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Brain asymmetry eases hypnotic trance

IF HYPNOSIS leaves you unmoved, blame the wiring in your brain. It seems those who find it easier to fall into a trance are more likely to have an imbalance in the efficiency of their brain's two hemispheres. The finding backs hotly disputed claims of a biological basis for hypnosis.

Around 15 per cent of people are thought to be extremely [susceptible](#) to hypnosis, while another 10 per cent are almost impossible to hypnotise. The rest of us fall somewhere in between.

Sceptics argue that rather than being in a genuine trance, some of us are simply more suggestible and therefore more likely to act the part. However, recent studies have hinted that during hypnosis, there is less connectivity between different regions, and less activity in the rational, left side of the brain, and more in the artistic right side. Such findings suggest hypnosis is more than acting.

To see if there are also differences between the brains of susceptible and unresponsive volunteers when they were awake, [Peter Naish](#) of the Open University in Milton Keynes, UK, used a standard test of hypnotic susceptibility, that combines motor and cognitive tasks, to identify 10 volunteers of each type. He then gave each volunteer a pair of spectacles with an LED mounted on the left and right side of the frame. The two LEDs flashed in quick succession, and the volunteers had to say which flashed first. Naish repeated the task until the gap between the flashes was so short that the volunteers could no longer judge the correct order.

Naish found that hypnotically susceptible volunteers were better at perceiving when the right LED flashed first than when the left one did. This suggested that the left hemisphere of their brain was working more efficiently (visual pathways cross over in the brain, so left controls right and vice versa). In contrast, the non-susceptible people were just as likely to perceive the right LED flashing first as the one on the left.

These differences in the balance of brain efficiency persisted when Naish tried to hypnotise both groups. During hypnosis, the brains of those in the susceptible group seemed to switch "states", becoming faster at spotting when the left LED flashed first. Meanwhile, the efficiency of the hemispheres remained relatively even in the non-susceptible people. They didn't fall into a trance, but their performance on the task started to deteriorate (*Consciousness and Cognition*, DOI: [10.1016/j.concog.2009.10.003](https://doi.org/10.1016/j.concog.2009.10.003)).

Naish suggests that successful hypnosis requires temporary domination by the brain's right side, a state that might be much easier to bring about in people who tend to have an imbalance in the efficiency of their two hemispheres, even when awake.

Hypnosis requires right side domination. People with asymmetric brains are more susceptible

"It fits in with a theory that hypnosis involves a transition from left to right hemispheric dominance," says [Zoltan Dienes](#) of the University of Sussex in Brighton, UK. He has used transcranial magnetic stimulation to temporarily reduce activity in the left hemisphere and found that this increases responsiveness to hypnosis. "It is as if people who don't have the natural ability to become right hemisphere dominant are being given a helping hand by reducing activity in their left hemisphere," says Naish.