

The Neuroscience of Decision-Making in the Law Curriculum

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The Tools

Strategies for Increasing Fairness and Eliminating Unconscious/Implicit Association in Decision-Making

1. Receive Effective Education throughout the Process of Implementing the Tools:

Decision-makers should receive education that creates awareness, motivates individuals and institutions to change and instructs on meaningful strategies for change. To change decision-making individuals must receive initial courses that convince them that implicit association exists and that it affects their decisions. Participants should then take continued focused courses that allow them to implement tools and learn additional information in small portions over an extended period of time.

2. **Take the Tests:** Decision-makers should engage in an individual self-assessment of implicit biases and preferences. (Taking the Race IAT, Gender-Career IAT and any 2 additional IAT's). These self-assessments can demonstrate the levels of implicit association that may accompany [amygdala](#) and [insula](#) reactions in the brain. The levels of implicit association may also predict executive functioning in the [prefrontal cortex \(PFC\)](#).

Tool: <https://implicit.harvard.edu/implicit/takeatest.html>

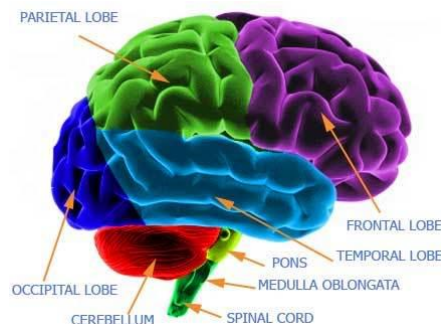
3. **Practice Eliminating the Underlying Bias:** Decision-makers should perform exercises that may help to change Implicit Association Test scores. These include counter-stereotype exercises, de-biasing exercises, videogames and competitions to change in-group/out-group affiliations.

4. **Follow the Rules:** Decision-makers should create adherence tools by listing valid factors upon which a decision should be based and referring to the list while making the decision. This should be done even if the decision-maker believes that they are well-versed in the factors. For instance listing:

All of the factors in a particular section of legislation or case law;

All of the requirements listed in a policy before the next step in a process can be taken; or

All of the attributes and qualification necessary for hiring for or promotion into a particular position.



5. **Copy the Symphony Example:** Decision-makers should remove initial identifying factors whenever possible before making an assessment.

6. **Change the Images:** Decision-makers should bring to mind counter-stereotypic images before making decisions. This may reduce [amygdala](#) activation.

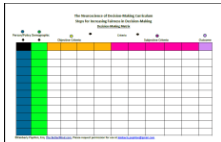
7. **Bob and Jim Effect:** Decision-makers should find similarities between themselves and the other person. This may increase the activation of the [ventral medial prefrontal cortex \(vmPFC\)](#) when judging them.

8. **Increase Human Encoding and Decrease Dehumanization:** Decision-makers should increase their ability to see all individuals as human. Increasing [medial prefrontal cortex \(mPFC\)](#) activation and decreasing [insula](#) activation allows the brain to encode individuals as human. Decision-makers should increase the assessments of “warmth” and “competence” across ethnic, racial, and socio-economic groups as well as all sexual orientations and transgendered status’. Decision-makers should also reduce dehumanization by reducing preferential responses in the [fusiform](#) region of the brain. Reactions in this region of the brain demonstrate that some decision-makers associate certain ethnic or racial groups with specific animals.

9. **Pain Empathy:** Decision-makers should increase empathy by altering appearance perception. Purposely creating [cortical spinal inhibition](#) (physical pain empathy) reactions with a hand that has an alternate skin color may change implicit bias levels. Likewise, equalizing empathy for psychological pain will increase fairness in decision-making.

10. **Perform the Study Individually:** Decision-makers should perform a self-analysis of past decision-making patterns. (A personalized "regression analysis" of specific types of decisions that you make on a regular basis).

Tool: Decision-Making Matrix ©.



11. **Perform the Study Systemically:** Leaders in the courts, state bar associations, private firms, nonprofits, prosecutors’ offices, public defenders’ offices and all “justice partner” agencies should perform a system-wide self-analysis of past decision-making patterns (*i.e.* a system-wide "regression analysis" of specific types of decisions that are made in the organization on a regular basis).

Tool: Decision-Making Matrix ©.



12. Go in for the System Check-Up: Leaders in the courts, state bar associations, private firms, nonprofits, prosecutors’ offices, public defenders’ offices and all “justice partner” agencies should take a random sample every fiscal quarter of key decisions and determine if there is a pattern. This process could activate the part of the **anterior cingulate cortex (ACC)** that weeds out bias in decision-making. Redact the names of all of the decision-makers so that the accountability is system-wide. Form a group to review the periodic assessments. This group must address any problematic patterns by increasing education, making policy changes and determining whether or not to perform more focused analysis. For example a court could take a random sample of 10% of all felony cases where a sentence is handed down after a trial. If the sample shows that men receive different sentences than women for the same crime then policies should be created to address the disparity.

Tool: Decision-Making Matrix ©.



13. Go in for the Individual Check-Up: Decision-makers should periodically take a random sample of decisions to determine if there is a pattern. This process could activate the part of the **anterior cingulate cortex (ACC)** that weeds out bias in decision-making. For example, a prosecutor’s office could pull 10 to 20 similar cases every fiscal quarter involving a particular charge that they deal with frequently (*e.g.* aggravated assault, possession with intent to sell or petty theft). The prosecutor could focus on those cases where a plea agreement was reached for defendants between the ages of 18-24 who had no prior offenses and only one low grade concurrent offense (*e.g.* resisting arrest). The prosecutor could then determine if different pleas were offered and if gender, income, race, age or some other factor affected the decision.

Tool: Decision-Making Matrix ©.

