

Alien Abductions, Sleep Paralysis and the Temporal Lobe

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Abstract

Twelve 'alien abductees' were given the Personal Philosophy Inventory (including a measure of temporal lobe lability) and a questionnaire about sleep experiences. They were compared with twelve matched controls and a student control group (n=51). No differences in temporal lobe lability were found between the groups but the abductees more often reported sleep paralysis than the controls.

Introduction

According to a recent Roper poll nearly 4 million Americans have been abducted by aliens (Hopkins, Jacobs and Westrum, 1992). In fact this figure is misleading and almost certainly a gross over-estimate (Blackmore, 1998; Stires, 1993). Nevertheless, personal accounts of abduction by aliens have increased since the publication of Hopkins' books *Missing Time* (1981) and *Intruders* (1987), and Strieber's *Communion* (1987).

Over the years a typical abduction account has emerged (see e.g. Mack, 1994; Newman & Baumeister, 1996; Schnabel, 1994; Thompson, 1993). Most experiences begin in bed at night (Spanos, Cross, Dickson and DuBreuil, 1993; Wright, 1994); more rarely from a car or outdoors. The abductee experiences an intense blue or white light, a buzzing or humming sound, anxiety and the sense of an unexplained presence. He or she is then transported or "floated" into a craft and may be restrained or paralysed and subjected to examinations, medical procedures, or the implantation of a small object in the nose or elsewhere. The aliens are typically grey, about four feet high, with a large head and black almond shaped eyes, though other aliens are occasionally reported (Wright, 1994). The aliens' purpose in abducting people varies from benign warnings of impending ecological catastrophe to a vast alien breeding program.

Occasionally people claim to be abducted in public, though there are few examples of independent corroboration. Physical evidence is extremely rare. A few 'implants' have reportedly been removed from abductees' bodies but they usually mysteriously disappear (Jacobs, 1993), or turn out to be "of normal biological material" (Mack, 1994) or even dental amalgam (Blackmore, 1997).

The abductions may not be physically real but they still require explanation. There is no evidence that people who see UFOs are generally suffering from serious psychopathology (Bloecher, Clamar & Hopkins, 1985; Parnell, 1988). Parnell and Sprinkle (1990) found that MMPI scores were in the average range for 140 people who claimed communication with aliens, and Spanos, Cross, Dickson and DuBreuil (1993) tested 49 UFO experiencers and found they actually showed less psychopathology than a student or a community control group and higher intelligence than the students. Bartholomew, Basterfield and Howard (1991) found characteristics of fantasy proneness in 132 out of 152 contactees but when standard tests were used, no differences were found in either fantasy proneness or hypnotizability by Ring and Rosing (1990), Rodeghier, Goodpastor & Blatterbauer (1991) or Spanos *et al* (1993). Zimmer (1984) found that UFO reporters were as likely as the normal population to be high academic achievers and showed no more alienation, distress or maladjustment. However, most of the UFO experiencers in these studies had simply seen lights in the sky; some had seen alien creatures but few reported full-blown abduction experiences. In the only study specifically of abductees, Powers (1994) assessed dissociative symptoms in twenty people claiming abduction. Compared with 'sightees' the abductees reported far more symptoms of dissociation and of post-traumatic stress. Clearly abductees must be separated from people who have only seen UFOs in future studies.

Newman and Baumeister (1996) have provided a cognitive-motivational explanation of how spurious memories of abductions are created and maintained. The motivation is likened to sexual masochism, and hypnosis serves to elaborate and maintain the false memories. The role of false memories in abduction cases has been widely discussed (Clark & Loftus, 1996) and there is no doubt that complex abduction fantasies can be created under hypnosis. However, about thirty per cent of abduction accounts are obtained without hypnosis (McLeod, Corbisier & Mack, 1996). Another possibility is that abductions are based on some real and frightening experience which is then elaborated (with or without hypnosis) into the culturally acceptable alien abduction story. Two possible experiences have been suggested; visions induced by excessive activation of the temporal lobes, and sleep paralysis.

Persinger (Persinger and Makarec, 1987; Persinger and Valliant, 1985) has shown that mystical experiences, psychic experiences and paranormal beliefs are associated with unstable temporal lobes, or high "temporal lobe lability". He has also been able to induce out-of-body and other experiences by applying rapidly fluctuating weak magnetic fields across the temporal lobes of subjects in the laboratory (Persinger, 1995). These include unpleasant vibrations, lights, floating, flying, out-of-body sensations, sexual arousal, and a sense of presence (Blackmore, 1994). Spanos *et al* found no difference between two groups of UFO reporters and control groups using the temporal lobe lability subscale of the PPI (Personal Philosophy Inventory, Persinger and Makarec, 1987). However, their 'UFO non-intense' group had only seen lights in the sky. The 'UFO intense' group had seen craft close up or experienced contact with an alien but only two claimed to have been taken up in a spaceship. Therefore this study did not adequately test for temporal lobe lability in abductees.

The main alternative theory is that abductions are associated with sleep paralysis. Sleep paralysis is a common experience in which a person wakes up but cannot move. It occurs occasionally in about 40% of the population (Fukuda, Miyasita, Inugami, & Ishihara, 1987; Spanos, McNulty, DuBreuil, Pires & Burgess, 1995; Blackmore, 1998) and more frequently in narcoleptics (Thorpy, 1990). It is often associated with a sense of presence, vibrations, lights, and sensations of being prodded or pulled, as well as emotions ranging from curiosity to intense fear or terror. Many cultures have sleep paralysis myths, such as witch or hag riding in England (Davis, 1996-7), the Old Hag of Newfoundland (Hufford, 1982), or Kanashibari in Japan (Fukuda, 1993). Alien abduction may be our modern sleep paralysis myth.

Spanos *et al* (1993) pointed out the similarities between abductions and sleep paralysis. The majority of their UFO experiences occurred at night and almost 60% of their "intense" UFO reports were sleep related. Of these experiences nearly a quarter involved symptoms similar to sleep paralysis. If sleep paralysis underlies abduction reports we would expect abductees to be especially prone to the experience. Further studies of sleep paralysis in abductees are clearly required.

The present study investigated temporal lobe lability and sleep disturbances in a sample of British abductees. Although people who have seen UFOs are easy to find, abductees are rare. Our sample is therefore small but, unlike most previous studies, consists entirely of people who claim full-blown abductions.

Method

Participants

The abductees (5 men and 7 women aged 20-69) were recruited through the *This Morning* television programme in which the senior author took part, and through BUFORA (the British UFO Research Association). They were sent a covering letter, a consent form and a questionnaire about their UFO experiences. Some had had multiple experiences of meeting aliens or being abducted, and one had also observed UFOs once or twice a year since he was twelve. Ten of them were convinced their experiences were physically real. Seven complained of medical problems, scars or headaches after the experiences. Half (2 men and 4 women) reported being abducted from their beds and half (3 men and 3 women) experienced abductions in other situations. Two independent judges categorised them into "day-time" and "night-time" abductees from their descriptions (inter-rater reliability; $r = 1.00$).

There were two control groups. The first was matched for age group, gender and occupational group. The second was a student control group of 51 undergraduates from the University of the West of

England, Bristol (17 men and 34 women aged 16-46).

Questionnaires

Three questionnaires were used. Abductees were given a questionnaire about their abduction experiences, asking for full descriptions and for details about when and where the abductions occurred, what the aliens were like, and any after-effects of the experience. All participants were given the Personal Philosophy Inventory (Persinger & Makarec, 1987). This consists of 140 statements to be answered as true or false. 52 of these comprise the 'temporal lobe lability subscale'. Scores on this subscale were recorded. A final questionnaire asked about sleep experiences including sleep patterns and dream recall, false awakenings, lucid dreams and sleep paralysis.

Results

Mean scores on the temporal lobe lability scale were abductees 19.3; matched control 18.3; student control 20.2. A one-way ANOVA shows there are no significant differences between the groups. The PPI contains an item directly about alien beliefs "Alien intelligence is probably responsible for UFOs". As Spanos had found, there were significantly more believers among the abductees than the matched controls (Fisher's exact test, $p = .047$) and the student controls ($p = .001$).

Differences were found in the sleep pattern questionnaire. There were three questions about sleep paralysis (waking paralysed, pressure on the chest and a sense of presence). The abductees reported all three experiences significantly more often than the matched controls (Fisher's exact test gives p values of 0.006, 0.04, and 0.01) and two of the experiences significantly more often than the student controls ($p = 0.007$, 0.11, and 0.002).

When reports of sleep paralysis are compared separately for the day-time and night-time abductees, there are no significant differences for the day-time group but the night-time group report sleep paralysis more often than the matched controls ($p = .00005$) and more often than the student controls ($p = .00003$). The abductees also reported more sleep disturbances, nightmares and out-of-body experiences than the student control group.

Discussion

This was a very small study, reflecting the fact that abduction reports are not common and probably far less so in Britain than in the USA. Also many abductees are unwilling to be involved in scientific research. Among the 24 approached, only 12 agreed to take part and some were scornful of the value of research (Cox, 1995). However, if abduction experiences require a different explanation from merely seeing UFOs then it is important to find people who claim full-blown abduction experiences for future research.

In spite of the small sample, the results strongly support the suggestion that alien abductions are related to sleep paralysis and not to temporal lobe lability. Temporal lobe lability scores were, if anything, lower in the abductees than controls, so a larger sample would have been unlikely to reveal a positive relationship. On the other hand sleep paralysis was significantly more often reported in abductees than either of the control groups, confirming Spanos *et al's* findings, and the idea that abductions may be a modern form of sleep paralysis myth. Of course an alternative is that real aliens are causing the increased sleep paralysis, and abductees' belief in aliens is well founded. The better we understand the psychological origins of the experience the less likely that alternative becomes. We hope that this study, small as it is, may help contribute to our understanding of these unusual experiences.

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