

Hilary Evans' Paranormal Picture Gallery



EVENING CLASSES, 1900's STYLE

Most of us dismiss the time we spend asleep as time wasted. But it need not be so, says the Psychic Research Company of New York, who in 1900 invited subscribers to take their course to develop their brains in all kinds of helpful ways. Murmured suggestions from your mother, for instance, could have filled your infant brain with all the facts you would one day need to win University Challenge, Mastermind, and the trivia quiz in the Rose and Crown.

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Editorial

Lindsay Kallis and Chris French



AS CHILDREN, we are taught to believe that we live in a magical world. A world where rabbits appear out of thin air, our ears are full of coins, and the likes of Santa Clause, the Easter Bunny, and an ethereal Tooth Fairy are as real to us as scraped knees and homework. We abandon these beliefs as we grow older, however, does it not seem that we fill the 'mythical void' that is left with ideas that are equally as fanciful? Psychics, creatures from the abyss, divination, and deities are all very real to many people. It seems as though our whimsical childhood fairy tales become replaced by socially acceptable adult fantasies; we may be taller and older, but we are still living with one foot in never-never land. The need to believe in a world that defies the natural laws that science demonstrates seems hard for many to escape. Recent research has shown that a *sceptical mind* is not the default of our nature; it appears that we want to believe. Perhaps part of our propensity for fallacious reasoning lies in education, or a lack thereof. Thinking rationally and critically is something we need to be taught; and it starts with what we tell our children. That's not to say that we need to kill off jolly St. Nick, but if we teach children how to ask questions, give them the courage to criticise, and allow them to explore the natural world, perhaps we can impart a positive change in our society's beliefs. It's time that we understood the history of our myths, and not our myths *as* history.

The James Randi Educational Foundation (JREF) is most definitely playing its part in bringing rational thought and scepticism to a wide audience. Through educational seminars, scholarships, and conducting research into paranormal and pseudoscientific claims, JREF is actively "creating a new generation of critical thinkers" (www.randi.org). The Amazing Randi himself recently made a rare visit to the UK and *The Skeptic* and *Skeptics in the Pub* organized *An Evening With James Randi and Friends* (see Jon Cohen's report of the event on p. 21). The sold-out evening was no doubt a high-

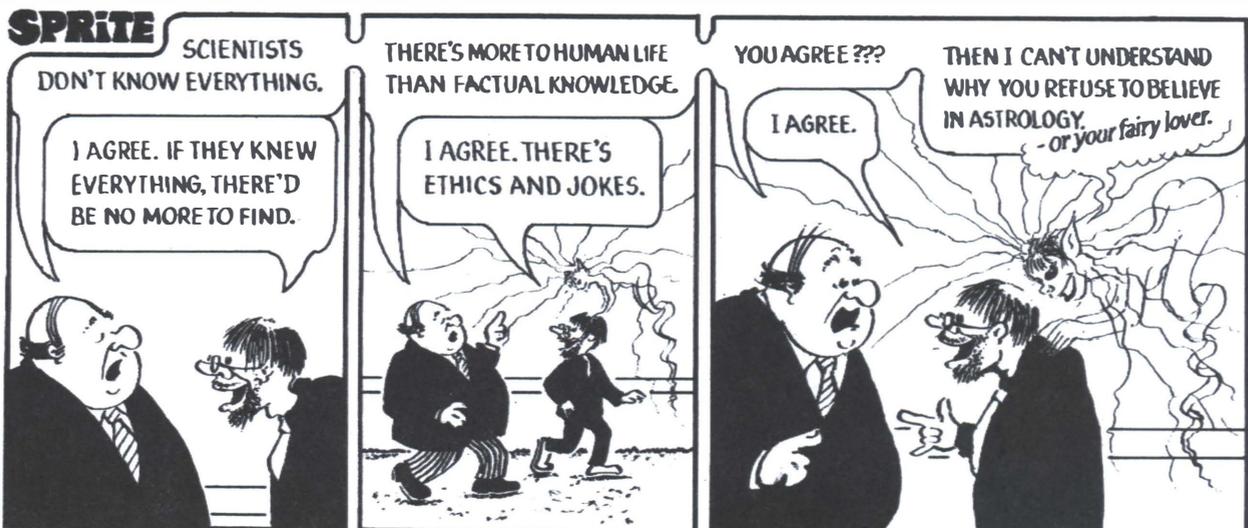
light of the year for many star-struck sceptics, and we are delighted to tell you that we raised almost £3000 for JREF; the money will undoubtedly be put to good use. If you missed out on the event stay tuned, because Randi is rumoured to be coming back to the UK in the autumn! It was overheard that evening that "If sceptics had a god, he would be called *Randi!*"

And speaking of mythological beings, Benjamin Radford (p. 18) takes us across the Atlantic to a small community in Eastern Canada that claims to be host to its very own lake monster. Radford shares with us his investigation into the history of "Cressie" (not to be confused with our own dear "Nessie"), and provides some alternative hypotheses as to what could really be lurking in the depths of Crescent Lake.

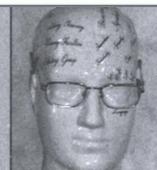
Our feature article in this issue addresses the science that has been delving into the relatively unexplored area of dying and consciousness. While the claims of a recent study published in *The Lancet* on near death experiences appear to challenge what we know about consciousness and the dependence of the mind upon the brain, Dr. Jason Braithwaite (p. 8) argues that this just isn't the case. In his extensive review and critique of this study, Dr. Braithwaite exposes the logical weaknesses and misconceptions at the heart of the authors' conjectures. At the end of the day, this is what scepticism and science are about; questioning and critically examining what others claim to be true.

With all the work and effort that are going into re-launching *The Skeptic*, we find ourselves asking "What does it mean to be a sceptic?" We'd like to take this opportunity to invite you to tell us how you came to call yourself "a sceptic", and what it means to you. Send your responses to edit@skeptic.org.uk. We'll be publishing some of them in the next issue of the magazine, and we look forward to hearing from you!

With best wishes,
Lindsay and Chris



Hits and Misses



Retired at twelve years old.

The Million Dollar Paranormal Challenge was first pledged by James Randi on 6 March 1998 and during its existence to date, none of the applicants have passed even the preliminary tests. On 6 March 2010, however, the challenge is to be retired and the collective sigh of relief from fraudulent performers might even faintly shift the Earth's axis of rotation (of course that's probably unlikely given the inherent difficulty in accurately targeting a single focal point so as to avoid any cancellation effects from equal and opposing forces, but you get the idea). In any case, the termination of the challenge creates a rather notable absence in the sceptics' default defence against claimants of all things supernatural.



Although it will no longer be possible to follow Sylvia Browne's 'progress' with the challenge or to learn of further perfectly reasonable excuses for not taking JREF money and scientific acclaim, there are a number of organisations that still offer prize money for successful applicants.

In the UK, the Association for Skeptical Enquiry (ASKE) is currently offering £14,000 to anyone successfully demonstrating psychic powers, and the Indian Skeptics are offering 100,000 Rupees to be awarded by B Premanand himself, for any psychic, supernatural or paranormal demonstration.

The list of prize funds continues too: \$100,000

(AUS) from Australian Skeptics (including \$20,000 for anyone who nominates a successful applicant), \$50,000 (US) from CFI's Independent Investigations Group and, bizarrely, \$2,500 (US) from Scientific American for a photograph of a spirit or a "visible psychic manifestation" under test conditions.

On its website, ASKE provides a list of 20 worldwide challenges which, at the time of publication, collectively offer over \$1,500,000 in prize money in addition to the JREF prize

Randi states that the reasons for the discontinuation of the JREF challenge are to make available more funding for future projects and scholarships, and as he says in the first edition of this year's *SWIFT*, it will also bring an end to "hundreds of poorly-constructed applications, and the endless hours of phone, e-mail, and in-person discussions we've had to suffer through". So while one challenge that grew from a humble \$100 (US) ends, many more are ready to continue in its place.

Blind guesswork?

The Ganzfeld procedure has its origins in 1930s Gestalt theory but has been used consistently as an experimental method for testing telepathy and remote viewing since the 1970s. In brief, the experiment is typically conducted using two rooms, in one of which the individual acting as the receiver is placed in effective perceptual isolation. They sit comfortably in a chair under a red light, with half ping-pong balls covering their eyes and listen to white noise (which is also coincidentally often used during military interrogation). Meanwhile, a set of images (or video clips) is randomly selected from a large pool of such stimuli and a particular target stimulus is randomly selected from that set. The 'sender' then concentrates on the chosen target in an attempt to telepathically transmit stimulus information to the receiver. The receiver, who typically enters a mildly altered state of consciousness, is asked to free associate any images or sensations they experience during the isolation, and is asked to identify target images when taken out of the Ganzfeld state afterwards.

The technique provides little information about the physical experiences of the receiver when in the Ganzfeld state, but a study conducted by Harvard researchers and published in *The Journal of Cognitive Neuroscience*, combined technological and traditional measures to provide exactly that.

This particular study used functional magnetic resonance imaging (fMRI) to observe the haemodynamic response and neural activity of participants who were presented with two images (two-alternative forced-choice task). Another individual, either biologically or

emotionally associated with the receiver, focused on the target image which was randomly selected from the two and attempted to transmit this to the receiver.

Whereas the original Ganzfeld tests rely substantially upon participants' ability to match visualised images to target images, usually in the presence of distractor images, the imaging technique was hypothesised to highlight any telepathic effect as participants' brain activity (as measured by blood-oxygen level changes) would be distinctly different in response to novel images than in response to familiar ones. Previous (non-paranormal) research into familiarity effects had already reliably demonstrated such effects.

Perhaps it is not a great shock to learn that the results were in line with chance expectation, but despite the counter arguments that ESP involves fundamentally different neural activity to normal perception, or that ESP effects are too weak to accurately measure in this manner, the study retains its methodological merit. If significant neurological differences are exhibited when studying 'normal' senses, perhaps a null result when testing ESP will add further weight towards a critical analysis of the alleged phenomenon. Or perhaps it's about time 'real' psychics were tested. I'm sure \$1,000,000 should cover the research costs.

Only 64 years to live

Dr Yoshiro Nakamatsu plans to die in 2072, which is no small feat, since he will be celebrating his 80th birthday this year. Nakamatsu, or Dr Nakamats as he is more widely known, has no apparent morbid fascination; this date has simply been borne out of his research and his theory of devoting equal attention to food, drink, sleep, muscle training, spirituality, and sex.

The Japanese inventor has over 3200 patents registered to his name, earning him a place in the *Guinness Book of World Records* and beating Thomas Edison, who registered a mere 1093. Dr Nakamats was the mind behind the digital watch, the floppy disk, the CD (devised because the popping noise from his vinyl copy of Beethoven's Fifth was a distraction from inventing), the DVD and the taxi-meter. He is also the only person to have licensed 16 patents to IBM. Nakamats eats only one meal per day consisting of no more than 700 kilocalories, and since 1971 has photographed every meal in order to recall those which might stimulate the best ideas.

Dr Nakamats is not exactly 'normal'.

Nakamats is currently developing many projects including: an energy self-sufficient house, bouncing shoes to decrease physical stress caused by walking, snack foods to improve mental performance, a revolutionary fluid to make sex more enjoyable (and designed to rectify Japan's falling birth rate), and paradoxically, a condom again intended to heighten pleasure, but also to rectify the world from AIDS. The common factor

between all of these concepts, however, is that Nakamats devised them whilst underwater.

It would seem that the man who sleeps only four hours per day, also finds inspiration whilst becoming slightly hypoxic. Nakamats immerses himself underwater in a feat of endurance in his own swimming pool until desperate for air or until ideas are forthcoming. He then emerges and scribbles the ideas on a Plexiglas tablet before continuing about the day.

In order to fulfil such a varied lifestyle with so little sleep, Nakamats naps in a device dubbed the *Cerebrex*, which is of course his own invention. It is a chair which, although comfy in appearance, also allegedly increases the blood circulation to the brain and increases synaptic activity in the brain through pulsating sound pro-



duced from headrest to footrest. Due to the unique technology contained within the recliner, Nakamats claims one hour in the chair has the same effect on the brain as eight hours of sleep.

The theory of power napping, however, is not new. Polyphasic sleep gives a supposed method to reclaim up to six hours that would otherwise be spent sleeping. It involves sleeping for a core period of a few hours and then taking strictly timed naps of 20 minutes or so throughout the day. In many cases a seemingly polyphasic schedule such as the one undertaken by Nakamats can simply be biphasic (normal) sleep with longer periods of sleep deprivation, but why so many notable individuals, such as Edison, DaVinci, Churchill, Franklin, and Napoleon, have been rumoured to keep odd sleeping patterns still remains unanswered.

Skeptic at large . . .

Wendy M Grossman



eHealth

I'VE SPENT the last couple of months interviewing people on the subject of ehealth. Mostly, these are companies who want to sell the NHS things – implantable medical devices that send patient data to doctors over a secure connection, the networking behind those connections, computerised management systems, and so on. The good news is that all of these companies are serious medical companies. So far, not one has proposed sending crystal vibrations across the Internet via synchronised concentration or proposed to supply home homeopathic remedy manufacturing kits.

Instead, the modern pacemaker has sensors and an internal processor to store the data the sensors collect, plus a wireless connection that lets the patient pass a mouse-like antenna over his chest to read the data, which can then be sent down an ordinary telephone line to a secure website. There, the doctor can read and assess it. The idea is a win all round: the patient doesn't have to travel to the hospital, and the doctor can spend less time on routine visits and accordingly more on the patients who really need his time.

And that's just one example. We're talking hospital-supplied tablet computers that run video games as well as allowing hospital staff to show you your patient records and graphical pictures of your innards for discussion. We're talking digital radiography, electronic patient records (with all the privacy issues those involve), turning pathology labs from a cottage industry into a modernised hub-and-spoke network of high-volume processors, and slapping barcodes or radio-frequency identification (RFID) tags on everything from patients to scalpels to reduce wastage, improve safety, and cut costs in the supply chain. If it all works it will be fabulous.

We've generally said that the growth of so-called alternative medicine has been fuelled by the increasing remoteness of today's medical service. Personal relationships with doctors are becoming as rare as personal relationships with bank managers. The average GP's practice has thousands of patients, only the unhealthiest of whom probably know their doctors at all.

Oddly enough, the remote monitoring techniques the ehealth companies are talking about as necessary to make the NHS's resources cover the needs of the population could take this trend either way. Patients with devices that can be monitored remotely may in fact feel in closer touch with their doctors if they get frequent reports (even if those reports are automated) about their condition than they do now with two to four routine appointments a

year. On the other hand, it's also easy to imagine that patients will be getting their automated reports from service centres based in India, where the staff will be reading treatment instructions from scripts.

I'd gotten as far as this when Simon Singh handed me a copy of the new book he's written with Edzard Ernst, *Trick or Treatment? Alternative Medicine on Trial*. And there, very helpfully, on page 65, as part of a discussion of the placebo effect and the importance of double-blind trials, they write about the Hawthorne effect: "It has been shown that the act of close monitoring can lead to a generally positive change in a person's health or performance."

It seems logical to think of the placebo effect as deriving from alleviating fear and anxiety and the key is trusting your doctor. Of course there are always physical causes, but it's the rare condition that is improved by getting the patient to panic. Close monitoring seems like an obvious way to diminish patient anxiety in a lot of cases.

The IT-skeptics among you will already have spotted the bluebottle in the unguent: since when does IT work the way we're told it's going to? I would do these interviews during the day and then wander the Web at night, finding the stories the vendors didn't mention. For example, Choose and Book, the electronic system intended to give patients control over doctors' appointments, entertainingly sent the wrong appointment details to 340 patients. Fun! (OK, be fair, that's out of seven million appointments it's made.) And that fancy new implanted defibrillating gizmo? A bunch of MIT guys discovered they could hack into the stream of data in transit. Dismiss the likelihood of this all you like; if your doctor is seeing you remotely, you are your data, and it had better be secured against tampering.

Of course, no one gets to open up someone's chest and plonk in a medical device without regulatory approval. But as I understand it, what gets studied is the efficacy of the device itself – does it synchronize the chambers, or defibrillate, or whatever it's supposed to do? As far as I'm aware, other than anecdotal evidence no one is comparing the outcome of remote monitoring versus traditional hospital appointments. Let's leave aside my morbid fantasy that as resources get tighter some bean-counter will come in and point out that if patient data can be read and assessed remotely, it might as well be done in Bombay instead of Basingstoke. Can the placebo effect survive the Internet?

P.S. I can highly recommend Singh and Ernst's book. Good stuff.

Towards a Cognitive Neuroscience of the Dying Brain

Jason J Braithwaite offers an in-depth analysis and critique of the survivalist's neuroscience of near-death experiences

Introduction

THERE IS a growing perception that the existence of near-death experiences (NDEs) poses a serious challenge to current scientific understandings of the brain, mind and consciousness (Braude, 2003; Fenwick & Fenwick, 1995; Parnia & Fenwick, 2002; Parnia, Spearpoint & Fenwick, 2007; Parnia, Waller, Yeates & Fenwick, 2001; Ring, 1980; Sabom, 1998, 1982). This was reaffirmed recently in a high-impact publication which received world wide attention (van Lommel, van Wees, Meyers, & Elfferich, 2001). This is in some friction with the dominant view from mainstream neuroscience; that the mind is, what the brain does (for comprehensive reviews, see Gray, 2004; van Hemmen & Sejnowski, 2006; Kanwisher & Duncan, 2004). According to the current scientific view, consciousness is an emergent property of the human brain in action. Within mainstream science, this is hardly a controversial or indeed unsupported viewpoint.

Like a number of studies before them (Fenwick & Fenwick, 1995; Parnia & Fenwick, 2002; Parnia, et al., 2001; Ring, 1980; Sabom, 1998), van Lommel et al. (2001) argued that their NDE research findings support the need for a radical revision of mainstream views concerning the relationship between the brain and consciousness. The implication is that the mind may be separable from the brain and hence we may all survive bodily death (known as the survivalist position). In contrast, other researchers have suggested that these experiences are hallucinations, the final visions produced by a massively disinhibited and dying brain (Blackmore, 1996, 1993, 1992, 1990; Braithwaite, 1998; Carr, 1982, 1981; Jansen, 1996, 1990; Saavedra-Aguilar & Gomez-Jeria, 1989). Although the various dying-brain accounts may concentrate on contributions from different mechanisms, none assume that mind is separate from brain.

The nature of the claim being made by the survivalists should not be underestimated. If true, it would require a truly radical revision of current neuroscience and the known laws of physics. To support such a radical view one would ideally require radical evidence of high quality. Did van Lommel et al. (2001) furnish their interpretations with such evidence? No. Despite its impact in NDE circles, the van Lommel et al. study provides no evidence that human consciousness survives bodily death. This paper briefly examines the factual and logical errors present in the analysis proposed in the van Lommel et al. study. It should be noted that the criticisms outlined here for that study also apply to

the other studies promoting the survivalist position which are based on similar arguments.

The study of Pim van Lommel et al. (2001)

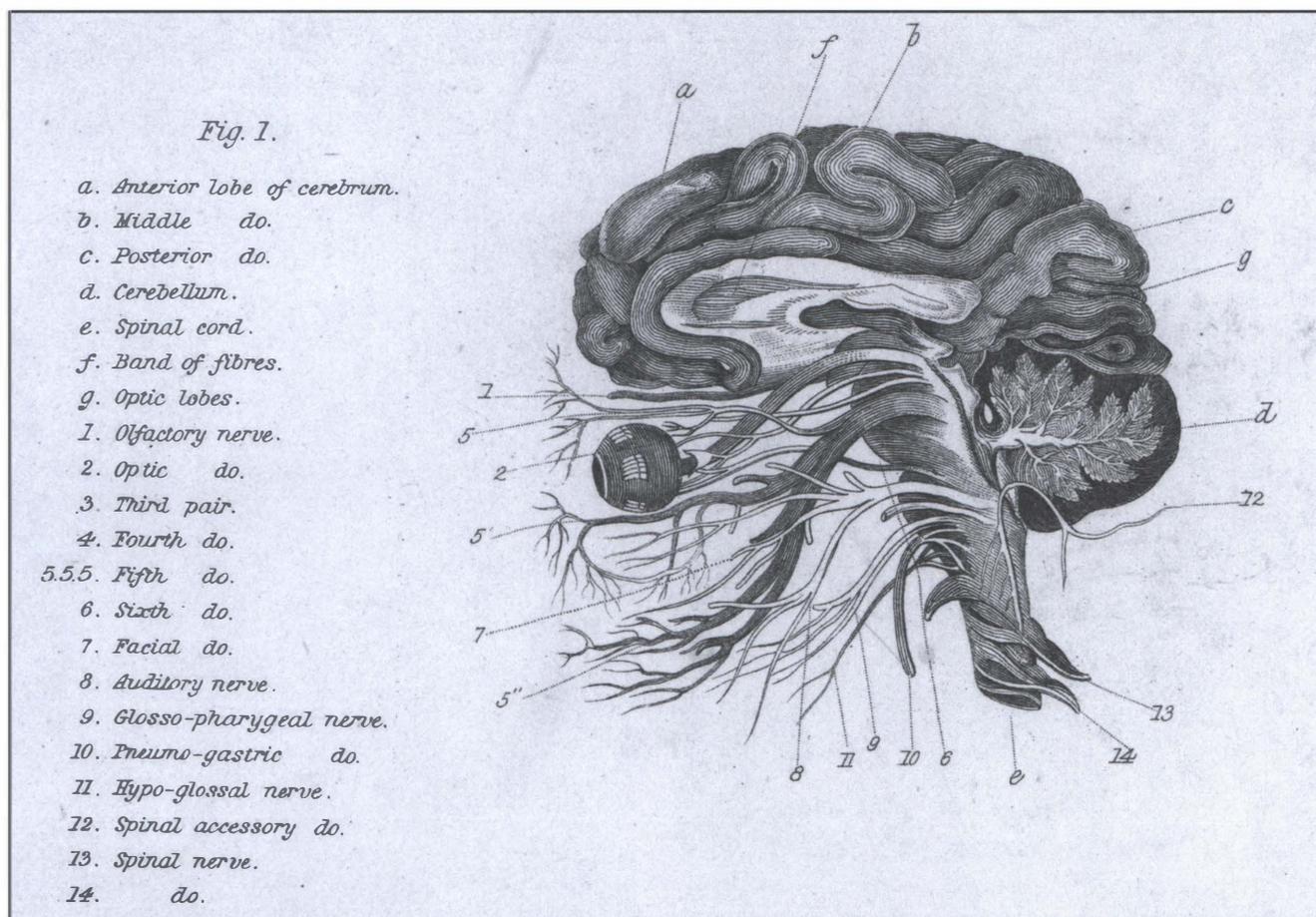
Methodologically speaking the van Lommel et al. (2001) study makes a useful contribution. They carried out a prospective study of 344 successfully resuscitated cardiac patients, 18% of whom reported NDEs (12% reported core NDEs). They investigated a host of factors, including demographic variables, age and medical history, and also interviewed patients a number of times over an eight-year period. There is certainly a wealth of useful data gathered by this study and researchers interested in the NDE would do well to consult this work. However, the real problems with the van Lommel et al. study are not so much related to their methods, but their interpretations and conclusions.

Survivalists have repeatedly misunderstood and misrepresented the dying-brain hypothesis when trying to argue against it

Based on their findings, van Lommel et al. (2001) concluded that we now require a new approach to consciousness – one that gives provision for non-irreducibility of the mind to the brain. In other words, the mind is not what the brain does and may indeed be independent of it. This neo-dualism is worrying. It is worrying as it appears to be primarily based on a potent combination of both factual and logical errors concerning the role of the brain in mental experience. The present paper will argue that the conclusions van Lommel et al. propose are at least premature and are at most unfounded. As such, the van Lommel study poses no serious challenge at all to current neuroscientific accounts of the NDE.

Misunderstandings over the role of anoxia: The 18% claim does not support survival

Survivalists have repeatedly misunderstood and misrepresented the dying-brain hypothesis when trying to argue against it (see, e.g., Fenwick, 1995; Fontana, 1992; Parnia & Fenwick, 2001; Parnia et al., 2001; Smythies, 1992). The van Lommel et al. study was no exception. Fundamental to van Lommel et al.'s argu-



Do recent studies of the near-death experience seriously undermine current neuroscientific assumptions concerning the relationship between mind and brain?

ment against the dying-brain hypothesis was the observation that only 18% of patients actually reported an NDE. Apparently (according to van Lommel et al.), this supports the case for a whole new approach to consciousness (see also Fenwick & Fenwick, 1995; Fontana, 1992). I disagree. Their reasoning was as follows. They argued that if cerebral anoxia was crucial for causing these experiences, and these patients experienced the same level of anoxia, then all should have reported NDEs. They state (van Lommel et al., 2001, p. 2039):

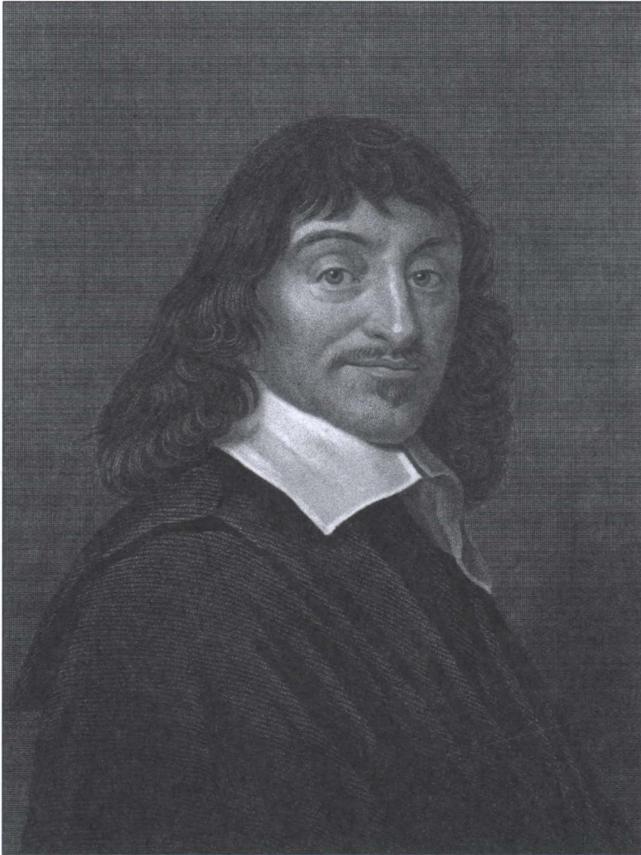
With a purely physiological explanation such as cerebral anoxia for the experience, most patients who have been clinically dead should report one.

Subsequently, they claim (van Lommel et al., 2001, p. 2043):

Our results show that medical factors cannot account for occurrence of NDE; although all patients had been clinically dead, most did not have NDE. Furthermore, seriousness of the crisis was not related to occurrence or depth of the experience. If purely physiological factors resulting from cerebral anoxia caused NDE, most of our patients should have had this experience.

From this, van Lommel et al. argued that, as only 18% reported NDE, this is clear evidence against the idea that the experiences are due to a dying brain. If this was the case, then all comparable patients should have reported an NDE. From this point, it appears to have been a small and 'logical' progression to directly infer that these experiences must be of paranormal origin and that these experiences index some form of survival of consciousness. This analysis is unsupported, illogical and, academically speaking, misleading.

Before going any further, it is important to be clear that van Lommel et al. (2001) provided no direct measures of anoxia for anyone in their sample. The presence and level of anoxia was indirectly inferred via experiential components provided in questionnaire responses and medical information regarding the nature and duration of the cardiac arrest. While one can accept the general essence of this reasoning, the method is certainly indirect and highly problematic. As a consequence, the claims of the study go far beyond what the data were capable of showing. No hard claims over the levels of anoxia should have been made when there was little or no attempt to measure it directly. This is problematic for van Lommel et al., as their fundamental claim rests on the assumption that patients had comparable levels of anoxia (something which was never shown to be the case). There was no direct evidence, and hence no real reason to assume, that this was the



René Descartes' name will forever be associated with the concept of dualism – but it has yet to be proven that the mind can be separated from the brain

case. As such, the whole rationale of this claim is undermined. While we can accept that those patients whom have suffered longer periods of cardiac insufficiency are more likely to have received greater levels of anoxia, we have no idea what those levels were in each case, or indeed that they were comparable. Comparing patients who have undergone similar durations of cardiac arrest is also no direct metric at all of the balance of blood gases in the brain, as resuscitation methods, their duration, and their efficiency will have varied considerably (not to mention the physical differences across patients).

Secondly, and perhaps more worryingly, the dying-brain hypothesis makes no such direct claims about the level of anoxia *per se*. Blackmore (1996, 1993, 1992, 1990) is quite clear on the matter that it is the *rate* of change or rate of anoxia onset that is important, not the overall level reached (see also Woerlee, 2003, for further evidence). If the onset of anoxia is too fast, patients simply lose consciousness and black out. Here, no conscious experience or memory would occur. With more prolonged rates of onset, the patient can seem somewhat confused and dazed. However, an intermediate level of change seems more conducive to intense altered states and NDEs (Appleby, 1989; Blackmore, 1996, 1993, 1990; Woerlee, 2003). This was a clear point made explicit by Blackmore, who also outlined the many different types of anoxia and their experiential

consequences yet this is either completely missed or misunderstood by van Lommel et al. Therefore, the whole logic of this position is based on a false and vastly oversimplified premise concerning the dying-brain hypothesis.

Thirdly, van Lommel et al. also totally ignored the degrees of within-brain and between-brain heterogeneity which would have implications for the degree of anoxia present, its rate of onset, and how it could impact on human experience. For example, in terms of within-brain differences, Blackmore (1993) noted that, as well as there being many different forms of anoxia (that have diverse neurophysiological consequences), any given rate of anoxia can impact on different brain areas disproportionately due to cell proximity to arteries and capillaries, to localised cell density, connectivity, and indeed the current levels of demand and activity in the specific neural systems being affected (Blackmore, 1993, 1990; Woerlee, 2003). In a structural sense, differing brain regions have differing numbers of neurons, with diverse connections and characteristics, all of which have differing oxygen demands. In a functional sense, levels of activity across neural systems within and between brain regions will not be matched – and so certain areas will be more susceptible to anoxia than others – based on the current processing demands taking place. In terms of between-brain variability, one illustrative line of evidence is that air-force pilots have been shown to have different thresholds of G-LOC and can tolerate (within a certain degree) a different level of stress and anoxia before losing consciousness (Whinnery, 1997, 1990; see Blackmore, 1993, for a discussion). Under these circumstances the amount of G-force can be controlled, yet clear differences across individuals exist. These differences reflect important physiological characteristics which clearly interact with external stressors. So a given level of anoxia can impact on experience differently across individuals. The van Lommel et al. study ignores these well known and well documented aspects of the dying-brain account.

Finally, a further logical problem is that it is not at all clear how an afterlife hypothesis actually explains the 18% rate of NDE. Surely, if an afterlife existence were real, all those in a position to glimpse it would do so? In other words, if the afterlife existed in some real sense, the real question is why did only 18% glimpse it? Indeed, is it not more of a problem for the afterlife hypothesis that only 18% have reported such experiences? Van Lommel et al. say nothing about this and as such no viable survivalist case was ever made for why only 18% of patients reported NDEs. At the very least, this seems to be an opportunity lost by the authors.

Misplaced confidence in EEG measurements

Within NDE research, a number of investigators have argued that a flat electroencephalogram (EEG) reading can be taken as evidence of total brain inactivity (and van Lommel et al. recruit this argument into their inter-

pretation; Fenwick & Fenwick, 1995; Parnia & Fenwick, 2001; Parnia et al., 2001; Sabom, 1998). This claim is totally incorrect. It is certainly the case that a flat cortical EEG would be indicative of a brain that is in some trouble. Assuming no technical error or problems with electrode contact, a flat EEG is far from desirable. However, the assumption that a flat EEG can be taken as strong evidence of global and total brain inactivity is unfounded. (It is also noteworthy that the studies making large claims about flat EEGs provide no information regarding the level of gain employed on the EEG device, assuming they were digital-QEEG devices. This would seem important as any EEG can become almost flat with the gain turned to a minimum. A flat EEG at maximum gain would be more indicative of neocortical inactivity, though again, not full-brain inactivity).

Unless surgically implanted into the brain directly, the EEG principally measures surface cortical activity. The waveforms seen in cortical EEG are largely regarded to come from the synchronistic firing of cortical pyramidal neurons. As such, it is entirely conceivable that deep sub-cortical brain structures could be firing, and even in seizure, in the absence of any cortical signs of this activity (for evidence based on electrical stimulation and seizure propagation, see Gloor, 1986; Gloor, Olivier, Quesney, Andermann, & Horowitz, 1982). Indeed, evidence reviewed by Gloor (1986) argued that inter-ictal discharges in the hippocampus or amygdala alone were more than sufficient to produce complex meaningful hallucinations – no involvement from the cortex was necessary!

A related idea is that seizure-based hallucinatory EEG patterns have been absent from the background EEG in some instances of NDE, even when the EEG itself was not flat (Fenwick & Fenwick, 1995). By this account, if the NDE was a hallucinatory process based in disinhibition, then the logic is that such disinhibition should be clearly visible in the EEG at that time.

However, the emerging evidence is somewhat unhelpful for the survivalist. Tao, Ray, Hawes-Ebersole, and Ebersole (2005) compared EEG activity from surgically implanted electrodes placed in or around deep sub-cortical regions of epileptic patients, with cortical EEG electrodes placed on the scalp of the same patients. The results were quite surprising. Tao et al. showed that for 90% of cases, large amplitude paroxysmal firing needed to recruit 10 cm² of brain tissue in order to show up against background cortical EEG traces. In other words, large seizure-based activity was being recorded by the surgically implanted electrodes (indexing clear and widespread brain-seizure activity) which was completely absent from scalp-based EEG traces until it propagated through and excited 10 cm² of brain volume. This is a considerable amount of brain tissue.

Furthermore, a recent study that employed both EEG and brain-imaging (fMRI) techniques to explore seizure processes found significant increases in localised cortical neural activity (indicative of a seizure) in the

fMRI BOLD (blood-oxygen-level dependant) response, which was completely absent from the EEG data (Kobayashi, Hawco, Grova, Dubeau, & Gotman, 2006). This is particularly striking in that this occurred despite the fact that the intense seizure activity occurred in a region where EEG electrodes were closely spaced. Kobayashi et al. note that this is striking as the EEG completely missed the most intensely discharging region despite the fact that this region was also located at the cortical level.

... differing brain regions have differing numbers of neurons, with diverse connections and characteristics – all of which have differing oxygen demands

The implication for NDE research is, of course, that the EEG does not provide a highly reliable measure of complete neural activity. Even high-amplitude seizure activity can fail to manifest itself in the background EEG if it does not recruit enough neural landscape. To summarise, confidence in previous claims that flat EEG represents total neural inactivity appears severely misplaced. These cases may represent instances of 'false-positives' (positive from the perspective of the survivalist wanting to recruit such instances as evidence of a dead brain). In addition, even in the presence of a background EEG, seizure-based activity (which is sufficient to support hallucinatory imagery and aura) could be considerable and yet may not become manifest in the cortical scalp-based EEG. Note also that the above empirical estimates were based on epileptic brains which produce large-amplitude brain activity. These estimates themselves may need to be increased even further for the normal non-epileptic brain which does not typically produce such high-amplitude synchronistic characteristics.

What the dying brain hypothesis really says: The importance of neural disinhibition

When one considers the dying-brain account in its full context it is clear to see that the emphasis placed on cerebral anoxia misses the true essence of the account. As a consequence, many of the criticisms against the dying-brain hypothesis border on the irrelevant. For the dying-brain account, the central assumption does not revolve around the presence or absence of anoxia *per se*, but of neural disinhibition. So the dying-brain hypothesis is perhaps more accurately characterised as one that models NDEs as an experiential consequence of a disinhibited brain (Blackmore, 1996, 1993, 1992, 1990; Braithwaite, 1998; Carr, 1982, 1981; Jansen, 1996, 1990; Saavedra-Aguilar & Gomez-Jeria, 1989; Woerlee,

2003). Of course, such neural disinhibition can be induced by anoxia, and it is likely that under more prolonged near-death situations it is likely to be present but, as a process, disinhibition can actually be triggered by many psychological and neurological factors such as confusion, trauma, sensory deprivation, illness, pathology, epilepsy, migraine, drug use and brain stimulation (for comprehensive reviews, see Appleby, 1989; Baldwin, 1970; Blackmore, 1993; Sacks, 1995; Siegal, 1980). Without exception, all these instances that induce neural disinhibition and seizure-type activity can all be associated with aura and hallucination.

In principle then, anoxia does not need to be present at all to produce hallucinatory imagery. However, under cases where people are 'near death' or suffer cardiac insufficiency for any prolonged period of time, it is likely (i.e., reasonable to assume) a degree of anoxia would be present. Therefore, while anoxia is one route via which disinhibition can occur, it is by no means the only route. In addition, the dying-brain hypothesis predicts that more vivid, profound, and meaningful NDEs are likely to be associated with greater degrees of disinhibition. Thus, NDEs reported when people truly are nearer to death (and hence the level of disinhibition would conceivably be greater), should be more vivid, profound, detailed and meaningful, relative to those reported when people only believed themselves to be so. This is exactly what has been found (Drab, 1981; Gabbard & Twemlow, 1984; Gabbard, Twemlow, & Jones, 1981; Owens, Cook, & Stevenson, 1990).

The idea that disinhibition underlies these striking perceptions is further evidenced by the brain's very limited scope for tolerating abnormal states and how it typically responds when it does encounter them. By far, the most common reaction from the brain to such states is disinhibition and seizure. Very small changes in the neural environment have been shown to be more than sufficient to impact on the fine balance maintained in the brain. For example, a 10-15% reduction in GABA inhibition is sufficient to significantly increase seizure propagation in cortical tissue, and changes of a few millimoles in extracellular potassium levels can turn a stable neural population into an epileptogenic one (Chagnac-Amitai & Connors, 1989; Haglund & Schwartzkroin, 1990; Korn, Giacchino, Chamberlin, & Dingledine, 1987). The ranges of these values are well within those encountered under normal brain functioning. The real question then becomes not one of whether disinhibition or seizure could be involved in contexts conducive to NDE but, as Schwartzkroin (1997) states, more one of why seizures are not indeed far more common and why are we not all having seizures constantly!

There is a further conundrum for the survivalist: in order for any experience to be remembered (assuming some form of perceptual experience occurred), memory must have encoded and represented the experience in the first place. Applied to the NDE, this means that there must have been sufficient neural activity to

encode the experience, to represent the experience, and to store the experience (even a glimpse of an afterlife would require this). As far as current science is concerned, it is not at all clear how a memory of an experience can occur without the use of memory itself. The very fact that these experiences were 'remembered' in the first place suggests that memory itself was functioning and encoding at the time of the experience (meaning there was neural activity in those brain regions during the experience, which may indeed have been responsible for the experience).

Of course false-memories show that we can remember the palpably untrue as a real memory, but these false memories are often based on illusory conjunctions between other encoded information represented in our memory systems (see Brainerd & Reyna, 2005). A false memory still requires an intact memory system, or at the very least, a partially intact one. In addition to this, other survivalists have argued that a brain near-death is too unstable to support vivid hallucination, and so cannot be an explanation for NDE (Fenwick & Fenwick, 1995; Parnia & Fenwick, 2002; Parnia, et al., 2001). The logical problem, however, for these researchers is: if the brain is too unstable to support hallucination, how is it possible for it to be stable enough to 'remember' mystical experience? A further problem is that it is factually incorrect; all disinhibitory models of brain function have provision for stable vivid hallucination (for examples, see Blackmore, 1993; Cowan, 1982; Sacks, 1995). Indeed, a disinhibited brain could produce an experience that is 'more vivid' and stable than even veridical perception as that experience would be endowed with ferocious neural activity, at least for a given time period. In addition, the survivalists assume that neural stability and cognitive stability are one and the same thing, which is certainly not the case.

This is the crucial logical fallacy of this whole field of research: how can one memorise an event in the absence of a working and functioning memory system? If, as the survivalists claim, the brain is dead then surely, so is memory. If memory is dead, then how can individuals remember anything – even if the original experience was mystical? The only way around this for the survivalist is to add some more untested assumptions and degrees of freedom that are tailored to allow for some paranormal mechanism in the first place. However, this again is a folly. Firstly, it violates the principles of Occam's razor by adding assumptions that are clearly unjustified. Secondly, it begs the question, assuming to be true that which it seeks to argue is true in the first place. It thus represents a hopeless case of circular reasoning. The survivalists can only make their arguments work here by assuming further, untested, supernatural ideas to be true. This is a serious error of reason, and one that undermines the argument to the level of uselessness.

Finally, the inescapable fact for the survivalist is that the brain is constantly trying to make sense of the ambiguous information it is given to arrive at a stable and coherent interpretation. If the context and infor-



The soul of a good old man leaves him at the moment of death and is borne away by angels to Paradise.

mation provided to the senses are unfamiliar, odd and bizarre, then one should not be surprised if the resulting conscious experience is somewhat unfamiliar, odd and bizarre (Cooney & Gazzaniga, 2003). This fits neatly with developments in cognitive psychology, cognitive science, and neuroscience that views neurocognition as an active model-building process. According to recent emerging scientific frameworks, even stable conscious experience is something of a fiction, but a far lesser fiction than other possible alternative realities. By this account, stable perception and indeed consciousness itself can be viewed as a form of *controlled hallucination* (Bentall, 1990; Claxton, 2005; Morgan 2003). Once it is realised that normal perception itself can be viewed, to some degree, as a stable and successful hallucination, it is hardly a leap to view NDEs as an extension of this natural process. The NDE then is merely a greater fiction that serves a temporary purpose for consciousness in that, for a short while, it represents reality in the absence of the more usual and stable reality provided by the senses (Blackmore, 1993; Braithwaite, 1998; Claxton, 2005; Morgan, 2003).

Other common misunderstandings

For neuroscientists, the fact that many components of the NDE are very similar to experiences associated with pathology, disease, illness, neurological conditions (e.g., schizophrenia, autoscopy, Charles-Bonnet syndrome, migraine aura, epilepsy aura) and direct forms of brain stimulation is a strong indication that such experiences

have an underlying neural correlate (Bentall, 2003; ffytche, 2000, 1999, 1998; Gloor, 1986; Gloor et al., 1982; Bear, 1979; Halgren, Walter, Cherlow, & Crandall, 1978; Sacks, 1995; Siegal, 1980, 1977). There is no component of the NDE that is unique to being 'near-death'.

Ignoring such strong similarities, survivalists like to highlight the marginal differences and van Lommel et al. (2001) did not miss their opportunity to further add to this confusion. When discussing the experiences associated with direct electrical brain stimulation they stated (van Lommel et al., 2001, p. 2044):

These recollections, however, consist of fragmented and random memories unlike the panoramic life-review that can occur in NDE. Further, transformational processes with changing life-insight and disappearance of fear of death are rarely reported after induced experiences.

Thus, induced experiences are not identical to NDE...

Firstly, this claim is not entirely correct. Vivid and meaningful experiences are reported by patients undergoing brain stimulation (see Gloor, 1986; Gloor et al., 1982; Bear, 1979; Halgren et al., 1978). Secondly, what the analysis of van Lommel et al. ignores is the crucial role of context. Patients undergoing electrical brain stimulation are typically conscious, know what to

expect, are relaxed and enjoy a constant controlled interaction with the surgeon (Gloor, 1986; Gloor et al., 1982; Halgren et al., 1978; Penfield, 1955; Penfield & Perot, 1963). They also receive constant feedback from the surgical team. This is nothing like the experiential context of the typical NDE where the patient is only semi-conscious (at best), and possibly undergoing some form of trauma, confusion, disorientation and dissociation from their surroundings. It is certainly not unreasonable to assume that the small experiential differences between NDE and brain stimulation studies can be explained, to some degree, by these large differences in context. This is certainly a far more probable conclusion than that of mind-brain dualism.

Furthermore, the reason the experiences under artificial circumstances are perhaps more brief and fragmented has nothing to do with a special status for the NDE, but more to do with the fact that the surgeon temporarily stimulates specific neuronal cell assemblies in an attempt to hone in on the type of aura experiences that the patients report as part of their epileptic condition. Under these circumstances the stimulation is meant to be brief, localised and controlled, which again is totally unlike a large intense seizure that would likely propagate through more tissue. The surgeon is trying merely to induce aura, not a massive seizure. It is certainly not the aim of the surgeon to induce deep, meaningful and long lasting spiritual experiences. It is usually the case that many experiences are elicited before the sought after aura is induced. Once the region associated with a particular sensation/aura has been identified then the surgery can begin.

To ignore these crucial differences in context is to do more than a disservice to both the relevance of these brain-stimulation studies and the way the dying-brain hypothesis recruits them into a theoretical framework. The dying-brain hypothesis states that the fact that highly similar experiences occur through direct interaction with neural tissue strongly implicates the role of the brain in the NDE. It never claimed that the experiences under both contexts should be identical – simply because both contexts are not identical! To illustrate this further, imagine you become stranded in a busy city centre and need to find your way home. The feeling associated with being stranded would be totally different if that city centre was familiar to you versus being completely unfamiliar and foreign to you. This is despite the fact that the same process, that of being stranded, underlies both experiences.

In their discussion and interpretation, van Lommel et al. (2001) perpetuate a further common misunderstanding in NDE research regarding the co-occurrence of an NDE and the presence of flat EEG profiles. They ask (van Lommel et al., 2001, p. 2044):

How could a clear consciousness outside one's body be experienced at the moment that the brain no longer functions during a period of clinical death with flat EEG?

This question is loaded and flawed. It is flawed because there are no documented cases that clearly show that NDE occurred at the precise time that the EEG was flat. This appears to be merely assumed. In any given case a flat EEG may occur and a patient may report an NDE, but there is no evidence that these two events occur at the same time. Although some have tried to make the argument for a link (Fenwick & Fenwick, 1995; Parnia & Fenwick, 2002; Parnia et al., 2001; Sabom, 1998), others have questioned this and shown it to be untrue, at least for the cases so far investigated and followed up by independent researchers (Blackmore, 1993; Braithwaite, 1998; French, 2001). It thus becomes loaded as it assumes something to be true, which has never indeed been reliably shown to be true. As such, the question is pointless in this context. To be fair, the van Lommel group are not the only ones to make this error, but their study represents one of the latest and highest impacting studies to make the mistake. Furthermore, as already explained, because flat EEG profiles do not necessarily index complete brain inactivity, even if such cases did exist it would not provide strong or convincing evidence that these experiences are taking place when the brain was dead. Instead, these arguments seem to reflect little more than a combination of poor understandings of brain science, selective evidence, and an uncritical acceptance of anecdotal reports.

Like others before them, van Lommel et al. (2001, p. 2044) imply that the NDE is severely problematic for contemporary cognitive neuroscience:

NDE pushes at the limits of medical ideas about the range of human consciousness and the mind-brain relation.

However, the evidence recruited in support of this statement is deeply unconvincing. Although the dying-brain hypothesis is far from complete, it is much further from being obsolete. All scientific accounts are in constant need of revision or refutation and the dying-brain hypothesis is no exception. Indeed, this is the process of science itself. As contemporary cognitive neuroscience progresses, the dying brain hypothesis should expect serious revision – though it is unlikely this will be to the benefit of the survivalist. In addition, the NDE should be considered a legitimate area of research for neuroscience and scientists could certainly learn a great deal about the brain and cognitive function by studying such instances. However, it is difficult to see what one could learn from the paranormal survivalist position which sets out assuming the truth of that which it seeks to establish, makes additional and unnecessary assumptions, misrepresents the current state of knowledge from mainstream science, and appears less than comprehensive in its analysis of the available facts. Scientifically speaking, confidence in the survivalist position would seem, at least at present, to be misplaced.

Conclusion

The van Lommel study was a major investigation published in a high-impact medical journal that received

world-wide coverage. While methodologically speaking the study was well carried out and is a valuable contribution to the field, the interpretations of the findings offered by the authors seem fanciful at best. The logical and factual mistakes in the interpretation of the study seem common to this field of research and show no sign of dissipating. Like many before it, the van Lommel et al. study has served to do little more than propagate poor understanding of brain science, which seems common to the survivalist approach. I know of no arguments proposed by the survivalists against the dying-brain hypothesis which actually characterise the dying-brain hypothesis accurately. The van Lommel et al. study was no exception. Such arguments are at least disingenuous and, at most, active attempts to avoid crucial information. If, at the very least, future survivalists attempted to characterise and represent the dying-brain hypothesis appropriately before arguing against it, they would certainly be making a unique contribution to the literature from that perspective.

It is important to be clear that van Lommel et al. provided no evidence at all that the mind or consciousness is separate from brain processes. In addition, there were no direct measures of anoxia, and no measures of neuroelectrical brain activity from their patients. Their findings are entirely consistent with contemporary neuroscience and are in line with the general dying-brain account of NDE. As such, this study poses no challenge at all to either psychological or neuroscientific accounts for the NDE. From this we can see that their claim of the need for a new science of consciousness (which makes provision for some form of dualism) is unfounded and unnecessary. In the absence of strong evidence for survival, it appears that the position of the survivalist is still one based on faith.

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SKEPTICS IN THE PUB

Skeptics in the Pub is an evening held once a month (in a pub, strangely enough) for anybody who has an interest in, or is sceptical about, the paranormal. Each month an invited speaker gives a talk on their chosen specialisation. The talk is followed by an informal discussion in a relaxed and friendly pub atmosphere. You can find out more about the meetings on *The Skeptic* website: <http://www.skeptic.org.uk/pub>. This includes directions and maps to the Penderel's Oak pub in London, where we meet. Alternatively, please contact Sid Rodrigues: 07818 443 735, pub@skeptic.org.uk. The meeting begins at 7:00 pm and there is a suggested donation of £2.00.

Skeptical Stats

1. Height from which one hundred origami planes (which have passed wind tunnel tests at over 200° C) will be released, in a Japanese attempt to establish if they will return to Earth when launched from space: **around 250 miles**
2. Average number of carrots consumed by one individual during their lifetime: **10,866**
3. Muzzle velocity of a new Navy-engineered rail gun, powered by electromagnetic energy rather than traditional chemical explosives, and which can fire projectiles up to a range of 230 miles: **Mach 7, or seven times the speed of sound**
4. Cash Prize offered by the British Heart Foundation for the two winners of a scheme called "Biggest Loser", a competition designed to encourage weight loss: **£130 per person**
5. Prize money offered by the XPrize Foundation and Progressive Insurance to the first person whose car can exceed 100 miles per gallon of fuel: **\$10,000,000**
6. Date by which manufacturer Volvo intends to eliminate all injuries and deaths in its own vehicles: **2020**
7. Percentage of evangelical Christians who reported reliance on angels for life guidance in a 2006 survey: **97**
8. Amount of money saved by American Airlines in 1987, after deciding to remove one olive from each salad served to first class passengers: **\$40,000**
9. Size of lawsuit filed against an aviation company after a pilot made a passenger sit in the toilet for the duration of a sold-out flight: **over \$2,000,000**
10. Proportion of the world's wildlife which has been lost since 1970: **approximately 27%**
11. Proportion of the world's Polar bear population predicted to be extinct by 2050 due to climate change: **two thirds, including all bears within the United States**
12. Age of the longest pliosaur (marine reptile) fossil, which measures approximately 15 metres from nose to tail: **150 million years**
13. Amount of energy required to forge one aluminium drink can from bauxite ore: **the same energy required to recycle an identical can 20 times**
14. Proportion of British people believed by one quarter of the population to have suicidal thoughts: **one in one thousand**
15. Actual proportion of the British population who have suicidal thoughts: **one in one hundred**
16. Average number of doctors in America who commit suicide: **between 300 and 400 per annum**
17. Number of individuals treated for depression with Fluoxetine (Prozac), which was recently shown to have the same effect as placebo medications except in cases of severe depression: **40 million people per annum**
18. Length of time a copper wire remained undetected in the bladder of a 19 year old male after he inserted it into his urethra and promptly forgot: **about 6 years**
19. Weight of ENIAC (Electronic Numerical Integrator And Computer), the first general purpose computer, which was unveiled in 1946 and contained 17,468 vacuum tubes: **28 tonnes**
20. Total energy consumed by ENIAC during its 88,223 hours of use: **14,997 Megawatts**
21. Energy produced by the Slingshot, a device which promises to clean water from almost any source liquid: **enough to power around 70 energy efficient light bulbs**
22. Year in which the first coin operated machine (which dispensed holy water) was believed to be invented: **215BC**
23. Number of vending machines in Japan: **1 for every 23 people**
24. Number of horses which have died as a direct result of being involved in racing, since March 2007: **204 (in 431 days)**
25. Speed of a new fibre optic internet infrastructure created by CERN and connected to eleven centres around the world: **10,000 times faster than current broadband speeds**

Sources

1 *New Scientist*; 2 *carrotmuseum.co.uk*; 3 Office of Naval Research; 4 *Daily Mail*; 5 *XPrize Foundation*; 6 Reuters; 7 Associated Press; 8 *airlineequality.com*; 9 NBC; 10 *Zoological Society of London*; 11 *Center for Biological Diversity*; 12 BBC News; 13 The Aluminium Can Group; 14, 15 *Youth Matters*; 16 Associated Press; 17 *The Guardian*; 18 Gazi Medical Journal; 19, 20 ZDnet News; 21 *unplggd.com*; 22 *gumballs.com*; 23 AgExporter; 24 *Animal Aid*; 25 *Times Online*.

Skeptical Stats is compiled by **Mark Williams**, with suggestions for this copy from **John Roberts**. Both *Hits & Misses* and *Skeptical Stats* depend heavily on reader contributions of clippings, story leads, and odd statistics. Please do send any interesting articles or opinions to mark.williams@gold.ac.uk, post a comment in our blog at ukskeptic.livejournal.com, or send in by post to the address on the masthead (p. 3). Contributions are gratefully received and cited with your names.

Searching for Cressie, the Crescent Lake Monster

Benjamin Radford recounts the story of his search for a monster that never was

CRESCENT LAKE is a picturesque body of water in northeastern Newfoundland, Canada, near the small town of Robert's Arm. Settlement of the area dates back to the 1870s, though other native peoples, including the Beothuk Indians, were early visitors. Robert's Arm (formerly Rabbit's Arm) has a population of about a thousand. The scenery is gorgeous, with walking trails snaking over lush green hills and around the placid lake (Figure 1). Though the region's natural beauty is the main attraction, it is the huge, dragon-like creature with fearsome teeth by the side of the road that draws visitors' stares (Figure 2). Next to it a sign welcomes visitors to "The 'Loch Ness' of Newfoundland!" Crescent Lake, deep and cold, is allegedly home to a local lake monster affectionately known as Cressie.

**..Cressie has never been
photographed; virtually all of the
evidence for Cressie's existence
comes from eyewitness sightings**

Along with colleague Joe Nickell, I've previously investigated other Canadian lakes in search of the reputed denizens in their depths (Radford & Nickell, 2006). Ontario beasties Champ (of Lake Champlain; Nickell, 2003; Radford, 2003), Igopogo (of Lake Simcoe), and Quebec's Memphre (of Lac Memphremagog) were no-shows despite our best efforts. I arrived at the lake on a crisp spring day last year hoping that Newfoundland's famous hospitality extended to their local monster.

But it was not to be. I scanned the horizon and quickly determined that Cressie was not on hand to greet me, so I headed a short distance into Robert's Arm and inquired about it at the town hall. I got a few curious looks from the pleasant, raven-haired woman behind the desk. Finally her face lit up and she said, "Oh, you need to talk to Fred Parsons, he's your monster man."

I'd been traveling in Newfoundland for less than a week and hadn't quite acclimated to the local accents and cadence. Because of that, I sort of missed the first name and just made a mental note to ask for a man named Parsons; in a town as small as Robert's Arm, I thought, surely there's only one. Little did I know that half the town was named Parsons.

I finally did find Fred, a former teacher (and "Citizen of the Year") with an easy smile and warm handshake.

We sat on the town hall steps while he told me about his Cressie sighting: On July 9, 1991, Fred and his wife left Robert's Arm at around noon for a doctor's appointment in Corner Brook. As he drove along the lake, he saw something in the water perhaps 100 yards out (Figure 3). "What I saw was like a long, snake-like creature on the water," he told me. "It was about fifteen or twenty feet long and a dark brownish colour - It was a long, sleek body without any significantly large head, basically right on the water." He glimpsed it only briefly, and by the time he realized he might have seen Cressie he had passed it by. In the years following his sighting, Fred became the area's resident collector of lake monster reports, clipping local newspaper items and interviewing witnesses.



Figure 1: The scenery around Crescent Lake is gorgeous (photograph courtesy of Benjamin Radford).

Local Aboriginal myths and lore are often cited as evidence for the existence of mysterious creatures. Cressie is no exception: Aboriginal legends are said to tell of two entities supposedly related to Cressie, the *woodum haoot* ("pond devil") and the *haoot tuwedyyee* ("swimming demon"). Several sources make this claim, and it is tempting to marshal old native stories and legends into modern evidence. However, one must be careful: just because native peoples have a name for a non-human entity does not necessarily mean that it actually refers to a real creature. Our own Western folklore tradition includes fantastic creatures from long ago (such as English fairies and Irish leprechauns); these are stories and not meant to be taken literally. The references to the *woodum haoot* and the *haoot tuwedyyee* seem to have been simply copied from one source to another without having been verified as having any actual con-

nection to Cressie. (A similar phenomenon occurred at Lake Okanagan, with native stories of the supernatural entity N'ha-a-itk being cited as evidence for Ogoogoo; see Radford, 2006.)

The Sightings

While there has been no organized, sustained effort to verify the creature's existence, no hard evidence – bones, live specimens, or carcasses – has been found. Unlike the monsters in Loch Ness and Lake Champlain, Cressie has never been photographed; virtually all of the evidence for Cressie's existence comes from eyewitness sightings. There have been about a dozen Cressie sightings since the 1940s. According to an information plaque on Cressie at "Cressie's Castle," a tourist lookout on the lake:

In the local oral tradition, sightings of Cressie go back to the turn of the century when one of Robert's Arm's first residents, remembered today as 'Grandmother Anthony,' was startled from her berry picking by a giant serpent out on the lake. In another daylight sighting of the early 1950s, two local woodsmen on the shores of the lake noticed what they thought was a boom log just off shore. Puzzled that it was drifting into the wind, the men motored hurriedly out in time to witness the upturned 'log,' now huge, black, and rounded, slip beneath the waters of the lake. One of the gentlemen, Mr. Andrew Burton, long since retired, recalls that they wasted no time in regaining the shore.

Burton described the object as about 25 feet long and a foot in diameter. Though it was at first thought to be a log, Burton said it didn't act like one: "A boom log would not have sunk suddenly out of sight or travelled against the wind." The sign continues,

On Thursday afternoon, September 5th, 1991, at approximately 4:30 PM, Mr. Pierce Rideout, a resident of Robert's Arm, was driving his pickup truck at the approach to that town when he noticed a disturbance on the surface of Crescent Lake. He observed through the open window of his truck what seemed to be the bow wave of a small boat about 150 yards off shore, or three-quarters the way from the small beach near Warr's Service Station and the forested point of land across the lake. It appeared to Mr. Rideout that a slowly moving object had just dropped below the surface, but as he watched, it rose to sight again: a black, fifteen foot long shape pitching forward in a rolling motion much as a whale does but with no sign of a fin, 'sail,' paddle, or fluke. Nor did it show a head or a neck. It then sank out of sight and did not reappear.

In recent years other sightings (all essentially describing the same long, snake-like shape) have occasionally been reported. With very few exceptions, eyewitness credibility is not in doubt. "There's several locals who

have spotted it and the fact of the matter is they've got nothing to lie about, they're honest people," Fred told me. Often lake monster reports will take a wide variety of forms; anything strange, odd, or mysterious seen in the lake is likely to be interpreted as the creature. People tend to see what they wish or hope to see, and once locals and tourists become aware of the monster, they will likely see monsters even when there are none.

Cressie Candidates

One thing that virtually all witnesses agree on is that Cressie is dark and eel-like in appearance. George Eberhart (2002), in his encyclopedia *Mysterious Creatures*, suggests that Cressie might be an oversized American eel (*Anguilla rostrata*). Indeed, "the lake and surrounding ponds are famous for their population of abnormally large eels".



Figure 2: The huge, dragon-like creature with fearsome teeth by the side of the road draws visitors' stares – but, thankfully, the one in this photograph is just a model (photograph courtesy of Benjamin Radford).

Though the eels typically grow to less than five feet, Robert's Arm writer Russell Bragg notes that "RCMP (Royal Canadian Mounted Police) divers may have accidentally discovered related 'monsters' while investigating an unfortunate drowning accident in another similar-sized lake in the area, South Pond. They returned to the surface with descriptions of giant eels as thick as a man's thigh. Many believe Cressie to be such a creature" (Bragg, 1995). Fred Parsons says he believes it is "quite possible" that Cressie is a giant eel. "What I saw indicated it was an eel-like creature. No question about that - but still we have a lake monster."

The eel hypothesis is by far the most likely, and the most popular explanation among longtime residents and eyewitnesses. Robert's Arm senior citizen Hughie Ryan says, "I think it's all nonsense. But there are some big fish in the lake, and I think there may be a giant eel in there." Says seventy-year-old, lifelong resident Ray Hewlett, "Some of the old fellers used to see it, they say. A giant eel they used to say, years ago" (Power, n.d.). As Fred told me, "It was only recently that a couple of trappers/fisher-

men were granted permission to set out eel traps in the lake. They successfully secured a high number of them". Thus is it such a stretch then to think that Cressie, the "eel-like" lake monster, might actually be eel?

Locals offer several other explanations, including floating or drifting trees and logs. There is no question that countless sunken logs lay in the lake's murky depths. After all, Crescent was used for decades for the specific purpose of floating logs through it: Well over a half million cords of pulpwood were harvested from the area and shipped overseas to large paper mills in Europe. The Crescent Lake/Tommy's Arm River network became a major center for this export pulpwood operation.



Figure 3: Fred Parsons pointing to where he saw Cressie on the lake (photograph courtesy of Benjamin Radford).

As with other reported lake monsters, it is a mistake to look for only one specific explanation for all the sightings. In truth there are many things in the lake – living and otherwise – that might double as large lake creatures. The sightings are probably a mixture of misidentifications, floating logs, large fish, otters, and perhaps even giant eel. It is also possible, of course, that Cressie is a prehistoric survivor or fantastic creature unknown to science and zoology. Yet if a group of unknown creatures has existed in the lake for centuries (thus being reported by Aboriginal legends), it's difficult to explain why they are so rarely seen. Crescent is a relatively small lake along a highway next to a small town, yet sightings only date back about sixty years, averaging one sighting every five years.

Cressie and Tourism

Whether Cressie lurks in the waters of Crescent Lake or not, it certainly exists in the local folklore and imagina-

tions. The tourism potential of their local monster has not been lost on the officials and citizens of Robert's Arm and the Beothuk Trail Tourism Committee. The town has tried to publicize itself as a lake monster tourism destination. In an area (in fact, an entire province) that has suffered economically from a dying timber industry and depletion of cod fisheries, tourism is being promoted like never before. The main effort began in the early 1990s, when local resident Russell Bragg created the Cressie sign along the highway.

A quarter mile or so down the road is the Lake Crescent Inn, run by Evelyn and Bruce Warr. As their brochure says, "Bring your camera! You just might see Cressie, our lake monster." If you don't see the beastie from the hotel, a twenty-minute walk along the lake will bring you to Cressie's Castle, a scenic area created especially for lake monster watching. It is outfitted with wooden benches, a boardwalk, and an information plaque, floats, and so on.

I left Robert's Arm and Crescent Lake without my monster, but that was okay. Whether fish, logs, giant eel, or unknown monster, Cressie's true identity is mostly irrelevant to the residents of Robert's Arm. And whether or not Cressie is in the lake, it is active in the hearts and minds of this small Newfoundland community.

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Benjamin Radford, managing editor of *Skeptical Inquirer* magazine, has investigated mysterious phenomena for over a decade. He is author of three books and hundreds of articles on all sorts of strange topics. A different version of this article appeared as Chapter 5 in *Lake Monster Mysteries* (written with Joe Nickell). His latest accomplishment is inventing a game called *Playing Gods: The Board Game of Divine Domination*. His books and films can be found at his web site, www.RadfordBooks.com.

An Evening With James Randi and Friends

Jon Cohen reports on the evening that will be remembered for all eternity as the greatest night there ever was (probably)

IT WAS LIKE a scene from Charlie and the Chocolate Factory. Those lucky enough to have secured seats grasped their booking references tightly like golden tickets. The Willy Wonka of scepticism, the Evel Knievel of debunking, James ‘The Amazing’ Randi was in town. When it was announced that *Skeptic* magazine, in collaboration with Skeptics in The Pub, were organizing ‘An Evening with James Randi and Friends’, the five hundred or so available tickets sold out in a matter of days.

Described by some as the founding father of modern day scepticism, Randi, the former escapologist and magician, has done more than anyone else to expose charlatany and pseudo-science. He has authored devastating critiques of Uri Geller, evangelical faith healers and the writings of Nostradamus, as well as writing the seminal *Flim-Flam!, Psychics, ESP, Unicorns and Other Delusions*. His longstanding offer of a million dollars to anyone who can demonstrate paranormal abilities under controlled conditions remains unclaimed.

Randi doesn’t get to the UK often so, when his visit was announced, the organizers of the event decided on Conway Hall as a suitably sized venue. The unassuming building nestles in a quiet London square and is home to the South Place Ethical Society as well as the recently inaugurated London branch of the Center for Inquiry.

In addition to Randi, the evening featured an impressive roster of guest speakers, and the ebullient Richard Wiseman hosted the evening. Professor Wiseman has gained a reputation as a champion of science and critical thinking on both sides of the Atlantic. Also formerly a professional magician, he is now Professor of the Public Understanding of Psychology at Hertfordshire University and has an interest in the psychology of deception. Wiseman did a brilliant job of introducing each speaker, his presentations peppered with demonstrations of magic as well as explanations of some of the psychological principals involved. (Most importantly though, he was extremely funny!)

The first speaker was Professor Chris French. As well as being head of the Anomalistic Psychology Research Unit (APRU) at Goldsmiths College, London (and co-editor of this publication), he is also a leading sceptical figure in the UK media and is the “go-to guy” when a sceptical perspective is required on a TV or radio show on the paranormal. Professor French spoke about the growth of scepticism in the UK (helped in no small part by groups such as Skeptics in the Pub who have steadily seen their numbers rising) as well as describing the work of his research unit. The APRU focuses on finding non-paranormal explanations for ostensibly paranormal experiences. This is a highly important direction for research as it is one thing to simply deny paranormal claims, but

a far more potent response is to show evidence for prosaic explanations of the causes of paranormal experiences. The more we understand about ourselves, the less need there will be to resort to supernaturalism to explain the stranger end of human experience.

Simon Singh followed. One of the UK’s most successful science authors, his books *Fermat’s Last Theorem*, *The Code Book* and *Big Bang* have sold in large numbers and have paved the way for a slew of popular science books. Dr Singh spoke about the beauty of the scientific method and then in what must have been one of the evening’s most memorable moments, he demonstrated the signature orange light emitted by sodium atoms by connecting a gherkin to the mains! Singh’s new book *Trick Or Treatment? Alternative Medicine On Trial* (co-authored with Edzard Ernst, the world’s first Professor of Complementary Medicine) has just been published and is a rigorous and uncompromising assessment of the evidence for and against alternative medicine.

Randi...has done more than anyone else to expose charlatany and pseudo-science

Next to the stage was Ben Goldacre who must surely have the gift of manipulating space-time itself. How else could anyone manage a full-time career as a medical doctor as well as be such a prolific blogger and journalist? (Goldacre’s column in *The Guardian* is always excellent.) A technical hitch meant that the slide presentation didn’t work, but we were still treated to a superb talk on the power of the placebo effect. Apparently studies have shown that four sugar pills are more effective than two, and the colour of pills and their packaging can impact on effectiveness, and, perhaps most remarkably, drugs which normally induce nausea are seen to *reduce* sickness in pregnant women when they are told that the drug is an anti-nausea medication. This suggests that in some cases, the placebo effect is powerful enough to act in opposition to the known pharmacological effects of substances!

The final guest speaker before Randi was Dr Susan Blackmore. Years studying parapsychology in the belief that proof of the existence of ESP was there to be found established Blackmore as a leading figure in British parapsychology. With typical impassioned delivery, Dr Blackmore recounted her story. A life changing out-of-body experience whilst a student at Oxford sparked her interest in the paranormal and prompted her to pursue a

PhD in parapsychology, but eventually a lack of positive results, as well as the discovery that researchers at Cambridge were obtaining such results by cheating, led Blackmore to become a sceptic. One might think that someone who started off earnestly searching for proof of the paranormal but changed her mind in the face of the evidence (or lack thereof) might be respected for having the strength of character to admit a mistake. But for Blackmore this was not the case. She spoke of receiving vindictive hate-mail from believers accusing her of being closed minded (the irony of this obviously having escaped the authors of such communications).

A few years ago Dr Blackmore withdrew from public scepticism, but her recent debate with theologian Alister McGrath (she completely demolished him), as well as comments made during the Randi evening suggest that she may be returning to the fold. This could be very good news for the sceptical community!

By now the anticipation was palpable. After a brief introduction and a video retrospective on Randi, the man himself walked onto the stage. It's hard to describe the feeling in the room at that point. The thunderous applause conveyed the profound respect and gratitude that the audience felt towards Randi. He has dedicated his entire life to fighting the spread of irrational beliefs, not just because he knows he's right, but more importantly, because he knows that genuine suffering follows all too often as a consequence of accepting extraordinary claims without extraordinary evidence.

Randi began by speaking about his biography currently being written by Penn Jillette, entitled *I am James Randi and I will Die Today*. The title comes from the days when, as a professional mentalist, Randi would each day write this sentence on the back of a business card along with his signature and the date and carry it with him, *just in case*.

He says the difference between a stage magician (or conjuror) and a self-proclaimed psychic is that the magician has an unspoken agreement with his audience. He will lie, cheat and generally employ all manner of deception in order to fool them; but this is part of the act. He is doing it purely for the benefit of their entertainment. Once the show is over, so too is the deception.

In contrast, the psychic demands the suspension of disbelief on a permanent basis. Randi draws the analogy of a Shakespearian actor asking the audience to accept that he really *is* the prince of Denmark. "Why are we not insulted by this?" he asked, "And why do such claims go largely unchallenged in our culture?"

The JREF million dollar offer will be ending in 2010. Currently, applicants for the prize are asked to answer three simple questions: What can they do? With what accuracy, and under what conditions? This would seem to be the most straightforward of requests, but Randi points out that 85% of claimants never get as far as even

answering these initial questions. He explained that once the challenge is withdrawn, the million dollars would be used to fund scholarships and research projects.

Randi spoke about the methodology in his test designs. The idea, he said, is to leave no room for interpretation or argument. The tests should be designed so as to negate the need for judgment of any kind. As an example, we heard of a test recently conducted in Japan where a man was claiming that his spirit guides could tell him the contents of sealed envelopes.

One method of testing would be to have the man guess at what was in a selection of sealed envelopes but this, according to Randi is not the best approach. What if the envelope contains a picture of a bicycle and the man guesses "motorbike"? Is that a hit or a miss? How about car or train? This method requires a subjective choice to be made about what constitutes a positive or negative result. Randi's test involved the man having to match up twenty different pictures to envelopes containing copies of those pictures, thereby neatly sidestepping the issue of what should count as a hit. It's a quantum affair: The picture either matches what's in the envelope or it doesn't!

In the case of the Japanese remote viewer, the claimant said that he expected to get at least seventeen out of twenty right. In fact he scored at chance level, successfully matching only one picture to the correct envelope. Randi pointed out that any complaints of unfair testing are unfounded as claimants are simply being asked to do what *they themselves* claim they can do.

At one point, Randi suddenly walked away from the microphone he had been speaking into the whole time, but his voice continued to come from the speakers loud and clear. In fact the microphone was not even plugged in (he was using a lapel microphone). He then also revealed that his glasses were in fact just empty frames with no glass. All this to illustrate his point that we tend to think that we can rely on our assumptions and are beyond being fooled.

The audience was treated to video clips of Randi exposing Peter Popoff and psychic surgeons but perhaps the most poignant moment in Randi's presentation was his discussion of fellowship amongst sceptics. He underlined how important it is to build sceptical communities where people can come together with a common sense of purpose. This definitely struck a chord as many sceptics have had the experience of feeling isolated as a result of their views. Needless to say, Randi's talk was followed by a standing ovation.

It has been said that organizing sceptics is like trying to herd cats. 'An Evening with James Randi and Friends' certainly disproved the adage. The event was a huge success and was in all likelihood the greatest sceptical event ever to have taken place in the UK. This can only be a good sign of things to come for scepticism in this country.

Jon Cohen is a successful record producer. However, his main passion is scepticism, which he discovered after reading Sagan's *The Demon Haunted World* in his early twenties. In 2008, he offered psychic surgeon Gary Mannion £50,000 if he could prove his abilities under controlled conditions.

Philosopher's Corner

Julian Baggini



ALTHOUGH THE WORD “sceptic” evokes a sense of questioning and doubt, sceptics spend most of their time fighting battles where it’s all too clear who the bad guys are, even if it’s less clear why exactly they are wrong.

It’s sometimes more interesting to focus one’s sceptical energies on issues which are genuinely more uncertain. Take, for instance, aesthetics. I’m caught in two minds over this. On the one hand, I don’t think anyone has formulated compelling criteria for why one work of art should be objectively better than another. But on the other, I cannot accept a thoroughgoing relativism which says that my doodles are objectively no worse than the cartoons of Leonardo.

Matters get even more puzzling when it comes to taste in food and drink. Again, although I find it hard to justify a judgemental attitude towards those whose idea of *haute cuisine* is a burger on a hilltop, at the same time I can’t reject the conviction I have that the artisan cheese at my local deli is just better than the stuff they knock out at the supermarket.

Those who suspect that oenophiles are the homeopaths of the taste world often point to scientific studies which they say debunk wine tasting. For example, it is well-known that if you give someone blindfolded a glass of white wine and tell them it’s red, they will rarely spot that something is amiss, even if they are distinguished wine critics.

A recent piece of research by Antonio Rangel of the California Institute of Technology provides more ammunition for the attack on wine snobbery. We already knew that people would claim to enjoy something more if it was more expensive, but Rangel wanted to push this further and ask if people really enjoyed costlier wine more or merely said they did. He did this by using fMRI (functional magnetic-resonance imaging) scans which monitored blood flow to the medial orbitofrontal cortex, the area of the brain responsible for registering pleasurable experiences.

Volunteers were given tastes of what they thought were five different wines. In fact, there were only three – two were served twice. Each time, volunteers were told the price of the wine, but they were given different prices each time the same wine was given to them. As a control, a follow-up tasting was conducted without price information.

You can probably guess the results. The medial orbitofrontal thingy lit up proportionately to the stated price, even though, when no price information was

given, there were no differences between the two tastings of the same wine.

A sceptical reading of this would allow that at least wine snobs aren’t lying: they really do get more pleasure out of expensive wines. But the reason they do has nothing to do with the quality of the wine: it’s all down to expectation.

However, the fact that the perceived quality of a wine can change enormously if expectations are changed does not in itself prove that there are no real qualities of the wine itself. Indeed, Rangel’s study suggested as much: stripped of the price information, the wines’ rankings did correlate with price, which is a proxy for supposed quality.

Most of the apparently debunking evidence about taste can be subjected to the same critique. All the experiments show is that our subjective experience can be affected by things outside the mouth. Colour, for example, primes us to experience flavours in different ways. But all this shows is that colour (along with texture, temperature and smell) is a factor in something’s flavour, not that the flavour isn’t real. The mistake we too easily make is to assume, in an excessively reductive way, that only those constituents of food and drink which directly affect the taste buds in the mouth are part of their real flavour. But why should we do that, when we could equally conclude that flavour is a complex phenomenon that involves more than chemicals in the mouth? (Barry C. Smith presents a more detailed, persuasive version of this defence of wine’s objective qualities in his edited collection, *Questions of Taste*.)

For fun, you can try replicating Rangel’s experiment (minus the fMRI scan, of course) next time you’ve got guests. Put a couple of cheap new world reds up against a few superior bottles from your local vintner. I recommend two from Spain: the 2006 Campo de Borja Borsao, and Pinord’s Clos de Torribas Crianza. I bet that in a blind tasting, they’ll agree that my selections are better than the others.

Even if you don’t fancy your own experiment, you can try them anyway and gather some anecdotal evidence for how my priming of your expectation affects your enjoyment. How it does so will of course depend on whether you think my endorsement is a reason to buy them or avoid them like the plague.

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Julian Baggini is editor of *The Philosophers’ Magazine* (www.philosophers.co.uk) and author of *The Pig that Wants to be Eaten and 99 Other Thought Experiments* (Granta), *Making Sense: Philosophy Behind the Headlines* (Oxford University Press) and *The Meaning of Life* (Granta). Julian’s latest book is *Welcome to Everytown: A Journey into the English Mind* (Granta). See www.julianbaggini.com.
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Through a Glass Darkly

Michael Heap



IN THE YEARS that I have taught and written about the subject of hypnosis, I have found it useful at times to refer to a general principle, namely the tendency for ideas and practices to be applied beyond their range of effectiveness. Much of the meaning of this principle is captured by the adage "When all you have is a hammer everything else looks like a nail".

Although this principle applies to other spheres of human activity, when I make this observation I usually have in mind medical and other therapeutic practices and the ideas on which they are based. Sometimes the range of legitimate application is very narrow or non-existent, as with most of alternative medicine, but this does not appear to impede the operation of the principle.

One factor fuelling this is, of course, the desirability of exploring the boundaries of the utility of a particular methodology or a set of ideas. "We've found that it works for X, now let's see if it works for Y as well". All too often however no proper evaluation takes place and something that may, at the most, contain a nugget of truth becomes a universal principle. How this comes about in the case of alternative medicine has been the subject of many sceptical critiques.

In the 1980s a number of my psychosomatically-minded medical colleagues became very taken with the idea that hyperventilation was the cause of much physical and psychological malaise and they treated their patients accordingly, namely by teaching them diaphragmatic breathing. One doctor I knew got into trouble when he was covertly filmed offering an expensive course of therapy to an AIDS patient to correct his supposed habit of over-breathing, which the doctor had decided was responsible for some of the man's symptoms.

Likewise, 'food allergy' burst on the scene in the 70s and 80s. It was announced that many psychiatric conditions were not 'all in the mind' but due to a reaction to certain foods. Even psychologists were amongst those who attended training courses on recognising and treating food allergy or intolerance and suddenly their patients were being put on exclusion diets. Vitamin and mineral deficiencies captivated some, and still do: a doctor who practised near Harley Street was heralded in the Sunday broadsheets when he proclaimed that anorexia nervosa should be treated as a zinc deficiency. I recall one consultant psychiatrist with whom I worked shaking his head in sorrow and telling me that some of his anorexic patients had opted out of treatment and

joined the stampede up to London to be treated by this doctor. Nothing comes to nothing, but 10 years later a biochemist came to give a lecture to our university psychiatric department promoting (unsuccessfully) the idea that zinc deficiency is associated with ... er ... um ... schizophrenia.

Currently, the official psychological panacea for emotional and behavioural problems is cognitive therapy, the pivotal concept being that psychological problems can be alleviated by helping people adopt more rational and constructive ways of thinking. Usually the therapy also involves changing maladaptive behavioural responses, hence 'cognitive behaviour therapy' or CBT. Rather like the little lion that used to appear on eggs in the 60s, the stamp of approval for CBT is that it is 'evidence based'. Its effectiveness has received support from clinical trials (obviously not 'double-blind' as one writer in a sceptical magazine seemed to believe). Moreover, it has the blessing of NICE, the National Institute for Clinical Excellence.

Now, according to Lord Richard Layard, Professor of Economics at the LSE, CBT should be made more widely available to people suffering from psychological problems such as depression. This was first expressed in a paper he prepared for the Cabinet Office ('Mental Health: Britain's Biggest Social Problem?') which led to a Labour Party manifesto commitment to increase access to therapy. In fact, Lord Layard has calculated that 10,000 CBT therapists need to be trained to deliver 10 sessions of therapy to an estimated one million at-risk individuals per annum. He believes that the cost needed for this will be offset by the economic benefits of returning people to work.

Naturally many psychologists and counsellors are jumping for joy. At least those who 'do CBT' are: I see no signs that those committed to other schools of therapy are doing likewise. But many psychologists and psychiatrists who have no self-interest, and may even stand to gain, believe the idea to be misconceived. I am one of them. It's an example of the overextension of ideas and practices that I have been talking about. I am not just referring here to narrow clinical considerations; it is also an overextension of something the Government appears very fond of doing and I think sceptics will recognise, namely creating teams of qualified professionals to solve society's problems rather trying to alter the conditions that give rise to the problems in the first place.

Michael Heap is the Chairman of ASKE and a clinical and forensic psychologist in Sheffield. ASKE email address = general@aske.org.uk
ASKE website = <http://www.aske.org>

Reviews

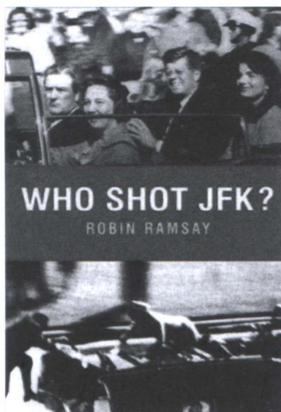
MORE FANTASY

Who Shot JFK?

by Robin Ramsay

Pocket Essentials, £9.99, ISBN 978-1-84243-232-7

Readers of *The Skeptic* may feel they have had enough of the Kennedy assassination, but here comes another book to add to the thousand or so published since that day in Dallas. At least this one is blessedly brief, though that is about all that can be said in its favour. Ramsay criticizes others' ignorance of the assassination, but his own is truly remarkable. He tells us he accepts Oswald's statement that he was a patsy, and states that there was no eyewitness evidence that he was at the window (there was), that he didn't have time to get to where a policeman saw him just after the shots were fired (he did), that his rifle was a poor weapon (it wasn't), that the photographs of him with the rifle were faked (they weren't), that six or seven shots were fired (the overwhelming evidence is there were only three), that a shot hit the car (no corresponding damage was found), that Kennedy's backwards movement means he was shot from in front (it doesn't), that the "magic bullet" which wounded Kennedy and Connally was undamaged (it wasn't), etc.



He spends lots of time and space on odd theorists whose views are on websites or in books from obscure publishers (I have never heard of most of them in decades of library work), but never mentions Gerald Posner's excellent *Case Closed*, which covers many of the points he raises. Ramsay rightly says there is no evidence that Clay Shaw, charged with Kennedy's murder by Jim Garrison, had anything to do with it, but fails to bring out the full grotesquerie of that shameful episode, grossly distorted in the film *JFK*. He rubbishes some wild theories, but only to introduce even dafter ideas. For example, he scorns David Lifton's silly book *Best Evidence* (Kennedy's body was tampered with before the autopsy, sufficiently well to fool the pathologists), but then turns to an alternative theory – two corpses! And whose was the other body? Why, J.D. Tippit, the policeman murdered by Oswald soon after the assassination, who is said to have resembled Kennedy (he didn't).

Jack Ruby, who shot Oswald, is credited with a major role in the "conspiracy" and is said to have been a Chicago Mob representative in Dallas, though there is no doubt that he was a dim, sad, mentally unstable born loser with a pathetic "colourful character" act who liked to feel "in" on sensational events, boasted of his "connections" with the police, press,



etc., and couldn't keep his mouth shut. No-one with any sense would ever have entrusted him with anything important. Ramsay blames Kennedy's successor, Johnson, but, of course, with no concrete evidence. Saying some people wanted Kennedy dead (an unremarkable thing to say about any powerful person) is not the same as saying any of them actually encompassed his death.

Ray Ward

MIND THE GUFF

The Psychic Handbook

by Craig & Jane Hamilton Parker

Vermilion, £10.99, ISBN 978-0091790868

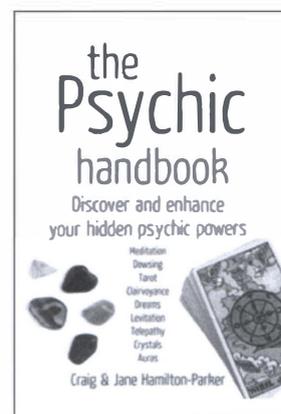
Do you finish people's sentences for them? Have you ever tried to ring someone only to find they were trying to ring you? Do animals either love you or hate you for no reason at all? These are all signs of the untapped psychic abilities that *everyone* has.

The authors came to 'fame' on *The Big Breakfast* and this is the cashing-in book; the fact that it is still in print after 13 years says more about its target audience than the quality of the contents.

This book will "change your life" with instructions on how to unleash your inner psychic – open your chakras, read auras, do psychometry, crystal healing, precognition, read tea leaves, telepathy and so on. It is peppered with "Strange Psychic Stories of the Stars" – celebrity endorsements of psychic reality.

Not only will you be able to predict world events, you will be able to change the shape of clouds with the power of your mind! There is even a set of Zener cards at the end for you to cut out and colour in.

There is a note of caution about not going too far until you have fully developed your powers, and a warning about bogus psychics, but the tone is gushing and uncritical throughout, with unqualified statements like: "The very same geophysical forces that destroyed Atlantis created crystals", or "Simple laboratory experiments reveal that some people can influence the fall of dice" and "Hypnagogic dreams contain potent omens of the future". Sai Baba is described as "a miracle worker", while Edgar Cayce and Doris Stokes are heroes.



The anecdotes and instructions blithely ignore things like confirmation bias, probability or just plain wishful thinking. If your psychic reading fails to hit the mark, what you see has symbolic rather than literal meaning. Handy.

Should you be feeling sceptical at this point, bear in mind that “nothing infuriates traditional scientists more than claims of the paranormal... they resent serious paranormal experimentation for, if confirmed, the established basis of science would be threatened... I despair of their bigotry”.

That’s told us, then.

Tessa Kendall

UNEDIFYING FAILING OBJECT

Nick Pope: The Man Who Left the MOD: The UFO Phenomenon Unveiled

directed by Philip Gardiner

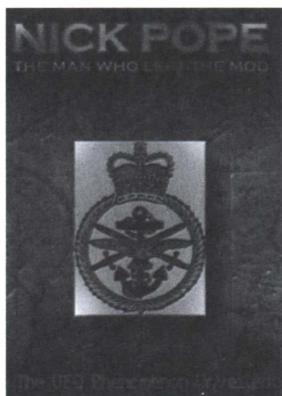
Reality Films, £27.99, EAN 883629172309

If you really expect anything to be unveiled, be prepared for disappointment. There are descriptions of a number of cases that will be no revelation to anyone who has a passing familiarity with ufology, plus a little of Nick Pope’s biography as a desk jockey at the MOD, some superficial musings on psychology, and opinions on the extra-terrestrial hypothesis (“can’t be ruled out”, it’s a “possible explanation” for UFOs) at odds with his firm acceptance of it when discussing specific instances.

If he has any real beans, Pope is not spilling them. There is a lot of “I can’t go into that” on defence issues, implying weighty secret knowledge, but no revelations to illuminate the UFO phenomenon. A definite mystery, though, is why an hour-long interview shot on camcorder in what is presumably a hotel room required four producers.

The makers must have been aware of the inherent dullness of the project, so Pope’s musings are subjected to tricky camera angles and image treatment, the lot overlaid with annoying background music that sounds as though they left the radio on.

As for the repeated references to being “Britain’s Fox Mulder”, that schtik is rather dated but eagerly promoted by Pope to make him seem interesting. Alas, the impression unintentionally conveyed is that Pope was given the UFO desk not as some kind of reward but because it was seen as unimportant in MOD terms, and it is a tribute to his *chutzpah* that he has drummed it up by portraying it as a “special position”, as it says on the cover, with himself as “chief UFO investigator”.



He comes across as self-satisfied, and the film as a vanity project. The enterprise is saved, however, by the amusing UFO-themed music video tacked on the end. And a name-check for *The Skeptic’s* esteemed co-editor, Professor Chris French.

Tom Ruffles

BEYOND QUACKOLOGY

Quirkology: The Curious Science of Everyday Lives

by Richard Wiseman

Pan Macmillan, £9.99, ISBN 978-0-230-70215-8

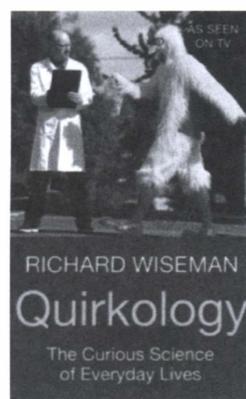
In this eminently readable survey, Wiseman introduces the general reader to a range of intriguing findings in psychology by outlining his own diverse areas of research. The difference between this and most psychology books is explained in the introduction: “unlike the vast majority of psychological research, these studies have something quirky about them. Some use mainstream methods to investigate unusual topics. Others use unusual methods to investigate mainstream topics.”

The first chapter counters the fatuities of astrology with the new science of chronopsychology: “What does your date of birth *really* say about you?” In a chapter focussing on superstition, Wiseman emphasizes that “superstitious beliefs are not just about the harmless touching of wood or crossing of fingers. Instead, beliefs can affect house prices, the number of people injured and killed in road accidents, abortion rates, and monthly death statistics, and can even force hospitals to waste significant amounts of funding on unnecessary patient care.”

The late Vic Tandy once gave a fascinating talk to Skeptics in the Pub about the role of infrasound in provoking unusual experiences which are then given supernatural interpretations. Wiseman has pursued this line of research by means of an experimental concert with an infrasound component, and he is not the only one to think there’s something in this. Another team’s research into sacred experiences “suggests that people who experience a sense of spirituality in church may be reacting to the extreme bass sound produced by the [organ] pipes.”

There are also chapters on deception, decision-making, humour and altruism. The epilogue provides antidotes to boring dinner parties, in the form of a list of factoids from the book, selected by guests at experimental dinner parties organized by the author. The top factoid is a quirkology classic: “People would rather wear a sweater that has been dropped in dog faeces and not washed, than one that has been dry-cleaned but used to belong to a mass-murderer.” Nowt so queer as folk.

Paul Taylor





LETTERS

Agnosticism Revisited

In my view, Steuart Campbell (*Skeptic*, 21.1, p. 27) summarises scientific practice well but overstates, oversimplifies or confuses a number of other points. (1) Linguists would argue forcefully that words (including words like *agnostic*) have *no* 'true meanings'. Their earliest meanings are not specially privileged, and even technical usage may change and diversify, quite legitimately as long as which meaning is in question is made clear. (2) Agnosticism as the position that it is not clear to one personally whether there is a god or not (with no necessary implication that it is impossible in principle to know) need *not* be 'wishy-washy'; it may be the outcome of careful consideration. I myself could be described as an agnostic in this sense, although I find it more transparent to identify as an atheist, in that unlike some who identify as atheists I do not claim to *know* that there is no god, but merely consider the existence of any god very unlikely and live my life in the confident view that there is none. Others painstakingly come to the view that they personally simply cannot tell whether there probably is or is not a god, and are thus more helpfully described as agnostics than I am. This already leaves us with four senses of the term *agnostic*, including Huxley's. (3) It is Campbell's reasoned view (which I share) that life has no (inherent) meaning; but opposing views are not self-evidently wrong and he should not state this as a bald fact. (4) If *agnostic* has a fifth, 'religious' sense (although such usage is rather rare), the term *Christian agnostic* is *not* a tautology, since this is only *one* sense of the term (and not Huxley's as upheld by Campbell). Non-religious agnostics clearly exist (see

above); as indeed do non-Christian but still religious agnostics, even within this fifth sense.

**Mark Newbrook
Wirral, Merseyside**

Where is your God now?

Madeline Neumann, a young girl of just 11 years old, has died from diabetic ketoacidosis in Weston, Wisconsin USA, after her parents chose to pray for her instead of getting her treated for her condition by doctors. This story has had people reacting furiously around the world. How could the parents of an innocent child just callously stand by and allow this poor girl to go through over 30 days of nausea, vomiting, excessive thirst, loss of appetite and weakness, until her body eventually just gave up and she died?

Everest Metro Police Chief Dan Vergin described how Madeline Neumann had died on Sunday 23rd of March 2008: "She got sicker and sicker until she was dead." The diabetic ketoacidosis meant that her body had very little insulin. All she needed to live was simple injections, the kind that thousands of people around the world give themselves every day. Dan Vergin goes on to tell us how the parents, Dale and Leilani Neumann, accounted for the death: "apparently they didn't have enough faith." They also said, "It was better to keep praying. Call more people to help pray." These deluded parents really thought that God would help cure their young child. It has also been revealed that Leilani Neumann also believed that her dead child would be resurrected.

The poor girl was only found when a concerned relative contacted the police and they went to investigate. Madeline was pronounced dead at the hospital. She leaves

behind three siblings between the ages of 13 and 16 years, but what is perhaps more disturbing is that the Police chief has said, "They are still in the home, there is no reason to remove them. There is no abuse or signs of abuse that we can see."

So watching a child slowly die in excruciating pain for over 30 days isn't abuse? Am I the only person who thinks these parents should be locked up and the kids taken into care? What happens if one of the other kids gets ill, will they pray for them too until they die?

Madeline's death is still under investigation, and any findings will be presented to the district attorney to review, and see if any charges can be brought against the parents Dale and Leilani Neumann. We can all only hope the D.A. sees sense. The sad thing is that this is not even the first time we have heard a story like this, where a child has died due to the deluded beliefs of the parents. Poor little Gloria Thomas died after her parents treated her serious eczema condition with homeopathy instead of conventional medicine. How many needless deaths do we never get to hear about? How many are hushed up or simply never make the news? When will people learn that faith alone will not cure an ill child, placebo beliefs will not cure real life and death problems?

Both Madeline and Gloria should be alive today, but instead they are dead because of the neglect and stupidity of their parents. So I ask you all, where is your God now? Where is your God when your child dies, or your mother, or your sister? Replace your faith with cold hard facts, it may just save your own life or the lives of your children.

**Jon Donniss
Birmingham**

Please send your letters to: **The Anomalistic Psychology Research Unit, Department of Psychology, Goldsmiths College, University of London, New Cross, London, SE14 6NW** or e-mail edit@skeptic.org.uk. Email communication is preferred. We reserve the right to edit letters for publication.

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