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BOOK REVIEWS

The Placebo Response and the Power of Unconscious Healing by Richard Kradin. Routledge, 2008. 296 pp. $40.00 (hardcover). ISBN 978-0-415-95618-5.

The placebo effect—roughly speaking, the effect a treatment has simply because people believe in it—has probably accounted for the positive outcomes of most medical treatments throughout history. According to one estimate, the vast majority of more than 20,000 ancient remedies catalogued and used by Asian and European cultures for roughly 2 millennia worked—when they worked at all—entirely because of the placebo effect (Shapiro & Shapiro, 1997). The creation of modern scientific medicine in the mid-19th century eventually gave rise to the search for empirical evidence that interventions really worked as advertised. Nevertheless, the placebo effect still plays an enormous role in medical intervention today.

But how can a belief determine the outcome of a physical intervention? That's a question posed by medical researcher and clinician Richard Kradin of the Massachusetts General Hospital and the Harvard Medical School in a new book called *The Placebo Response and the Power of Unconscious Healing* (Kradin, 2008). As it happens, it's also the question raised in a number of other recent books, most notably one by neuroscientist Fabrizio Benedetti of the University of Turin (Benedetti, 2008; also see Evans, 2004; Guess et al., 2002; Harrington, 1997; Moerman, 2002; Peters, 2001; Thompson, 2005). Although there are a few skeptics out there (see Hrobjartsson & Gotzsche, 2001), there is strong consensus these days that the placebo effect, long ignored by serious scientists and practitioners, is something we need to understand and perhaps even employ deliberately to improve clinical practice.

Indeed, to ignore the role that belief plays in clinical interventions would seem to be folly. Hundreds of studies have now confirmed the power of the placebo in a variety of contexts, some demonstrating outcomes quite extreme and almost bizarre. The placebo response has been estimated to account for at least 75% of the effectiveness of major antidepressant drugs, for example (Kirsch & Sapirstein, 1998; cf. Kirsch et al., 2008), and occasionally placebo pills appear to outperform both prescription medications and herbal remedies (Davidson et al., 2002). Researchers have also found that simply stabbing a patient with a scalpel—that is, performing "sham surgery"—can produce benefits similar to that of real surgery (Cobb et al., 1959; Diamond et al., 1960; Mosely et al., 2002). Perhaps most impressive of all, placebo procedures also work with animals, even though animals presumably lack both the imaginations and belief systems some say are essential to placebo effects in humans. In a landmark study published in the 1970s (one of the first to put the placebo effect on the map with hard-headed bench scientists), Ader and Cohen (1975) showed that rats that had learned to associate

a saccharin-flavored liquid with the nausea-inducing effects of an immosuppressive drug had immosuppressive (and ultimately fatal) reactions to the saccharin water alone. It's no wonder that a recent national survey of physicians in the U.S. found that about half of them use placebo treatments regularly with their patients, with only 5% of them informing their patients that they're doing so (Tilburt et al., 2008).

Kradin's approach to the placebo effect, exemplified by the first two-thirds of his book, is largely straightforward. He begins, as one might expect of a member of the mainstream medical establishment, by admitting that he had paid little attention to the placebo effect for most of his career. When he began to run clinical trials, he "recognized that placebo effects could confound the interpretation of therapeutic results" (p. xii) and began to wonder "why one of the most important topics in medicine has for centuries been systematically neglected" (p. xiii). His belated exploration of this important subject is subsequently summarized: Yes, the placebo response is quite real in the treatment of depression, even producing measurable brain changes. Yes, alternative explanations can often be found to account for placebo effects. Yes, placebo pills can increase antibody levels and reduce symptoms. Yes, as Norman Cousins reminded us, healing is a holistic phenomenon, and state of mind can play a role.

Continuing his journey of discovery, Kradin deftly summaries hundreds of findings of this sort for the reader, weaving together readings from medicine, psychology, and other fields, demonstrating placebo effects in the treatment of anxiety, headaches, arthritis, ulcers, cancer, and other maladies, showing the role that context plays in the magnitude of the effects, and expressing concerns when he has them. The problem is that except for his skepticism and growing awareness, there's virtually nothing new or unique about his journey. At times, one wonders what took him so long, or why, presumably already having gained a full awareness of the phenomenon when he began writing his book, he presented his views with so much apparent angst.

That said, Kradin does what needs to be done: He gently chides modern medicine for its single-minded obsession with physics and linear causation, for its failure to see the person as a whole, and for the hubris routinely practiced by clinicians, who in fact often know very little:

> Many lay people harbor the erroneous notion that physicians know how most treatments work. Truth be told, there is hardly an effective treatment in which the mechanism of action is well known, and in some cases, physicians have absolutely no idea as to how their prescriptions actually work. (p. 66)

Continuing his journey, Kradin reminds us of the power that shamans and magic had—and often still have—to alter health and well being. Discovering Morton Smith's (1978) book *Jesus the Magician,* Kradin finds it "remarkable to consider the possibility that the placebo response may be basis of the dominant religions of the Western world" (p. 38) and perhaps even more remarkable that the first demonstrably effective drug—quinine—wasn't identified until the 18th century. He wonders why it's taken so very long for modern medicine to look with

proper humility and awe at the real mysteries and complexities of healing and properly blames drug companies—obsessed with "recouping their investment and making a profit" (p. 75)—for trying to turn attention away from the power of placebos, even going so far as to "exclude placebo-responders from their drug trials" (p. 76).

With few exceptions, when Kradin is rehashing what most experts on the subject already know about placebos, he does it well, and the exceptions are generally minor. One that's somewhat troubling is that he implies several times that the commonly used research design that evaluates a drug or other treatment by comparing characteristics of a treatment group to those of a placebo control group is adequate for identifying the placebo effect. In fact, the placebo/treatment comparison is only adequate for identifying the differential effectiveness of the *treatment* over the placebo. The placebo effect itself can't be identified unless a *third* group—a *no treatment* group—is employed. When improvement in the placebo group exceeds that of the no treatment group, the difference is likely due to the placebo effect. On a more trivial note, in discussing behavioral conditioning studies with rats, Kradin incorrectly identifies Richard J. Herrnstein, my advisor in graduate school, as "Robert Hernstein."

Kradin gets into more serious trouble when, increasingly, he reveals his struggles with the classic mind-body problem, or, as he calls it, the mind-body "conundrum." "René Descartes was correct," he says. "Mind and brain are categorically different, even if they are inextricably linked" (p. 171). His dualistic thinking never subsides, even when, at one point, he uncharacteristically asserts that "the idea that mind and body are distinct is patently absurd" (p. 147). Reviewing studies demonstrating that placebos produce changes in brain chemistry and activity, as a dualist, Kradin has no choice but to think that there must be something mysterious about this, and his solution is to take us into the murky world of "psychoanalytic inquiry"—a realm that doesn't easily connect with brain research, no matter how faithfully or exuberantly one spins those Freudian yarns. Borrowing from the ideas of neo-Freudians such as John Bowlby, Donald Winnicott, and Joseph Sandler, this is where, in the latter part of his book, Kradin says things that the other recent books on the placebo effect generally do not, such as: the placebo is a "protosymbol" for things such as "early dynamics with caretakers." Just how does one prove such an assertion?

I'll spare you further details of his ideas on the nonlinearity of brain processes and the emergent properties of mind (nothing surprising here) and instead make some assertions about the mysterious placebo effect that just need to be made. Yes, indeed, placebo effects in humans seem often to be mediated by cognitive processes; perceptions and beliefs about authority figures, for example, can make all the difference. But placebo effects occur in animals, for goodness sake, and virtually every experience we have—everything from copulating to getting a traffic ticket to getting a back rub—produces changes in the brain. Why do we suddenly need to worry about the mind-body conundrum or psychoanalytic

inquiry when we discover that a sugar pill, under specific environmental conditions and with certain individuals, can produce changes in health or behavior, along with corresponding changes in brain structure or activity? Why do we—or at least Kradin—feel so compelled to resort to the muddy and mystical when the facts themselves speak so plainly?

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Describing Inner Experience? Proponent Meets Skeptic by Russell T. Hurlburt and Eric Schwitzgebel. Cambridge, MA: MIT Press, 2007. viii + 322 pp. $34.00 (hardcover). ISBN 978-262-08366-9, 0-262-08366-3.

Trying to go beyond the usual academic practice of having a "dialogue between the deaf," this book is the collaboration between two individuals holding quite different views about the possibility of obtaining valid and reliable (although by no means perfect) accounts of conscious experience. On the cautiously "yes" side is psychologist Russell T. Hurlburt, who created his Descriptive Experience Sampling (DES) methodology and has tested it in programmatic research spanning many years now (e.g., Hurlburt & Heavey, 2004). On the cautiously "no" side is philosopher Eric Schwitzgebel, who has written extensively about his distrust of introspective reports.

After the two authors met in a conference on consciousness they initiated a discussion that included Schwitzgebel trying the DES method himself. They then decided to write a book in which they would intersperse points and counterpoints among new DES data collected from participant "Melanie." The initial chapters of the book are devoted to the authors laying out their territory, followed by a section of the book devoted to the sampling and analysis of Melanie's conscious experience. The book ends with reflections by both writers.

In his initial chapter, Hurlburt reviews the literature on introspection as a research method, showing that some of the received wisdom about the limitations of introspection are wrong, including the usual account of why it was abandoned (i.e., that competing laboratories were getting dissimilar data, instead of the fact that they got similar data but interpreted them differently), and the famous critique by Nisbett and Wilson (1977) of introspection (pertinent to reporting about the causes of one's experience rather than to the experiences themselves; see also Wilson, 2003). Hurlburt describes methods to sample the contents of consciousness, although he does not discuss other relevant methods such as phenomenological approaches and questionnaires (cf. Pekala & Cardeña, 2000). He describes the DES method, which includes random beeping as a signal for the participant to pay attention to his/her experience at the time of the beeping, to write some notes about it, and to meet with the experimenter within 24 hours to participate in an interview to explicate the experience. This is an iterative process and Hurlburt mentions that it takes some practice and a skilled interviewer before the participant can provide good reports. He concludes that, albeit imperfect, this is the best introspective method and that it produces valid and reliable data, giving examples from research with individuals with borderline personality disorder and Asperger's disorder.

In his chapter, Schwitzgebel provides a philosophical critique to positions that treat introspection as either being infallible or useless, and briefly summarizes the refried positivist approach of Dennett as "incoherent" (p. 44). Schwitzgebel considers that introspective data must be treated with great caution and

throughout the book advocates using multiple methods to establish the validity of introspective data. I find it difficult to argue against his position as the literature in many areas, including hypnosis, shows that subjective reports and "objective" data can supplement each other. For instance, PET research shows that the brain areas responsive to color in highly hypnotizable individuals become more active after they are given a hypnotic suggestion to see a black-and-white pattern as if it were in color, in agreement with the verbal report of their experiences (Kosslyn et al., 2000). A neurophenomenological approach (e.g., Cardeña et al., 2007; Lutz & Thompson, 2003) that considers introspective reports as essential to the understanding of related brain activity can yield results that go well beyond simplistic use of brain imaging techniques and of the limitations of *any* method of research, whether about introspection or about "objective" matters (cf. Pekala & Cardeña, 2000).

About half of the book is devoted to an analysis and discussion of the sampling of Melanie's experience. To give a taste of this section, on the fourth sampling day Melanie reports feeling a yearning about scuba diving, feeling bobbing at the top of the water, and so on, at the moment of the beep. Then Hurlburt seeks to clarify if those were two different sensations, which one was the central one, and proceeds to seek clarification and analysis of the experience. Schwitzgebel dialogues with him and Melanie about a number of issues he is skeptical of, such as whether some of Melanie's report is more inference than recall. This then goes on for about 27 pages, with some boxed asides to discuss more general issues in depth. To what extent the reader will be interested in more than 150 pages of this will depend, I suspect, on how much she/he cares about DES practical and theoretical nuances. For my part, I noticed that after reading a number of pages in this section, my interest in the book started to wane.

The final section of the book includes reflections by both authors on what they learned during this process. Although they became subtler in their evaluation of the other's position, there was no real revelation or change of hearts by either. It is clear that Schwitzgebel respects Hurlburt's work, but he does not agree that the DES is the best or only way to study conscious experience. I agree with this assessment even though I have admired Hurlburt's work for a long time. Some of my research involves comparing more global aspects of the stream of consciousness such as consciousness alterations following a hypnotic procedure. Although taking a less atomistic approach than the DES will miss many details, I think that alternative introspective methods provide a better sense of states of consciousness as a whole (Cardeña et al., 2007). And even the maligned "armchair" approach of introspection yielded what is probably the most significant analysis of the stream of consciousness when it was used by someone of the caliber of William James (1890). Thus I would also be less skeptical of introspection than Schwitzgebel, or perhaps better said, as skeptical of introspectionism as of other methods in psychology and the sciences in general, all of which offer at best limited perspectives. Tolerating uncertainty is a skill demanded

by science (and life), or as James put it, the true philosopher (or scientist) should have "the habit of always seeing an alternative" (1876).

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Shyness: How Normal Behavior Became a Sickness by Christopher Lane. Yale University Press, 2007. 272 pp. $27.50 (hardcover). ISBN 9780300124460.

Referring to the current edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*), a tome revered as the final authority on psychiatric disorders, the American Psychiatric Association (APA) states that

As the number of psychiatric diagnoses has grown over time, researchers and clinicians have been able to share their knowledge of mental disorders with greater precision. An increased number of diagnoses does not mean, however, that more individuals are being diagnosed with mental illnesses. The diagnostic "pie" has not gotten larger; rather, the pieces of that pie have gotten smaller and more precise. More precise diagnoses significantly aid the advance of research and treatment. (1997: 2)

Psychiatrists it seems, would like us, the general public, to believe that their intentions are magnanimous. We are supposed to accept that the "pie" is not getting bigger; that each new psychiatric diagnosis serves only to advance scientific research and improve the lives of those suffering from the identified malaise. We are to believe that the recurrent explosion in psychiatric illnesses and the simultaneous discovery of seemingly miraculous drugs to cure them signals nothing other than benevolent progress.

For some time people have been expressing doubt, suggesting that the relabeling of human experiences has gone too far, and wondering whether the flurry of diagnosing and medicating is not more about profit than it is about making us mentally healthy. *Shyness* is, to the extent that it puts substance to these concerns, a valuable book.

First, Lane briefly describes the conflict, dating back to the 19th century, between psychoanalytic and physiological psychiatry over the nature and cause of mental problems. This struggle culminated in victory for the latter and, as the biological model took hold of the profession, it became progressively easier to reposition human characteristics as pathologies requiring treatment. Common, "garden variety" behaviors and emotions that earlier might have been considered annoying or unpleasant became redefined as an array of mental disorders.

Then, in intriguing detail, drawing on previously classified material, Lane weaves a readable story about the inner workings of the APA committee charged with the task of rewriting the *DSM*. Focusing, as he does, on the role played by its long-term chairman, Robert Spitzer, is fitting as it was primarily under Spitzer's direction that the *DSM* doubled from 180 categories in 1968 (already up from the 106 found in the first *DSM* published in 1962) to over 350 by 1994.

Lane documents, with the support of fascinating, internecine correspondence, the quarrels and compromises that resulted in taskforce members dropping by the wayside as Spitzer undauntedly pursued his belief that "mental ailments were really medical disorders" (p. 56). For instance, Richard Schwartz of the Cleveland Clinic took exception with *DSM-III* (and with Spitzer) for classifying "abnormalities of thought, emotion and behavior" as illnesses while he considered them to "lie outside the domain of psychiatry" (p. 64). He is quoted as writing that "my quarrel with *DSM-III* is that for many of the disorders listed therein, the social consensus that they are true diseases and should be managed by the psychiatric profession is lacking" (p. 76). Despite such opposition, Spitzer got his way on this and many other occasions.

Chapter 3 focuses on shyness, chosen by Lane to illustrate how a generally (and historically) "normal" characteristic can be turned into a diagnosable disease. Shyness as a concept catches public attention and, given the "head scratching" response to shyness being elevated from a familiar human trait to a serious psychological condition, he chose well. Lane's take on the transmogrification of shyness makes for an interesting read.

Shyness isn't shyness anymore. It is "a disease" that Henderson and Zimbardo, of the Shyness Institute in Palo Alto, warned is a "public health danger that

appears to be heading toward epidemic proportion" (p. 5). From Lane's perspective, the *DSM-IIIR* was instrumental in turning an "apparently relatively rare problem into one that could afflict almost everyone on the planet" (p. 100). Shyness, social phobia, avoidant personality, introverted personality disorder, all disappeared as a new disorder, branded with a new name, was created—social anxiety disorder.

And here the plot thickens. In an engrossing fourth chapter, the author describes how pharmaceutical giants began ringing the public alarm bells while, at the same time, they retained public relations firms to reposition their existing drugs, such as the antidepressant class of selective serotonin reuptake inhibitors (SSRIs), to meet the anticipated (and created) demand. Paxil was one of these drugs and the one on which Lane focuses the reader's attention. "The initial goal. . ." he writes, "was less to promote Paxil than 'to educate reporters, consumers, and in some cases, physicians, in an effort to encourage diagnosis and treatment' " (p. 122). Targeted consumers, television commercials, magazine ads, bus shelter posters, and celebrity endorsements carried the message.

By the early years of the 21st century, almost everyone knew that social anxiety disorder was "the problem" and that Paxil was "the answer."

But this answer, like most authoritatively expressed answers, had its qualifiers. In this instance, these qualifiers were significant ones that for an unacceptably long time were ignored. Their uncovering is the focus of Lane's fifth chapter.

As Paxil, its generic version and other SSRI's continued to be strongly promoted, upwards of 20% of users found that the drugs either did not work or produced disturbing side effects. For those individuals, and for others who just failed to follow the regimen, withdrawal was often difficult, leading to serious harmful reactions. Along with the identification of these reactions as a "rebound syndrome" (p. 139), came a noticeable public, and legal, backlash against the drugs. In one case, a judge ordered a stop to advertisements that claimed Paxil was not habit-forming. Numerous lawsuits were initiated asserting that physicians and consumers had been mislead regarding the severity of withdrawal, and thousands of reports were submitted to the FDA reporting serious withdrawal issues.

Lane is strongest in these first five chapters, especially when he relies on the following:

(1) His knowledge of the history of psychiatry,
(2) The fruits of his investigative work in unearthing the fundamental problem with psychiatric diagnostic labels in the *DSM,* and
(3) The literature he accessed on the role of the pharmaceutical industry in this drama. Regarding this literature, it is obvious that Lane relied heavily on the writings of David Healy, the well-versed and prolific neuropsychologist who has long been the pre-eminent "thorn in the side" of the pharmaceutical giants. Lane effectively weaves Healy's work into his book and, in doing so, echoes much of Healy's own controversial and well-articulated warning.

Lane's final two chapters are comparatively weak, making for a disappointing ending to what had up to that point been an impressive book.

In Chapter 6, "A Backlash Forms: Prozac Nation Rebels," Lane fails to get across what he means by "a backlash" and to support the notion that "Prozac Nation" is, in fact, rebelling. He draws primarily on a body of fictional literature that is not widely enough known to get across a coherent message. For example, writing about the "consequence of a 'neurochemical reshaping of personhood'," he draws on the relatively obscure fictional writings of Jonathan Franzen and Will Self as well as the generally unfamiliar cinematic works of Zach Braff to illustrate that shyness, introversion and other common emotions are aspects of human nature and not a medical disease. This diversion is likely attributable to the nature of Lane's primary academic work that lies not in psychiatric or pharmaceutical territory but rather in the area of literary criticism. While it may be interesting material for another book, it does not contribute to the theme of this book and I would be inclined to skip this chapter.

Unfortunately, the next chapter, the final one, entitled "Fear of Others in an Anxious Age," reads like a hodge-podge of ideas that too often are poorly, or incompletely, presented. Lane warns of other emotions and behaviours (apathy, compulsive buying, Internet addiction, etc.) that he sees destined to be pathologized and medicated—a reasonable concern given recent history. He talks about a variety of strategies being used to expand the *DSM* and "the pie," including what he calls "switch and bait," presumably referring to "bait and switch, the marketing strategy that is applied when the failure of one solution to an identified problem is dealt with by redefining the problem and selling another solution. When he refers to the notion of lowering the threshold so that mild negative emotions are still viewed as symptoms of disease, Lane quotes one Harvard University psychiatrist but makes no mention of the literature on this topic or even of the term "shadow syndromes" that, when it was coined in the late 1990s, drew enormous public reaction (pro and con) (Ratey & Johnson, 1997). Then he talks about the need to "have more professional sceptics like Satel and Sommers" (p. 202), quoting from their book *One Nation Under Therapy* as if it stands alone as a serious critique penned by a mental health professional. Unfortunately, he seems unaware of a large body of work examining psychiatry (and psychology) as an out-of-control industry, much of it written by equally, if not more, sceptical "professionals" (see, e.g., Caplan, 1996; Dawes, 1994; Dineen, 1996, 2001; Kramer, 1997; Sarnoff, 2001; Smail, 1984). Then Lane appears to enjoy exposing a bizarre plan of the Pharmaceutical Research and Manufacturers of America (PhRMA) involving secretly commissioning " 'a thriller novel whose aim was to scare the living daylights out of folks who might want to buy cheap drugs from Canada' " (p. 204). While somewhat off the topic (or, perhaps, just misplaced in the book), these pages make interesting reading and show the depths to which 'Big PhRMA' is willing to go. But beyond these pages is only an abrupt ending that includes an ambivalent remark to the effect that the pharma-psychiatry business may win out

(or human nature may), a brief discourse on how suffering is part of life and, finally, a one-line reminder of what the book was about.

Despite the weak ending, Lane's book is worth reading because in the first five chapters, he does such an admirable job of exposing how the psychiatric profession and the pharmaceutical industry together manage to develop and popularized new "mental diseases" and the accompanying treatments apparently designed to increase profits.

Since 2007, when *Shyness* was published, shyness has endured as an anxiety-based "treatable" illness and the sale of psychiatric drugs for shyness and an array of other "normal behaviors" remains lucrative. We are 2 years closer to the 2011 release date of the next revision of the *DSM*. Not much has happened to slow the impetus. Almost certainly, *DSM-V* will contain new disorders that reflect how intertwined the profession of psychiatry and the pharmaceutical companies remain.

Shyness: How Normal Behavior Became a Sickness reveals how "the pie is growing," and why we should care. It is a solid book and one that is likely to remain current for several years, if not decades, to come.

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Out of Our Heads: Why You Are Not Your Brain, and Other Lessons from the Biology of Consciousness by Alva Noë. Hill and Wang, 2009. 214 pp. $25.00 (hardcover). ISBN 978-0809074655.

Out of Our Heads is a book about the location of minds. A long tradition in the mind sciences has it that this is an easy matter. Since minds wholly are products

of brains, they are located, if they have locations, entirely *in* brains. This tradition, Noë argues, is mistaken.

Noë, in constructing his claim, ably and accessibly presents a line of argument very well known to contemporary philosophers, though rarely fully appreciated. The general view, roughly, is that thoughts are not located in the brain because thought is itself a relational notion. Since a thought is a relationship holding between an agent and the world, thought extends quite literally from the agent to the world. Thought occurs in the world fully as much as it occurs in the brain of the agent.

One way to get clearer on this claim is to understand what it is not. This is not the tired old "nature/nurture" debate. Noë's claim is not that we have the thoughts we have as a result of environments acting on brains (though there's no need for him to deny that, so far as it goes). His is the much subtler, more radical and more interesting claim that so much as distinguishing between environment and thought is artificial and misleading. His point is to call into question the very construction under which thoughts are *about* the world rather than *in* the world.

This is in contrast to now-standard intuitions under which thoughts are divorced from the structures about which they are thoughts. The standard argument here proceeds through appeal to the logical independence of thought and object. I might have a pain in my leg absent any real stimulus causing it—or absent even a leg. The pain would be the same in any case. Similarly, I might dream of my brother or even have an experience as of a brother downloaded into my head from some matrix-like computer. What this shows, the argument runs, is that my thoughts are *representations* of the world. They occur (or at least logically could occur) in either the presence or the absence of the things that they represent. So, to have a pain in my leg, or to think of my brother, just is to have my brain arranged into some particular structure; actual legs and actual brothers are not necessary for me to have thoughts about them.

This view, Noë argues, is mistaken. Consider language as a special case of thought. The production of noise is, to be sure, independent of any particular thing being named. I can make the sound "WAH · tur" in either the presence or absence of actual H_2O. The production of that sound, though, is not language; it is a mere flapping of the glottis. Noise-making becomes language proper only in light of a particular past history of producing and hearing that sound and in light of a present purpose in making it. History and intent, then, are necessary not for sounds but for the sounds *to count as language*. Similarly, causal history and logical connection are not necessary for brains to have structures, but they are necessary for those structures to count as *thought*.

This, in turn, points to a second important thread in the book. Language is a shared enterprise. If I ask you to pass me the water, I am engaged in a project. That project fails if the ideas bound in the sentence remain resident in my head only (or, for that matter, only in your head or bilocated). The project succeeds only if what I am thinking gets connected in the right way to what you are thinking. Meaning, then, ends up not being a thing stored in my head and moved to yours, but rather an *undertaking*. Learning a language does not consist of storing a set of meanings

for sounds but rather of developing a certain sort of skill, an ability to affect one's listener in certain ways. The point is that that language is dynamic, an action and not a thing. This in turn tells us that locating meaning requires showing full respect to the tendency of actions to range over the world. A baseball game can take place in a park, to be sure. But the game is not some simple sum of the motions of the players. There might be meaning in our exchange of words, but that meaning is not found in individual productions of noise.

These, then, are Noë's two main arguments: thought takes place in a world, and it consists of acting a certain way in that world. Of course these ideas are far better elaborated and far better defended in the book itself.

The book does have some weaknesses, both in rigor and in manner of presentation. Noë refers to the view he opposes, for example, sometimes as the "Platonist" view, sometimes as the "Cartesian" and sometimes as the "intellectualist", "computational" or even "standard" view. Conversely, we get, on the positive side, that *something* is extended out into the world, but that something sometimes is the mind, sometimes meaning, sometimes thought, consciousness, language, cognition, the agent or even the animal. There are real differences in these notions, differences worth attending. Similarly, one might wish that rather less weight were placed on generalizations and on analogy.

This book articulates a tradition over 50 years old. Most of the arguments presented are well known, as are the responses to the arguments. Noë does not always do justice to opposing views, tending towards mere dismissal.

The combination of the above tends to give the book a tone both casual and polemical. That said, it is not clear that the above could be repaired without substantial damage to what makes the book valuable. It was not intended as an epitome, and pushing it farther in that direction may well have made it less enjoyable and less accessible than it is. I can say that I was teaching an advanced class in the philosophy of mind when I read this book. When it came time to lecture externalism, I cribbed from it shamelessly. That, surely, is a sort of applause.

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Biocentrism: How Life and Consciousness Are the Keys to Understanding the True Nature of the Universe by Robert Lanza with Bob Berman. Benbella Books, 2009. 212 pp. $24.95 (hardcover). ISBN 978-1933771-69-4.

Let me be so very unkind as to start off this review by laughing out loud at Robert Lanza and Bob Berman: their Appendix 1, entitled "The Lorentz

Transformation," features a single equation (which is reproduced below, with the correct version for comparison):

$$\Delta T = t\sqrt{1 - v^2/c^2} \text{ (Biocentrism version)}$$

$$\Delta T = \Delta t\sqrt{1 - v^2/c^2} \text{ (corrected version)}$$

Like me, you at first (perhaps) think that their problem is merely that of having chosen a bad typesetter: but, no—they go on to say "t should be multiplied by the meat-and-potatoes of the Lorentz transformation, which is the square root of 1, from which we subtract. . . ." No, neither Robert nor Bob is at home with this simple element of physics. They bollix it! (In their acknowledgements, they thank Ben Mathiesen for his help with the material in the appendix, so I must mention poor Ben's name as well.)

Let's go on now to Appendix 2, "Einstein's Relativity and Biocentrism." Here the news is much better! I did not go through the details of their exposition, but their theme is one that is dear to my heart: rejection of Einstein's "two postulates," followed by the substitution of Minkowski space. Score one for Robert and Bob! In fact, score a *big* one! From the quagmire of physics, they have, this time, pulled out a brass ring!

Who is to blame for the farce of Appendix 1? Not Robert or Bob (or even Ben for that matter). *I* am the person to blame. I teach freshman physics, and I teach it just as badly as the next professor. Our freshman text (regardless of which one we choose) presents the two postulates. These are so unintuitive that anyone learning relativity that way could never be expected to recognize a wrong version of the Lorentz transformation of time intervals. No, Robert and Bob are to be *commended* for pursuing their underlying thesis *despite* having been taught physics so wretchedly badly by me and my physics friends.

And what *is* their underlying thesis? They present it as a long list of Principles of Biocentrism that have no individual value, in my opinion—but the heart of it, collectively, is correct. On page 15 they say "the animal observer creates reality and not the other way around." That is the essence of the entire book, and that is factually correct. It is an elementary conclusion from quantum mechanics.

So what Lanza says in this book is *not* new. Then why does Robert have to say it at all? It is because we, the physicists, do NOT say it—or if we *do* say it, we only whisper it, and in private—furiously blushing as we mouth the words. True, yes; politically correct, hell no!

Bless Robert Lanza for creating this book, and bless Bob Berman for *not dissuading* friend Robert from going ahead with it.

Not that I think Robert Lanza *could* be dissuaded—this dude doesn't dissuade! Lanza's remarkable personal story is woven into the book and is uplifting. You should enjoy this book, and it should help you on your personal journey to understanding.

Well, that is my review. What shall I do now? Let me continue with comments on items in the book that seemed to me, as I read, worthy of attention.

Page 4, bottom: "particles seem to respond to a conscious observer. Because that can't be right, . . ." Well, it *is* right, but, there *are no* particles. Observations (which we often misinterpret as "particles") most certainly *do* respond to a conscious observer.

Page 8: " 'God did it'. Now, this book is not going to discuss spiritual beliefs nor take sides on whether this line of thinking is wrong or right." Well, this line of thinking *is* right, or else you are stuck with solipsism (which I for one reject).

Page 16, bottom: "photons of light from the overhead bulb bounce off the various objects and then interact with your brain. . . . This is undeniable—it's basic seventh grade science." But it is in fact dead wrong. There *are* no photons. Quantum mechanics deals with nothing but observations; photons are a useful engineering concept and nothing more.

Page 36: (we each have in our brain) "as many neurons as there are stars in the galaxy." Your own head contains what is probably the most complex thing in the entire universe. (However, it does annoy me that with all those neurons I am not better at math.)

Various places: the authors are on their toes in suggesting unreality for space and time. String theorists (the last I looked) talk of space and time being perhaps emergent properties, rather than fundamental ingredients. Lanza and Berman's discussions of special relativity (despite Appendix 1) are very good, and expanded my own appreciation. And while I am at it, their presentation of the "mysteries" of quantum mechanics is capable and familiar, but is totally unnecessary, as quantum mechanics is almost trivial in its origin from the assumption of space and time plus a few simple symmetries. No mysteries there!

Page 58: "obviously there is no possible rebuttal to a suggestion that an unknown variable is producing some result." Oh *yes* there is! "Hidden variables" has been refuted decisively by experiment.

Page 88, top: mention of Fred Hoyle and carbon (and mention elsewhere of the "fine tuning" of the universe to allow life). The Hoyle example is refuted decisively by David Gross, who points out that quantum chromodynamics is a fixed structure, so the nuclear resonance that is required to make carbon is there, Fred Hoyle or no Fred Hoyle. Once you understand that the universe is purely mental, you are hardly surprised at the fine tuning. But, if you *don't* understand that the universe is purely mental, your awe at the fine tuning is foolish: anyone can catch you out, simply by postulating a multiverse. Don't waste your time on this silly game!

Page 92: the authors make the interesting remark, "by reminding us of its great successes at figuring out interim processes and the mechanics of things, and fashioning marvelous new devices out of raw materials, science gets away with patently ridiculous 'explanations' for the nature of the cosmos as a whole." So very true! And yet the notion that the universe exists only in our minds

also seems patently ridiculous. I don't mind the "patent ridiculousness" of explanations, for that reason: what I care about is truth or falsity, as judged by experiment. And the answer, by experiment, is, that the universe exists only in our minds.

Page 154, second line from top: the authors draw attention to the much-neglected *hula* theory.

Page 163, bottom: "A Big Bang means the universe was born, and that therefore it must someday die. . . ." Not so—current cosmology detects a birth, but clearly indicates endless accelerating expansion.

Page 167: the authors appeal to science fiction (and to films—but they don't mention *Groundhog Day*!) as laying a groundwork for acceptance of their thesis. With the authors, I hope for some kind of Malcolm Gladwell "tipping point" for the excellent ideas that they advance. Their book, I hope, will be a big step in the right direction. Acceptance would be of immense value to society, through placing humankind once again at the center of the cosmos.

Page 170: the authors kindly knock Daniel Dennett, for which I thank them. It was while reading a review of a Dennett book "explaining" consciousness that I got so disgusted that I sent my essay, "The Mental Universe," to *Nature* (it appeared on 7 July 2005) for publication.

Page 174, bottom: I greatly enjoyed reading ". . . must feel like the nature of the sun did to the ancient Greeks. Every day a ball of fire crosses the sky. How would one *begin* to ascertain its composition and nature?" Until I'd read those simple words, that obvious thought had never crossed my mind. It is both glorious and humbling: we have accomplished so astoundingly much, and yet we still know nothing of the ultimate reason for our existence.

On page 182, the authors briefly discuss dreams. This is useful: the best I can come up with is that we are dreams in the mind of God.

Pages 191–192: the authors end their book by speculating, feebly, on life after death, pointing to conservation of energy. Well, energy doesn't exist—it is simply a conserved quantity (due to time-translation symmetry). No, your hope for life after death does not come from physics. Your hope comes from the astounding fact that that you exist. NOTHING could be more improbable than THAT, and yet . . . you DO exist! You are a true miracle that has actually happened, and being granted one more (and much smaller) miracle is not too much to ask for, in my opinion.

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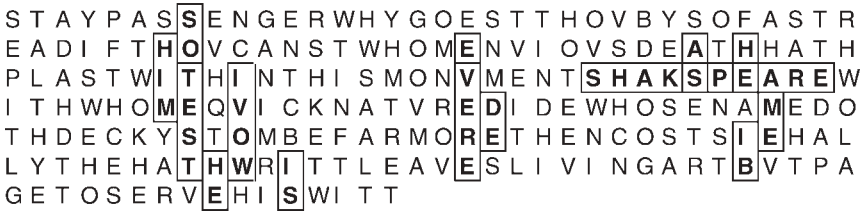
Proving Shakespeare: In Ben Jonson's Own Words by David L. Roper. Orvid Publications, 2008. 556 pp. $49.94 (hardcover). ISBN 978-0-557-01261-9.

Roper has, in this book, provided primary new evidence relevant to an enigma of over 400 years standing: the actual identity of the author "William Shakespeare". While orthodoxy has held to the traditional attribution of these monumental works to a gentleman from Stratford-upon-Avon, the evidential proof for this has been much more lacking than we are led to believe. A strong case can be made, and has been made since first proposed in 1920, that the author was actually Edward de Vere, Earl of Oxford. Oxford was recognized in his own day as a poet and playwright of notable talent, but one who published little under his own name. A massive amount of evidence has been advanced in his cause but the question remains disputed. David Roper of Cornwall, England, has published what may be definitive proof for the Oxfordian cause in the form of decryption of a message inscribed four centuries ago in a plaque on the wall of the Holy Trinity Church at Stratford-upon-Avon. This reviewer is not wont to defer to the voice of authority but rather has sought to follow the facts on this subject. Roper's evidence seems quite definitive in favor of Oxford. He has subjected to critical analysis the English language portion of the inscription and extracts from it the following: "SO TEST HIM I VOW HE IS E DE VERE AS HE SHAKSPEARE ME I B". (The initials are those of "Jonson, Ben"; the "J" was not in use and "I" was commonly used in its place.) Roper's decryption method is Equidistant Letter Sequencing, or ELS, a method first proposed by Giordano Cardano in 1550 and known as the "Cardano Grille". The method involves placing the letters (without punctuation or spaces) in a rectangular array and identifying words then appearing in vertical sequences, varying the width of the rectangle until intelligible material appears. (Cardano was a 16th century Italian doctor and mathematician, and his method was used by European governments for coded messaging at the time.) Roper also tested the inscription for possible reference to "Bacon" and "Marlowe" and founded no possible coded references to them. The interpretation also passes tests for uniqueness and deliberate intent. In several instances, a word is used twice, but with different spellings, e.g., WHOM vs. WHOME, THIS abbreviated as YS, and THAT abbreviated as YT. If in one or more instances the versions of a word were swapped, the decryption would be destroyed. Roper closes his book with the rebuttal of arguments set forth by Stratfordians as the basic cornerstone of their position: the Stratford Monument (refuted by the decryption), "Greene's Groatsworth of Wit", the First Folio introductory material, and the dating of plays such as *The Tempest* and *Titus Andronicus*. In all, Roper's book is a concise and encompassing study that illuminates a nearly four-century-long controversy.

ELS Graph of Stratford-upon-Avon Inscription



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Encounters at Indian Head: The Betty and Barney Hill UFO Abduction Revisited by Karl Pflock and Peter Brookesmith. San Antonio, TX: Anomalist Books, 2007. 312 pp. $17.95 (paper). ISBN 978-1-93366518-4.

Captured! The Betty and Barney Hill UFO Experience by Stanton T. Friedman and Kathleen Marden. Franklin Lakes, NJ: New Page Books, 2007. 320 pp. $16.99 (paper). ISBN 156-414-971-4.

In 1998, planning began for a unique symposium. It was not to be a large, well-attended one to guarantee a profit. In fact there would be no audience aside from the participants. The topic of the symposium would be just one UFO story. That story was the Barney and Betty Hill UFO abduction, said to have happened on the night of September 19, 1961. And the symposium would be a discussion of the merits and drawbacks of the Hills' claims. Planned also at this time was the production of a book based upon the discussions. It was hoped that a publisher's advance for the book would defray costs of running the whole affair. Unfortunately, the advance didn't come, nor did publisher interest. Nevertheless, with the assistance of Joseph Firmage, a wealthy supporter of UFO research, the plans did finally come to fruition. It would be 2007 before the book would appear due to a variety of delays, not the least of which was the passing of one of the authors, Karl Pflock.

The symposium took place back in September 2000 at the Indian Head Resort in New Hampshire, close to the site where the close encounter phase of the Hills' experience allegedly took place. The participants covered a spectrum of attitudes towards UFO abductions in general and the Hill case in particular. Representing

somewhat of a pro side were Karl Pflock, Dr. Thomas Bullard, Walter Webb, who was the original investigator of the Hills for NICAP, the National Investigations Committee on Aerial Phenomena in Washington, D.C., and to a lesser extent Greg Sandow. More skeptical were writers Marcello Truzzi, Hilary Evans, Peter Brooksmith, Martin Kottmeyer and arch-UFO skeptic Robert Sheaffer. Dennis Stacy wrote a chapter on the straightforward facts of the case. All were given the task of addressing the question as expressed on the back cover of the book, "Was the 'first' UFO abduction the result of a genuine alien encounter or the product of some well-primed imaginations?" In answering this question the harder task, or burden of proof, would be on the proponents of the notion that the Hills met alien creatures from another world.

The first thing this reviewer wanted to know as an outside observer of the Hill sighting was whether there was any physical evidence during the alleged encounter that would set it apart from the usual run-of-the-mill alien abduction claim of encounter, capture, experiment and release. Thousands of such reports exist, the details of which most UFO researchers could recite in their sleep. Several references to possible physical evidence appear in the book. One involves a "pink residue," which Betty found on her dress after they arrived home in Portsmouth, New Hampshire, from their encounter. Betty said it was a powdery substance that she at first dismissed as being nothing of importance. But she subsequently had second thoughts and kept the dress and shoes she wore stored in her closet from then on. The powder had long since vanished but it seemed to have left a persistent stain in the fabric of the dress.

More physical evidence was reported in the form of scrapes on the tops of Barney Hill's shoes, trouser cuff burrs on his pants, a circle of warts on Barney's groin, and a binocular strap broken by Barney while reacting to the close-up view of the UFO. Both of the Hills' wristwatches had stopped and peculiar shiny spots were noted on the truck lid of their 1957 Chevy Bel Air. It was an interesting variety of items to ponder. What did the book's contributors think of all this?

Karl Pflock called this physical evidence "interesting, suggestive, and consistent with the Hills' testimony" (p. 217). But did it directly verify any suggestion that the Hills met aliens? He said that except for the warts and car's shiny spots "we only know of it from the Hills themselves" (p. 217). The warts, he said, were likely "psychosomatic." Pflock drew from these findings that while he subjectively endorsed the Hill story as genuine, he had to admit that "objective proof of this remains just beyond our grasp" (p. 236). Walter Webb commented on the shiny car spots, saying he thought Betty's description of the spots may have been "somewhat exaggerated" (p. 244). He attributed her claim about the spots to her excitement following the encounter and a desire to offer proof of the experience by connecting the spots to the beeping noises she heard before the abduction event. If I read this correctly, Webb doesn't ascribe much importance to the shiny spots. Yet he concluded that the "probability is high" that the Hill report was genuine.

I was beginning to become confused. I had thought perhaps that the one arbiter of the difference between a seemingly unlikely narrative report and a genuine factual experience, physical evidence, might tilt the conclusions in a direction where that evidence pointed. But here the opposite was occurring. Despite the lack of physical evidence as admitted by all chapter contributors, there was still a tendency to entertain the reality, or alien abduction nature, of the Hills' sighting.

In her retelling of the story under hypnosis, Betty was not oblivious to the need for some kind of concrete proof. When she was on the alien ship after her and Barney's alleged medical probing, Betty had wanted to take what appeared to be a book with her as she left the alien ship. At first it seemed she would be allowed to keep it as evidence. But of course, inasmuch as we have come to wearily expect this sort of situation, the book was snatched away from Betty at the last minute before she was ushered off of the ship.

Another consideration of evidence, though not physical, was how the authors dealt with the famous Hill star map, that which was seen by Betty on the ship and later recalled under hypnosis. Only two of them, Sheaffer and Pflock, addressed it in some detail with Sheaffer criticizing it and Pflock supporting it. Such a debate would depend upon the accuracy of the map. Considering the way it was recalled, during a hypnosis session by a non-astronomer, I'm not sure this is the kind of accuracy that many analysts would prefer to see. Nevertheless this is what we are left with by Betty to ponder. The potential for a detailed positional map of stars as seen on an alien spacecraft would be at least worthy of investigation. Sheaffer pointed out numerous problems with interpretation of the map's stars by UFOlogists through the years. Oddly in his criticism he cites another star map interpretation, a study by Charles Atterberg, who determined that three core stars of his map decipherment were a better match for Betty's sketch that the oft-cited Marjorie Fish star map, constructed in the 1970s as a three-dimensional model so that numerous nearby star systems could be viewed from many perspectives. Sheaffer suggested, "Surely this is more remarkable than any of the evidence supporting the Fish map" (p. 198). If I didn't know better this almost sounds like Sheaffer thinks there might be something to the map after all. Pflock was careful to avoid suggesting that the Fish interpretation was proof of anything but he agreed that the map was nonetheless provocative. In 2005, author William McBride published "Interpretations of an Alien Star Map" in which he cited no less than five interpretations of Betty's star map. With the innumerable possibilities of pattern matches in our stellar neighborhood to the Hill star map, the scale of which we don't even know, we might expect this list of map views to increase with newer theories based upon refined stellar positions.

With the lack of physical evidence, the issue becomes whether or not Betty and Barney Hill are believable. No one in this volume suggests a hoax was committed. Both of the Hills were highly regarded in their community. There seems to be little doubt that the Hills believed what they said happened to them. But it is clear from *Encounters at Indian Head* that this is where the battle lines are drawn. Just

about everything you would want to know about the fine pro and con details of the Hill story has been put on display by the various authors. Having both sides presented under one cover was a refreshing take on an incident that has become part of the popular culture, and this presentation translates very well to the reading public.

Another fresh look at the Hill abduction narrative is *Captured! The Betty and Barney Hill UFO Experience* by Stanton Friedman and Kathleen Marden. Friedman, a nuclear physicist by trade, has become the premiere advocate of flying saucers as extraterrestrial spacecraft for the last 40 years. Marden serves on the Mutual UFO Network's Board of Directors and is its Director of Field Investigation Training. Most importantly for this book, though, is that Marden is Betty Hill's niece and the trustee of her records. This means that the book gives previously unprecedented insight into the personal life of Betty and Barney in the form of diaries, personal files and family recollections and photographs. For those who have followed the Hill story through the years, it is a treasure trove of detail about the Hills as people, their interests and their ways of thinking. I was especially curious about how the Hills met after Betty's first, and unhappy, marriage, a chance encounter at a boarding house where Betty had stayed temporarily while having her own home remodeled. As fate would have it Barney was a genuinely good person, a family man and a stable personality, lifting Betty out of the gloom of her divorce. It was an unusual dichotomy how their backgrounds in community activism and a normally evolving life would take on such a strange, and now iconic flair into the world of the unexplained. Barney particularly was reminiscent of the Roy Neary character in the film *Close Encounters of the Third Kind,* where an ordinary man becomes embroiled in an extraordinary situation and simply wants to know what is going on. Neither Betty nor Barney were the typical odd ball, wild-eyed saucer contactees who dominated the UFO scene in the late 1950s with peculiar tales of encounters with angelic aliens and their space philosophies. They came across as much more sincere. This reviewer met Betty Hill a few times and found her to be a charming woman who knew from where she came. I missed the opportunity to meet Barney. I began my first employment at the same postal facility where he had worked, South Postal Annex in Boston, which was the largest mail sorting facility in New England. Occasionally I would work in the outgoing secondary section where Barney up to a year before had been stationed, throwing mail into pigeon holes for dispatch. Many who had worked there remembered Barney as a hard-working, easy-going man. No one had an ill word to say. Like Betty, he was someone who people wanted to believe.

However, being decent, hard-working and sincere people does not necessarily make such an experience a literal fact. There still exists in the report the lack of concrete proof of a meeting with space beings. That is unless you want to consider Betty's stained dress from the time of the abduction, as described in the book. The authors say that several analyses were performed. A 1978 report didn't reveal anything overtly extraterrestrial. Neither did a 1980 report by an

"anonymous" scientist. The most recent study, by chemist Phyllis Budinger of Frontier Analysis, Ltd. (a small firm devoted to UFO physical evidence study), was performed between 2001 and 2003 and showed the presence of an "anomalous biological substance" that "permanently altered the physical characteristics of Betty's dress" (p. 268). The authors conclude that it "seems to be an indirect result of her UFO encounter" (p. 268). Unfortunately the anomalous substance is not explained in further detail, nor is further analysis of this reported since 2003. And how would this lead to it being an "indirect" result of the encounter (whatever that means)? This to me seems a stretch as an explanation. Budinger has since said that while no alien substances were identified, "the chemical analysis supports Betty's account of the events," according to a Budinger-authored page at The Black Vault Encyclopedia Project on the Internet. How can a no-alien finding support an alien encounter? This statement was reiterated at a lecture she gave at the Cleveland Ufology Project meeting on April 16, 2005. The stretching of conclusions continues.

The oddest remark came from Pinelandia Biophysics Lab, which said that the pink-stained dress material induced a "higher degree of energy" in water. It also added that water in which the dress material was soaked caused wheat seed samples to germinate at an unusually fast rate. Pink powder, permanent stain, a dress swatch soaked in water aiding seed germination? Perhaps this was from some sort of fertilizer? Instead of resolving this issue of physical evidence, these analyses introduced confusion. There is a tendency in UFO research opinions to practice a "God of the Gaps" notion that is prevalent in the debate about evolution and intelligent design, where ambiguities in research results are explained as undefined influences of extraterrestrials rather than potential lapses and omissions in the research. This is too close to how critics of evolution plug in a creative god to explain incomplete elements of the fossil record instead of granting that those gaps in knowledge may have other, or as yet undiscovered, more or less conventional explanations.

Some of the UFO history presented in the book could have been more careful. "MJ-12," the alleged government investigation into the now-famous Roswell saucer crash, is offered as fact when it is not. It said that it had been established under a "special classified executive order" when there is no such tool used by the president. But one of the supporting documents for MJ-12, the Truman-Forrestal memo of September 24, 1947, is called "infamous." The last time I saw a definition of this word it said, "having a reputation of the worst kind," a rather peculiar choice of wording in a book co-authored by Stanton Friedman, the single most ardent supporter of MJ-12 reality on all of planet Earth.

I thought Dr. Benjamin Simon, the Hills' psychiatrist and hypnotist, took a bit of undue heat on p. 181 when it was said that Barney was angry with him because he felt Simon assured him that the truth would be revealed by his and Betty's hypnosis, then felt deceived that Simon expressed his clinical conclusion that the Hills' experience was the result of a shared dream with Betty. There was no way

that Dr. Simon could have assured a physically real event without some type of independent corroboration, a.k.a. physical evidence. All of the story came from the Hills' verbal recounting. Much of it was offered under hypnosis, the credibility of which we now know must be viewed cautiously. Furthermore, truth to everyone is in each individual's mind's eye. A perceived truth can be different from reality. For example, I had a dream much like the Hills'. To me the dream was real. I have a memory of it and can recount it in detail. Even colors and smells can be part of the event. The existence of this detail was genuine to me. But it wasn't a real event outside of my mind's eye. It was a phantom of my senses.

The authors themselves explained Dr. Simon's position on his two patients. The book says, "He made it clear to them that hypnosis is not a magic bullet or necessarily a pathway to objective truth. Rather, it is the truth as the subject perceives it, and may or may not be consistent with objective reality" (p. 182). But after saying this, the authors labeled Dr. Simon's suggestion of a shared dream as "nonsense." That is fine as a personal opinion, but in the absence of hard evidence of alien contact, upon what is this label based? It can only be based upon a *belief* that the story is literally true, which then becomes not science but an emotional assessment. I would like to think that the Hill abduction is real to finally settle the issue of whether there is intelligent life in space. Yet the clash between hard and soft evidence offered up in all such narratives forces a suspension of the will to believe in them as proof of those events. Inevitably the cases must go on the shelf until more information is available. This is something I trust the authors recognize when confronted with reasonable contrary questioning.

Aside from such loose ends, I would recommend a reading of both *Encounters at Indian Head* and *Captured! The Betty and Barney Hill UFO Experience* for putting many little-known facts about the Hills between their respective covers. They provide the most up-to-date, comprehensive background available on the Barney and Betty Hill experience, the first for story balance and the second for witness depth regardless of what you may believe about UFO abductions.

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UFOs and Nukes: Extraordinary Encounters at Nuclear Weapons Sites by Robert L. Hastings. Self-Published, 2008. 602 pp. $23.95 (paper). ISBN 978-1-4343-9831-4.

Researchers in the Unidentified Flying Objects (UFO) field have long noted an apparent affinity between sightings of these mysterious craft and things nuclear. The most celebrated of all UFO incidents, the alleged crash at Roswell, New

Mexico, offers a clear demonstration of this arcane relationship. In July 1947, the time of that event, Roswell Army Air Field was home to the only nuclear weapons equipped unit in the world. In fact, some people believe that it was our detonation of atomic bombs at the end of World War II that caused extraterrestrial visitors to begin to actively monitor development of nuclear energy here on Earth.

Of course, attributing any motive for alien intrusion would be highly speculative, almost to the point of irresponsibility. Fortunately, Hastings does not make such leaps. What he has done is to assemble a vast array of material that strongly supports the notion that UFOs have observed closely, and even interacted with, our strategic weapons systems. Given the number of intense interactions that have occurred, including interruption of vital systems in our nuclear triad (intercontinental ballistic missiles, B-52s, and nuclear submarines with sea-launched ballistic missiles), there can be no doubt about the seriousness of those actions. What seems to be most amazing is the apparent lack of concern displayed by senior officials of the U.S. Government in general, and the Department of Defense in particular. He also informs the reader about similar incidents that took place in the former Soviet Union.

In conducting his research, Hastings made very smart moves in alerting military officers to this issue, and inviting them to participate by providing him information about their personal experiences. That was accomplished by publishing information in journals, including the newsletter of the *Association of Air Force Missileers,* read by military personnel, both active and retired. That effort proved to be quite successful and many previously unknown cases were documented. While a group of observations, collectively known to UFO researchers as the Northern Tier Incursion, had been discussed for years, many more people from missile units stationed across northern America came forward. The result is that Hastings' book is undoubtedly the best collection of UFO incidents, as they relate to nuclear sites, that has ever been assembled.

While the book focuses on military interactions, Hastings does note that UFOs were seen around many other nuclear facilities as well. Sightings at U.S. national laboratories such as Los Alamos and Oak Ridge are cited. Then there were observations made at commercial nuclear power plants including Indian Point (New York), Palo Verde (Arizona), Surry (Virginia) and Yankee (Connecticut). Also included was mention of sightings following the well-known accident at Chernobyl near Kiev, in the former Soviet Union.

Hastings does a good job of reporting the incidents from the perspective of those military personnel who came forward and talked to him. Worthy of note are the number of emails, letters, and direct quotes that are included. Unless a person specifically asked to have his/her name redacted, the author has done an excellent job of identifying individuals, and the relative position they were in at the time of their observations. The vast majority of them held very responsible positions, regardless of their rank.

At times Hastings does make speculation, but he generally identifies that the information is his conjecture. That is an admirable trait as many reporters slip in their own suppositions without so notifying the reader. He obviously is partial to

what is popularly known as *the extraterrestrial hypothesis*. As an example of his speculation, he addresses issues raised by skeptics, such as why aliens are often reported to be humanoid in appearance. His possible explanations include the following:

- That the "humanoid" form is a universally-distributed, highly-successful, evolutionary form of sentient beings
- Because we are them (meaning the aliens seeded Earth)
- Time-travel allows future generations to come back and make observations

As with many other UFO writers, Hastings addresses the skeptics in general, and the Condon Report in particular. He correctly notes that most of the skeptics are in reality debunkers, who make pronouncements unbounded by facts and little, if any, research into the issues they attack. In his commentary he quotes a review of former SSE president Peter Sturrock's book *The UFO Enigma: A New Review of Physical Evidence,* stating, "Sturrock assiduously dissects the Condon Report and makes it clear that the study is scientifically flawed" (p. 287).

An area on internal incongruence comes when discussing official secrecy by the U.S. Government regarding UFOs. It is clear that in the early period of UFO sightings, much of the material was classified. We were at the height of the Cold War, and the very notion that some other country (especially the Soviet Union) might have weapon technology that exceeded our own capabilities was very frightening. Many reports that were previously classified as *Top Secret* are cited appropriately. Some of those reports even speculated that UFOs were, in fact, of extraterrestrial origin. Studies conducted at the time raised concerns about the ability of the civilian population to assimilate such an announcement, and the impact that might have on public confidence and social order. Unfortunately, and despite significant evidence to the contrary, that anachronistic perception lives on in many sectors of society today.

However, what Hastings has clearly detailed is a classification process that lacks any semblance of centralized control. While seemingly missed by the author, this may be one of the most important findings in the book. At times mysterious, and questionably identified, people did appear and interrogate witnesses. On numerous occasions these were described as CIA agents, though there are several other agencies that might have reason to be interested in these events. Yet, at other times, and in some of the most significant cases, no interviews were taken, nor ominous warnings given. That is certainly true for Bob Salas, a launch control officer for the infamous Malmstrom case in which their missiles came off line, and for COL Chuck Halt, then-deputy commander of the Bentwaters Air Force Base in the United Kingdom. Both cases are highly important to national security, yet no adverse actions were taken or admonitions given. What these collective observations suggest is that imposition of security strictures regarding UFOs was conducted by lower level intelligence operatives, and *not* by a centralized, hierarchical system driven by a formal national edict. Probably based on good

intentions, and supported by a commonly held belief systems that UFOs must be highly classified, I'd suggest that the operatives who did impose secrecy sanctions were simply *winging it*—doing what they thought best at the time.

Worth noting are the comments by many people in the Personnel Reliability Program, better known as simply the PRP. For military personnel associated with nuclear weapon systems, being in the PRP involved both unscheduled physical testing (for drugs) and constant mental evaluations. One could be removed from the program for almost any reason, and therefore, participants became extremely risk aversive. The near-universal perception was that reporting UFOs could cause supervisors to question one's mental stability—thus loss of job assignment. Also, in the U.S. Air Force, there was also the strong feeling that interactions with the Office of Special Investigations were to be avoided at all costs. The message was clear. Unless absolutely necessary, don't report sightings of high strangeness or that could not be explained. Ironically, the unintended consequence of the action of overly aggressive interrogation was to weaken national security.

Hastings implores people with specific knowledge to come forward. Despite the wide-spread belief that reporting UFO activity will result in adverse consequences, he notes that, "over the past 35 years, not one of my ex-military sources has had agents from the FBI, or any other agency, show up at his door" (p. 577). That is a strong statement and it parallels my own experience over several decades and clearly indicates that it is safe to speak out.

While Hastings does make a good case for a relationship between nuclear weapons and UFOs, this should not be taken as the only relationship that might exist. There have been many UFO observations and even critical incidents that have no relationship to nukes. The book would benefit greatly if an index was included. Currently it is difficult to cross reference names and data for research purposes. Self-published, *UFOs and Nukes* is only available through the author's Web site at www.ufohastings.com.

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Medical Miracles: Doctors, Saints, and Healing in the Modern World by Jacalyn Duffin. New York: Oxford University Press, 2009. 285 pp. $29.95. ISBN 978-0-19-533650-4.

The author of this book is a physician and historian of medicine at Queens University, Ontario. Drawing on Vatican archives and texts from the Vatican library, she has critically reviewed 4 centuries of testimony that bear on the topic of "medical miracles." The idea of this research came to her after she was invited

to examine the medical records of a patient in remission from acute leukemia. Only later did she discover this patient's story was part of the canonization process of the first Canadian-born saint, Marie-Marguerite d'Youville. Unlike previous studies of miracles, this book focuses on the truth value of *miracle* claims—in this review, a term referring to a paranormal event in the context of religious belief.

To be canonized, the saint must prove his or her miracle-producing prowess. The range of miracles reported throughout Church history is wide (see, e.g., the writings of Herbert Thurston, 1952). But there is a good reason for focusing on medical miracles; they can be ratified or rejected in light of modern science. The phenomenon of miraculous healing is stable across history, although there are changes of emphasis; for example, in modern times more doctors are brought into the process of certifying the miracle. Duffin observes that healing miracles speak to something universal in the human condition, the struggle against death.

The process of certifying who is a saint keeps evolving and has kept pace with the modern world. The thinking of the popes and the physicians has become more refined; nevertheless, *i processi* (examinations of testimony) continue to bear miraculous fruit. So it appears, according to Duffin, that we have a robust phenomenon worthy of study; among the 1400 cases she collected from 1588 to 1999 were people of 48 countries from Australia to Uruguay.

In saint-making, science and religion embrace temporarily, uniting in their submission to evidence—the *positios* (bound testimonies), *dubios* (doubts, questions), and *riti processi*. The physician does not pronounce a healing as miraculous. His only duty is to give the best scientific account of it; if he gives a credible explanation of the "miracle," it will be discarded or laid aside. If he does confess genuine epistemic wonder about the healing, the door remains open for the Church to acknowledge its miraculous status.

The author devotes a chapter to the supplicants. Who are the people who plead for and receive miracles? Of the 4 centuries of cases studied, the majority were common people of all classes and ages, not elites; one notes the catholicity of miracles. The miracle-happening is a product of many contingencies. "A potential saint can be invoked only by those familiar with her deeds and reputation" (p. 36). Miracle-making, in these accounts, is a by-product of tangible localities and experienced intimacies.

The chapter opens by describing a woman in agony, supplicating a being she believes, begs, and hopes will heal her. It's a powerful image of what religion is about at its wrenching core: the soul *in extremis* crying out for help—on a wing and a prayer. The woman in this story had a huge, hard tumor in her left breast. "For twenty days and nights, Maria prayed to the uncanonized Paolo, witnessed by the woman who shared her bed" (p. 37). The pain continued but by morning the tumor had vanished. In looking at the data in support of the cause of the saint, Duffin is laying the groundwork for a different way of theorizing the origin of religion. For surely such experiences are bound to generate strong "religious" or "spiritual" beliefs.

Chapter 3 deals with the types of miracles covered in the author's database. Most are inexplicable, often very rapid cures of diseases ranging from cancer to tuberculosis. This sort of thing goes back to the Christian gospels where Jesus is repeatedly said to have made the blind see and the lame walk and even the dead rise. The tradition continues on through Medieval times (when the cult of Mary inspires new waves of miraculous performance) and *increasingly* into the 20th century, in spite of the growing sophistication of medical science.

The miraculous extension of human performance occurs in ways other than healing people, e.g., healing animals, expelling demons, escaping from captivity, converting souls, and levitating. Duffin notes that in the latter part of the 20th century there was a spike in miracles of iatrogenic disease and death, a creative response to risk of fatal error in our medicalized society (p. 99). Some of the nonmedical miracles like the multiplication of food—Sai Baba is known for this practical talent (Haraldson, 1987)—will doubtless drive some readers beyond their boggle-thresholds.

There is also the bizarre, transcendently grotesque business of incorruptibility. The dead bodies of saints speak to us in queer ways: by remaining in an unnatural state of non-decay; by emitting unexplained fragrances; by occasionally retaining the warmth of living bodies and exuding fragrant oils; and by sometimes ejecting warm blood from different orifices and sometimes by moving limbs (Cruz, 1977). I am not aware of any systematic medical research into these necrological wonders; the field is open for the intrepid explorer, though one hopes the Church would permit hands-on scrutiny of saintly incorruption.

Chapter 4 reviews the key player in the drama of miraculous certification: the doctor. "I quickly learned," writes Duffin, "that the Vatican does not and never did recognize healing miracles in people who eschew orthodox medicine to rely solely on faith." The alleged miracle needs to be tested by reason, observation, and the whole web of customarily justified beliefs; only in light of these do we have standards for calling something "transcendent" or "paranormal" or "miraculous."

Duffin documents the growing importance of the physician in the miracle-attributing process. The number of doctors involved has gradually increased over the centuries. The maximum number of physicians involved in assessing a single miracle was 19 in 1926, as part of testimony for the "cause" of Joaquina de Vedruna, who was beatified in 1940. Gradually, the testimony of physicians begins to override that of the person to whom the miracle occurred (p. 121). In some of Duffin's cases, doctors themselves were recipients of a miracle. She documents in detail the growing use of technology in the diagnosis and therapeutics of miracle cases, emphasizing the scientific credentials of the process. "Miraculously cured patients were treated with the best modalities available, be it drugs or surgery" (p. 127).

In a curious ex-voto painting (reproduced on p. 128) we observe a man obtaining radiation therapy as he invokes the Virgin, looking over him from a cloud formation in a corner of the room: nice kitsch proclaiming the marriage of science

and the miraculous. But other examples are cited of drugs and surgery being rejected by supplicants who are then miraculously healed (p. 129).

The doctors don't have to be believing Catholics; many have been Jewish or nonbelievers. Disagreement among doctors over an alleged case in effect "falsifies" the miracle claim (p. 135). Sometimes there are rivalries between doctors, which adds to the democratic élan of the process. Some doctors resist the whole idea of miracles; but in the end doctors are key players in the saint-certifying process. Personal differences must be laid aside in forming medical opinions; for ". . . doctors serve as essential witnesses from science," observes Duffin, "the polar opposite of religion" (p. 140). So the attempt to certify miracles is willy-nilly an attempt to unite science and religion, a happy coincidence of opposites.

What about the criteria for a miracle? The physicians find three things indicative; the healing must be "complete, durable, and instantaneous" (p. 140). The extraordinary speed of recovery was frequently encountered. The astonishing speed of the healing is what makes the physician throw up his hands, and say, "I can't explain this; it's beyond the reach of scientific thought."

Dr. Duffin offers a fascinating chapter on the dramatic nature of miraculous healings. For example, the doctors had given up on the infant whose death they said would occur in moments, and indeed the child seems to have expired. The mother in desperation swifts the child away in her arms to the tomb of the nearest saint. "Then she fell on her knees, sobbing and praying fervently to the spirit of the man inside, asking him to intercede with God to spare the child's life" (p. 145). An hour or so later the child revives and is restored to health, and the community—and witnesses of the miracle—give joyful thanks. All this is intensely dramatic—the agony, the invocation, the miracle, the joy, the communal celebration.

Invocation transcends solitary prayer; it embeds itself in corporeal performances, e.g., the whole family prays for intercession near the entombed body of a saint. Spiritual transcendence is rooted in and nourished by the concrete, the sensuous, the particular: it is *this* lock of saint's hair that is coveted for its spiritual power. Sometimes the supplicant went so far as to press the afflicted parts of her body on the marble of the saint's tomb or its incorrupt corpse (or part thereof) if possible. The journey to the tomb of the saint was often arduous, thus intensifying the felt appeal for help. The tomb of the saint, the pilgrimage there, the relics, novenas, images, vigils, sacred lamps, anointing with oil, all served to focus and heighten the drama of miracle-making. Miraculous power is pragmatic and pluralistic, and Duffin details the role of dreams and visions, and ends by discussing the importance of thanksgiving in the miracle drama.

The conclusion summarizes the reasons and specific sense in which Duffin accepts the reality of unexplained healings, and I leave her nuanced argument to the reader to consider in detail. Perhaps the most striking conclusion of the book concerns the stability and durability of extraordinary healings through the last 4 centuries.

One thing the author wisely leaves open: given that a healing is "miraculous" in the sense of being unexplained, to what shall we ascribe it? God or some unknown human, some purely natural capacities? Or . . . ? She leaves this to her readers to decide if they feel they must; it is a matter of interpretation, an act of faith.

The book contains a valuable Appendix on the author's sources and methods, charts and tables summarizing numerous data, and reproductions of artworks by fine artists and ordinary people expressing thanks and vows.

This is pioneering research with great theoretical and practical interest; it should engage anyone curious about the unknown limits of human capacity.

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Unbelievable: Investigations into Ghosts, Poltergeists, Telepathy and Other Unseen Phenomena, from the Duke Parapsychology Laboratory by Stacy Horn. New York: Ecco, 2009. 289 pp. $24.99 (hardcover). ISBN 978-0061116858.

I started reading Stacy Horn's book, *Unbelievable,* which concerns the famed ESP-researcher Joseph Banks Rhine, shortly before a visit to my parents' home in Georgia. My father had been ill and I was pondering gentle but interesting forms of entertainment. Inspired by Rhine's work, I decided to design a telepathy experiment. Upon arrival, I corralled my father, mother and one of my sisters into participating.

On the first day, I must tell you, we were brilliant.

My test had a very simple design. Each of us held a notepad and pencil. We sat around a table, facing away from each other. One person then drew a picture. The other three were then expected to draw that picture on their own notepad without being able to see the original drawing. "No laughing," I said sternly, in advance. "And no talking either."

But once we sat hunched over our tablets, it didn't matter. All I could think about was a boat. I drew one that resembled a small ocean liner, with little portholes dotting the sides and a smokestack puffing out gray curly loops. I sketched in some waves underneath it. When my father put his tablet down for comparison, he'd drawn a boat. It was bigger. It had more smokestacks. But it was startlingly

close. My mother had also drawn a ship. My sister had drawn a bird but then she had found the whole idea ridiculous anyway.

Over all, we were slightly dazzled—or maybe unnerved—by that first result. Of course, it marked our only real success. In the other seven tests, I drew flowers when it should have been houses, little birds instead of roaring bonfires. By the end of the experiments, my father—bored, I deduced—was simply doodling more boats with shark-fins circling around them.

All of which illustrates (in an admittedly amateur-time way) some of the challenges that confronted J. B. Rhine in his years of trying to explain telepathy. He wanted to build an indisputable scientific case for extra-sensory perception. But even carefully controlled studies of telepathy often yield inconsistent results. The most talented subjects appear to wax and wane in their aptitude. The scientific explanation for such erratic findings remains elusive even today. A method for reliably predicting success or failure, which would give a major boost to the field's credibility, has yet to be developed by paranormal researchers.

Nevertheless, Rhine, described by Horn as "the Einstein of the Paranormal" (p. 4), probably came closer to achieving that credibility than any other scientist in the history of the field. From 1930 to 1980, Rhine gained national eminence as the driving force behind Duke University's parapsychology laboratory, along with his wife, Louisa, an equally driven researcher.

Rhine first caught the country's attention with the publication of his 1934 book, *Extra-Sensory Perception,* which detailed his methodical experiments with telepathy. His central method involved asking one participant to mentally send images from a series of picture cards to another participant. It was during this period that he discovered a young man who apparently had an exceptional gift for receiving the images. Hubert Pearce, a divinity student, routinely identified at least 10 cards out of a deck of 25, and once correctly named every card in the stack. Probability theory indicated that anything above five could be considered significant.

"Hubert's abilities were astounding" (p. 36), Horn writes. The experiments also taught Rhine that a participant who was invested emotionally in the work tended to perform better. Pearce's highest scores occurred when Rhine bet money that the student couldn't get the correct answers. And eventually it taught him, as psychical researchers of the 19th century had also concluded, that such abilities are usually transient. And, again, possibly affected by emotion: Pearce's ESP successes ended when his then-girlfriend ended the relationship. They did not return.

Years later, the British physicist Freeman Dyson would cite this emotional connection as one of the issues that made telepathy research so antithetical to the standard model of research. Scientific studies strive for cool objectivity, he said, and "The experiment necessarily excludes the human emotions that make ESP possible" (p. 45). And without emotion, he suggests, the experiment is bound to fail.

The book is most engaging as it explores the simmer of excitement surrounding the Rhines' work, and the deepening frustration of having finding after finding dismissed by the scientific community. The Duke experiments were good enough to gain the laboratory some influential allies; even Albert Einstein raised the possibility that physics might one day explain telepathy. But they were never quite enough to move supernatural research out of the fringes of science.

"It was the parapsychology critics themselves who finally convinced me that the lab's work was sound" (p. 243), Horn writes. In investigating the criticisms, she concludes that although Rhine successfully countered almost all the complaints, the other scientists refused to acknowledge that publicly. By simply ignoring him, his critics neatly made his best research invisible.

She's less successful at providing any real insight into the Rhines themselves. The descriptions are superficial—"intensive concentration always defined Rhine's character" (p. 35)—and both J. B. and Louie Rhine appear as two-dimensional overachievers throughout the book. The book would have been better for some humanity and, frankly, for some more focus. The catalogue-like survey of the Duke laboratory's interests—from ghosts, to poltergeists, to mediums—tends to give the book a list-like feeling far too often.

But, in the end, it made me think, which is my favorite end to any book. It led me to design the ESP-experiment, which kept my family busy for four nights in a row. We also spent plenty of time discussing and wondering about the results and telepathy in general. And that first night, the night of the boat drawings? We're still trying to explain it.

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The Art of Dying by Peter Fenwick and Elizabeth Fenwick. New York: Continuum, 2008. 251 pp. $16.95 (paper). ISBN 978-08264-9923-3.

The authors are a husband-wife team. Peter Fenwick, MB, BChir, FRCPsych, is a neuropsychiatrist who directed the neuropsychiatry epilepsy service at Maudsley Hospital in London for many years. He is well known for his writings on a variety of topics, including consciousness and near-death experience (NDE). Dr. Fenwick serves on the Editorial Board of the *Journal of Scientific Exploration.* Elizabeth Fenwick has written many books on health, family issues, pregnancy and child care.

The first part of this book explores end-of-life experiences (ELEs). These experiences include deathbed visions, perceptions of something leaving the body around the time of death and deathbed coincidences.

ELEs are outside of the life experience of most people. The ELE terminology is likely to be unfamiliar to many. Lest this lack of familiarity lead to doubt about the book's findings, several points should be remembered. It is a basic scientific principle that what is real is consistently observed. The Fenwicks find remarkable consistency in the classes of ELEs presented. This consistency is evident both in their meticulous analysis and in the case reports presented. In addition, this book's reviewers have amassed scores of experiences from all around the world with striking similarity to the ELEs described in this book. ELEs certainly are consistently observed.

ELEs are usually not frightening and may be profoundly meaningful to those experiencing them. Deathbed visions are the most common type of ELE. These are the visions of the dying that are generally comforting, may include visions of deceased individuals and generally help the dying individual through the dying process. They are not explainable as hallucinations or the effects of medications.

There have been multiple reports of perceptions of something leaving the body around the time of death. This rarely discussed phenomenon is the observation of a form leaving the body, usually at the moment of death. It may be associated with a sensation of love or visible light.

Deathbed coincidences are an awareness that someone has died, even though they may be geographically far from the dying person and not even know they were ill. Deathbed coincidences may include a sense of awareness of their death, a sense of presence of the deceased, and may include apparent auditory or visual communication from the deceased. Other types of deathbed coincidences are inexplicable occurrences, such as a clock stopping at the moment of death.

Scores of people who had ELEs were interviewed for this book. Research participants sharing these experiences were often professional caregivers who commonly encountered death among those they were caring for. Scores of illustrative case reports are presented. These accounts are fascinating and help clarify the range of experiences in each ELE category. There have been recent scholarly reviews of some of these subjects (Kelly et al., 2007), but the Fenwicks' study adds important new understandings. It is interesting how many of their research subjects had not shared their experiences with others until this study. Hopefully this book will encourage more people to be comfortable sharing their ELEs in the future.

Following discussion of ELEs, there is a chapter devoted to the concept of the "soul." A discussion of belief systems about the soul from around the world is presented, followed by a very short section documenting the paucity of scientific pursuit of the soul. The Fenwicks succinctly, and in our opinion quite accurately conclude:

> Listening to people who are dying, or who have been with the dying and have reported these 'soul sightings', is probably the nearest any of us are going to get to a proof that we are more than just mechanical automatons. (p. 183)

The next chapter is devoted to consciousness, an area of notable expertise of Dr. Peter Fenwick. ELEs and related experiences are a tremendous challenge to reductionist views that consciousness can only exist in, and only be a product of, the physical brain. The evidence presented for the inter-connectedness of the mind comes from ELEs and a host of other credible scientific studies. Converging lines of evidence support the Fenwicks' conclusion:

> In my view, a satisfactory explanation of consciousness must include a detailed role for brain mechanisms, an explanation for the action of mind both inside and outside the brain, and an explanation of consciousness held in common, or the way we seem to be linked together. It should also give an explanation of wide mental states, including transcendent experiences in which the experiencer claims to see through into the structure of the universe. (p. 200)

The next chapter is a fascinating discussion of consciousness and the NDE. The Fenwicks are authorities in this area; they previously co-authored a book about NDE (Fenwick & Fenwick, 1995). Evidence is mounting that NDE is medically inexplicable and may provide among the strongest evidence that consciousness can exist apart from the body (Holden et al., 2009).

This book concludes with some excellent insights on dying a good death. This is especially relevant in our current society, where it is uncommon to openly discuss death.

Ars Moriendi ('The Art of Dying') were two texts written about 1415 and 1450 following the Plague (Black Death) that killed about half of Europe's population. People living in this era knew death, and there were few priests available to comfort the dying and bereaved. The Fenwicks state:

> *Ars Moriendi* ('The Art of Dying') was a blueprint, illustrated by a number of woodcuts, setting out the protocols and procedures of a good death and on how to 'die well', according to Christian precepts of the late Middle Ages. It was very popular, was translated into most Western European languages, and was the first in a Western literary tradition of guides to death and dying. It included advice to friends and family on the general rules of behavior at the deathbed and reassurance that death was nothing to be afraid of. We need a new *Ars Moriendi* now for the twenty-first century. (pp. 213–214)

We couldn't agree more. The Fenwicks present an excellent discussion on what should be considered to 'die well' in our time. This is an especially timely topic given the all-too-common practice of treating terminally ill patients with invasive medical care at a cost of many billions of dollars per year.

This book is very readable and would be very informative to both the casual reader and scholars. The Fenwicks present a very logical classification and description of ELEs that are likely to be used by future researchers. We were especially pleased with the multiple quotes from those who experienced ELEs and other experiences. These quotes helped clarify ELEs and related experiences, not only by demonstrating their content, but also how they affected the individuals who experienced them.

Much of the Fenwicks' research is truly pioneering. This book is highly recommended. It would be of great interest to those interested in death and dying, those with an interest in consciousness, and those interested in new material on exceptional experiences during the process of dying and following death.

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Life Beyond Death: What Should We Expect? by David Fontana. Watkins Publishing, 2009. 214 pp. $17.95 (paper). ISBN 978-1906787080.

David Fontana has now given us a sequel to his earlier *Is There an Afterlife: A Comprehensive Overview of the Evidence* (2005). In his earlier work, Fontana presented a case for postmortem survival based on a broad range of empirical evidences, with a particular emphasis on the data of mental and physical mediumship. In *Life Beyond Death,* Fontana continues where he left off in the final chapter of his earlier work, the nature of the afterlife. Given that we survive death, what might the next world be like? What kind of existence can there be for persons without their physical bodies? Fontana addresses these questions by comparing the data of psychical research and the testimony of some of the Western and Eastern religious traditions of the world. He argues that these diverse sources express a compatible and shared vision of what the afterlife is like.

Overview of Fontana's Book

Fontana begins his book (Chapter 1) by providing his reasons for embarking on this particular study, the limitations of science in handling the topic, and the importance of psychical research (especially mediumship) and the testimony of the world's spiritual traditions to informing us about the character of the afterlife.

He tells us, "Much of what is said adds up to a coherent and consistent view of the afterlife based on sources that may make sense to all those who do not on principle dismiss any possibility that we live on after death" (p. 6). So Fontana does not aim to present a conclusive, definitive, or compelling case for what the afterlife is like. Rather, he says, "My aim is to present a selection of the information available to us, and then leave it to the readers to make their own assessment of its value" (p. 7).

Chapters 2 and 3 provide an account of the experience of dying and the initial phase of the afterlife based largely on the data of near-death experiences (NDEs). Patients near death, or who were pronounced dead, report continuing experiences during their down time: an out of body experience, traveling through a dark tunnel with a light at the end of the tunnel, entering into a pleasant landscape, review of their life, and meeting beings of light or deceased relatives or friends. Some of the features of NDEs are corroborated by apparitional experiences, mediumship, and the testimony of the ancient Greeks, Egyptians, and religious traditions such as Buddhism and Christianity. These otherwise diverse traditions seem to converge on a basic theme, a theme reinforced by the phenomenon of deathbed visions (pp. 24–33).

Chapter 4 deals with the possible implications of sudden death and suicide for the afterlife experience. Fontana draws on the testimony of ostensible communicators in various cases of mediumship, such as the mediumship of Wellesley Tudor Pole. The results are corroborated by an appeal to religious traditions, for example Tibetan Buddhism, that emphasize how one's state of mind at death can influence one's experience of an afterlife. The consensus reached by examining these sources is that sudden death or suicide leads to an at least initially unpleasant and disorienting afterlife experience, a fact that may also explain negative NDEs (pp. 20–21, 52).

Chapter 5 covers "earthbound spirits," that is, those who have died but for various reasons fail to move on into the afterlife. Based on the data of mediumship, reasons for remaining earthbound include sudden death, emotional ties, desires, or disbelief in an afterlife (pp. 62–63). Fontana also uses earthbound spirits to provide an explanation of poltergeist phenomena (pp. 64–67). As in his earlier chapters, Fontana appeals to Buddhism to show that the evidence from mediumship is similar to what religious traditions have taught. Here Fontana cites the Tibetan Buddhist belief in a realm of hungry ghosts, reserved for those whose lives were characterized by greed and selfishness. Spirits trapped in this realm see the world of the living and are consumed by their desires for what they see, but their desires cannot be satisfied. Earthbound spirits also have the power to possess people, as is exemplified in trance mediumship (pp. 68–75).

Chapters 6, 7, and 9 develop a conception of three different planes of afterlife existence: the plane of Hades, the plane of illusion, and the plane of color. Together with the earthly plane of existence, these planes constitute the four planes of form. These planes of existence resemble life on earth to varying

degrees. They are the abode for people still attached to their earthly existence in some manner.

The plane of Hades is the lowest level of the afterlife, and it is described as a state of mind rather than a location (p. 90). What one experiences in Hades is relative to one's state of mind, especially at the time of death. For some it may be a restful or peaceful state. For others, it may involve a sense of remorse for wrongs done on earth. For others yet, it may be a place of punishment. Hades includes purgatory, and so it includes experiences of cleansing and renewal, as well as punishment.

The planes of illusion (Chapter 7) and color (Chapter 9) involve experiences of an idealized conception of the present world, complete with the people, objects, places, and events experienced in our ante-mortem state. Here Fontana makes use of H. H. Price's conception of the next world as a mental projection (pp. 106–109, 148–149, 153–154), an idea corroborated by the Tibetan conception of Bardo. These planes of existence, analogous to the dream world of our ante-mortem state, are shaped by our desires and thoughts. These worlds are, in the words of H. H. Price, "image-worlds," built up from our desires and the content of our ante-mortem memories. Consequently, individuals experience objects and places with which they were familiar in their ante-mortem state. Desires determine activities as expressions of wish fulfillment. While this explains the diversity of afterlife experiences (within the planes of illusion and color), it doesn't follow that we are confined to our own solipsistic worlds. Fontana says that like-minded individuals will experience a common environment in which they may interact with each other (pp. 106–107). So these worlds are more properly speaking products of corporate minds. Furthermore, communications between discarnate spirits will be telepathic in nature (p. 169), and travel to other locations may be immediate or mediated by imagery of travel acquired before death (pp. 169–170). These features of the planes of illusion and color are drawn largely from the data of mental mediumship.

Chapter 8 covers the topic of reincarnation. Reincarnation is said to occur typically to people who are in one of the planes of form, since these planes of existence indicate continuing attachments to earthly existence. Fontana returns again to the Tibetan Buddhist doctrine of Bardo and the correlated Tibetan teachings on rebirth (pp. 132–142), which include rebirth in realms other than earth. The discussion dovetails with Fontana's emphasis on multiple planes of postmortem existence.

Chapter 10 sketches three formless planes of existence: the plane of intellectual harmony, the plane of cosmic consciousness, and the plane of contemplation of the Supreme Mind (p. 87). These planes are planes of "increasingly pure and rarified consciousness" (p. 86) and represent the higher levels of postmortem spiritual and moral evolution. In the formless realms a person has to varying degrees transcended individual, limited existence and is brought into a greater unity with all other things.

As Fontana says:

> the formless planes mark a major departure from the four lower realms in that they are said to be no longer illusory but to approach successively closer to an ultimate reality in which consciousness is not limited by the need to accommodate to a physical body and to time and space, whether actual or illusory. (p. 176)

The different planes of existence are correlated with different degrees of spiritual and moral development (pp. 86–87, 106, 143). Fontana is clear that not only does one's degree of moral and spiritual development at death determine the plane at which one enters the afterlife, but there can be movement between different planes of existence based on moral and spiritual development *in* the afterlife. So processes of moral and spiritual development that began in our earthly existence continue into the afterlife.

Strengths of Fontana's Book

There are three useful contributions Fontana's book makes to the topic of the afterlife.

First, Fontana's inclusion of religious conceptions of the afterlife sets his work apart from many other treatments of the afterlife in parapsychological literature. In this way his work is bound to capture the interest of a broader audience whose ideas about the afterlife are shaped, at least in a general way, by their adherence to a particular religious tradition. In weaving together insights from Christianity and Buddhism, Fontana has provided a tapestry of the afterlife that rises above the sectarian aspects of many religious conceptions of the afterlife. He shows us how these traditions provide compatible and even complementary visions of the afterlife.

Second, Fontana's emphasis on different planes of existence can be seen as a way of harmonizing the Western religious emphasis on personal or individual survival and the Eastern emphasis on survival that transcends our individuality and separateness from things, for example, in the form of absorption into a higher or universal consciousness. The different levels of the afterlife move increasingly away from individual survival to a more universal mode of existence in which one's individuality has been modified to accommodate a greater unity with other things.

Finally, the diversity of afterlife views and their sometimes apparently contradictory nature is often presented as a reason to dismiss such accounts and perhaps reject the notion of an afterlife altogether. Fontana has to some degree addressed this concern. He has provided a way to reconcile very different accounts of the afterlife, for example, by conceptualizing the afterlife as involving different planes of postmortem existence correlated to a person's level of spiritual development. The idea seems to be an important point of convergence between the various traditions Fontana discusses.

Criticisms of Fontana's Book

While Fontana's work has the above merits, there are some disappointing features of the text, presentation, and argumentation.

(1) Fontana is unclear about how the case for survival (developed in his earlier book) relates to the epistemic status of beliefs about the nature of the afterlife articulated in his latest book. Consequently, it's hard to know where Fontana's exposition of other viewpoints ends and the presentation of his own beliefs begins.

Although Fontana is clear in both books that there is strong support for survival (p. 4), he expresses greater reservation about ideas concerning the nature of the afterlife. He says that his discussion of such ideas "does not necessarily imply a belief [on Fontana's part] in all the things for which they stand," but "it does not imply that the book is based on mere conjecture" (p. 6). He goes on to clarify that much of what he says constitutes a "coherent and consistent view of the afterlife" (p. 6). Later in the text he reminds the reader that his discussion of the seven planes of existence "should not be taken as an attempt to be definitive" (p. 87). So the tone is considerably more reserved than in Fontana's earlier book.

Now this is surely a sensible approach as far as it goes. Since some of the evidences for survival are not informative about the nature of an afterlife, we can't maintain that simply because there's a strong case for survival there's an equally strong case for what the afterlife is like. Ostensible past life memories, for example, do not typically inform us about the intermediate state between death and rebirth. But something should nonetheless be said about the connection between the case for survival and the case for what the afterlife is like. After all, and this point goes unacknowledged, some strands of evidence—if genuinely evidence for survival— are also evidence for some of the ideas of the afterlife Fontana discusses. This is true of many of the NDEs Fontana cites, and it's true of some of the data of mental mediumship Fontana cites. In these cases, it's difficult to separate the evidence for survival and evidence for the nature of the afterlife. To the extent that belief in an afterlife is reasonable given these evidences, beliefs about the character of the afterlife based on the same evidences will also be reasonable. So Fontana's tone is too reserved at this juncture.

Moreover, Fontana says that in his book he will only draw on mediumistic material "whose information is *likely* to be informative on the afterlife" (p. 5, emphasis mine). This suggests a more positive stance toward at least *some* of the afterlife ideas Fontana discusses, but this is never directly addressed in the text. He says his "aim is to present a selection of the information available to us, and then leave it to readers to make their own assessment of its value" (p. 7). Fair enough, but the reader may want to know how strong of a case Fontana thinks there is for the truth of at least some of the afterlife claims in his text, even if this is contingent on the success of the project he carried out in his former book. Related, the reader might like to know what Fontana *himself* actually believes with respect to the array of ideas he develops in the text, however less than certain

these beliefs are. This is only natural given that the case for his belief in survival (presented in his former book) relied heavily on the data of mediumship, which he says here is *likely* to be informative on the afterlife. Again, it looks as if Fontana's stance in his current book is too reserved.

(2) Fontana is quite explicit that he wants to show that the data of psychical research regarding survival and religious testimony about the afterlife are similar at crucial points, that there is a shared core of afterlife beliefs. This includes the Western religious traditions, especially Christianity (pp. 5, 39–40, 43, 47–49, 57, 93–99, 112–113, 183). But there is a significant unacknowledged discontinuity between the Western religious traditions and the afterlife ideas discussed by Fontana. While human persons may exist as disembodied spirits or souls immediately after death, they are in their final or ultimate postmortem state *physical* beings. There is a future day of corporate judgment of the human race. At this time human persons are physically raised from the dead by the power of God. Souls are reunited with their physical bodies. They don't exist as "astral bodies" in non-earthly realms. The redeemed enjoy eternal life on a renewed earth. This eschatology is a logical implication of a holistic conception of the human person. God creates the human person as a psycho-physical unity. Immortality is not a matter of transcending our physical existence but of perfecting it. What is most disappointing here is that Fontana doesn't as much as mention this widespread and deeply entrenched Western religious narrative of survival of death. This casts considerable doubt on Fontana's claim that the Western religious traditions are consistent with the other traditions he examines, at least as far as the essential features of the former are concerned.

(3) As a special case of the above, Fontana's treatment of bodily resurrection in Christianity (pp. 43, 112–113) at best marginalizes the view that the resurrection body is a physical body. Fontana acknowledges that Christianity affirms "bodily survival" but he takes this to mean the possession of a non-physical body, an astral or soul body. He acknowledges that for centuries it was assumed that the resurrection body was a physical body but that now it is generally believed to refer to a non-physical body of some sort (p. 43). While some theologians hold to a spiritualist interpretation of bodily resurrection, the physicality of the resurrection (of Jesus and the human race) is still a widely held belief, even among prominent contemporary Christian philosophers (e.g., Richard Swinburne, Peter van Inwagen, Stephen Davis, William Lane Craig, Kevin Corcoran, Dean Zimmerman). Contemporary Christian philosophers disagree of course as to whether this physical body is the original body reconstituted, revivified, or a newly created replica body, but the physicality of this body is not in doubt among such thinkers. Fontana's account is particularly unfortunate since physicalist conceptions of the resurrection body potentially resolve philosophical issues concerning personal identity and survival. They also provide a model of survival that is consistent with supposing that consciousness depends on a functioning brain. In this way, Fontana's discussion is isolated from relevant mainstream discussions in contemporary Anglo-American philosophy of religion.

(4) In Chapter 8 Fontana raises the well-known population argument against reincarnation (p. 122). This argument claims that the increase in population on earth is incompatible with reincarnation models. Fontana is unimpressed by what he calls the "standard reply" to this objection, namely that people reincarnate more rapidly these days than at earlier times. Fontana says that we really don't know that this is the case, so this population objection to reincarnation "remains effectively unanswered" (p. 122). But as David Bishai has persuasively argued, it is the population-argument objector who is saddled with an unwarranted metaphysical assumption, namely that "the mean duration of stay in the afterlife has been constant throughout human history" (Bishai, 2000: 419). The population argument needs this assumption, but the assumption certainly seems unwarranted, or at least no more warranted than assumptions built into rebirth models that allow them to be compatible with population growth. So the population objection carries considerably less force than Fontana supposes.

(5) Fontana's defense of survivalist interpretations of the data is at crucial points disappointing and inadequate. For example, as in his earlier work, Fontana dismisses appeals to living agent psychic functioning, the so-called Super-ESP hypothesis (pp. 147–148; cf. 79, 166), to explain the veridical data of mediumship. Fontana simply says that this view "involves so many debatable assumptions and suppositions as to put it outside the bounds of serious credibility . . ." (pp. 147–148). Nothing more is said. Fontana just refers the reader to his more detailed discussion of the Super-ESP hypothesis in his earlier book (p. 148). Among other things, the Super-ESP hypothesis challenges the survivalist interpretation of the data of mediumship,[1] one of Fontana's main sources, which he says is "likely to be informative on the afterlife" (p. 5). Given the space afforded to refutations of various other non-survivalist interpretations of afterlife evidence (pp. 11–15, 70–71, 73, 78), it's disappointing that Fontana doesn't say more about this rival hypothesis and cite his specific reasons for rejecting it, for example, that it is allegedly unfalsifiable and postulates a degree of living agent psi for which there is allegedly no independent support.[2] This would benefit those who haven't read Fontana's very large earlier book or who are unacquainted with the super-psi debate in parapsychology.

It is also peculiar, if not ironic, that Fontana dismisses the Super-ESP hypothesis on the grounds that it is based on "debatable assumptions." This may or may not be true, but it requires further explanation because there is hardly a point in Fontana's own presentation that isn't based on "debatable assumptions" broadly construed. Indeed, given Fontana's own cautionary disclaimers throughout his book, it would seem that Fontana is very aware of the conceptually problematic and evidentially limited nature of his project. So what sort of debatable assumptions does the Super-ESP hypothesis involve? And how are these assumptions significantly more debatable than the assumptions at work in Fontana's account of the afterlife? These are two important questions Fontana does not address. Consequently, Fontana's treatment of the evidence of mediumship, as well as

other survival evidences, suffers from an important inadequacy. The super-psi hypothesis seems unfairly dismissed, a dismissal that is unfortunately all too characteristic of much of the literature on survival.

(6) There's an interesting philosophical problem raised by Fontana's presentation of afterlife ideas. Fontana presents the idea that there can be movement between different planes of existence caused by one's spiritual or moral development (p. 143). Although at death some people enter immediately into the formless realms, others reach such realms from lower planes of existence. But according to Fontana at least two of the lower planes of existence amount to mental projections based on the desires and memories of postmortem individuals. So what's the problem here?

The difficulty stems from the plausible assumption that moral and spiritual development is actualized in worlds with some objective features, not worlds that are, in the words of John Hick, "plastic to our human wishes" (Hick, 1994: 273). The idea here is that objective features of a world generate genuine conflicts and challenges that are responsible for character formation. Now if afterlife worlds were solipsistic worlds, it would be clear that such worlds would not be conducive to any sort of spiritual or moral development. However, Fontana does not believe that afterlife worlds are solipsistic. He incorporates the idea of interaction and shared experiences between really distinct discarnate spirits that exist in a common mind-produced environment. Fontana says, for example, that individuals gravitate towards locations where there are individuals of a like mind to himself" (pp. 106–107). So, as he says, each community builds up its own little world (p. 107).

The problem here is that worlds that are projections of a corporate mind are not significantly more conducive to the moral/spiritual development of its members than solipsistic worlds fashioned by a single person's mind. Both kinds of worlds will lack genuine character-forming conflicts and challenges. Moreover, Fontana doesn't suggest any constraints on what kinds of desires will group people together in the afterlife. Do people, for example, whose lives were characterized by an overwhelming desire to shop, gather and spend their time roaming around in afterlife malls? Are they sufficiently funded for persistent purchasing? For them, perhaps money does grow on trees. Their world is plastic to their collective wishes. It's very hard to see moral and spiritual development in such wish-fulfillment worlds. Fontana says, for example, that people in the plane of illusion can only progress once they recognize the illusory nature of their existence. But is this the sort of thing a person would recognize given that his world has been fashioned from his own thoughts and desires? It is difficult, I think, to see people moving from these lower realms of form to the higher planes of formless existence.

One resolution to this difficulty is to emphasize rebirth into the earthly realm or some realm that is not plastic to our wishes, individually or collectively. Fontana suggests rebirth on earth from the planes of form (p. 143) but he doesn't utilize it to alleviate the unacknowledged difficulty of positing worlds that are both

mental-projection/wish-fulfillment worlds and also conducive to moral and spiritual development. Consequently, Fontana misses an important opportunity to give his discussion some philosophical sophistication.

(7) Finally, although Fontana provides author-text references when quoting source material, no page numbers are provided for any of these. Fontana doesn't even provide page numbers for important references to his own earlier publication, for example, when referring readers to his refutation of the Super-ESP hypothesis (p. 148). While the editor(s) may have felt this acceptable given the book's popular orientation, it is unfortunate for the reader who wishes to locate Fontana's quotations in the cited sources, or who wishes to follow up on Fontana's references to his own earlier publication.

Despite these weaknesses, Fontana's book is a helpful contribution to reflections on the possible nature of the afterlife. Hopefully it inspires similar future projects.

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Notes

[1] For an account of how the super-psi hypothesis challenges the survival of hypothesis, see Stephen Braude (2003).

[2] Fontana (2005: 103–112) raises these particular criticisms. For a defense of the super-psi hypothesis against these criticisms, see Michael Sudduth (2009).

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