

Are Hallucinations Just Delusions?

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Abstract

Hallucinations may provide a number of different types of perception, some of which cannot be called merely delusion.

Introduction

Frederic William Henry Myers (1843-1901) book *Human Personality and Its Survival of Bodily Death* (1903) argues that the mind is not generated by the brain but is instead limited and constrained by it. Myers strongly influenced his contemporary intellectual community, and in particular William James and Aldous Huxley. He was also presaged in this view by the poet and mystic William Blake.¹ (1757-1827) Aldous Huxley, in his book *The Doors of Perception*,² suggested that all around us is Mind at Large, (being an information field) which comprises everything. He proposed that the brain is a 'reducing valve,' narrowing that information to a small trickle, and suggested that drugs may temporarily open that valve.³

Myers' views seem to be shared by some current researchers. Edward F. Kelly, Professor of Research in the Division of Perceptual Studies at the University of Virginia School of Medicine, is lead author of the book *Irreducible Mind: Toward a Psychology for the 21st Century*. Published in 2009, this book and it's authors strongly support the concept of the brain as a reducing valve for the mind.⁴ Kelly notes that most of Myer's theoretical ideas and the empirical phenomena used to support them are still valid today and have not been "disproven but simply displaced." The authors also point out some of the weaknesses in Myer's approach and provide discussions regarding opportunities for further investigation.

The concept of the brain as a reducing valve is supported by some clinical studies. A British study⁵ shows how psilocybin — the drug contained in certain mushrooms — affects the connectivity of the brain. Researchers found that the psychedelic chemical, which is known to trigger feelings of oneness with the universe, does not work by ramping up the brain's activity as they'd expected. Rather, under influence of psilocybin, overall brain activity drops, particularly in certain regions that are densely connected to sensory areas of the brain.⁶ The largest decreases were observed in the medial prefrontal cortex (mPFC) and the anterior and posterior cingulate cortices (ACC and PCC, respectively). Scans also showed a reduction in functional connectivity between the mPFC and PCC, so that their normally synchronous activity was de-synchronized. When functioning normally, these connective 'hubs' appear to help constrain the way we see,

hear and experience the world, grounding us in our local reality. They are also the key nodes of a brain network linked to self-consciousness and depression. Psilocybin cuts activity in these nodes and severs their connection to other brain areas, inducing a state of 'unconstrained cognition'. "The results seem to imply that a lot of brain activity is actually dedicated to keeping the world very stable and ordinary and familiar and unsurprising," says Robin Carhart-Harris, a postdoctoral student at Imperial College London and lead author of the study, published in *Proceedings of the National Academy of Sciences*. The article concludes: "Indeed, Huxley and Blake had predicted what turns out to be a key finding of modern neuroscience: many of the human brain's highest achievements seem to involve preventing actions instead of initiating them, and sifting out information rather than collecting and presenting it for conscious consideration." However, another study of the effects of psilocybin on the brain found the opposite effect of Carhart-Harris' group: "We have completed a number of similar studies and we always saw an activation of these same areas," says Franz Vollenweider at the University of Zurich in Switzerland. "We gave the drug orally and waited an hour, but they administered it intravenously just before the scans, so one explanation is that [their] effects were not that strong."⁷ Yet the effects were there in the Carhart-Harris study.

Ghosts and Apparitions

Myers, who became one of the founder members of the Society for Psychical Research,⁸ wrote that apparitions are not 'hallucinations' but have a real existence in the metetherial world which he described as a dream-like world, in opposition to his contemporaries, such as Edmund Gurney and Frank Podmore who wrote that apparitions were 'hallucinations'. In this context 'hallucination' is thought to be synonymous with delusion.⁹ Mary Roach notes that in 1988, Michael Persinger compared the dates for thirty-seven years of Fate magazine haunting reports with geomagnetic activity for those dates, and found a significant correlation. Roach asks "Are those people whose EMF-influenced brains alert them to "presences" picking up something real that the rest of us can't pick up, or are they hallucinating?"¹⁰ Pam Kircher, physician at M. D. Anderson, trained to help patients at the end of their lives. She noticed that routinely dying patients talked with deceased relatives. At first she thought they were hallucinating, so she devised a test. She would interrupt the conversation with deceased Aunt Sally, asking a question. They would stop their conversation with Aunt Sally and politely respond, and then continue their conversation with aunt Sally. Kircher says that a hallucinating person cannot be pulled back to reality in this way.¹¹

DMT Induced Perceptions: Alternative Consciousness?

The presence of the psychoactive chemical N, N-dimethyltryptamine (DMT), an endogenous neurotransmitter, in the human body has puzzled scientists for decades. Although it normally breaks down rapidly in the body as the result of interaction with monoamine oxidase,¹² it is a powerful 'hallucinogen.' Endogenous DMT was investigated in the 1960s and 1970s and it was proposed that DMT was involved in psychosis and schizophrenia. However, much of this research proved inconclusive and

conventional thinking has since held that trace levels of DMT, and other endogenous psychoactive tryptamines, are insignificant metabolic byproducts. DMT researchers question this.¹³ Unlike addictive drugs, which typically allow users to escape, psychedelic drugs have the opposite effect: instead of allowing users to avoid negative emotions, they magnify the painful feelings.¹⁴ As a result of their DMT experiences, some subjects resolved difficult personal problems, which they later realized were positive solutions, and they felt better. The basic processes of psychotherapy seemed to be at play.¹⁵

Jeremy Narby received his PhD in anthropology from Stanford University. He is author of the book *The Cosmic Serpent: DNA and the Origins of Knowledge*. He noted the incompatibility between orthodox scientific thinking, which regards hallucinations as irrelevant, and the practice of certain indigenous South American cultures, which use a hallucinogenic brew called *ayahuasca* to obtain verifiable information about plants. This brew is a combination of DMT, and a monoamine oxidase inhibitor which prevents its breakdown in the human body. Narby found that Ashaninca shamen of the Amazonian rain forest take their consciousness down to the molecular level to gain access to this information from the double helix of DNA, which are perceived as huge luminous intertwined serpents. The DNA apparently communicates via three dimensional images (presumably holographs) which are formed by coherent (laser) light from photons emitted by the DNA.¹⁶ Science today is coming to realize that there is a lot about DNA we do not know, and that there may in fact be no 'junk DNA'.¹⁷

DMT users experience remarkably similar hallucinations, unlike those who use LSD, peyote, or other psychedelic drugs. Dr. Rick Strassman, a psychiatry professor at the University of New Mexico, has been on the vanguard of DMT research in an attempt to understand its biological effects.¹⁸ Strassman's study showed DMT induced perception of DNA and other biological components in subjects, consistent with Narby's study of Ashaninca shamen. Visions of DMT users in Strassman's study, however, were not limited to biological components. When administered a sufficient DMT dose, subjects have reported the presence of intelligent beings that do not appear to be the projections of their subconscious in the Freudian sense. Many subjects believe that the perceived alternate reality is persistent in that it exists irrespective of their subjective momentary perception.¹⁹

After exposing 60 volunteers to DMT, Strassman noted that in addition to having near-death type experiences (NDEs), many claimed to have engaged in an interaction with some outside intelligence; an insectoid or reptilian alien presence in advanced technological environments that communicated with them throughout their hallucinatory experience. Often, during the hallucination, they were 'probed', 'tested', 'taught', 'loved', or even 'raped'. Alex Grey suggests that these DMT demons are parts of our own being.²⁰ These hallucinations closely mirror those accounts of alien abduction reported in the studies of John Mack. Conversely, Mack notes that sometimes abduction experiences appear to result in personal growth and transformation. For example, the aliens may be recognized as intermediates between humans and the primal source of creation; like angels or 'light beings'. Abductees may experience themselves as returning to their

cosmic source; an inexpressibly beautiful realm beyond space/time as we know it. Abductees may weep when they have to leave this cosmic home. Consciousness is experienced not as coterminous with the body; and the notion of a soul with an existence separate from the body becomes relevant.²¹ It was only later, when his study was well underway, that Strassman began to consider DMT's possible role in the alien abduction experience.²² Strassman notes "It is almost inconceivable that a chemical as simple as DMT could provide access to such an amazing array of experiences. From deep insights to encounters with aliens. Abject terror or nearly unbearable bliss. Near-death and rebirth. Enlightenment..."²³ It is just as fascinating to ponder why Nature made DMT to allow such experiences."²⁴ Strassman notes that he was unable to locate any similar reports in research subjects taking other psychedelics. "Only with DMT do people meet up with 'them', with other beings in a non-material world."²⁵

It has been claimed that the "Near Death Experience" DMT test subjects experience is different from the true NDE, where the experience occurs to a patient who has flat lined EKG and EEG signals. However, even in a "true" NDE, the neo-cortex is functional as the person returns to normal consciousness, and there is no way to prove that the experience did not occur during this time period.

The Hallucinations of Schizophrenia:

Strassman notes that his studies were not the first to describe DMT induced 'contact' with other beings. Reports from the 1950s derive from patients with schizophrenia.²⁶ Wilson van Dusen was chief psychologist at the Mendocino State Hospital in northern California for many years. This was an inpatient facility for the severely mentally ill, so he spent a lot of time hearing his patients talk about their 'others': the voices in their heads. Van Dusen tried to talk to the voices themselves, with the patient being the intermediary. "In this way, I could hold long dialogs with a patient's hallucinations". After interviewing twenty such patients, he decided that he agreed with the patients that their 'others' were not hallucinations but inhabitants of a different order of being. With exploration of these states, it became apparent to Van Dusen that the mind can think without any apparent effort, and without the interference of the conscious mind, it thinks faster, clearer, and more richly.²⁷

Van Dusen notes: "In my dialogues with patients I learned of two orders of experience, borrowing from the voices themselves, called the higher and the lower order.... They [lower order] invade every nook and cranny of privacy, work on every weakness and credibility, claim awesome powers, lie, make promises and then undermine the patient's will. They never have a personal identity though they accept most names or identities given them..... "In direct contrast stands the rarer higher order hallucinations. In quantity they make up perhaps a fifth or less of the patients' experiences. ... This rarer higher order seldom speaks, whereas the lower order can talk endlessly. ... In general the higher order is richer than the patient's normal experience, respectful of his freedom, helpful, instructive, supportive, highly symbolic and religious." Van Dusen was a follower of Emanuel Swedenborg, and he noticed that his patients' 'others' fell into camps of good and evil, sharing numerous traits with Swendenborg's entities.²⁸ Van Dusen wrote his

conclusions in a pamphlet called *The Presence of Spirits in Madness*. Although the case can be made that this is a very restrictive set of data, the general data available are also quite restrictive. How many doctors have conversations with their patient's 'hallucinations'?

Hallucinations in the General Population

Auditory hallucinations in otherwise healthy people are so prevalent that it has resulted in something called the 'Hearing Voices Movement', initiated in 1987 by professor of social psychiatry Marius Romme and journalist Sandra Escher in the Netherlands, with the formation of Stichting Weerklank (Foundation Resonance), an organization for the voice hearing community. In 1988, an organization *The Hearing Voices Network* was established in England. Networks have also been established in Italy, Finland (1995), Wales, Scotland, Switzerland, Sweden, Austria, Germany (1998), Norway, Denmark, Japan (1996), Israel, New Zealand, Australia and the USA (2006).²⁹ *The Hearing Voices Network* now supports not only people who hear voices, but also those who see visions or have other unusual perceptions.³⁰

A balanced account of the significance of the *Hearing Voice Movement* was published in *New York Times Magazine* in 2007.³¹ Author Daniel B. Smith³² writes:

"H.V.N.'s brief against psychiatry can be boiled down to two core positions. The first is that many more people hear voices, and hear many more kinds of voices, than is usually assumed. The second is that auditory hallucination — or 'voice-hearing', H.V.N.'s more neutral preference — should be thought of not as a pathological phenomenon in need of eradication but as a meaningful, interpretable experience, intimately linked to a hearer's life story and, more commonly than not, to unresolved personal traumas."³³

Although many heard voices are negative, Smith notes that he has met some voice hearers who believed their voices were from the spirit realm.³⁴

Psychology Today reports that although most auditory hallucinations usually begin after trauma, sometimes the voices within can provide a sense of protection and encouragement.³⁵

The National Institute of Health notes that "Research has shown the occurrence of auditory hallucinations in the general population to such an extent that they cannot be said to be pathognomonic of psychiatric illness. In the psychiatric population, these tend to be frequent, intrusive, and distressing. In contrast, in the nonclinical population, these are often predominantly positive and non threatening."³⁶

We may conclude that hallucinogenic drugs may induce a state of unconstrained cognition. Perceptions resulting from DMT hallucinations may reflect verifiable data as well as provide psychotherapeutic benefits. Hallucinations may occur in the general population, and even the hallucinations of schizophrenics may reflect some larger reality.

¹ Note: Irreducible Mind: Toward a Psychology for the 21st Century Edward F. Kelly et al (2007)

² Huxley's book takes its title from a phrase in William Blake's poem *The Marriage of Heaven and Hell*.

³ Huxley's exact words:

<http://www.ianmack.com/aldous-huxley-dont-mistake-the-trickle-for-ultimate-reality/>

⁴ The authors of this book: Edward F Kelly, Professor of Research, U of Va.; Emily Williams Kelly, Professor, U of Va.; Adam Crabtree, Canadian psychotherapist; Alan Gauld, Retired Reader in Psychology of Nottingham University and President of the Society for Psychical Research from 1889 until 1992. Michael Grosso, Professor of Philosophy, U of Va.; and Bruce Grayson, Professor of Psychiatry, U of Va.

⁵ *Neural correlates of the psychedelic state as determined by fMRI studies with psilocybin*
<http://www.pnas.org/content/109/6/2138>

⁶ David Nutt, a neuropsychopharmacologist at Imperial College London, used functional magnetic resonance imaging (fMRI) to monitor the changes in brain activity during the transition from normal consciousness to the psychedelic state induced by psilocybin. Nutt said "Surprisingly, we found that psilocybin actually caused activity to decrease in areas that have the densest connections with other areas."

⁷ <http://healthland.time.com/2012/01/24/magic-mushrooms-expand-the-mind-by-dampening-brain-activity/#ixzz2BcbUbdYC>

These findings are consistent with the free-energy principle of brain function developed by Karl Friston of University College London, which states that the brain works by constraining our perceptual experiences so that its predictions of the world are as accurate as possible. <http://www.nature.com/news/psychedelic-chemical-subdues-brain-activity-1.9878>

⁸ <http://www.esalen.org/ctr-archive/mediumship.html>

⁹ http://en.wikipedia.org/wiki/Frederic_William_Henry_Myers

¹⁰ Mary Roach, *Spook*, p. 216, 223

¹¹ Barbara Hagerty, *Fingerprints of God* Riverhead books 2009 P. 228 f.

¹² <http://www.neurosoup.com/maoi.htm>

¹³ “The recent discovery of a G-protein-coupled, human trace amine receptor has triggered a reappraisal of the role of compounds present in limited concentrations in biological systems. Interestingly enough, DMT and other psychoactive tryptamine hallucinogens elicit a robust response at the trace amine receptor. While it is currently accepted that serotonin 5-HT_{2A} receptors play a pivotal role in the activity of hallucinogenic/ psychedelic compounds, we propose that the effects induced by exogenous DMT administration, especially at low doses, are due in part to activity at the trace amine receptor. Furthermore, we suggest that endogenous DMT interacts with the TA receptor to produce a calm and relaxed mental state, which may suppress, rather than promote, symptoms of psychosis. This hypothesis may help explain the inconsistency in the early analysis of endogenous DMT in humans.”

http://www.tripzine.com/pit/DMT_TA_anxiolytic.pdf

¹⁴ Some studies find that lowered activation of the mPFC is associated with anticipatory anxiety rather than calmness . Carhart-Harris notes that healthy volunteers had no negative reactions, but during depression people are more sensitive to having a negative response to psychedelic drugs.”

<http://healthland.time.com/2012/01/24/magic-mushrooms-expand-the-mind-by-dampening-brain-activity/#ixzz2C5ZG7TDa>

¹⁵ *DMT: The Spirit Molecule* Chapter p. 156

¹⁶ http://www.bibliotecapleyades.net/ciencia/ciencia_adn12.htm

One anthropologist, who ingested the substance, visually experienced "hundreds of millions of years of activity -...on a scale and with a vividness impossible to describe”.

¹⁷ **Hidden Treasures in “junk” DNA**

<http://www.scientificamerican.com/article.cfm?id=hidden-treasures-in-junk-dna&page=2>

¹⁸ http://www.scientificexploration.org/journal/jse_21_1_rodriguez.pdf

See *DMT The Spirit Molecule* by Rick Strassman MD; Park Street Press 2001. p.177

¹⁹ http://www.scientificexploration.org/journal/jse_21_1_rodriguez.pdf

²⁰ <http://www.youtube.com/watch?v=aFjEMe7KJVU>

²¹ John E Mack, MD *Human Encounters with Aliens: Abduction*, Scribner’s, 1994, p. 48 f.

²² [http://rickstrassman.com/DMT:The Spirit Molecule](http://rickstrassman.com/DMT:The_Spirit_Molecule)

²³ *DMT The Spirit Molecule* p. 310

²⁴ *DMT The Spirit Molecule* p. 310

²⁵ *DMT The Spirit Molecule* p. 187

²⁶ *DMT The Spirit Molecule* p. 187

²⁷ Wilson von Dusen *The Presence of Other Worlds* p. 29.

²⁸ *Spook: Science Tackles the Afterlife* by Mary Roach **YEAR?** P. 191
See http://e-swedenborg.com/tp/books/w.vandusen/presence_spirits.htm

²⁹ http://en.wikipedia.org/wiki/Hearing_Voices_Movement

³⁰ <http://www.hearing-voices.org/>

³¹ *Can You Live With the Voices in Your Head?* Daniel B. Smith, March 25, 2007
<http://www.nytimes.com/2007/03/25/magazine/25voices.t.html?pagewanted=1&r=0>

³² Daniel B. Smith is the author of *Muses, Madmen and Prophets: Rethinking the History, Science and Meaning of Auditory Hallucination* Penguin Press and from which the NYT article is in part adapted.

³³ *Can You Live With the Voices in Your Head?* p2.

³⁴ *Can You Live With the Voices in Your Head?* p1.

³⁵ <http://www.psychologytoday.com/articles/200701/in-your-head-hearing-voices>

³⁶ <http://www.ncbi.nlm.nih.gov/pubmed/17521516>