and motivation, and on whether they believed he deserved to be allowed to continue to live" (p. 91). Perhaps more troubling was the tendency of the white males to control or dominate the discussion in the deliberation process. Bowers et al. (2001) had discovered similar results. In their examination of the CJP database, however, Devine and Kelly (2015) found no evidence of a white male dominance effect. And, as noted previously, demographics of defendants, victims, or jurors had no effect on the final outcome. This discrepancy in findings between simulation research and the CJP database is well deserving of continuing examination.

DAMAGE AWARDS IN CIVIL CASES: ANOTHER SPECIAL ISSUE

Jury decision-making research has focused primarily on criminal cases, as reflected in this and the preceding chapter. It is important to emphasize, however, that many researchers have examined decision making in civil cases, particularly as it relates to settling on damage awards. Many scholars have noted that assigning a dollar amount to losses a plaintiff has suffered is an overwhelming and ambiguous task, given little guidance by the courts (e.g., Diamond, Rose, Murphy, & Meixner, 2011; Reyna et al., 2015; Robbennolt & Eisenberg, 2017). Dollar amounts are unbounded, beginning at zero but without end. In jurisdictions where damages are capped (limited), the caps are extremely high.

Damage awards may be compensatory—intended to "make someone whole" after suffering a loss—or punitive—intended to punish the defendant for the harm caused to the plaintiff. How does one decide how to compensate someone for the loss of a leg or the loss of a loved one's life? Furthermore, the losses are often intangible, reflected in such things as enjoyment of life or future earning capacity. And what is the "right" amount of punishment to place on a civil defendant, who may be an individual or a corporation? Jurors are often at a loss how to arrive at this, which may partially explain why judges very often reduce jury awards. Nevertheless, disagreement between judge and jury awards is not as great as often assumed, but the research in this area is very mixed, particularly as it relates to punitive damages. As Robbennolt & Eisenberg (2017) write, "additional research that explores factors that might influence judges and jurors differently would be useful" (p. 118).

It appears from the research thus far that damage award decisions have little correlation with demographic variables or political leanings of individual jurors. Predicting jury awards on these bases is probably a futile effort. However, because of the cognitive complexity of many civil cases in which damages were sought, many scholars have suggested that judges, not juries, were more adept at this task. As noted, though, judges and juries are not that dissimilar in their damage assessments.

A group of researchers (Hans & Reyna, 2011; Reyna & Brainerd, 2011; Reyna et al., 2015) have proposed a model of jury decision making in damage awards that is based on the story model discussed earlier. Called the *fuzzy trace model*, it takes into specific consideration how people use their cognitive abilities and translate them to make decisions about numbers. Reyna et al. (2015) demonstrated that mock jurors were cognitively able to determine the "gist" or essential meaning of the information they received in civil cases and were able to assign reasonable awards.

JUDICIAL DECISION MAKING

Traditionally, social and behavioral scientists studied jury decision making far more than the decision making of judges and conducted few experimental, archival, or field studies on this topic (Baum, 2010; Mitchell, 2010). Over the past two decades, research on judicial decision making has expanded, although it is by no means exploding. The research microscope has focused very little on judges compared to juries. There continues to be a substantial gap in our understanding of how judges think and how they make their decisions.

It is of interest, though, that existing research does suggest a high rate of agreement in decision making between judges and juries as well as among judges themselves (Robbennolt & Eisenberg, 2017). A series of studies has found judges and juries agreeing substantially on criminal verdicts, but less so in more recent years, with juries more prone to conviction than judges (Leopold, 2005). When judges and juries are presented with hypothetical case materials, they tend to agree on liability in civil cases, but the amount of damages awarded is often disparate. That is, juries and judges agree on who is at fault, not so much on how much a litigant should be awarded (see Robbennolt & Eisenberg, 2017, and references therein). To repeat, deciding on damage awards is a particularly challenging task for juries in civil cases, but it is not an insurmountable one (Reyna et al., 2015).

As the following quote indicates, there is much work to be done on judges alone, however:

> How will a judge's decision on a motion, verdict, or appeal be affected by precedents, the presence of an *amicus curiae* brief from the federal government, the plaintiff's race, a particularly eloquent brief or oral argument by the defendant's attorney, the preference and arguments of other panelists on a collegial court, the opinions of the local bar, the presentations of expert witnesses, or the demands on the judges' time? (Klein, 2010, p. xi)

Functions of Trial Judges

Trial judges represent the front line in both civil and criminal trials (Vidmar, 2011). Vidmar elaborates:

> At early stages of litigation they make rulings about relevant law bearing on the dispute—for example, about whether the litigation is "ripe" for further attention by the court, about whether the claims have merit, or about whether a statute of limitations is or is not applicable. (p. 58)

They also manage a range of settlements, approve plea bargains, rule on preliminary motions (such as whether evidence should be suppressed or a trial should be moved), and of course preside over jury trials. They sentence defendants found guilty in criminal cases and review civil jury verdicts, sometimes adjusting damage awards. As further noted by Vidmar, these various decision-making activities are potentially influenced by the judge's personality, attitudes, experiences, and cognitive biases, as well as a host of other factors.

Decisions made by trial judges are also influenced by considerable deference to precedent, which tends to keep personal characteristics and cognitive biases in check during judicial decision making. Vidmar (2011) comments that "judges know that if they deviate too far from prior case law or statutory guidelines, their ruling will be appealed—and likely overturned in an appellate court" (p. 58). According to Robbennolt, MacCoun, and Darley (2010), a solid understanding of judicial decision making must incorporate the knowledge that judges simultaneously try to balance numerous, disparate, and often conflicting objectives. We might add to this the recent concerns about the overreliance on computerized risk instruments to make decisions about bail and sentencing (Fishel, Flack, & DeMatteo, 2018; Israni, 2017). This was mentioned in Chapter 2 and will not be revisited here. However, it should be noted that critics have asked for both more careful review of the validity of these instruments and more attention given to the human aspects of decision making.

Regular watchers of legal dramas on cable and network television are routinely treated to a parade of judges who are impatient, funny, kind, sarcastic, respected, corrupt, naive, efficient, brilliant, or incompetent—in other words, they are human. As psychologists have learned over the years, all humans rely on stereotypes and cognitive shortcuts to simplify and make sense of a complex social and legal world. Cognitive shortcuts allow for more efficient information processing, but they also create stereotypes. Judges, in spite of their education, training, and experience, are probably not immune to errors of judgment and decision making. Some empirical work clearly points in that direction.

Research on Judge Biases

Guthrie, Rachlinski, and Wistrich (2001a, 2001b), in their oft-cited and comprehensive study of federal trial judges, used the term **cognitive biases** to characterize the group of decision errors sometimes made by judges. In fact, cognitive biases affect the decisions many professionals make, "including doctors, real estate appraisers, engineers, accountants, options traders, military leaders, psychologists, and even lawyers" (Guthrie et al., 2001a, p. 1). For instance, several studies have discovered that judges appear to be similar to juries in their inability to disregard legally prejudicial and impermissible facts in rendering a verdict (Landsman & Rakos, 1994; Vidmar, 2011; Wistrich, Guthrie, & Rachlinski, 2005). This issue is probably not as extensive as found among juries, but it still exists. Guthrie and his colleagues (2001b) focused on three cognitive biases or *cognitive illusions* to which trial judges are most likely to fall prey: (1) anchoring, (2) hindsight bias, and (3) egocentric biases.

Anchoring

Anchoring involves giving excessive weight to the initial starting value (the anchor) when decisions are to be made under conditions of uncertainty. This bias is especially prevalent in civil cases. Guthrie et al. (2001a) give the example of real estate transactions when people are trying to decide the fair market value of a house before they make an offer. In these situations, they commonly rely on the initial value available to them—the list price. The list price tends to "anchor" purchasing parties' final-price offer. Reliance on anchors is often reasonable in such a setting, because the anchors provide important information about the true market value of a house. In some cases, however, the list price does not provide relevant information about the market value, but it does influence judgment and decision making. Guthrie et al. (2001a) write, "In litigation, anchors, such as damage awards requested by plaintiffs' attorneys or damage caps provided by statute, have been shown to influence the amount of damages awarded by juries" (p. 2). The researchers also discovered that judges are influenced by anchors in a similar fashion. As an example, they are aware of the awards made in similar cases and do not stray significantly from these amounts.

In the criminal context, in making sentencing decisions, judges have less discretion, especially in the federal system and in states where they are expected to abide by sentencing guidelines set by sentencing commissions. Other states have maximum and minimum sentences, set by statute, for various crimes. The range may be very broad, and judges are free to sentence at the uppermost or lowermost level, and in doing so may take extralegal factors into account. Although an offender can appeal a sentence on the basis that it was disproportionate to the crime committed, only the most egregious sentences have been overturned. Furthermore, even when guidelines are provided, judges can depart from them if they

provide their reasons for doing so for the record. In essence, the discretion given to judges at criminal sentencing is very broad and deserves continuing scrutiny.

Hindsight Bias

As stated earlier in the chapter when discussing jurors, *hindsight bias* is the tendency to change a previous judgment or decision in the direction of newly provided information (Massoni & Vannucci, 2007). Stated another way, it is the tendency, after an event has occurred, to overestimate the extent to which the outcome could have been foreseen (VandenBos, 2007). It is one of the most pervasive errors in everyday human judgment and prediction, and judges are by no means immune to it. Guthrie et al. (2001a) argue that hindsight bias is a threat to accurate determinations in many areas of law. These legal scholars note that it is unusual, in ordinary life, to expect people to predict the outcome of past events; however, in law, people are asked to make this kind of judgment on a frequent basis. Because courts usually evaluate events *after* they happen, judges are continually vulnerable to hindsight bias (Guthrie et al., 2001b).

> For example, when a judge or jury sets out to determine whether a defendant was negligent, they must evaluate the reasonableness of precautions that the defendant took against causing an accident, and they make this decision knowing that there was an injury. (Guthrie et al., 2001a, p. 2)

Research has shown that precautions that seem reasonable to people *before* an accident may seem negligent afterward. It is not hard to find this principle operating in the nonlegal world. The quarterback was at his best throughout the game but fumbled at the very end. Because the team lost, the quarterback is at fault. Had the team won, the fumble would have gained little attention. To use a legal example, a prosecutor seemed skillful during the trial, but seems less competent after the jury decides not to convict. The opposite also occurs—that is, something initially believed to be unreasonable is later thought to be acceptable. The prosecutor's brazen attack on the witness is outrageous, until the prosecutor wins the case. She is then praised for her stellar performance.

In their study, Guthrie et al. (2001b) found that judges are indeed susceptible to hindsight bias. The researchers determined that judges could not help but rely on information that was not available before a relevant event occurred, but that later became available.

> When deciding whether to suppress evidence found during a police search, for example, judges are expected to ignore their knowledge of the outcome of the search for purposes of determining whether the police had probable cause to conduct the search. (Guthrie et al., 2001b, pp. 804–805)

This susceptibility to hindsight bias, the researchers write, is troubling because judges are frequently expected to suppress their knowledge of some set of facts before making decisions.

Oeberst and Goeckenjan (2016) also demonstrated that judges were susceptible to hindsight bias in a hypothetical situation involving criminal negligence—specifically whether a mental health professional was negligent in allowing a psychiatric patient to leave the grounds of a hospital for a brief walk with an acquaintance. Judges were randomly assigned to case materials that either did or did not include a harmful outcome (the patient returned to the facility, or the patient did not return and in the meantime committed crimes). Judges who were informed of a harmful outcome were significantly more likely to find the defendant negligent.

In another experiment, Wallace and Kassin (2012) recruited 132 judges from three states to participate in an experiment involving errors in judgment around confession evidence. The judges were presented with one of six versions of a two-page criminal case summary taken from actual cases containing confession evidence. The case involved burglary and the murder of a young woman. The researchers manipulated three levels of confession by the defendant and two levels of evidence. After reading the case summary, the judges were asked to complete a questionnaire on how they would rule.

Results revealed that judges found that the high-pressure confession was coerced and therefore improperly admitted into evidence. However—and as found in previous studies on juries—the improper confession, even if not admitted, significantly increased the judges' conviction of the defendant, even in the weak evidence condition. The judges knew the defendant had confessed, and this hindsight knowledge affected their decision.

> The fact that judges exhibited the same bias that mock jurors have in past studies is interesting and adds to a growing body of research suggesting that some of the biases observed in lay decision makers are rooted in such basic social cognition processes that they tend to afflict professional judges as well. (Wallace & Kassin, 2012, p. 156)

The researchers contend that hindsight bias is so fundamental that no one is immune, including trial judges.

Egocentric Bias

People are often self-serving about their own abilities and competences (as well as those of their children and grandchildren). Some are so to an extreme—"I alone can fix this." "People routinely estimate that they are above average on a variety of desirable characteristics, including health, driving, productivity, and the likelihood that their marriage will succeed" (Guthrie et al., 2001a, p. 3). Because of these **egocentric biases**, litigants and their attorneys probably overestimate their own abilities and the merits of their cases. These biases are also likely to undermine settlement efforts because each side remains optimistic about its chances of winning at trial.

Judges, like most humans, are also likely to be inclined to interpret information in self-serving or egocentric ways (Guthrie et al., 2001b). These judicial biases might make it difficult for them to realize they can make mistakes, "issue unfair rulings, make choices that reflect personal biases, or even be subject to cognitive illusions of judgment" (Guthrie et al., 2001a, p. 3). Guthrie et al. (2001b) had judges rate their prior decisions and found a significant self-serving bias, in that they underestimated the number of cases that had been overturned by higher courts. In sum, they believed they were better in their decisions than their records revealed.

Racial and Other Group Biases

In addition to the cognitive biases discussed above, judges may have racial biases as well as gender, ethnic, religious, and other biases against persons belonging to specific groups. Both anecdotal and research evidence of such biases was not uncommon in the past, but there has been less evidence in recent years, likely because of diversity in the judicial profession. Anecdotes continue to be told, including the one about the judge who sentenced a male teacher to a mild probationary sentence for the rape of a 14-year-old girl, stating that the girl herself was physically advanced for her age. Recent research, however, has not documented the *systematic* gender discrimination of the past.

Racial bias has been somewhat documented, however. For example, judges have been found to be as prone as other persons to stereotyping of blacks (Rachlinski, Johnson, Wistrich, & Guthrie, 2009; Vidmar, 2011). That is, judges in some studies imposed harsher penalties on black defendants than on white defendants. In a study by Blair, Judd, and Chapleau (2004), blacks who were rated as having the most "Afrocentric" features received significantly longer sentences than blacks having fewer of these features, even after other factors were controlled in the study.

However, Vidmar (2011) admonishes that these studies did not involve real-world contexts but were laboratory experiments that may have distorted the results. The typical methodology in such studies is to ask participants to read case materials or view portions of a simulated trial. Vidmar asserts that "in actual trials, judges weigh inadmissible evidence along with many other pieces of evidence, including arguments by opposing legal counsel, so any effects of implicit biases may be negligible" (p. 59). In actual cases, compared with simulation studies, judges have more detailed information or deal with settled legal doctrines, and they have more time to consider and deliberate. However, Vidmar also believes that the potential effects of race on sentencing may be "subtle and invidious" (p. 59) and difficult to clearly identify.

In sum, judges are human and are subject to the same cognitive biases as other humans, and they are often unaware of these biases, most particularly hindsight bias. To a great extent, these biases can be modulated by the legal rules that are placed on judges and the fact that their decisions are subject to review by appellate courts. Many cases are not appealed, however, and appellate courts are often reluctant to second-guess decisions made by trial judges. For these reasons, it is hoped that scholars will continue to focus the research microscope on judicial decision making.

SUMMARY AND CONCLUSIONS

The decision-making processes of juries and judges, particularly juries, have been researched extensively by social scientists, resulting in an impressive store of studies from various academic disciplines. Reviews of the literature indicate that more than 1,500 jury studies have been published, and many more are available in professional databases. About two-thirds of the published studies are mock jury experiments. Some have participants who either served on juries or were called for jury duty, but most use typical research participants recruited from the community or college classrooms. Studies of judicial decision making are fewer in number, but they are more likely to use real judges. The judges are surveyed about their attitudes or actual decisions, or they are asked to read case materials and make decisions based on the facts of the case presented. The chapter focused primarily on the decision making of jurors, but increasingly more information about judicial decision making is becoming available.

Juries adopt deliberation styles, with the two most common being verdict-driven and evidence-driven. It appears that most juries use the former, which indicates a desire to reach consensus or unanimity as soon as possible. The law prefers juries to use the evidence-driven approach, which implies a very careful review of the evidence presented as well as conscientious deliberation among a group of individuals who are unlikely to have known one another before the trial began. Verdict-driven juries spend less time deliberating and are more likely to pressure jurors with a minority opinion to bend to the majority. Nevertheless, researchers do not suggest that justice is not served by the verdict-driven jury. There is concern, however, when some jurors may not feel free to participate or may not be listened to. Research has found that diversified juries (in terms of socioeconomic status, race, gender, and age) are the most likely to ensure the integrity of the jury system.