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Neurons For Free Will

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Researchers [implanted](#) electrodes in patients to track their neurons. They asked them to look at a clock and press a button, and then to tell them the exact time they decided to press the button. Daniela Schiller and David Carmel [report](#):

[A]bout a quarter of these neurons began to change their activity *before* the time patients declared as the moment they felt the urge to press the button. ... So it turns out that there are neurons in your brain that know you are about to make a movement the better part of a second before you know it yourself. What does that mean?

It might be tempting to conclude that free will is an illusion.

Some have believed this since the days of Libet, who recorded EEG and found it contained a specific pattern that predicted his subjects movements before they felt the conscious will to act. EEG measures electrical activity on the surface of the head, combining information from billions of neurons; Fried and his colleagues have gone further, by finding individual neurons that do this. But before reaching any sweeping conclusions, it is important to remember that this study looked at a very rudimentary kind of action. The decision to move a finger hardly ranks as the same kind of free will we exercise when we make moral choices or major life decisions.

(Video: "Ode to the Brain" is the ninth episode in the [Symphony of Science](#) music video series, featuring Carl Sagan, Robert Winston, Vilayanur Ramachandran, Jill Bolte Taylor, Bill Nye, and Oliver Sacks.)

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