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DREAM TECH

Startups trying to measure your sleep and figure out what's in your head at night

BY JONATHAN RIGGS | MARCH 23, 2015

Dreams are the ultimate mystery: What exactly is going on when our conscious minds turn off and our innermost selves take over? Throughout time, people have imbued dreams with the ability to predict the future, reveal hidden truths, and boost creativity.

It makes sense, then, that with today's ever-more-sophisticated technology, the idea of monetizing this mysterious, universal process seems like, well, a dream come true. After all, with the rise of wearable technology capable of measuring biometrics, like the Fitbit or Apple's iWatch, every bodily process presents a rich marketing opportunity.

Inspired by the potential intersection of technology and dreams, psychologist Richard Wiseman teamed up with British mobile development company Yuza to create an app that would serve two purposes. Not only would it allow people to attempt to shape their own dreams, but the information collected would serve as a large-scale experiment itself.

Before going to sleep, users of this app, Dream:ON, select from a menu of "soundscapes," set an alarm, then place their phone on their mattress. Approximately half an hour before the alarm is set to go off—when the sleeper should be in the final REM period of their sleep cycle—the app triggers motion-detecting sensors to determine if the sleeper is, in fact, dreaming. If they are, the app plays the soundscape. When the dreamer awakens, they immediately enter the details of their dream into the app.

Since its launch in 2012, the app has been downloaded more than 500,000 times and has logged tens of thousands sets of dream-data. Based on this data, Wiseman says that people's dreams are, indeed, influenced by choosing various soundscapes.

"The effect may be due to the subtle sounds being played during the night, the power of suggestion, or a combination of the two. Whatever the explanation, we know that it is possible to help people shape their dreams," he said. "Perhaps most exciting of all, the work suggests that it might now be possible to use this effect to help people in their waking lives."

Our dreams aren't the only nighttime data in demand—so are our sleep patterns.

Created by Julia Hu, the startup called Lark began as a wristband sleep tracker and silent alarm clock. It became more successful, however, after shedding these unwieldy extras, and evolving into an app that constantly processes and comments on your fitness levels and sleep activity.

Lark is certainly not the first or only startup to try sleep-tracking, of course.

Mimo is a company that sells a sensor-embedded cotton kimono for babies that monitors their breathing, body position, sleep activity, and skin temperature.

It's easy to see why all this data is desirable all around. The importance of getting enough sleep is enormous for human health, and the implications for products like Dream:ON or Lark to empower you to recognize and address sleep quality issues is laudable.

Insomnia, for example, is a devastating condition whose causes and cures still aren't fully understood. While it's tempting to think of as a condition mostly impacting those under great stress or driven to create—singer/songwriter Jenny Lewis famously discussed how a two-year battle with sleeplessness not only shaped last year's *The Voyager* but nearly killed her—insomnia and sleep deficiencies actually impact the majority of people.

According to a TIME magazine article, Americans spent around $32 billion in 2012 alone on sleep aids.

With apps and information and more power than ever in the palm of our hands, the future of sleep and dreaming (like the future of many of our health concerns) will become increasingly individualized.

Every person who has access to all this technology will be empowered to seek the avenue that suits them best. Wiseman hopes that Dream:ON can lead to further healing options, including a dream therapy of sorts.

According to him, about 80% of dreams revolve around anxiety in some form. In a typical night of dreaming, the sleeper's first series of dreams focus on the root of whatever their particular anxiety is. Ideally, the dreams should become calmer in nature as the subconscious works through the anxieties until the last dream helps the sleeper awaken refreshed and relaxed.

An app like Dream:ON, Wiseman says, represents his hope that, one day, full-fledged dream control could be used as a therapeutic tool to treat a host of mental health issues such as depression.

After all, the ultimate benefit of better sleep is better health. As Wiseman describes in his book *Night School: Wake Up to the Power of Sleep*, higher-quality sleep helps people become happier, healthier and more successful in facing the challenges of their day, so there is a need to explore this emerging frontier.

"For years the self-development movement has focused on improving people's waking lives," he writes. "It's time to reclaim the night, to change your life while you are sound asleep, and to wake up to the new science of sleep and dreaming."

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Photo: Joseph Gordon-Levit in the film Inception. Credit: Just Jared