Dreams and Psychology

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DREAMS

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I've always been fascinated by dreaming and the science of dreams. My dreams are so vivid and realistic it really feels like I enter another world when I sleep. The other night I had a dream that I was sitting on a boat in the middle of a lake, watching the sunrise. In that moment, I felt calm, relaxed and completely at peace. Such a therapeutic and healing experience, I woke up happy, and I took that feeling with me the rest of the day.

What are Dreams

Dreams are stories and images that our minds create while we sleep. They can be entertaining, fun, romantic, disturbing, frightening, and sometimes bizarre. Dream remains one of behavioral science's great unanswered questions. Dreams have a purpose but it may not be to send us messages about self-improvement or the future, as many believe. Instead, many researchers now believe that dreaming mediates memory consolidation and mood regulation, a process a little like overnight therapy. But it's not a benefit all share equally: People who are sleep deprived also tend to be dream deprived, spending less time dreaming and perhaps not remembering dreams as well.

Role of Dreams in Mental Health

Dreams are a universal human experience that can be described as a state of consciousness characterized by sensory, cognitive and emotional occurrences during sleep. The dreamer has reduced control over the content, visual images and activation of the memory. There is no cognitive state that has been as extensively studied and yet as frequently misunderstood as dreaming. There are significant differences between the neuroscientific and psychoanalytic approaches to dream analysis. Neuroscientists are interested in the structures involved in dream production, dream organization, and narratability. However, psychoanalysis concentrates on the meaning of dreams and placing them in the context of relationships in the history of the dreamer. Reports of dreams tend to be full of emotional and vivid experiences that contain themes, concerns, dream figures, and objects that correspond closely to waking life. These elements create a novel "reality" out of seemingly nothing, producing an experience with a lifelike timeframe and connections.

Dreams Help You Learn: Have you ever fallen asleep unsure about a decision you were trying to make? Then when you woke up, the answer somehow became clear?

We've all heard the expression "let me sleep on it", but there is actually scientific evidence to support that we, in fact, learn while we sleep. According to researchers at Harvard Medical School, if you learn a task and then sleep, you may be 10 times better at that activity than if you had stayed awake. Dreaming helps your brain make sense of new information.

Dreams Can Be Therapeutic: Although what we experience in our dreams is make-believe, the emotions that go along with them are quite real, and dreams can help heal those emotions.
"Our dream stories essentially try to strip the emotion out of a certain experience by creating a memory of it," Scientific American reports. "This way, the emotion itself is no longer active. This mechanism fulfills an important role because when we don't process our emotions, especially negative ones, this increases personal worry and anxiety.
If you're experiencing some form of PTSD or emotional trauma, dreams can be a form of overnight therapy.
Matthew Walker, a neuroscientist at the University of California, Berkeley conducted a sleep study published in the journal *Current Biology*. Walker's study concludes that when people go through an emotional event, this triggers the release of stress hormones which prioritizes that event in your mind. This is a reminder to your brain to work through it during sleep.
Walker explains, "Somewhere between the initial event and the later point of recollecting, the brain has performed an elegant trick of divorcing emotions from memory, so it's no longer itself emotional."

Dreams Can Help You Overcome Your Fears : This applies more for lucid dreaming — when you are aware you're dreaming. A lucid dreamer essentially manipulates and controls the dream.
Let's imagine you are afraid of public speaking. Every time you get in front of a crowd, you feel as if your heart is beating out of your chest and you're on the verge of passing out. In a lucid dream, you are in complete control, and you have nothing to lose. You can practice what you're afraid to do in real life. The more you practice, the more you are reprogramming your brain. As time passes, you will lose that fear in the real world. Whether you want to learn a new skill, heal emotional pain or face your fears, dreams have the potential to change your life. Sweet dreams everyone!

Why we have Nightmares ……

Nightmares can create feelings of terror, anxiety, or despair, and lead to psychological distress or sleep problems like insomnia. Research has identified a range of causes for nightmares, including post-traumatic stress, anxiety—especially the presence of generalized anxiety disorder, dissociation, and physiological changes.

Are nightmares based on real-life experiences?
"Re-experiencing" is a common symptom of post-traumatic stress disorder, also known as flashbacks. These involuntary recollections often manifest in the form of nightmares that can cause significant emotional distress. Even when the dreams are not exact replays of a trauma, they may have a strong symbolic or indirect connection to the event.
Do children have more nightmares than adults?

Terrifying dreams that rouse people from sleep plague children more often than adults, and nightmares can be especially vivid for young children because they may have a harder time separating fantasy from reality. But at least half of grownups also have occasional nightmares, although fewer than 10 percent report frequent or recurring episodes.

Lucid dreams

Lucid dreaming is the dreamer is aware that they are dreaming. They may have some control over their dream. This measure of control can vary between lucid dreams. They often occur in the middle of a regular dream when the sleeping person realizes suddenly that they are dreaming.

How do lucid dreams work?
Research suggests that the brain undergoes a physiological change during lucid dreaming. In fMRI studies, the prefrontal cortex and a cortical network including the frontal, parietal, and temporal zones have been shown to activate when the brain begins lucid dreaming. This appears related to the "waking consciousness" that characterizes lucidity.

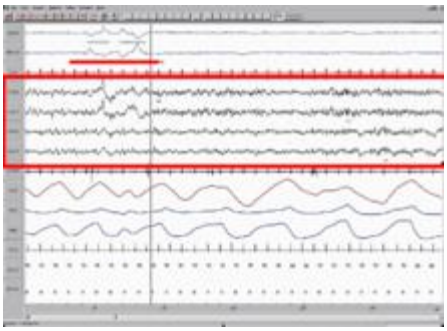
Can anyone have lucid dreams?
Most people do not typically experience lucid dreaming, or do not realize they do, and those who do tend to experience it in a limited way, without full agency. But some experts, and advocates of the potential benefits of lucid dreaming for boosting creativity and confidence, and reducing stress, believe most people can train themselves to experience lucid dreams.

Theories of Dreams…..

When it comes to why we dream, there are many theories. Ever since Freud first proposed that dreams were the "royal road to the unconscious," it has been standard clinical practice to assume that dreams bear meaningful psychological messages, though often in bizarre disguise.
"They do not deceive, they do not lie, they do not distort or disguise… They are invariably seeking to express something that the ego does not know and does not understand," Jung wrote.

Neuroscientists today are continuing to explore dreams, dream interpretation and are finding many health benefits. Wherever the argument may ultimately lead, the new data and theories even now are prompting some clinicians to modify their understanding of the role of dreams in mental life.
In general, researchers divide sleep into two principal phases: rapid eye movement, or REM, sleep, and non-REM sleep. Dreams are associated with REM sleep. The body and brain are in a unique state during REM sleep. The eyes move back and forth under the closed lids, hence

the name. Brain waves are in many ways similar to those during the waking state. At the same time, the major muscles of the body are in a kind of paralysis, so that they move little, if at all.



EEG showing brainwaves during REM sleep

The **threat-simulation theory** suggests that dreaming should be seen as an ancient biological defense mechanism. Dreams are thought to provide an evolutionary advantage because of their capacity to repeatedly simulate potential threatening events. This process enhances the neurocognitive mechanisms required for efficient threat perception and avoidance.

The **expectation-fulfillment theory** posits that dreaming serves to discharge emotional arousals (however minor) that haven't been expressed during the day. This practice frees up space in the brain to deal with the emotional arousals of the next day and allows instinctive urges to stay intact. In effect, the expectation is fulfilled (the action is "completed") in a metaphorical form so that a false memory is not created. This theory explains why dreams are usually forgotten immediately afterwards.

One prominent neurobiological theory of dreaming is the **activation-synthesis theory**, which states that dreams don't actually mean anything. They are merely electrical brain impulses that pull random thoughts and imagery from our memories. The theory posits that humans construct dream stories after they wake up, in a natural attempt to make sense of the nonsensical. However, given the vast documentation of the realistic aspects of human dreaming, as well as indirect experimental evidence that other mammals such as cats also dream, evolutionary psychologists have theorized that dreaming does indeed serve a purpose.

The **continual-activation theory** proposes that dreaming is a result of brain activation and synthesis. Dreaming and REM sleep are simultaneously controlled by different brain mechanisms. The hypothesis states that the function of sleep is to process, encode, and transfer data from short-term memory to long-term memory through a process called consolidation. However, there is not much evidence to back this up. NREM sleep processes the conscious-related memory (declarative memory), and REM sleep processes the unconscious related memory (procedural memory).

The underlying assumption of continual-activation theory is that, during REM sleep, the unconscious part of the brain is busy processing procedural memory. Meanwhile, the level of activation in the conscious part of the brain descends to a very low level as the inputs from

the senses are basically disconnected. This triggers the “continual-activation” mechanism to generate a data stream from the memory stores to flow through to the conscious part of the brain.

Freud: Dreams as the Road to the Unconscious Mind

In his book "The Interpretation of Dreams," Sigmund Freud suggested that the content of dreams is related to wish fulfillment. Freud believed that the manifest content of a dream, or the actual imagery and events of the dream, served to disguise the latent content or the unconscious wishes of the dreamer. Freud also described four elements of this process that he referred to as "dream work":

- **Condensation**: Many different ideas and concepts are represented within the span of a single dream. Information is condensed into a single thought or image.
- **Displacement**: This element of dream work disguises the emotional meaning of the latent content by confusing the important and insignificant parts of the dream.
- **Symbolization**: This operation also censors the repressed ideas contained in the dream by including objects that are meant to symbolize the latent content of the dream.
- **Secondary revision**: During this final stage of the dreaming process, Freud suggested that the bizarre elements of the dream are reorganized in order to make the dream comprehensible, thus generating the manifest content of the dream.

Freud and Dream Interpretation

Jung: Archetypes and the Collective Unconscious

While Carl Jung shared some commonalities with Freud, he felt that dreams were more than an expression of repressed wishes. Jung suggested that dreams revealed both the personal and collective unconscious and believed that dreams serve to compensate for parts of the psyche that are underdeveloped in waking life.

Jung also suggested that archetypes such as the anima, the shadow, and the animus are often represented symbolic objects or figures in dreams. These symbols, he believed, represented attitudes that are repressed by the conscious mind.

Unlike Freud, who often suggested that specific symbols represent specific unconscious thoughts, Jung believed that dreams can be highly personal and that interpreting these dreams involved knowing a great deal about the individual dreamer.

Hall: Dreams as a Cognitive Process

Calvin S. Hall proposed that dreams are part of a cognitive process in which dreams serve as "conceptions" of elements of our personal lives. Hall looked for themes and patterns by analyzing thousands of dream diaries from participants, eventually creating a quantitative coding system that divided what's in our dreams into a number of categories.

According to Hall's theory, interpreting dreams requires knowing:

- The actions of the dreamer within the dream
- The objects and figures in the dream
- The interactions between the dreamer and the characters in the dream
- The dream's setting, transitions, and outcome

The ultimate goal of this dream interpretation is not to understand the dream, however, but to understand the dreamer. Research by Hall revealed that the traits people exhibit while they awake are the same as those expressed in dreams.

Domhoff: Dreams as a Reflection of Waking Life

G. William Domhoff is a prominent dream researcher who studied with Calvin Hall at the University of Miami. In large-scale studies on the content of dreams, Domhoff has found that dreams reflect the thoughts and concerns of a dreamer's waking life.

Domhoff suggests a neurocognitive model of dreams in which the process of dreaming results from neurological processes and a system of schemas. Dream content, he suggests, results from these cognitive processes.

Interpretations

What goes through our minds just before we fall asleep could affect the content of our dreams. For example, during exam time, students may dream about course content. People in a relationship may dream of their partner. Web developers may see programming code. These circumstantial observations suggest that elements from the everyday re-emerge in dream-like imagery during the transition from wakefulness to sleep.

Memories

The concept of 'repression' dates back to Freud. Freud maintained that undesirable memories could become suppressed in the mind. Dreams ease repression by allowing these memories to be reinstated. A study showed that sleep does not help people forget unwanted memories. Instead, REM sleep might even counteract the voluntary suppression of memories, making them more accessible for retrieval. Two types of temporal effects characterize the incorporation of memories into dreams:

- the day-residue effect, involving immediate incorporations of events from the preceding day

- the dream-lag effect, involving incorporations delayed by about a week

The findings of one study suggest that:

- processing memories into dream incorporation takes a cycle of around 7 days
- these processes help further the functions of socio-emotional adaptation and memory consolidation

Dream lag

Dream-lag is when the images, experiences, or people that emerge in dreams are images, experiences, or people you have seen recently, perhaps the previous day or a week before. The idea is that certain types of experiences take a week to become encoded into long-term memory, and some of the images from the consolidation process will appear in a dream.

Themes

The themes of dreams can be linked to the suppression of unwanted thoughts and, as a result, an increased occurrence of that suppressed thought in dreams. Fifteen good sleepers were asked to suppress an unwanted thought 5 minutes prior to sleep.

The results demonstrate that there were increased dreams about the unwanted thought and a tendency to have more distressing dreams. They also imply that thought suppression may lead to significantly increased mental disorder symptoms.

Research has indicated that external stimuli presented during sleep can affect the emotional content of dreams. For example, the positively-toned stimulus of roses in one study yielded more positively themed dreams, whereas the negative stimulus of rotten eggs was followed by more negatively themed dreams.

Typical dreams are defined as dreams similar to those reported by a high percentage of dreamers. Up to now, the frequencies of typical dream themes have been studied with questionnaires. These have indicated that a rank order of 55 typical dream themes has been stable over different sample populations. Share on PinterestSome themes are familiar to many people, such as flying, falling, and arriving late. The 55 themes identified are:

- school, teachers, and studying
- being chased or pursued

- sexual experiences
- falling
- arriving too late
- a living person being dead
- a person now dead being alive
- flying or soaring through the air
- failing an examination
- being on the verge of falling
- being frozen with fright
- being physically attacked
- being nude
- eating delicious food
- swimming
- being locked up
- insects or spiders
- being killed
- losing teeth
- being tied up, restrained, or unable to move
- being inappropriately dressed
- being a child again
- trying to complete a task successfully
- being unable to find toilet, or embarrassment about losing one
- discovering a new room at home
- having superior knowledge or mental ability
- losing control of a vehicle
- fire
- wild, violent beasts
- seeing a face very close to you
- snakes
- having magical powers
- vividly sensing, but not necessarily seeing or hearing, a presence in the room
- finding money

- floods or tidal waves
- killing someone
- seeing yourself as dead
- being half-awake and paralyzed in bed
- people behaving in a menacing way
- seeing yourself in a mirror
- being a member of the opposite sex
- being smothered, unable to breathe
- encountering God in some form
- seeing a flying object crash
- earthquakes
- seeing an angel
- part animal, part human creatures
- tornadoes or strong winds
- being at the movie
- seeing extra-terrestrials
- traveling to another planet
- being an animal
- seeing a UFO
- someone having an abortion
- being an object