

This brain-reading cap lets locked-in syndrome patients have conversations

Infrared light sees the difference between 'yes' and 'no'



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This is pretty incredible. Patients with locked-in syndrome, who are totally paralysed and unable to speak, have been able to communicate with doctors and family via a brain-reading cap.

The small scale study, of four patients, was carried out at the University of Tübingen in Germany. The cap uses a system called fNIRS (functional near-infrared spectroscopy). Infrared light is used to detect blood flow in the brain and the neuroscientists first used test questions - with obvious 'yes' or 'no' answers - to work out which blood flow signalled 'yes' and which signalled 'no'.

Once the team was satisfied, with a 70% accuracy, for each of the three women and one man in the study, they then began to hold simple conversations with the patient using the brain cap to respond.

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When asked if they were happy with life, all four answered 'yes' and the man told his daughter not to marry her boyfriend by answering 'no' nine times out of ten when posed the question.

The next step for Niels Birbaumer, the lead neuroscientist on the study, is to work on a communication system which uses the brain sensing cap to allow the locked-in wearer to speak proactively.

He cited Jean-Dominique Bauby's blinking method for dictating *The Diving Bell and the Butterfly* as inspiration. Bauby was able to move his eyelid but the cap could, in future, allow completely paralysed patients the chance to communicate in meaningful ways.

We've seen brain measuring headbands, helmets and glasses with functions as wide as [detecting stress](#) and [controlling Netflix](#). And while this is a very small study, there's clearly life-changing tech at work.

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In Fifth Grade we were all taught our bodies are made of Atoms. Atoms have Electrons in their outer Shells. Electrons Repel, thus no Atom can Touch any other Atom. You cannot Touch the Chair you are sitting on. All human body will have over 10 to the 27th electrons. This is more than the number of grains of sand on the Earth.

TIMES the number of visible Stars in the Sky. No Human being has ever been able to Directly Perceive our True Energetic Nature. So any Human Conceived Philosophy or Perception is flawed. Our senses can be lied to. Our Perception can be Twisted by Motivation. Our Income can Influence Ideas. As We Think, We Are. The Powers of the Mind are Infinite. We can Expand our Consciousness by Reducing the Judgements and in Accepting the Impermanence + Fluidity of Philosophies.

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