SEVERAL DOMAINS WHERE COGNITIVE ERRORS AND BIASES CONTAMINATE EVALUATIONS AND DECISION-MAKING

The overview below was written and copyrighted 2012 by JoAnn Moody, PhD, JD  National Consultant, Faculty Diversity & Development www.diversityoncampus.com  joann.moody@earthlink.net

Definitions. During cognitive processing (defined as our collecting, sifting through, and interpreting various kinds of information to use in our decision-making), most of us often unintentionally take cognitive shortcuts and fall prey to cognitive errors described below. These shortcuts and errors compromise decisions and evaluations made within various domains.

Examples of Domains. In scientific experiments, in piloting aircraft, in diagnosing medical ailments and disorders, in investing small and large sums of capital—in all these arenas, brain scientists and other experts are finding that decision-makers unwittingly rely on cognitive shortcuts and biases as they do their jobs. These “contaminants” in decision-making can have serious consequences. They can bring about: unfair personnel evaluations and unfair hiring/firing/promoting; patient suffering and death; crashes of aircraft, with widespread human and property damage; unraveling of seemingly sound financial enterprises; and misleading results from experiments.

These same contaminants, in our daily lives, can affect all of us. More details are below.

1. In medicine, “predictable and preventable cognitive errors” mar diagnosticians’ cognitive processes and decisions (Groopman). Four examples include: rushing to closure; failing to revise first impressions (a kind of “anchoring”); selectively choosing information to support one’s hunch; stereotyping patients. More errors are discussed in the following publications.


2. In our daily lives and in our work at colleges, universities, and professional schools, most of us also prove susceptible to cognitive contaminants. The following are findings from almost a decade of operation of the Project Implicit program (see Implicit.Harvard.edu).

Three major researchers (at Harvard and the Universities of Washington and Virginia) created a website for self-administered Implicit Association Tests. More than 5 million visitors have taken the tests. Other countries have started participating. The excerpt below is from the Project website at implicit.harvard.edu.

- Implicit biases are pervasive. They appear as statistically "large" effects that are often shown by majorities of samples of Americans. Over 80% of web respondents show implicit negativity toward the elderly compared to the young; 75-80% of self-identified Whites and Asians show an implicit preference for racial White relative to Black.
• **People are often unaware of their implicit biases.** Ordinary people, including the researchers who direct this project, are found to harbor negative associations in relation to various social groups (i.e., implicit biases) even while honestly (the researchers believe) reporting that they regard themselves as lacking these biases.

• **Implicit biases predict behavior.** From simple acts of friendliness and inclusion to more consequential acts such as the evaluation of work quality, those who are higher in implicit bias have been shown to display greater discrimination [and hostility]. The published scientific evidence is rapidly accumulating. Over 200 published scientific investigations have made use of one or another version of the IAT.

• **People differ in levels of implicit bias.** Implicit biases vary from person to person --- for example as a function of the person’s group memberships, the dominance of a person’s membership group in society, consciously held attitudes, and the level of bias existing in the immediate environment. This last observation makes clear that implicit attitudes are modified by experience.

3. **In various domains, biases can be negative or positive.** A few years ago, the Swedish Research Council made an astonishing discovery: a female applicant for SRC post-doctoral funding had to have 2.5 times greater credentials (articles published, etc.) than a male applicant—just to reach the threshold of “competency” which enabled her to have her proposal reviewed by a panel. [Wenneras, C. & Wold, A. (1997). “Nepotism and sexism in peer-review.” *Nature* 387: 341-3.] Another way to view the findings at the Research Council: men’s track records could be considerably weaker but they would still be deemed competent. *The remedy for this inequity in peer review?* Merely removing names from the applications!

Likewise, journal editors in several countries are increasingly removing authors’ names and institutional affiliations from their articles before they are sent to peer reviewers. In a similar way, equity in *orchestras* has been bolstered by having all applicants for musical posts anonymously perform their auditions behind a screen, so that gender is not a factor. “Blind reviews,” in short, can reduce unintended negative bias for some and positive bias for others.

4. **Good news regarding the mitigating of cognitive errors.** All of us (most of us?) unwittingly make cognitive errors. BUT there are several ways to prevent or diminish these. As one example, checklists for evaluation committees and for medical diagnosticians are proving invaluable to use (A. Gawande, *The Checklist Manifesto: How to Get Things Right*, 2009).

In addition, giving ourselves and our colleagues consistent prompts and reminders has been proven useful (C. Sustein and R. Thaler, *Nudge: Improving Decisions*, 2008). Social cognition expert Susan Fiske and others have been experimenting with how to “prime” subjects so that they intently concentrate on recognizing and rising above biases and errors and begin to build self-correction habits of mind (see Fiske’s publications at the Princeton U. website). In fact, by using brain-imaging technology, neuroscientists can pinpoint the specific brain areas activated—when we learn to self-correct/minimize predictable errors and become “primed” to develop new cognitive habits.

For illustrations of 15 cognitive biases and shortcuts that contaminate decision-making and personnel evaluations at colleges, universities, and professional schools, see JoAnn Moody’s 40-page booklet “Rising Above Cognitive Errors: Improving Searches, Evaluations, and Decision-Making.” Organizational dysfunctions (such as overloading and rushing evaluation committees) predictably intensify the errors. Reducing the errors can be accomplished through ground rules for committees and evaluators, checklists, matrices, coaching, and frequent reminders and visual prompts about the 15 errors—all these strategies and others are outlined in the booklet. Go to [www.diversityoncampus.com](http://www.diversityoncampus.com) to order. Or write to joann.moody@earthlink.net.