Lucidity – Establishing Consciousness within a Dream

Hannah Brown was stuck in the web of a giant spider that crept closer. With every passing second the beast’s fangs and pinchers became more defined in the darkness. Brown didn’t scream; she was paralyzed with fear. As the spider closed in, she had a moment of clarity.

“This isn’t real,” she thought. “It’s a dream. I don’t have to be here.”

Upon recognition of her subconscious, Brown removed herself from the threat of the spider and was soon playing on a jungle gym.

Lucid dreaming is consciousness within the subconscious. It is the ability to distinguish the dream world from reality, while dreaming. Modern research on the topic has many believing lucid dreaming is a means of resolving nightmares that can cause anxiety, an aid in problem solving, and a source creative inspiration.

For some, such as Brown, 21, a University of Iowa junior, lucid dreaming comes naturally and occurs frequently. Brown had her first lucid dream when she was 6, and continues to have them, almost daily. For others, including University of Iowa senior Andrew Havey, 21, lucid dreaming is an experience that can only be had with training.

“Normally, those who learn to lucid dream naturally, do so in response to childhood nightmares,” Robert Waggoner, author of ‘Lucid Dreaming: Gateway to the Inner Self’ said in an email. “They develop what I call a lucid mindset or persistent mental habit of questioning their state of awareness. Recent scientific studies have shown that dreaming increases the creative ability of people asked to solve a problem requiring a creative solution.”

The first textual description of lucid dreaming emerged from Buddhist’s philosophy, predating 1000 BCE. It wasn’t until the 1970’s, that physical evidence for lucid dreaming became available when two scientists, working separately, designed experiments where sleeping participants would signal lucidity to the researcher with a pre-determined pattern of eye movements.

Although the body is largely paralyzed during REM sleep, the eyes are not and even today researchers use eye movements as a means of communication with lucid dreaming participants.

In a 2008 journal article by the American Psychological Association, author Daniel Erlacher measured the cardiovascular response to dreamed physical exercise in lucid dreamers. Once conscious of their dream, participants signaled to the researchers using a series of eye movements that indicated lucidity.

“Initially the scientific community was stunned by the evidence for lucid dreaming!” Waggoner said. “For years, scientists disregarded the stories of people becoming consciously aware in the dream state as “mere anecdotes” or the mistaken memories of Buddhist monks and parapsychologists. Now, lucid dreaming has been used as a way of looking at the nature of consciousness.”

“It’s almost like being hypnotized,” Brown said. “You’re not fully conscious, but in a sense you are.”

Many lucid dreams come with a level of dream control, where the dreamer can decide to fly through New York City or transform a frightening scene into something more pleasant. Havey says he learned how to fly when dreaming lucidly by simply thinking about the sensation of floating up. However, Craig Webb, speaker, trainer, author and researcher on consciousness and communication said in an email, learning to lucid dream is more like learning to play guitar than ride a bike. In order for lucidity to increase in frequency the training techniques must be continually practiced.

Once lucidity is attained, however, the dreamer must learn to remain consciously asleep without waking up. Beginning lucid dreamers often become so excited once they establish consciousness that they bring the dream to a premature end.

“It takes practice to learn how to remain in a lucid dream,” Waggoner said.

Havey began experience mild lucid dreaming 2-3 years ago, when he recognized he could control certain elements of his dreams. Since then, he has practiced lucid dreaming by taking short naps during the day, which he says has increased the frequency of his lucid dreaming. When his dreams become too complex or he cannot create the necessary details of the dream, however, he is likely to wake up.

“Those who do not require training are usually a little more casual about their lucid dreams, and so not generally quite as enthusiastic as beginning lucid dreamers,” Webb said. “So a higher level of excitement shows in the latter group’s lucid dreams initially.”
Webb is the Executive Director of The Dream Research and Experimental Approaches to the Mechanism of Sleep (DREAMS) Institute, a nonprofit organization founded in Montreal that supports the ongoing research of dreams and their practical applications.

The DREAMS Institute offers methods for lucid training such as taking short naps after periods of wakefulness, making an effort to remember dreams and consciously acknowledging the distinction between reality and dreams by asking oneself, “Am I dreaming?” throughout the day. It is suggested that individuals should wake themselves from sleep during the night and then return to sleep after allowing the body to wake up. By manipulating sleep, individuals can change the level of consciousness in their dreams.

“In lucid dreams, certain functions/portions of the brain are active which are not as active during ‘normal’ dreams that are remembered just upon waking,” Webb said. “This is not really a brain region on-off type of situation, but more lower and higher levels of activity during the different states of ‘normal’ dreaming and lucid dreaming. Lucid dreams are generally more easily remembered than other dreams.”

Brown said the frequency of her lucid dreams correlates with amount of sleep she receives. Lucid dreams occur more often in the summer when Brown has more time to sleep than during the school semester. When Brown has the time to nap, however, she says she is likely to lucid dream.

“It’s a very pleasant feeling,” she said. “Especially if a dream does turn scary, it’s nice to know it’s not real.”

Despite the recent interest in lucid dreaming, brought on by films such as 2010’s _Inception_ and continued research on the topic, skeptics claim lucid dreaming is an interesting trick, but unlikely to affect the health of people.

Mark Blumberg is a professor of behavioral neuroscience at the University of Iowa who studies the developmental importance of sleep. Blumberg said dreams are a reflection of how one’s brain operates while trying to make sense of random activity during sleep. Movements that occur during sleep, such as twitching are not a result of the dream content, but inspire the dream content.

For example, when a dog starts running in its sleep, the movements from the dog are affecting the dream, the dream is not effecting the movements.

“Dreams are unimportant for sleep,” Blumberg said. “We do not sleep in order to dream. The idea that lucid dreaming is important reflects a way of thinking. It does not say anything about the function of dreams.”

Modern research has begun challenging Blumberg’s perspective, however. In a 2009 study, researchers found lucid dreaming is a hybrid state of consciousness between wakefulness and REM sleep. Using a 19-channel electroencephalogram (EEG), researchers found that lucid dreamers were able to simultaneously active parts of their brain that were active during sleep and waking consciousness.

“This is a huge discovery,” Waggoner said. “Studies like this are beginning to help us understand the nature of this thing called ‘consciousness’.”

Other studies, including the experiment by Erlacher found lucid dreaming affects the physiology of sleepers. From the study, Erlacher found dreamed physical exercise caused an increase in the heart rates of experiment participants.

“Lucid dreaming allows for scientific experimentation within the dream state,” Waggoner said. “Though these scientific experiments are in their infancy, major advances in understanding are underway.”

Brown says she does not believe her life would be any different if she did not have the ability to lucid dream, but enjoys the experience for its entertainment value.

“I think that dreams in general are really interesting and can be really revealing,” Brown said.

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**Lucid dreaming studies**

- Evidence REM sleep can support unimpaired cognitive function...
- A state of consciousness with features of both waking and non-lucid dreaming
Lucid dreaming brain activity

Using a 19-channel electroencephalogram (EEG), researchers found that lucid dreamers were able to simultaneously active parts of their brain that were active during sleep and waking consciousness.

Learn how to lucid dream

The Dreams Foundation (Craig Webb)

Lucid Advice (Robert Waggoner)