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Breakthrough: Mind-Reading Software Could Make Paralyzed People Speak!

A first step towards mind reading

In movies, machines and people can read your mind. Till we achieve that, a first step could be done, which would be quite a breakthrough: translate the thoughts of a paralyzed person into speech in a pioneering experiment. Jonathan Brumberg from Boston University revealed the results of his team at the meeting of the Society for Neuroscience in San Diego, California last week. The researchers made their investigation with Eric Ramsay, 27, a young man left paralytic by a car accident for eight years. He is well aware but he cannot express other way than through eye movements. Now researchers, tracking cell signaling between the young man's brain cells, could translate his brain activity into sounds, according to The New Scientist. In 2004, researchers implanted in the patient a wireless electrode, 6 mm below the surface of his brain, in the area known to trigger the impulses that go to the muscles of the tongue and mouth, resulting sound production and speech. After investigating the patterns of these nerve signals, triggered when Ramsey intended to speak, the researchers developed a software that could transform them into a computer "voice", which one day could generate blocks of words. The investigations revealed a clear brain pattern forming when Ramsey attempted to pronounce the vowels "oh", "ee" and "oo". Various patterns were linked with many sounds, and the research team assesses that they can correctly say what Ramsey wanted to say in 80 % of the cases. In a few weeks, a computer could turn Ramsay's brain pattern signaling into sounds which will be audible in real time. After vowels, the researchers will tackle consonants, the last step which will give Ramsey back the possibility to "speak". "Conversation is what we're hoping for, but we're pretty far from that," said Joe Wright of Neural Signals, a Duluth, Georgia, based company, which develop the technology employed by Ramsey. The scientists chose Ramsey for their investigation because of his young age, which means he has a long further life expectancy and can withstand several investigations weekly.