

Investigation of the sleep paralysis theory of the alien abduction phenomenon.

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Alien Abductions: A Case of Sleep Paralysis by Javed Ather Siddiqui, Shazia Farheen Qureshi and Abdul Khaliq Al Ghamdi of the Department of Psychiatry, Mental Health Hospital, Taif, Saudi Arabia (2018) suggests that reports by reputed alien abductees is the result of a phenomenon known as "sleep paralysis." Sleep paralysis is fairly common with approximately 40% of people reporting an instance at least once in their lives (WebMD, n.d).

In order to back this theory, they present an explanation of sleep paralysis as well as the types of sleep paralysis suggested by J. Allen Cheyne, Steve D. Rueffer, Ian R. Newby-Clark. Although three types are mentioned (intruder, unusual bodily experiences and incubus) the primary focus appears to be on the Intruder class which highlights a foreign and unwelcome presence.

The only evidence presented, however, is a single case study of an overworked driver whose symptoms included nightmares and depression along with sleep paralysis.

This is a plausible theory as sleep paralysis is a known and recognized condition and the symptoms do roughly correlate to certain reports of alien

abductions: paralysis, fear and a foreign presence and, in some cases, levitation indicating being “lifted” into a spacecraft (Blackmore, 1998).

The sleep paralysis phenomenon usually occurs on waking or falling asleep which is the time during which the body undergoes “light sleep” or Stage 1 non-REM sleep (Licht, Hull & Ballantine, 2016). This stage of sleep can involve hallucinations and odd sensations (American Sleep Association, n.d.).

Sleep paralysis, as a concept, is a natural phenomenon which everyone is subject to whenever they fall asleep and enter the REM state. During this time, much of the brain’s activity is similar to the waking state with certain exceptions, the most notable being a condition known as “atonia,” or the decrease or absence of muscular control. During non-REM sleep stages, there is, similarly some decrease in motor neuron activity resulting in a lesser version referred to as “hypotonia” (Salih, Steinheimer & Grosse, 2011).

French neurophysiologist Michel Jouvet, who did extensive studies on the different states of sleep, specifically isolating and studying brain patterns during REM (Rapid Eye Movement) sleep (Slotnik, 2017) showed that certain

parts of the brain are responsible for deliberately stifling motor neuron functionality during the various sleep stages.

Specifically, the pre-locus coeruleus, a small cluster of neurons in the pons, appears to be responsible for sleep atonia and hypotonia as well as other functions, such as regulating sodium intake (Alhadeff & Betley, 2017).

Experiments by Jouvet suggested as much when lesions were made to sever these parts of the brains in cats. The result was that the cats would act as though they were awake when EEG monitoring suggested that they were, in fact, fast asleep (Mahowald & Schenck, 2004).

Given that the body has a natural mechanism to prevent muscular movement during sleep (presumably to prevent us from acting out our dreams, like Jouvet's cats) It is not too difficult to imagine that a brain disorder, possibly brought about by intense stress as experienced by the subject of the case study in the article by Siddiqui, Qureshi and Al Ghamdi (2018) could conceivably cause these parts of the pre-locus coeruleus to become activated early during hypnogogic sleep or fail to be deactivated during the hypnopompic sleep state (Lu, Sherman, Devor & Saper, 2006).

As the final stage of sleep is most likely a REM state, unless awakened unnaturally (Licht et al., 2016) – a state labeled by Michel Jouvet as “paradoxical sleep” (Brown, 2003) due to the similarity in brain patterns to wakefulness - and given that the hypnopompic state, a state between sleep and wakefulness is associated with hallucinations (Mental Health Daily, n.d.) it is not unreasonable to suggest that these hallucinations lead subjects to believe that they are detecting an alien presence. Furthermore, during the state of sleep paralysis, the amygdala triggers a sympathetic nervous system response which adds terror to the equation – it’s the body’s reaction in fear to not being able to move but, in the hypnopompic state, could translate into the fear of the alien presence (Emslie, 2016).

While the sleep paralysis theory of extraterrestrial or paranormal visitation may explain some alien abduction scenarios, it certainly does not explain them all as not all abductions are reported as occurring during the hypnogogic or hypnopompic states. The first alien abduction case to be reported is the story of Betty and Barney Hill who claimed to have been abducted during a road trip from Canada to New Hampshire (Booth, 2017).

Whitley Strieber, the noted author of the 1987 book *Communion* claims multiple visitations. Although he is unwilling to attribute the origin of his

“visitors” as extraterrestrial, many of his reported encounters occurred during waking hours and he describes conversations that referenced previous encounters – details which this author suggests are far too specific to suggest a vague or random hallucination during a para-sleep stage (Strieber, 1987).

While there is certainly a case for sleep paralysis as an explanation of visitations by djinn’s, spirits, succubi, extraterrestrials and other unusual and unwelcome visitors, it is not sufficient to explain all of such phenomena. The sleep paralysis theory is accompanied by other theories to explain and unmask paranormal accounts, such as the Accidental Awareness theory which posits that certain reports of experimentation by extraterrestrial strangers are the result of surgical patients accidentally awakening during surgery and misinterpreting the surgical staff as aliens (Skomorowski, 2014).

Again, a plausible explanation and, again, there are cases where this explanation is inadequate, along with sleep paralysis theory. However, one thing is for certain – the alien abduction phenomenon will need to be the subject of much further research before a fully adequate explanation is found.

References:

WebMD (n.d.) Sleep Paralysis. Retrieved from:
<https://www.webmd.com/sleep-disorders/guide/sleep-paralysis#2>

Blackmore, Susan (1998) Abduction by Aliens or Sleep Paralysis? *Skeptical Inquirer*. Vol 22 #3. Retrieved from:
https://www.csicop.org/si/show/abduction_by_aliens_or_sleep_paralysis

American Sleep Association (n.d.) Sleep Hallucinations – Research & Treatments. Retrieved from: <https://www.sleepassociation.org/sleep-disorders/more-sleep-disorders/hallucinations-during-sleep>

Siddiqui, Javed A., Qureshi, Shazia F. and Al Ghamdi, Abdul K. (2018) Alien Abductions: A Case of Sleep Paralysis. *Sleep and Hypnosis. A Journal of Clinical Neuroscience and Psychopathology* Jun 2108.

Licht, Deborah M., Hull, Misty G. and Ballantyne, Coco (2016) *Presenting Psychology*. New York, NY: Worth Publishers

Salih, F., Steinheimer, S. and Grosse, P. (2011) Excitability and recruitment patterns of spinal motoneurons in human sleep as assessed by F-wave recordings. *Experimental Brain Research*. Vol 213 #1.

Slotnik, Daniel E. (2017) Michel Jouvet, Who Unlocked REM Sleep's Secrets, Dies at 91. *New York Times*. Retrieved from:
<https://www.nytimes.com/2017/10/11/obituaries/michel-jouvet-who-unlocked-rem-sleeps-secrets-dies-at-91.html>

Alhadeff, Amber L; Betley, J Nicholas (2017) Pass the salt: the central control of sodium intake. *Nature Neuroscience*. Vol. 20 #2.

Mahowald, M. W. and Schenck, C. H. (2004) Rem sleep without atonia – from cats to humans. *Archives Italiennes de Biologie*. Vol 142 #4.

Lu, Jun; Sherman, David; Devor, Marshall; Saper, Clifford B. (2006) A putative flip-flop switch for control of REM sleep. *Nature*. Vol. 441 # 7093.

Brown, Chip (2003) The Stubborn Scientist Who Unraveled A Mystery of the Night. *Smithsonian Magazine*. Retrieved from:
<https://www.smithsonianmag.com/science-nature/the-stubborn-scientist-who-unraveled-a-mystery-of-the-night-91514538>

Emslie, Karen (2016) Awake in a Nightmare: From ancient demons to alien abductions, paranormal tales reveal that “sleep paralysis” may be as old as sleep itself. *The Atlantic*. Retrieved from:
<https://www.theatlantic.com/health/archive/2016/05/sleep-paralysis/484490>

Booth, Billy (2017) 1961-The Hills: Abducted by Aliens. *ThoughtCo*. Retrieved from: <https://www.thoughtco.com/the-hills-abducted-by-aliens-3293363>

Strieber, Whitley (1987) *Communion: A True Story*. Avon Publications. New York City, New York.

Skomorowski, Anne (2014) Alien Abduction or “Accidental Awareness”? *Scientific American*. Retrieved from:
<https://www.scientificamerican.com/article/alien-abduction-or-accidental-awareness>