

# Ten seconds of free will

by Denny Borsboom

Several years ago I attended a lecture by Berkeley philosopher John Searle. Someone in the audience asked: ‘What do you think about free will?’ Searle replied: ‘I have just one thing to say about free will. This is free will.’ Upon saying this, he raised his arm. ‘Next question, please.’

At the time, I considered this a bad answer to a good question, but I have since come to view it as a good answer to a bad question. The issue of whether we have free will necessarily involves several blanks that must be filled in, namely who the ‘we’ is supposed to be, what a ‘will’ is, and from what that will ought to be ‘free’. Filling in these blanks gives rise to nonsensical, unsolvable, or trivial questions. Searle answered one of the trivial ones by raising his arm, simply because he did not do it at gunpoint.

There exist people who believe that every interesting question has an experimental answer, and free will is no exception to their territorial ambitions. For instance, in the early 1980s, Benjamin Libet let subjects perform voluntary actions, like flexing their wrists, and recorded electro-encephalogram (EEG) measures of their cortical activity. It turned out that the so-called readiness potential (a peak in the EEG readings that precedes action) occurred before the moment at which subjects reportedly had chosen to flex their wrist. The brain ‘acted’ before the subjects ‘decided’.

Some concluded from this that we have no free will; rather, we are the slaves of our brains. I have always found this to be a weird conclusion, especially given Libet’s experimental setup. For instance, while

preparing this column, I spent last night repeatedly trying to flex my wrist ‘voluntarily’. It turns out to be quite hard to deliberately control the timing. As a matter of fact, my wrist surprised me a couple of times by flexing involuntarily. It takes a lot of wishful thinking to relate this task to the question of free will.

For those intent on drawing the conclusion that free will does not exist, the time differences in Libet’s experiment – which were in the order of hundreds of milliseconds – made this relatively easy; one could imagine that the brain is generally a fraction ‘ahead of the mind’. Recently, however, Soon and colleagues published a paper in *Nature* where they testified that, using functional magnetic resonance imaging (fMRI), they could pinpoint preparatory brain activity up to ten seconds before people decided to act.

Ten seconds. In ten seconds I can eat a slice of pizza, play a round of blues on my guitar, or – on a good day – prove that the square root of two is not rational. In fact, if I were hooked up to an fMRI scanner, and brain measures predicting my actions ten seconds later were communicated to me, I would have sufficient time to decide that the experiment is an insult to my intelligence, and get out of the scanner. That is free will. Next question, please.



Denny Borsboom is assistant Professor at the Psychological Methods Department.  
<http://home.medewerker.uva.nl/d.borsboom/>