

The choice is ours

April 2 2008

The option to choose among several courses of action is often associated with the feeling of being in control. Yet, in certain situations, one may prefer to decline such agency and instead leave the choice to someone else – out of politeness, or when too tired to choose, or when the consequences of the choice options appear complex or are unknown.

In a collaborative effort between the University of Amsterdam and the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig, Birte Forstmann and colleagues used functional magnetic resonance imaging to examine what happens in the brain when people are presented with the option either to determine their own course of action or to let someone else make the decision.

In a study published in this week's *PLoS ONE*, the researchers found that two areas in the medial frontal cortex contribute specifically to these decision-making processes. A posterior region, the so-called rostral cingulate zone (RCZ), is engaged when conditions present most choice options. An anterior region, the so called Brodmann area 10, is engaged when the choice is completely ours, as well as when it is completely up to others to choose for us. Ultimately, they demonstrated that who is doing the deciding matters just as much as whether we have any options from which to choose.

Citation: Forstmann BU, Wolfensteller U, Derrfuss J, Neumann J, Brass M, et al. (2008) When the Choice Is Ours: Context and Agency Modulate the Neural Bases of Decision-Making. *PLoS ONE* 3(4): e1899. doi:10.1371/journal.pone.0001899

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