**Summary of an fMRI Study on How We Judge People Who Are Like Us and Not Like Us**

Jason P. Mitchell, C. Neil Macrae & Mahzarin R. Banaji, *Dissociable Medial Prefrontal Contributions to Judgments of Similar and Dissimilar Others,* NEURON 50, 655-663 (2006).

**Invited Essay for Georgetown University**

(the National Center for Cultural Competence)

[Adapted]

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Do our brains encode some people as more human and others as less human? Judges and attorneys must constantly make critical judgments about people. When judges sentence defendants they must rely in part on their assessments of the individuals involved. Likewise when attorneys make or recommend plea offers, hire, promote or demote people they must engage in assessments. They must assess the person's behavior, predict their habits and determine their preferences. As judges and attorneys make these judgments they must ascribe certain emotions to the subjects of their judgments. The ventral medial prefrontal cortex (ventral mPFC) is implicated in ascribing feelings, desires and motivations to people. Conversely, the dorsal medial prefrontal cortex (dorsal mPFC) is used in ascribing beliefs and knowledge (in addition to some emotional states). Some scientists believe that the ventral mPFC is implicated in encoding people as more highly human and the dorsal mPFC is implicated in encoding people as less human. Can using different parts of the neuroanatomy to make judgments about different people affect decisions?

Scientists at Harvard University found that people use the ventral mPFC to make judgments about people like them and the dorsal mPFC to make judgments about people who are not like them. The Harvard scientists presented a group of subjects with pictures of two people, each with a description. Both pictures were of White or Caucasian people, so race was not a factor in the study. One person was described as an evangelical Christian, a registered Republican from the Midwest and conservative. The second person, was described as not particularly religious, a registered Democrat from the East Coast and liberal.

After the subjects viewed the pictures and descriptions, they were asked to decide which person was like most them and which person was least like them. The scientists used functional Magnetic Resonance Imaging (fMRI) to scan the subjects' brains while asking 66 questions about each person's preferences and potential behavior.

When the subjects considered the questions about the similar person, the *ventral* medial prefrontal cortex activated. However, when the students answered the same questions about the dissimilar person, the *dorsal* medial prefrontal cortex activated. Finally, when the subjects were asked to answer the same 66 question about themselves (*i.e.* to predict their own behavior, to determine their own preferences, to assess their own habits) the *ventral* medial prefrontal cortex activated. This was the very same part of their brain that they used to judge the person who was most similar to them.

A series of studies demonstrate that people we see as “other" or dissimilar we may also see as less human. The ventral mPFC may be activated when subjects make inferences about more human aspects of emotion. The dorsal mPFC may be activated when subjects make judgments about another person’s knowledge or belief. We may assume that people who are not like us feel emotions that are less human. We may also assume that people who are most like us feel human emotion with greater depth. We may show less empathy for those who we encode as less human. We also may fail to understand their needs.

These judgments may affect how attorneys and judges interact with people who they see as dissimilar. The most telling part of this study is that all of the people in the picture were the same race. Numerous studies demonstrate that neurophysiologic reactions would be even more pronounced if the differences included income level, race, ethnicity, social status, gender, education level or sexual orientation.