

New research proves color is not a black and white issue

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Scientists at the University of Hull have found that some people have the ability to hallucinate colours at will - even without the help of hypnosis.

The study, published this week in the journal *Consciousness and Cognition*, was carried out in the Department of Psychology at the University of Hull. It focused on a group of people that had shown themselves to be 'highly suggestible' in hypnosis.

The subjects were asked to look at a series of monochrome patterns and to see colour in them. They were tested under hypnosis and without hypnosis and both times reported that they were able to see colours.

Individuals' reactions to the patterns were also captured using an MRI scanner, which enabled the researchers to monitor differences in [brain activity](#) between the suggestible and non-suggestible subjects. The results of the research, showed significant changes in brain activity in areas of the brain responsible for visual perception among the suggestible subjects only.

Professor Giuliana Mazzoni, lead researcher on the project says: "These are very talented people. They can change their perception and experience of the world in ways that the rest of us cannot."

The ability to change experience at will can be very useful. Research has shown that hypnotic suggestions can be used to block pain and increase the effectiveness of psychotherapy.

It has always been assumed that hypnosis was needed for these effects to occur, but the new study suggests that this is not true. Although hypnosis does seem to heighten the subjects' ability to see colour, the suggestible subjects were also able to see colours and change their brain activity even without the help of hypnosis.

The MRI scans also showed clearly that although it was not necessary for the subjects to be under hypnosis to be able to perceive colours in the tests, it was evident that hypnosis increased the ability of the subjects to experience these effects.

Dr William McGeown, who also contributed to the study, says: "Many people are afraid of hypnosis, although it appears to be very effective in helping with certain medical interventions, particularly pain control. The work we have been doing shows that certain people may benefit from suggestion without the need for hypnosis."

The study, which was partially funded by the BBC, used a control group formed of less suggestible people, or people less likely to respond to hypnosis. It was found that this group of people were not able to hallucinate colour and, again, these reported results were supported by MRI scans.

Provided by University of Hull

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