

# Hypnosis study unlocks secrets of unexplained paralysis

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(Medical Xpress)—Hypnosis has begun to attract renewed interest from neuroscientists interested in using hypnotic suggestion to test predictions about normal cognitive functioning.

To demonstrate the future potential of this growing field, guest editors Professor Peter Halligan from the School of Psychology at Cardiff University and David A. Oakley of University College London, brought together leading researchers from [cognitive neuroscience](#) and hypnosis to contribute to this month's special issue of the international journal, *Cortex*.

The issue illustrates how methodological and theoretical advances, using hypnotic suggestion, can return novel and experimentally verifiable insights for the neuroscience of consciousness and motor control. The research also includes novel brain imaging studies, which address sceptics' concerns regarding the subjective reality and comparability of hypnotically suggested phenomena that previously depended on subjects' largely unverifiable report and behaviour.

Halligan and Oakley also contribute to a new and revealing brain imaging study in the special issue that explores the brain systems involved in hypnotic paralysis. This research follows their earlier pioneering work on hypnotic leg paralysis reported in the *Lancet* in 2000.

Patients with "functional" or "psychogenic" conversion disorders present symptoms, such as paralyses, are clinically challenging. They comprise between 30 and 40% of patients attending neurology outpatient clinics and place a huge strain on [public health services](#).

Professor Halligan of Cardiff University's School of Psychology said: "This new study, working with colleagues at the Institute of Psychiatry in London, suggests that hypnosis can provide insights into of the [brain systems](#) involved in patients who display symptoms of [neurological illness](#), but without evidence of [brain damage](#). New insights show that symptoms experienced by patients with functional or dissociative conversion disorders (e.g. medically unexplained paralysis) can be simulated using targeted hypnotic suggestion.

"In this study we monitored brain activations of healthy volunteers with hypnosis induction who experienced paralysis-like experiences which could be turned 'on' and 'off'. The suggestion resulted in subjects being unable to move a joystick together with a realistic and compelling experience of being unable to move and control their left hand despite

trying.

"When compared to the completed movements, the suggested paralysis condition revealed increased activity in brain regions know to be active during motor planning and intention to move – and also brain areas involved in response selection and inhibition."

Comparing symptoms conveyed by conversion disorder patients and those produced by 'paralysis' suggestions in hypnosis, has revealed similar patterns of brain activation associated with attempted movement of the affected limb.

These findings could inform future studies of the [brain](#) mechanisms underpinning limb paralysis in patients with conversion disorders. More importantly they could lead to effective treatments.

Provided by Cardiff University

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