**Article: Why We Dream: Five modern theories for dreams and nightmares**

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Freud said that whether we intend it or not, we're all poets. That's because on most nights, we dream. And dreams are lot like poetry, in that in both things, we express our internal life in similar ways. We use images more than words; we combine incongruent elements to evoke emotion in a more efficient way than wordier descriptions can; and we use unconscious associations rather than logic to tell a story.

Freud essentially called dreams those poems we tell ourselves at night in order to experience our unconscious wishes as real. Dreams allow us to be what we cannot be, and to say what we do not say, in our more repressed

daily lives. For instance, if I dream about burning my workplace down, it's probably because I want to dominate the workplace but am too nervous to admit that aggressive drive when I'm awake and trying to be nice to the people who might give me a raise.

Freud certainly had a catchy theory about dreams, but it was also limited. For him, every single dream was the picture of an unconscious wish. But people who have had boring dreams or nightmares might feel something missing from that formulation. In turn, recent theorists have tried to give a more accurate account of why we dream. In the following post, I'll list some of the current theories on why, at night, our brains tell strange stories that feel a lot like literature. I'd like to know if any of these theories resonate with you, or if you have your own belief about why we dream.

(Many great literary minds were obsessed with their dreams. Samuel Coleridge wanted to write a book about dreams--that "night's dismay" which he said "stunned the coming day." Edgar Allan Poe knew dreams fed his literature, and he pushed himself to dream "dreams no mortal ever dared to dream before.")

**Theory #1: The Evolutionary Theory: We Dream to Practice Responses to Threatening Situations**

Ever notice that most dreams have a blood-surging urgency to them? In dreams, we often find ourselves naked in public, or being chased, or fighting an enemy, or sinking in quicksand. Antti Revonsuo, a Finnish cognitive scientist, has shown that our amygdala (the fight-or-flight piece of the brain) fires more than normal when we're in REM sleep (the time in sleep when we dream). In REM sleep, the brain fires in similar ways as it does when it's specifically threatened for survival. In addition to that, the part of the brain that practices motor activity (running, punching) fires increasingly during REM sleep, even though the limbs are still. In other words, Revonsuo and other evolutionary theorists argue that in dreams, we are actually rehearsing fight-and-flight responses, even though the legs and arms are not actually moving. They say that dreams are an evolutionary adaptation: We dream in order to rehearse behaviors of self-defense in the safety of nighttime isolation. In turn, get better at fight-or-flight in the real world.

**Theory #2: Dreams Create Wisdom**

If we remembered every image of our waking lives, it would clog our brains. So, dreams sort through memories, to determine which ones to retain and which to lose. Matt Wilson, at MIT's Center for Learning and Memory, largely defends this view. He put rats in mazes during the day, and recorded what neurons fired in what patterns as the rats negotiated the maze. When he watched the rats enter REM sleep, he saw that the same neuron patterns fired that had fired at choice turning points in the maze. In other words, he saw that the rats were dreaming of important junctures in their day. He argues that sleep is the process through which we separate the memories worth encoding in long-term memory from those worth losing. Sleep turns a flood of daily information into what we call wisdom: the stuff that makes us smart for when we come across future decisions.

**Theory #3: Dreaming is Like Defragmenting Your Hard Drive**

Francis Crick (who co-discovered the structure of DNA) and Graeme Mitchison put forth a famously controversial theory about dreams in 1983 when they wrote that "we dream in order to forget." They meant that the brain is like a machine that gets in the groove of connecting its data in certain ways (obsessing or defending or retaining), and that those thinking pathways might not be the most useful for us. But, when we sleep, the brain fires much more randomly. And it is this random scouring for new connections that allows us to loosen certain pathways and create new, potentially useful, ones. Dreaming is a shuffling of old connections that allows us to keep the important connections and erase the inefficient links. A good analogy here is the defragmentation of a computer's hard drive: Dreams are a reordering of connections to streamline the system.

**Theory #4: Dreams Are Like Psychotherapy**

But what about the emotion in dreams? Aren't dreams principally the place to confront difficult and surprising emotions, and sit with those emotions in a new way? Ernest Hartmann, a doctor at Tufts, focuses on the emotional learning that happens in dreams. He has developed the theory that dreaming puts our difficult emotions into pictures. In dreams, we deal with emotional content in a safe place, making connections that we would not make if left to our more critical or defensive brains. In this sense, dreaming is like therapy on the couch: We think through emotional stuff in a less rational and defensive frame of mind. Through that process, we come to accept truths we might otherwise repress. Dreams are our nightly psychotherapy.

**Theory #5: The Absence of Theory**

Of course, others argue that dreams have no meaning at all--that they are the random firings of a brain that doesn't happen to be conscious at that time. The mind is still "functioning" insofar as it's producing images, but there's no conscious sense behind the film. Perhaps it's only consciousness itself that wants to see some deep meaning in our brains at all times.