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EDITORIAL.

In this issue, we have a theme of anomalous experiences and trance running through the pages. We explore more about how the relationships between certain correlates of hypnotisability and trance states are linked to particular anomalous experiences. How will knowing any of this help in clinical practice or research into hypnosis? More clients than not report unusual phenomena that do not arise directly from the trance states induced in hypnosis sessions. Such understanding also helps us relate to experiences of our own and to our friends' and neighbours' increasing reports of anomalous, paranormal and mystical experiences; not to mention those reported on television shows. Like you, I can easily dismiss someone else's experiences—in fact, I can analyse them to extinction—but when it comes to my own, I know those experiences were "as real as real" and nothing that you, or anyone else, can say will alter the fact that I had those experiences over different times and places in the world. The fact that I can explain them in scientific terms does not delete them from my world of experience or history.

Because the historical reviews by Carlos Alvarado have been received so well, we have included his review on the history of animal magnetism, which was once considered to be linked to both paranormal and trance states. Nancy Zingrone and Carlos Alvarado from the U.S.A. explore correlates of hypnotisability, dissociation, and absorption in relation to the seeing of auras. In their article, Kathryn Gow, Louise Hutchinson, and David Chant focus on the role of dissociation and fantasy proneness in general anomalous experiences, including some that might be classified as paranormal.

Michael Thalbourne concentrates on the relationship between transliminality and hypnotisablity (including the correlate of absorption) in anomalous experiences. David Wilde and Craig Murray from the U.K. analyse two cases of OBEs through the lens of a phenomenological approach.

Paul W. Schenk carefully dissects how past life therapy can be utilised in family systems therapy and will no doubt stimulate some heated debate. I have put aside my own scepticism of reincarnation; you might do the same and find that regardless of Paul's arguments, the outcomes are similar to other types of therapeutic techniques: It is after all a person's beliefs that we work with in hypnosis.

In the review section, through a review article, we are treated to a journalistic exposé on the role of hypnosis in films written by our editorial assistant Carl Harrison-Ford.

Completion of Term

This is my last edition as the editor of the *AJCEH* and looking back over the past five years I note that I have managed to bring in more contributions from other countries, both in relation to research and case studies; at Barbara Woods' suggestion, along with other members, I added scripts which have been very popular with practitioners and trainees. The commitment of ASH members, university staff and professionals from Australia and overseas has made these changes possible. Surprisingly, the addition of the film reviews has demonstrated that hypnosis is a much more common and public topic than we may have thought. Carl Harrison-Ford's "outsider's view" of films featuring hypnosis in this edition of the *AJCEH* adds weight to that finding, as did Deidre Barrett's article published in the international journal in recent years. Soon, we will be moving to electronic journal status and it will make a very big difference to our publications in terms of exposure and citations.

I would like to thank Carl Harrison-Ford for his tenacity in remaining with the *AJCEH* for over more than two decades now. Having his steady "eagle eye," with his excellent knowledge of the English language and social scientific jargon, means that between us the finished product is polished before it goes to the printers.

In the background is Ann Wilson's secretariat, who like Barry Evans' secretariat before her, handles the mail-out and the myriad of queries that we now receive about the journal in relation to copyright and subscriptions.

The *AJCEH* would clearly not exist without the dedication of the previous editors: Barry Evans who served for two decades, and Arthur Jackson, Guy Grant, Wendy-Louise Walker and Kevin McConkey and others who also added their professionalism to the role of editor over its lifetime.

Kathryn M. Gow October 2009

MODERN ANIMAL MAGNETISM: THE WORK OF ALEXANDRE BARÉTY, ÉMILE BOIRAC, AND JULIAN OCHOROWICZ

Carlos S. Alvarado University of Virginia

Historical discussions of animal magnetism as a concept of force generally emphasise publications appearing before the mid-nineteenth century. This article focuses on selected aspects of a later neo-magnetism that flourished between the late nineteenth and the first two decades of the twentieth century, namely the work of Alexandre Baréty, Émile Boirac, and Julian Ochorowicz. They used the concept of magnetism to explain the induction of trance and anaesthesia, as well as mental suggestion. Outside of the neomagnetic movement, contemporary comments of the work of these men were generally negative. Regardless of this, and of current scepticism on the subject, this work should be recognised as part of the context in which the field of hypnosis developed.

General histories of the investigations and ideas of hypnotic phenomena always mention the concept of animal magnetism as a factor in the development of hypnosis (e.g., Gauld, 1992; Pintar & Lynn, 2008). Because the concept was important, we need to be aware that certain aspects of its history are sometimes neglected. In this article, I will focus on selected examples of late nineteenth- and early twentieth-century magnetism.

ANIMAL MAGNETISM

Animal magnetism was considered by many to be a force that could be used to induce trance, and other phenomena such as healing, clairvoyance, and the transference of thoughts and sensations from one person to another (for

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Correspondence concerning this paper should be addressed to the author at: Division of Perceptual Studies, Department of Psychiatry and Neurobehavioral Sciences, 210 10th St. NE, Suite 100, University of Virginia Health System, Charlottesville, VA, 22902, email: csa3m@virginia.edu.

overviews see Barrucand, 1967; Crabtree, 1993; Gauld, 1992; Méheust, 1999). Writing in 1779, Franz Anton Mesmer (1734–1815) listed 27 propositions concerning this force, which he defined as a universal fluid that emanated from the heavenly bodies and that was present in nature (Mesmer, 1779/1980). Mesmer related animal magnetism to physical and organic matter, the human body being affected by it through the nerves. In an attempt to relate this force to other principles, Mesmer compared it to magnetism, arguing that it was polarised. He not only believed that this force could heal, but was convinced that it could be reflected and intensified by mirrors, propagated by sound, and stored in matter (Mesmer's system is thoroughly discussed by Pattie, 1994).

This concept was elaborated by later mesmerists who published their ideas and observations during the eighteenth (Tardy de Montravel, 1785), nineteenth (Du Potet, 1868), and twentieth (Durville, 1920) centuries. In the opinion of Baron Jean du Potet de Sennevoy (1796–1881), the phenomena of magnetism could be explained as follows: "The nervous, active atmosphere of the magnetiser, no doubt augmented by the impulse of his will ... enters in rapport with the passive nervous atmosphere of the magnetised person, and augments the latter to the point that, in some cases, it seems that there is a real saturation of the nervous system" (Du Potet, 1868, p. 316; this and other translations are mine). By all accounts, the mesmeric literature was vast and varied (Alvarado, 2008; Gauld, 1992, pp. 631–668).

The development of a variety of theoretical views about hypnosis (e.g., Braid, 1843; Charcot, 1882) contributed to the decline of magnetic theory. As stated by a writer in the *Revue Scientifique de la France et de la Étranger*, hypnosis was seen either as a "particular case of induced hysteria," or as the absorption of "animal magnetism into hypnotism according to Braid's formula" (Héricourt, 1884, p. 813).

Scepticism about this hypothetical force was rampant. One author saw the "hypothesis of magnetic fluid" as one unsupported by "any good experimental demonstrations" (Richet, 1884a, p. 221). Hippolyte Bernheim (1840/1919), the leader of the Nancy school of hypnosis, affirmed that the phenomena of hypnosis "are not due to a magnetic fluid"; instead, he wrote "everything is due to suggestion" (Bernheim, 1884, p. 73).

But this is far from saying that the mesmeric tradition was over. As stated in a recent overview: "Hypnosis had not replaced mesmerism at the end of the nineteenth century, but still existed alongside it" (Pintar & Lynn, 2008, p.

Editor's note: when searching for the details of this and similar double dates, go to name first and then the second date mentioned of the two; e.g., Mesmer 1980.

91). In fact, magnetism, and its variants, continued to be defended by serious students during the late nineteenth and into the twentieth centuries. While it may be argued that ideas, similar to the concept of animal magnetism, are still with us in many guises (e.g., Movaffaghi & Farsi, 2009; Nelson & Schwartz, 2005), my interest in this article is to discuss some partly forgotten figures who were active at the end of the nineteenth and the first decades of the twentieth centuries. In a previous article, I discussed two such figures (Alvarado, 2009). In this article, I will focus on the work of other overlooked theorists, namely Alexandre Baréty, Émile Boirac, and Julian Ochorowicz. 2

SOME MODERN MAGNETIC IDEAS

Mesmer's view (1779/1980), that the efficacy of the magnet to heal was due to animal magnetism, was echoed by others who saw the magnet as one of the means by which human magnetism could be transmitted (Durville, 1895). In this context, it is of interest to mention that the influence of the magnet was explored at the Salpêtrière by many physicians such as Alfred Binet (1857-1911) and Charles Féré (1852-1907), who focused on transfer phenomena. This was the belief that a magnet applied on a hypnotised subject could be used to move a motor or a sensory phenomenon from one side of the body to another (and later from one person to another). However, instead of animal magnetism, these authors explained their successes with the idea that the magnet "acts like a faint electric current on the nervous system, and produces a continuous peripheral excitement" (Binet & Féré, 1887, p. 262). This, and studies on the physiological effects of metals applied internally (in liquid form), or externally on contact with the skin (Charcot, Luys, & Dumontpallier, 1877, 1878), while not using the concept of animal magnetism, had a conceptual relationship to the old mesmeric claims of the efficacy of magnets as healing agents (Harrington, 1988).

In England, Edmund Gurney (1847-1888) explored the possible effect of a physical influence from the fingers of a person to induce anaesthesia and other effects (e.g., Gurney, 1884). The French were particularly interested in these ideas as seen in Ambroise-Auguste Liébeault's (1823-1904) exploration of the effects of "zoomagnetism" on the medical condition of small children

Regarding the late magnetic movement, see Alvarado (2009), De Rochas (1902), and Harrington (1989). Gauld (1992) and Pintar and Lynn (2008) paid little attention to this literature. Aspects of it were discussed by authors such as Barrucand (1967), Crabtree (1993), Dingwall (1967-1968), and Plas (2000).

(Liébeault, 1883), in Albert de Rochas' (1837–1914) studies of the projection of tactual sensations beyond the periphery of the body during hypnosis, a phenomenon referred to as the "exteriorisation of sensibility" (De Rochas, 1899), and in Jules Bernard Luys' (1828–1897) descriptions of the abilities of hypnotised individuals to perceive "effluvia" emanating from human beings (Luys, 1892). In addition, many others defended a variety of concepts of force that formed what may be termed the late neo-mesmeric movement. The individuals discussed below represent prominent exponents of this tradition.³

THE CONTRIBUTIONS OF JULIAN OCHOROWICZ (1850–1917)

Polish psychologist and philosopher Julian Ochorowicz created a simple instrument to measure susceptibility to hypnosis and to magnetism. This consisted of a tubular magnet, called an hypnoscope, that was placed around the finger of a person (Ochorowicz, 1885). In some persons, the magnet produced physical sensations that indicated to Ochorowicz openness to hypnosis and to magnetism. Out of 100 tests, there were reports of sensations in 30 of them.

Ochorowicz believed that the effects could not be accounted for by suggestion, even though he accepted that both suggestion and magnetism could act together. In his view, the magnet "is merely the substratum of another action, which is so weak ... that it hides itself from our instruments, and exhibits itself only through the intermedium of exceptionally sensitive nervous systems" (p. 281).

In a test conducted in darkness, a woman was able to differentiate a magnetised from a non-magnetised hypnoscope (Ochorowicz, 1909, p. 750). The magnetised hypnoscope elicited sensations of cold and tingling, while the non-magnetised one felt hot and agreeable. ⁴

Ochorowicz (1887/1891, p. 348) referred to "psycho-physical transmission" to account for such phenomena as differences in performance between hypnotisers. Furthermore, he discussed this transmission in terms of the ups and down of what the French called "mental suggestion," defined by one author as "the transmission of thought or sensations of an individual to another

There were many other representatives of this tradition (e.g., Alrutz, 1921; Bertholet, 1927; Chazarain & Declé, 1886; Magnin, n.d.).

Both Delboeuf (1887) and Grasset (1887) reported instances in which subjects did not show reactions differently to magnetised and non-magnetised hypnoscopes.

without perceptible exterior signs to our senses" (De Rochas, 1887, p. 372). 5 He believed that rapport between operator and subject did not take place in hypnosis. However, magnetic action could bring rapport in different stages. In this view, rapport showed "the action upon the subject of a centre of radiation from without ... and an adjustment in conformity with the dynamic nature of that centre ... effected little by little" (Ochorowicz, 1887/1891, pp. 273-274).

Ochorowicz discussed other phenomena that, in his opinion, provided evidence for the existence of a physical influence. One of these was the subject's recognition of the magnetiser's touch from that of other individuals. This also happened, he said, when the touch was applied through a rod or a pencil. On the latter, he wrote: "It proves that molecular dynamic differences pass beyond the surface of the body; that a certain vibratory tonic movement peculiar to a given organism is propagated beyond its periphery, and can influence the subject so definitively, so palpably, that there is a real action" (Ochorowicz, 1887/1891, p. 223).

The Polish researcher also said that it was possible to produce healing effects without actual physical contact and without the patient's knowledge. This effect was further evidence for "an inductive action that overpasses the superficies of the body" (Ochorowicz, 1887/1891, p. 328). In addition, he argued that "moral" or psychological means could not explain the differences in the effects of the magnetic action on different people: "One hand acts differently from the other hand. Hence, there is a physical action, and a personal physical action" (p. 329). Nevertheless, he stated later that he did not believe that the right and left hands had different polarities and that he had not found that they produced different effects (Ochorowicz, 1909, p. 759).

THE CONTRIBUTIONS OF ALEXANDRE BARÉTY (1844-1918)

French physician Alexandre Baréty became interested in magnetism during the 1880s. His preliminary studies were presented to the Société de Biologie de Paris on July of 1881 (Baréty, 1881/1882) and later expanded into a long monograph entitled Le magnétisme animal: Étudié sous le nom de force neurique rayonnante et circulante dans ces propriétes physiques, physiologiques et thérapeutique (Baréty, 1887; see also Baréty, 1888).

For an overview of examples of this phenomenon and methodological issues in its study see Ochorowicz (1887/1891). Plas (2000, pp. 87-109) also discussed French interest in mental suggestion, such as Richet's (1884b).

Baréty's monograph, over 600 pages long, was described by another proponent of magnetism as "the greatest scientific effort which has been made hitherto to establish the reality of animal magnetism" (Boirac, 1912/1917, p. 92). This book was about the field of "neurodynamics," or "the study of actions of neuric currents of a neuraliser subject on the neuric currents of a neuralised subject" (Baréty, 1887, p. xiv). Neuric force, a principle analogous to animal magnetism, was believed to be a bodily force "probably from the nervous system, which circulates along the nerves or *radiates* out of them ... and is susceptible to producing certain sensitive, motor and psychic modifications on other human bodies" (p. xii). The book was divided into two parts. The first consisted of physical and physiological phenomena observed with one person, a Mlle C., and the second included phenomena observed with other individuals.

The neuric force, Baréty believed, circulated within the nerves of the body and could be projected out of it as well. The latter was accomplished by means of passes, by pointing the fingers to the desired target, as well as through eyesight, and breath. The rays were said to travel in a straight line when coming out of the body, and could be reflected by some surfaces such as mirrors, or dispersed when passing through a prism.

Its effects included anaesthesia, hyperesthesia, loss of sight or hearing, contractions and trance. For example, when Baréty affected the sensibility of Mlle C, he was able to "anaesthetise and hyperesthesise the integuments of different regions ... abolish or exalt one or another sense" (p. 326).

The neuric force was said to have both internal and external properties. The internal ones were physical properties similar to heat, light and electricity. The external ones were the effects on animate and inanimate matter out of the body. The effects of this force were similar to the effects of a magnet, and some metals could augment the neuric force. Furthermore, Baréty noticed that those susceptible to "neuricity" were also susceptible to atmospheric electricity.

Direct neurisation involved radiation from the magnetiser to the patient. But it could also be achieved through reflection (when the neuric force bounced off another surface) or through refraction (through lenses or prisms). Baréty also referred to mediated neurisation, or an effect produced by another body or substance that had been charged with neuric force. An example of such a substance was water, which could "acquire the inherent properties of the neuric force" (p. 56). But water did not retain the force for long. Baréty presented a list of common objects that he was able to charge with neuric

force to use in mediated neurisation (pp. 271–272). In addition to water, this included paper, a table, a wall, a mirror, a book, a flower, a ruler, dice, and a handkerchief. Baréty believed that the hand could project this force through a sewing needle.

Neurisation also took place through induction. As Baréty explained: "The sole presence of a person close to another may affect the specific nervous state of one of them..." (p. 234).

The neuric force could produce therapeutic effects. Baréty believed it could affect general sensations, the functioning of the senses, movement and mental functions. These effects could take place while the subject was awake, or in a trance induced by the force, or appear spontaneously while the force was acting.

The first passes with Mlle C. were carried out on 30 October 1880. Baréty passed his open hand up and down the patient's body, and she soon fell into trance and exhibited anaesthesia throughout the body. "Some days later, on 2 November, I saw that I could produce anaesthesia without trance by passes on different regions of the body, and limited to the region covered by the passes. I could thus anaesthetise a finger, the nose, and ear, one of the eyelids, [and] half of the side of the body' (p. 211).

Baréty attempted to control Mlle C.'s stomach pain. "Her pain," he wrote, "disappeared in a few seconds when we directed our fingers" to the region of her body that was in pain (p. 98).

Digital rays could go through different obstacles, he thought, such as walls, wool, and a shawl folded in eight sections. But the effects of the force passing through obstacles were weaker than those obtained with the direct projection of "neuric radiation." In November of 1880, Baréty tested the possibility of neuralisation through a brick wall; the wall was 50 cm thick. His patient was situated between 10 to 12 cm from the wall's surface. From another room, Baréty placed his hand 50 to 60 cm from the wall pointing his fingers at the subject. He was able to induce contractions in the patient's hand and wrist (p. 116).

Baréty believed the neuric force could explain some medical conditions. Hysteria was a case in point, representing a "modification in the direction, the force and the distribution of nervous or neuric currents" (1887, p. 627).6

For other late magnetic views of hysteria see Baraduc (1893, p. 162), and Bonnaymé de la Flachere (1917, p. 137). Ochorowicz (1884, p. 558) believed that sensitivity to the effects of magnets indicated that a person could be cured of nervous maladies through the influence of "magnetism, of hypnotism, of imagination, of metallotherapy, of weak electrical influences and of other minimal stimulants."

THE CONTRIBUTIONS OF ÉMILE BOIRAC (1851–1917)

French philosopher Émile Boirac, a professor of philosophy at the Lycée Condorcet (Paris), and chancellor of the Académie de Grenoble and of the Université de Dijon, was well known for his strong defences of magnetism. In an early essay written to classify what we refer to today as parapsychological phenomena, Boirac (1893) referred to "psychodynamy," or the phenomena in which an individual could affect persons or physical matter at a distance through a force housed in the human body that was "different from all known forces, but analogous to radiating or circulating forces such as heat, light, electricity and magnetism" (pp. 346–347). Later, in a similar way, he referred to magnetism as "a personal and psychophysical action of the operator, an action emanating from its brain, which is exerted by currents more or less analogous to electrical and magnetic currents" (Boirac, 1895b, p. 60). The effects of this force on individuals included sensations of attraction and healing, but also such effects as the exteriorisation of sensibility (Boirac, 1895a) and the induction of trance at a distance (Boirac, 1896a).⁷

For all the merits of the Nancy School of Hypnosis, Boirac (1895b) argued, suggestion was not enough to explain all the phenomena produced. But he believed that mesmeric hypothesis had acquired a bad reputation and was ignored by most scientists: "Animal magnetism is [like] an America [in] that [it] has been lost and recovered during the [last] twenty or thirty years" (Boirac, 1907, pp. 1–2).

Boirac was aware of the influence of suggestion, but wondered "whether the ancient hypothesis of animal magnetism, in a more or less modified expression, was not the source" of some hypnotic phenomena (Boirac, 1912/1917, p. 80), as he wrote about a force he called "biactinism":

[This] is the agent which transmits to the nerve centres the excitations coming from the periphery and gives birth to the sensations. It is this also which transmits to the muscles the orders of the will, and determines the movements of the exterior organs. It is this, too, which excites and regulates the different vital functions; respiration, circulation, assimilation, and catabolism. But we do not know what constitutes it. (Boirac, 1917/ n.d., p. 158)

Boirac classified the phenomena dependent on this nervous force as "magnetoid." He argued that, when acting on a person, their physical basis could be separated from suggestion by keeping information from the subject,

Caratelli (1996, pp. 146-171) reviews accounts of induction of trance at a distance. See also Ochorowicz (1887/1891) and Myers (1886).

by conducting observations in complete silence, and "by acting only at a distance, without contact, through the supposed radiation of some organ of the operator, principally the hand" (Boirac, 1917/n.d., p. 60).

In attempting to show the existence of this force, Boirac used passes and a steady gaze to influence a 16-year-old young man: "Seated in front of the subject ... I slid my right foot slowly over the carpet, the toe pointing toward the subject's left foot. I noticed immediately a slight movement, a sort of tremor, in his foot. Again I slid my right foot, very slowly and without noise; this time the subject's foot glided visibly toward mine" (Boirac, 1917/n.d., pp. 165-166). Similar effects were reported when Boirac moved his hand nearer to the subject's own hand. In these movements, the subject "behaved as if his nervous system were, so far as voluntary movements are concerned, in communication with my own" (pp. 166–167).

CONTEMPORARY CRITIQUES

The work of Ochorowicz, Baréty and Boirac was not accepted by most of their contemporaries involved with hypnosis. An indication of this was an editorial note published in the Revue de l'Hypnotisme Expérimental & Thérapeutique on the first page of an article about the neuric force authored by Baréty (1888). The note stated that Baréty's opinions were in "complete opposition with the ideas generally admitted today" (p. 80). Suggestion was the generally accepted explanation for the phenomena of hypnosis, and ideas of magnetism, fluids and the like were considered unscientific and unacceptable by many.

An example of incredulity about the dynamic ideas of Ochorowicz was the reviewer of his book on mental suggestion. The reviewer, who praised Ochorowicz for his empirical approach, simply stated that he was not convinced (Colas, 1888). Another reviewer, English psychical researcher, Frank Podmore (1856-1910), referred to the hypnoscope as a "dubious little toy," and considered that it was premature to discuss the merits of Ochorowicz's force concepts to explain mental suggestion (Podmore, 1887).

Baréty was said not to have taken (or reported) proper precautions against suggestion, especially because most of his results were obtained with a single subject and "everyone knows that hypnotisable subjects are susceptible, through training, to a special education of incredible perfection, that renders them suitable to seize the suggestions" (Anonymous, 1887, p. 566). Similarly, the reviewer of the American Journal of Psychology saw the book as a document suggestive of a "joint product of pseudo-scientific methods gradually evolving a set of systematised symptom-reaction in an interesting hysterical subject, half whimsical originations, half subtle divination of theories of the experimenter almost before they are known to himself" (Anonymous, 1888, p. 502).

Pierre Janet, well known for his studies of dissociation, suggested that Baréty's beliefs led him to accept ambiguous responses of his subjects that may have had explanations other than the projection of a neuric force (Janet, 1888, p. 94). Janet also felt that the psychological aspects of the subjects were not explored, something that could explain or interact with other factors. However, he admitted that ideas such as Baréty's could contain some truth.

Boirac's ideas were also debated by several individuals. One of them wrote that he used a "truly scientific spirit" (Jankelevitch, 1908, p. 552), while another saw his work as possibly being the effect of "unsuspected sources of error rather than the existence of a psychic force" (Pierce, 1908, p. 471).

It was noticed that Boirac's concept of a force was ambiguous, but seemed to be analogous to physical magnetism (Leaf, 1895, p. 600). As this critic wrote: "We know far too little to say that it is not so; but I am not aware of any experiments which tend to prove it, and M. Boirac's seem to me to go certainly against it" (p. 600).8 Furthermore, another critic accused Boirac of showing a "loose and vague way of handling theories" (Sidgwick, 1908, p. 288).

Another reason for the rejection of the work discussed here was the psychical research work these men engaged in, particularly Boirac and Ochorowicz. Both of them wrote about mental suggestion (Boirac, 1896a; Ochorowicz, 1887/1891). Similarly, both men discussed telekinesis, assuming that it was explained by the projection of a biophysical force of a person's body (Boirac, 1912/1917; Ochorowicz, 1910). Such interests were demonstrated as well by other neo-mesmerists (e.g., Durville, 1909; De Rochas, 1887). Closely related to the late magnetic movement, there was a spiritualistic and psychical research literature on concepts of forces emanating from the human body to explain mental and physical phenomena that preceded, and later overlapped with, the neo-mesmeric movement (Alvarado, 2006).

CONCLUSION

Compared to earlier authors, Baréty, Boirac and Ochorowicz represent a late mesmeric tradition. Among other aspects, they used magnetic theory to

A later exchange between Boirac (1896b) and Leaf (1896) did not solve the controversy. One of the issues discussed was the hypothetical distinction between thought transference and the effects of a physical effluence to explain the effects reported by Boirac.

On nineteenth-century European psychical research, see Biondi (1988), Oppenheim (1985), Plas (2000), and Wolffram (2005).

explain action at a distance. In addition, both Baréty and Boirac discussed magnetic effects on the human body.

While their ideas were not widely accepted at the time, and may seem to many today to be methodologically weak, this does not mean that they were the work of cranks, or that they should be treated with disdain, as some have done in the past (Barrucand, 1967). Such ideas were part of the history of attempts to understand hypnosis, interacting in many ways with other developments that became part of the accepted canon.

Following the interest historians of science have in rejected practices such as alchemy and phrenology, and in constructs, such as the ether and phlogiston, a proper history of hypnosis should not be made only of past work and ideas that resemble the present. Studying the work of such men as Baréty, Boirac and Ochorowicz illuminates the context in which Charcot, Bernheim and others worked to develop their ideas. In a wider context, re-examining such ideas is helpful to understand the development of science itself (e.g., Hanen, Osler, & Weyant, 1980), a topic beyond the scope of this article.

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AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS OF OUT-OF-BODY EXPERIENCES IN TWO CASES OF NOVICE MEDITATORS

David J. Wilde University of Manchester

Craig D. Murray Lancaster University

The out-of-body experience (OBE) is an anomalous experience that has been found to occur under a variety of circumstances. This article takes its focus the in-depth examination of the lived experience of having an OBE as described by two novice meditators. A qualitative approach was adopted using interpretative phenomenological analysis. Two female participants who had OBEs while meditating took part in face-to-face, semi-structured interviews. Three interrelated themes emerged from the findings. Analysis highlighted the potential for the OBE to function as an adaptive psychological response in relation to how participants endeavoured to discharge existing need-related conflicts. Also emergent was the transactive nature of the out-of-body environments themselves, which were seen as meaningful places that facilitated participants' embodied, goal-oriented behaviours. Accordingly, participants took pragmatic views about their OBEs, seeing them more as tools or skills that can be utilised as an extension of their selves. Also emphasised was the role of absorption in the production of both the participants' meditative and out-of-body states.

INTRODUCTION

The out-of-body experience (OBE), whereby "the centre of consciousness appears to the experient to occupy temporarily a position which is spatially

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Correspondence concerning this paper should be sent to David J. Wilde at the School of Psychological Sciences, University of Manchester, Oxford Road, Manchester M13 9PL, U.K.: David.J.Wilde@manchester.ac.uk.

remote from his/her body" (Irwin, 1985a, p. 5) has been a research topic in psychology for over a century (Alvarado, 1992). Although phenomenologically diverse, three broad characteristics are typically reported in the literature: a sensation of being disembodied (Monroe, 1971), perceiving the physical body from a remote vantage point (Green, 1967), and the impression of travelling to distant locations (Peterson, 1997). OBEs can happen under a variety of different circumstances, such as: spontaneously occurring (Blackmore, 1986); during periods of illness or stress (Palmer, 1978); via voluntary induction, following techniques suggested by Monroe (1971) for example; under hypnosis (Cardeña, 1988) or when in trance states as utilised in some shamanic cultures (Peters & Price-Williams, 1980); while under the influence of alcohol or drugs (Tart, 1971); as part of a near-death experience (Ring, 1980); and while meditating (Kohr, 1980). This article focuses its examination on OBEs as described by two novice meditators.

The phenomena of OBEs and the practice of meditation have generally been researched along independent agendas. Where previous research has considered the two together, it has been mostly in the form of surveys that have investigated, either wholly or in part, the occurrence of the OBE in various populations. This work has generally yielded positive correlations between OBEs and meditation (Alvarado, Zingrone, & Dalton, 1996; Hunt, Gervais, Shearing-Johns, & Travis, 1992; Kohr, 1980; Myers, Austrin, Grisso, & Nickeson, 1983; Palmer, 1979; Usha & Pasricha, 1989). However, this literature tells us little about the phenomena as they have occurred together. The lack of research interest in these experiences as they may occur mutually seems surprising given the relative commonality of the OBE—approximately 12% of the general population have been estimated to have had one (Alvarado, 2000)—and the explosion in popularity of meditation since the 1960s (Blackmore, 2003). More recently, findings from an internet-based survey on OBEs conducted by Murray, Fox, and Wilde (2006) found that 89 out of 1,110 experients (8%) reported having had an OBE while meditating. This accounted for the second largest category of circumstance. Of these 89 experients, 32 (2.9%) reported they had single OBEs and 57 (5.1%) reported they had meditation-related OBEs on more than one occasion, ranging from two to as many as 500 separate occurrences. Furthermore, the literature sources for both phenomena also note that the two experiences share certain overlapping characteristics; particularly that they are both deemed to be altered states of consciousness and are related to dissociation and absorption. We shall now briefly review the evidence relating to these characteristics.

OBEs and Meditation as Altered States of Consciousness (ASC)

An ASC can be defined as "a qualitative alteration in the overall pattern of mental functioning such that the experiencer feels his [or her] consciousness is radically different from the 'normal' way it functions" (Tart, 1972, as cited in Pekala & Cardeña, 2000, p. 95). Much of the work investigating OBEs as ASCs has taken a similar path to meditation, that is, from a neurophysiological, laboratory-based position, with individuals who claim to be adept at inducing OBEs wilfully (Gabbard & Twemlow, 1984; McCreery & Claridge, 1996; Tart, 1967, 1968, 1969). Alvarado (2000) concluded in his review of the psychophysiological data concerning OBEs that the OBE appears to be linked with states of relaxation or low arousal, states which are directly linked to and promoted in the practice of meditation.

Meditation itself has often been couched in terms of ASCs; for instance, Farthing (1992, p. 421) defined meditation as "a ritualistic procedure intended to change one's state of consciousness by means of maintained, voluntary shifts in attention." Research has investigated the potential for meditation to induce ASCs mostly from the neuroscientific perspective (Aftanas & Golocheikine, 2001; Austin, 1998; Bagchi & Wenger, 1957; Easterlin & Cardeña, 1998; Fenwick, 1987; Kamatsu & Hirai, 1966; Ornstein, 1986). Overall, Vaitl et al. (2005, p. 109) concluded that there do seem to be examinable psychophysiological bases underlying the capability of persons to enter ASCs via the "intentional self-regulation of attention".

Psychological Absorption and Dissociation and Their Links to OBEs and Meditation

OBEs and dissociative processes have been linked in numerous studies. In terms of the attentional processes potentially underlying entry into out-of-body and meditative states, the personality trait of absorption appears to be fundamentally important. Absorption has been suggested to facilitate openness for ostensibly mystical and paranormal experiences (Gliski, Tataryn, Tobias, Kihlstrom, & McConkey, 1991; Wild, Kuiken, & Schopflocher, 1995) and as an essential meditative skill—that is, the ability to concentrate without distraction (Smith, 1987). The construct of absorption has been defined by Tellegen (1992, p. 1) as "a disposition to enter, under conducive circumstances, psychological states that are characterised by marked restructuring of the phenomenal self and world. These more or less transient states may have a dissociated or

an integrative and peak-experience-like quality. They may have a 'sentient' external focus, or may reflect an inner focus on reminiscences, images, and imaginings." Accordingly, absorption has received considerable attention in research into OBEs and meditation.

The majority of previous work on OBEs has been survey work conducted by comparing OBErs with non-OBErs. This research has found that OBErs tend to score higher on measures of dissociation, especially somatoform dissociation, and absorption (e.g., Irwin, 2000; Murray & Fox, 2005). Early studies (e.g., Irwin, 1980) established a positive correlation between absorption and OBEs. This finding has been replicated in several studies conducted since (Dalton, Zingrone, & Alvarado, 1999; Glicksohn, 1990 [2 studies]; Irwin, 1981, 1985a; Myers et al., 1983), though not in others (Gabbard & Twemlow, 1984; Glicksohn, 1990 [1 study]). When taken together these results show a moderate correlation between absorption and OBEs (Alvarado, 2000).

A significant positive relationship between OBEs and dissociation, as measured on the Dissociation Experiences Scale (DES), was found by Richards (1991). A number of studies have subsequently reported a similar relationship (e.g., Alvarado & Zingrone, 1997; Irwin, 2000). Dissociation in turn has been associated with trauma and PTSD (e.g., Carlson & Putnam, 1993) as have OBEs (Irwin, 1996; Spiegel, 1988). For example, Cardeña and Spiegel (1993) described how earthquake survivors in San Francisco reported more frequent episodes of their self detaching from their body and periods of narrowly focused attention in the week immediately following the earthquake than they did four months afterwards. Where trauma occurs early in life, is experienced as severe or has become chronic, dissociation may then become a coping mechanism. However, some commentators (e.g., Allen, 1993) consider dissociation more as a skilful ability to control one's attentional processes "that requires a certain degree of mental agility" (Waelde, 2004, p.149).

More recently somatoform dissociation—"dissociation which is manifested in a loss of the normal integration of somatoform components of experience, bodily reactions and functions" (Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1998, p. 713) has become of interest to OBE researchers. Building on the work of Nijenhuis et al. (1998), Irwin (2000) bestowed key roles for absorption and dissociation in his model of OBEs. In Irwin's theory, the foundation of the OBE lies in a union of dissociative processes beginning with a disruption of somatic input. The powerful realism of the OBE is explained by Irwin as a product of the strong absorption processes at work during the experience, as well as playing a certain role in directing the experient's attention further away from their somatic sensations once the process begins.

In an updated review of the psychological and physical states and processes prior to and during the OBE, Irwin and Watt (2007) have emphasised that many OBEs happen under conditions of extremely high or low cortical arousal (such as meditation and certain trance states)—an important precursive condition to the strong states of absorption Irwin suggests in part underlie the OBE occurrence. OBErs themselves often describe feeling relaxed, focused and clear minded during the experience. However, Maitz and Pekala (1991) reported that OBErs' attentional processes during the experience, rather than being inwardly focused, are more like an externally directed perceptual experience, which is concordant with the above definition of absorption by Tellegen (1992). Irwin and Watt (2007) have also noted that a person's capacity for absorption or to focus their attention is a key factor in OBE induction techniques used experimentally (Irwin, 1981) and those promoted by knowledgeable writers on the subject (often referred to as "astral projection," e.g., Eby, 2002).

Absorption has been associated with various means by which a sense of bodily detachment may be brought forth, such as hypnosis (Cardeña, 2005) and meditation (e.g., Hoelzel & Ott, 2006; Holroyd, 2003). The Compact Oxford English Dictionary (2005) defines the word "meditate" simply as "to focus one's mind for a time for spiritual purposes or for relaxation." Developing an ability to progressively reduce one's reactivity to distracting stimuli and prolong and deepen periods of focus is the key element (and often greatest hurdle) for beginners to master when starting meditation (Blackmore, 2003; Ornstein, 1986). Some people are better than others at this task, suggesting that this ability is a personality variable. The idea that intending to regulate one's attention is involved in the process of meditation as a function of personality has been investigated by Hoelzel and Ott (2006). They hypothesised that people who had a high absorption trait would be able to enter deeper meditative states more easily than those who had a lower capacity for absorption. Their hypothesis was supported. The results showed that absorption had a stronger positive influence on meditative depth than did the length of time a person had been practising the technique. This finding is interesting in the context of this review as it implies that a novice meditator who is high in absorption could attain ASCs, and therefore potentially have an OBE, more easily than those individuals lower in absorption who may have been practising longer. Additionally, Davidson, Goleman, and Schwartz

(1984) noted that absorption was greater and anxiety lower in longer term meditators than it was in controls and beginners, suggesting a training effect with prolonged practice. Translating these results to the phenomenon of OBEs could lend support to Alvarado's (2000) suggestion that a possible explanation why people have multiple OBEs is that, after they have had the first one, with each subsequent OBE they become more adept at recognising the experience and may gradually develop greater cognitive abilities to assist the progression of the experience when it starts.

There are two types of meditation—concentration and awareness meditation—both of which essentially utilise the attentional processes in different ways. In the former, the meditator voluntarily narrows their attention and in the latter they expand it (Blackmore, 2003; Ornstein, 1986). Bogart (1991) has suggested that, via the practice of either sensory reduction or excess, the brain's ability to process information is radically transformed, allowing for states of "flow" to arise that are "characterised by perceptual expansion and sharpening" (p. 14). Hoelzel and Ott (2006) have also noted that some of the manifestations of entering into absorptive states (and so the potential to enter into ASCs and OBEs) are an increased sense of realism regarding the object(s) of attention and an altered sense of self. The notion that meditative practices, whether harnessing sensory engrossment or reduction, can lead to entry into ASCs (and therefore OBEs) is reminiscent of what was mentioned earlier in relation to the high/low cortical states of arousal underpinning Irwin's (2000) dissociational theory of the OBE.

Rationale for Study

Although the above review is not exhaustive, it does highlight that there is a significant gap in the literature surrounding the phenomenon of OBEs as they happen in relation to the practice of meditation that warrants some attention. As can be seen, much of the previous work on the OBE has been nomothetic and quantitative in nature, usually taking the form of experimental work (e.g., Tart, 1972) or survey studies (e.g., Blackmore, 1984). This research has increased our overall understanding of the OBE immensely. However, if we return to Tart's (1972) definition of the ASC, we note the reference to "a qualitative alteration" from the normal mode's conscious functioning, suggesting that OBEs (as well as other ASCs) are distinctly individual in nature, ergo the averaged data obtained from quantitative studies may be relevant only to an average person; perhaps at best only a theoretical construct (De Waele, 1986; Flick, 2002). Some qualitative work on OBEs has been carried out (e.g., Blackmore & Wooffitt, 1990; Irwin, 1985b). Where this is the case a descriptive phenomenological approach has usually been taken that has tended either to describe categorically the broad after-effects of the OBE, or to distil a rich and widely varied experience down to a range of common features, for example, sensations experienced during onset and cessation, content and vividness of the experience, and the psychological state of the experient (see Alvarado, 2000, and Irwin & Watt, 2007 for more in-depth reviews). It seems by taking a single stranded, reductive approach researchers have methodically objectified, depersonalised and rationalised these experiences—essentially removing all sense of a person in there having an OBE—which somehow seems inadequate in view of the epistemological basis of the approach taken. Conversely, when examining the verbal accounts of OBErs, it is evident that the OBE should perhaps not be viewed as a unitary experience, but rather as a collection of comparable experiences, subtly different depending upon their arising circumstances and/or the situated, embodied, historical contexts of the experients' lives.

In order to address these issues, the aim of this study was to conduct an in-depth examination of the lived experience of having an OBE during meditation, and to examine what meaning experients attribute to their OBEs. Such work would be expected to contribute more to a further understanding of the OBE rather than any particular meditative practice.

METHOD

Study Design

This study was conceived within the framework of interpretative phenomenological analysis (IPA) (Smith, 1996). Theoretically and philosophically, IPA is founded on a blend of phenomenology, hermeneutics and idiography. IPA is phenomenological in that it seeks to obtain and honour a person's experiences, understandings, perceptions and accounts (Reid, Flowers, & Larkin, 2005). There is no attempt to construct an objective truth about an experience; rather, IPA is more concerned with the subjective account and meaning of the experience (Brocki & Wearden, 2006). However, IPA also acknowledges that in order to reach a deeper understanding of ourselves and our world, it is important to consider how the human being interprets their world, both individually and socially, and in attempting to gain access to another person's world that "access depends on and is complicated

by the researcher's own conceptions ... required in order to make sense of that other personal world through a process of interpretative activity" (Smith, Jarman, & Osborn, 1999, pp. 218–219). The skill of attempting to understand another person's experience from their perspective has been termed "vicarious introspection" by self-psychology authors (e.g., Bacal, 1995; Ornstein & Ornstein, 1995).

Sampling

The intense analysis of individual accounts and the examination of shared meaning, along with any nuances in these meanings, is reflective of the idiographic characteristic of IPA, which is generally characterised by small and homogeneous samples (Smith & Osborn, 2003). Having noted this, there has been a recent tendency for IPA studies to include samples of two participants (e.g., Knudson & Coyle, 2002; Parke & Griffiths, 2005) or to use single-participant case studies (e.g., Bramley & Eatough, 2005; de Visser & Smith, 2006).

Given what was outlined in the introduction, it must be noted that this study is relatively exploratory in nature, involving a very small sample size, and therefore broad claims about the generalisability of the results to the wider OBE population are not attempted. While IPA is not opposed to more general claims for larger populations, it is "committed to the painstaking analysis of cases rather than jumping to generalisations" (Smith & Osborn, 2008, p. 54). While generalisable claims regarding a sample in a single IPA study are not made, as more studies with other samples are carried out with similar findings, more general claims become possible. Smith and Osborn (2008) refer to this as "theoretical generalisability," rather than "empirical generalisability." While we do not make any claims that the experiences described herein are universal to all OBEs or OBErs, we have explicated the meanings of the OBE which emerge for both our participants. Furthermore, as Brown and Engler (1986) and Shapiro, Schwartz, and Santerre (2002) have noted, meditation is a developmental process, and therefore the findings of this study may be considered pertinent at best to beginner meditators, but not to more advanced practitioners.

Participants were eligible for this study if they could confirm upon initial contact that they had previously had one or more OBEs (i.e., the OBE(s) they nominated included the perceived temporary dislocation of consciousness as a key component of the experience—see Irwin's definition at the beginning of the introduction; their OBEs occurred during a period of meditation; and they were willing and able to talk about their OBEs using English as a first language. Informed consent was obtained from both participants. In considering our definition of meditation, the authors recognise that there is a difference between the traditional conceptions of meditation as an Eastern spiritual discipline and contemporary Western conceptions, where meditation is an umbrella term for different practices (e.g., forms of relaxation training, guided imagery, and hypnosis-related techniques). Herein, we refer to meditation as defined by Shapiro et al. (2002, p. 632): "Meditation refers to a family of techniques which have in common a conscious attempt to focus attention in a non-analytical way and an attempt not to dwell on discursive, 'ruminating thought." Shapiro et al. outline certain elements to this definition which we think highlight the broad inclusivity of this definition. First, the definition includes the phrase "conscious attempt" signifying that there is deliberate behavioural intention to focus one's attentional processes. Second, the definition does not imply that meditation must be carried out within a religious framework. Indeed, as meditation has become more popular in the West, it has gradually been peeled away from its original religious origins and been "re-packaged" as a more secular path to personal and spiritual development, or as a technique for health improvement (Blackmore, 2003; Ornstein, 1986).

With these considerations in mind, two women—Patricia and Louise—were recruited. Louise was recruited from a database of respondents who had taken part in previous research studies on OBEs. Patricia contacted the researcher after conducting her own research about OBEs on the internet and found a link to the researcher's web page at the university. Pseudonyms have been used to ensure anonymity is maintained.

Participants

Patricia (White British, age 31) estimated that she had had between two and five OBEs while meditating. Patricia recalled early experiences (between four and seven years old) of staring at a poster on her bedroom wall and then starting to feel as if everything around her was shrinking and "the room was the size of postage stamp and I was size of a pinhead." Her first OBE happened at the age of 14 while she was attending an art class at her new school. She remembered feeling unsettled at the school and felt that she was being bullied by some of the other girls. However, she found peace and comfort in drawing

and painting. Her OBE happened one day while she was engrossed in drawing a picture. Although she felt anxious about what was going on around her, she became progressively focused on her drawing and then suddenly noticed that she could see her hand, her drawing and the room from above. Later, at the age of 19, she was studying to be a dancer at college and became very ill with glandular fever. Concerned that her illness might become something more chronic she began practising Transcendental Meditation. the meditation ceremony she received her personal mantra and was then taken through a guided meditation during which she had an OBE. Patricia described how she initially felt her mind "focusing in" and her body coming "down and down." She then exited her body through the top of her head. She continues to meditate today, not for health reasons, but simply to relax and keep her mind clear.

Louise (White British, age 36) had her first and only OBE during meditation three years prior to the interview. She began a meditation for health course in an attempt to relax and de-stress herself after leaving a long-term relationship with a violent partner. She found the course difficult and struggled for the first few weeks to relax and let go of her thoughts and feelings and enter the meditative state. Her instructor encouraged her to continue and she eventually went into a meditative state in her sixth class. Her instructor was guiding the class through a Jungian meditation that described a journey to a forest.1 She felt very relaxed prior to leaving her body and very aware of the instructor's voice. After a while she realised she could not hear the instructor's voice anymore and felt that she really was in the place that was being described in the meditation. She felt disembodied and disconnected and experienced some very powerful emotions. She recalled seeing her physical body curling up on the floor below her. She came out the OBE when roused by her instructor, who had also noticed her curling up on the floor and crying. Although she enjoyed being in the OB state, she was profoundly upset at the vulnerable condition she perceived herself to be in. She went back to the class the following week and during that evening's meditation session she felt as if she was "moving off" to have another OBE. This frightened her and she terminated the experience and the meditation. She never went back to the class again. Although she was very frightened by the experience, she also remembered the peace and tranquillity of being in the OB state and said she would like to try meditation again, but only if she thought she could feel safe

This type of guided imagery—visiting comforting places such as meadows, mountainsides and forests—is a familiar script technique used in hypnosis to help treat various clients with various problems, for example, bulimia nervosa (Esplen & Garfinkel, 1998).

while doing it.

Interview Schedule

An interview schedule was constructed according to guidelines set out by Smith and Osborn (2008). Interview questions were derived from an in-depth literature review and from an analysis of the experiences of 1,110 OBErs who took part in a previous web-based questionnaire study about OBEs (Murray et al., 2006). As part of that study, OBErs were asked to provide accounts of their only or most recent OBE. Details supplied during this study directed the researchers to consider the OBE more broadly as a life-event and to design the interview schedule for this study to try and capture the OBE in some form of biographical perspective, rather than simply investigating the experience in isolation. As a result, a pre-prepared interview schedule was constructed that contained a list of main topics to be covered, including biographical details, full details of the OBE, what happened immediately after, and questions about the person's life since and any other experiences they may have had. All questions were open-ended and inquired about OBEs generally without trying to focus on either positive or negative aspects.

Data Collection and Analysis

Ethical approval for the study was obtained in accordance with local institutional research governance procedures. Both interviews were conducted by the first author. Patricia's interview was conducted at her home. Louise's interview was conducted at a U.K. university that she was attending. Both interviews were digitally recorded and lasted approximately one hour. Interviews were fully transcribed by the first author.

There are numerous detailed worked examples of IPA (e.g., Smith & Eatough, 2006) that guide the researcher through the analysis process. The analysis of the transcripts in this study followed a similar procedure. During the transcription phase notes were kept of first impressions of any points of interest. Upon completion of all transcription, one transcript (Patricia's) was chosen for analysis by the researchers and read several times. During each subsequent reading, researchers made further notes of any preliminary thoughts or interpretations in the left-hand margin of the transcript. Examples of such notes are: "Since OBEs: better able to cope with past situation, feels calmer, other people say she seems calmer" (Louise) and "Experience felt familiar, like re-learning a childhood skill" (Patricia). When this process seemed to come

to a natural point of exhaustion, the transcripts were read again, this time attempting to move from note-taking to the elicitation of higher level themes. These were written in the right-hand margin. At this point care was taken to remain true to "the essential quality of what was found in the text" (Smith & Osborn, 2003, p. 68). For example, the preliminary notes mentioned above later translated into early themes, such as "New self/old self-transformative experience" (changed later to "Selves in transformation: the adaptive value of OBEs") and "Control/skill/learning" (later to become "Tools, skills and learning: the OBE as an embodied experience"). This procedure was replicated with Louise's transcript. New information emerging from Louise's transcript augmented the themes initially identified from Patricia's transcript. This necessitated revisiting Patricia's transcript in order to validate the congruence and robustness of the analysis. Finally, after both transcripts were fully analysed, a summary table of themes was produced. This table was supplemented with line/page number references and a textual extract to support each theme to again ensure that an "audit trail" could be traced back to the raw data.

Ensuring the Validity of the Analysis

This study employed a variety of procedures throughout the analysis phase to ensure the integrity of the final interpretations. First, the authors met regularly to compare their independent analyses on the transcripts. The analysis conducted by the first author was evaluated alongside the second author's. This process enabled the achievement of deeper understandings of the data: similar and additional interpretations of the data provided by both researchers were analytically engaged with to produce definitive themes and interpretations. This activity served as one indication of the trustworthiness of the analysis. However, the aim of this process is to ensure the credibility of the analysis rather than to produce an analysis which is objectively true (Yardley, 2008).

Two further suggested criteria to assess the integrity of qualitative research are internal coherence and presentation of evidence (Smith, 1996). Internal coherence refers to whether the argument presented within a study is internally consistent and supported by the data. Presentation of evidence refers to there being sufficient data from participants' discourse within a report to enable readers to evaluate the interpretation. Therefore, the emergent themes presented are supported by participants' actual discourse, in order that the integrity and credibility of the interpretations can be assessed by the reader.

FINDINGS

Three main themes emerged from the analysis, which provide a cumulative, condensed account of the subjective meaning of our participants' experience of their OBEs: (a) Selves in transformation: the adaptive value of OBEs; (b) OBEs in their place: the transactive nature of out-of-body environments; and (c) Tools, skills and learning: the OBE as an embodied experience.

Each theme will be discussed in turn and illustrated by direct quotations from the transcripts.²

Selves in Transformation: The Adaptive Value of OBEs

This theme relates to the impact participants' OBEs had upon their sense of self, and is concerned with the potential for the OBE to function as an adaptive form of behaviour. When Patricia moved to another area of the country she found life at her new school initially difficult. She was the new girl in class and perceived her environment to be hostile and intimidating. It was under these conditions that she had an OBE one day in her art class. She described how she only saw part of herself—her hand—from above. Later, as an adult, she confessed that she had a tendency to want to withdraw into herself to escape from periods of stress or conflict. She drew a distinction between her professional and personal selves, feeling it was acceptable for this 'tuning out' to happen in her professional life, but not her private one:

Patricia, lines 869 to 879

I've got this ability to sort of just disappear a little bit and it can be quite odd, I think, sometimes if I'm not sort of happy with things ... so instead of like talking about how I feel ... I can almost not hear things and disappear and I didn't really know I did it ... I think when I'm working it's fine, I'm allowed to do that, but when it comes to sort of more everyday life I've realised that's a little bit odd.

She disclosed that being able to leave her body had made her more comfortable in withdrawing from the world in order to sort out her problems as if it has legitimised the behaviour in some way. Upon reflection, though, she felt there had been both positive and negative results to her OBEs:

Patricia, lines 928 to 934

In a good way ... the sense of kind of expansion and focus and really good positive

Transcription conventions: Prior to each quotation, the participant's pseudonym will appear followed by the line numbers identifying the extract within the flow of the interview. Any words appearing between two square [] brackets indicate where notes of clarification have been added by the authors. Ellipsis points indicate where a quotation has been abridged.

sense of yourself and ... in a bad way in that, when I tell people I've even felt sort of weird about it and I think there's a sense of isolation from it as well, not only by having the experiences but by doing the experiences regularly, it can isolate me a little bit, but I'm used to stepping out of things, which can sometimes be quite odd for people.

Louise had endured some major life events which have had severe effects on her sense of self, of which the OBE is one. After a three-year violent relationship ended she was diagnosed with PTSD and began taking an interest in personal development issues. In considering meditation, she described searching for something that could be beneficial in terms of alternative ways of dealing with stress. She did not expect to have an OBE. Although she was unnerved and disconcerted by what happened to her in the class, she felt the OBE component was helpful and positive in that it took her away from her stressful life situation:

Louise, lines 240 to 242 and 492 to 493

Just that there was ... a place of complete tranquillity and peace, which is something that I hadn't had for such a long time, emotionally, just to know that was there, was just fantastic ... I remember feeling really grateful for the experience.

Since her OBE, she had noticed a reduction in the frequency of her nightmares. She no longer had sudden crushing feelings or terror attacks and she had become more introspective and better able to cope with past situations. She expressed how much more adept she was at being able to manage highly emotional situations or events, such as a recent bereavement:

Louise, lines 711 to 719

I was also able to cope with it better ... I think I was able to be quite introspective about it ... before I was one for being quite loud and dramatic about it and that's kind of calmed me.

Louise was disinclined to say that either the OBE or the meditation were "cure-all pills" to such difficult life events. She did, however, express a wish to find those feelings of peace again and is looking to take up meditation once more. She felt that her OBE has in some way helped her become more self dependent and not reliant on the help of others or therapies.

OBEs in Their Place: The Transactive Nature of Out-of-Body **Environments**

Participants' OBEs happened in different out-of-body (OB) environments, which were perceived multi-modally and characterised by moments of strong affect. Both Patricia and Louise described how they took cues from these environments, and, particularly in Patricia's case, also cognised, planned and experimented with them. She did point out that her degree of control in achieving these OB states was quite variable; however, once in the OB environment, she described having a great deal of control over where she goes.

For example, during a business trip to Europe, she felt homesick and so began meditating with the deliberate aim of leaving her body. She felt herself exit through her head and ascended through the roof the building³ where she was staying:

Patricia, lines 469 to 489

I saw myself ... I was against a wall and a mattress and ... seeing my room from above and then the red roof of my block of flats and the street outside ... and seeing like the [town] outskirts ... and sort of being able to say, ok, that must be Warsaw over there, that must be Krakow down there, that must be Berlin over there ... ok that's the Baltic, almost like being in an aircraft, I suppose ... that must be Scandinavia, that must be Russia, that must be France, and coming up and then finding Britain and sort of tracing through Britain ... and sort of coming in down into places ... and sort of seeing the top of my parents' house ... focusing in and going down and trying to sort of see streets and identify places where I used to live or where people would be.

Some are not as effortless as others. Since her first meditative OBE, Patricia has tried several times to induce an OBE during her meditations, without success. However, sometimes when meditating she becomes conscious of the OBE when it is going to happen, and she tries to control it, with mixed success; sometimes it will stop, other times she can almost "steer" the experience to a full OBE. Other times, such as in the Europe OBE, she just lets them happen.

Known also as "astral projection" or "astral travelling." In the early part of the twentieth century, French researchers used hypnotic suggestion as a way of inducing OBEs but this was abandoned for a time because of criticisms levelled at the demand characteristics of the technique and that hypnotically induced OBEs may not be comparable to spontaneous OBEs (Irwin & Watt, 2007). However, more recently the use of hypnosis as a method of inducing and studying OBEs has been employed by several researchers (e.g., Irwin, 1989; Cardeña, 2005; Nash, Lynn, & Stanley, 1984).

Louise's OBE happened during a guided meditation in which she was asked to visit a forest and it was characterised by a high degree of awareness and coherence. After an initial period of guidance, Louise became aware she was no longer following her instructor's voice and found herself autonomously directing herself within the OB environment.

Louise, lines 166 to 228

I just remember being there in this place ... Just physical sensations of walking, sounds, feeling the sun coming through, and as you were walking through the forest and then, you could almost touch the water, feeling this but very, very vividly.

Although similar to Patricia's OBEs in terms of perceived realism, Louise's experience differed in that it was imbued with positive emotions. Different also was the distinct sense of place that defined the experience for Louise in contrast to the more functional, cognitively coherent environments portrayed by Patricia. Louise embraced this and described it as a "safe" place.

Tools, Skills and Learning: The OBE as an Embodied Experience

As a professional dancer, Patricia utilised her mind and body as tools for expression in her daily working life. Similarly, she appeared to have embodied the OBE also, viewing it as a tool which could be manipulated to serve a variety of purposes in her life; helping her in her work and to make connections with others over large distances. Her first OBEs happened as a child, then in later life they reappeared under stressful conditions when attending a new school, and once more when she learned to meditate. Her adulthood OBEs had mostly happened when she had been in states of deep psychological absorption, that is, when resting, or practising yoga or meditation. The roots of her openness to experiencing OB states may have been put in place in her childhood, and then later reinforced with repeated experiences. When she learned to meditate, she had in place the cognitive skills and understanding of her own body and its limits from being a dancer to take advantage of her OBEs while meditating and use them as an extension of her self. In the next extract, Patricia describes how she felt after she had her first meditative OBE during her Transcendental Meditation ceremony and what it subsequently meant to her:

Patricia, lines 417 to 419 and 698 to 703

For me it felt like something that I already knew how to do as a child, it was something that was quite familiar to me; it was like a skill I'd forgotten how to do, and this [the meditation] had helped remind me how to do it ... it gives you a really good perspective on yourself that you're not sort of entrapped within yourself; you can go out yourself and also experience the gift to travel to other people's minds almost ... or to be outside of just this place that we are in, it's not just this body but also just this environment that, you think you're stuck in.

Patricia's self is in one instance a very rooted, embedded, pragmatic person who wishes remain firmly fixed "in the dirty, messy, complicated, weird, useless world," while at the same time taking advantage of seemingly extracorporeal travel and the supra-normal abilities it suggests, such as flying over cities and countries. For instance, the OBEs she reported during meditation took place in replicas of real life places and are described as "pure moment[s] of consciousness," characterised by feelings of dislocation, timelessness and of being outside of the moment, with a high degree of perceived realism. She further likened the art of dancing, of being completely in the moment of a very technically complex set of movements, to the OB state:

Patricia, lines 832 to 840

There's a relaxation that comes with that, with working at that sort of really high level, and it's something about the clarity of the mind, it's not about the body—it's about the clarity of the mind, and that's similar to when you're sort of outside yourself ... they're remarkably similar, rather than being actually the opposite extremes; it's about tapping into the same thing, the same clarity of yourself.

Louise's OBE occurred during a guided meditation during which she was directed to visit a forest and was characterised by a degree of dual awareness. While in the OB state, she saw her physical body below her curling up on the floor into a foetal position with other people around her. She felt she was aware of the room and her body, but at the same time felt quite disconnected from both. She noted physical sensations congruent with the environment she was in; warm sunshine on her face and the sound and feel of water against her hands from a stream. She likened this state of being to previous violent episodes in her relationship with an ex-partner, where she would at times step out of herself and view the attacks as a third-party observer. That disconnected feeling is something which Louise parallels with being in the OB state. Although she did not think they were one and the same, she did acknowledge that they may be related:

Louise, lines 266 to 310

When the last attack happened, I was literally disconnected from, and felt as if I was watching it being played out rather than being in the middle of it ... and I was there kind of pre-empting what was going to happen next and that was quite bizarre ... this is why I'm saying that this out-of-body experience ... can quite definitely be the product of years of feeling very disconnected and looking for safety.

She has reflected long and hard about her OBE and has studied the scientific literature about OBEs as an undergraduate psychology student. This has led her to theorise about the possible nature of her OBE. She felt that being diagnosed with PTSD had opened up the possibilities for several explanations as to why she has had her OBEs. One theory she had was that, because of her emotionally vulnerable state, she might have been looking for a route to escape the brutality of her everyday emotional and psychological existence. Her crying upon her exit from the OB state could have been a sign of a release of that emotion. She also struggled with what the experience actually qualified as.4 At some points during the interview, she called it an OBE, and at other times, she preferred to think of it as an altered state of consciousness (ASC). She felt that she could accept that it was an ASC rather than an OBE, as she found it difficult to reconcile her experience with what she was working towards in her scientific psychology studies. She confided at the end of the interview that she had not reached any conclusions either way, but also admitted that she had not done enough reading or talking to people about it yet.

DISCUSSION

One of the novel findings from this study is the way that participants utilised their OBEs, particularly with repeated experiences, to function as adaptive psychological responses in relation to how they endeavoured to discharge their

During the peer review process for this paper, one reviewer commented on how some participants may misinterpret their OBE for another experience, for example, autoscopy. This problem is mainly intrinsic to OBE research involving self-report, self-selection questionnaire surveys where the respondent is asked to identify their experience with a "screening" definition of the OBE provided by the researcher, usually with a dichotomous response choice, such as "yes/no." Using this method, the researcher cannot be fully certain which way the respondent has interpreted the definition of the OBE they have provided. This "false positive/negative" problem has important methodological implications for incidence rates. However, this is not such an issue in studies such as this one, where the interviewer has the ability to explore the nature and meaning of the experient's OBEs and ascertain which are genuine OBEs and which are not. Readers interested in finding out more about this issue are referred to the debate between Neppe (2007) and Murray and Fox (2007).

existing need-related conflicts. Indeed, Irwin and Watt (2007) have noted that in some OBE cases, the experience may facilitate the social needs of some experients, "such as the need to be with a particular person" (p. 177), which would fit well with some of the findings here. For instance, Patricia's OBEs have dual functions, one to act as a kind pressure valve—relieving tension from the internal and external pressures of everyday life and providing a sense of freedom—while at the same time being a means by which to try to connect with others. Tentatively, the findings of this study suggest that participants were not completely leaving the psycho-affective substrate of their everyday life worlds behind when entering the OB state; rather, they took socio-cultural behaviour patterns with them and employed embodied, situated actions and skills in an attempt to resolve those tensions.

The idea that the OBE could be a tool that can be utilised as an extension of the self (Hall, 1969) and developed is entirely consistent with the practical applications of meditation in the same context. As we noted earlier, practice effects have been found for meditation by Davidson et al. (1984) and advocated for OBEs by Alvarado (2000). Additionally, McCown (2005) has reported anecdotal evidence of mindfulness meditation being used by lawyers and physicians for the practical advantages it gave them, in terms of being able to attend more closely to their clients' needs. Similarly, it has also been noted by some OBE researchers (e.g., Ehrenwald, 1974) that shamans and mystics make use of OBEs as a way of embarking on "shamanic flights" as part of their ritualistic work (Eliade, 1964; Ichazo, 1973; Peters & Price-Williams, 1980).

In this study, Patricia revealed how she drew upon both her experiences in meditation and her OBEs and applied that understanding in her work teaching dance students. Furthermore, she also described high degrees of skilful navigation and interaction within her OB environments for the deliberate purpose of exploration and information acquisition. It has been suggested by Irwin and Watt (2007) that the majority of such perceived control within the OB environment is solely cognitive and directed towards a desired location, or as mentioned above, to a particular person. What is interesting with Patricia's case is her descriptions of her psychological processes while dancing and her OB states during meditation, clearly involving deep psychological attention being directed towards physical states of being. As we noted in the introduction, many authors (Cardeña, 2005; Gow, Lang, & Chant, 2004; Holroyd, 2003; Irwin & Watt, 2007) have highlighted the role of absorption in the production of states of being that are characterised by a sense of detachment from the physical body. Such states are meditation, OBEs, hypnosis, trance states related

to rhythmical music and dancing such as the "whirling dervishes," as well as "automatic" behaviours and activities such as walking, running, and playing a musical instrument.

Phenomenologically speaking, Mauss (1950, as cited in Csordas, 1993, p. 139) has emphasised the role of the attentional and imaginal processes related to the attainment and perfection of physical skills, for example by sports athletes. Csordas (1993) termed this "somatic modes of attention," defined as "culturally elaborated ways of attending to and with one's body in surroundings that include the embodied presence of others" (p. 138), which could be extended to states of transcendence such as those suggested by meditation and OBEs. Moreover, the progressive embodiment of the OBE over time such that it becomes a skill is reminiscent of Merleau-Ponty's (1962) concepts of "intentional arc" and "maximum grip." For Merleau-Ponty, skills are attained in the course of interacting with objects and situations. The intentional arc defines the process by which these skills are first encountered, learned and then finally merged into the person's being. This leads to the concept of maximum grip—to achieve an increasingly superior grasp of lived situations. That goal-directed behaviour was also reported suggests that at least some of the skills involved were cognitive in nature. As Anderson (2003, p. 105) has written:

We imagine a goal as being at some place ahead of us, and employ strategies for attaining it analogous to those we might use on a journey to a place. We plan a route, imagine obstacles, and set landmarks to track our progress. In this way, our thinking about purposes ... is rooted in our thinking about space. It should come as no surprise to anyone that our concepts of space ... are deeply tied to our bodily orientation to, and our physical movement in, the world.

On the basis of these considerations, then, our participants' OBEs can be considered to have happened in places or spaces; there is a dynamic quality to these experiences—they are never static and are characterised by multi-modal sensations—"as place is sensed, senses are placed; as places make sense, senses make place" (Feld, 1996, as cited in Geurts, 2003). Here we refer to Western environmental psychology literature; principally in relation to the personenvironment transactional approach, emblemised by the work of Ittelson (1973) and Stokols and Schumaker (1981). In so doing, it should be noted here that the concept of environment should be considered in its broadest meaning, not just its "simple physical-perceptual characteristics" (Bonnes & Secchiaroli, 1995, p. 35). In this respect, the OB environment may then be conceptualised, not simply as a psychologically and affectively inert setting, but as a meaningful place, and the OBEr as perpetually occupied in balancing need-related, goal-oriented activities with the perceived demand characteristics of that space; be they "'resistant,' 'supportive' or 'facilitative' with regard to the participants' behaviours" (Bonnes & Secchiaroli, 1995, p. 61).

The transactive approach under consideration here also recognises a cognitive-hermeneutical role for the experient—meaning and understanding emerge from the experience and are not determined by the characteristics of either the environment or the percipient (Ittelson, Proshansky, Rivlin, & Winkel, 1974). Emotions are considered equally as important with regards to goal-oriented behaviours. With reference to place and its relationship with the self and identity, Tuan (1974, 1979) proposed the concept of "topophilia" indicative of "all the [positive] affective ties of the human being" with the environment, whereas negative ties, such as anxiety or fear, were conceptualised as topophobic. This is illustrated in our data by Louise's account of her OBE, which was flooded with intense and passionate joy and profound peace, and tied to the place that she found herself in.

Finally, in this section, as we have touched on identity, we must therefore briefly consider place identity, often considered as a sub-structure of the self-identity. Proshansky, Fabian, and Kaminoff (1983, p. 61), viewed place identity as "developed by thinking and speaking about places, through a process of distancing which allows for reflection and appreciation of places." Central to this vision is the idea that by reflecting on and talking about places, those places become imbued with meaning and thus make significant contributions to the identity formation process. This point is important, because both of our participants had problems with disclosure, fearing ridicule or embarrassment should anyone discover they were disposed to leaving their bodies, in a sense a kind of powerlessness, which not only impinges on the integration of the OBE (as discussed above), but may also be problematic in how the person comprehends and identifies with themselves as being an OBEr.

CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

The findings presented here supplement current knowledge of OBEs in several ways. All participants demonstrated a desire for control over their lives, usually in relation to specific, unfulfilled needs that had germinated in earlier stages of their lives. This led them to begin meditating in the first place.

Their OBEs were unexpected events, but once introduced into their lives they became integral parts of their evolving self-identity, providing adaptive avenues by which they could manage existing need-related conflicts. Related to this were the challenges (real and perceived) that they encountered in trying to share their experiences with others and the strategies they employed to manage this disclosure. However, as part of this process, fresh uncertainties and conflicts also began to emerge, which subsequently impinged upon their beliefs, attitudes and sense of self. Also emergent is the transactive nature of the OB environments themselves. It is argued here that, rather than taking place in psychologically and affectively inert settings, our participants' OBEs were situated experiences occurring in meaningful places, sometimes imbued with positive emotions, and that they interacted with those surroundings in goaloriented ways. In doing so, they performed embodied actions and motions. In Patricia's case, these were learned from earlier OBEs or experiences of a similar nature and cultivated with repeated practice.

Moreover, the explorative findings from this study raise some interesting questions that may be used as the basis for future research directions. For instance, further in-depth examinations of the issues surrounding control, skill acquisition and development, and embodiment need to be conducted. In this respect, studying OBErs recruited from populations of sportspersons, dancers, performers, etcetera, may be particularly fruitful. The tentative finding suggesting that there are socially motivated needs related to the OBE also requires further exploration, not only in terms of how these needs affect the content of the experience, but also how they may impinge on its occurrence. The function of the OB environment has been highlighted in this study as something potentially important both to the meaning that the experient attributes to their OBEs, and reciprocally in terms of cognitive skill development. Future research should investigate more thoroughly the relationship between the different types and qualities of the environments that OBEs take place in, the needs of the experient and how these act together in order for an experient to draw meaning from the experience. Finally, this study examined the lived experiences of OBEs in two novice meditators. Both of our participants chose meditation as a means to address health-related issues. Future studies should look at OBEs as experienced by advanced meditators who have been training with a specific form of meditation for a long period of time, as well as those meditating with the aim of spiritual and personal development.

The interpretative phenomenological approach taken in this research has been instrumental in highlighting the subtle social, perceptual and affective dimensions of the phenomenon of OBEs. They are complex, novel and meaningful events that are a rich part of an experient's life and as such they will cognise about them and wish to talk about them. Additionally, the personal biographical framework in which IPA works—viewing the participant as a situated, embodied, historical person—as well as its cognitive focus, which is not traditionally a concern of phenomenology, is ideally suited to investigate the multi-dimensional nature of these unique experiences.

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TRANSLIMINALITY, ANOMALOUS BELIEF AND EXPERIENCE, AND HYPNOTISABILITY

Michael A. Thalbourne Independent psychological researcher

Transliminality is defined as the hypothesised tendency for psychological material to cross thresholds into, or out of, consciousness. In this article, the author first describes the manner in which the concept of transliminality was arrived at, and second gives a comprehensive review of the correlations between transliminality and anomalous/paranormal belief and ostensible experience. Since such belief and experience correlate both with transliminality and with hypnotisability, it is suggested that hypnosis researchers should examine the correlation between transliminality and hypnotisability, expecting it to be positive and significant.

BACKGROUND TO THE TRANSLIMINALITY CONSTRUCT

The year 2009 is the centenary of the coining of the word "transliminal," meaning in its Latin roots "across (trans) the threshold (limen)." It was, apparently, invented by F. L. Usher and F. P. Burt (1909) in their attempts to explain telepathy: They theorised that information from the supraliminal consciousness experienced "transliminal leak" across the threshold to the subliminal consciousness; from there, it was somehow transferred to the subliminal consciousness of another person and thence, by a similar process of leakage, appeared in that person's supraliminal consciousness.

After these researchers, the word "transliminal" appeared in the work of Anderson (1962), Rugg (1963), and MacKinnon (1971), but the word "transliminality" appears to have been first used by Thalbourne (1991). The kernel of the concept was arrived at in the 1991 publication, and was developed in work published in 1994, as follows.

Thalbourne and Delin (1994) were interested in the correlates of paranormal belief/experience and also of mystical experience. As a measure of belief in, and ostensible experience of, the paranormal, they administered the 18-item Australian Sheep-Goat Scale ("sheep" are the believers/experients, "goats" the disbelievers/non-experients: Thalbourne & Delin, 1993¹). They also gave their participants the 25-item Mystical Experience Scale (Thalbourne, 1991), as well as a specially devised 9-item creative personality scale, the Magical Ideation Scale (Eckblad & Chapman, 1983) as an index of schizotypy, and two scales to measure history of manic-like and depressive tendencies (Thalbourne, Delin, & Bassett, 1994). Paranormal belief/experience correlated with mystical experience and with all the other variables. Over and above that fact, the six variables all correlated positively and significantly with each other. This positive manifold suggested that factor analysis would yield a single underlying variable, and indeed this occurred.

What name could be given to this underlying factor? Thalbourne and Delin suggested "transliminality"; literally, the tendency to cross the threshold. Studies of perception, imagery and memory all provide some evidence for a threshold that mediates unconscious-conscious awareness. Thalbourne and Delin have suggested that there are individual differences between people in the selectiveness with which the barrier or gating mechanism between subliminal and supraliminal is operating (either at the present time or as an enduring trait), with consequent effects upon the extent to which material from the subliminal level appears in—can even engulf—the supraliminal consciousness. Thus, in one person only certain types or quantities of ideation or affect are allowed to "cross the threshold" into consciousness; whereas in another the threshold is, relatively speaking, much more permeable, allowing through into the supraliminal region more, and perhaps in some sense "deeper," material. Persons high in transliminality will, relatively speaking, experience a much larger number of different types of input from the subliminal regions, whereas others, lower in transliminality, may hear from that region on considerably fewer occasions. Thus, paranormal belief and experience can be said to be one consequence amongst many of a mind high in transliminality. Mystical experience and creativity are other such consequences.

Could this factor be replicated? Thalbourne, Bartemucci, Delin, Fox, and

This terminology comes from the parapsychologist Gertrude Schmeidler. Originally, a "sheep" was a person who believed ESP to be possible under the conditions of the given experiment, while a "goat" was someone who rejected this possibility. No disparagement is intended for either sort of participant: The labelling comes from a New Testament simile.

Nofi (1997) pooled their data to see whether the single-factor solution continued to be obtained. Their results indicated that the solution continued. but only if depressive experience was omitted. These researchers then presented five studies examining the relationship between transliminality and its (now five) core constituents and a range of variables, the outcome being that it seemed that schizotypal personality (Claridge & Broks, 1984), fantasy proneness (Myers, 1983), absorption (Tellegen & Atkinson, 1974) and hyperaesthesia (hypersensitivity to environmental stimulation—a specially devised scale) were all constituents of transliminality. However, these variables needed to be presented in one and the same study in order that all the variables could be shown to be related to each other.

This goal was achieved by Thalbourne (1998), using a sample of 301 students of psychology at various levels. The original five variables continued to inter-correlate positively and significantly with each other, and together they made a cluster containing absorption, fantasy proneness, hyperaesthesia, and (positive) attitude towards dream interpretation. The correlation matrix for the nine resulting variables is shown in Table 1.

Table 1: Intercorrelations for Nine Variables, Thalbourne (1998); N = 234

	1	2	2	- 1		-	7	0	0
	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Paranormal belief	_	.56	.37	.28	.54	.60	.45	.32	.33
2. Mystical experience		_	.32	.24	.41	.49	.41	.25	.19
3. Creative personality			_	.22	.29	.49	.41	.28	.21
4. Manic experience				_	.43	.43	.43	.30	.14
5. Magical ideation					_	.56	.62	.47	.35
6. Absorption						_	.69	.43	.45
7. Fantasy proneness							_	.45	.30
8. Hyperaesthesia								_	.29
9. Positive attitude									_
towards dream									
interpretation									
3.7 4.11 1 1	,		1	1 1	0 = 1		1		

Note: All correlations are significant at better than the .05 level, two-tailed.

Note that absorption is known to be related to hypnotisability, while fantasy proneness was formerly thought to be characteristic of highly hypnotisable persons (Wilson & Barber, 1983) though 18 years ago Wickramasekera (1991, p. 163) concluded that it was not a reliable predictor of hypnotic ability.

THE MEASUREMENT OF TRANSLIMINALITY

In the studies by Thalbourne and Delin (1994) and Thalbourne et al. (1997), transliminality was measured by means of a factor score. This method is extremely inconvenient when there are more than just a few component variables, since all the variables have to be measured in a given sample, seeing as that factor score equations may not generalise to new samples. Thalbourne (1998) therefore produced a brief, true/false, 29-item Transliminality Scale, based on the correlations of all the items of all the nine parent scales with the factor score, and choosing a number of items for the Transliminality Scale in accordance with each of the parent scales' communality statistic. This scale has a Cronbach alpha of .87.

The Transliminality Scale was no sooner published than an offer was made to "top-down purify it," since it is recognised that there are deficiencies in the approach of classical test theory. Top-down purification involves the application of three procedures: (a) the elimination of any items that are biased for gender or age (or both; response-biases are important to address because they can elicit spurious factor structures of test items, as well as erroneous findings from other statistical analyses); (b) the determination of unidimensionality; and (c) determination of the suitability of a Rasch (probabilistic hierarchy) model. Rasch models yield interval-level data that are a step above the ordinal-level data typically derived from questionnaires. In other words, questionnaires based on Rasch models are true scales or "measuring sticks." Therefore, these techniques overcome the limitations of classical test theory and are considered the gold standard in scale construction.

In the present case, Lange, Thalbourne, Houran, and Storm (2000; see also Houran, Thalbourne, & Lange, 2003) demonstrated that 12 of the 29 Transliminality Scale items were biased (or caused bias) for gender and/or age, that the remaining 17 items were unidimensional, and that a Rasch model fit those items. Since this version of the scale is arguably superior, it is known as the Revised Transliminality Scale (RTS), and may be found in the Appendix. Note that, for the sake of context, all the 29 original items are nevertheless presented to respondents, but just the 17 starred items are scored. Also given in the Appendix is a conversion chart for the summed number of endorsed items (range 0–17) to Rasch scores (range 13.7–37.3).

The "item map" of the 17 items shows that low to intermediate levels of transliminality are characterised by ambiguous perceptions and evidence of fantasy proneness often involving paranormal or "New Age" themes. While

highly transliminal individuals show similar, but stronger, forms of these experiences, they also report very concrete sensory experiences such as being overwhelmed by smells, being bothered by bright lights, and an inability to shut out a heightened awareness of sights and sounds. The findings thus support the notion that transliminality manifests itself not only in people's subjective beliefs, but that it affects the thresholds of the perceptual system's interaction with the outside world.

The Rasch reliability of the RTS is .82, which translates to a KR-20 reliability of .85. Furthermore, Houran et al. (2003) report a test-retest reliability of .82 for this measure over an average of seven weeks, based on the data of Thalbourne (2000). About this time, transliminality was defined as "the hypothesised tendency for psychological material to cross thresholds into or out of consciousness" (Thalbourne & Houran, 2000, p. 861).

A MAJOR CORRELATE: ANOMALOUS/PARANORMAL BELIEF AND EXPERIENCE

Diverse measures of anomalous/paranormal belief and ostensible experience might naturally be expected to correlate with transliminality because its measures contain, or are an index of, such beliefs and experiences (Thalbourne & Houran, 2003). In what follows, it will be assumed that all measures of transliminality are essentially interchangeable, and that associations with anomalous/paranormal belief/experience may be slightly overestimated due to a minor degree of item-overlap (not applicable to the RTS, which scores no paranormal items).

One belief of this kind is belief in an afterlife. Thalbourne (1998–1999) presented to his participants a number of scenarios about life after death (Thalbourne, 1996), including the nonsurvivalist scenario. He found that, of all groups, reincarnationists scored the highest level of transliminality, with immortalists scoring midway, and nonsurvivalists scoring at the lowest level. However, reincarnationists in the East are not necessarily expected to follow this Western pattern.

Thalbourne and Houran (2000), using the Mental Experience Inventory (Kumar & Pekala, 1992), reported that, in an Australian and an American sample, transliminality was significantly correlated with belief in "'psi-related' and unusual events" (rs of .59 and .66 respectively), and with the report of "paranormal, unusual experiences" (rs of .79 and .82 respectively).

Thalbourne (2001) likewise found moderate to high correlations between transliminality and Anomalous/Paranormal Experience (.72), Belief (.70) and Self-Attributed Ability (.65) (but not with Fear of the Anomalous/Paranormal), all four scales scored from the Anomalous Experience Inventory (Kumar, Pekala, & Gallagher, 1994). The findings from the first three of these scales were replicated by Houran, Kumar, Thalbourne, and Lavertue (2002): for experience, r = .65; for belief, .54; and for ability, .48. Results for anomalous/paranormal experiences were replicated by Cooper and Thalbourne (2005), r = .68.

In the study by Thalbourne (2001) transliminality also correlated with the Australian Sheep–Goat Scale (item-corrected r=.56), and with New Age Philosophy (.64) and Traditional Paranormal Beliefs (.45), scored from the top-down purified version of Tobacyk's Revised Paranormal Belief Scale (Lange, Irwin, & Houran, 2000). Houran, Ashe, and Thalbourne (2003) confirmed these latter two findings in a larger sample (.46 and .26 respectively) and showed that, as expected, the correlation with New Age Philosophy was significantly higher than for Traditional Paranormal Beliefs. Lange, Irwin et al. (2000) interpreted as New Age Philosophy beliefs that seem to instil more of a sense of control over interpersonal and external events and that therefore benefit individuals, for example, ESP, reincarnation, astrology; and they interpreted as Traditional Paranormal Beliefs beliefs that tend to be culturally transmitted and social beneficial, for example, the devil, Heaven and Hell, witchcraft. Transliminality is related to both types of beliefs, but more strongly to New Age Philosophy.

Two additional subscales may be derived from the Anomalous Experience Inventory. The Index of Encounter Experiences lists 11 different encounters that a respondent may have with the supernatural or a borderline reality, such as ghosts, angels, UFOs, or "little people." The Poltergeist subscale consists of 8 items dealing with general phenomena associated with hauntings and poltergeists. Houran and Thalbourne (2001) found significant correlations of .61 and .51 respectively with the Revised Transliminality Scale; Houran, Kumar et al. (2002) obtained correlations of .46 and .30, and Houran, Ashe et al. (2003) confirmed the finding for the Index of Encounter Experiences (.38). Moreover, Cooper and Thalbourne (2005) devised a Shamanic Belief and Experience questionnaire that correlated .50 with transliminality.

During a field study of Edinburgh's reputedly haunted South Bridge Vaults, Houran, Wiseman, and Thalbourne (2002) examined psychological predictors of (a) *number* of discrete reported haunt experiences, and (b) number of

different types or modalities of haunt experience. Transliminality was a significant predictor of both these variables, where the sample was 134, but not in a later, much smaller study (N = 20) at the Edwards Place, in Springfield, Illinois (Houran, 2002).

There are also a number of relevant results using single-item variables concerning paranormal belief/experience. Thalbourne and Delin (1994) found that significantly higher transliminality scores were obtained by people who had supposedly precognitively "seen" a future event, "seen" contemporary events at a great distance by ESP, had visions of the deceased, and who claimed unusual healing powers. Three of these four findings were confirmed by Thalbourne and Fox (1999). Thalbourne (1999) found a significant correlation of .62 between transliminality and belief that one is psychic. In the study by Thalbourne (1998), there were available eight parapsychologically relevant items from the Magical Ideation Scale: The more parapsychologically favourable response was significantly associated with higher transliminality in 8 out of 8 cases. Using standard multiple regression analysis Thalbourne (2008) found significantly positive betas for transliminality in relation to outof-the-body experience (.34), premonition (.48), and veridical hunch (.46), being three of five items from the Inventory of Childhood Memories and Imaginings, Form C (Myers, 1983).

Anomalous/paranormal belief, experience, and self-attributed ability considered generally are thus moderate to strong correlates of transliminality.

Readers of this journal may be wondering whether, given its connection with absorption, transliminality is related in some way to such phenomena as hypnotisability, and it is to this issue that we now turn.

AN ESP/TRANSLIMINALITY EXPERIMENT USING **HYPNOSIS**

A question that may be validly asked is whether ostensible experience of ESP is anything more than subjective, and whether transliminality can predict scoring in objective ESP experiments. The transliminality approach is consistent with previous conceptualisations of ESP as occurring at the unconscious level, as in this quote from the wife of the famous researcher J. B. Rhine:

Ever since psi [= the paranormal factor] was recognised as originating in unconscious mental levels, it has seemed likely that the greatest barrier to its free operation is the difficulty of converting unconscious knowledge into conscious form ... when the person is awake, ESP information from the unconscious seems to be hindered by the difficulty of crossing the conscious threshold. (Rhine, 1975, p. 97)

The main issue addressed in a study by Del Prete and Tressoldi (2005) was whether the hypnagogic state is a special mental state conducive to anomalous cognition. Twelve participants with high scores on the Revised Transliminality Scale² or the Absorption Scale took part in a guessing task in which trials of experimenter-induced hypnosis and self-induced relaxation alternated. Each participant contributed 10 trials in the hypnotic state and 10 trials in the relaxed state. They were ultimately shown 20 different sets of four emotionally neutral figures, one of which figures the participant was required to guess was being displayed in another room, having been selected pseudo-randomly ($P = \frac{1}{4}$).

With hypnotic induction in the hypnagogic state, the mean hits score was at 37.5% (mean chance expectation = 25%), which was significantly higher than the chance-level results in the relaxation condition (24.2%). Further support for the hypothesis that the hypnagogic state is ESP-conducive was obtained by the significant correlation between ESP performance in the hypnagogic state (but not in the relaxation state) and the scores on the Transliminality Scale (r = .71, p < .01) and the Absorption Scale (r = .76, p < .01). These findings are particularly impressive given the small sample size and the restriction of Transliminality and Absorption scale scores to those that were above average. The findings suggest that transliminality interacts with hypnosis.

HYPNOTISABILITY

Susceptibility to hypnotic induction appears to have been established as a characteristic more likely to be found in believers in the paranormal. In a review of the literature, Wickramasekera (1991) listed nine relevant studies, which together show a consistent and almost invariably significant tendency for persons who believe in, or claim experience of, paranormal phenomena to score higher on various measures of hypnotic ability. Our question is, do persons who score high on transliminality likewise show enhanced hypnotic ability? We do not have any evidence for this thus far, and it one of the aims of this article to encourage hypnosis researchers to examine this possible relation. Since paranormal belief and transliminality are so highly correlated, it stands to reason that whatever correlates with paranormal belief is likely to correlate with transliminality. Moreover, in the meantime we have evidence from Cooper and Thalbourne (2005) that transliminality correlates .67 (p < .001) with a scale to measure hypnosis-related experiences, devised by Ås, O'Hara, and Munger (1962). But, as Terhune (2005) points out, this is not the same thing as hypnotisability, and therefore further research is urgently needed.

Only the 17 scorable items were administered.

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Appendix: The Revised Transliminality Scale

1.	Horoscopes are right too often for it to be a coincidence.	T	F
2.*	At times I perform certain little rituals to ward off negative	T	F
	influences.		
3.*	I have experienced an altered state of consciousness in which I		
	felt that I became cosmically enlightened.	T	F
4. *	At the present time, I am very good at make-believe and imagining.	T	F
5.*	I have felt that I had received special wisdom, to be		
	communicated to the rest of humanity.	T	F
6.	I have sometimes behaved in a much more impulsive or	T	F
	uninhibited way than is usual for me.		
7.	I am fascinated by new ideas, whether or not they have practical	T	F
	value.		
8.*	I have sometimes sensed an evil presence around me, although I	T	F
	could not see it.		
9.*	My thoughts have sometimes come so quickly that I couldn't	T	F
	write them all down fast enough.		
10.	If I could not pretend or make-believe anymore, I wouldn't be	T	F
	me—I wouldn't be the same person.		
11.	Sometimes I experience things as if they were doubly real.	T	F
12.*	It is sometimes possible for me to be completely immersed in	T	F
	nature or in art and to feel as if my whole state of consciousness		
	has somehow been temporarily altered.		
13.*	Often I have a day when indoor lights seem so bright that they	T	F
	bother my eyes.		
14.	I am convinced that I have had at least one experience of	T	F
	telepathy between myself and another person.		
15.	I am convinced that I am psychic.	T	F
16.*	I have experienced an altered state of awareness which I believe	T	F
	utterly transformed (in a positive manner) the way I looked at myself		
17.	I am convinced that I have had a premonition about the future	T	F
	that came true and which (I believe) was not just a coincidence.		
18.*	I think I really know what some people mean when they talk	T	F
	about mystical experiences.		
19.*	I have gone through times when smells seemed stronger and	T	F
	more overwhelming than usual.		

20.*	I can clearly feel again in my imagination such things as: the feeling of a gentle breeze, warm sand under bare feet, the softness of fur, cool grass, the warmth of the sun and the smell of freshly	Т	F
24 1	cut grass.		_
21.*	A person should try to understand their dreams and be guided by	Т	F
22 +	or take warnings from them.	Т	F
22.*	While listening to my favourite music, in addition to feeling	1	Г
	calm, relaxed, happy, etc., I often have a feeling of oneness		
	with the music, or of being in another place or time, or vividly		
	remembering the past.	_	_
23.	At times I somehow feel the presence of someone who is not	Т	F
	physically there.		
24.	I am convinced that it is possible to gain information about the	T	F
	thoughts, feelings or circumstances of another person, in a way that		
	does not depend on rational prediction or normal sensory channels.		
25.*	For several days at a time I have had such a heightened awareness	T	F
	of sights and sounds that I cannot shut them out.		
26.*	I sometimes have a feeling of gaining or losing energy when	T	F
	certain people look at me or touch me.		
27.	Now that I am grown up, I still in some ways believe in such	T	F
	beings as elves, witches, leprechauns, fairies, etc.		
28.	Sometime people think I'm a bit weird because my ideas are so	T	F
	novel.		
29.*	When listening to organ music or other powerful music, I	T	F
	sometimes feel as if I am being lifted up into the air.		

To score: for items with an asterisk, allot 1 point for a "true" response, zero points for "false," and add the 17 scores. Convert this raw sum score (number of endorsed items) to Rasch scores for the Revised Transliminality Scale (M = 25, SD = 5) according to the following conversion table:

No. of endorsed items	Rasch transliminality measure
0	13.7
1	15.9
2	18.3
3	19.9
4	21.1
5	22.1
6	23.1
7	24.0
8	24.9
9	25.7
10	26.6
11	27.5
12	28.5
13	29.6
14	30.9
15	32.5
16	35.0
17	37.3

PSYCHOLOGICAL CORRELATES OF AURA VISION: PSYCHIC EXPERIENCES, DISSOCIATION, ABSORPTION, AND SYNAESTHESIA-LIKE EXPERIENCES

Nancy L. Zingrone, Carlos S. Alvarado, and Natasha Agee University of Virginia

Five survey studies, three conducted from 1995 to 1997 and two more in 2007 and 2008, are reported in which we hypothesised that individuals who claimed to be "aura viewers" would report a higher frequency of other seemingly psychic, mystical and lucid dream experiences and a higher number of discrete psychic experiences than "non-aura viewers." For Studies 2 through 5, it was also hypothesised that aura viewers would obtain a similar relationship with synaesthesia-like experiences and with measures of dissociation (using the Dissociative Experiences Scale), absorption (using Tellegen's Absorption Scale), and depersonalisation (using the Cambridge Depersonalisation Scale). The studies also differed in terms of the language of administration (either Spanish or English) and study populations (from special interest groups to college students to members of the general public). In all five studies, the main hypotheses were confirmed with the exception of lucid dreams, a significant difference between the groups being found only in Studies 3 and 5. In Studies 2 through 5, the predicted relationship of aura vision to synaesthesia and personality variables was confirmed. All five studies suggest that aura vision experiences relate to an overall pattern of claims of psychic and mystical experiences. The consistency of the results was surprising, given the differences in sample selection, language of administration, and study location.

The data entry for Study 1 was conducted while the second author enjoyed a grant from the Parapsychology Foundation and the first two authors were funded by Cambridge University's Perrott-Warrick Fund. Study 2 was done while the first two authors were funded by the Society for Psychical Research; Study 3 was completed while they were funded by the Institut für Grenzgebiete der Psychologie und Psychohygiene. Studies 4 and 5 were funded by Bursary 6506 awarded to the second author by Fundação Bial.

Correspondence concerning this article should be addressed to the first or second author at: Division of Perceptual Studies, Department of Psychiatry and Neurobehavioral Sciences, University of Virginia Health System, 210 10th St NE, Suite 100, Charlottesville, VA, 22902, email: nlz5p@virginia.edu or csa3m@virginia.edu.

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For years, there have been accounts and discussions of the "aura vision" phenomenon, that is, lights, glimmers, or what appear to be "force fields" around the human body (for overviews, see Alvarado, 1987; Regush, 1977; Tart, 1972; Zingrone, 1995). Among these are the descriptions of the experiences of single individuals (e.g., Garrett, 1939) and ostensibly medically related observations of some aura-viewers (Karagulla, 1967). Although a large popular literature exists (e.g., Schumsky, 2005), little scientific research has been conducted. Prevalence, phenomenology, the relationship of aura vision to other phenomena, to personality, cognitive and medical variables are all under-investigated. Our own interest in personality correlates motivated this program of study.

Different investigators have reported positive relationships between self-reports of auras and such seemingly psychic experiences as apparitions, ESP, out-of-body experiences, as well as mystical experiences and lucid dreams (Alvarado & Zingrone, 1994, 2007–2008; Kohr, 1980; Palmer, 1979). We previously found (Alvarado & Zingrone, 1994) positive relationships between auras and vividness of visual imagery and fantasy proneness, suggesting that cognitive factors are important in the formation and/or expression of the aura experience. More recently, partially relying on our earlier work (Alvarado & Zingrone, 1994; Zingrone & Alvarado, 1994), Parra (2008) reported that aura experiencers obtained significantly higher scores than non-experiencers on measures of vividness of imagery, fantasy proneness, absorption, dissociation, and schizotypy.

In the five studies reported in this article, we hoped to replicate and extend these previous findings. Because our previous research was conducted with small N studies, and because data collection methods may have influenced results by creating expectation or other contextual effects, we decided both to use larger samples and, insofar as it was possible, to mask the purpose of the research. The latter strategy was particularly applied in Studies 2 through 5.

In all five studies reported here, we predicted that participants who claimed to see auras would also claim higher frequencies of psychic phenomena, mystical experiences and lucid dreams, as well as a greater number of discrete psychic phenomena than those who did not claim to be "aura viewers."

We argued in an earlier paper that auras may be related to cognitive factors other than those previously explored (Alvarado & Zingrone, 1994). Healy (1984) suggested that auras represented sensitivity to the permeability of ego boundaries. Consequently, we predicted that dissociation would be positively and significantly related to aura experiences (Study 2). It is assumed

that when another person is the stimulus, the production of an aura may be related to impressions of, or information obtained from, that person, and that the processing of this information (whatever its source) may depend on an ability to shift, or to make more permeable, the barriers between subconscious defence mechanisms and waking consciousness. Pekala, Kumar, and Marcano (1995) have speculated about the importance of dissociation in providing the necessary conditions for the processing of weak perceptual signals such as those presumed to underlie some seemingly psychic phenomena. They argue that "highly dissociative individuals [may be] ... able to focus on one particular aspect of subjective experience such that the image/thought does not get 'diluted' or 'contaminated' by other aspects of subjective experience" (p. 327). This notion is conceptually consistent with Waller, Quinton, and Watson's (1995) study in which dissociation was found to be related to threatrelated information processing.

Previous studies have found a positive relationship between auras and other seemingly psychic experiences (Alvarado & Zingrone, 1994, 2007–2008; Kohr, 1980; Palmer, 1979). Positive correlations have also been reported between dissociative experiences and general psychic experience claims (Parra & Argibay, 2006; Pekala et al., 1995; Richards, 1991; Ross & Joshi, 1992; Zingrone & Alvarado, 1994). Therefore, we postulated that aura report frequency and mean dissociation scale scores would be significantly and positively correlated in Study 2.

Absorption, as measured by Tellegen's Absorption Scale (TAS) (Tellegen & Atkinson, 1974), has been positively related to claims of psychic experiences in past research (Glicksohn, 1990; Irwin, 1985b). Absorption has also been related to altered states (Glicksohn & Barrett, 2003) and to dissociation (Frischholz et al., 1991; Norton, Ross, & Novotsky, 1990). Consequently, in Study 3 we predicted that the mean TAS scores would correlate positively with aura reports.

In our previous study (Alvarado & Zingrone, 1994), we speculated that aura vision may be related to synaesthesia, that is, to cross-modal sensory processing (on synaesthesia see: Baron-Cohen & Harrison, 1997; Robertson & Sagiv, 2005). Kenneth (1933), Amadou (1954), and Mishlove (1993) have also proposed this connection. The idea here is that acquisition of information about another person, obtained through visual and other sensory modalities and /or through everyday emotional assessments, may be transformed into a hallucination of light or an "energy" field. This experience may be, at its core, a synaesthetic process. Cytowic's (1989) descriptions of the features of several

synaesthetes' experiences provides evidence for this, in that the descriptions he recounts are, prima facie, similar to what is found in popular accounts of aura vision. One of us (Alvarado) has also obtained modest and exploratory evidence that supports a relationship between synaesthesia-like experiences and claims of general psychic experiences (Alvarado, 1994). Others have also found a positive association between out-of-body experiences (OBEs) and synaesthesia (Irwin, 1985a; McCreery & Claridge, 1995). Because auras have been related to psychic experience in general and OBEs in particular (Alvarado & Zingrone, 1994; Kohr, 1980; Palmer, 1979), we predicted a positive correlation would be obtained between aura vision and synaesthesialike experiences in Studies 2 through 5. In Study 3, we measured this relationship using the Synaesthesia Factor of Tellegen's Absorption Scale, and in Studies 4 and 5, using two items querying the perception of colours with sounds, music and voices, and colours with numbers and letters.

In this study, depersonalisation is defined as a psychological trait that includes a number of distinct aspects, such as feeling detached from one's own body and emotions (e.g., Simeon & Abugel, 2006). Depersonalisation also involves feelings of derealisation that can extend to other people, familiar objects, activities and places, one's own stream of consciousness, and to visual, auditory, tactile and bodily sensations such as pain, hunger or thirst. Perceptual distortions of the passage of time and of the shape of one's own body are also reported (see the discussion of phenomenological features of depersonalisation in Sierra & Berrios, 2001; for overviews of the literature see Coons, 1996; Moreira-Almeida, Alvarado, & Zangari, 2006; Simeon, 2004; Simeon & Abugel, 2006; Steinberg, 2001).

The original purpose of Studies 4 and 5 was to test, using the Cambridge Depersonalisation Scale (CDS) (Sierra & Berrios, 2000), the relationship of depersonalisation to OBEs. Because we found a positive relationship between depersonalisation and OBEs in both Studies 4 and 5 (the specific results of these analyses will be reported elsewhere), and because a relationship was found between mean DES scale scores in Study 2 and TAS scale scores in Study 3 and all psychic experiences queried, and because the DES includes a depersonalisation subscale, we predicted a significant and positive relationship between mean CDS scores and aura vision experiences in Studies 4 and 5.

Finally, in all five studies we expected that the prevalence of aura experiences would be lower than the prevalence of claims of dream ESP, waking ESP, apparitions, and OBEs. Others have reported this finding (e.g., Gómez Montanelli & Parra, 2004; Kohr, 1980; Palmer, 1979; Zingrone &

Alvarado, 1994), and one of us (Alvarado, 1996, p. 16) combined some of these results in graphic form in a previous paper.

STUDY 11

Method

Participants

Participants in Study 1 were readers of a popular New Age magazine published in Madrid called Más Allá de la Ciencia. The magazine is distributed internationally with a circulation of over 100,000. Most of the readers were from Spain, but the magazine circulates in other countries in Europe and Latin America as well. The questionnaire focused on out-of-body experiences, although it included items on other psychic experiences, Respondents (N = 492) were self-selected volunteers. Demographic items showed that respondents were mainly female (68%, N = 492), married (43%, N = 487), and moderately religious (39%, N = 459).

Questionnaire

The questionnaire, written in Spanish, was sent to the editors of the magazine. They published it across two facing pages of an issue with some minor editorial changes. The questionnaire asked for name and address, demographic information, and items about dream recall, lucid dreams, precognitive dreams, waking ESP, apparitions, auras, mystical experiences, movement of objects (i.e., seeing objects move by themselves), and OBEs, in that order. Both the aura and OBE questions asked for descriptions. The OBE question also included sub-items querving phenomenological details.

The six-option response scale for the dream recall item ranged from "never" to "always" (every day). The rest of the experience items were three-option: (a) "yes, once"; (b) "yes, more than once' (approximately how many?); and (c) "no."

The aura question read: "Have you ever seen a light or lights, a glow or an 'energy field' around a person or parts of their body that could not be explained by physical causes or any other explanation?"

We are grateful especially to Benjamin Noriega and María Pérez Molina, who made this study possible by coordinating our contact with the magazine and sending us the data at their own expense, and to José Antonio Campoy, chief editor of Más Allá de la Ciencia, who printed our questionnaire and collected the replies. Analyses of other aspects of this data appear in Alvarado and Zingrone (1999, 2007-2008).

The editors of the magazine introduced the survey with the title "Study of Psychic Experiences in Spain: Do You Have Paranormal Powers or Have You Had Strange Phenomena?" They presented the study as one of psychic phenomena similar to those conducted in other countries. Readers' collaboration was solicited, confidentiality was guaranteed, and respondents were directed to mail completed questionnaires to the editorial offices. One of us (Alvarado) was mentioned as the investigator.

The editors introduced two omissions and one mistake into the printed questionnaire. Age was not included and the question about marital status did not include the widow/widower option. The ESP dream question was rewritten to focus on seemingly precognitive dreams only.

Procedure

Printed in the Fall 1994 issue of the magazine, the questionnaire was distributed through the magazine's normal circulation methods. Four-hundred and fifty-three completed questionnaires were collected by the editors in the Spring of 1995. The final 39 arrived during the Fall of 1995.

Analyses

Using Statpac, analyses included chi square and Mann–Whitney U tests, Spearman correlations, and a logistic multiple regression. We decided not to correct for multiple analyses, choosing to rely instead on replication. We calculated the effect size (es) of the z values obtained in the Mann–Whitney analysis using the following formula: z / \sqrt{N} (Rosenthal, 1991, p. 19, formula 2.18). All p values were two-tailed.

Results of Study 1

Descriptions of Auras

The following is a selection of experiences supplied by our respondents. We have translated them from the original Spanish.

- 1. I saw a zone of clarity around the head, neck, and torso of a woman who was delivering a talk; it was a tenuous light.
- Flames came out of him, as if they were sparkling and glimmering. When
 his hands came close to my body ... I noticed an energy, similar to when
 the hands are put close to the television, accompanied with an agreeable
 warmth.

- 3. When I observe the head of people, I see a white outline on the head. On other occasions there is a shadow close to them.
- 4. I see some sort a fog or very tenuous smoke that leaves the mouth of the person who talks to me, but only when I am not looking directly, but sideways.
- 5. I have seen something like a red fog behind persons at a distance and a violet colour around my brother after a strong discussion.
- 6. I often see a light that envelops people. The colours are very soft and variable.
- 7. It was with a girl who sold books; after I spent a good amount of time with her, half of her head irradiated light down to the shoulders.
- 8. I saw a young woman whose face transformed and radiated a reddish smoke while she was trembling. Also an old woman ... had a halo formed.
- 9. When I look at people I clearly see sort of a shine that surrounds them, on their heads, shoulders and arms, with a width reaching 20 or 30 cm, and if I look more into the shine I start to see subtle colours ... Also, when I fix my sight on objects ... I see a shine around the whole object that varies in width from 1 to 2 cm, but this shine has no colour, it is white and colourless.
- 10. I was in my business looking at some people who were passing by, when I suddenly stopped seeing an old lady and saw a group of beams or rays of light—even the darker ones shone and fluctuated with a vibration and colour that I have not seen since. I was frightened and started looking at other people, but as soon as I focused on them, they became kind of a torch of colours with rays going everywhere except to the ground and at a distance that I calculated to be one metre ... These rays contracted and expanded, they were something alive.

Prevalence and Frequency of Aura Reports

Forty-six per cent of the respondents (N = 485) claimed to have seen auras. Of these, 11% (N = 54) said they had experienced aura vision only once and 35% (N = 170) said they had more than one experience.

Relationship of Auras to Demographic Variables

Thirty-one per cent of the experiencers were male (N = 68) and 69% were female (N = 156), a difference that was not significant, N = 485, $\chi^2(1)$ = .77, p=.76, phi = .04). Aura viewers (N=209) did not differ significantly from non-aura viewers (N=245) in terms of religiosity, Aura M=2.46, No Aura M=2.33, U=23666.50, z=1.39, p=.16, es=.06.

Relationship of Auras to Psychic and Dream Experiences

We predicted that aura experiencers would also claim a higher number of other psychic experiences and dream experiences. As can be seen on Table 1, there were significant differences between the aura viewers and non-aura viewers on the psychic experiences, but not on lucid dreaming. Dream recall frequency, however, was significantly higher in the aura group (N=220, M=4.70) than in the non-aura group (N=255, M=4.53), U=25516.00, z=1.70, p=.09, es=.08.

			1			(/	
Experience	Aura	N	No Aura	N	$\chi^{2}(1)$	p	phi
Precognitive	85%	223	71%	259	12.24	.0005	.16
dreams							
Waking ESP	84%	223	64%	258	23.33	.00001	.22
Apparitions	92%	222	76%	261	22.08	.00001	.21
Out-of-body	87%	221	78%	259	5.91	.02	.11
experiences							
Movement of	43%	222	30%	260	9.67	.002	.14
objects							
Mystical	80%	222	63%	261	18.16	.00002	.19
experiences							
Lucid dreams	90%	222	89%	257	.11	.75	.01

Table 1: Parapsychological and Dream Experiences in Relation to Auras (Study 1)

An index of psychic experiences (IPE) was calculated by counting the number of specific experiences other than aura (precognitive dreams, waking ESP, apparitions, OBEs, movement of objects). It was found that aura experiencers obtained a higher mean index (N=224, M=3.88) than did the non-Aura group (N=261, M=3.18). This difference was significant, U=19217.00, z=6.51, p<.00001, es=.39). The IPE was also significantly correlated to aura frequency experience, r=19217.00, r=19217.00.

As we predicted, the prevalence of aura claims was lower than all of the other experiences claimed, with the exception of movement of objects: apparitions (83%), OBEs (82%), precognitive dreams (78%), waking ESP (73%), aura (46%), and movement of objects (36%).

Logistic Multiple Regression

To further explore the predictors of aura vision, we performed a logistic multiple regression. The dependent variable was aura group membership. The independent variables were lucid dreams, dream recall, precognitive dreams, waking ESP, apparitions, mystical experiences, movement of objects, and OBEs. The regression was significant, $\chi^2(8) = 75.17$, p < .0001; Log of Likelihood Function = -276.450188. The only variables that significantly predicted group membership (aura yes vs aura no) were apparitions (Coefficient = .55, SE = .15, T-Ratio = 3.66, p < .0001), mystical experiences (Coefficient = .41, SE = .13, T-Ratio = 3.31, p = .001) and waking ESP (Coefficient = .41, SE = .13, T-Ratio = 3.157, p = .002). The cases that were predicted correctly (66.4%) represented a 12% improvement over the percentage that was predicted by chance.

Discussion of Study 1

As predicted, the aura experience was positively associated with claims of a variety of experiences. Comparison of the number of reports of auras with those of other experiences showed that auras were less common than other claims (with the exception of movement of objects) but that, if aura vision was reported, the experiencer was likely to report more of the other psychic experiences than non-experiencers. In addition, a logistic regression singled out apparitions, mystical experiences, and waking ESP as the best predictors of aura group membership.

STUDY 22

Method

Participants

The participants of Study 2 were students at a U.S. community college in Illinois. The 308 respondents were mostly female (60%), single (79%), around 23 years old (Range = 17 to 59, N = 167, M = 23.2), and slightly religious (48%, N = 305).

We wish to thank Susan Zingrone for introducing us to faculty and staff at the college, Emily C. Wadsworth (Dean of Humanities and Communication), Terence Lenio (Coordinator of Social Sciences), the faculty members who gave us access to their courses, and most especially we thank the participating students for making this study possible.

Questionnaire

We created a questionnaire called the Questionnaire of Mental Experiences comprised of two sections, one of demographic variables and one of additional questions. In the second section, the response scale ranged from 0 to 100 in increments of 10. Instructions emphasised that questions should be answered in terms of the percentage of time that the person had the experience described, limiting their responses only to those experiences that occurred without the use of drugs or alcohol.

Twenty-eight of the items in the second section consisted of the revised version of the Dissociative Experiences Scale (DES) (reproduced in Carlson & Putnam, 1993). There is evidence that this scale is as valid and reliable as the original scale (Ellason, Ross, Mayran, & Sainton, 1994; Offen, Waller, & Thomas, 2003; Waller et al., 1995). Our assessment of the internal cohesion of the scale in the data obtained a Cronbach alpha of .92. In addition, we obtained a significant negative correlation with age, r(308) = .19, p = .03.

We had intended to include the seven-item Synaesthesia Factor of Tellegen's Absorption Scale, one of six factor-analytically derived factors (Tellegen, 1992) that has been correlated with scores on laboratory synaesthesia tasks (Rader & Tellegen, 1981). One item was inadvertently omitted and an item from a different factor substituted, reducing our synaesthesia subscale to six items.

We also included questions about mystical experience, dreams (recall, lucidity and vividness), dream ESP, waking ESP, apparitions, OBEs, and auras. The aura question read: "Some people have seen a light or lights or energy fields around any part of a person's body which, as far as they could tell, were not due to normal or natural causes."

The DES response scale was used for all the items. This standardisation was used to maintain consistency with the revised form of the DES and to camouflage the DES items, thus reducing the likelihood that the purpose of the study would be intuited by the participants. In addition, all the items were randomised, so as to further minimise the transparency of the DES and therefore the potential influence of contextual effects.

Procedure

We approached the Dean of Humanities and Communications and the Coordinator of Social Sciences, who put us in contact with several professors willing to allow us to administer our questionnaire in their courses. Two of us (CSA and NLZ) visited participating classes, presenting the study as one

designed to investigate normal phenomena of daily life in general, and of memory, imagination and dreams in particular. We told the students that our interest was in prevalence and individual differences, never mentioning that our real interest was in psychic phenomena, dissociation and synaesthesia. Students were told that they were under no obligation to participate in the study and that they should not complete or return the questionnaire to us, if they did not wish to do so. Consent forms were included in the survey packets, some of which were completed and returned to us in class, some of which were completed and returned to instructors after we left, and others which were returned to us by the post. Some students were awarded credit by their instructors for completing the questionnaire and others were not.

Analyses

Statistical analyses—chi square and Mann-Whitney U tests, Spearman correlations and logistic multiple regression—were conducted using StatPac. To compute the basic prevalence of psychic, mystical and dream experiences using the 0-100 scale, we counted as "yes" any response with a rating over 0. As in our previous studies, we decided not to correct for the number of analyses and instead to rely on common patterns across studies and on future replications. We used the same effect size (es) formula as noted in Study 1. All p values are two-tailed.

Results of Study 2

Collection Method and Academic Credit

We analysed the data to determine if administration/collection methods or academic credit influenced the results. No evidence was found to suggest that these variables either affected scores on the DES (Zingrone & Alvarado, 2001– 2002), or the frequency of lucid and vivid dreams or dream recall (Alvarado & Zingrone, 1997). Further analyses of the frequency of auras in relation to the collection and credit variables revealed no significant differences. Consequently, all questionnaires received were pooled for subsequent analyses.3

Prevalence of Aura Reports

Although our questionnaire was constructed to ask for specific frequencies of experiences, it was possible to assess the basic aura claim by counting as one

For details of the analyses, please contact the authors.

experience any reply over zero. Sixteen per cent of our respondents (N = 48) claimed to have experienced auras.

Relationship of Auras to Demographic Variables

Sixty-seven per cent of those reporting auras were female, as compared to 33% males (N = 308, $\chi^2[1] = 1.03$, p = .62, phi = .06). Neither age (Aura N = 23, M = 25.13, No Aura N = 144, M = 22.88, U = 1813.50, z = .73, p = .47, es = .06), nor religiosity (Aura N = 47, M = 3.38, No Aura N = 258, M = 3.04, U = 5138.00, z = 1.66, p = .10, es = .10) were significantly different.

Relationship of Auras to Psychic and Dream Experiences

We predicted that aura experiencers would have a higher number of claims of other parapsychological experiences and of dream experiences than non-experiencers. As can be seen in Table 2, the aura group and the non-aura group produced significantly different levels of psychic experience claims (dream ESP, waking ESP, apparitions, OBEs), but two dream variables (lucid dreams and vivid dreams) were not significantly different. Dream recall frequency, however, was significantly higher in the aura group (N = 48, M = 66.04) than in the non aura group, N = 260, M = 55.46), U = 4929.00, z = 2.31, p = .02, es = .13.

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Experience	Aura	N	No Aura	N	$\chi^{2}(1)$	p	phi	
ESP dreams	96%	47	72%	257	11.89	.0006	.20	
Waking ESP	92%	47	68%	257	11.00	.0009	.19	
Apparitions	73%	48	33%	260	27.57	.000001	.30	
Out-of-body experiences	58%	48	25%	257	22.10	.000001	.27	
Mystical experiences	88%	48	67%	260	8.19	.004	.16	
Vivid dreams	100%	48	96%	260	2.11	.15	.08	
Lucid dreams	85%	48	83%	257	.24	.62	.03	

Table 2: Parapsychological and Dream Experiences in Relation to Auras (Study 2)

Just as we did in the previous study, an index of psychic experiences (IPE) was calculated for each respondent. The mean index for the aura group was significantly higher (N=48, M=3.15) than that of the non-aura group (N=260, M=1.95), U=2997.00, z=5.72, p<.00001, es=.33. It was also

found that the index was significantly positively correlated to the frequency of aura experience, r(308) = .39, p < .0001.

As we predicted, the prevalence of aura claims was lower than that of the other psychic experiences: dream ESP (76%), waking ESP (71%), apparitions (39%), OBEs (30%), and aura (16%).

Relationship of Auras to Dissociative Experiences

The overall mean DES score for the whole sample (N = 308) was 21.70 (SD = 12.89, Md = 19, Range = 1 to 65; for more psychometric details)see Zingrone & Alvarado, 2001-2002). As predicted, aura experiences were positively correlated to DES scores (r[308] = .49, p < .0001). In addition, the aura group obtained a significantly higher mean score on the DES (N = 48, M = 29.75) than the non-aura group (N = 260, M = 20.22), U = 3393.50, z= 5.02, p < .00001, es = .29. Our factor analysis of the DES found a single solution (Zingrone & Alvarado, 2001-2002), a departure from previously reported factors (e.g., Ross, Joshi, & Currie, 1991).

Waller, Putnam, and Carlson (1996) selected eight items of the DES using taxometric methods that they claim identify a "type of individual who experiences pathological dissociation" (p. 311). This short form of the DES (called the DES-T) is comprised of amnesia, depersonalisation and derealisation items. Absorption items generally considered to be markers of non-pathological everyday dissociative experiences are not included. These authors found that patients with dissociative disorders obtained higher scores on these items than patients with other psychiatric conditions, in which dissociation was not considered important, and also higher than normal controls. In exploratory non-predicted analyses we correlated the DES-T and the rest of the DES with the aura question. Both the DES-T (r[308] = .48,p < .002) and the rest of the DES (r[308] = .48, p < .0002) correlated positively and significantly with aura experiences.

Relationship of Auras to Synaesthesia-Like Experiences

As predicted, an analysis of the mean of six items taken from the Synaesthesia Factor of Tellegen's Absorption Scale found that the mean for the aura group (N = 48, M = 36.21) was significantly higher than that of the non-aura group (N = 260, M = 25.23), U = 3946.00, z = 4.05, p = .0001, es = .23. Aurafrequency also significantly and positively correlated with the synaesthesia score, r = .45, p < .0001.

Logistic Multiple Regression

For this analysis, the dependent variable was aura group membership (i.e., aura yes, aura no). Independent variables were dream recall, vivid dreams, lucid dreams, DES score, synaesthesia score, ESP dream, waking ESP, apparitions, mystical experience, and OBEs. Although the overall regression achieved significance ($\chi^2[10] = 44.43$, p < .00001; Log of Likelihood Function = -111.062498), only one—mystical experiences—emerged as a significant predictor of aura group members (Coefficient = 0.14, SE = 0.01, T-Ratio = 2.02, p = 0.04). One hundred per cent of the cases were correctly predicted, but with an improvement of only 1% over what would have been predicted by chance.

Discussion of Study 2

The results of Study 2 replicated both those of our previous study on auras (Alvarado & Zingrone, 1994) and Study 1; that is, aura experience was positively associated with reports of psychic experiences. Comparison of the frequency of auras with the frequency of other experiences showed that auras were less common than other claims, but that if an aura was reported, the experiencer was likely to report other experiences such as dream ESP, waking ESP, apparitions, mystical experiences and OBEs. In addition, aura frequency was positively related to DES and DES-T scores, as well as to the six items from the Synaesthesia Factor of the TAS. While a logistic regression singled out mystical experiences as a significant predictor of aura group membership, overall the regression did not improve significantly on chance prediction.

STUDY 34

Method

Participants

The participants in Study 3 were selected by graduate students who received credit for their participation in a parapsychology course at a small private university in San Juan, Puerto Rico. Respondents were recruited mainly from the friends, workmates, classmates, family members and acquaintances of the students. Most of the respondents (N = 119) were born (87%) and/or raised

We wish to thank the following students who collected the data for this study: Luis Acevedo, Carmen Capella, María Isabel Cruz, Aida Cruz, Dimary González, Luz Irizarry, Emma Lizardi, Maybelle Mercado, Yadira Pizarro, Mayra Sanabria, Jesús Soto, and Marcos Vega.

(N = 118, 93%) in Puerto Rico. At the deadline for data completion, 120 questionnaires had been returned. Respondents were mainly female (N = 118, 71%), single (N = 119, 52%), with a mean age of 31 (N = 83, Range = 18 to)40, SD = 9.21).

Ouestionnaire

The Spanish-language questionnaire, titled Questionnaire of Mental Experiences in Daily Life, was composed of demographic questions, Tellegen's Absorption Scale (TAS), and questions about psychic experiences including auras and dreams. Data on other experiences were gathered but are not being reported here. With the exception of the demographic questions, the items were presented in random order. All the questions were formatted to match the true and false response options of the original TAS. The aura question read: "I have seen a light, lights, or energy fields around parts of a person's body which, as far as I could determine, were not accounted for by 'normal' or 'natural' causes."

Procedure

Student administrators were doctoral students, mainly in the final stages of a clinical psychology program. One of us (Alvarado) translated the TAS into Spanish. The translation and other items were modified after a critical assessment was made by the students, as to the clarity of the questions and the appropriateness of the translation to the Puerto Rican context. In addition to being asked to avoid targeting individuals known to be psychic experiencers, the students were also instructed to present the questionnaire as part of a psychological, rather than a parapsychological, course project. They were warned not to mention absorption or psychic experiences when they approached potential respondents. We also asked them to avoid recruiting clinical patients. Student administrators reviewed questionnaires for completeness and to attempt to collect descriptions of OBEs and auras where relevant. Unfortunately, very few descriptions were obtained due to the respondents' unwillingness to provide them, among other reasons.

Analyses

Statpac was used to conduct chi square and Mann-Whitney U tests and the logistic multiple regression. As in our previous studies, we decided not to correct for the number of analyses, but to rely instead on common patterns across studies and on future replications. We used the same effect size (es) formula as noted in Studies 1 and 2. All p values are two-tailed.

Results of Study 3

Descriptions of Auras

Unfortunately, only three descriptions of auras were collected. We translated these from Spanish.

- 1. When I am in a room or in a house with walls painted with pale colours and there is a person standing in front of the wall, and if I stare at the person, I can see an energy field around the body.⁵
- 2. I have seen a transparent light in some people, as if they were inside a frame of that light.
- 3. I do not know how to explain what I see, but it is neither strong nor bright. It is a light and I have only seen it on two occasions with children.

Prevalence of Auras

Out of 118 questionnaires with information about aura prevalence, 15% (N = 18) claimed to have had the experience.

Relationship of Auras to Demographic Variables

Eighty-three per cent of the 18 aura viewers were female and 17% (N = 117) were male, $\chi^2(1)$ = 1.40, p = .47, phi = .11. The aura viewers were slightly older (N = 15, M = 33.20) than the non-aura viewers (N = 69, M = 30.32), but not significantly so, U = 366.50, z = 1.76, p = .08, es = .19. There was no significant difference between aura viewers (N = 18, M = 2.28), and those who had not had the experience (N = 96, M = 2.73) on religiosity, U = 1054.00, z = 1.48, p = .14, es = .14.

Relationship of Auras to Psychic and Dream Experiences

Table 3 shows the consistently higher frequency of psychic and dream experiences in the aura group than in the non-aura group, which confirms our predictions.

⁵ These conditions of observation suggest the possibility that this report may be explained by contrast effects.

Experience	Aura	N	No Aura	N	$\chi^{2}(1)$	p	phi
ESP dreams	78%	18	56%	97	3.07	.08	.16
Waking ESP	83%	18	47%	100	8.08	.004	.2
Apparitions	94%	17	38%	99	18.11	.00002	.40
Out-of-body	67%	18	28%	100	10.18	.001	.29
experiences							
Vivid dreams	100%	18	77%	99	5.21	.02	.21
Lucid dreams	83%	18	60%	99	3.69	.05	.18

Table 3: Parapsychological and Dream Experiences in Relation to Auras (Study 3)

Then IPE was calculated for each respondent by counting reports of ESP dreams, waking ESP, apparitions, and OBEs. The IPE was significantly higher in the aura viewer group (N = 100, M = 3.17) than in the non-aura (N = 100, M = 1.67), U = 368.50, z = 3.98, p = .0001, es = .37.

As predicted, auras were the least common of the experiences: ESP dream (59%), waking ESP (53%), apparitions (46%), OBEs (35%), auras (15%).

Relationship of Auras to Absorption Experiences

The overall mean TAS score for the whole sample was 16.93 (N=120, SD=8.14, Md=18, Range = 0 to 34) and had a Cronbach alpha of .91. As predicted, the aura group (N=18) had significantly higher mean absorption scores than the non-aura group (N=100, Aura M=23.00 vs No Aura M=15.94, U=455.00, z=3.41, p=.0007, es=.31). As can be seen on Table 4, as predicted, the Synaesthesia Factor score was also significantly higher for the aura group than for the non-aura group. The other factors of the scale also differentiated the two groups in question.

Logistic Multiple Regression

In this analysis, the dependent variable was aura group membership (i.e., aura yes, aura no). The independent variables were lucid dreams, vivid dreams, dream ESP, waking ESP, OBEs, apparitions, and absorption scores. The overall regression was significant, $\chi^2(7) = 28.96$, p < .0001; Log of Likelihood Function = -33.208147. However, the only significant predictor of aura group membership was apparitions (Coefficient = -2.66, SE = 1.16, T-Ratio = -2.31, p = 0.02). Although 83% of the cases were correctly predicted, this result was 1.8% less than the percent predicted by chance.

Table 4: Mean Scores of Factors of the Absorption Scale in Relation to Auras (Study 3)

			*		
Factor	Aura N = 18	No Aura N = 100	Mann– Whitney U	p	es
Responsiveness to engaging stimuli	4.89	3.60	2.56	.01	.64
Synaesthesia	4.50	3.03	2.90	.002(1t)	.76
Enhanced cognition	5.06	3.19	3.19	.0003	.95
Oblivious/ dissociative involvement	4.00	3.01	2.12	.04	.53
Visual reminiscence	2.39	1.69	2.71	.01	.65
Enhanced awareness	2.17	1.43	2.33	.05	.50

Discussion of Study 3

The results of Study 3 replicated both those of our previous study on auras (Alvarado & Zingrone, 1994) and Studies 1 and 2. That is, aura experience was positively associated with reports of psychic experiences. Comparison of the frequency of auras with the frequency of other experiences showed that auras were less common than other claims, but that if an aura was reported, the experiencer was likely to report more of the other psychic experiences, as well as more mystical experiences. In addition, aura viewers obtained significantly higher absorption scores overall, as well as significantly higher scores on the factors of the TAS. While a logistic regression singled out apparitions as a significant predictor of aura group membership, overall the regression predicted group membership at 1.8% less than that predicted by chance.

STUDY 4

Method

Participants

Two-hundred and fifty-six individuals returned usable questionnaires that had been distributed in 2007, from a stratified random sample of the residents of a Central Virginia city. Respondents were mostly female (63%, N = 256), Catholic (68%, N = 228), married (52%, N = 255), and moderately religious (35%, N = 253).

Questionnaire

A four-page questionnaire was prepared that included demographic questions, the Cambridge Depersonalisation Scale (CDS) (Sierra & Berrios, 2000), the Satisfaction With Life Scale) (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985), and items surveying the frequency of a variety of experiences (SWLS and other data, related specifically to depersonalisation experiences, are beyond the scope of this article and will be reported elsewhere). The experiences relevant to this study were dream recall, lucid and disturbing dreams, psychic experiences (waking ESP, dream ESP, apparitions, out-of-body experiences, and auras), sense of oneness with nature (referred to as mystical experience here), déjà vu, and synaesthesia-like experience, both of seeing colours while hearing sounds, music or voices, and while seeing, hearing or thinking about letters or numbers.

The aura question read: "Have you ever seen a light or lights around or about a person's head, shoulders, hands, or body which, as far as you could tell, were not due to 'normal' or 'natural' causes?" The response scale had five options: "never," "rarely," "occasionally," "frequently," and "most of the time."

Because the purpose of this study was to test the relationship of the psychological variables to a variety of dream, synaesthesia-like, as well as seemingly psychic experiences with a special emphasis on OBEs, respondents who claimed to have experienced aura vision were not asked for a description of their experiences.

Procedure

A stratified random sample was drawn from the total population of a small Central Virginia city. Addresses were selected from each of the six postal zip codes that made up the city's postal area so as to conform to the proportion of population resident in each zip code. Stratification was used because differing concentrations of the various socioeconomic strata are distributed across these regions. The questionnaire, called The Study of Human Experiences Project, was presented in either Form A or Form B (the position of the Cambridge Depersonalisation Scale and related items was alternated from a point in the questionnaire after the demographics and the SWLS but before the dream, synaesthesia-like and psychic experience questions in Form A, to a point after all these other questions in Form B). Two-hundred and fifty-six completed and usable questionnaires were received.

Analyses

Analyses, conducted using Statpac, included chi square and Mann–Whitney U tests, Spearman correlations, and logistic regression. For chi square tests, item responses were recoded so that endorsements of "never" became "no," and endorsements of "rarely" through "most of the time" became "yes." As in our previous studies, we decided not to correct for the number of analyses and instead to rely on common patterns across studies and on future replications. We used the same effect size (es) formula as noted in Studies 1 through 3. All p values were two-tailed.

Results of Study 4

Order Effects

Because our questionnaire was administered in two different forms, we compared the results obtained with Form A to those obtained with Form B, so as to determine whether the data could be pooled. In the analysis, OBE claims were significantly more frequent on Form B than on Form A (OBE Form A: N = 125, M = .36, SD = .84; OBE Form B: N = 127, M = .58, SD = .71, U = 9315.00, z = 2.38, p = .02, es = .15), and Lucid Dream Frequency was significantly lower on Form B than it was on Form A (Lucid Dreams Form A: N = 126, M = 1.28, SD = .94, Lucid Dreams Form B: N = 127, M = 1.03, SD = .93, U = 6767.00, z = 2.12, p = .03, es = .13). However, because neither the aura (Aura Form A: N = 125, M = .16, SD = .48, Aura Form B: N = 127, M = .13, SD = .42, U = 7790.50, z = .25, p = .79, es = .02) nor the other comparisons were significantly different, we decided to pool the data from Forms A and B for the rest of the analyses.

Prevalence and Frequency of Aura Reports

Eleven per cent (N = 27) of the respondents claimed to have seen auras. Of these, 6% said they had "rarely" had the experience and 4% said they "occasionally" had the experience. No individuals endorsed "frequently" or "most of the time."

Relationship of Auras to Demographic Variables

Thirty-three per cent of the aura experiencers were male (N = 9) and 67% were female (N = 18), $\chi^2(1) = .23$, p = .63, es = .03. Aura viewers (N = 27)did not differ significantly from non-aura viewers (N = 224) in age (Aura M = 45.89, No Aura M = 49.5, U = 2741.00, z = .79, p = .43, es = .05) or in religiosity (Aura N = 27, M = 1.52, No Aura N = 223, M = 1.47, U = 3092.50, z = .23, p = .82, es = .02).

Relationship of Auras to Psychic, Dream, Mystical, Déjà vu, and Synaesthesia-Like Experiences

We predicted that aura experiencers would have a higher prevalence of claims of other psychic experiences, and of mystical, dream and synaesthesia-like experiences. As can be seen in Table 5, there were significant differences between the aura viewers and those who did not claim auras on the parapsychological, déjà vu, mystical, and synaesthesia-like experiences, but not on the experience of lucid or disturbing dreams. Consistent with the findings of Studies 1 through 3, dream recall frequency was significantly higher in the aura group (N = 27, M = 2.63) than in the non-aura group (N = 226, M = 2.17), U = 3700.50, z = 1.81, p = .07, es = .01.

Experience	Aura	N	No Aura	N	$\chi^{2}(1)$	p (1T)	phi
ESP dreams	74%	27	46%	224	7.61	.006	.17
Waking ESP	81%	27	46%	225	11.99	.001	.22
Apparitions	78%	27	29%	226	25.83	<.0001	.32
Out-of-body	67%	27	34%	225	11.15	.001	.21
experiences							
Lucid dreams	85%	27	69%	226	3.04	.08	.11
Disturbing dreams	100%	27	92%	224		.28*	
Mystical	78%	27	56%	225	4.53	.03	.13
experiences							
Déjà vu	89%	27	82%	224		34★	
Synaesthesia: colours							
with sounds/music	48%	27	19%	226	11.87	.001	.22

Table 5: Parapsychological and Dream Experiences in Relation to Auras (Study 4)

12%

224

0084*

Synaesthesia: colours

with letters/numbers

33%

27

The IPE was calculated by counting reports of ESP dream, waking ESP, apparitions, and OBEs. The overall IPE (N=256) had a mean of 1.69, with a range of 0 to 4. Those who claimed to have reported aura vision had a significantly higher mean IPE (N=27, M=3.00) than did the group who did not claim auras (N=226, M=1.54), U= 4799.00, z=4.86, p=<.0001, es=.31. A correlation of aura frequency was also significantly related to the IPE, $r_{\rm s}(253)=.55$, p=.0001.

^{*} These variables were tested using Fisher's Exact Probability due to one or more cells with Ns less than 10.

As we predicted, the prevalence of aura claims (11%) was lower than all of the other psychic experiences claimed: apparitions (78%), waking ESP (50%), ESP dreams (49%), and OBEs (38%).

Logistic Multiple Regression

To further explore the predictors of aura experiences, we performed a logistic regression. The dependent variable was aura group membership. The independent variables were dream recall, disturbing dreams, lucid dreams, ESP dreams, waking ESP, apparitions, OBEs, mystical, déjà vu, the two forms of synaesthesia-like experiences, and depersonalisation scores. The overall regression was significant, $\chi^2(12) = 43.49$, p < .0001; Log of Likelihood Function = -64.172441. The only variables that significantly predicted aura group membership were apparitions (Coefficient = .81, SE = .34, T-Ratio = 2.37, p = .018) and mystical experiences (Coefficient = .47, SE = .24, T-Ratio = 1.97, p = .048). Ninety two per cent of the cases were predicted correctly, a 2% improvement over chance.

Relationship of Depersonalisation to Aura Experiences

The overall mean CDS score for the whole sample was 20.13 (N = 256, SD = 19.40, Range = 0 to 93). Male respondents (N = 96) did not differ significantly from females (N = 160) on their mean depersonalisation scores: Male M = 22.43, Female M = 18.75, U = 8337.50, z = 1.15, p = .252, es = .07. An interitem correlation yielded a Cronbach alpha of .88. A factor analysis uncovered five factors comparable to those found by previous investigators (e.g., Sierra & Berrios, 2001; a paper reporting the complete psychometric details of this scale is in preparation).

As predicted, the frequency of aura vision experiences was positively correlated to depersonalisation scores, $r_s(253) = .44$, p < .0001. In addition, the aura group (N = 27) obtained a significantly higher mean depersonalisation score (M = 30.19) than the non-aura group (N = 226, M = 18.87), U = 3904.00, z = 2.37, p = .02, es = .15.

Discussion of Study 4

As predicted, the aura experience was positively associated with claims of a variety of experiences. Comparison of the number of reports of auras with that of other experiences showed that auras were less common than all other

claims, but that if an experience was reported, aura viewers were more likely to report other psychic experiences than non-aura viewers. A logistic regression singled out apparitions and mystical experiences as the best predictors of aura group membership, although the prediction improvement over chance was minimal. These results were consistent with those of Studies 1 through 3. Finally, as predicted, aura vision claimants exhibited significantly higher levels of depersonalisation than those who did not claim aura vision, and the frequency of their aura vision experiences significantly correlated with CDS scores.

STUDY 5

Method

Participants

Participants in Study 5 were self-selected volunteers who responded to online study announcements. Of the questionnaires downloaded, when the study was closed at midnight on 2 June 2008, 597 were deemed usable. Respondents were mostly female (65%, N = 589), married (44%, N = 585), and slightly or moderately religious (29% each, N = 583).

Questionnaire

The web-based questionnaire was identical to that used in Study 4 and was presented online in two forms identical to the two forms in the random survey. As in Study 4, because the purpose of the study was to test the relationship of the psychological variables with a variety of dream, synaesthesia-like, mystical, déjà vu and psychic experiences but with a special emphasis on OBEs, respondents who claimed to have experienced aura vision were not asked for a description of their experiences.

Procedure

In January of 2008, a recruitment announcement was sent to two psychologyand parapsychology-related email newsletter lists with a combined subscriber base of approximately 11,300 individuals. The same announcement was also featured on various psychology- and parapsychology-related blogs, chat lists, social networking and other websites from January through June. It is therefore impossible to estimate how many people actually saw the announcement.

Individuals who wished to participate followed a link to an introductory website, www.studyofhumanexperiences.org, where they chose either Form A or Form B of the questionnaire according to whether their birth year was an even or an odd number. Once participants completed the questionnaire, their data was immediately uploaded to an encrypted archive on the hosting site. Data from individuals who navigated away from www.surveymonkey. com without completing the questionnaire was automatically uploaded into the encrypted archive as well. Once downloaded, the data was analysed for duplicates by searching on IP address, name, and on postal and email addresses when available. Duplicate questionnaires were purged from the dataset, as were questionnaires on which the only response was an endorsement of the consent form.

Analyses

Analyses included chi square and Mann–Whitney U tests, Spearman correlations, and logistic regression. As in Study 4, the five-item response scale on the experience questions were recoded for the chi square analyses such that endorsements of "never" became "no," and endorsements of "rarely" through "most of the time" became "yes." As in our previous studies, we decided not to correct for the number of analyses and instead to rely instead on common patterns across studies and on future replications. The formula used in Studies 1 through 4 to calculate effect sizes (es) was also used in this study. All p values were two-tailed.

Results of Study 5

Order Effects

Our questionnaire was uploaded to the website in two different forms, as mentioned earlier (Form A positioned CDS scale items and depersonalisation experience questions after demographic and SWLS items but before the psychic and other experiences; Form B position moved the CDS and its collateral experience items to the end of the questionnaire). Mann–Whitney U tests were performed on mean CDS scores, and on all the items that queried the frequency of experiences. Déjà vu mean scores were significantly higher on Form B than they were on Form A (Déjà Vu Form A N = 257, M = 1.94, SD = .96, Déjà vu Form B N = 263, M = 2.18, SD = .86), U = 38513.50, z = 2.75, p = .006, es = .11. Because neither aura (Form A = 262, M = 1.09, SD = .80).

1.23, Form B N = 265, M = 1.09, SD = 1.23, U = 34755.00, z = .02, p = .98, es = .001) nor any of the other comparisons were significantly different, it was decided to pool the data from Forms A and B for the rest of the analyses.

Prevalence and Frequency of Aura Reports

Forty-six per cent said they had never had the experience, but 54% (N =285) of the 527 respondents who answered the aura vision question claimed to have had the experience. Of the latter group, 19% responded "rarely," 20% claimed to have experienced aura vision "occasionally," 10% "frequently," and 5% "most of the time."

Relationship of Auras to Demographic Variables

Twenty-nine per cent (N = 82) of the aura vision experiencers were male, and 71% were female, while 42% (N = 202) of those who did not claim the experience were male (N = 100) and 58% female (N = 136)—a significant difference $(N = 521, \chi^2[1] = 10.09, p = .001, phi = .14)$. Aura viewers (N = .001, phi = .14)285, M = 45.48) did not differ significantly from non-aura viewers (N = 236, 44.79) in age (N = 521, U = 34560.00, z = .54, p = .59, es = .02), nor in terms of religiosity, Aura N = 240, M = 1.27, No Aura N = 278, M = 1.23, U= 34159.50, z = .47, p = .64, es = .02.

Relationship of Auras to Psychic and Dream Experiences

We predicted that aura experiencers would have a higher prevalence of claims of other psychic experiences. As can be seen in Table 6, there were significant differences between the aura viewers and those who did not claim auras, on all of the psychic experiences and on all other experiences, with the single exception of disturbing dreams. Consistent with the results of Studies 1 through 4, dream recall frequency was significantly higher in the aura group (N = 285, M = 2.88) than in the non-aura group (N = 242, M = 2.54), N =527, U = 40876.00, z = 3.67, p = <.0001, es = .16.

The IPE was calculated by counting the number of specific experiences other than aura claim; that is, dream ESP, waking ESP, apparitions, and OBEs. The overall mean IPE (N = 597) was 2.76 with a range of 0 to 4. Aura viewers obtained a significantly higher mean IPE (N = 285, M = 3.54) than did nonaura viewers (N = 242, M = 2.63), U = 50108.50, z = 8.97, p < .0001,

Table 6: Parapsychological and Dream	Experiences in Relation to Auras (Study 5)

Experience	Aura	N	No Aura	N	$\chi^{2}(1)$	p (1T)	phi
ESP dreams	90%	284	73%	240	26.43	<.0001	.22
Waking ESP	93%	282	74%	240	34.39	<.0001	.26
Apparitions	93%	282	66%	242	57.64	<.0001	.33
Out-of-body	83%	280	49%	240	66.50	<.0001	.36
experiences							
Mystical	97%	284	83%	241	30.22	<.0001	.24
experiences							
Lucid dreams	96%	285	81%	241	30.12	<.0001	.24
Disturbing dreams	98%	285	98%	242		.4804*	
Déjà vu	99%	277	90%	239	20.77	<.0001	.20
Synaesthesia: colours	64%	280	25%	240	77.46	<.0001	.39
With sounds/music							
Synaesthesia: colours	48%	283	17%	240	54.53	<.0001	.32
with letters/numbers							

^{*} This variable was tested using Fisher's Exact Probability due to a cell with an N less than 10

es = .39. For the persons who estimated the frequency of their aura experiences (N = 527), the index was significantly correlated to those estimates, $r_s = .53$, p < .0001).

As we predicted, the prevalence of aura claims (54%) was lower than all other psychic experiences: waking ESP (84%), ESP dreams (82%), apparition experiences (80%), and OBEs (67%).

Logistic Multiple Regression

To further explore the predictors of aura experiences, we performed a logistic regression. The dependent variable was aura group membership. The independent variables were dream recall, disturbing dreams, lucid dreams, ESP dreams, waking ESP, apparitions, OBEs, mystical experiences, déjà vu, both synaesthesia-like experiences and CDS scores. The overall regression was significant, $\chi^2(12) = 189.24$, p < .0001; Log of Likelihood Function = -268.91 The variables that significantly predicted group membership (aura yes, aura no) were apparitions (Coefficient = .47, SE = .14, T-Ratio = 3.44, p = .0001), waking ESP (Coefficient = .30, SE = .13, T-Ratio = 2.42, p = .015), mystical experiences (Coefficient = .25, SE = .11, T-Ratio = 2.28, p = .022) and synaesthesia-like experience of colours with sounds (Coefficient = .47, SE = .13, T-Ratio = 3.51, p < .0001) as positive predictors, and disturbing

dreams (Coefficient = -.33, SE = .15, T-Ratio = -2.19, p = .028) as a negative predictor. While only 75% of the cases were predicted correctly, this still represented a 21% improvement over chance.

Relationship of Depersonalisation to Aura Experiences

The overall mean CDS score for the whole sample was 37.18 (N = 591, SD = 14.15, Range = 0 to 279). As predicted, the frequency of aura vision experiences was positively correlated to depersonalisation scores (r[527] = .36, p < .0001). In addition, the aura group (N = 285) obtained a significantly higher mean depersonalisation score (M = 50.00) than the non-aura group (N= 242, M = 30.12), U = 45485.50, z = 6.32, p = < .0001, es = 28.

Discussion of Study 5

As predicted, the aura experience was positively associated with claims of a variety of experiences. Consistent with the results of Studies 1 through 4, reports of aura experiences were less frequent than reports of all other psychic experiences, but aura viewers were nonetheless more likely to report more discrete psychic experiences than non-aura viewers. A logistic regression singled out synaesthesia-like experiences of colours with sound, apparitions, ESP waking experiences and mystical experiences as positive predictors, and disturbing dreams as a negative predictor of aura group membership. Unlike the results obtained in Studies 1 through 4, the regression predicted fewer cases correctly but the improvement over chance was considerable. Finally, as predicted, aura vision claimants exhibited significantly higher levels of depersonalisation than those who did not claim aura vision, and the frequency of their aura vision experiences correlated significantly with CDS scores.

SUMMARY OF THE RESULTS OF ALL FIVE STUDIES

Overall, the results of the five studies were exceedingly consistent with one another, even though: three studies were conducted in the mid-1990s and two ten years later; two were conducted in Spanish and three in English; four used convenience samples and one a stratified random sample; and study populations differed widely, being readers of a popular magazine published in Spain, community college students in the midwestern United States, "townspeople" and students on a Spanish-speaking Caribbean island, residents of a small city in Central Virginia, and an international group of English-reading

internet users.

In none of the five studies were demographic variables significantly different for aura viewers and non-aura viewers. In all five studies, aura vision experiences were reported less frequently than all other psychic experiences, but when claimed, aura experiencers also reported significantly more discrete psychic experiences than those who did not claim aura vision. Aura viewers claimed significantly more lucid dreams than non-experiencers in Studies 3 and 5, as well as significantly more mystical experiences in Studies 1, 2, 4, and 5, significantly more vivid dreams in Study 3, significantly more déjà vu experiences in Study 5, and significantly more synaesthesia experiences as measured by six of the seven items of the Synaesthesia Factor of Tellegen's Absorption Scale in Study 2, by the complete Synaesthesia Factor in Study 3, and by the two synaesthesia-like experience items in Studies 4 and 5. As can be seen in Table 7, in all five studies, aura viewers reported a higher frequency of all experiences queried with the single exception of disturbing dreams in Study 5.

Table 7: Other Experiences in Relation to Auras

Experiences	S1	S2	S3	S4	S5
Study population	Readers of Más Allá	Community College, U.S.	Puerto Rican graduate students	General public (random) U.S.	International internet users
Date conducted	1995	1996	1997	2007	2008
# of participants	492	308	120	253	527
ESP dream					
Aura yes	85%	96%	78%	74%	90%
Aura no	71%	92%	56%	46%	73%
Waking ESP					
Aura yes	84%	92%	83%	81%	93%
Aura no	64%	68%	47%	46%	74%
Apparitions					
Aura yes	92%	73%	94%	78%	93%
Aura no	76%	33%	38%	29%	66%
OBEs					
Aura yes	87%	58%	67%	67%	83%
Aura no	78%	25%	28%	34%	49%
Movement of obj	ects				
Aura yes	43%	_	_	_	_
Aura no	30%	_	_	_	_

Table 7: Other Experiences in Relation to Auras (cont.)

Experiences	S1	S2	S3	S4	S5
Study population	Readers of Más Allá	Community College, U.S.	Puerto Rican graduate students	General public (random) U.S.	International internet users
Date conducted	1995	1996	1997	2007	2008
# of participants	492	308	120	253	527
Vivid dreams					
Aura yes	_	100%	100%	-	_
Aura no	_	96%	77%	_	_
Lucid dreams					
Aura yes	90%	85%	83%	85%	96%
Aura no	89%	83%	60%	69%	81%
Disturbing dream	S				
Aura yes	_	_	_	100%	98%
Aura no	_	_	_	92%	98%
Mystical					
Aura yes	80%	88%	_	78%	97%
Aura no	63%	67%	_	56%	83%
Déjà vu					
Aura yes	_	_	_	89%	99%
Aura no	_	_	_	82%	90%
Synaesthesia: colo with sounds	ur				
Aura yes	_	_	_	48%	64%
Aura no	_	_	_	19%	25%
Synaesthesias: colo with numbers/let					
Aura yes	_	_	_	33%	48%
Aura no	_	_	_	12%	17%

In Study 1 (see Table 1), the differences between aura viewers' claims of other experiences were significant in all comparisons with the single exception of lucid dreams. In Study 2 (see Table 2), all comparisons were significant except vivid and lucid dreams. In Study 3 (see Table 3), only the comparison of ESP dreams reported by aura viewers and non-aura viewers was nonsignificant. In Study 4, only the analyses of lucid dreams and déjà vu experiences were not significantly different between the two groups, and in Study 5 only disturbing dreams was nonsignificant.

As for the psychological correlates, as predicted aura viewers obtained significantly higher dissociation and DES-T mean scores (Study 2), significantly higher mean absorption scores (Study 3), and significantly higher mean depersonalisation scores (Studies 4 and 5). Similarly, in Studies 2 through 5 aura experience frequency was significantly and positively correlated to psychological scale scores.

In Studies 2 through 5, all logistic regressions run to determine which experience variables predicted aura group membership, were significant. However, in Studies 2 through 4, while 83%–100% of the cases were predicted, the range of the improvement over chance prediction was only 1%-2%. In Study 1, the results were more robust, in that while only 64% of the cases were correctly predicted, the improvement over chance was 12%. Study 5 obtained similar results with only 75% of the cases correctly predicted, but with an improvement over chance of 21%. In Studies 2, 4 and 5 mystical experience was a significant positive predictor of aura group membership. In Studies 3, 4, and 5, claims of apparition experiences were a significant predictor, and in Study 5 synaesthesia-like experiences of colour when hearing sound, music or voices was a significant positive predictor of aura group membership, while claims of disturbing dreams was a negative predictor. Although the regression results in Studies 2 through 4 were not robust, there was some consistency across Studies 2 through 5 in predictors.

As can be seen on Table 8, Studies 1 and 5, that had more robust prediction of correct cases, surveyed individuals with higher levels of experiences than the respondents of Studies 2 through 4 in which prediction of correct cases was minimal or less than chance.

	ESP dream	Waking ESP	Apparitions	OBEs	Aura
Study 1	78%	73%	83%	82%	46%
Study 2	75%	71%	39%	30%	16%
Study 3	59%	53%	46%	38%	15%
Study 4	49%	50%	78%	38%	11%
Study 5	84%	82%	80%	67%	54%

Table 8: Comparison of Endorsement of Psychic Experiences for all Studies

CONCLUSION

The results of these five studies allow us to address empirically a variety of questions about aura vision. The first is the differential prevalence of the

experience (although we cannot claim representativeness for any study but Study 4). The high prevalence of aura claims in Study 1 (46%) is not surprising because the participants were readers of a popular magazine on New Age topics who also showed a higher prevalence on all the psychic experiences. Similarly, the high prevalence in Study 5 is not unexpected, given that respondents to the online questionnaire were self-selected individuals with sufficient personal interest in psychic phenomena to be either subscribers to special email newsletters or chat lists, readers of blogs or frequenters of websites devoted to the topic. Similar percentages of aura experiences have been obtained in past studies in which participants were individuals with a high interest in and/or involvement with psychic phenomena and beliefs (Gómez Montanelli & Parra, 2005, 52%; Kohr, 1980, 47%; Richards, 1988, 44%).

Studies 2, 3 and 4 obtained a prevalence of aura claims of 16%, 15% and 11%, respectively. Although much lower than the prevalence reported in Studies 1 and 5, these percentages are still high, as compared to studies with representative samples in which prevalence ranged from 0% to 6% (Haraldsson, Gudmundsdottir, Ragnarsson, & Jonsson, 1977; Murray, 1983; Palmer, 1979), and as compared to studies with non-random samples with students and other groups (e.g., Neppe, 1981, 9%; Pekala, Kumar, & Cummings, 1992, 7%; Pekala, Kumar, & Marcano, 1995, 7%). Some studies based on non-random samples have more comparable percentages to those of Studies 2 through 4. These are values of 11% (Gómez Montanelli & Parra, 2005, students), and 13% (Alvarado, 1994, students of a parapsychology course; Gómez Montanelli & Parra, 2004, persons who have been in contact with a parapsychology institute; Thalbourne, 1994, members of the Society for Psychical Research). However, other studies have obtained higher prevalences. In addition to the studies with special groups mentioned above, prevalence estimates have ranged from 23% (Clarke, 1995, students in a university correspondence course) to 28% (Murray, 1983, members of Isneg tribe in the Phillipines) to 48% (Tart, 1971, marijuana smokers).

All of our five studies present evidence that supports the predictions of positive relationships between auras and claims of other psychic experiences, the analyses with the indexes of psychic experiences being an example. The aura group obtained significantly higher index scores than did the non-aura group in all five studies with effect sizes that ranged from .31 to .39.

Our studies also showed consistently that auras are reported less often than other experiences. A similar pattern was observed with studies using comparable questionnaires (Kohr, 1980; Palmer, 1979, two samples; Zingrone & Alvarado, 1994). Additional data, consistent with this pattern, has been 162

reported by Gómez Montanelli and Parra (2004, 2005) and by Thalbourne (1994). Although auras are less frequent, they are significantly and positively associated with other experiences, as seen on Tables 1, 2, 3, 5 and 6. Because these results show that while not everyone sees auras, a great proportion of those who do see auras also experience other phenomena, we may be dealing here with a particular type of experience which, while associated with other phenomena, happens to very few individuals in general, or to a particular subset of the individuals who are already experiencing an above average rate of spontaneous experiences.

As mentioned in the summary section above, demographic variables we reported here were not significantly related to aura claims. This lack of relationship with demographics is consistent with the results of previous studies (e.g., Kohr, 1980; Palmer, 1979).

In Studies 2 and 3, we found significant positive correlations between aura vision and synaesthesia-like items of Tellegen's Absorption Scale, and in Studies 4 and 5 with items that queried two types of synaesthesia-like experiences. This provides some support for the idea that the visual experience of an aura may be related to the transformation of information from a particular sensory modality, or from vague emotional impressions into perceptions of lights or luminous fields. Of course, and as argued before (Alvarado, 1994), we need to refine our measurement of a potential synaesthetic process. The use of items from Tellegen's Absorption Scale probably is not the best way to measure such a hypothetical propensity for cross-modal processing that some believe underlies the aura experience. Laboratory performance tasks (Mattingley, Rich, Yelland, & Bradshaw, 2001; Rader & Tellegen, 1987) or directed questions aimed at fleshing out the phenomenology of spontaneous synaesthetic experiences (Domino, 1989; Eagleman, Kagan, Nelson, Sagaram, & Sarma, 2007) may be better ways to test for synaesthesia. Another way to explore the subject is to assess how common aura reports are among high-functioning synaesthetes, as compared to non-synaesthetes.

We should keep in mind that in Study 3, we had enough information to compare the different factors of the Absorption Scale for those in the aura and non-aura groups. In these analyses, the synaesthesia factor was the second highest factor to correlate to aura claims. This suggests that other dimensions of absorption may be more important in the processes underlying aura vision. The strongest effect was found with the factor that Tellegen (1992) calls Enhanced Cognition. This factor contains items that cover augmented or unusual forms of perception. The second strongest effect size was connected to the Synaesthesia

Factor, also associated with unusual perceptual experiences. The comparison that vielded the lowest effect size was the factor that involves dissociative phenomena involving an apparent narrowing or separation of perception. These findings suggest that the aura experience is mainly associated with the perceptual aspects of absorption; that is, a predisposition towards the processing of unusual perceptual input or of imagery may be more important to aura claims than a dissociative process that involves losing awareness of surroundings. All of this should be evaluated keeping in mind that later studies have found different factors (e.g., Jamieson, 2005).

The hypotheses regarding dissociation (Study 2), absorption (Study 3), and depersonalisation (Studies 4 and 5) were also confirmed. This suggests to us that cognitive processes or abilities related to alterations in consciousness in the focusing of attention, the presence of permeable barriers to the subconscious, or the detachment from, or distortion of, perceptual processes may also be important in the genesis of aura vision experiences. Future research may profitably include measures of boundary thinness (Hartmann, Harrison, & Zborowski, 2001) and transliminality (Lange, Thalbourne, & Houran, 2000).

Regarding dissociation and depersonalisation, scale scores obtained by our participants were rarely above the established cut-off points for pathology and thus cannot be seen to indicate a relationship between psychopathology and aura vision. In fact, recent discussions of the meaning of the scores derived from such scales as the DES question their diagnostic value in nonclinical populations (e.g., for the DES, see Merritt & You, 2008; Modestin & Erni, 2004).

We feel strongly that the consistency of the results of all five studies reported here, both between studies and with previous findings, argue that aura viewers are a unique group of individuals with whom future work should be carried out. It is possible that some of these individuals are experiencing perceptual anomalies that may be linked to neurological disorders, but instead of treating them as symptoms and seeking medical help, the experiences have been conceptualised as positive or even healthy. If this is so, further studies of aura viewers, with this in mind, may provide insight into the impact of context on the interpretation of seeming perceptual experiences. Similarly, because aura viewers appear to report so many other relevant experiences, they constitute a group of individuals with whom a wide variety of experiences can be studied as one. Phenomenological, developmental, cognitive and experiential variables might be more readily explored in this population.

Unfortunately, the psychological study of auras has been generally neglected by students of rare and/or anomalous phenomena. It seems to us that a great

potential for increased knowledge about sensory and perceptual processes in general, and seemingly psychic experiences in particular, lies with this unique group of experiencers. Future research would do no less than provide useful information not only to serve these goals, but also to add to finer-grained clinical distinctions between benign and pathological experiences.

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CORRELATIONS BETWEEN FANTASY PRONENESS, DISSOCIATION, PERSONALITY FACTORS AND PARANORMAL BELIEFS IN EXPERIENCERS OF PARANORMAL AND ANOMALOUS PHENOMENA

Kathryn M. Gow, Louise Hutchinson, and David Chant Queensland University of Technology

This study examined various psychological correlates of belief in, and experience of, anomalous phenomena. Anomalous experiences are those that, although they may be experienced by a considerable number of individuals—such as experiences considered to be telepathic—are thought to diverge from ordinary experiences or from established accounts of reality. One hundred and seventy-three participants (114 females and 59 males) were classified as anomalous experiencers (n = 125), anomalous believers (n = 39) and non-believers (n = 9), according to their responses on a Measure of Anomalous Experiences and Beliefs. Focusing on the Experiencer group, correlational analyses were conducted with fantasy proneness, dissociation, paranormal beliefs, and the personality correlates of "intuition" and "feeling." Analyses revealed significant correlations between fantasy proneness and five of the seven subscales of paranormal belief and significant moderate (to low) correlations with both the "intuition" and "feeling" dimensions of the MBTI. Dissociation was also related to global paranormal belief and to the subscales of psi, superstition, and extraordinary life forms.

Belief and interest in anomalous and paranormal phenomena are much higher than realised and seem to be increasing (French & Wilson, 2007; Lange, Irwin, & Houran, 2000). Recent research has suggested that nearly half of the American population believe in some form of anomalous or parapsychological phenomena (Lamont, 2007; Newport & Strausberg, 2001; Watt, Watson, & Wilson, 2007), and studies conducted throughout Europe and the United States reveal that more than 25% of participants have experienced some kind of anomalous or paranormal phenomenon, with the most reported

Correspondence concerning this article should be addressed to the first author at kathryngow@bigpond.com.

occurrence being some form of communication with a deceased person. These experiences occurred most commonly in the form of a dream, déjà vu or sensing the deceased person's presence (Barbato, Blunden, Reid, Irwin, & Rodriquez, 1999; Datson & Marwit, 1997). A contributing factor to these increasing levels of belief is the media, which devotes a vast amount of time and money on anomalous and paranormal claims, with television shows such as Medium, Supernatural, Ghost Whisperer, Crossing Over, and The 4400 being screened on a daily basis around the world (French, 2001; French & Wilson, 2007).

The question here, however, is not whether anomalous and parapsychological phenomena exist, but rather what the psychological processes are that underpin these beliefs and experiences (Irwin, 1993, 2004; Peltzer, 2002; Sharps, Matthews, & Asten, 2006; Thalbourne, Dunbar, & Delin, 1995). Researching the psychological correlates of anomalous beliefs and experiences could perhaps provide a greater understanding of typical human experiences, as these phenomena seem to have real life implications for the behaviour of a large percentage of the world's population (French, 2001; Houran, Irwin, & Lange, 2001; Peltzer, 2002).

Anomalous Beliefs and Experiences

An anomalous experience is defined as "an uncommon experience (e.g., synesthesia) or one that, although it may be experienced by a substantial amount of the population (e.g., experiences interpreted as telepathic), is believed to deviate from the ordinary experience or from the usually accepted explanations of reality" (Cardena, Lynn, & Krippner, 2000, p. 4). The multiplicity of anomalous experiences that have been detailed over time is vast and complex (Berenbaum, Kerns, & Raghaven, 2000). Anomalous experiences differ from paranormal experiences in that they encompass a wider range of unusual phenomena. Anomalous experiences, for instance, not only cover experiences considered to be strictly paranormal in nature (Krippner, 2000; Thalbourne et al., 1995) such as extrasensory perception (ESP) and psychokinesis, but also such phenomena as plantpsi and possession. These experiences are considered to be anomalous because there seem to be no physical or biological mechanisms to account for the phenomena (Allistone & Wooffitt, 2007). Therefore, all paranormal experiences are considered to be anomalous in nature; however, not all anomalous phenomena are identified as fitting within the paranormal framework (Krippner, 2000).

The next section will elucidate the theory and research about certain variables purported to be related to anomalous beliefs and experiences, such as fantasy proneness, dissociation, paranormal beliefs, and the personality characteristics of "intuition" and "feeling."

Fantasy Proneness

Fantasy proneness is defined as "the propensity to fantasise a large part of the time and to be deeply absorbed in or fully experiencing what is being fantasised" (Irwin, 1990, p. 655). Hough and Rogers (2007-2008) report that typical characteristics of the fantasy prone individual include: "high hypnotic susceptibility, vivid childhood memories, a propensity for realistic, almost hallucinatory imagery, and a tendency to experience strong bodily reactions to imagined events (e.g., apparent orgasm without physical stimulation)" (p. 141). Investigations into the relationships between fantasy proneness and belief in anomalous and paranormal phenomena have demonstrated positive and, in many cases, high correlations between these two variables (Kennedy, 2005; Wiseman & Watt, 2006). Thus, numerous varieties of personal anomalous experiences have been reported by individuals who have high levels of fantasy proneness (Irwin, 1992; Robertson & Gow, 1999), for example, seeing an apparition (Parra, 2006), or having an out-of-body experience (Wilson & Barber, 1983). Furthermore, Irwin (1990) found fantasy proneness to significantly correlate with six out of the seven subscales of the Paranormal Beliefs Scale.

The ability to be highly fantasy prone is said to stem partly from the positive encouragement of imaginative play by parents and significant others during childhood (Irwin, 1992, 1993; Makasovski & Irwin, 1999). The occurrence of trauma and/or physical abuse throughout childhood has also been documented in the literature as providing a framework for the development of fantasy proneness (Irwin, 1992, 2004; Lawrence, Edwards, Barraclough, Church, & Hetherington, 1995), in that traumatic experiences in childhood could instil the need for control as a means of coping, which might enhance or magnify the occurrence of uncontrollable and anomalous events in the person's life. Paranormal beliefs are endorsed as a result of fantasy proneness because they offer a sense of illusionary control over uncontrollable life events (Irwin, 1993, 2004). Irwin's (1993) model could be considered to be circular, in that anomalous and paranormal beliefs enable the individual to feel as if they are coping with an event that is perceived to be uncontrollable. Nevertheless, these underlying feelings of helplessness could, in fact, be reinforcing the paranormal belief and further enhancing the propensity to fantasise. Irwin (1993) emphasises, however, that fantasy proneness should be examined using the more positive developmental settings rather than focusing solely on abuse and trauma issues, as this may only be relevant for a small number of individuals who typically exhibit high levels of fantasy proneness.

Although past research has shown that "fantasisers" report some difficulties differentiating fantasy from reality and as a result have higher reports of anomalous, paranormal, hallucinatory and other unusual experiences (Lynn & Rhue, 1988; Parra, 2006; Wiseman & Watt, 2006), Wilson and Barber (1983) were of the opinion that this does not predicate the presence of coping difficulties on the part of the fantasiser. Indeed, their research indicated that only a small number of fantasisers had psychopathology in some form and that the majority were very well-adjusted individuals.

Dissociation

Dissociation is defined as "a structured separation of mental processes (e.g., thoughts, emotions, memory and identity) that are ordinarily integrated" (Spiegel & Cardena, 1991, p. 367) and manifests through one's behaviours, cognitions, affect and physiology (Eisen & Carlson, 1998). Pekala, Kumar, and Marcano (1995) explain this mechanism by stating that individuals who are highly dissociative in nature have the ability to focus on one dimension of subjective experience so intently that the thought or image is unlikely to become contaminated or diluted by other forms of subjective experience. Dissociation may therefore be necessary for the event to be accessed and understood without contamination from competing information processing tools. Braude (1988) suggests that dissociative experiences enable a bridge to form which links cognitive functions with the functions that underpin anomalous phenomena. Sharps et al. (2006) elucidate the above point by highlighting that individuals with tendencies toward dissociation can feel as if they have been dislodged from the day-to-day realities of human experience and as a result may have higher levels of belief in the paranormal than people who do not display dissociative tendencies. Ross and Joshi (1992) propose that experiences that are paranormal or anomalous in nature are "an expression of normal dissociative capacity" (p. 360), with Richards (1991) stating that this allows for "an enhanced sensitivity" (p. 88) to particular experiences that may be anomalous in nature. It has therefore been suggested that the true nature of anomalous and paranormal experiences could perhaps be illuminated through researching dissociation (Ross & Joshi, 1992).

Irwin (1994), for example, determined that dissociation scores were positively correlated with scores on global paranormal belief and with particular subscales within this measure, in particular extraordinary life forms, belief in psi, spiritualism, and precognition. Others have found similar results in relation to psi experiences (e.g., Richard, 1991; Zingrone & Alvarado, 1994). Sharps et al. (2006) reported that dissociation was associated with heightened tendencies towards beliefs in anomalous and paranormal phenomena. Furthermore, Richards (1991) produced moderate correlations between scores on the Dissociative Experiences Scale (DES) and frequency of psychic experiences. It has therefore been suggested that dissociative ability may enhance a person's sensitivity to experiences that are anomalous in nature (Pekala et al., 1995; Ross & Joshi, 1992). This sensitivity could, however, be explained by the reduced response capability of the dissociative person (Merckelbach, Muris, Horselenberg, & Stougie, 2000).

Paranormal Beliefs

Parapsychologists typically use the term "paranormal" when referring to claims of extrasensory perception (ESP) and psychokinesis (PK) (Hyman, 2007; Rao, 2001; Thalbourne et al., 1995) which are collectively referred to as "psi" (Beloff, 1993; Hyman, 2007; Rao, 2001; Watt, 2006). Nevertheless, some parapsychologists and other researchers hold a broader multidimensional definition which encompasses not only the above phenomena, but numerous other phenomena (Irwin, 1993, 2004, 2007; Thalbourne et al., 1995) such as superstition, witchcraft and alien abduction (Irwin, 1993; Krippner, 2000; Tobacyk, 1995). Lawrence (1995), for example, suggests that something can be considered paranormal if it is "in principle physically impossible and outside the range of human capabilities as presently conceived by conventional scientists" (Lawrence, 1995, p. 132). Thalbourne (1995) agrees with this definition, but Tobacyk (1995) believes that it is too restrictive in nature, because it only focuses on the human aspect. Furthermore, he asserts that human consciousness is the mechanism that enables individuals to attribute paranormality to particular objects or incidents which are not all necessarily human in nature. Due to the broad scope that the term "paranormal" encompasses, the factorial structure of paranormal phenomena is still a contentious issue leading to continuing debates (Barbato et al. 1999; French & Wilson, 2007; Irwin, 1993, 2004, 2007; Kennedy, 2005; Thalbourne et al., 1995).

An important factor that underlies paranormal and anomalous beliefs is one's own personal experiences and the experiences of trusted friends and family (Auton, Pope, & Seeger, 2003; Clarke, 1995; French & Wilson, 2007; Glicksohn, 1990; Irwin, 2004; Otis & Alcock, 1982). Gallagher, Kumar, and Pekala (1994) concluded from their research that participants who held strong beliefs in paranormal and anomalous phenomena reported having more experiences of these phenomena than participants with weaker beliefs. Not all believers have claimed to have had a paranormal experience; however, substantial minorities over a wide range of cultures have (French & Wilson, 2007). A number of researchers have ascertained that belief in the paranormal is directly related to personal experience (e.g., Clarke, 1995; Glicksohn, 1990; Messer & Griggs, 1989). However, Irwin (1985) distinguished that a combination of personal experiences and the reading of paranormal literature were the biggest correlates for paranormal belief. More recent studies have revealed that the widespread dissemination of paranormal concepts in the media is a major influential factor in people's belief in the paranormal (Auton et al., 2003; French, 2001; French & Wilson, 2007; Irwin, 2004). Irwin (1993) deduced from his extensive review of the theoretical literature that believers in the paranormal tend to seek out various activities that are paranormal in nature, such as seeing a medium or psychic or practising being one, using drugs to expand the mind, studying parapsychology and seeking out things in the media with a paranormal theme. Through his investigations, he concluded that "the association between paranormal belief and paranormal involvement may well be bidirectional or circular, with beliefs encouraging involvement and with involvement serving to reinforce beliefs" (Irwin, 1993, p. 13).

Through examining the theoretical literature, it is perhaps reasonable to assume, therefore, that the formation of paranormal beliefs is moulded partly by a combination of personal experiences, sociocultural factors and, among other things, a belief based on individual needs (Callaghan & Irwin, 2003; Farha, 2007; Fitzpatrick & Shook, 1994; Irwin, 1992; Krippner & Winkler, 1996; Makasovski & Irwin, 1999).

Personality Dimensions

Personality characteristics play a significant role in individual attitudes towards anomalous and paranormal phenomena (Kennedy, 2005). Research shows, for instance, that the dimensions of the Myers–Briggs Type Indicator (MBTI)—"intuition," "feeling" and "perceiving"—have a relationship with

paranormal beliefs (Kennedy, 2005; Lester, Thinschmidt, & Trautmen, 1987; Murphy & Lester, 1976). Research undertaken by Gow and colleagues (Gow, Lane, & Chant, 2003; Gow, Lang, & Chant, 2004; Gow, Lurie, Coppin, Popper, Powell, & Basterfield, 2001) assert that both the "intuition" and "feeling" personality dimensions of the MBTI are positively correlated with experience of, and belief in, certain anomalous phenomena. Furthermore, results of a study conducted by Arcangel (1997), which attempted to induce a feeling of contact with deceased entities, identified that of the participants who reported making some form of contact, 96% were identified as having "intuition" and "feeling" personality preferences on the Myers-Briggs Type Indicator (MBTI). However, 100% of the participants who reported that no contact was made had "sensing" and "thinking" personality preferences (Arcangel, 1997). Myers and Myers (1995) assert that "the province of intuition is to see the possibilities and the province of feeling is a concern for people" (p. 47). Additionally, Keirsey (1998) states that individuals with "intuitive" and "feeling" personalities tend to have a mystical outlook on life and explore such phenomena as parapsychology, occultism, and concepts which are metaphysical and esoteric in nature.

Fantasy proneness and paranormal beliefs have also both been shown to have a relationship with the "intuition" and "feeling" dimensions of the MBTI (Gow et al., 2003; Gow et al., 2004). In the Gow et al. (2004) study of out-of-body experiences (OBEs), significant correlations were produced between the Paranormal Beliefs Scale's (PBS) subscales of witchcraft, spiritualism, precognition and psi, and the "feeling" dimension of the MBTI. An examination of these findings indicates that individuals have innate motivations and interest in believing and experiencing certain anomalous phenomena (Kennedy, 2005).

Gender Differences

Gender is a demographic characteristic that has received considerable attention in anomalous and paranormal literature. Irwin (1993) reported that females held a stronger belief in the paranormal than males on most of the seven subscales of the PBS, except for extraordinary life forms where males were assessed as having higher scores. Irwin (1985), Millman and Hofstra (2004), Randall (1990), and Tobacyk and Milford (1983) all reported that women scored higher on global paranormal belief than men. When examining the different dimensions of anomalous beliefs, it is usually females

who indicate stronger beliefs in such phenomena as superstition, hauntings, ESP (namely precognition and telepathy), astrology, traditional religious beliefs and reincarnation (Irwin, 1993, 2004). Men, on the other hand, tend to have stronger beliefs than women with regard to extraordinary life forms and belief in UFOs (Clarke, 1991; Irwin, 1993; Shermer, 2007).

Based on the research findings of this study, in relation to the phenomena of interest outlined above, it was hypothesised that:

- 1. Fantasy proneness and dissociation would be significantly correlated with scores on the total PBS and the majority of subscales of the PBS.
- 2. The "intuition" and "feeling" personality dimensions would correlate with both fantasy proneness and global paranormal beliefs.
- 3. The "feeling" preference of the MBTI would correlate with the psi, witchcraft, spiritualism and precognition scores of the PBS.

METHOD

Participants

A total of 173 participants (114 females and 59 males) volunteered to participate from first year psychology students studying at the Queensland University of Technology (QUT) (75; 43.35%) and the general population (98; 56.65%). The first-year psychology students were given course credit for their participation and members of the general population participated voluntarily. All participants provided written consent and these forms were placed into a separate pile to the anonymous surveys.

Design

This study used a correlational design to assess the relationship between fantasy proneness, dissociation, paranormal beliefs, and the personality dimensions of "intuition" and "feeling," and paranormal experience. Participants were grouped based on their responses to the Measure of Anomalous Experiences and Beliefs. A comprehensive glossary of anomalous phenomena was provided for participants to read to ensure a better understanding of anomalous phenomena and be able to identify if any of these phenomena had ever happened to them, or if not, whether they believed that these events were possible. Based on their responses, participants were categorised as: (a) "experiencer," (b) "believer," or (c) "non-believer." Correlational analyses were conducted on data from the experiencer and believer groups.

Materials

The test booklet was divided into two sections. Section one contained an information sheet, consent form and background information sheet. The second section contained the questionnaires, in which a Latin square design was used to limit the effects of sequence and order with regard to their arrangement. The tests used were: the Inventory of Childhood Memories and Imaginings (ICMI), the Dissociative Experiences Scale (DES), the Paranormal Beliefs Scale (PBS), and the Myers-Briggs Type Indicator (MBTI). The Measure of Anomalous Experiences and Beliefs was also used to classify groups.

Bio Data Participants were asked to complete a background information sheet which asked them about the demographic details of gender, age, education, nationality, and country of origin.

Fantasy Proneness The Inventory of Childhood Memories and Imaginings (ICMI) (Wilson & Barber, 1983) was used to measure the level of participants' fantasy proneness. This is a 52-item, true-or-false self-report measure in which participants were asked questions such as: "As an adult, I occasionally pretend I am someone else" and "I have felt, heard, or seen an apparition (a spirit or ghost)." Based on responses to these questions, participants were grouped into being either: "low" (0-13), "medium" (14-34) or "high" (35-52) fantasisers. Test-retest reliability of the ICMI has been reported as ranging from .93 to .87 (Lynn & Rhue, 1988).

Dissociation The Dissociative Experiences Scale (DES) (Bernstein & Putnam, 1986) was used to measure the participants' levels of dissociation in everyday life. This is a 28-item continuum measure where participants are asked to indicate how often they experience given phenomena. Responses to each item range from 0%, indicating that this never happens to them, to 100%, which indicates that this happens to them all the time. Some examples of the questions asked are: "Some people have the experience of finding themselves in a place and having no idea how they got there" and "Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event." The DES has been shown to have significant construct validity which ranges from .79 to .50 (Bernstein & Putnam, 1986) and good test-retest reliability with scores ranging from .96 (Frischolz et al., 1991) to .79 (Pitblado & Sanders, 1991). Generally, studies have also found the DES to produce high internal reliabilities, with scores on Cronbach's alpha above .90 (Wright & Loftus, 2000).

Paranormal Beliefs The Paranormal Beliefs Scale (PBS) (Tobacyk & Milford, 1983) was used to measure the extent of belief in the paranormal. This is a 25-item self-report inventory that contains seven specific subscales: (a) Traditional Religious Beliefs, (b) Witchcraft, (c) Spiritualism, (d) Precognition, (e) Psi Beliefs, (f) Extraordinary Life Forms, and (g) Superstition. A 5-point scale is used for each response ranging from strongly disagree (1) to strongly agree (5). Participants were asked to rate their response to such questions as: "If you break a mirror, you will have bad luck" and "It is possible to communicate with the dead." Items 21 and 23 have been reversed in this scale. Construct validity was shown to be .89, with test-retest reliability also .89. Reliability for the subscales ranged from .84 to .60 (Tobacyk & Milford, 1983).

Personality Dimensions The Myers-Briggs Type Indicator (MBTI) (Myers, 1962) is a 32-item self-report questionnaire that measures independent dimensions of personality based on Jung's personality typology. These dimensions are: (a) Introversion/Extraversion, (b) Intuition/Sensation, (c) Thinking/ Feeling, and (d) Judging/Perceiving. Each question is made up of two items in which participants recorded their preference from 0–10. Based on their responses, participants were then placed into one of two groups in each of the four possible personality dimensions. Some examples of questions asked were: "If it doesn't matter which I choose, I prefer being called imaginative or intuitive" or "being called factual or accurate," and "If it doesn't matter which I choose, I prefer being free to do things on the spur of the moment," or "knowing well in advance what is to be done." Validity and reliability of the MBTI have been found in both research and clinical settings (Carlson, 1985; Myers & Myers, 1995). The four personality dimensions were ascertained as having test-retest reliability ranges .84 to .76 (Myers & McCaulley, 1985) and Carlson (1985) confirmed a satisfactory spilt half reliability.

Procedure

Participants were handed the surveys and asked to return them to the marked survey box provided in the School of Psychology, or hand them directly to the researchers at the end of the session or class. Reply paid envelopes were provided to the general population for return of the surveys.

RESULTS

Data Cleaning/Screening

Data was analysed using SPSS 10. Thirteen cases were excluded due to substantially insufficient data. Of the 173 participants remaining, missing data were either replaced by the mean for that question where appropriate, or treated as missing data. The data were screened for skewness, normality and kurtosis and no questionable data were found.

Classification of the Groups

Answering "yes" or "no" to two questions about whether they had either had an anomalous experience or believed in anomalous experiences established which of the three groups the participants fitted best into. Participants who answered "yes" to having had an anomalous experience were labelled as experiencers (n = 125), participants who answered "no" to the above question but answered "yes" to believing that anomalous experiences occur were labelled as believers (n = 39), and the rest of the sample who answered "no" to both of the above questions were labelled as non-believers (n = 9).

Analyses

Table 1 provides a summary of the means and standard deviations for the three groups in relation to total scores on the measures of fantasy proneness, dissociation, global paranormal beliefs, and the "intuition" and "feeling" personality dimensions of the Myers-Briggs Type Indicator (MBTI).

Table 1: Means and Standard Deviations for the Three Groups on Fantasy Proneness (ICMI), Dissociation (DES), Global Paranormal Beliefs (PBS), and the "Intuition" (N) and "Feeling" (F) Personality Dimensions (MBTI)

Scale	Experience M	ers $(n = 125)$ SD	Believer M	s (n =39) SD	Non-belie M	evers $(n = 9)$ SD
ICMI	26.75	7.11	23.15	6.56	19.67	13.16
DES	17.62	13.29	18.18	11.99	15.72	12.81
PBS	2.85	0.51	3.18	0.62	3.56	0.89
MBTI (N) MBTI (F)	41.82 44.37	8.40 8.42	41.13 45.03	11.30 8.15	42.67 40.67	8.95 9.19

The investigation of the differences between the three groups is outside the word limit for this journal's articles and is thus the subject of another paper. The following analyses deal with the relationships between the variables of interest mainly with the experiencer group only.

Fantasy Proneness, Personality and Paranormal Beliefs

Fantasy Proneness and Paranormal Beliefs A Pearson correlational analysis revealed significant correlations with fantasy proneness (M = 26.75; SD = 7.10) when examining the experiencer group on global paranormal belief (M = 2.85; SD = 0.51), r = .36, p < .0001 and five of the seven subscales (see Table 2). These subscales were psi (M = 2.77; SD = 0.80; r = .32, p < .001), witchcraft (M = 2.78; SD = 0.81; r = .22, p = .01), spiritualism (M = 2.61; SD= 0.88; r = .35, p < .0001), extraordinary life forms (M = 3.52; SD = 0.82; r = 0.88; r == .18, p < .05) and precognition (M = 2.03; SD = 0.69; r = .27, p = .002). No significant correlations were found for the traditional religious beliefs and superstition subscales of the PBS (refer to Table 2 for correlations).

Fantasy Proneness and Personality Dimensions A Pearson correlational analysis determined that both the "intuition" (M = 41.82; SD = 8.40), r(125) = .30, p = .0008, and "feeling" (M = 44.37; SD = 8.42), r(125) = .21, p = .02, dimensions of the MBTI had significant, but moderately low, correlations with fantasy proneness (M = 26.75; SD = 7.10).

Table 2: Anomalous Experiencers Group: Pearson Correlations for Global Paranormal Beliefs and the Seven Subscales of the Paranormal Beliefs Scale (PBS) on Fantasy Proneness (ICMI), Dissociation (DES), and the "Intuition" (N) and "Feeling" (F) Personality Dimensions of the (MBTI)

PBS	ICMI	DES	N	F
TRB	0.04	0.08	0.06	0.01
Psi	0.31***	0.19*	0.14	0.01
Witch	0.22**	0.06	0.20	0.04
Super	0.12	0.24**	0.03	0.28**
Spirit	0.34***	0.10	0.09	0.07
Extra	0.18*	0.08	0.02	0.11
Precog	0.27**	0.20*	0.17*	0.15
Global	0.36****	0.23*	0.17*	0.14

Note: "Experiencers," N = 125. *p < .05; **p < .01; ***p < .001; ****p < .0001.

TRB = Traditional religious beliefs; Psi = Psi; Witch = Witchcraft; Super = Superstition; Spirit = Spiritualism; Extra = Extraordinary life forms; Precog = Precognition; Global = Global paranormal beliefs.

Dissociation and Paranormal Beliefs Significant correlations were found when examining the experiencer group between dissociation and global paranormal belief (M = 2.85; SD = 0.51), r = .23, p = .01 and three of the seven paranormal belief subscales: psi (M = 2.77; SD = 0.80), r = .19, p = .04, superstition (M = 0.80), r = .044.02; SD = 0.92), r = .24, p = .006, and precognition (M = 2.03; SD = 0.69), r = .006= .20, p = .02). No significant correlations were established for the traditional religious beliefs, witchcraft, spiritualism and extraordinary life forms subscales of the PBS (refer to Table 2).

Personality Dimensions and Paranormal Beliefs With respect to the PBS, a Pearson correlational analysis revealed that for the experiencer group, superstition r =.28, p = .002 had a moderate to low correlation with the "feeling" dimension of the MBTI, while the "intuition" dimension of the MBTI had significant but low correlations with global paranormal belief r = .18, p = .05, witchcraft r = .21, p = .02, and precognition r = .18, p = .05 (refer to Table 2).

Gender Differences The relationship between gender and the five dependent variables was examined for the experiencer group (Female = 83; Male = 42). Significant gender differences were found on fantasy proneness (Female: M = 27.90; SD = 7.27), (Male: M = 24.48; SD = 6.25), F(1, 124) = 6.79, p < 10.00.01. No significant gender differences were produced for dissociation, global paranormal beliefs and the "intuition" and "feeling" personality dimensions.

Anomalous Experiences and Beliefs The Measure of Anomalous Experiences and Beliefs was designed to measure both quantitative and qualitative data on individual experiences and beliefs. Table 3 contains a list of all the anomalous phenomena measured and provides frequencies and percentages for both the experiencer and believer groups. Results for both groups revealed that déjà vu was the most endorsed anomalous phenomenon, with 58.38% of participants experiencing it at some time and 87.28% believing that it was possible to experience it. Dreams that are paranormal in nature were also identified as having quite a high endorsement, with 21.39% experiencing them and 70.52% believing that this phenomenon was possible to experience. At the lower end of the endorsements, none of the participants reported experiencing alien abduction, ANPSI, bleeding pictures or statues, paranormal combustion, doppelganger, natural anomalies and historical monsters, plantpsi, possession, telekinesis, or voodooism. Interestingly, however, the percentages for belief in the above phenomena were found to range from 38.92% for alien abduction to 46.24% for paranormal combustion.

Table 3: Frequency and Percentages of Anomalous Experiences and Beliefs for the Experiencer Group and for the Believer Group N = 173

	Experiencers		Belie	
	Frequency	Percentage F	requency	Percentage
Alien abduction	0	0.00	72	38.92
ANPSI	0	0.00	96	51.89
Apparition	12	6.94	91	52.60
Bleeding statues*	0	0.00	75	40.54
Channelling	4	2.31	84	48.55
Clairvoyance	10	5.78	106	61.27
Combustion	0	0.00	80	46.24
Crystals	5	2.89	82	47.40
Curse	2	1.16	84	48.55
Deathbed visions	2	1.16	88	50.87
Déjà vu	101	58.38	151	87.28
Direct voice	3	1.73	78	45.09
Direct writing	2	1.16	76	43.93
Doppelganger	0	0.00	78	42.16
Dreams*	37	21.39	122	70.52
Ectoplasm	1	0.58	74	42.77
ESP*	17	9.83	98	56.65
Fortune telling	5	2.89	88	50.87
Ghost	26	15.03	103	59.54
Gift of tongues	4	2.31	83	47.98
Haunt	13	7.51	87	50.29
Intuition	32	18.50	118	68.21
Levitation	4	2.31	77	44.51
Luminous phen.*	6	3.47	82	47.40
Magic	2	1.16	85	49.13
Medium	5	2.89	80	46.24
Miracle	9	5.20	96	55.49
Natural anom.*	0	0.00	74	42.77
Near death*	4	2.31	101	58.38
Odours*	3	1.73	78	45.09
OBE*	10	5.78	98	56.65
Past lives	4	2.31	94	54.34
Plantpsi	0	0.00	73	42.20
Poltergeist	2	1.16	78	45.09
Possession	0	0.00	75	43.35
Precognition	16	9.25	93	53.76
Premonition	15	8.67	102	58.96
Psychics	4	2.31	91	52.60
PK*	1	0.58	75	43.35
Stigmata	2	1.16	76	43.93

Table 3 (cont)

	Experiencers		Believers	
	Frequency	Percentage F	requency	Percentage
Superstition	12	6.94	91	52.60
Telekinesis	0	0.00	75	43.35
Telepathy	9	5.20	88	50.87
UFOs*	4	2.31	82	47.40
Voodooism	0	0.00	80	46.24
Witchcraft	1	0.58	87	50.29

Note: Experiencers, n = 125; Believers, n = 39.

Results from the third question on the Measure of Anomalous Experiences and Beliefs are depicted in Table 4. This question asked participants if they thought that their experiences and/or beliefs were either real, contained elements of reality and fantasy, or were fantasy based only. Results revealed that for both the experiencer (68%) and believer (75.76%) groups, the majority indicated that they believed that there were both elements of reality and fantasy in their experiences and beliefs. Experiencers (27.20%), however, were found to be more likely to believe that their experiences and beliefs were real than believers (18.18%).

Table 4: Frequency and Percentages for the Experiencer Group and for the Believer Group on the Reality of their Anomalous Experiences and Beliefs

	Experience	Experiencers $(n = 125)$		$(n=33)^{\alpha}$
	Frequency	Percentage	Frequency	Percentage
Real	34	27.20	6	18.18
Reality and fant	asy 85	68.00	25	75.76
Fantasy	6	4.80	2	6.06

^a For the believer group, six participants did not answer the question.

DISCUSSION AND CONCLUSION

The purpose of this study was to gain a greater understanding of anomalous experiences and their relationships with significant variables of interest. This study confirmed relationships between fantasy proneness and global paranormal belief, fantasy proneness and the personality dimensions of "intuition" and "feeling," paranormal beliefs and dissociation, and paranormal beliefs and the personality dimensions of "intuition" and "feeling." Implications of these findings will be now discussed.

^{* =} bleeding pictures and statues; dreams (paranormal); luminous phenomena; natural anomalies and historical monsters; near death experiences (NDEs); odours (paranormal); outof-body experiences (OBEs); psychokinesis (PK); unidentified flying objects (UFOs).

Summary of Findings in Relation to the Hypotheses

The first hypothesis was confirmed in that fantasy proneness was found to be significantly correlated with global paranormal belief and with five of the seven of the individual subscales.

The second hypothesis was confirmed for the experiencer group. Both the "feeling" and "intuition" personality dimensions were found to correlate with fantasy proneness. The second part of the hypothesis was only partially confirmed, in that the "intuition" dimension significantly correlated with global paranormal belief, but with no significant relationship being established for the "feeling" dimension of the MBTI. There were, however, other relationships found as outlined.

The third hypothesis conjectured that the "feeling" preference of the MBTI would correlate with the psi, witchcraft, spiritualism, and precognition subscales of the PBS. This was not confirmed, with results for the experiencer group revealing that no significant relationship was determined between the above paranormal belief subscales and the "feeling" preference of the MBTI. However, there was a significant correlation with the superstition subscale.

Fantasy Proneness and Paranormal Beliefs

Global paranormal beliefs revealed significant relationships with fantasy proneness for the experiencer group. This is consistent with Irwin's (1990, 1991) research which established a positive relationship between paranormal beliefs and fantasy proneness. These results add further evidence towards Irwin's (1990) assertion that "fantasy proneness may facilitate paranormal belief, and paranormal belief in turn may be conducive to parapsychological experience" (Irwin, 1990, p. 656).

Fantasy Proneness and Personality Dimensions

Fantasy proneness was the one consistent variable across both the definitive and general anomalous experiences that demonstrated a strong relationship with both the "intuition" and "feeling" dimensions of the MBTI. This is consistent with Gow et al.'s (2001, 2003, 2004) studies that examined a variety of different anomalous experiences and their relationships with these personality dimensions.

Paranormal Beliefs and Dissociation

A significant relationship was found between global paranormal belief and dissociation for the experiencer group. This result is consistent with Irwin's (1994) and Makosovski and Irwin's (1999) arguments that paranormal beliefs are dissociative in nature. Nevertheless, as Richards (1991) asserts, this result is not indicative of a dissociative disorder, but may instead indicate that anomalous experiencers have a higher predisposition for dissociative experiences than believers and non-believers.

Gender

Gender differences were examined for each variable for the experiencer group, with fantasy proneness being the only variable to show significant differences, thus indicating that female experiencers were more fantasy prone than male experiencers. The lack of differences in paranormal beliefs was not in line with those of previous research (Irwin, 1985, 1993; Millman & Hofsta, 2004; Randall, 1990; Tobacyk & Milford, 1983); however, the nature of the phenomena listed may have added more paranormal and anomalous experiences than generally involved, thus leading to more of a consensus between the genders. The fact that the study measured a wide range of experiences rather than just anomalous experiences, such as OBEs, NDEs, alien abductions, and past lives that actively engage the person has probably led to a "dampening down" effect.

Qualitative and Quantitative Data on Anomalous Experiences and Beliefs

The Measure of Anomalous Experiences and Beliefs provided both quantitative and qualitative data on a variety of anomalous phenomena. Results revealed that there was a high level of belief in anomalous phenomena compared to direct experience. Only two participants (1.16%), for example, claimed to have had an experience of the anomalous phenomena of deathbed visions. However, 88 participants (50.87%) said that they believed that deathbed visions were possible. Furthermore, none of the participants claimed to have experienced possession or telekinesis, although results for these phenomena revealed that 75 participants (43.35%) still believed that both these phenomena were possible. These results indicate that individuals do not necessarily need to have direct experience of anomalous phenomena to believe that these phenomena exist and are possible. It might be said that experience does seem to lead to an increased level of belief, with results revealing that of the anomalous phenomena that were most frequently reported as having been experienced, a higher level of belief in these phenomena was also reported. The three anomalous phenomena that were most frequently reported as having been experienced were déjà vu (58.38%), paranormal dreams (21.39%), and intuition (18.50%). These three phenomena also had the highest rates of belief: déjà vu (87.28%), paranormal dreams (70.52%), and intuition (68.21%). Furthermore, experiencers were found to be more likely to believe that their experiences and beliefs were real than believers. Results seem to confirm Irwin's (1993) assertion that a relationship exists between belief in, and experience of, parapsychological phenomena.

Future Research Directions

As presently understood, it appears that few studies have been conducted examining a broad array of anomalous experiences and the variables of fantasy proneness, dissociation, paranormal beliefs, and the personality dimensions of "intuition" and "feeling." The use of a glossary of anomalous experiences, which may be unique to this study, has also helped to clarify why such a different result was found in this study from previous studies conducted at this university.

Much of the past research has focused on individual anomalous experiences and has not examined these complex phenomena as a group. Further research examining the complexities of direct experience and belief in anomalous phenomena as a group could potentially enhance the theoretical understanding of these seemingly increasingly pervasive phenomena. For future research on a larger sample, it would be interesting to check for differences between the student population and the general population across the variables of interest. It would also be interesting, using the same wide array of experiences, to ascertain whether or not the same results would be obtained and the same proportion of experiencers, believers, and non-believers would be identified.

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FAMILY SYSTEMS THERAPY IN THE FOURTH DIMENSION: A THEORETICAL MODEL FOR THERAPY OF THE PAST LIFE TYPE

Paul W. Schenk Private Practice, Tucker, Georgia

The author presents a layered genogram model for conceptualising and utilising hypnotic phenomena of the "past life" type. An earlier article (Schenk, 1999) discussed a different model which bypasses the question of reincarnation by interpreting the client's "waking dream" as a purely metaphorical projection from the unconscious. The model presented here incorporates reincarnation concepts by adding a fourth dimension to family systems models of psychotherapy. The article then applies the model to several case studies to demonstrate some of its clinical applications. Whether the hypnotic imagery is understood as factual or symbolic, a growing body of literature indicates that treatment strategies associated with therapy of the past life type can be effective in treating Axis I symptoms which have not responded to other treatment approaches. These techniques can also bring about, albeit more slowly, durable Axis II personality changes similar to those seen as sequellae of near-death experiences. Just as hypnotic regression in the current life includes the possibility of any of four types of inaccurate memory, including "false memories" arguably derived from suggestions made by the therapist, therapists are advised to carefully address this issue with clients. With the two models as theoretical foundations, the author hopes to stimulate more widespread research into the therapeutic implications of these hypnotic techniques, independent of either the therapist's or client's beliefs about reincarnation.

Psychotherapists risk professional ostracism from their colleagues when they work in an area that is perceived by many as lacking scientific credibility. This creates a classic double bind: Scientific credibility can only be established by those who are willing to risk their own credibility by doing research in areas where credibility has not yet been established. For the clinician undertaking research in therapy of the "past life" type, however, this double

bind is accompanied by an additional obstacle. Past life therapy presupposes reincarnation is a reality; a possibility that many therapists and lay people believe is impossible because their religious convictions exclude it. The author finds this particularly ironic, as this kind of psychotherapy tends to be intensely spiritual.

Ross (1991) has observed that "a cultural dissociation barrier has been erected that effectively removes from consideration those parts of self that deal with experiences that are unacceptable to Western thinking," Crabtree (1992) terms this "cultural hypnosis." He observed that the kinds of experiences which are rejected in this manner fall into three main categories: (a) paranormal experiences; (b) deep intuitive consciousness; and (c) programs responsible for running the physical organism (such as the autonomic nervous system).

Crabtree states: "Because we live in a state of 'consensus trance' we are highly suggestible. In this state, we accept as real what our culture has agreed to call real, and we deny the reality of what our culture ignores." At a cultural level, he suggests that this means listening more carefully to the people who have experiences that fall into the three categories of rejected/denied experience. Unlike much of the world's population, reincarnation still falls outside the religious dissociation barrier of many Americans, both lay and professional (Moody, 1999).

Moody (1975) and Sabom (1982) reported that patients who have had a near-death experience (NDE) rarely disclose it to their physicians, unless specifically asked, for fear of how the physicians would react. Similarly, psychotherapy clients seldom bring the question of reincarnation into therapy unless the therapist inquires about the client's beliefs. When they do, however, it is difficult for it to go unnoticed. This is particularly true if imagery of the past life type occurs spontaneously during hypnosis work (e.g., Weiss, 1988). The experience can be startling for both the clinician and the client. How it is handled can have a significant impact on the therapeutic relationship.

The urge to resolve the cognitive dissonance that results from such experiences can provide considerable energy to read, explore, and rethink one's theories and models. The interested clinician can turn to a variety of works (e.g., Almeder, 1987, 1992; Bowman, 1997; Cardena et. al, 2000; Cerminara, 1950; Fiore, 1978; Lucas, 1993; Moody, 1975, 1977, 1991, 1999; Ring, 1980, 1984; Stevenson, 1966, 1977a, 1977b, 1984, 1987, 1997a, 1997b, 2003; Tucker, 2005; Wambach, 1979; Weiss, 1988, 1992, 1996). The willingness to explore the possible ramifications of reincarnation can be much more difficult to the extent that a belief in reincarnation does not overlap one's own core religious

or spiritual beliefs. The shift from a model of life lived once to a model that includes reincarnation has major consequences. Fortunately, the author's experience is that these neither needs to be fully understood or resolved in order to make use of the clinical implications.

When conducting research in any area, it is useful to draw on the various kinds of evidence that can establish scientific credibility. Such evidence comes from several sources including:

- Pure research, such as the kind which is done out of basic curiosity: "I
 wonder what would happen if..."
- Applied research, such as longitudinal and retrospective studies which test theories using a priori or a posteriori designs.
- Incidental discoveries (such as Teflon) made while doing a different task.
- Observed data that does not fit existing theories. One example would be the holographic theory of memory storage that replaced Penfield's earlier model of localised storage in the brain (Talbot, 1991).

The theoretical model presented here has been derived from a mix of the above sources of information gathered over the past 22 years. The model is a straightforward extension of concepts developed by family systems therapists such as Haley, Watzlawick, and Minuchin. It incorporates reincarnation concepts by adding an additional dimension to how systems are drawn and conceptualised. The author has previously presented (Schenk, 1999) an alternative model for understanding and utilising hypnotic phenomena of the past life type that avoids any reference to the question of reincarnation and past lives. In that model, the hypnotic imagery of the client's "waking dream" is interpreted as purely metaphorical and therefore fictional. The therapist works interactively with the dream content, drawing on the theories and therapeutic strategies of therapists like Freud, Jung, Perls, and Sacerdote (1967) who viewed dream material as a projection from the unconscious.

The author believes that both models provide clear frameworks for conducting clinical research and evaluating the efficacy of these particular approaches for treating specific symptoms. Both models utilise traditional psychotherapy tools, such as trauma treatment strategies, paradox, cognitive reframing, corrective emotional experiences, etcetera. Both models can produce clear symptom reduction (1st order change) and/or existential/spiritual shifts (2nd order change). Indeed, it is the intensely psychospiritual aspect of this work that the author finds the most intriguing and rewarding.

Five Types of Memory to Bear in Mind

If the clinician allows for the possibility that some of the imagery is really that of memories from another lifetime, the author believes it is critical to inform clients of some basic issues regarding memory (Terr, 1990, 1994). Terr delineates five types of memory:

- 1. True memory.
- 2. True memory with false detail (e.g., a parent attributes a real event as having occurred to one child in the family when it really occurred to a different child in the family).
- 3. False memory with true detail (e.g., the person describes accurate details of a concert thought incorrectly to have been attended in person, but it was actually viewed on TV).
- 4. Lying.
- 5. Absolutely false memory (no known basis in reality for the memory, but the person believes the memory to be true and accurate).

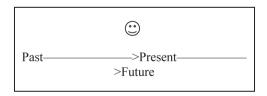
It is this last type of "memory" that was the focus of the major debate in the United States during the 1990s (Brown, Hammond, & Scheflin, 1998) under the heading of "false memory syndrome." While the author has never heard of a legal case being brought against a clinician for "implanting false memories" from a different life in a client's belief system by hypnotic suggestion, he believes it is important to address with clients the fallibility of memory both at the outset and at the end of a hypnotic session involving imagery of the past life type.

THE THEORY: FAMILY SYSTEMS THERAPY IN THE FOURTH DIMENSION

The First Dimension

Traditional psychotherapies that use an intrapsychic model can be conceived of as one-dimensional: the individual (a point) moving across time (which defines a line) as in Figure 1.

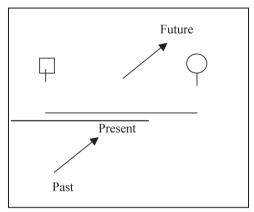
Figure 1: One-Dimensional Intrapsychic Model



The Second Dimension

Interpersonal models can be conceived of as two-dimensional: the dyad (represented as a line) moving across time (the 2nd dimension) as in Figure 2.

Figure 2: Two-Dimensional Interpersonal Model



The Third Dimension

Family systems models can be thought of as three-dimensional: the genogram (drawn in two dimensions) moving across time as in Figure 3. In each of the three models, the dimension of time makes the model dynamic. At any single moment in time, therapy may focus on intrapsychic issues in an individual in the family system (1-D), a dyad such as a parent-child relationship (2-D), or the larger system (3-D). Note that the fact that a 2-D view may be enough to explain an observed problem does not mean that there is not also a 3-D problem. For example, a couple with co-dependency problems may also have a history involving parents whose relationships with other family members was characterised by similar dynamics.

Genograms provide the therapist with a simple, visual way of charting people, events, and major themes in a family's history. For example, the author was having trouble getting a 16-year-old client to even allow the possibility that her mother might have reason to be concerned about the girl getting pregnant until he showed her the genogram he had drawn of her family (Figure 4).

As she looked at the drawing, she made a quantum, durable shift in her attentiveness to her risks of becoming pregnant. She did not need to know the specifics of how her mother and grandmother each became pregnant at exactly the same age. She knew that she, herself, had no intentions of

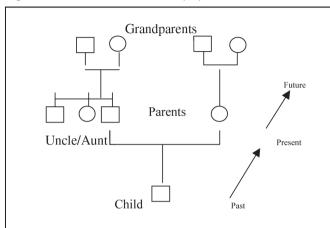
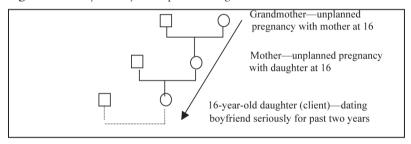


Figure 3: Three-Dimensional Family System Model

Figure 4: Family History of Unplanned Pregnancies



becoming pregnant at 16, and was willing to assume her predecessors had felt the same. She decided that something seemed to make 16 a very risky time for first-born women in her family, and became very clear she would not ignore that simple observation.

The clinical use of such three-dimensional genograms provides a rich way of organising and displaying a wealth of information about individuals, couples, and family systems¹. The therapist can move back and forth from intrapsychic factors (1-D), to interpersonal factors (2-D), to systemic level factors (3-D) as the needs of a session dictate.

For the interested reader, McGoldrick and Gerson (1985) and McGoldrick, Gerson, and Shellenberger (1999) offer excellent texts on the use of genograms. As one of many famous case studies, their presentation of Jung's family history elucidates clearly the history behind the merger of the medical and metaphysical in his work.

The Fourth Dimension Applied to Genograms

I know that some readers use therapeutic tools which are alike to some aspects of what I write about here and that a few of you believe in reincarnation and/or past lives. I also realise that many are opposed to such frameworks and thus I ask you to suspend your objections to my work until you have read the whole article.

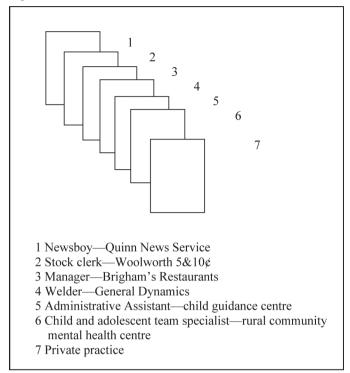
A simple test of the therapeutic utility of four-dimensional genograms comes from their parallel form in business—the organisational chart. Just as therapists can draw genograms to visually represent relationships within an extended family, personnel managers can draw organisational charts to visually depict relationships within and among different levels of an organisation. At its simplest level is the individual employee, analogous to the intrapsychic model of psychotherapy. Next would be the supervisor—supervisee relationship, analogous to the two-dimensional model. A simple three-dimensional organisational chart might show the employees within a given department or unit, under the supervision of the department head or manager. Like a fully detailed family tree, the full organisational chart of a company can become quite complex.

When a given employee's career history is plotted over time as a collection of these organisational charts from each company where the employee has ever worked, additional information about the employee is suddenly available in the four-dimensional organisational chart that a single (3-D) chart can never reveal. For example, Figure 5 shows a subsection of the author's own career path, where each page would contain the genogram of the respective company/organisation.

A supervisor who wants to fully understand the current skills, attitudes, and weaknesses of a given employee may find it very useful to take a more detailed history of the experiences that the employee had at each of the other companies where she/he previously worked. The years spent in these other positions may well contain events which still have considerable influence on the employee's current performance and relationships with peers and supervisors. To draw a parallel from Stevenson's research (1977a) on the explanatory value of reincarnation, one can see how the employment history at earlier companies might help explain factors influencing such things as:

- the employee's particular career interests;
- · a strong dislike of certain tasks;
- skills which the supervisor didn't realise the employee possessed;

Figure 5: The Author's Career Path



- an unexpectedly difficult relationship with a supervisor or co-worker;
- unusually strong feelings about other companies; or
- factors which explain previous injuries or scars.

On the one hand, these may seem quite evident. An employee's skills and assets are acquired over years of experience. Some aspect of a prior position may have allowed the person to develop skills in grant writing, or how to troubleshoot computer software problems, or how to coordinate the efforts of a team working on a project. Often an employee's liabilities have also been acquired over years of experience. A new typist's problems with carpal tunnel syndrome may have developed over an extended period of time. A mechanic's periodic back problems may date back to a single job-related injury that occurred 10 or 20 years before. A salesperson's problems with supervisors may stem from "politics" at a former company where the employee was treated unfairly. A job resume by itself is unlikely to contain the information needed to fully "diagnose" the origins of the current problem. But the supervisor can

use it as a road map when talking with the employee to help search for the information which is relevant to the current problem.

If time is the first dimension in each of the psychotherapy models presented above, then reincarnation can be thought of as simply extending the three-dimensional model of the family genogram one dimension further into the fourth dimension. If each lifetime of the soul is drawn as a separate genogram, lines between these layered genograms represent the path of the individual across lifetimes. (For the purpose of this discussion, the reader is asked to indulge the probably inaccurate implication that time is linear.) The model easily accommodates the idea of two people who have known each other in other lifetimes, whether as siblings, spouses, parent-child, friends, etc. "Soul mates" can be understood as two people whose genograms include intersection points across a larger number of lifetimes. To the extent that the assumptions underlying the one-, two- and three-dimensional models of psychotherapy are valid, the same assumptions remain valid as a subset of the four-dimensional reincarnation model. For example, if a co-dependent couple (2-D) can validly trace some of the roots of their interpersonal problems to childhoods with alcoholic or abusive parents (3-D), then other problems may sometimes have roots in another dimension—in another lifetime (4-D).

Note that turning to past lives to explain symptoms is not required in this model any more than a therapist must always turn to a multi-generational family genogram to explain a given client's presenting symptoms. If effective therapy can be done with an intrapsychic or interpersonal model for a given client, there is no need to complicate the formulation of the case. As Freud is said to have reminded the student who questioned him about his cigar being a phallic symbol, "Sometimes a cigar is just a cigar."

Two major tests of any model or theory lie in its ability to explain past events (a posteriori), and to predict future events (a priori). It is one thing for two events to correlate in some way. It is an entirely different matter to state that one event caused another. It is this distinction which is often the basis for a clinician's rejection of the idea that the client's imagery could be from a prior life. It is one thing to say that a client who is involved in, say, a co-dependent relationship conjures up a hypnotically facilitated waking dream of another lifetime in which the client was similarly enmeshed with the same person. As a projective technique, there would be little argument that the client could simply have "dreamed up" a story which highly correlates with the current reality. The critic correctly argues that reincarnation is not needed to explain the dream imagery. The fallacy of the argument begins at this point, however,

if the critic implicitly assumes that correlation precludes causation (from another lifetime). In this situation, the critic is implicitly arguing that because the two can be explained with current life information (a two- or threedimensional model), the two cannot also be explained as possibly being true from a four-dimensional model involving past life roots.

Both theoretical models (i.e., those in the author's 1999 article and in this one) assume that something outside the client's conscious awareness is selecting material which is relative to the presenting problem(s). The model presented here assumes the selected material could be factual; the model in the 1999 article assumes it is metaphorical/symbolic/fictional. In clinical practice, the author finds that the effectiveness of these techniques in treating a variety of Axis I and Axis II symptoms appears to be independent of both the client's and therapist's views about reincarnation. From a pragmatic standpoint during the therapy session, it doesn't matter whether the imagery is interpreted as factual or metaphorical. The therapist only needs to change the induction slightly to shift from one model to the other, or to include both as possibilities:

If ideomotor signalling (Rossi, 1986; Rossi & Cheek, 1988) has indicated there is a past life connection to the current problem, the therapist might continue by suggesting that your higher self can move you at the speed of thought across time and space to a lifetime which contains important information about [the symptom]...

If the hypnosis work is approached as a waking dream, the therapist can include language such as: I'd like to invite your unconscious to work with us today in presenting to you a dream, a symbolic story, whose content will address [the presenting problem] in a way that is timely, useful, and constructive...

For the client who is comfortable with both models, the language can be more inclusive: so that with regards to [the presenting problem], your higher self can bring into consciousness timely, useful, safe, constructive imagery and content that you may understand as coming from another life or as symbolically relevant to your current situation...

In the same way that therapists working with a client's childhood memories carefully seek to remain neutral as to their gist/detail accuracy (Brown et al., 1998), the therapist working with past life imagery seeks to remain similarly neutral. The therapeutic usefulness of the hypnotic experiences does not hinge on which model is correct. ² To demonstrate this idea, consider the following anecdote:

Handled in this manner, hypnotically facilitated experiences of the "past life" type also avoid the problems associated with lawsuits involving hypnotically refreshed memories or "false memories."

The client was a middle-aged, white male physician. In an earlier session, he had met a "guide" named Thomas who had a wonderful sense of humour. Through the client, I asked Thomas if there was a way to tell the difference between real past life imagery and imagery which is just metaphorical. The client reported the following response from Thomas:

"Yes [pause], but we aren't going to tell you how to tell the difference [pause], because we don't want you to get distracted. [Pause] And, by the way, today's imagery is just imagery."

The remainder of the session contained a "past life" type experience that the client reported was just as vivid and just as clinically useful in addressing his presenting issues as had been his previous experiences. Since the client believed in reincarnation when he initially came for therapy, the suggestion is that "Thomas" did not want the client to miss the therapeutic potential of the symbolic imagery by dismissing it as "not real." Note, however, that if the client's unconscious created Thomas as well as the imagery, it also did a nice job of staying "meta-" to the question we had posed by reminding him to focus on the relevancy of the imagery about to be presented.

The actual application of both models allows the use of a variety of traditional therapy strategies. Among the more frequent strategies the author employs are the following:

- 1. Braun's BASK model of memory (1988a, 1988b) is often helpful. When current emotions or behaviour do not match the available information (Behavior, Affect, Sensations, Knowledge), the unexpected difference is postulated to be attributable to memories from prior events which are not fully conscious. Classic trauma treatment work involves the re-association of these dissociated memory fragments so that the response makes sense. For example, in past life work, a presenting symptom such as a fear of drowning often resolves rapidly after accessing a past life in which the person died by drowning. The irrational fear of the phobic situation becomes a rational fear when the "true" origin is recovered and worked through. Again, the client does not need to define the recovered imagery as factual for the symptom to resolve. It seems to function just as well if the content is defined as only symbolic.
- 2. The client's imagery routinely includes the person's death in that lifetime or waking dream.³ For the therapist, familiarity with the NDE literature is very helpful here. Clients often report being in a bright light and having

It is important to remember that clients are never themselves in these hypnotic experiences; they always report being someone else. I never project clients forward to their own death in the current lifetime.

the experience of the presence of angels, guides, or dead relatives (from that lifetime). These figures are always experienced as loving, non-judgmental, and unconditional in their acceptance of the person. For the client whose life has included few experiences of "unconditional positive regard," the after-death phenomena associated with both models routinely provide powerful emotional experiences. Taken literally, these encounters provide an excellent opportunity to rework decisions made at the time of death, to release physical symptoms that correspond to injuries sustained during a traumatic death, and to forgive self or others for events in that lifetime. This is particularly useful when the other person is understood to be present in the current lifetime also. Taken symbolically, this part of the client's waking dream still functions as a "corrective emotional experience." For example, for the client with an overly strict superego who believes his/her mistakes are unforgivable, the non-judgmental acceptance experienced "in the light" combined with the experience of forgiving self can be quite intense. For the client with a rigid view of what is and is not possible, the virtual reality of these hypnotic experiences can provide alternative solutions/responses to problem situations than have previously occurred in his/her real life.

3. Clients who feel victimised often have difficulty perceiving a current life problem from more than one perspective. The strategy of cognitive reframing can work well for those with better left-brain, analytical skills. Logic and analogy do not work as well for the "feeling" client. Drawing on the ability of hypnosis to bypass the "critical factor" in which the logical brain dismisses certain ideas as impossible, both models provide clients with experiential reframes that are affectively congruent with the content. One such client with a long history of feeling victimised had imagery in which she fled for her life from a medieval town as a young teenager. At the author's suggestion, she went back to a pre-birth scene for that "life." She experienced talking with the woman who functioned as her mother in that life. The client reported that the two of them were laughing hysterically at how funny they both thought it was that she (the girl) would be running into the woods as a teenager to flee from those who were chasing her on horseback! Changing the attributions one attaches to an event automatically alters the resulting feelings (Miller & Wackman, 1982). The "victim" definition begins to transform when the person experiences the same kind of event from a radically different perspective. Many clients report past life experiences in trance in which their role as the antagonist alters their current life view of both the victim and the aggressor. Another client was still angry at her dead partner for leaving her (having died from cancer). In her imagery of an earlier lifetime, she was also with that partner, but that time the client died first. Having experienced being in both positions, she understood that each role contained both advantages and disadvantages emotionally. Her anger at her dead partner subsided considerably after this experience.

CLINICAL APPLICATIONS OF THE MODEL

Drawing on case studies from the author's clients, the remainder of the article explores the applications of this four-dimensional model to several themes that the author finds often emerge in past life imagery:

- Clients sometimes demonstrate sudden, durable reduction or resolution of various Axis I symptoms.
- Clusters of lifetimes emerge in which a particular person from the client's current lifetime is described as being present in the other lifetimes.
- Lifetime clusters sometimes emerge which deal with a particular theme
 that is part of the client's problematic way of perceiving relationships or
 life in general. The scope of these ranges from specific (e.g., jealousy) to
 transpersonal (e.g., a belief in hope) in magnitude.

While not a focus of this article (see Schenk, 1999, 2006), it is important to note that past life type imagery often involves metaphysical components. Many clients describe contacts with spirit guides, guardian angels, etcetera. Some, as in the anecdote about Thomas above, are visible to the client during hypnosis; others are not. Clients describe the information and advice from these contacts as consistently non-judgmental, supportive, and constructive. Some report messages from these contacts that are targeted to the therapist rather than the client. For example, a "guide" may offer the therapist a caution about the importance of dealing with a specific issue with the client. Again, note that neither the therapist nor the client is required to assume that this information comes from a guide. As with the earlier analogy involving Thomas, the information is quite useful, even if it is assumed to be coming from the client's unconscious. For whatever reason, clients consistently pass along this information to the therapist, even though it usually refers to an issue the client would rather avoid.

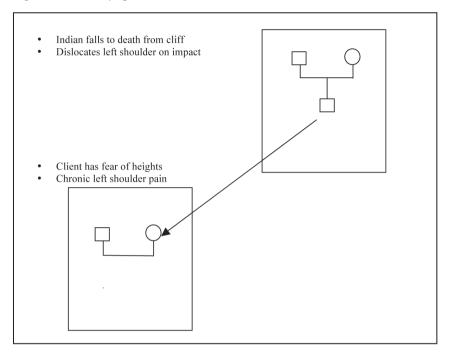
One of the most striking applications of past life therapy techniques is in treating specific phobias. Unlike fears that are reality based in prior traumatic experiences in the client's life, phobias are seen as irrational fears because there is no known antecedent (the BASK model) to account for the intensity of the fear. The irrationality disappears when a past life origin of the fear emerges. Once the origin is found, the therapist can utilise a variety of traditional trauma treatment strategies to resolve the fear, as would be done if the origin were from the current life. A traumatic death experience in a past life often includes intense emotions during which the person made decisions about himself/herself in relationship to others. These then function as state dependent memories (Rossi & Cheek, 1988) in the current life. In this vein, Woolger (in Lucas, 1993) notes the importance of completely addressing all four components of any traumatic memory:

- Physical/somatic/body,
- · Cognitive,
- Emotional, and
- · Existential meaning.

Case 1: Chronic Left Shoulder Pain and a Fear of Heights

A variation on phobias involves physical conditions that do not heal as expected. One client presented with a chronic history of left shoulder pain and a seemingly unrelated fear of heights. Ideomotor signalling indicated that from the client's perspective, there were origins from both the present life (which were known) and from a prior life. In past life type imagery, she experienced being a male American Indian who fell to his death one day while walking along a cliff. As the Indian floated above his dead body, he noticed his left shoulder had been horribly dislocated from the fatal impact. The author suggested the Indian and the woman dialogue about his final thoughts as he had fallen to his death. Both concluded that she had anchored in her own shoulder his caution: "Be careful when walking along high places: you could kill yourself with one wrong step." He agreed that having experienced his life and death, she could effectively hold this wisdom in her consciousness rather than in her shoulder. Both her fear of heights and shoulder pain resolved following this experience, and had not returned after several months. Her four-dimensional genogram is shown in Figure 6.

Figure 6: Phobic Symptom With Chronic Pain



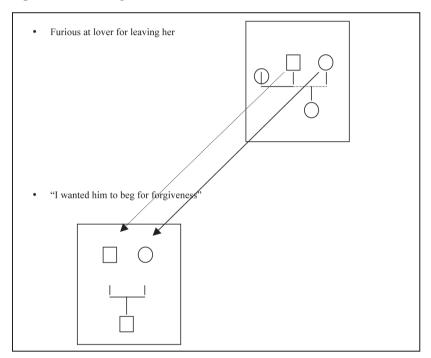
Case 2: Multi-Life Relationship Problems

The varied sources of intense relationship difficulties are well recognised by both couples therapists and family systems therapists. Like phobias, sometimes the origins seem not to be adequately explained, even after taking a careful family history of both partners. In such cases, the added information from layered genograms sometimes holds the missing information that allows resolution of the conflict.

One couple (Charles and Leigh) presented for marital work because of the woman's intense anger towards her husband: "I wanted him to beg for forgiveness when he came home." While he agreed that some of it had been clearly warranted, both concurred that his past behaviours (which he had since changed) did not adequately account for all of her anger. After exploring possible origins in traditional ways, the author used ideomotor signalling to inquire about possible past life factors. She subsequently had three past life type experiences, each one involving her son, her father, and her husband. In the last one, she had an affair with a man who was separated from his wife. She had hoped that becoming pregnant would cement her relationship with him. However, he returned to his wife instead. She died right after giving birth

to a daughter: "I never forgave him for that; he left with somebody." As she explored the soul level decisions following her death, she was able to release her anger. The next week she reported that her anger towards Charles had completely subsided. At follow-up one year later, both she and her husband reported that her presenting intense anger had remained absent. Her dual genogram is shown in Figure 7.

Figure 7: Marital Anger



Case 3: Multi-Life Experiences Involving the Same Theme (Power)

When a theme is experienced in several lifetimes, there are usually important variations and subtleties that transform the concept for the client. Often, the effect is to take a construct that the client had previously defined in a narrow way (e.g., power) and through several past life experiences come to understand the construct as existing along a broad continuum. External labels such as "victim" cease to hold much meaning by themselves. Instead, the client discovers through these different lifetimes that it is the internal, personal experience of the relationship that is critical. The struggle for control shifts to an internal one in which the client is faced with choosing to hold on to old beliefs (e.g., feeling victimised), or shifting to the new beliefs experienced during hypnosis which produce contentment, calm, and inner peace. The affective richness of the trance experiences seems to combine the best of virtual reality (without the hardware or software) with the cognitive logic of how changes in attribution lead to changes in feelings. The importance of the emotional component of these images cannot be overstated. The cognitive component of the experience seems clearly secondary to the emotional component; that is, the cognitive shifts follow automatically from the (emotional) experiences.

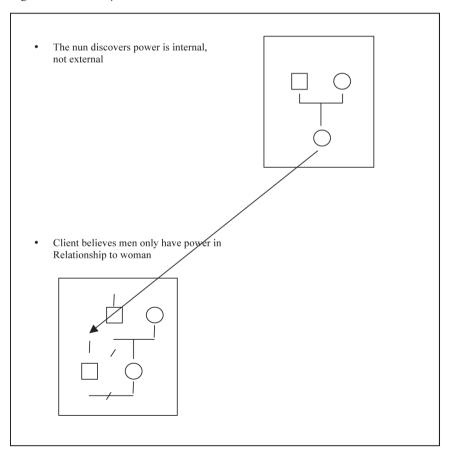
One male client from a Jewish background had grown up with the belief that women possess "magic" and men do not. Therefore, he believed that in order to have access to it, a man has to be close to a woman. As a result, when the client found himself between relationships, he experienced considerable anxiety. In one session involving past life type imagery, the man experienced himself as a nun who lived her life in a convent. Even as a child, the woman had understood that her father was afraid of power and of misusing it. Her father had brought her to the convent, in part, so that she might pray for family fortune, the success of people close to him, etcetera. As might be expected, her early memories of the convent were of feeling excluded from the world outside. Referring to other teenagers she said: "They are allowed out of the cell, this room, and I am not."

As the imagery continued, the client reported a major shift: The young woman had experienced separation as a kind of exile, but suddenly had the experience "that God missed me." The client periodically interjected his own observations about correlations between physiological aspects of the hypnotic experience and memories of some of the Psalms from the Old Testament which had long held meaning for him. As he experienced being the nun, he described a kinaesthetic sense of his throat area knowing what was true ("love"), as contrasted with his mouth area ("fear") which he described as trying to dismiss what he was experiencing. He reported being quite moved by the parallels between his emotional reactions to the old Psalms, the young nun's emotional experiences as she prayed, and his own physical reactions. In this context, the nun commented at one point, "All songs are the same song."

When I asked if the client was willing "to explore the rest of [the nun's] life," he briefly reported about the tone of the nun's adult life and then had a spontaneous OBE experience following her death. The nun, who had since become the Mother Superior of the convent, found herself talking with Jesus and Mother Mary. In a dialogue involving the client, the nun and the other two, the client reported further insights. He had seen magic as something external to himself; something you go and find and then get incorporated by

it. As the nun, he had the experience of having created a space within himself into which the magic could enter. He also suddenly had the realisation that power is just another form of magic. Taken together, these insights served to shatter his faulty assumption that only women could have magic (i.e., power). As he internalised these experiences and insights, he reported being "flooded with light." Following the trance work, he commented again about the "aha!" shift from perceiving power as something external to something internal. He remarked about the power of the contrasts of the two religious traditions, but even more so about the masculine-feminine contrast. In a follow-up with the client two years later, he related several anecdotes which evidenced the durability of the shift regarding power, and also reported significant shifts in his spiritual practices. His dual genogram is shown in Figure 8.

Figure 8: Power Myth



Case 4: Multi-Life Experiences Involving Head Related Trauma

A traumatic event sometimes has the effect of putting life on hold for an extended period of time. Trauma can trigger grief because of a tangible loss or because of the shattering of a belief. One client, Dorothy, was referred by her neurologist 18 months after a car accident that had left her with some unpleasant neurological symptoms such as periods of dizziness and confusion, the experience of tiring easily, and classic symptoms of post-traumatic stress. Over a series of months, she had a series of past life type experiences which incorporated symbolic aspects of how the accident had impacted her life. Three of these included a sudden death involving the head.

As a young widow (Anne) during World War II, she was struck and killed by a car while crossing a street as a pedestrian. As she floated above the body, the author asked her to notice her final thoughts. From a third person perspective the client reported:

She's confused. She didn't know, didn't really know what happened and why it happened so quickly. She knows she was hit by a car, but doesn't accept that her life is over. Too sudden.

This matched Dorothy's own experience following her car accident. Prior to that she had led an independent life as a single woman running her own small business, a business that required considerable time spent in the car. Suddenly she had found herself totally dependent on others for such simple things as getting to a grocery store. She had found it quite difficult to accept basic help from other people. In the imagery, Dorothy first helped Anne resolve her confusion and disbelief. Then in exchange, Anne offered to return the favour.

She wants to help me. She sees my cloudiness, my confusion. She doesn't think she can clear it all by herself. She's touching my head, giving peace and happiness. She keeps embracing me, telling me to be strong, to keep working at it ... She wants to keep helping me. I see her saying she'll be with me, watching. She's extending her hands, touching my head to try to make things better. I feel calmer when she touches me. Almost like we've gone from being friends and companions to her watching for me, her taking care of me. [Is that okay with you?] Yes. I trust her.

At this point, the author created an operant conditioning cue anchoring Anne's calming touch as a response to future feelings of cognitive cloudiness. Then he built on the idea of Anne as a resource by inviting her to notice if there were others who could help.

Schenk: Then in the future if you are feeling some of that cloudiness,

can she come and touch your head to restore that sense of

calm and peacefulness?

Dorothy: Yes. I was there for her to help her; she'll do what she can to

help me. Now our roles are reversed. She'll help me find a

way back as much as she can.

Schenk: As you helped her to find her husband, can she bring others

to you who may also help?

Yes. There is an aura of purple around her helping her. I Dorothy:

> don't see anyone behind her, but I feel tremendous help through her for me. I catch glimpses of my [current life] father [who died a decade earlier] now and then; the rest is just an energy or aura around her. It's very big. It's all very positive, very loving, very warm. They want to do all they can ... I feel she and everyone with her will really be there for me. They won't be able to do it all. Telling me she won't do everything, but will always be there whenever I need her. They'll be there to give me strength, guidance, the capacity to go forward.

Dorothy returned to the theme of sudden loss in her next waking dream. In this one, she was a man, George, who had married and raised two children. In his later years, he suffered a stroke that left him unable to speak for the few days before he died. She noted that, "he didn't feel robbed because his life ended early. He's just sorry he couldn't talk with his family at the end." That led into a dialogue between Dorothy and George in which he cautioned her:

He's telling me to not let that happen to me. To always express my emotions and feelings every day, because you don't know if you'll have a next time to talk with people ... Again, he expresses sorrow at not being able to express himself at the end. He tells me to really work at what I'm going through now so that I don't have to go through these limitations.

I see George and Anne now, both there to help me. What happened to them is not to be reflected in me ... I feel like they're telling me there are other lives. They are happy I've recognised in my own experience the value of what's important and what isn't—the people we love and not possessions, not work; an understanding of the value of life. They're saying it will enrich my relationships with family and friends. This deepens them even more than before. I've learned to give up fear by being willing to ask for help. It's sharing of help whenever anyone needs support. They say I need to get more rest so my brain can heal even more.

At the end of that session Dorothy commented again how difficult it had previously been for her to accept help. The clear message she heard from Anne and George went in at both the literal and metaphorical levels: "It's okay [to ask for help]. We're happy to do it. You've done it for us." As our work continued in the months that followed, she confirmed that it has become easier to ask for help and to accept it when offered.

Three months after her waking dream as Anne, Dorothy returned for a second look at Anne's life. She focused on the time period between her husband's death and her own death. This dream sequence helped punctuate a theme which was to re-emerge in other dreams: The car accident didn't kill you. You still have the option to go forward with your life. This theme emerged one more time in a past life type experience as a painter, Claire, who lived in France. After her death as the painter she reported:

Dorothy:

I see her telling me to start with a clean page ... to paint my own life and my own beauty ... with the softness and colours that I want. To go with my feelings ... to go with the happy and bright colours: the yellows and the blues, greens ... just a bit of purple. To feel free ... to express myself freely. It doesn't matter that I don't have her techniques ... just to paint what I feel ... that it doesn't take talent; it just takes emotion. I see her showing me the colours and shapes I would want, saying, "Just enjoy." It's like I see her sweeping her arm to the page I've painted that's now big and large ... covering our whole view ... saying, "Now, go paint the rest of your life."

Schenk:

She seems to have understood how happiness is a by-product

of choices.

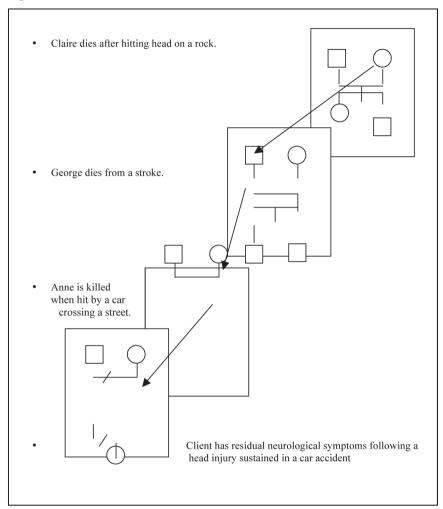
Dorothy:

Yes. Yes, I feel that just in the choices I am making in my own life today how much calmer, happier, at peace I feel. Glad I've teleproception control again.

taken control again.

The client's assumptions about control and loss played out in a series of past life type experiences which facilitated both first order change as her depression lifted, and second order change as she gradually incorporated her changing beliefs and attitudes into her daily life. Her four-dimensional genogram is shown in Figure 9.

Figure 9: Head Trauma Across Four Lifetimes



SUMMARY

In this article, the author has proposed adding a fourth dimension to family systems models as one way of extending current personality theories and treatment strategies to account for results such as those in the four case studies presented above. As is hopefully clear from the excerpts used, neither the therapist nor the client needs to begin with a belief in reincarnation, nor does either need to attribute the hypnotic experiences to past lives for them to produce symptom resolution. The author's own experience suggests that waking dream (i.e., metaphorical) imagery intermingles with past life recall in trance. The same therapeutic tools are applicable to both kinds of imagery. Drawing distinctions between the two has not been a distinguishing factor where the effectiveness of treatment outcome is concerned. Both can produce significant Axis I symptom reduction, and over time, Axis II changes of a second order nature. When using hypnosis for imagery of the past life type, therapists are advised to carefully educate clients about the fallibility of memory, just as they do when using hypnosis for age regression in the current lifetime.

Applied research requires a theory or model with which to measure the degree of fit between expectations and observations. In proposing a model to explain experiences of the types described in this article, the author seeks to offer clinicians and researchers a theoretical basis for critically exploring the ways that these therapeutic tools may be useful. With both models to serve as a foundation, further research on the clinical applications of therapy of the past life type and/or waking dreams may become easier to articulate. Stevenson's well-documented studies of several thousand children who claim to remember past lives point to a variety of possibilities. In his 1977 articles, as well as in later books, he has offered case studies of previous lives that could be categorised along several factors:

- phobias and philias of childhood;
- skills not learned in early life (such as xenoglossy, speaking in or responding to a foreign language the person has never studied);
- · abnormalities of child-parent relationships;
- vendettas and bellicose nationalism:
- · childhood sexuality and gender identity confusion;
- · birthmarks, congenital deformities, and internal diseases;
- differences between members of monozygotic (identical) twin pairs; and
- abnormal appetites during pregnancy.

These and other presenting symptoms offer a rich variety of research possibilities to the interested clinician who is willing to venture outside the cultural dissociation barrier.

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HYPNOSIS ON FILM: A NOTE

Carl Harrison-Ford Freelance publisher's editor

"When a hypnotist appears on screen, expect evil," counsels Deirdre Barrett (2006), which is true to a degree, although "evil" is a rather loose-fitting coverall in many of the films she cites. Silver-screen hypnotists are so often so melodramatic, or agents of such melodramatic plots, their evil is of the moustache-twirling type, lacking in resonance or menace. Still, they frequently bring the profession into disrepute. That said, inaccuracies about hypnotherapy and misconceptions about the nature of hypnosis are often as nothing compared with broader issues of plot credibility. On top of which, hypnosis (often conducted by an amateur) is almost as frequently used for comic effect—a quick and neat way of reversing a situation, having a person act against his or her ostensible character or, as in Alfred Hitchcock's use of stage hypnotism in the first and better version of his The Man Who Knew Too Much (1935), of giving an amusing still centre to a scene of mayhem. But hypnosis is incidental to that film's plot, and Hitchcock believed hypnotism does not translate plausibly to the screen. As he told François Truffaut when discussing a film project that never materialised:

I feel you cannot put hypnotism on the screen and expect it to hold water. It is a condition too remote from the audience's own experiences. In the same way, it's impossible to put an illusionist on the screen, because the public knows instinctively, through the tricks they have seen in films, how the director went about it. They will say, "Oh well, he stopped the reel and then took her out of the box!" It's the same thing for hypnotism. And, visually speaking, there would be no difference between someone who is really hypnotised and someone who's pretending. (Truffaut, 1969, p. 383)

Observations that are too often ignored.

One of the funniest and cleverest uses of hypnotism I have seen comes in

episode 4 of the BBC comedy *Help* (2005), written by, and starring, Chris Langham and Paul Whitehouse. What's more, the induction could pretty well have come from this journal's Scripts section. Langham's life has taken an unsavoury turn since 2005, but this in no way detracts from the insights he and Whitehouse brought to the series, or the clever uses he makes of various approaches to talking therapy. In the episode incorporating hypnotism, we don't witness therapeutic suggestion, or learn at first the rather drab client's presenting condition, but when he is brought out of trance, he reveals his initial relief and the nature of that problem when he says, "I feel like an area supervisor." In fact no problem has been addressed. It's funny in the overall context—trust me!—and viewers know (*pace* Hitchcock) there has been no pretending. The structure is excellent, the script supple as well as broad, and much of the humour comes from the way strands of plausibility run through a chaotic scenario—therapy in the service of entertainment.

Back at the evil end of the movie mesmerist spectrum, hypnotherapists and researchers must fume, giggle or despair at depictions on screen of their profession or of the events they can supposedly set in train. But there are, I hope, compensations for many. Stories like George du Maurier's Trilby (invariably filmed and referred to as "Svengali," named after the manipulator rather than the singer, who for all her beauty and talent becomes his instrument) retain great power, taking their sometimes ambiguous place alongside myths, legends, and enduring fairy and folk tales. Not "true life" in a documentary sense, but as real at some level, and as compelling, as a Faustian bargain. And while myth criticism has lost much of its presence amongst the many schools of literary criticism, film and film studies seem to have retained close ties with things archetypal, and draw much of their force from the association. As a medium, film plays interesting games with verisimilitude. On the one hand, the moving photographic images bring a level of realism to art that had not been available before; on the other hand, film can play on this to offer a distinctive and at times decidedly creepy sense of shadowplay ... of things being not quite how they seem. The therapist or researcher able to forgive procedural errors, even absurdities, should still find much of interest in the film medium.

From its earliest days, cinema has been shot through with representational to-ing and fro-ing. While the movie set itself can be more realistic than could ever be erected on a theatre stage, it can also be a "mindset." Take, for instance, the townscapes and other environments depicted in Robert Wiene's pioneering *The Cabinet of Dr Caligari* (1920), which contribute mightily to the film's internality ... to its unsettling combination of somnambulism,

mesmerism and a potpourri of folkloric fears and terrors. The film, famously, ends with a twist of a type that has in the intervening years descended into cliché—the story has most likely been a figment of a madman's imagination. A key effect of this in Caligari is the endorsement, not just of the ability of the young and realistic medium to enter a subjective state, but also to stay there for an extended period, holding the viewer in his or her own deluded thrall. A bit like the sense of "waking sleep" that some have ascribed to hypnosis. But while Caligari is the first important film to incorporate hypnotic themes and concerns (with whatever degree of accuracy) it was not the first attempt to capture something subjectively "hypnotic" on celluloid.

For that the credit seems to go to the American dance pioneer, theatrical innovator and de facto colour therapist Loïe Fuller, who in 1891 developed her "serpentine dance" for the play Quack M.D., in which she played a character who danced while under hypnosis. Fuller saw her dance not as just portraying someone "under hypnosis" but as somehow depicting "hypnotism" itself in a way that was also "hypnotic" in its effect on the audience. Her billowing silk costumes captured much of the spirit of Art Nouveau, she was well received in France, and her work and concerns have been seen as an analogue to Charcot's cures and theories of hysteria (information culled mainly from http://press.princeton. edu/chapters/i8519.pdf). A 45-second film of this dance, filmed by the Lumière brothers in 1897 and bound to bewilder the contemporary hypnotherapist who has read of the dance's intention, is available, with commentary, as clip 9 in a generally fascinating early cinema slideshow at http://slate.com/id/2167573/fr/ nl/. Both internet sites were still operative in October 2009.

Be that as it may, in 1931 hypnotism entered the sound era in Archie Mayo's Svengali.4 Here the occasionally used German expressionist sets with their characteristic exaggeration (to Hollywood from Caligari via the silent movies of Fritz Lang, himself soon to continue his career in the U.S.) give a sense of unease and of otherness that runs deeper than the affectionate yet sharp social satire of the impoverished bohemians. Svengali is a surprisingly effective and affecting film despite, I must concede, the beams of light emanating from Svengali's eyes as he summons Trilby, by night, across the rooftops of Paris!⁵

All films discussed here available as of October 2009, some of them (such as Svengali and Caligari) in various, sometimes budget, editions.

This scene can be seen on YouTube, at "Svengali 1931." So much is available on the extraordinary and constantly expanding YouTube (though it is not always easy to search), readers will find many clips and extracts relevant to this review, including movie trailers and extracts from lectures. The Cabinet of Dr Caligari, Svengali and Whirlpool are available there in their entirety, although sometimes blurry.

The notes on the back of the Alpha Video DVD draw viewers' attention, apparently straight-faced, to John Barrymore's "mesmerizing performance" as the wicked mentor (who is also, interestingly, the only character in the film with an appreciation of art that is both finely tuned and technically adept).

In films such as these, hypnotic techniques keep lowlife and sometimes downright disreputable company with vaudeville, the fairground, the demimonde and various mystical beliefs, some of which were modified and given new leases of life, crossing regional boundaries with the spread of literacy and the yellow press ... keeping alive fears and superstitions as did, decades later, *The Twilight Zone* and *The X-Files*. Artists will always find new ways to tell the stories, such as Beauty and the Beast or Faust, in which people lose or relinquish selfhood—the list is a long one, the means of loss varied—and dragoon new approaches and techniques to their needs. So, how could they pass hypnosis by? In fact who, in the silent movie and early sound eras at least, could have predicted the heights of respectability hypnotherapy would scale? And myth-making / myth-trawling aside, hypnosis also has elements that are useful when addressing the nuts and bolts and problems of storytelling.

For all the talk of themes and messages and philosophies around which serious criticism revolves, there are storytelling basics that need to be set in place first, but whose success is not just a starting point, or part of the remit, but an aesthetic element as well. There is an art, not only technique, in moving successfully from a to b to c, not necessarily in that order, and ending where you want to; in controlling the coincidences that all stories need to get coherence and closure, so those coincidences don't seem merely matters of convenience (as in the well-timed arrival of the cavalry or the hastily summoned surprise witness); in giving readers and viewers and listeners access to information the fictional characters mightn't be likely to articulate or even know. As well as being a form of entertainment or of therapy, hypnotism can serve as a useful ingredient in assembling a story, finding a stance that negotiates points of view. I raise these issues in part because, after more than 20 years as the copyeditor of this journal, I am mindful of the extent to which hypnotherapists also need to pay attention to the building blocks of storytelling and the care with which implications have to be negotiated. A false move can unravel a strategy and even return a client to an earlier, more vulnerable or troubled condition.

In drama, popular notions of hypnosis allow storytellers to manipulate coincidences like a puppeteer—in the theatre of a consultation—and to give them access to motivations that may be unknown to a central character, at least at a conscious level. Sometimes psychological and therapeutic procedures

allow them to do so all too easily, but there is an interesting shift in movie therapy, in Hollywood and elsewhere, that began in the early 1940s and has hypnotic notions weaving their way through the mix. I am referring to what became known as "film noir." It is a fascinating area in film history (I say area rather than era, because it is not really over, although "neo-noir," as more recent films in the genre are sometimes called, are decidedly flimsier, psychologically lite, or gris).

Noir is still the subject of much debate, thanks to its ongoing appeal. Largely black-and-white, for many years mainly "B" or "pre-interval" movies, noir films were gritty, sexually ambivalent or otherwise messy crime stories of the hardboiled school, more often than not involving a femme fatale. Visually, their frequent use of small bright sources of light and long deep shadows owed much to German expressionism (with links going all the way back to Caligari). Their often lowly commercial status and penny-pinching production standards were offset, critically, by the almost simultaneous development of the "auteur theory," which credited the director with being the "true author" of works in an entertainment form characterised by a wide range of key contributors from writers through to editors, actors and cinematographers. In some ways, being able to credit films with a single authorial voice came as nothing so much as a relief, giving critics a peg on which to hang their hat. Many of the key noir directors—amongst them Fritz Lang, Richard Siodmak, Jacques Tourneur, Billy Wilder, and Otto Preminger, along with Val Lewton, one of the few non-directors accorded auteur status—were from Europe, frequently refugees, and seemed to bring with them notions of overt psychological motivation and causation, tied up in past events, in a storytelling format Hollywood had avoided. In some ways, the crime story plots, so often closely related to past misdeeds, were not so much whodunits as they were analogues of guilt and the psychology of the dirty, hidden or suppressed secret. The era also saw the first "psychological Western," Raoul Walsh's very noir Pursued (1947) with its shining, talismanic quasi-hypnotic image the key to Jeb Rand (Robert Mitcham) unlocking crucial events in his past. Whatever their psychological depth-innovative, then increasingly formulaic-noir movies gave those moviemakers and moviegoers, many of whom also sought therapy when it was all the go, the diagnostic terms of reference which they brought to their therapist. That is to say, they helped set a popular psychology agenda. Their role in prepping clients has now been taken over by the more diverse temptations and dangers offered by the internet, but movie psychology still frequently adheres to noir conventions. (The two versions of The Manchurian Candidate

have first [1962] a foreign enemy and later [2004] a corporate enemy within, reflecting shifts in demonization and the location of conspiracy theories, but a shared brainwashing/hypnotic means of manipulation.)

A couple of interesting noir movies—*Cat People* and *Whirlpool*—have strong but ambiguous terms of hypnotic reference. The interest is not necessarily located in procedural accuracy, but might amuse or interest those therapists with a concern for how their skills have been presented.

Cat People (1943; Warner T7275) was the first of a series of movies produced by the Russian-born Val Lewton, a sophisticated man who stumbled into producing a series of cheap horror movies aimed at saving production company RKO from the money lost with Orson Welles' classic Citizen Kane and the studio-butchered The Magnificent Ambersons. The films, several of which were written literally to fit the sensational-sounding titles Lewton was given in advance—I Walked With a Zombie, Isle of the Dead—are remarkable for their sophistication in the circumstances. Cat People was directed by the highly talented Jacques Tourneur. Irena Dubrovna (Simone Simon), a troubled Serbian fashion artist living in New York, meets at the big cat enclosure at the zoo, and soon marries, the ultra-dependable Oliver Reed (the character's name, played by Kent Smith), but she is haunted by the notion that people of her native village are cursed "cat people"—an idea that is reinforced by many images in the film, most of them purely suggestive ... a matter of shadows and of clever cutting that makes the film more disturbing than common-or-garden supernatural. There is also a strong theme of sexual frigidity and the marriage is not consummated; were it to be, Irena clearly believes, who knows what animal depredations would be unleashed?

In an attempt to cure Irena of her fears, Reed arranges for her to see the psychiatrist Louis Judd (Tom Conway, the brother of George Sanders, both wonderfully sophisticated, but bored and rather dissolute Englishmen, in life and before the cameras). Part of his treatment involves hypnosis and gives the film one of its most memorable images, of Irena in trance in a circle of lamplight. "Hypnosis always tires me. And some of my patients, too, find it exhausting," Judd tells her, for whatever reason. Apart from including an arresting visual image, the scene is interesting for its anti-psychiatric elements. In fact, almost everything Judd says in his recap is mythical and personal material that Irena has earlier told Reed; he has not discovered anything new, his summary is rather glib, so he establishes neither personal nor professional authority. Not only that, but Judd has not taken heed of the clear warnings in Irena's story: to a "man of science" they sound merely superstitious, but

viewers who have shared the shadows and troubling ambiguities with Irena and those associated with her know better. The scene plays with, and teases, therapeutic authority the way ... well, the way a cat plays with its prey.

In fact, some of these aspects of the story are happy accidents in that the hypnosis scene was not part of the original script. Fearful that censors would find the non-consummation of the marriage, and Irena's arresting encounter with an extraordinarily feline beauty, evidence of a lesbian subplot (a possible reading, to be fair), Team Lewton wrote the scene that allowed the psychiatrist to spell out the back story and explain Irena's fears away over-confidently. "Those things are very simple to psychiatrists," says Judd of what he has elicited in "tiring" hypnosis. "These childhood tragedies are inclined to corrode the soul, to leave a canker in the mind, but we will try to repair the damage." I call this a happy accident because the scene in the psychiatrist's office gives us an image of great visual impact, and also because it helps sets the terms of Judd's demise when his sexual advances make his fate all the more acceptable in dramatic terms: it gives viewers the grim satisfaction of knowing that they were ahead of the character, a psychiatrist no less. There are more things in heaven and earth than are dreamed of in DSM-IV. (Interestingly, Judd's lust comes across as more tasteless than unprofessional. Times change.) Adjusting a script to answer likely criticism, and doing so in a way that works to the film's advantage, points to aspects of filmmaking that sorely test thematic planning and integrity. Movies are often, and legitimately, criticised for being fiddled to death by producers and censors, but occasionally (The Big Sleep is another example) restrictive pressures can work to their advantage. In Cat People, a scene shoehorned in to deflect possible criticism also allows in a degree of scepticism about problem solving.

Cat People may not scale the greatest aesthetic heights, but nor does it lie injured in the foothills. I have watched it happily on a number of occasions, at times with friends I wanted to "convert" to Lewton. It is strong evidence of the considerably sophisticated skills he and Tourneur were able to bring to a brief that was rough and ready at the very best and had no inbuilt respect for producer, screenwriter or director. The other films Lewton made for RKO include skilful and imaginative manipulation of budget attention-grabbers associated with body-snatching, with plague and isolation, with suicide cults and even zombies, but not in ways that can be drawn into the terms of reference of a review for AJCEH. It is worth noting, however, that one of the characters in The Ghost Ship (1943) claims, when massaging a fellow crewman, that he has "hypnotic hands" and that, despite a rather abrupt ending, the film is a fine and worrying depiction of a control freak working alarmingly

free from supervision. Despite the title, the film is not in the slightest bit supernatural. (The nine Lewton movies for RKO are available as a box set through Warner Bros, along with a moderately informative documentary. Some include commentary as extras. Please note that, in some continuity with the terms of Lewton's employment, his 1944 movie *The Curse of the Cat People* is quite unrelated to the 1943 film which is the one that truly deserves "Curse" in the title.)

In 1949, Austrian-born Otto Preminger, who moved to America in 1935 and established his reputation in 1944 with *Laura*, made *Whirlpool* (Fox Film Noir 09). While *Laura* is a noir classic, *Whirlpool*'s limited, but real, potential is too often buried in melodrama, although it is rated surprisingly highly at the IMDb site (which is not much of a critical barometer) and was respectfully reviewed on release. It boasts a fine cast, exudes tension for much of the time (the script is by the talented Ben Hecht in league with Andrew Solt) and has interesting, but uneven, hypnotic terms of reference.

Ann Sutton (Gene Tierney, who also played the title role in *Laura*) is married to a psychoanalyst. In the opening scenes, she is caught shoplifting, but is somehow saved the embarrassment and humiliation of prosecution through the all too convenient intervention of David Korvo (José Ferrer). Korvo is smooth but shady—too smooth one might say; a man who lives by his wits, by charm, as a gigolo, by cold readings, and by dispensing therapies that include hypnosis. Having saved Ann, he proceeds to try to take control of her, hypnotising her at a party, helping her with a sleep disorder (none of which strikes me as grotesquely silly although the induction is both abrupt and strangely offhand) while drawing her, by a number of means, into his web ... indeed to steal for Korvo while in trance and to take the rap for a murder he commits to rid himself of debt and of possible exposure of his various deficiencies. To deepen the drama and add an extra layer of nastiness, Ann is chosen because of Korvo's professional jealousy of her husband Bill (Richard Conte).

Given the generally high levels of tension through most of the film, I will avoid detailed synopsis: That would spoil the strengths, while details of the shortcomings will overemphasise them. Although the film at times makes particularly heavy demands of the willing suspension of disbelief in realist terms, the story of Korvo's manipulation and of Ann's wounded (or compromised) innocence is forcefully presented. It is easy to read the film sexually, as a stylised or coded account of a disastrous affair with murderous consequences (itself standard noir fare).

The play of therapies and interpretations of behaviour and the consideration given to motive hold the attention, as does Preminger's crisp and austere, yet atmospheric, direction. While Korvo is portrayed as a confidence man—"a hypnotist amongst his other shady practices," as one character puts it!—and appears to have no moral code, Bill Sutton—a successful psychiatrist—seems to have no real clue that his darling wife is distressed. And yet she has been distressed from the beginning of their film—in narrative terms shoplifting is her "presenting problem." (When was the image of the bored or insecure well-to-do kleptomaniac housewife born?) Then for the bulk of the film the adoring husband fails to see what we do, namely that Ann is in a trance, answering questions routinely, flying by instruments. In fact for all Korvo's cruel and cynical nastiness, the manipulated cold reading we see and of which he boasts, and the murder plot, he is never less than sharp and insightful with Ann, alert to that which he can manipulate. Such skills are not lost, even in a plot that is sometimes far-fetched.

Barrett (2006) concentrates on Korvo's use of self-hypnosis to endow "himself with supernatural powers of recovery so that he could leave his bed and commit murder without falling under suspicion." These scenes are in fact compelling, shot with a particular intensity, and audiences in 1949, less than five years after the end of World War II, would most likely have been familiar with stories of super, if not supernatural or superhuman, acts. Alfred Hitchcock's well-grounded concerns about appearances do not seem to apply.

And while credulity is sometimes stretched, Preminger and his scriptwriters went some way to relate the hypnotic elements of the film to received opinion on the practice. A note accompanying the re-release states that Preminger "even hired a respected hypnotist, Fred Schneider, as technical advisor for the film's hypnosis sequences." Unfortunately the commentary option with the DVD, by cinema scholar and Time critic Richard Schickel, doesn't follow up on this. Nor does Schickel give much credit to the "film as analogue" line to which noir movies are especially well suited. One popular belief about hypnosis Whirlpool is careful to address is the notion that no person in hypnosis will perform any deed that is against his or her moral code. So Ann's back story—another noir staple; psychological retrofitting—has ingredients that "allow for" her shoplifting and her capacity to be exploited by a man who is, on the face of it, more perceptive than her husband. Korvo susses out accurately enough and early enough that Ann is, for reasons locked in the past, already a thief, and theft is the one crime we see her commit twice in the film. But "you're not a thief," bumbles Bill Sutton late in the piece, "you're someone

I've injured by being blind, but I'll cure you this time. Might take some time." What a klutz, though perhaps a psychoanalyst *would* make such an anodyne comment while conducting therapy late in the day and on the run.

To hypnotherapists, *Whirlpool* may well be a film of mixed messages, or even one that invites derision from some. But does it really have a critical stance on professional and amateur psychology, or on hypnosis? I suspect not. The dopey, but doting, shrink and the sharp charlatan with the added disadvantage of being either evil or amoral (can one be both?) are the animating forces in the unfolding of a human drama. Hypnosis is the flag of convenience under which the story sails. To the extent that the good names of the profession or the calling are damaged, the damage is incidental by virtue of being so melodramatic. It is a story of *human* frailties and manipulations, not of procedural ones, and the failings and manipulations are credible. Perhaps mental health professionals of different persuasions can derive some amused satisfaction from the attention hypnosis has been paid here.

Generally, can readers of *AJCEH* expect hypnosis to receive a better hearing—or a more accurate one—in film and television? Seemingly, not to any great extent. There are a number of reasons for this, and chief amongst them is hypno-mesmerism's popular image and history as a showground attraction, as a rather sensational amusement, and as a mysterious procedure that makes people do strange things ... and unpleasant ones in the hands of a master manipulator. A disreputable and discredited hypno-showman, whose book I edited years ago, boasted to me of his ability to create scenarios in which people would, say, disrobe in public even if that was against their better judgment. Stories like this resonate in the popular imagination. The fact that hypnosis offers effective therapeutic benefits in a number of situations is wonderful, but these benefits will only make it to the big or small screen if they can be used to dramatic advantage.

Meanwhile, for reasons suggested above, a dodgy hypnotist or a dodgy hypnotic technique or unlikely outcome can work surprisingly effectively in a film in an agency role. If I can watch I Walked With a Zombie and find it rewarding (as I do) without believing in the undead, or if I can read Paradise Lost or the poems of George Herbert without faith myself, then I believe I can gain insights into behaviour, identity, loss of self, and manipulation while watching Svengali without fretting over HGSHS:A, induction techniques or arm levitation and the like.

Still, there are also limits to tolerance. While I can roll with some punches, indeed not see some of them as blows at all, there are misrepresentations that

not only rankle but that seem breaches of good faith. Unrelated to hypnosis, in January 2008, U.S. ABC aired the pilot of Eli Stone, a comedy drama (code words for "whimsy," therefore answerable to little) involving a lawyer, Stone, who has visions and who acts successfully on the behalf of a mother who believes her child became autistic as a result of the preservative thimerosal in a vaccine (see New York Times, 23, 29 January 2008; Slate, 30 January 2008; clips from the show on YouTube). Despite objections from the American Academy of Pediatrics which cited rejection of such links by the Centers for Disease Control, the Food and Drug Administration, the World Health Organisation and the Institute of Medicine, not to mention concerns from manufacturers Eli Lilly and GlaxoSmithKline, the show proceeded and did no more than air an mild neo-disclaimer. The good news, if there is any, is that the network action strikes a blow against those who believe that Big Pharma is unstoppably powerful and manipulative of all media.

In the light of such disregard for scientific received wisdom, which irritates me despite an inclination to look favourably on contrarians, it is unlikely studio bosses are likely to worry too much about portraying hypnosis or its practitioners with near clinical accuracy unless there is a compelling reason unrelated to good practice, most likely—to do so.

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