

INSTRUCTOR: How many of you remember your dreams from last night? How many of you remember your dreams from every night? Why do we remember some dreams and not others? Something all college students are passionate about is sleep, but we don't often take the time to consider the impact or meaning of these dreams on our reality. In my high school psychology class, we did a segment on the science of dreams. And ever since I have been interested in understanding more about dreams.

Studies have proven not only that dreams significantly resemble our reality, but that they can also affect our reality. Today will take us through some of the many theories about how dreams form and the mind, affect our sleep, and impact our reality. Over the past century there have been and continue to be many different theories about why we dream. In 1899, Sigmund Freud, the famous psychoanalyst, said in his book *The Interpretation of Dreams* that dreams are a disguised fulfillment of a suppressed wish. In 1902, another dream theorist, Carl Jung, claimed that dreams served as a hidden door to one's unconscious, and that they can lead us to discover our true personalities in a way that our conscious mind never could.

These are both examples of some of the classical theories about the function of dreams. Today, more general common sense ideas about dreams have emerged. These ideas are not tied to the ideas of classical dream analysts. Contemporary dream analysts have come to a general consensus that there is probably not a specific reason for why we dream. The reasoning we remember so little of our dreams, if they were so important wouldn't we remember them?

In 2010 psychologist Kelley Bulkeley, co-author of the book *Children's Dreams: Understanding the Most Memorable Dreams and Nightmares of Childhood*, commissioned a demographic study of approximately 3,000 US adults. 68% of them remembered only two to three dreams each month. Only about 10% of women and 7% of men said that they recalled a dream almost every morning. Although there is no clear evidence for why people dream, most analysts agree that dreams do contain meaning.

Some people believe certain symbols or events that happen in dreams can correspond to things that happen in day to day life. This is why people consult dream dictionaries. For example, teeth are a common dream symbol. Dreaming of losing your teeth can symbolize general anxiety, or even a fear of public speaking. In addition to the meaning of dreams,

researchers have long known that dreaming corresponds to rapid eye movement, or REM, during sleep.

So what is REM sleep? Rapid eye movement sleep is when your eyes flicker about while your eyes are closed, usually about 90 minutes into your sleep cycle. Intuitively, argues researcher Yuval Nir, it would seem that eyes flicker as we scan an imaginary scene. But it has been very difficult to provide evidence for it. This difficulty is because of the fact that dreamers in research studies are asleep.

In a well known 1957 study, two experimental psychologists, William Dement and Nathaniel Kleitman, argued that REM corresponds to dreaming. Since that time, there have been numerous studies. For example, today doctor Nir at Tel Aviv University has come very close to proving that REM corresponds with eye movement by monitoring the sleep of volunteers with epilepsy. These volunteers had electrodes implanted deep into their brains to help with treatment, reports the *New Scientist Journal*.

Nir and his colleagues found that activity seemed to spike about a quarter of a second after a flicker, just as it would when seeing an image when you're awake. Doctor Nir reports that he and his research team are sure that the brain is alternating between different imagery. Because the theory of REM sleep and dreaming was so widely accepted, it was also believed that we could only dream during REM sleep. Today we know that is not the case.

For example, according to psychologist G. William Domhoff, children under age five in the sleep laboratory reveal that they only report dreams from REM sleep about 20% to 25% of the time. So REM sleep does not automatically equate to dreaming. In his book, *Dreaming: A Cognitive Psychological Analysis*, dream psychologist David Foulkes, argued that dreams are a cognitive achievement. Which means that we basically learn how to dream, or at least how to remember dreams over time.

Just because we experience REM sleep does not necessarily mean that we dream. Many mammals experience REM sleep, but we have no evidence that they dream. Many sleep researchers believe that REM sleep is the most desirable way to sleep because it's the deepest sleep humans can achieve. In a 2005 study by Tore Nielsen, director of the Dream and Nightmare Lab at the Sacre-Coeur Hospital in Montreal, losing 30 minutes of REM sleep can lead to a 35% REM increase the next night.

According to *Scientific American*, Nielsen also found that dream intensity increased with REM

deprivation. Subjects who were only getting about 25 minutes of REM sleep rated the quality of their dreams much higher on a nine point scale. Although scholars and researchers disagree about whether dreams have some adaptive function, G. William Domhoff argues that human beings gradually invented uses for dreams. In more technical terms, dreams have an emergent function that develops through culture.

Domhoff reports that dreams are used by shamans to diagnose illness. So if shamans were the first psychoanalysts, Freud and Jung are modern day shamans. Domhoff also suggest that dreams give therapists and their patients something in common to talk about. Domhoff's observation is useful because it points out a common misunderstanding about dream interpretation. The content of a dream is less important than how the person describes that dream. In Freud's approach to dream analysis, the therapist learns as much about the patient from how they describe their dream as the dream itself. This is because Freud believed that the dream was a disguised wish.

Neurologist Patrick McNamara argues that dreams affect social relationships. In his book *An Evolutionary Psychology of Dreams*, as well as in essays and other publications like *Psychology Today*, McNamara suggests that the narratives in our dreams can affect how we feel about people, even if we don't mean to. There is a strong evidence that dreams, especially the bad ones, have a significant influence on our waking life.

In a 2004 study by Mark Blagrove, Laura Farmer, and Elvira Williams, anxiety, depression, and acute stress were all found to be associated with nightmare distress and the perspective frequency of unpleasant dreams. So even if there is no strong conclusive evidence that dreams have an impact on our reality and or our daily life, most of the researchers I have consulted suggested there is a correlation. It's simply tough to study dreaming because researchers must rely on indirect data. For example, electrical activity or the self-reports of dreamers.

Dreaming, although still a mysterious event and process, is a fascinating achievement of the human brain. Both practicing analysts, and psychologists, and scientific researchers have been studying dreams since the end of the 19th century. Much time has been spent to understand how dreams impact and affect our relationships and reality. In my time with you today, I have explained how the psychoanalytic analysis of dreams provides us with a more intuitive understanding of dreams and the meaning of dreams. And how scientific research suggests a correlation between dreaming, REM sleep, and well-being. I hope I have inspired

you to reflect on your own dreams and perhaps do more research about this fascinating topic.