

People who meditate are more aware of their unconscious brain

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People who meditate are more aware of their unconscious brain activity – or so a new take on a classic “free will” experiment suggests.

The results hint that the feeling of conscious control over our actions can vary – and provide more clues to understanding the complex nature of free will.

The famous experiment that challenged our notions of free will was first done in 1983 by neuroscientist Benjamin Libet. It involved measuring electrical activity in someone’s brain while asking them to press a button, whenever they like, while they watch a special clock that allows them to note the time precisely.

Typically people feel like they decide to press the button about 200 milliseconds before their finger moves – but the electrodes reveal activity in the part of their brain that controls movement occurs a further 350 milliseconds before they feel they make that decision. This suggests that in fact it is the unconscious brain that “decides” when to press the button.

In the new study, a team at the University of Sussex in Brighton, UK, did a slimmed-down version of the experiment (omitting the brain electrodes), with [57 volunteers, 11 of whom regularly practised mindfulness meditation](#). The meditators had a longer gap in time between when they felt like they decided to move their finger and when it physically moved – 149 compared with 68 milliseconds for the other people.

This suggests they were recognising their unconscious brain activity earlier than most people, says [Peter Lush](#), a member of the team, supporting the belief among meditators that it helps them to become more aware of their internal bodily process, he says. Such a result has previously been [predicted by the Buddhist scholar Georges Dreyfus](#).

## Spectrum of awareness

The non-meditators were also tested on how well they could be hypnotised. After they were out of any hypnotic trance, the experiment was repeated. Those who could be easily hypnotised felt like they decided to move their finger 124 milliseconds later than did those of low hypnotisability. In fact, the easily hypnotisable group had the sensation of deciding to move 23 milliseconds after their finger had actually moved.

It is not that people who are highly hypnotisable are puppets, says Lush, but that they may have less conscious access to their unconscious intentions.

“Self-awareness of our intention to act is a fundamental part of being human, so anything that affects it is important,” says [Stephen Fleming](#) of the Wellcome Trust Centre for Neuroimaging in London. “The results indicate that hypnotisability and mindfulness might be at opposite ends of a spectrum of self-awareness,” he says. Previous research has suggested that [people who meditate are less easy to hypnotise and people who can be hypnotised are less “mindful”](#), in other words, are less aware of their internal bodily processes.

Another study using Libet’s set-up has shown that people who are impulsive also have [shorter time intervals between their conscious awareness of an intention to act and the act itself](#).

However others have criticised drawing broad conclusions from such experiments, saying that giving people an instruction to sit and press a button at some random time-point is an artificial situation and [may not be relevant to real-life decisions](#) – like voting in a referendum.

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