
Juror Decision-Making

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COGNITION AND JUROR DECISION-MAKING

Imagine a day in the life of a typical juror, whether in England, Canada, New Zealand, Scotland, Ireland, Australia, or the United States. Upon arrival in court he or she is beset by a complex system of rules and procedures that are well rehearsed and well understood by the professionals who work in those settings, but complicated and obtuse to the newcomer. In some jurisdictions, the complexity is amplified by the jury selection process. In Canada, for example, two lay “triers” selected from the pool of potential jurors determine whether their fellow jurors can be impartial. In the US, the prosecutor and defense attorneys dismiss potentially biased jurors based either on readily apparent juror prejudices or on attorneys’ intuitions about prospective jurors’ inclinations. The stated purpose of jury selection in these jurisdictions is to assure the court that those jurors who remain are impartial. But for the prospective juror the questioning process involves a number of complicated cognitive tasks, including reconstruction of the past, forecasting of the future, and inferential reasoning.

In any jury trial, empanelled members must sift through conflicting arguments and evidence presentations and a series of exhaustive jury instructions that frequently involve concepts and language unfamiliar to most laypeople. In England, Australia, and Canada, jurors hear summations of the evidence by the judge that may differ in significant ways from attorneys’ arguments. Then, during their deliberations, jurors are asked to recall vast amounts of trial evidence, expected to understand and apply their instructions, and ultimately, to decide on an “appropriate” verdict.

These procedures beg the question, how *do* jurors decide on an “appropriate” verdict? How willing, able, and motivated are they to process the large volume of trial evidence, some of it contradictory in nature? How do they assess and combine disparate sources of information? By what process do they evaluate and use the trial evidence in reaching their decisions? How do their prior experiences and preconceptions regarding the judicial

system influence their decision-making abilities? Hastie (1993) suggests that one reason psychologists are interested in jurors' judgments is that the juror's task is an inherently complex one that involves almost all higher-order thought processes of interest to cognitive psychologists.

In this chapter, we attempt to address some of the cognitive aspects of juror decision-making. Although other recent reviews of juror and jury decision-making exist (e.g., Greene *et al.* 2002; Levett *et al.* 2005), to our knowledge none looks explicitly at the cognitive processes involved in individual jurors' decision-making. We focus on the individual as the unit of analysis, leaving for now the nascent field of research that focuses on deliberating juries. Though jury deliberation presents a fascinating arena for examining the complex social interplay of several deliberating thinkers, focusing on the *juror* gives us the opportunity to explore in more precise detail how cognitive factors alone influence legal decision-making. Importantly, many studies have documented the crucial role that individual jurors' preferences play in reaching a final jury verdict. Indeed, the pre-deliberation verdict preferences of individual jurors predict the final outcome in the vast majority of cases (MacCoun & Kerr 1988; Devine *et al.* 2001). So because most of the work involved in determining the resolution of a case happens in the thoughts of individual jurors, it makes sense to hone in on reasoning processes at the individual level. These processes are highly determinative of the jury's final verdict.

To begin, we outline various cognitive models of juror decision-making that have been advanced and tested in recent decades. In the sections that follow, where possible, we apply aspects of these models to applied problems in the legal realm. Although cognitive mechanisms influence judgments in all areas of law (as evidenced by chapters in the 1999 edition of the *Handbook of Applied Cognition* that explored the cognitive mechanisms underlying eyewitness testimony and pre-trial publicity), we focus our review on three specific psycho-legal domains: juror decisions related to the death penalty, sexual harassment, and damage awards. Although these topics are primarily germane to American law, they present psychologically important issues that extend beyond the particular legal contexts involved. In addition, they represent "hot topics" in psychology and law that have generated a great deal of recent empirical work. So focusing our gaze their way will allow assessment of how cognitive principles apply both to decisions in these particular domains of American law and to legal decision-making more generally.

To presage an important point though, juror research has been a relatively disjointed enterprise, at least from the perspective of a cognitive theorist; with some exceptions, researchers have tended to test *legal* assumptions about juror behavior rather than assumptions that flow from models of cognition. Stated otherwise, cognitive models and the postulates that come from those models have had only modest and fleeting impact on our understanding of jurors' thought processes. Why is this so? We suspect that many psycho-legal researchers were initially drawn to this field because it values and rewards real-world applicability somewhat more than detailed theory development and refinement (though, of course, most would agree that there is nothing so useful as a good theory). This desire for relevance and application in the real world has, at some level and with some exceptions, tended to trump concerns about advancing basic cognitive theory.

Although the development of theory has not been at the forefront of scholarly work on juror decision-making, neither has that work been atheoretical. In fact, the prevailing *zeitgeist* has been to borrow concepts and measures from cognitive or social-cognitive theories and use them to examine the aptness of legal assumptions about jurors' behavior.

For example, various researchers (e.g., Dewitt *et al.* 1997; Chen & Chaiken 1999; Simon 2004) have examined how different modes of information-processing influence jurors' decision-making. Applying aspects of the elaboration likelihood model (ELM) proposed by Petty and Cacioppo (1986), Dewitt *et al.* have shown that, as ELM would predict, mock jurors who are not motivated to process scientific evidence in a thoughtful and effortful way are also less likely to attend to issue-relevant arguments presented during a trial. Borrowing concepts of coherence-based reasoning, Simon (2004) has shown that jurors' decisions involve a complex and nuanced set of cognitive processes that transform difficult choices into easier ones by amplifying one alternative perspective on the evidence and deflating competing perspectives. In essence, the cognitive system imposes coherence on complicated decisional tasks. Other theories of reasoning, e.g., belief bias, though not yet applied to the realm of juror decision-making, also posit that beliefs and attitudes affect construction of mental models and can bias reasoning performance (Evans *et al.* 1993; Klauer *et al.* 2000). They hold promise for future application. Finally, as we detail later in this chapter, Chen and Chaiken (1999), relying on a theory distinguishing systematic and heuristic reasoning, have shown that jurors faced with complicated cognitive tasks and lacking the motivation or ability to fully evaluate the evidence tend to rely on heuristic rules-of-thumb to determine a defendant's culpability.

In addition to the application of basic cognitive and socio-cognitive models to promote understanding of legal decisions, some psychologists have developed *de novo* theories of juror behavior to account for the ways that jurors think, reason, judge, and decide. We describe the models and predictions that flow from those theories next.

MODELS OF JUROR DECISION-MAKING

The ideal juror is one who can dispassionately listen to the trial evidence and is savvy enough to render a verdict based on rational and prejudice-free thought processes. The real juror, on the other hand, is not the blank slate that the judicial system prefers and presumes to exist. Rather, various cognitive factors affect jurors' abilities to process complex and lengthy trial information and make judgments based on that evidence in light of the legal parameters available to them. Models that describe this process tend to fall into one of two categories: mathematical approaches and explanation-based approaches. The most comprehensive review of these models is provided by Reid Hastie in an edited book entitled *Inside the Juror* (1993).

Three different models exemplify the mathematical approach: (1) probability theory (Schum & Martin 1993); (2) algebraic theory (Anderson 1981); and (3) stochastic processes (Kerr 1993). In all three, jurors are thought to engage in a series of "mental" calculations in which they weigh the relevancy and strength of each independent piece of trial evidence and translate the resulting score into an assessment of the defendant's culpability (in the realm of criminal law). This score is then compared to the criterion needed to find the defendant guilty (or, in civil law matters, liable). If the weight of the trial evidence meets the legal threshold for finding the defendant responsible, the juror will render that verdict. In a similar vein, Bayesian models rely on jurors' preconceptions about the defendant's culpability, factoring into this analysis the subjective links between pieces of evidence (Marshall & Wise 1975; Pennington & Hastie 1981; Schum & Martin 1982). These mathematical approaches are complex, and are dependent on the underlying assumption

that jurors can conceptualize and weight pieces of trial information as separate and distinct entities (Hastie 1993; Ellsworth & Mauro 1998), an assumption not supported by more recent analyses of the jury decision-making process (Greene *et al.* 2002). Indeed, mathematically-based theories have generated relatively little empirical work in recent years as it has become clear that jurors do not necessarily process items of evidence as discrete entities or necessarily update their prior beliefs in light of that new evidence. More generally, we know that jurors' behavior does not conform to principles of probability.

Explanation-based approaches that emphasize jurors' cognitive organization or representation of the evidence have been favored by jury researchers in recent years. We describe the most widely cited explanation-based approach to jurors' cognitive behavior, the story model, in some detail. We also describe a second explanation-based approach, the heuristic-systematic model, that has been applied to juror decisions to explain the ways that jurors process evidence and use it to structure their choices. These models both portray the juror as an active decision-maker who interprets, evaluates, and elaborates on the trial information, rather than as a passive recipient who merely weighs each piece of evidence as a discrete entity and combines these elements in some probabilistic fashion.

The story model, developed by Pennington and Hastie (1981, 1986, 1988, 1993), posits that jurors construct a narrative storyline out of the evidence presented during the trial. There are three stages in this model: (1) evaluating the evidence through story construction; (2) learning about the various verdict options available; and (3) reaching a decision by fitting the story to the most appropriate verdict category (Pennington & Hastie 1993).

During the story construction stage, jurors use three kinds of information to create a plausible story: the evidence presented throughout the trial (such as testimony from the witnesses); their real-world knowledge of similar cases or crimes in their community; and their own generic expectations and experiences relevant to the issues in the case. In the process of constructing a narrative framework, various interpretations of the evidence can result in different stories. The juror will ultimately adopt the story that, in his or her mind, best fits the evidence and is most coherent (Pennington & Hastie 1993). In the second stage, jurors learn about the verdict options from the judge's instructions (in a homicide trial, these might include legal definitions of first-degree murder, second-degree murder, and manslaughter). In the final stage, jurors attempt to match the story that they constructed in the first stage to one of the second stage verdict categories using the legal rules and prescriptions provided by the trial judge. If the storyline fits the requirements of the verdict category under consideration, the juror will choose that verdict category. If the threshold is not met, the juror will search for a more appropriate verdict category.

Although the interpretative nature of story construction is likely to include a combination of accurate representations gleaned from the evidence presented during the trial, it may also involve unintended misrepresentations and even purposeful distortions (Smith 1991). Carlson and Russo (2001) posit that jurors engage in pre-decisional distortion, in which they interpret new trial evidence in a manner consistent with whichever verdict is tentatively favored at the time the evidence is presented. Jurors who tentatively favor the plaintiff (or defendant) early in the trial may interpret new information in a manner that supports that initial leaning. Carlson and Russo found such distortions to be particularly problematic in a sample of prospective jurors awaiting jury duty, whereas pre-decisional distortions among student participants were more limited. Such distortions challenge the

legal system's requirement that jurors carefully consider and evaluate all trial information in a bias-free manner.

Empirical data show that jurors have a strong inclination to construct stories out of the evidence. In an early interview study, Pennington and Hastie (1981) asked jurors to "talk aloud" and respond to questions about the evidence and the judge's instructions as they made a decision about a homicide case. Jurors tended to organize the evidence into a narrative. Many of their stories included trial evidence that was only inferred (not actually presented) during the trial, reflecting the constructive nature of the adopted narrative. In addition, despite hearing the same trial information, those participants who chose a guilty verdict created different stories than those who chose the not guilty option.

Pennington and Hastie (1988) conducted a follow-up study to examine further the relationship between story construction and memory for evidence. They provided participants with various pieces of evidence that supported either a guilty or not guilty verdict and tested recognition of the evidence after the trial. Mock jurors recognized more evidentiary information consistent with their verdict choice than evidence inconsistent with that choice, suggesting the existence of pre-decisional distortion. Participants also falsely recognized verdict-consistent story elements that were not included in the original trial.

In a third study, Pennington and Hastie (1988) varied the manner in which the evidence was presented: both the defense and the prosecution presented their evidence using either a story-based approach (evidence presented in a story format) or a witness-based approach (evidence presented by a collection of witnesses who testified in no particular order). They found that when the prosecution used a story-based strategy and the defense did not, jurors convicted the defendant 78 per cent of the time. When the strategies were reversed, convictions dropped to 31 per cent. These findings suggest that the easier it is for jurors to construct a narrative, the more likely they are to render a verdict consistent with that story. This is not to imply that psychologists can reliably predict what kind of stories jurors will construct, as most personality and demographic characteristics have only weak relationships to juror verdicts. But according to Schuller & Yarmey (2001), the story model does provide an empirical framework through which researchers can test how cognitive and environmental factors influence juror decision-making.

Why do some jurors construct a guilt-based narrative while others create a not-guilty story? In answer to this question, Pennington and Hastie (1993) proposed that the constructive nature of story-generating is based on jurors' prior experiences, knowledge of the world, and ability to deal with the legal constraints placed upon them. Each juror has varying degrees of experience with issues related to the facts of a case, and this experience affects how he or she interprets both the trial evidence and the judge's instructions.

Other studies have shown the powerful influence of prior experiences and expectations on jurors' cognitive construction of evidence. Smith (1991) found, for example, that although lay definitions of legal rules often include legally incorrect information, jurors rely on these incorrect definitions when determining their verdicts. Likewise, they use crime prototypes (schemas based on "typical" crime elements) as models for determining whether a particular verdict alternative is appropriate, even if these prototypes are inconsistent with the facts and instructions in the current case (Smith 1991). Prior experience and real-world knowledge are only part of the story-generating process, however. Jurors' beliefs, attitudes, and cognitive capabilities also play a pivotal role in the processing of trial-relevant information, particularly when it comes to creating a plausible and coherent story framework.

Other explanation-based models stem from social-cognitive theories that propose a dual-processing approach to human information-gathering, whereby perceivers process information through either a passive, heuristic-based approach or a more active, systematic approach. One dual-process model that has attained some prominence in recent years and that has relevance to jurors' tasks is the heuristic-systematic model proposed by Chen and Chaiken (1999).

The heuristic-systematic model proposes that people process information along a heuristic/systematic continuum. Heuristic processing entails a nearly effortless appraisal of the available information, often using simple decision rules or rules-of-thumb (e.g., experts should be given deference) to evaluate information. Systematic processing, on the other hand, involves a more careful scrutiny of the available information (Chen *et al.* 1996). Though often more accurate than heuristic processing, decisions made using the systematic approach require greater cognitive effort on the part of information processors, who must have both the motivation and ability to fully evaluate information placed before them (Chen & Chaiken 1999). When either is lacking or when such information involves complex trial testimony and evidence, jurors may rely on heuristic rules-of-thumb to determine the defendant's culpability. For example, they may focus on the complexity of the testimony delivered by an expert witness or authority figure (Cooper *et al.* 1996), the number of plaintiffs involved in a lawsuit (Horowitz & Bordens 2000), the attractiveness of a witness (Catano 1980), the amount of evidence they are asked to evaluate during the course of the trial (Weinstock & Flaton 2004), or their prior knowledge and lay prototypes regarding the "typical" crime (Smith 1991). In each of these examples, jurors' reliance on heuristic shortcuts may undermine their ability to comprehend and integrate discrete pieces of evidence and apply those facts to the legal criteria provided by the judge (Greene & Ellis 2006).

In the following sections, we describe three applications of cognitive psychology to juror behavior in American law. In particular, we focus on subjects that have captured a great deal of empirical attention by psycho-legal researchers, namely capital punishment (in the realm of criminal law) and sexual harassment and damage awards (in civil law), but that have not been thoroughly examined through the lens of the cognitive psychologist. Where appropriate, we describe tests of the story model and dual-process model in these applied areas.

JUROR DECISION-MAKING IN CAPITAL PUNISHMENT CASES

A decision task that is uniquely American (though informative on jurors' assessments in all jurisdictions) is the determination of whether to sentence a convicted felon to death. Although European nations have no capital punishment, a surge of violent crime in Australia has raised the possibility of reinstating the death penalty, abolished in the 1960s, in that country (Forsterlee *et al.* 1999). So although only American jurors currently grapple with the uniquely finite nature of capital punishment, jurors in other jurisdictions may one day have to make these decisions as well. In the meantime, jurors in all trials are required to weigh competing sources of evidence and apply their assessments to legal standards provided by the judge – the inherently psychological tasks that we ask of capital jurors. So understanding jurors' decision-making in capital cases is broadly useful.

Because of the distinctive nature of capital punishment, this area of American criminal law has received special recognition by the courts (*Furman v. Georgia* 1972; *Gregg v. Georgia* 1976), which have adopted a series of specialized and explicit procedures to guide jurors' decision-making. These guidelines rely, implicitly, on beliefs about jurors' cognitive processes and, indeed, psychologists have examined the effects of these guidelines on jurors' decision-making processes in capital punishment cases.

Among the guidelines is a requirement that jurors who serve in a capital murder trial be "death-qualified." That is, they must be willing to impose the death penalty should the facts of the case warrant that punishment. Death qualification occurs during the jury selection of a capital trial, serving to exclude jurors whose beliefs about the death penalty are such that they would be unable or unwilling to impose it (*Witherspoon v. Illinois* 1968; *Wainright v. Witt* 1985; Butler & Moran 2002). In fact, jurors are excluded from capital trials if they are unwilling to impose the death penalty under any condition or if they are willing to *always* render a death verdict regardless of the case facts. One study estimated that 19 per cent of Californians hold the former view and 2.6 per cent ascribe to the latter (Haney *et al.* 1994). Other studies find comparable numbers.

A question that has garnered significant research effort asks how death qualification influences the overall decision-making capabilities of the jury. Death-qualified jurors do differ from jurors who are not death qualified (so-called "excluded jurors") in terms of their willingness to impose the death penalty, but they also differ in terms of their willingness to convict criminal defendants. Filkins *et al.* (1998) conducted a meta-analysis on the effects of death qualification on capital trial verdicts and found that death-qualified jurors were more likely than excluded jurors to convict the defendant and reached this decision long before they had to choose whether to sentence the defendant to death. Cowan *et al.* (1984) found similar results in their study of 288 mock jurors, where 75 per cent of death-qualified jurors convicted the defendant of homicide as did only 53 per cent of excluded jurors. In fact, a long line of research now documents that people who are excluded during the death qualification process are less punitive and less prosecution-oriented than those who serve in capital cases.

Death-qualified individuals also tend to favor crime control models of criminal justice (as opposed to due process models that focus on fair procedures), favor the point of view of the prosecution, mistrust criminal defendants and defense counsel, and take a more punitive stance against offenders (Fitzgerald & Ellsworth 1984). These individual preferences can have a dramatic impact on jurors' story constructions and on the verdicts they ultimately choose.

The story model posits that the prior experiences and worldviews of jurors (including death-qualified jurors) lead them to perceive trial information in a way that accommodates their individual attitudes. For example, an authoritarian attitude may provide an initial framework through which information presented during the trial is filtered, and the story that results is likely to be consistent with this initial belief structure. The juror who survives jury selection in a capital case may be especially likely to have this perspective; after all, he or she has agreed with governmental authorities (i.e., the prosecutor and judge) that the death penalty is appropriate in at least some circumstances. In addition, because jurors in capital cases have pondered the defendant's punishment before hearing any evidence of his guilt, their story construction may begin from a pro-prosecution stance, thinking that the defendant must be guilty and evaluating new evidence in light of that bias (Haney 1984).

Another of the guidelines formulated by the US Supreme Court (in *Gregg v. Georgia* 1976) is the bifurcation of capital trials into two phases: a guilt phase in which the defendant's guilt is assessed, and a penalty phase in which the sentence is determined. Although it provides some consistency sought by the courts, bifurcation also raises questions about jurors' competence to independently weigh and evaluate evidence presented during the two phases of a capital trial.

Empirical research now documents some of the problems with the two-phase bifurcated trial structure of capital punishment cases. Post-trial interviews of capital jurors conducted by researchers from the Capital Jury Project (a large research consortium that has examined jury behavior in 20–30 capital trials in each of 15 states in the US) reveal that jurors reach important conclusions during the guilt phase of the trial that have nothing whatsoever to do with the defendant's guilt. Many jurors questioned in these studies said that they relied on evidence presented during the guilt phase to reach personal decisions about punishment. In particular, these jurors tended to take an early stand favoring death. Jurors who took an early pro-life stand, on the other hand, were likely to point to the jury's deliberation (rather than the evidence presentation) as the point at which they reached a decision about punishment (Bowers *et al.* 1998). These findings suggest a strong primacy effect; many jurors are apparently influenced by the heinous character of the crime and the horrific nature of certain evidence (information that tends to be presented early in the trial), and wait for neither the evidence and arguments related to punishment nor for sentencing instructions from the judge before making their punishment choices. Furthermore, most jurors who took a premature stand on punishment were "absolutely convinced" of the correctness of their choice; in fact, jurors who reached these conclusions during the guilt phase were more firm in their beliefs than those who did so after hearing arguments, evidence, and instructions about sentencing. These premature punishment stands may influence the attention that jurors pay to discrete pieces of evidence and the weight that they accord that evidence during both the guilt and punishment phases of the trial, making them largely unreceptive to any contrary evidence that is presented later in the case (Bowers *et al.* 1998).

Jurors' ability to evaluate evidence presented during the penalty phase may be problematic as well. Jurors are supposed to consider two sources of evidence during this phase of the trial. First, they determine whether any aggravating factors are present. These are statutorily defined factors that make the defendant more worthy of death (e.g., that the crime was carried out in an especially heinous manner). If jurors find and agree upon aggravating factors, they then consider mitigating factors – any factors that make the defendant less deserving of the death penalty. Mitigating factors may be statutorily derived (e.g., the defendant was under extreme mental duress) or they may involve any non-statutory factor the juror may find relevant (e.g., the defendant was young; he has good parents).

A question of grave concern is how jurors weigh aggravating factors against the mitigating factors in determining the appropriateness of a death sentence. Some data suggest that jurors' attitudinal predispositions influence how they evaluate aggravating and mitigating evidence. For example, Butler and Moran (2002) found that death-qualified jurors were more likely to attend to and use aggravating factors and excluded jurors were more likely to attend to and use mitigating factors in their decision calculus. These findings fit squarely with the story model's prediction that an individuals' predispositions and expectations will

influence the evidence evaluation stage of decision-making. The differential emphasis placed on these trial elements and the different story constructions that result obviously have a dramatic impact on the resulting verdicts.

Another question with relevance to cognition is whether capital jurors' appraisal of aggravating and mitigating factors, and their application of capital jury instructions more generally, is limited by poor comprehension of these legal dictates. To be sure, the legal instructions that accompany capital trials are written in complex and exacting language, and few, if any, jurors have experience with these concepts or terminologies. Lacking knowledge of the concepts involved and being unsure about how to apply the law, jurors may rely more on their predispositional biases than the legal prescriptions provided by the court. Stated otherwise, they rely on heuristic processing rather than a more in-depth, careful, and systematic approach. In story-model terminology, jurors may have difficulty reaching a logical and legally defensible decision because they were not adequately informed about their verdict options.

Several studies have examined jurors' comprehension of death penalty instructions. In a series of studies, Richard Wiener and his colleagues borrowed elements of the story model in an attempt to determine how well jurors understand and apply capital jury instructions. For example, Wiener *et al.* (1995) reasoned that death penalty jurors engage in active story construction, using the life histories of the defendant and the victim, the trial evidence, and their own prior experiences with homicides to construct plausible stories. They also hypothesized that jurors' narrative constructions of the evidence would incorporate potentially erroneous knowledge about relevant legal concepts and rules of law. Through interviews, they learned that jurors hold inaccurate and narrow definitions of capital trial instructions and that a majority of jurors confuse elements of aggravation with elements of mitigation. For example, 77 per cent of respondents inaccurately defined aggravation (24 per cent offered definitions that were too narrow and 52 per cent thought aggravation implied that *less* severe punishment was necessary). Further, 52 per cent inaccurately defined mitigation (42 per cent defined it too narrowly and 9 per cent thought mitigation implied that *more* severe punishment was appropriate). Lacking the ability to understand the jury instructions may have hindered each juror's chances of systematically processing relevant trial information.

Data from the Capital Jury Project further underscore jurors' inability to understand and apply aggravating and mitigating evidence. The US Supreme Court has ruled that jurors must find at least one statutorily defined aggravating factor in order to sentence the defendant to death (*Zant v. Stephens* 1983), and in some jurisdictions jurors may consider only certain factors as the basis for a death sentence. Yet, most jurors do not realize that they can consider only these defined aggravating factors and none other (Bowers & Foglia 2003). In addition, despite the fact that most state statutes require that aggravating circumstances be proven beyond a reasonable doubt, 30 per cent of jurors questioned at the conclusion of capital murder trials were unaware of this stringent requirement (Bowers & Foglia 2003).

The US Supreme Court has also ruled that jurors may consider *any* mitigating factors, not just those provided by statute (*Lockett v. Ohio* 1978). However, close to half of jurors interviewed as part of the Capital Jury Project were unaware of this prerogative. Even after hearing instructions to this effect, two-thirds of capital jurors did not realize that unanimity was not required to find mitigation; in fact, they can consider any factor in

mitigation that they personally believe (Bowers & Foglia 2003). Importantly, these mistaken notions about how to handle aggravating and mitigating evidence all favor the sentence of death, rather than life imprisonment.

Can these misunderstandings be corrected, perhaps via rewriting, simplifying, or clarifying the penalty phase jury instructions? This possibility was examined by Wiener *et al.* (2004), who attempted to devise capital jury instructions that would assist jurors to overcome deficiencies in their instruction-based scripts. At the conclusion of a mock capital trial, jurors in this study received one of eight different versions of the instructions: (1) instructions currently used in Missouri; (2) control or baseline instructions in which all legal jargon and definitions were removed; (3) simplified instructions that were rewritten for improved clarity; (4) so-called “debunking instructions” that explained some of the common errors jurors make when applying the instructions; (5) flowchart instructions that provided a step-by-step graphic about how to proceed; and (6), (7), and (8) three practice instructions that allowed jurors to participate in a different capital trial case before judging the case at hand. (These jurors thus had prior experience with capital murder instructions.) All jurors then completed a series of questionnaires designed to assess their understanding of the instructions and then deliberated to a verdict.

Wiener *et al.* found that jurors given the approved Missouri instructions showed little understanding of how to proceed; their scores did not differ from the baseline condition in which no legal definitions were provided. However, mock jurors given the simplified instructions, debunking instructions, flowchart instructions, and the practice instructions understood the trial procedures and requirements better than jurors given the Missouri and the baseline instructions, suggesting that jurors who received some form of enhanced instructions relied less on their own (often mistaken) schemas of legal definitions. Rather, they applied the concepts embedded in the instructions in a more appropriate and rational manner. As in prior research (Wiener *et al.* 1995; 1998), jurors who poorly understood the instructions were more likely to give the defendant a death sentence than a sentence of life in prison, suggesting that enhancing jurors’ understanding of their instructions may offset their reliance on predispositional, pro-prosecution biases.

Poor comprehension of capital sentencing instructions may explain another pervasive finding in the literature on death penalty jurisprudence, namely racial disparities in sentencing. Baldus *et al.* (1983) analyzed over 2000 manslaughter convictions from 1973 to 1979 and found that defendants who killed Whites were 11 times more likely to receive the death penalty than defendants who killed Blacks.¹ Some empirical evidence suggests that jurors’ misunderstanding of capital instructions may lead them to render verdicts dependent, in part, on the racial characteristics of defendants and victims.

To explore the role of race and instruction comprehension in capital trials, Lynch and Haney (2000) presented 402 jury-eligible participants with a videotaped summary of a homicide trial in which the race of the defendant and the victim was varied. They found that those jurors who poorly understood the instructions were more likely to sentence the defendant to death. This was particularly true when the defendant was Black and the victim was White. (In this condition, 68 per cent of sentences were for death and 32 per cent were for life without parole. By contrast, when the defendant was White and the victim was Black, only 36 per cent of sentences were for death and 64 percent were for life without parole.) Poor comprehension may force jurors to evaluate the evidence and apply the law without judicial guidance, leading them to rely on idiosyncratic and potentially irrelevant factors such as racial stereotypes when constructing their legal narratives.

Dual-processing models may also explain these results. As instruction comprehension decreases, heuristic processing may allow jurors to focus on extralegal factors such as race. Without careful scrutiny of the trial evidence, jurors' prejudices and biases are given freer reign to influence story construction. If jurors' prototypes about crimes and criminal defendants are racially biased at the outset, those prototypes may be invoked to find minority defendants, or those who kill White victims, more worthy of death sentences.

Yet we also know that the story prototypes that capital jurors hold are complex and multifaceted. To study the manner in which potential jurors create prototypical death penalty stories, Wiener *et al.* (2002) interviewed 76 jury-eligible, death-qualified citizens and had them create stories revolving around a homicide. They found that several prototypes emerged, rather than one unifying storyline. Nonetheless, jurors' stories tended to include some key components of a homicide schema, though there were several variations and subcategories associated with each prototype. (It is important to note that this study did not focus on capital murder trials, which may provide a more unifying story framework for participants, particularly as crimes eligible for the death penalty are limited by thresholds of aggravation, i.e., capital cases typically involve brutal and heinous actions that arguably make the defendant worthy of the death penalty.)

Summary

Although US courts have scrutinized trial procedures in capital cases and have attempted to eliminate arbitrary and capricious decisions on the part of jurors by requiring capital juries to be death-qualified and by bifurcating capital trials, several problems remain and threaten the fairness of the process. Jurors who are deemed death-qualified tend to hold opinions more in line with the prosecution than the defense, and tend to render more guilty verdicts than their non-death-qualified peers. The story model proposes that jurors will construct a story from the available trial evidence using their own prior experiences and knowledge as a template. The prior experiences and belief structures of death-qualified jurors may be skewed in a punitive direction, may guide their interpretation of evidence presented during the guilt phase, and may account for the pro-prosecution stances they often assume.

A problematic feature of bifurcation is the fact that many jurors apparently lack the ability to withhold judgment about an appropriate penalty until they have heard evidence and instructions related to punishment; rather, they make premature decisions about punishment in response to evidence concerning the facts of the crime. Some commentators have called for separate juries to decide the issues of guilt and punishment in these cases. This procedural modification would certainly reduce concerns about the conviction-proneness of death-qualified jurors (assuming that jurors who determine guilt would not need to be death-qualified) and instances of premature judgments, but would reduce the efficiency of the courts.

Jurors' inability to comprehend and apply the penalty phase instructions seems more easily remedied, given the empirical data on improvements in comprehension that come with revised, simplified, and clarified instructions. Clearly, unfamiliar terminology and obtuse legal concepts impede jurors' abilities to weigh the evidence in a systematic and evenhanded fashion and increase the likelihood that jurors will resort to shortcut heuristic reasoning strategies. Less careful decision-making will result.

JUROR DECISION-MAKING IN SEXUAL HARASSMENT CASES

Legislation in the US prohibits employers from discriminating with regard to compensation, terms, conditions, or privileges of employment because of race, color, religion, sex, or national origin. Although these laws have enabled American women to gain legal support for their employment rights, little headway regarding sexual harassment, an issue of concern to many female employees, has been made in the years following enactment of these laws.

Much of this legal abeyance regarding sexual harassment resulted from an inability both to define sexual harassment and to provide guidelines for dealing with these often ambiguous workplace behaviors. Consequently, the US Equal Employment Opportunity Commission (EEOC) set out to clarify what does and does not constitute sexual harassment (EEOC 1980, revised 1993) and in so doing, outlined two types of sexual harassment claims. One form of sexual harassment quid pro quo occurs when employers take negative employment actions against complainants who reject sexual advances or requests for sexual favors (Andrew & Andrew 1997). This tit-for-tat harassment has been generally agreed upon by all US courts to constitute sexual harassment (Henry & Meltzoff 1998).

The second form of sexual harassment, hostile workplace sexual harassment, has created significant confusion in terms of an operational definition (*Harris v. Forklift Systems, Inc.* 1993). Hostile workplace sexual harassment refers to conduct that subjects employees to an “intimidating, hostile, or offensive working environment” (EEOC 1980, revised 1993, p. 74667). Such behaviors include “unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature” (EEOC 1980, revised 1993, p. 74667). A key component of hostile workplace environment sexual harassment is that the behavior must be unwelcome by the target. That is, the plaintiff must show that she was offended by the conduct and that she suffered an injury from it (Conte 1997). In addition, according to this definition, the behavior must also be pervasive and severe in order to be deemed harassment (Andrew & Andrew 1997).

The complexity of sexual harassment claims extends to American courtrooms in cases where jurors are confronted with such thorny issues as contradictory claims about past behaviors, the need to assess those behaviors from the perspective of the complainant, and the task of evaluating the severity of invisible, emotional injuries. The story model has been invoked to explain how people determine whether sexual harassment has occurred. It can explicate some of the ways that jurors view incidents of sexual harassment in a trial setting.

To examine how story construction occurs during sexual harassment trials, Huntley and Costanzo (2003) examined post-trial narratives written by 112 mock jurors who took part in a sexual harassment trial simulation. The authors employed content analysis to examine jurors’ responses. Two divergent narrative constructions emerged, one supporting the plaintiff (e.g., “she was an employee of good character who was understandably afraid to speak out against the harassment”) and the other supporting the defendant (e.g., “the plaintiff was oversensitive and encouraged the sexual comments and advances”). When Huntley and Costanzo used these themes as mediators in a model that predicted verdicts in other sexual harassment cases, they found that the themes accounted for a significant amount of the variance with regard to the verdict, jurors’ commitments to the verdict, and their confidence in that verdict. When constructing a story about alleged sexual harassment, jurors apparently rely on prototypes within that domain. Stated otherwise, jurors

tend to organize the evidence in a sexual harassment trial into narrative structures that forecast their verdicts, as predicted by the story model.

In constructing these stories, jurors sometimes rely on their prior knowledge and experiences to evaluate a complainant's potentially harassing environment. According to the story model, after the evidence is organized into a narrative format, jurors must then apply the legal rules and standards that are intended to guide their verdict choices. Two legal standards are used to evaluate whether sexually harassing behaviors occurred. One standard, the *reasonable person* standard, asks whether the conduct in question would interfere with a reasonable person's work performance (*Rabidue v. Osceola* 1986). If so, the conduct is deemed harassing. A second standard, the *reasonable woman* standard, defines a hostile workplace as one in which a reasonable woman would find the conduct in question sufficiently severe or pervasive to alter the conditions of employment and create an abusive working environment (*Ellison v. Brady* 1991). The reasonable woman standard is based on the assumption that work is a distinctively different experience for women than for men, as each gender perceives certain interpersonal behaviors differently.

Some psychologists have asked how the reasonable person and reasonable woman standards are differentially applied in sexual harassment cases and whether the gender of the perceiver influences his or her evaluations. For example, Wiener *et al.* (1995) presented two written vignettes which described the facts of cases involving alleged hostile workplace harassment to both female and male participants and asked them to assess whether the conduct in question constituted harassment. Half of the participants applied the reasonable person standard and half used the reasonable woman standard. Although the authors found no differences based on legal standard, they did find that women were more likely to deem the conduct in the vignettes to be unwelcome, severe, and pervasive. They also found that women were more likely to see the conduct as negatively affecting the claimant's work performance and psychological wellbeing and to view the vignettes as being representative of a hostile working environment.

Further examination of the effects of differing legal standards on judgments of sexual harassment has shown that employees who receive the reasonable woman standard in mock juror research were more likely than those with the reasonable person standard to deem the behavior in question as sexual harassment (Wiener & Hurt 2000). Taking a slightly different approach, Perry *et al.* (2004) analyzed the outcomes of US federal district court cases of hostile environment sexual harassment that involved the reasonable woman standard. They found that these cases were somewhat more likely to be decided in favor of the plaintiff than cases that did not use this standard. Taken together, these findings imply that the reasonable woman standard may lower the threshold that a juror uses to decide whether an incident constitutes sexual harassment.

Do prior experiences with hostile or submissive victims impact sexual harassment decisions? To answer this question, Wiener *et al.* (2004) had participants read two sexual harassment cases in which the behavior of the complainant in the first vignette was varied (i.e., she acted in either a neutral, hostile, submissive, or hostile *and* submissive manner) whereas the complainant in the second vignette always acted in a neutral manner. The complainant's behavior activated behavior-consistent attitudes about that complainant (e.g., the hostile complainant was perceived as antagonistic, leading decision-makers to find less evidence of sexual harassment; the submissive complainant was perceived as needing protection, spurring benevolent judgments and increasing the chance of perceivers finding sexual harassment). In addition, these attitudes spilled over onto the second vignette

(e.g., a hostile first complainant primed participants to see the second complainant as hostile, as well). In essence, the story script involving the first complainant carried over to the second scenario.

The dual-process model can also help us understand how jurors determine whether sexual harassment took place. According to this model, perceivers use well-rehearsed and easily retrievable attitude structures regarding sexual harassment, relying in part on the severity of the conduct. If the conduct is so severe that most people would see the behavior as sexually harassing (or so benign that few people would see it as harassing), then perceivers use heuristic processes to decide whether harassment took place. Such automatic processing allows the decision-maker to determine if the conduct was harassing without investing substantial cognitive energy (Bargh 1994; Wegner & Bargh 1998). For example, work environments filled with sexually explicit stimuli (e.g., sexual jokes and explicit photographs) clearly suggest a climate conducive to sexual harassment so observers' decisions about the likelihood of harassment in those settings may require little cognitive effort. On the other hand, rigidly controlled work environments that are demonstrably intolerant of these explicit behaviors may be easily classified as non-harassing. But when the sexual conduct and tolerance for sexual behavior in the workplace are intermediate or ambiguous in nature, perceivers must engage in a second processing stage, making a more effortful, systematic evaluation of the harassment claim.

At this point, the decision-maker is expected to rely on legal rules to guide his or her determination about the existence of harassment. Though processing at this stage is more systematic than during the first stage, the perceiver's motivation and ability to understand the legal rules will have a large impact on the final decision. Thus, legal criteria can guide perceivers' decisions to the extent that they are understood and applied correctly. If perceivers do not understand the legal criteria, they may use their own experiences and beliefs as reference points, measuring the purported sexual harassment against their own internal, subjective standards of welcome, pervasiveness, and severity (Wiener *et al.* 2004). The varying experiences that men and women have with regard to sexual harassment may thus influence how they view incidents of sexual harassment, especially when they lack the capacity to understand the nuances of the legal rules.

Summary

Courts have struggled with and reached different conclusions about the definition of sexual harassment and the appropriate standards to apply in assessing potentially harassing behaviors. These varying definitions and standards are ripe for psychological evaluation and indeed, psycho-legal researchers have asked, empirically, how laypeople think about potentially harassing behaviors. In particular, ambiguity inherent in the context of hostile workplace environments (ambiguity stemming from the need to understand the target's perceptions of the offensive behavior) has spawned considerable psychological research.

Empirical work testing postulates of the story model has shown that jurors tend to organize the evidence in a sexual harassment case into narrative structures that influence their choice of verdict and that their prior experiences with this topic serve to frame these choices. When measuring the constructed story against the legal requirements for sexual harassment, jurors viewing the behavior from the standpoint of a reasonable woman are somewhat more likely to find harassment than jurors using the reasonable person standard.

This relationship is not a strong one, however. Dual-processing theories may also explain sexual harassment determinations, as systematic processing may be required to fully understand the legal prescriptions and offset prior biases.

JURY DECISION-MAKING AND DAMAGE AWARDS

American jurors in civil cases have two theoretically independent decisions to make: first, who is responsible for causing the injuries or harm claimed by the plaintiff, and second, whether the plaintiff is entitled to compensation. Although psychologists have examined jurors' thought processes on both questions, considerable recent work has focused on the second, describing how jurors assess whether a plaintiff should receive damages and in what amount.

The determination of damages is no simple task; rather, it requires careful attention to the evidence concerning injuries and losses, evaluation of the credibility of expert witnesses who typically present this evidence, memory for highly detailed information, predictions about future suffering, and calculation of the funds that might reasonably compensate a victim for these losses. In addition, some jurors use the damage award to express their sentiments about the defendant's conduct. Consider the case of nine-year old Caitlyn Chipps, who suffered from cerebral palsy. Her parents sued their insurance company for repeatedly denying payment for their daughter's treatments. In 2000, after a month of testimony, six jurors, including Diane Leininger, delivered their verdict: \$79.6 million, the largest damage award ever issued in an individual case in that jurisdiction (Curriden 2001). Why was the award so large? According to juror Leininger,

We were stunned by the testimony. The company sent bonus checks to claims reviewers who saved the company money by denying the most medical claims for patients. And the company made its claims process so egregious and difficult just to increase their chances that families would eventually give up seeking reimbursement for treatments rather than continuing to fight to get their money . . . We had to send a message that would get not only Humana's attention but the attention of every [insurance company] out there. (Curriden 2001)

Although few juries award damages of this magnitude (in fact, there is significant controversy about whether damage awards are excessively high and growing in size; Seabury *et al.* 2004), this case illustrates the vast freedom that jurors are accorded in their decisions about damages. Judges send jurors off to deliberate with only minimal guidance about how their damage assessments should proceed (Greene & Bornstein 2000) and, at least in the realm of damages for non-economic losses like pain and suffering, with the disclaimer that the law provides no fixed standards by which to measure damages. It is no wonder that psychologists have been interested in examining the way that jurors make decisions on this largely unstructured task.

The primary focus of this research has been on the influence of various factors on the size and variability of damage awards. The severity of the plaintiff's injury has been a consistent and reliable predictor of compensatory damage awards, both in archival analyses (e.g., Bordens & Horowitz 1998; Vidmar *et al.* 1998) and in jury simulation studies (Feigenson *et al.* 2001; Greene *et al.* 2001). In general, people with significant injuries and losses receive more compensation than those with injuries and losses that are more negligible, a phenomenon termed "vertical equity."

But especially in the realm of non-economic damages, there are also large differences in awards for seemingly similar injuries, a phenomenon termed “horizontal inequity.” Psychologists and policy analysts have wondered whether these inequalities are the result of differences in jurors’ perceptions of harm to the plaintiffs, their monetary valuations of similarly perceived harms, the use of improper considerations such as personal characteristics of the litigants, or some combination of these factors. In general, the data suggest that jurors’ perceptions of harm are consistently influenced by certain variables, such as the extent of the plaintiff’s disability and the amount and duration of mental suffering, and not by variables such as the physical pain and disfigurement experienced by the plaintiff (Wissler *et al.* 1997). But some commentators (e.g., Kahneman *et al.* 1998) have suggested that damage awards are unpredictable because jurors have great difficulty translating their beliefs about harm into a monetary value. According to this argument, although jurors may agree about how severe an injury is, their choice of a monetary award often amounts to a stab in the dark. This occurs primarily because jurors must map their awards onto an unbounded magnitude scale. As a result, damage awards show a great deal of variability, particularly in the realm of punitive damages that are intended to punish the defendant for immoral and egregious behavior and to deter others. Finally, there is some, albeit minimal, support for the possibility that characteristics of the plaintiff, including age, race, and gender, can account for horizontal inequities in jury awards (Greene & Bornstein 2003).

Another explanation of horizontal inequity is that jurors miscalculate damage awards for plaintiffs who are partially responsible for their claimed losses. This situation arises when jurors apply rules of comparative negligence that have been enacted in most states. In these cases, jurors assign separate percentages of fault to the plaintiff and the defendant, and the plaintiff’s damages are reduced proportionally (so, for example, if the plaintiff is deemed to be 25 per cent responsible for the accident and the jury awards \$100,000, the plaintiff would receive only \$75,000). But both archival (Hammit *et al.* 1985; Shanley 1985) and experimental studies (Feigenson *et al.* 1997; Zickafoose & Bornstein 1999) show that damages are “doubly discounted” in these cases: jurors first discount their awards to reflect the plaintiff’s wrongdoing, and the judge then further reduces the award to reflect the jury’s decision about proportionate fault of the two parties. In the end, plaintiffs who are found comparatively negligent receive smaller gross damage awards than comparably injured non-negligent plaintiffs. Other studies have shown that with variations in the instructions (Sommer *et al.* 2001) or the verdict form used (Zickafoose & Bornstein 1999), even blameworthy plaintiffs are able to recover fully, however.

Psycho-legal research has explored jurors’ use of heuristics in decisions about damages. They have learned, for example, that jurors apparently find it difficult to ignore evidence of the plaintiff’s liability once they have been exposed to it, a phenomenon termed “hind-sight bias.” In terms of awarding compensation, jurors should be expected to examine the severity and nature of the plaintiff’s injuries (after all, it is for these injuries that the plaintiff is receiving compensation) and the plaintiff’s conduct (because if the plaintiff’s actions contributed to his or her injuries, compensation is reduced accordingly). But jurors apparently also consider the conduct of the *defendant* in their calculation of damages, something that is contrary to the law’s intentions. In theory, jurors should not increase their damage awards to reflect any revulsion over the defendant’s conduct; neither should they decrease the award if they believe the defendant acted reasonably.

These premises were examined by Greene and colleagues (2001) in a jury analogue study. Mock jurors heard the evidence in a reenacted automobile negligence case in which the conduct of the defendant was described as either very careless (e.g., a truck driver was traveling 10 miles per hour over the speed limit through a construction zone, changing lanes rapidly, after having consumed alcohol), mildly careless (e.g., traveling near the speed limit with just one lane change immediately prior to the accident), or was not described at all. Jurors were asked to award damages to a plaintiff who was injured when the defendant lost control of the truck and crossed into oncoming traffic.

Data from individual jurors showed that they awarded more compensation when they had evidence of the defendant's conduct than when they did not. Thus, mock jurors fused their evaluation of the defendant's conduct with their evaluation of the plaintiff's injuries. Further evidence of this effect comes from the finding that jurors who heard about the defendant's conduct perceived the plaintiff as having sustained greater harm than jurors who did not hear about the defendant's behavior. Evidence of the defendant's carelessness, even when it was not particularly egregious, served to make the injury seem worse. These findings fit nicely within the framework of the story model, showing that jurors process evidence by constructing an overall narrative of the case, and demonstrating that jurors' interpretations of the evidence may be distorted to fit with the narratives they have created. More recent data suggest that this fusion of evidence can be partially offset by restructuring the task for jurors, essentially by separating the decisional components (i.e., liability, where defendant conduct *is* to be considered, and damages, where it is not) into separate segments of a trial and providing the evidence relevant to each decision separately (Smith & Greene 2005).

Another cognitive heuristic of relevance to damages determinations, the "simulation heuristic," is sometimes invoked when jurors evaluate events that have already taken place (typically with some negative ramifications for the plaintiff) and construct alternative simulations (or scenarios) of these events (Kahneman & Tversky 1982). Because most of this work has concerned simulations that lead to alternative outcomes (so-called "counterfactuals"), the research has been characterized as an investigation of counterfactual thinking. Counterfactual thinking arises in situations where people ponder what *might* have happened differently so that an alternative – typically better – outcome would have occurred. Jurors' damage awards can be influenced by counterfactual thinking. Mock jurors who could mentally mutate the defendant's behavior to undo an injurious act tended to find that behavior unreasonable and awarded the victim more compensation (Wiener *et al.* 1994).

A third heuristic used by jurors in determining damages is termed "anchoring-and-adjustment." A standard practice in many cases is for plaintiffs' attorneys to supply jurors with a number stating the amount of damages sought by their client (the *ad damnum*), and, on occasion, for defense attorneys to counter that figure with a lower number of their own. Psychologists have reasoned that because the judgment about damages involves uncertainty and jurors lack confidence in their own ability to assign monetary values to various injuries (Jacowitz & Kahneman 1995), these numbers serve as powerful anchors on jurors' decisions. The thinking is that jurors rely on these salient numerical reference points when making quantitative judgments, and that even if new evidence leads them to make adjustments away from the anchor, the resulting figure will still have been influenced by the anchor. This is the so-called anchoring and adjustment heuristic (Tversky & Kahneman 1974).

A number of empirical studies show the influence of the *ad damnum* on jurors' judgments about damages. In a particularly impressive demonstration of this effect, Hinsz and Indahl (1995) showed a reenactment of a wrongful death trial to mock jurors. The case was brought by the parents of two children who were killed in an automobile accident. In one condition, the plaintiff's lawyer requested \$2 million, and in a second condition he requested \$20 million. Despite hearing instructions to fairly and reasonably compensate the plaintiffs for their losses, jurors' mean awards varied dramatically as a function of the anchor: the mean award in the \$2 million *ad damnum* condition was approximately \$1.05 million and the mean from the \$20 million condition was \$9 million. The *ad damnum* functioned as an anchor and jurors reasoned heuristically after hearing that request.

Even extreme requests can function as anchors on subsequent judgments. In a mock personal injury trial, Chapman and Bornstein (1996) varied the *ad damnum*. In one condition, the hypothetical plaintiff claimed that her birth control pills led to her ovarian cancer and requested the large sum of \$1 billion in compensation. Although she was perceived as more selfish and less honorable than a hypothetical plaintiff who asked for a more modest \$5 million, still jurors awarded more to her than to the more reasonable plaintiff. Hastie *et al.* (1999) have shown dramatic effects of the *ad damnum* on resulting awards for punitive damages, as well.

We examine one final influence on jurors' decision-making regarding damages, namely trial complexity. The assessment of damages sometimes involves evaluation of extensive evidence – much of it highly technical – regarding multiple plaintiffs and defendants. In mass tort cases, for example, the issues being litigated are complex and the claimed losses are often immense. The cognitive tasks posed for jurors in the face of these complexities are enormous.

Using mock jury methodology, Irwin Horowitz and his colleagues have conducted several empirical studies to examine the effects of various aspects of trial complexity on decision-making about damages. Horowitz and Bordens (1988) asked how jurors make decisions about damages in trials involving multiple plaintiffs with differing degrees of injury from an environmental pollutant released by the defendant. They found clear evidence of a framing effect: jurors assessed damages for any given individual in light of the information available regarding other plaintiffs. Thus, the most severely injured plaintiff received lower damages when his case was aggregated with others, rather than tried separately, suggesting that the less severely injured plaintiffs pulled down jurors' responses to that outlier.

Complex cases also tend to involve highly complicated terminology, another issue of interest to Horowitz and his colleagues. Empirical examination of jurors' compensatory award judgments showed that they were affected by the complexity of the language used during the trial (Horowitz *et al.* 1996). Less complex language allowed jurors to discriminate more accurately among plaintiffs with differing degrees of injury, although jurors were able to award damages commensurate with a plaintiff's injuries only when less complex language was combined with low information load.

Other aspects of complex trials, including conflicting interpretations of law, multiple claims and counterclaims, and highly technical or scientific evidence presented by expert witnesses, raise questions about the competence of jurors to decide these cases fairly and rationally. Clearly, cognitive psychological research is relevant to this concern and psycho-legal researchers would do well to borrow cognitive theories and findings to address this problem.

Summary

Because they lack clear guidelines, jurors have difficulty assessing damages. As a result, their awards are sometimes highly variable, and similarly injured plaintiffs are treated differently. We have suggested several reasons for these discrepancies, including the unbounded monetary scale that jurors use to assess damages and that invites variability, as well as inconsistencies in how jurors discount damages when the plaintiff is partly to blame. We have also described several cognitive heuristics or shortcuts that jurors rely on when making decisions about damages. We suspect that such reliance increases as the complexity of the decision increases. We know that trial complexity casts a long shadow over jurors as they attempt to wade through complicated and technical evidence and to understand and apply legal terms unfamiliar to most laypeople.

CONCLUSION

Jurors draw upon a number of cognitive processes in their attempts to make sense of the evidence presented at trial and to reach sensible verdicts. Among the cognitive processes are heuristic reasoning, memory reconstruction, language comprehension, schema acquisition and modification, and the induction and use of stereotypes. The study of juror decision-making can be enhanced by application of theories and principles derived from cognitive psychology. In this chapter, we have attempted to show that jurors' thinking can be accounted for both by the story model and dual-process model, cognitive theories that break the decision process into component parts and that predict how jurors' knowledge, expectations, attitudes, and motivation will influence their evaluation of the evidence and determination of a verdict. Although these models use different constructs and assume different mechanisms by which jurors reason and resolve controversies, both theories have been successfully invoked to describe the ways that jurors process and make sense of inherently complicated, unfamiliar information. In that respect, the theories are complementary rather than contradictory; both offer valid accounts of jurors' decision-making process and, in fact, can explain the same data.

Empirical analysis of jurors' decisions has tended to be influenced by legal theory rather than by basic cognitive psychological theory. Indeed, with the exception of mathematical models, which have actually generated few specific predictions about juror behavior and the more successful story and dual-process models, cognitive psychologists have tended to steer clear of the applied realm of decision-making by jurors. Perhaps the task is perceived as inherently complex and difficult to model. Perhaps the real-world setting is a deterrent to theorists. But applied psycho-legal researchers have tended to keep their distance from cognitive theorists, as well. Their reluctance to embrace cognitive theorizing may be a byproduct of the historic schism between basic and applied psychological research. Perhaps they fear that over-reliance on cognitive theory will impair their ability to make important connections to lawyers, judges, and policy-makers who have little understanding of psychological science. Whatever the reasons, our hope is that this chapter might, in some small way, encourage both cognitive psychologists and applied psycho-legal researchers to look to the law *and* to cognitive psychology as a source of inspiration for their empirical studies and as explanation for their findings.

NOTE

1 However, an updated study focusing on capital trials in Nebraska from 1973 to 1999 (Baldus *et al.* 2002) found that although minority defendants advanced further through the death penalty process than non-minority defendants, race did not have a differential impact on final sentences. This may be due to the small number of death penalty cases in Nebraska that involve minority members, limiting statistical power. At the time the Baldus team collected data, judges, rather than jurors, decided whether to sentence the defendant to death in Nebraska, a fact that may also account for discrepancies between this study and the 1983 study. Theoretically, judges have a more thorough and accurate knowledge of the law, and a considerable degree of experience that helps them avoid falling prey to their biases. Yet in 2002, the US Supreme Court ruled that judges will no longer decide death penalty sentences, and that death penalty determinations are in the province of an empanelled jury (*Ring v. Arizona* 2002). Whether racial bias will return to Nebraska and other states affected by the Court's opinion (Arizona, Colorado, Idaho, and Montana) is a question that may be answered in the next few years.

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