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Dreaming In the Digital Age

Artificially Stimulating Dreams: The Unrecognized Dangers

It's time to look more closely at the risks of new dream technologies.

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Source: Kelly Bulkeley

Technological changes in the study of dreams are opening new horizons for growth, insight, healing, and creativity. But these exciting technologies also have the potential for abuse, either through ignorance or deliberate ill intent. If we want to turn the positive potentials into realities, we also have to think carefully about how to limit, diminish, or eliminate the negative possibilities.

This is the first of three posts I'll write about new technologies of dreaming with significant negative risks. I'll look at technologies for *stimulating dreams*, *imaging dreams*, and *tracking dreams*. Each area has many positive potentials as well, but we already know a fair amount about the happier side of the equation. What those of us in the dream research field have not yet discussed enough are the dangers looming ahead and how best to prepare for them.

Stimulating dreams involves the use of various substances and procedures to intensify the dreaming process. The goal is to push beyond the natural bounds of dream experience and, if possible, to elicit dreams with special qualities (e.g., pleasure, lucidity, self-discovery). For example, researchers have long known about the dream-altering effects of galantamine, a plant extract that increases the neurotransmitter acetylcholine that predominates in REM sleep, and ayahuasca, an Amazonian plant that enhances visionary experience in waking and dreaming. These substances are not new, but as their chemical profiles become better known, researchers will be able to isolate, refine, and strengthen their active ingredients and deliver them more directly to the brain and body.

Many of the prescription medications used by millions of people today have the "side-effect" of disrupted sleep, disturbed dreaming, increased nightmares, and a variety of other parasomnias. These effects are rarely studied by medical science, but they clearly indicate the sensitivity of the sleep and dreaming process to chemical alterations. Neuroscientific resources already exist for the development of psychoactive drugs that could be specifically aimed at boosting the power of the dreaming brain, or shutting it down. Although there is currently no commercial market for such drugs, that may not last for long. People who suffer from PTSD nightmares are likely to be among the first recipients of drugs that try to suppress the dreaming process as a whole. But it won't stop there. If given the option, many healthy, non-traumatized people might be willing to take a medication that completely stops them from dreaming, just like one might take a drug to stop the annoyance of indigestion or flatulence.

Similar results will likely emerge from research on a variety of external tools that can be used to impact the dreaming process while a person is asleep. Devices like transcranial magnetic stimulators can alter neural activities in the brain during the sleep cycle. Light-emitting masks worn over the eyes can send a signal to people that they are asleep, thus potentially triggering a lucid dream. Aural beats played during sleep can influence the electrical wave patterns of the brain, amplifying some of those patterns and diminishing others. Here again, there is currently no significant commercial market for such devices, but that is bound to change, and perhaps sooner than we expect.

The reason is that dream-stimulating substances and devices will in the future be able to target specific parts of the brain with greater speed, intensity, and control than ever before. At some point, the technologies for stimulating dreams will allow people to select special kinds of dreams to experience during sleep—happy dreams, arousing dreams, adventurous dreams, enlightening dreams—just like people today choosing which video games to play or which movies to watch. Designer drugs will produce designer dreams. There will be "100 Hottest Dream" lists showing which artificially induced dream scenarios are most popular. Dream DJ's will become a new breed of psycho-artist.

We can make better sense of these prospects if we look at them in the historical context of rituals of dream incubation, which have been practiced in religious traditions around the world as a means of evoking spiritually significant dreams. All substances and devices that try to stimulate dreams are essentially forms of dream incubation, and this will be true in the future, too. The big difference is that these new dream incubation methods will operate on people's brains with vastly greater speed and intensity than previously possible, offering much more control over the dreaming process.

This prospect of heightened speed, intensity, and control is very alluring, but it also poses the risk of abruptly thrusting people into realms of the psyche for which they are dangerously unprepared. This is precisely the virtue of classic dream incubation rituals in ancient Greece, India, and many indigenous cultures: they provide a safe framework of guidance, meaning, and support, which allows the individual to go deeply into the realm of dreaming and then safely return to the community with revitalizing energy. Without attention to the need for such a framework (similar to the holding space of depth psychological therapies), new technologies may produce overly intensified dreams that people are not able to handle or process.

The promise of greater control is especially worrisome, because an emphasis on controlling dreams can limit a person's encounters with deeper, more autonomous dimensions of the unconscious. For many researchers and therapists in this field, the highest value of dreaming is the way it reveals aspects of the psyche *beyond* the ego and its sphere of rational control. By temporarily surrendering ego control during sleep and dreaming, we gain access to the broader perspective and innate intelligence of the unconscious psyche. The concern, then, is that too much focus on greater control of dreaming can cut us off from that inner resource, leading to myopia, overconfidence, and the failure to recognize danger before it's too late.

What can dream researchers do to prevent such problems from arising? We can start with better education about the nature of sleep and dreaming and their vital roles in human health. We can develop alternative therapies and non-drug based treatments for people with PTSD. We can insist on more serious investigation of the side-effects of prescription medications and their harmful impacts on sleep and dreaming. And we can show how much more is possible by teaching people to use time-honored methods of dream incubation to explore the depths of their unconscious minds.

As an overall assessment, future progress in dream-stimulating substances and devices seems inevitable, but the risks are huge and need much more study. There is currently no reason to believe the dreams generated by these new technologies will be better, more profound, or more insightful than dreams generated by traditional methods of dream incubation.

About the Author

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