Violent dreams may hint at why dreaming evolved, researchers say

October 30 2005

Twenty years ago, scientists discovered a bizarre disorder whose victims act out their dreams while asleep, often hurting themselves or their spouses in the process.
One patient kicked a hole in his bedroom wall, according to a paper published in a medical journal. Another tried to jump out a window. A third fired an unloaded gun, a fourth attempted to set his bed on fire. Still others tried to choke their wives.

Now, scientists say a new study has provided surprising insights into the condition, suggesting patients tend not only to act out their dreams, but to have many more violent ones than other people.

This, in turn, hints that the disorder could shed light on an old debate, the researchers claim: why dreams evolved, and what function they serve. One theory that deserves particular attention in light of the findings, they add, is that dreams evolved as a way to mentally rehearse threatening situations.

Dreams appear “severely altered” in the disorder, known as REM Sleep Behavior Disorder or RBD, wrote the researchers in the Oct. 11 issue of the research journal Neurology. Their study of 98 patients found that the patients reported having violent dreams more than four times as often as healthy people.

This was striking, the researchers added, especially given that past research has shown aggression, misfortune and other negative thoughts

tend to weigh prominently even in healthy people's dreams.

Yet the sleep disorder patients were no more violent in real life than ordinary, the researchers wrote, and some past reports have suggested they may be even less so.

The prevalence of the disorder is unknown, but estimates have ranged from 0.5 percent to 1 percent of the population. Patients are most often men, usually middle-aged or older.

The REM in the name of the condition stands for Rapid Eye Movement, a phase of sleep normally associated with dreaming. The name reflects the fact that patients act out their dreams. This isn't the case with sleepwalking, a separate condition, which normally occurs in a different phase of sleep.

RBD is usually treatable. Doctors frequently prescribe the drug Clonazepam for the condition. Some physicians also argue that many cases can be treated without drugs, by taking steps to make the bedroom safer.

Patients often flail, kick and punch in their sleep. This not uncommonly leads to injuries, though no deaths have been reported. If awoken, patients will often say they were dreaming of fending off attackers, protecting their families from intruders or running from a threat.

Healthy people don't act out their dreams because the brain has a mechanism for immobilizing the body during the dreaming stage of sleep. But this mechanism malfunctions in RBD.

In the new study, Maria L. Fantini and colleagues at Vita-Salute San Raffaele University in Milan, Italy, decided to see if patients also experience different types of dreams. Past reports suggested patients had

more vivid or violent dreams, but the issue hadn't been studied in detail, according to Fantini and colleagues.

The new study is "very important," said Mark Mahowald of the University of Minnesota in Minneapolis, a co-discoverer of RBD, in an email. "Our group had reported anectodally that the aggression experienced in dreams of patients with RBD was out of character with their daytime behavior. This careful study has clearly documented that fact."

Fantini's team asked participants in their study simply to describe the most recent dream or dreams they could recall. Sixty-six percent of sleep disorder patients recounted at least one violent dream, compared with 15 percent of healthy people who were surveyed for comparison.

The patients' dreams also tended to have different casts of characters, which may have been related to the threatening themes: more animals, and more strangers. But "Interestingly, sexual elements in dreams were never reported by patients," wrote the researchers.

The violent dreams and the uncontrolled body movements in RBD likely result from the same underlying brain problem, Fantini and colleagues wrote—possibly hyperactivity in the brain stem, a primitive part of the brain connected to the spinal cord. A leading theory claims the brain stem is at the root of a brain network for dreaming.

Fantini and colleagues also said the findings draw attention to another theory, which addresses why dreaming evolved rather than how it physically occurs.

Proposed by Finnish psychologist Antti Revonsuo five years ago, the theory holds that dreaming evolved as a way to rehearse threatening situations, so that the dreamer can better handle them in real life.

For the vast majority of time that humans were evolving, the most common threatening situation was a wild animal attack, Fantini and colleagues noted. Dreams may reflect this.

Children dream particularly often of animal or monster attacks, they added. This may reflect that stage of evolution most closely, the researchers said, since all organisms tend to share traits with their evolutionary ancestors most closely when they're young.

"Interestingly, in the present study, dreams in RBD were characterized by similar percentages of aggression and animal characters to those reported in children," Fantini and her team wrote.

Consistent with their findings, they wrote, Revonsuo "suggested that RBD may originate from an inappropriate activation of the [brain's] threat-simulation system, leading to an intensive threat simulation during dreams."

*by Jack Lucentini - World Science (*http://www.world-science.net*)*

The original story can be found here*.*