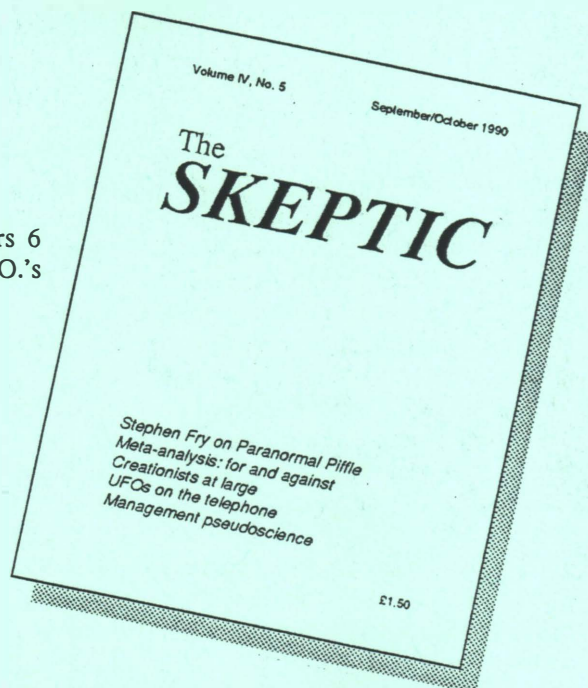
Rob Lee
St Andrews

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