

Scientists Find Evidence That the Brain Changes During Hypnosis

By Paige Towers • August 1, 2016 at 3:40pm

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Although hypnosis

has shown itself to be an effective method for treating mental health issues, managing physical pain and even treating insomnia

, it's often presented as entertainment, or as something eerie and supernatural. But hypnosis hasn't just developed an untrustworthy reputation with the public: for decades, scientists have argued whether hypnosis actually alters the way a subject's brain works, or is merely

a response to an expectation

, aka a placebo effect.

On Thursday, new research

from Stanford University gives evidence to the belief that the disassociated nature and lowered selfconsciousness associated with hypnosis is not merely a psychological response. According to the study, which was published in *Cerebral Cortex*,

some areas of our brains function differently when under the effects of hypnosis. These changes in neural activity offer possible explanations for the enhanced focus that hypnotized subjects often demonstrate, as well as their increased suggestibility.

In subjects deemed to have a high susceptibility for hypnosis, the areas of the brain associated with internal and external focus, awareness, and evaluation were less active.

As quoted in The New York Times,

the lead author of the study, Dr. David Spiegel, said, “I think we have pretty definitive evidence here that the brain is working differently when a person is in hypnosis.” A professor of psychiatry and behavioral sciences at Stanford, Dr. Spiegel also believes that the affected areas of the brain help explain the characteristic behaviors associated with being in a hypnotized state.

He and his team studied 57 healthy subjects. Based on evaluation, 36 scored very high on tests measuring their susceptibility to hypnosis, and 21 scored very low. All of the subjects underwent four conditions in a MRI scanner, including two experiences of hypnosis which were guided by prerecorded instructions. In one hypnotic experience, for instance, the subjects were instructed to imagine that they were on a relaxing vacation.

11/10/2016 Hypnosis Seems to Have An Actual Effect on Our Brains | Van Winkle's The researchers found that in subjects deemed to have a high susceptibility for hypnosis, the areas of the brain associated with internal and external focus, awareness and evaluation were less active. As well, during times that subjects reported they felt more hypnotized, certain regions of the brains decoupled. Meaning? Certain connections made in hypnotized subjects' brains were lessened; they were experiencing a change.

As stated in the study, this reduced activity in certain parts of the brain “could decrease personal agency and contribute to heightened suggestibility as well as the ability to dissociate from distress and pain that are characteristic of hypnosis.”

While hypnosis may continue to be associated with fasttalking men in fancy suits, or psychiatrists swinging pocket watches in darkened rooms, this new research provides evidence to the idea that people enter into hypnotic states not just because of their responses, but due to biology.

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