

# Mind-Reading Scanner Could Record and Analyze Dreams, Says Brain Researcher

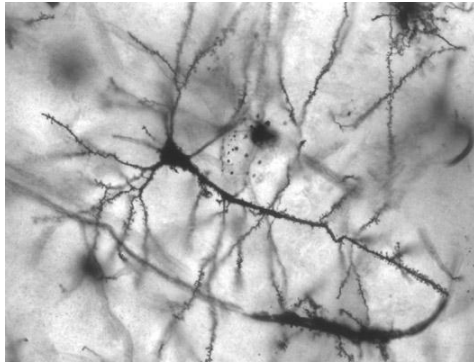
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## Matching Neurons to Specific Concepts

Researchers are building databases linking specific thoughts to specific neurons in the brain in hopes of creating an electronic system that can record dreams.

*MethoxyRoxy via [Wikimedia](#)*

If you ever have trouble remembering your dreams, you're certainly not alone. Our dreams are as elusive as the mechanisms behind them, few of which are understood completely. But Dr. Moran Cerf wants to develop a system capable of reading and [recording your dreams](#) electronically. Cue the "Inception" theme music.

Cerf believes that it's possible to create a system that would allow psychologists to compare patients' recollections of their dreams with an electronic visualization of the activity in their brains, and he's taken the first steps toward doing so via a study that associates specific, individual neurons with specific objects or ideas.

By building a database of associations for each patient, Cerf and his colleagues could figure out what a patient was thinking about without him or her saying so. With a large enough database, the thinking goes, a third party could "read minds" by looking at which neurons light up during the course of a dream, creating an electronic record of said dream.

It's quite a leap from being able to identify a neuron associated with a specific thought or concept and being able to translate the rich canvas of a dream into an electronic visualization. In fact, more than one person in the fields of psychology and neurology seem to think the idea is far-fetched.

But the idea behind Cerf's research is tantalizing and could lead to better understandings of the brain's function if not a dream recorder. Better brain-machine interfaces are the great promise for those trying to develop systems to enable incommunicative people, such as those with locked-in syndrome, to communicate again. And as brain sensor technology provides higher resolutions and becomes less invasive, a system that can identify and respond to abstract concepts at the neural level could be the basis for thought-controlled machines in the future.

For now, Cerf continues to build his neuron-thought databases. The next step is to monitor the brain activity of his volunteer patients – who already have electrodes implanted in their brains to treat them for brain seizures – as they sleep to see if he can decipher exactly what it is they are dreaming of. By comparing how different brains tie different thoughts and concepts to different neurons, Cerf could learn quite a bit about memories and how the brain organizes the information it collects.