

Minding the Court: Enhancing the Decision-Making Process

By Pamela Casey, Kevin Burke and Steve Leben¹

1. Introduction

A compelling and growing body of research from the fields of cognitive psychology and neuroscience provides important insights about how we process information and make decisions. This research has great potential significance for judges, who spend much of their time making decisions of great importance to others. For most judges, this research literature is not part of their judicial education.

This article reviews cutting edge research about decision making and discusses its implications for helping judges and those who work with them produce fair processes and just outcomes. It builds on a 2007 American Judges Association paper that encouraged judges to incorporate the principles of procedural justice (see side bar) to help ensure a decision-making process deemed fair by litigants.² Procedural fairness increases compliance with court orders and is critical to positive public perceptions of the court system.³

Implementing procedural-justice principles in the courtroom demands the judge's "mindful" or conscious focus and attention. Understanding how the brain processes information and the various factors that can influence decisions and courtroom behaviors is a first step to practicing more mindful decision making that is consistent with the principles of procedural justice.

Key Procedural-Justice Principles

Voice—Litigants have the opportunity to participate in the process and offer their perspective.

Neutrality—Litigants believe the judge is neutral, makes decisions based on rules rather than opinions, and applies rules consistently.

Respectful treatment—Litigants are treated with dignity and feel their problems are taken seriously.

Trust—Litigants perceive the judge is sincere and caring.

2. The Science of Decision Making

At any point in time, an individual is bombarded with a host of sensory information. Most of it is processed "behind the scenes" with little or no knowledge on the part of the individual. Much like a computer continues to work in the background while a word-processing program is on the screen, individuals constantly process a barrage of sights (e.g., the glare on the computer screen), sounds (e.g., the click of the keys), smells (e.g., the coffee on the desk), and other information—sorting, categorizing, and storing it—even as they intently focus on a specific task (e.g., reading a case file or writing an opinion).

Reflexive processes—Like blinking in bright sunlight, these reflexive processes are automatic, rapid, and unconscious.

Reflective processes—Like solving a math problem, reflective processes are deliberative, slow, and conscious.

This dual system of information processing is the mechanism by which judgments and decisions are made. Neuroscientist Matthew Lieberman has identified different areas of the brain associated with each system by neuroimaging.⁴ The

¹ Pamela Casey is Principal Court Research Consultant of the United States' [National Center for State Courts](#). Kevin Burke is a judge of the Hennepin County District Court in the State of Minnesota, and Steve Leben is a judge of the State of Kansas Court of Appeals in the United States. Both Judge Burke and Judge Leben are past presidents of the [American Judges Association](#). This article is based on a white paper adopted by the AJA in 2012. The authors thank Dr. Ingo Keilitz for his editing of the original paper for publication here. They also thank Dr. Jenny Elek, Dr. Keilitz, and Dr. Robert Rust for their substantive contributions to the development of the original paper.

² Kevin Burke and Steve Leben, *Procedural Fairness: A Key Ingredient in Public Satisfaction*, 44 CT. REV. 4 (2007); see Tom R. Tyler, *Procedural Justice and the Court*, 44 CT. REV. 26, 30-31 (2007) (describing the key procedural-justice principles contained in the sidebar).

³ See Steve Leben, *Considering Procedural-Fairness Concepts in the Courts of Utah*, at 4-6, paper presented at the Utah State judicial conference, Sept. 14, 2011, available at <http://www.proceduralfairness.org/Resources/~media/Microsites/Files/procedural-fairness/Utah%20Courts%20and%20Procedural%20Fairness%2009-2011.ashx>.

⁴ Matthew D. Lieberman, *Reflective and Reflexive Judgment Processes: A Social Cognitive Neuroscience Approach*, in SOCIAL JUDGMENTS: IMPLICIT AND EXPLICIT PROCESSES 44 (Joseph P. Forgas, Kipling D. Williams, and William Von Hippel eds., 2003). Scientists are still exploring whether there are two different systems, multiple systems, or multiple processes that make up one system, but most agree on "processes that are unconscious, rapid, automatic, and high capacity, and those that are conscious, slow, and deliberative." Jonathan St. B. T. Evans, *Dual-Processing Accounts of Reasoning, Judgment, and Social Cognition*, 255 ANN. REV. PSYCHOL. 255, 256 (2008). This article relies on Lieberman's model because of his extensive work mapping areas of the brain and because the labels he uses are more descriptive of decision-making processes than, for example, Daniel Kahneman's system 1 and system 2 labels. Compare Burke and Leben, *supra* note 2, and Lieberman, with DANIEL KAHNEMAN, THINKING, FAST AND SLOW (2011).

reflexive, automatic system relies on patterns that develop based on the individual's experiences with the world. The individual learns over time how to distinguish different objects, people, actions, and situations based on features that coalesce into patterns. These patterns, referred to as schemas, help the brain process information quickly and efficiently. Based on prior experiences, for example, individuals know that a red octagon in the distance means "stop."

The reflective, controlled system relies on deliberative intention and effort to perform a task. Memorizing a new phone number or computer password requires concentration. Once the phone number or password is repeatedly practiced, however, it becomes a readily accessible schema that comes to mind with little effort. For a judge with a domestic-violence docket, for example, a bit of study up-front would teach the judge the elements of domestic battery—with no need to look it up again as each case is called.

While the reflexive system can process information on an ongoing basis, the reflective system has a limited capacity. It works for a while but eventually runs out of gas. Thus the brain is somewhat miserly about its use of the reflective system. This "principle of least effort" means that decision makers initially tend to rely on the automatic retrieval of schemas to process incoming information and engage the reflective system only when motivated to do otherwise by, for example, learning a new skill or solving a complex problem.⁵

Gary Klein refers to this reliance on schemas as recognition-primed decision making.⁶ His premise is that we develop schemas that we subsequently use to size up a situation and decide how to move forward. For example, a firefighter does not enter a burning building and proceed to analyze all the potential options for action. Rather, the firefighter instantaneously takes in a variety of information about the current situation and matches it to a response option that has worked in similar situations in the firefighter's past. The initial option may not have been the best option if there had been enough time to generate and analyze all possible options, but it usually works. Judges, particularly when confronted with large dockets, heavy calendars, or pressing "emergency" motions, can tend to use the same process as firefighters. Sometimes using the first option that works rather than the optimal option will be satisfactory — but not always.

Reflexive decision making works for countless choices an individual makes throughout the day.⁷ And in some instances, such as those requiring a quick decision in an emergency situation, as in the firefighter example, the reflexive approach might be better than a more deliberative, reflective approach.⁸ The problem with reflexive decision making, however, is that sometimes the underlying schemas are based on inaccurate information (e.g., assuming two events that occur together are related, as in superstitions), are only partially correct (e.g., stereotypes), or are applied incorrectly (e.g., using a gesture that is misinterpreted in another country).⁹ Two prominent examples of schemas that can lead to inaccurate decisions are cognitive heuristics and implicit biases.

2.1 Cognitive Heuristics

Heuristics are schemas based on only part of the information available—letting us make decisions more quickly. Research shows that reliance on heuristics in some circumstances can lead to more accurate decisions and judgments than reliance on more rational models.¹⁰ But heuristics also can be faulty in a variety of ways, leading decision makers to jump to conclusions and make errors in solving problems.¹¹ And since heuristics operate in the world of unconscious, reflexive processing, we can easily make errors without recognizing the source of a faulty decision.

Heuristics—schemas that rely on only some of the information available so an individual can make a decision quickly and with little effort.

⁵ Serena Chen and Shelly Chaiken, *The Heuristic-Systematic Model in Its Broader Context*, in *DUAL-PROCESS THEORIES IN SOCIAL PSYCHOLOGY* 73 (Shelley Chaiken and Yaacov Trope eds., 1999).

⁶ Gary A. Klein, *A Recognition-Primed Decision (RPD) Model of Rapid Decision Making*, in *DECISION MAKING IN ACTION: MODELS AND METHODS* 138 (Gary A. Klein, Judith Orasanu, Roberta Calderwood, and Caroline E. Zsombok eds., 1993).

⁷ "Most of the time we solve problems without coming close to the conscious, step-by-step analysis of the deliberative approach. In fact, attempting to approach even a small fraction of the problems we encounter in a full, deliberative manner would bring our activities to a screeching halt. Out of necessity, most of problem-solving is intuitive." PAUL BREST AND LINDA HAMILTON KRIEGER, *PROBLEM SOLVING, DECISION MAKING, AND PROFESSIONAL JUDGMENT: A GUIDE FOR LAWYERS AND POLICYMAKERS* 14 (2010).

⁸ See, e.g., Timothy D. Wilson et al., *Introspecting About Reasons Can Reduce Post-Choice Satisfaction*, 19 *PERSONALITY AND SOC. PSYCHOL. BULL.* 331 (1993); Timothy D. Wilson and Jonathan W. Schooler, *Thinking Too Much: Introspection Can Reduce the Quality of Preferences and Decisions*, 60 *J. PERSONALITY AND SOC. PSYCHOL.* 181 (1991).

⁹ See Desmond Morris, *Gestures, Meanings, and Cultures*, YOUTUBE (Jan. 29, 2011), <http://www.youtube.com/watch?v=fRQSRRed58XM>, for some common examples of cultural differences in interpreting gestures in a video by Desmond Morris.

¹⁰ Gerd Gigerenzer and Wolfgang Gaissmaier, *Heuristic Decision Making*, 62 *ANN. REV. PSYCHOL.* 451 (2011).

¹¹ KAHNEMAN, *supra* note 4.

Anchoring is one of these heuristics. For example, a person is likely to give a higher or lower estimate of damages if a particularly high (or low) figure is introduced. That number—even if far off the mark—tends to act as an anchor around which later estimates are formed.

In a classic study, participants were asked to estimate the number of African countries in the United Nations after witnessing a researcher spin a wheel of fortune that landed on one of two numbers.¹² The wheel of fortune was rigged to stop only on the numbers “10” and “65.” The median response of participants who saw and wrote down the number “10” was 25 countries; and the median response for participants who witnessed the number “65” was 45 countries.

Do judges who are trained to follow procedural rules designed to minimize the influence of irrelevant information succumb to anchoring? In a series of studies with German judges, Birte English and her colleagues examined whether criminal sentencing decisions could be influenced by anchors that judges knew to be irrelevant.¹³ The anchor was presented in several ways: (a) by a journalist’s question about the sentence, (b) by a prosecutor’s acknowledged, randomly determined sentencing demand, and (c) by a prosecutor’s sentencing demand obtained by the judge throwing a pair of loaded dice. In all cases the judges’ decisions were influenced by the anchors. The judges sentenced more harshly when exposed to the higher rather than lower randomly determined anchor.

Another heuristic is the reliance on small and unrepresentative samples of the population to make decisions. Individuals frequently view small samples incorrectly as representative and adjust their expectations accordingly.

Uri Simonsohn and Francesca Gino, who studied the influence of this heuristic,¹⁴ postulated that individuals who make a set of decisions every day would try to align each daily set of decisions to reflect their overall distribution of decisions. To test this hypothesis, the researchers reviewed data from over 9,000 interviews in which interviewers scored the qualifications of the interviewees. They found that interviewers’ daily subsets (small samples) of scores tended to reflect their overall distribution of scores (population). Even though on a given day four interviewees, for example, may all have been deserving of a high score, the interviewers will be reluctant to score all four highly, and the interviewees will be more likely to be ranked lower to conform to the interviewer’s overall population scores.

Simonsohn and Gino ask us to imagine, for example, a judge who must make dozens of judgments a day. Given that people underestimate the presence of streaks in random sequences, the judge may be disproportionately reluctant to evaluate four, five or six people in a row in too similar a fashion, even though that “subset” was formed post-hoc.¹⁵

More evidence that judges are susceptible to heuristics comes from a series of studies by law professors Chris Guthrie and Jeffrey Rachlinski and Judge Andrew Wistrich.¹⁶ They explored judges’ use of five heuristics: (a) anchoring, (b) framing—the same information presented differently (e.g., the glass is half full versus half empty), (c) hindsight—the sense that specific outcomes were more predictable once the outcomes are known, (d) representativeness—ignoring statistical base-rate information, and (e) egocentricity—overconfidence in one’s abilities. They found that judges’ decisions were influenced by each of these heuristics.

For example, when some judges were told about a clearly meritless motion to dismiss for lack of jurisdiction in a diversity case (based on the idea that damages were less than \$75,000), judges who were aware that such a motion had been filed awarded a lesser damage amount (30% less overall) than judges who did not know about the motion to dismiss.¹⁷ But they also found that judges showed less susceptibility to the framing and representativeness heuristics than other experts and laypersons, and, in a subsequent study, that hindsight did not affect judges’ decisions in a specific scenario involving a probable-cause determination.¹⁸

¹² Amos Tversky and Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCI. 1124 (1974).

¹³ Birte English, Thomas Mussweiler, and Fritz Strack, *Playing Dice with Criminal Sentences: The Influence of Irrelevant Anchors on Experts’ Judicial Decision Making*, 32 PERSONALITY AND SOC. PSYCHOL. BULL. 188 (2006).

¹⁴ Uri Simonsohn and Francesca Gino, *Daily Horizons: Evidence of Narrow Bracketing in Judgment from 10 Years of MBA-Admission Interviews*, PSYCHOLOGICAL SCIENCE (forthcoming).

¹⁵ *Id.* at 10-11 (citing Thomas Gilovich, Robert Vallone, and Amos Tversky, *The Hot Hand in Basketball: On the Misperception of Random Sequences*, 17 COGNITIVE PSYCHOL. 295 (1985)).

¹⁶ Chris Guthrie, Jeffrey J. Rachlinski, and Andrew J. Wistrich, *Inside the Judicial Mind*, 86 CORNELL L. REV. 777 (2001).

¹⁷ Chris Guthrie, Jeffrey J. Rachlinski and Andrew J. Wistrich, *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1, 21 (2007).

¹⁸ Andrew J. Wistrich, Chris Guthrie and Jeffrey J. Rachlinski, *Can Judges Ignore Inadmissible Information?: The Difficulty of Deliberately Disregarding*, 153 U. PA. L. REV. 1251 (2005).

2.2 Implicit Biases

Implicit biases, another type of schema, also threaten fair processes and just outcomes. They are based on implicit attitudes or stereotypes that operate below the radar. Research shows that even individuals who consciously strive to be fair and objective can nonetheless be influenced by implicit biases.¹⁹

Scientists use a variety of methods to measure implicit bias, but the most common is comparing individuals' reaction times in response to pairings of two stimuli that are strongly associated (e.g., elderly and frail) with two stimuli that are less strongly associated (e.g., elderly and robust). *Project Implicit*, begun in 1998 by researchers from several U.S. universities, offers web-based reaction-time tests, referred to as Implicit Association Tests, in over fifteen areas such as weight, age, race, and religion that anyone can take.²⁰ A review of the results of over 2.5 million tests taken between 2000 and 2006 revealed the pervasiveness of implicit preferences for socially privileged groups such as white over black and straight over gay.²¹ Research also shows that implicit biases can influence decisions in a variety of real-life settings such as employers hiring job applicants, police officers deciding to shoot, healthcare workers providing medical treatment, and voters making voting choices.²²

Research by Rachlinski and his colleagues suggests that judges may be influenced by implicit bias.²³ They found, for example, a strong white preference on the Implicit Association Test among white judges. In keeping with the general population findings of the Implicit Association Test, the black judges showed no clear preference overall (44% showed a white preference but the preference was weaker overall). The researchers also reported some evidence that implicit bias affected judges' sentencing decisions, though this finding was less clear. Importantly for judicial decision making, the researchers found that "when judges are aware of a need to monitor their own responses for the influence of implicit racial biases, and are motivated to suppress that bias, they appear able to do so."²⁴

3. Mindful Judicial Decisions

Scientists agree that most behaviors and decisions result from a combination of both reflexive and reflective processes. The question is the extent to and ways in which the two processes work together for any particular decision.²⁵ Several researchers postulate what psychologist Jonathan Evans refers to as "default-interventionist" models of judgment and decision making.²⁶ These models propose that initial intuitive or reflexive responses are generated, which are then modified or endorsed by the reflective system. The reflective system routinely endorses the initial responses, reserving more deliberative, effortful processing to when the individual is motivated to do so and working memory and time are sufficient.²⁷

In most situations, default processing is good enough. But in the courtroom, where individuals face possible restrictions of liberty and judges consider other life-altering issues—such as family preservation, personal safety, economic security, and adequate housing—fair processes and just outcomes demand a more deliberate approach. Given that most behaviors and decisions result from a combination of both reflexive and reflective processes, are there ways to lessen the effects of faulty heuristics and implicit biases? One step is to understand some of the causes of diminished decision-making abilities, which include fatigue (like sleep deprivation), other depleted resources (like glucose levels), multitasking, mood, and fluency (i.e., ease of processing information).

¹⁹ Patricia G. Devine, *Stereotypes and Prejudice: Their Automatic and Controlled Components*, 56 J. PERSONALITY AND SOC. PSYCHOL. 5 (1989).

²⁰ PROJECT IMPLICIT, <http://www.projectimplicit.net/about.html> (retrieved September 28, 2012).

²¹ Kristin A. Lane, Jerry Kang, and Mahzarin R. Banaji, *Implicit Social Cognition and Law*, 3 ANN. REV. L. AND SOC. SCI. 427 (2007); Brian A. Nosek et al., *Pervasiveness and Correlates of Implicit Attitudes and Stereotypes*, 18 EUR. REV. SOC. PSYCHOL. 36 (2007).

²² John T. Jost et al., *The Existence of Implicit Bias Is Beyond Reasonable Doubt: A Refutation of Ideological and Methodological Objections and Executive Summary of Ten Studies That No Manager Should Ignore*, 29 RES. ORGANIZATIONAL BEHAV. 39 (2009).

²³ Jeffrey J. Rachlinski, Sheri Lynn Johnson, Andrew J. Wistrich, and Chris Guthrie, *Does Unconscious Racial Bias Affect Trial Judges?*, 84 NOTRE DAME L. REV. 1195, 1225-26 (2009).

²⁴ *Id.* at 1221. For judicial-education resources on implicit bias, see PAMELA M. CASEY, ROGER K. WARREN, FRED L. CHEESMAN II. & JENNIFER K. ELEK, *HELPING COURTS ADDRESS IMPLICIT BIAS* (2012), available at www.ncsc.org/ibreport.

²⁵ Robert Boyd et al., *Explicit and Implicit Strategies in Decision Making*, in BETTER THAN CONSCIOUS? DECISION MAKING, THE HUMAN MIND, AND IMPLICATIONS FOR INSTITUTIONS 225 (Christoph Engel and Wolf Singer eds., 2008); Roy F. Baumeister, E. J. Masicampo, and Kathleen D. Vohs, *Do Conscious Thoughts Cause Behavior?* 62 ANN. REV. PSYCHOL. 331 (2011); Evans, *supra* note 4.

²⁶ Evans, *supra* note 4, at 266.

²⁷ Jonathan St. B. T. Evans, *The Heuristic-Analytic Theory of Reasoning: Extension and Evaluation*, 13 PSYCHONOMIC BULL. AND REV. 378, 382 (2006).

3.1 Effects of Fatigue, Diminished Resources, and Multitasking

We all know that fatigue, depleted resources, and multitasking lower performance. Researchers Yvonne Harrison and James Horne reviewed studies on the effects of sleep deprivation and identified several effects including poor “communication, lack of innovation, inflexibility of thought processes, inappropriate attention to peripheral concerns or distraction, over-reliance on previous strategies, unwillingness to try out novel strategies, unreliable memory for when events occurred, changes in mood including loss of empathy with colleagues, and inability to deal with surprise and the unexpected.”²⁸

Blood sugar (glucose) fuels the brain, and research shows that reflective processes demand more fuel than reflexive processes. When glucose levels are low, individuals have a tendency to rely more on reflexive decision-making strategies and have more difficulty summoning their reflective system to check their decisions.²⁹

This research may explain the findings of a recent study that examined decision fatigue among Israeli parole-board judges.³⁰ The study found that the experienced judges’ decisions fluctuated based on when cases were heard during the day. Cases heard early in the morning and just after breaks (with meals) were more likely to end with a parole grant than cases heard shortly before breaks and at the end of the day. That is, decisions tended to default to the *status quo* of denying parole as the number of cases increased until judges took a break. Because each break included a meal, it is not possible to say with certainty that it was the meal and not the “timeout” that affected subsequent decisions. But research in this area suggests that the meal replenished glucose stores and thus contributed to the change in “default” processing in cases following a break. In either case, the study suggests that “judicial decisions can be influenced by whether the judge took a break to eat.”³¹

Finally, multitasking involves the rapid switching from one task to another. Done in milliseconds, the brain postpones one task and sets up for the next.³² For more than 97% of the population, this task switching has a cost in performance.³³ Despite numerous studies to the contrary, however, most individuals think that they are good at multitasking and more efficient as a result. Many judges are the same; even if they concede that multitasking has a cost, many judges are quite good at articulating that—for them—the cost is negligible and worth it.

As noted, researchers consistently find diminished performance by those who multitask. For example, psychologists Jason Watson and David Strayer tested the performance of 200 individuals on a driving simulation task, a cognitive task involving memorization and basic math problems, and a dual-task condition involving both the driving simulation and the cognitive tasks.³⁴ Performance measures on the individual tasks were significantly better than those in the dual-task condition.

Task switching in the courtroom has the potential of distracting the judge and reducing performance, but it also carries with it the sense that a judge is not fully engaged with the matter at hand. A central tenet of procedural fairness is that the judge is an active listener. If the judge seems distracted with other matters, litigants will not feel that their voice has been fully heard. A recent study by Harvard psychologists demonstrated the importance of giving people voice.³⁵ The researchers found that regions of the brain associated with reward are activated when individuals are allowed to talk about themselves.

3.2 Effects of Mood

Mood affects the way we process information, with those in a positive mood generally more likely to engage in reflexive, automatic processing and those in a negative mood more likely to engage in more reflective, deliberative processing.³⁶

²⁸ Yvonne Harrison, and James A. Horne, *The Impact of Sleep Deprivation on Decision Making: A Review*, 6 J. EXPERIMENTAL PSYCHOL.: APPLIED 236, 246 (2000).

²⁹ E.J. Masicampo and Roy F. Baumeister, *Toward a Physiology of Dual-Process Reasoning and Judgment: Lemonade, Willpower, and Expensive Rule-Based Analysis*, 19 Psychological Science 255 (2008).

³⁰ Shai Danziger, Jonathan Levav, and Liora Avnaim-Pesso, *Extraneous Factors in Judicial Decisions*, 108 PROC. NAT'L ACAD. SCI. 6889 (2011).

³¹ *Id.* at 6890.

³² Stephen Monsell, *Task Switching*, 7 TRENDS COGNITIVE SCI. 134 (2003).

³³ Jason M. Watson and David L. Strayer, *Supertaskers: Profiles in Extraordinary Multitasking Ability*, 17 PSYCHONOMIC BULL. AND R. 479 (2010).

³⁴ *Id.*

³⁵ Diana I. Tamir and Jason P. Mitchell, *Disclosing Information About the Self Is Intrinsically Rewarding*, 109 PROC. NAT'L ACAD. SCI. 8038 (2012).

³⁶ Gerald L. Clore and Jeffrey R. Huntsinger, *How Emotions Inform Judgment and Regulate Thought*, 11 TRENDS COGNITIVE SCI. 393 (2007).

One explanation is that positive moods enhance the default processing approach—the status quo—and negative moods inhibit it.³⁷ In many instances, individuals “default” to reflexive processing; thus positive moods often are associated with reflexive processing. If things are good, there is little motivation to engage in more effortful processing. Reliance on stereotypes comes easily.³⁸ A negative mood, on the other hand, signals a problem that requires more focus and attention.

Researchers Kimberly Elsbach and Pamela Barr suggest that different moods are more suited for some purposes than others: “[P]ositive moods are best suited for decision-making tasks that are interesting or require creativity or efficiency, while negative moods are best suited for decision tasks that are effortful and/or require careful consideration and analysis of a number of different issues and potential outcomes.”³⁹

It is possible for individuals to override their spontaneous reliance on reflexive processing when in a positive mood by being more vigilant. Research shows, for example, that specifically instructing individuals to pay attention and holding individuals accountable for their decisions can induce more effortful processing.⁴⁰

3.3 Fluency

Fluency refers to the ease with which we process information. People generally consider information that is processed more fluently (i.e., is more easily understood) as more accurate and true than less fluent information.⁴¹ This holds true for a range of sensory and cognitive information. For example, information written in an easy-to-read font is considered more accurate than the same information written in a more difficult-to-process font. Likewise, information that is familiar, easier to pronounce, and easier to retrieve from memory is judged more true and likeable and individuals express more confidence in it, whatever its actual content (and accuracy) may be. Much of advertising is based on the idea of fluency.

Psychologist Adam Alter and his colleagues demonstrated that fluency is associated with reflexive information processing and disfluency is associated with more reflective processing.⁴² In one of their studies, they asked participants to complete the Cognitive Reflection Test, a series of three questions that seem to have initially easy answers but, upon further reflection, require more systematic processing to obtain the correct responses. The researchers gave some of the participants in the study the questions in an easy-to-read font and other participants received the questions in a difficult-to-read font. Those in the latter disfluency group answered more items correctly. The researchers suggest that the difficult font served as a cue to the reflective system that the task would require more effort to process. Those in the easy-font group had no clue that more effortful processing was required.

Nancy Pennington and Reid Hastie demonstrated the potential effects of fluency in a courtroom setting. They found that when individuals read case materials and were asked to come to a decision at the end (similar to the typical juror’s task), the individuals develop narrative stories to understand the evidence. The researchers manipulated the order of the evidence provided, making it easier or harder to develop a coherent narrative. Consistent with the research on fluency, they found that the ease in creating a narrative story affected “perceptions of evidence strength, judgments about confidence, and the impact of information about witness credibility.”⁴³ Decisions shifted in the direction of the narratives that were easier to construct.

4. Becoming More Mindful

Almost everything a judge does involves processing information and making decisions. So if they are to improve their performance as judges, they must focus on improving the performance of those tasks. Doing so can offer additional benefits as well. One aspect of being more mindful is finding ways to relieve stress, which can interfere with information processing and decision making. Some judges may regard job stress as part of the job, but job stress can lead to

³⁷ Jeffrey R. Huntsinger, Gerald L. Clore, and Yoav Bar-Anan, *Mood and Global-Local Focus: Priming a Local Focus Reverses the Link Between Mood and Global-Local Processing*, 10 *EMOTION* 722 (2010).

³⁸ Galen V. Bodenhausen, Geoffrey P. Kramer, and Karin Süsser, *Happiness and Stereotypic Thinking in Social Judgment*, 66 *J. PERSONALITY AND SOC. PSYCHOL.* 621 (1994).

³⁹ Kimberly D. Elsbach and Pamela S. Barr, *The Effects of Mood on Individuals’ Use of Structured Decision Protocols*, 10 *ORGANIZATION Sci.* 181, 193 (1999).

⁴⁰ Norbert Schwarz and Gerald L. Clore, *Feelings and Phenomenal Experiences*, in *SOCIAL PSYCHOLOGY: HANDBOOK OF BASIC PRINCIPLES* 385 (Arie W. Kruglanski and E. Tory Higgins eds., 2nd ed. 2007); Bodenhausen, Kramer, and Süsser, *supra* note 38.

⁴¹ Adam L. Alter and Daniel M. Oppenheimer, *Uniting the Tribes of Fluency to Form a Metacognitive Nation*, 13 *PERSONALITY AND SOC. PSYCHOL. R.* 219 (2009).

⁴² Adam L. Alter, Daniel M. Oppenheimer, Nicholas Epley, and Rebecca N. Eyre, *Overcoming Intuition: Metacognitive Difficulty Activates Analytic Reasoning*, 136 *J. EXPERIMENTAL PSYCHOL.: GEN.* 569 (2007).

⁴³ Pennington and Hastie, *Explaining the Evidence: Tests of the Story Model for Juror Decision Making*, 62 *J. PERSONALITY AND SOC. PSYCHOL.* 189, 202 (1992).

diminished physical health.⁴⁴ Of course, consistent with the theme of this paper, stress also can lead to a diminished capacity for good decision making.⁴⁵

The remainder of this paper suggests some strategies that may help judges be more mindful and make better decisions. First, they might do well to should focus on the higher purpose of the proceeding and properly deciding a case with a real impact on someone, not just processing a court docket. Second, they could formalize and critique heuristics used to make repetitive but important decisions. For example, a judge might consider what specific factors are leading to bail decisions or probation conditions: Are they based on accurate information? Third, they could become more mindful and periodically “read the dials.” Am I tired? Is noise from outside the courtroom a distraction? Is a break in order? Fourth, decision aids, like checklists, may help. Finally, they might benefit from feedback and fostering accountability.

4.1 Focusing on Purpose

Sometimes the sheer press of business makes it difficult for a judge to focus on the individual case. The primary purpose of court work becomes *moving* cases as opposed to *hearing* them. It is hard to be mindful when the focus is on getting through a docket, signing orders, writing opinions, preparing a speech for a local community group, and any number of other responsibilities that fall on a judge’s shoulder.

Taking time—even just a few minutes—to bring full attention to the matter at hand offers a check on reflexive, automatic decision making and a step toward ensuring a fair process and a just outcome. Administrative Judge Judy Harris Kluger makes this point in her reflections about working in the busy New York City Criminal Court:

For a long time my claim to fame was that I arraigned 200 cases in one session. That’s ridiculous. When I was arraigning cases, I’d be handed the papers, say the sentence is going to be five days, ten days, whatever, never even looking at the defendant. At a community court, I’m able to look up from the papers and see the person standing in front of me. It takes two or three more minutes, but I think a judge is much more effective that way.⁴⁶

Judges who see their work not as the volume of the cases they move in a particular day, but rather as their contribution to a fair and just court system are likely to find more satisfaction and meaning in their work.⁴⁷ Judges who see themselves as cogs in the machinery of the system may benefit from remembering their contributions to the larger system goals.

4.2 Formalizing Decision Heuristics

Although the law may assume that decision makers review and weigh all relevant information in a systematic manner to reach an optimal judgment, research demonstrates that this is not the case in practice. In a study of bail decisions in England and Wales, researchers found that a simple “matching heuristic” explained decisions better than a more complex, integrated model of decision making. The matching heuristic relied primarily on three factors: bail decisions could be predicted 92% of the time in one court, for example, by relying on (1) whether the prosecutor opposed bail, (2) whether a previous court imposed conditions or remanded in custody, and (3) whether police imposed conditions or remanded in custody. If the answer was yes to any of these, the magistrate’s decision was to deny bail.⁴⁸ In another study, the findings showed that magistrates’ beliefs about their decision-making process differed from their practice (*i.e.*, relying on a simple heuristic).⁴⁹

Clement McDonald observed that physicians often rely on a subset of information and extrapolate based on experience to make diagnoses and treatment decisions. He notes that the lack of scientific information available on some drugs and diseases, for example, requires doctors to develop heuristics. Rather than ignoring the use of heuristics, he calls for the medical community to formalize them. “Exposing these heuristics to critical review so that they can be clarified, improved, and standardized may reduce practice variation, thereby making it easier to optimize the care process,” he writes.⁵⁰

In the same way, judges can consider the “rules of thumb” they may be using to process their cases, whether traffic, small claims, family, civil, or criminal. Are there specific factors that cause one judge to put the defendant in custody at sentencing while another does not? Does a defendant’s marital status have any bearing on a bail decision? Taking time to

⁴⁴ *E.g.*, Jo Ann Heydenfeldt, Linda Herkenhoff and Mary Coe, *Mind Fitness Training: Emerging Practices & Business Applications: Applied Neuroscience*, 1 Int’l J. Humanities & Soc. Sci. 150, 150 (2011).

⁴⁵ *Id.*

⁴⁶ *Id.* at 81.

⁴⁷ Brent D. Rosso, Kathryn H. Dekas, and Amy Wrzesniewski, *On the Meaning of Work: A Theoretical Integration and Review*, 30 RESEARCH IN ORGANIZATIONAL BEHAVIOR 91 (2010).

⁴⁸ Mandeep K. Dhami, *Psychological Models of Professional Decision Making*, 14 PSYCHOL SCI. 175 (2003).

⁴⁹ Mandeep K. Dhami and Peter Aytton, *Bailing and Jailing the Fast and Frugal Way*, 14 J. BEHAV. DECISION MAKING 141, 163 (2001).

⁵⁰ Clement J. McDonald, *Medical Heuristics: The Silent Adjudicators of Clinical Practice*, 124 ANNALS INTERNAL MED. 56, 57 (1996).

reflectively identify and rely on decision heuristics that are transparent and predictable across cases and judges, could go a long way to enhancing litigant perceptions of fairness.⁵¹

4.3 “Reading the Dials”

The principles of procedural justice require focus and attention, which may be hard to come by if a judge is tired or hungry, is multitasking, or is not in a mood to engage in effortful processing. Taking stock of such distracting factors serves as a reminder that more concentration may be necessary. Sometimes little annoyances may become irritating distractions and unwittingly raise the level of tension in the courtroom. Sometimes the judge just wants to “push through” the remaining cases when a break would be best for all.

Periodically “reading the dials” helps identify distractions and potential ways to lessen their effects. For example, does the temperature in the courtroom need to be adjusted or noise in the hallways reduced? Is it time for a break? Some judges and lawyers have adopted a practice of “mindfulness” to strengthen their ability to read the dials.⁵²

Harvard researchers describe the practice of mindfulness as meditation that “encompasses focusing attention on the experience of thoughts, emotions, and body sensations, simply observing them as they arise and pass way.”⁵³ Other researchers note that “mindfulness is thought to enable one to respond to situations more reflectively (as opposed to reflexively).”⁵⁴

A common meditation practice involves sitting quietly and concentrating on the breath. Individuals try to identify when their mind wanders from focusing on the experience of breathing; and, once they do, they return the mind’s focus to the breath. As they practice this sequence over and over, they gradually learn to recognize the thoughts and emotions that pull their attention away and are able to regain focus more easily. Research by psychologist Amishi Jha and her colleagues shows that the ability to focus attention is evident after just thirty minutes of practice a day for eight weeks.⁵⁵ As with physical exercise, the longer individuals practice mindfulness meditation, the more skilled they become.⁵⁶

Bob Stahl and Elisha Goldstein offer another mindfulness practice to help individuals take a quick look at the dials. They refer to it as the STOP meditation.⁵⁷ The STOP acronym reminds individuals to:

- Stop what they are currently doing,
- Take a deep breath and focus on the sensation of breathing,
- Observe what they are thinking, feeling, and doing, and
- Proceed with new awareness.

Judges can use this quick pause throughout the day, especially when they find themselves getting distracted, bored, or overwhelmed. The pause helps to refocus attention and reaffirm the priority to ensure each case is given a fair process.

Attorney Douglas Codiga expressed concern that judges and attorneys’ misconceptions about mindfulness being mystical or otherworldly, requiring a commitment to Buddhism, or amounting to just another stress-reduction technique would lessen its potential to impact the field.⁵⁸ Contrary to these misconceptions, he argued that mindfulness is compatible with legal principles of reason, analysis, and skepticism; does not conflict with preexisting religious beliefs and requires no

⁵¹ Gerd Gigerenzer, *Heuristics*, in HEURISTICS AND THE LAW 17 (Gerd Gigerenzer and Christoph Engel eds., 2006).

⁵² See, e.g., Mindfulness in Law Web site at <http://mindfulnessinlaw.com/Home.html>; The Institute for Mindfulness Studies, The Mindful Judge website at <http://themindfuljudge.com/Home.html>; Amanda Enayati, *Seeking Serenity: When Lawyers Go*, CNN HEALTH, (May 11, 2011), <http://thechart.blogs.cnn.com/2011/05/11/seeking-serenity-when-lawyers-go-zen/>; and Leonard L. Riskin, *The Contemplative Lawyer: On the Potential Contributions of Mindfulness Meditation to Law Students, Lawyers, and Their Clients*, 7 *Negotiation L. Rev.* 1 (2002)

⁵³ Britta K. Hölzel et al., *How Does Mindfulness Meditation Work? Proposing Mechanisms of Action from a Conceptual and Neural Perspective*, 6 *PERSP. PSYCHOL. SCI.* 537, 538 (2011).

⁵⁴ Scott R. Bishop et al., *Mindfulness: A Proposed Operational Definition*, 11 *CLINICAL PSYCHOL.: SCI. AND PRAC.* 230, 232 (2004).

⁵⁵ Amishi P. Jha, Jason Kropf, and Michael J. Baime, *Mindfulness Training Modifies Subsystems of Attention*, 7 *COGNITIVE, AFFECTIVE, AND BEHAV. NEUROSCIENCE* 109 (2007).

⁵⁶ Alberto Chiesa, Raffaella Calati, and Alessandro Serreti, *Does Mindfulness Training Improve Cognitive Abilities? A Systematic Review of Neuropsychological Findings*, 31 *CLINICAL PSYCHOL. R.* 449 (2011).

⁵⁷ See STOP meditation demonstrated at <http://www.youtube.com/watch?v=EiuTpeu5xQc>. See generally ELISHA GOLDSTEIN, *THE NOW EFFECT: HOW THIS MOMENT CAN CHANGE THE REST OF YOUR LIFE* (2012); BOB STAHL AND ELISHA GOLDSTEIN, *A MINDFULNESS-BASED STRESS REDUCTION WORKBOOK* (2010).

⁵⁸ Douglas A. Codiga, *Reflections on the Potential Growth of Mindfulness Meditation in the Law*, 7 *HARV. NEGOT. L. REV.* 109 (2002).

commitment to Buddhism; and, in addition to reducing stress and improving lawyering skills, mindfulness would help legal professionals develop insights regarding their entire lives.

4.4 Using Decision Aids

At first blush the idea of using a decision aid, like a checklist or a benchcard, may seem mundane. But compelling lessons from other professions such as health care and aviation demonstrate their incredible potential for improving performance. Physician Atul Gawande, for example, tells the story of how simple checklists (requiring such simple steps as washing hands with soap and fully covering the patient with sterile drapes) implemented in a Michigan hospital intensive care units saved over 1,500 lives and an estimated \$175 million dollars in costs.⁵⁹

Judges sometimes use checklists to decide substantive issues, but judges might also benefit from having procedural checklists.⁶⁰ In busy courtrooms with crowded dockets, a judge can easily fail to cover an essential piece of information that a defendant must be told before a plea may be voluntarily entered. When using checklists, however, judges should be careful also to follow the principles of procedural fairness and not simply cross off items on a checklist. For example, it is important that the defendant actually understand the rights he or she is giving up, not just answering “yes” to a series of questions obviously intended to get an affirmative response (“Do you understand?”).

Other tools based on evidence-based practices, such as risk and needs assessments, can be helpful to judges in making sentencing and probation-revocation decisions.⁶¹ Research demonstrates that standardized, objective assessment instruments enhance decision making across a wide variety of professional decisions.⁶² Researchers Stephen Gottfredson and Laura Moriarty suggest the following reasons, in part based on reflexive processing, for the superiority of statistical methods of prediction compared to intuitive methods: decision makers may not use information reliably, may not attend to base rates, may inappropriately weight predictive items, may weight items that are not predictive, and may be influenced by causal attributions or spurious correlations.⁶³

4.5 Seeking Feedback and Fostering Accountability

Because feedback is essential to learning and developing expertise, judges might seek and courts could benefit from providing opportunities to obtain feedback. Judges seldom know the results of their decisions. Even when a judge’s decision is reviewed by an appellate court, the lag time between making the decision and getting appellate feedback diminishes the value of the information. Individuals benefit the most when feedback is immediate.

Judges also cannot improve their decisions when they do not know what is and is not working at a systemic level. Does the court have access to outcome data on, for example, pretrial release, sentencing, and probation revocation decisions? What are the trends in the data? What cases most often result in failure to appeal or rearrest, and what decision heuristics might be guiding the cases? The court could also collect information on litigant satisfaction using a survey such as the National Center for State Courts’ *CourTools Access and Fairness Measure*.⁶⁴ The results of the survey would indicate whether judges’ assessments of their practice of procedural fairness principles are consistent with litigants’ experiences.

Judges also could be videotaped periodically or observed by a mentor or colleague. A neutral observer more likely will be able to identify mistakes in reasoning or instances where procedural fairness practices could be strengthened.⁶⁵ Finally, accountability can lead to more effortful, reflective processing of information. Researcher Eileen Braman explains:

⁵⁹ Atul Gawande, *The Checklist*, THE NEW YORKER (Dec. 10, 2007), available at http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande; see also ATUL GAWANDE, THE CHECKLIST MANIFESTO: HOW TO GET THINGS RIGHT (2011); Ingo Keilitz, “Never Events” in *Court Administration: Lessons from Health Care Reform*, 21(1) THE COURT MANAGER 6-15 (2009).

⁶⁰ For examples of substantive-law checklists, see Guthrie, Rachlinski and Wistrich, *supra* note 17, at 40.

⁶¹ Pamela M. Casey, Roger K. Warren, and Jennifer K. Elek, *Using Offender Risk and Needs Assessment Information at Sentencing: Guidance for Courts from a National Working Group*, NATIONAL CENTER FOR STATE COURTS (2011), available at <http://www.ncsc.org/Services-and-Experts/-/media/Files/PDF/Services%20and%20Experts/Areas%20of%20expertise/Sentencing%20Probation/RNA%20Guide%20Final.ashx>.

⁶² Stephen D. Gottfredson and Laura J. Moriarty, *Clinical Versus Actuarial Judgments in Criminal Justice Decisions: Should One Replace the Other?*, 70 FED. PROBATION 15 (2006), available at <http://heinonline.org/HOL/LandingPage?collection=journalsandhandle=hein.journals/fedpro70anddiv=23andid=andpage>.

⁶³ *Id.*

⁶⁴ National Center for State Courts, *CourTools: Measure 1, Access and Fairness* (2005), available at http://www.courttools.org/-/media/Microsites/Files/CourTools/courttools_Trial_measure1_access_and_fairness.ashx.

⁶⁵ Brest and Krieger, *supra* note 7, at 635.

Put another way, accountability tends to heighten accuracy motivations. When we know others are watching, we want to “get things right” and we also strive to use appropriate decision criteria to avoid criticisms that may be raised down the line.⁶⁶

One suggestion for holding judges accountable is to require that they provide an explanation for their decision, preferably in writing. Guthrie and his colleagues argue that “the discipline of opinion writing might enable well-meaning judges to overcome their intuitive, impressionistic reactions.”⁶⁷ Research also shows that individuals who were required to justify each step in a decision process performed better.⁶⁸

To the extent that judges ask themselves “why” at each point in their decision process and consider alternatives, their decisions will be the result of more effortful and deliberate processing. And to the extent that they are willing to engage in obtaining and using feedback from others, as discussed above, they will enhance a culture of accountability.

⁶⁶ Eileen Braman, *Searching for Constraint in Legal Decision Making*, in *THE PSYCHOLOGY OF JUDICIAL DECISION MAKING* 215 (David E. Klein and Gregory Mitchell eds., 2010).

⁶⁷ Guthrie, Rachlinski and Wistrich, *supra* note 17, at 37.

⁶⁸ Baumeister, Masicampo, and Vohs, *supra* note 26.