

Mechanism of 'blindsight' explored

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Rice University researchers report inducing temporary "blindsight" in healthy volunteers.

Blindsight is a phenomenon in which people with a deactivated primary visual cortex -- an area of their brain essential for visual perception -- can still sense objects in their field of vision.

Researcher Tony Ro and colleagues tested blindsight in human subjects with normal vision.

Using an electromagnetic brain stimulation technique, the researchers deactivated the primary visual cortex in 12 volunteers. An object on a screen -- such as a colored disk or a horizontal or vertical bar -- was then flashed in front of the temporarily blinded volunteers.

Although the volunteers reported no awareness of the objects' characteristics the majority of the time, they also guessed correctly at a level significantly higher than chance.

The results suggest the existence of a visual pathway that bypasses the primary visual cortex and can process some characteristics unconsciously, the scientists said.

The research appears in the online early edition of the Proceedings of the National Academy of Sciences.

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