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**On Juror Decision Making: An Empathic
Inquiry**

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On Juror Decision Making: An Empathic Inquiry

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PSYCHOLOGY

Abstract

This review examines the workings of jurors deciding criminal cases. It seeks not to commend or condemn jury decision making but rather to offer an empathic exploration of the task that jurors face in exercising their fact-finding duty. Reconstructing criminal events in the courtroom amounts to a difficult feat under the best of circumstances. The task becomes especially complicated under the taxing conditions of criminal adjudication: the often substandard evidence presented in court; the paucity of the investigative record; types of evidence that are difficult to decipher; the unruly decision-making environment of the courtroom; and mental gymnastics required to meet the normative demands of criminal adjudication. The critical spotlight is directed not at the jurors but at the conditions under which we expect them to fulfill their duty and the reverence in which their verdicts are held. The article concludes with a set of recommendations designed to assist our fact-finders in meeting the societal expectations of this solemn task.

INTRODUCTION

Criminal punishment amounts to a grave exercise of state power. The constitutional authority to unleash this power is entrusted in the criminal process and, in the American legal system, is rested ultimately in the hands of the jury. Given the high stakes of the process and the steep cost of error—whether in the form of convicting an innocent person or acquitting the guilty—the societal epistemic demands from criminal juries are remarkably high.

The ability of criminal juries to determine facts correctly is generally revered by the legal

system. The English jurist William Blackstone ([1791](#), p. 379) described juries as “the glory of the English law.” The US Supreme Court routinely lauds “the good sense and judgment of American juries” [[Manson v. Brathwaite \(1977\)](#), p. 116]. Former US Supreme Court Justice Sandra Day O’Connor posited that a person cannot be deemed legally or factually innocent if he is awarded the constitutional protections and found guilty by a jury of his peers [[Herrera v. Collins \(1993\)](#)]. One contemporary judge has opined that there is something “almost mystical” about juries’ ability to find the truth ([Hoffman 2007](#), p. 664). Juries are held in high regard also by an array of scholars (Abramson 2000, [Burns 2015](#), [Kalven & Zeisel 1966](#), Lempert 1998, [Vidmar & Hans 2007](#)). Other scholars are less sanguine ([Bornstein & Greene 2017](#), [Devine 2012](#)). And, as revealed by exoneration cases, there is little doubt that juries have on occasion made fateful errors (see [Natl. Regist. Exonerations 2019](#)). Indeed, research shows that jury verdicts are influenced only in part by the evidence, which leaves a majority of the variance to be explained by extra-evidential factors ([Devine et al. 2007](#), [Garvey et al. 2004](#), [Kalven & Zeisel 1966](#), [Visher 1987](#)).

This review is intended to neither commend nor condemn criminal juries. Rather, it sets out to offer an empathic inquiry into factors that might hinder the fact-finding task and lead it toward mistaken conclusions. This inquiry embarks from the recognition that the mission that jurors face in serious criminal cases is often profoundly taxing and vastly discrepant from tasks people perform in the normal course of their lives. Criminal adjudication requires jurors to mentally reconstruct from the evidence an event that occurred at a time past, at a remote place, and under circumstances that are often very unfamiliar. This reconstruction may be encumbered by the complexity of the criminal event, the moral perplexity of the decision, the gravity of depriving a person of freedom, and much more. This task amounts to a difficult feat under the best of circumstances, and it becomes especially complicated when performed under the adverse conditions in which jurors operate.

At bottom, this inquiry explores the person–job fit, a subject of interest in the field of organizational psychology. The person–job fit stands for the relationship between people and the job they are expected to perform, focusing on whether their knowledge, skills, abilities, and tools are commensurate with the demands of the task (Edwards 1991, Kristof-Brown 2005). The review highlights four of the task’s features that tend to undermine jurors’ fit for their mission. The first section explores the often substandard evidence presented in criminal trials and the

blunt tools made available to jurors for the delicate task of distinguishing between accurate and inaccurate evidence. The second section examines difficulties that are inherent in drawing inferences from the types of evidence that are commonly presented in criminal trials. The third section examines the decision-making environment of the courtroom, in particular, the impact of adversarial advocacy. The fourth section examines some exercises of mental gymnastics required to meet the normative demands of criminal adjudication. In all, this review suggests that the cognitive abilities required for accurate fact-finding in complex legal cases exceed what most people can reliably offer. Importantly, the critical spotlight is directed not at the jurors but at the evidence we feed them and the tools, procedures, and decisional environment we make available to them. The review concludes with a set of recommendations designed to help fact-finders meet the societal expectations from criminal adjudication.

Some caveats and clarifications are in order. First, although on occasion erroneous verdicts might be attributable in part to jury callousness, prejudice, or misconduct ([Garrett 2011](#), [Nat'l. Regist. Exonerations 2019](#)), this review does not address the obvious harms that can be inflicted by rogue jurors. Rather, it is premised on the assumption that the vast majority of jurors are earnestly motivated to reach accurate decisions. In other words, jurors are taken to be striving to draw inferences from the evidence adduced at trial, consistent with the rationalist ([Twining 1990](#)) and reasoned judgment ([Fuller 1978](#)) traditions of legal fact-finding. Second, jury service often entails exposure to human suffering and violent criminal events, which can be a source of vicarious mental trauma ([Lonergan et al. 2016](#)). While the subject of juror well-being warrants serious attention, it is not the subject of this review. Third, the review focuses on jurors (as opposed to judges), because they perform the lion's share of the fact-finding in the fraction of cases that get adjudicated. A possible role for judges in legal fact-finding is visited briefly in the concluding section. Focusing on jurors (as opposed to juries) means that we refrain from examining the effects of jury deliberation (for a review, see [Diamond & Rose 2018](#)). This choice is justified by research indicating that jury verdicts tend to be influenced heavily by the individual decisions made by the numeric majority of their members ([Devine & Kelly 2015](#), [Simon 2012](#)) and by research suggesting that any salutary effect of deliberation on jurors' errors and biases yields mixed results ([Diamond & Rose 2018](#); see also [Larrick 2016](#)). Fourth, the discussion dwells most directly on determinations of fact (e.g., "Did the defendant break into the home?") rather than on normative judgments of culpability (e.g., "Was the homeowner justified

in shooting the intruder?”). Finally, the discussion concentrates mostly on adjudication of criminal cases in the American legal system, though some of it could be applicable also to civil cases and possibly also to adjudication in other legal systems.

I. MURKY EVIDENCE

The first part of the review explores the proposition that the criminal fact-finding task is hindered by the quality of the evidence that is commonly presented at trial and the bluntness of the tools jurors are given for distinguishing between accurate and inaccurate evidence (for a detailed discussion, see [Simon 2012](#)).

Inadequate Investigations and Evidence Drift

Criminal prosecutions often rely on two classic forms of witness testimony: the identification of the suspect and accounts of the criminal event, both of which rely inevitably on the witnesses' memory system. For both types of evidence, the testimony presented in court can be removed from factual truth by at least three levels of discrepancy. First, eyewitnesses may have misperceived the incident or developed an erroneous memory of the suspect owing to spontaneous factors, such as limited attention, suboptimal viewing conditions, or confusing memories from different events ([Lindsay et al. 2007](#), [Toglia et al. 2007](#)).

Second, and more ominously, witnesses' statements can be swayed by police investigative procedures. Witnesses may be induced to identify a person they did not truly remember owing to the manner in which the identification procedure was conducted, such as when detectives give the witness biasing instructions; construct the lineup in a suggestive manner; or communicate the identity of the suspect to the witness, whether explicitly or implicitly ([Wells & Quinlivan 2009](#)). Similarly, interviewers can induce witnesses to report facts they do not actually remember ([Fisher & Schreiber 2007](#)), by way of suggesting facts to them or by pressuring them to engage in memory work to jog their memory for facts they cannot recall ([Toglia et al. 2007](#)). Investigators can readily alter the strength witnesses' reported memories by providing them with confirmatory or nonconfirmatory feedback ([Hanba & Zaragoza 2007](#), [Stebly et al. 2014](#)).

A classic type of evidence that is induced by the investigative process is confessions, by which the defendant admits to having committed the crime or being implicated in the criminal event. Confessions are generally believed to be reliable inculpatory evidence, yet lessons learned

from exoneration cases and other sources suggest that are brought to provide false confessions with some regularity ([Drizin & Leo 2004](#)). The prospect of false confessions should not be surprising given that the interrogative protocols used by most American police departments are premised on interrogators' judgments that the suspect is being deceitful ([Inbau et al. 2011](#)), judgments that contain a high rate of error ([Hartwig & Bond 2014](#)), and that can readily bear confirmatory conclusions and self-fulfilling effects on the interrogative process ([Meissner & Kassin 2002](#), [Narchet et al. 2011](#)). Moreover, these interrogative protocols are based on accusatory interrogative methods that obtain confessions by deploying a suite of techniques designed to create psychological coercion ([Kassin 2012](#), [Leo 2008](#)). The heavy-handedness of these methods can bend the will of both guilty and innocent suspects ([Kassin 2012](#), [Leo 2008](#)), which thus impairs confessions' diagnosticity with respect to the suspect's guilt ([Meissner et al. 2015](#)). Still, confessions are routinely presented in court and, despite persistent protestations from the defense, are found to be inadmissible only on the rarest of occasions [[Inbau et al. 2011](#), [Lego v. Twomey \(1972\)](#)].

Third, over the course of the investigative and pretrial processes, we observe a phenomenon of evidence drift: Witnesses' memories degrade, are exposed to contamination, and lose many of their traces of accuracy. As witnesses interact repeatedly with investigators, lawyers, other legal actors, and even non-legal actors, their narratives become crystalized, gaps are filled, and ambiguity is replaced by the certitude that is expected for courtroom consumption. This drifting causes a generally unnoticed schism between the raw statements the witness gives at the first interviews and the synthetic testimony delivered ceremoniously in the courtroom, months and even years down the line ([Simon 2012](#)). Nowhere is the distortion of testimony more candidly acknowledged than in the practice of witness preparation, by which lawyers steer witnesses toward providing a particular version of the facts ([Applegate 1989](#)) and harden their allegiance in the face of impending hostile cross-examination from the opposing lawyer ([Wells et al. 1981](#)).

Excavating in the Dark

Piercing the three layers of discrepancy becomes even less feasible given that jurors perform this feat with the use of rather blunt tools and under poor lighting conditions. Despite the seriousness of the criminal process, criminal investigations are typically not documented in a complete, reliable, or otherwise satisfying manner. Thus the investigative record is frequently opaque:

Lineups are rarely taped, most interviews are paraphrased noncontemporaneously, and interrogations are often conducted in the privacy of the interrogation room ([Sullivan 2008](#)). The opacity of the investigation has grave implications for the adjudicatory process. For one, fact-finders are deprived of access to witnesses' raw statements, which are typically the most accurate account of the criminal event. This opacity also conceals investigative actions that might have induced witnesses' responses. Thus, all too often, fact-finders are kept in the dark with respect to crucial facts, such as whether the administrator of a lineup pointed out the suspect to the witness, whether a particular statement was first suggested by the witness or by the interviewer, and whether promises and threats were made in the interrogation room. In all, the opaque record helps conceal the evidence drift, thus undermining jurors' ability to notice that synthesized statements rendered in court do not reflect the original statements given by the witness ([Simon 2012](#)).

This shortfall of probative information is ostensibly filled by way of oral testimony, primarily from the investigating officers. On the stand, detectives habitually deny influencing witnesses' responses. In some instances, these denials are genuine, whether because the detective did not engage in any such behavior; was unaware that her conduct influenced the witness's response; or, most likely, simply forgot the specific utterances that were exchanged. In other cases, detectives lie outright about their conduct, a practice known as testilying ([Slobogin 1996](#)). Regardless of the source of the detective's denial, it often contradicts the defendant's account. Such discrepancies occur frequently in the context of interrogations, where disputes often arise over the content of the statements attributed to the suspect and the investigative means used to elicit them ([Leo 2008](#)), as well as over procedural issues, such as whether the defendant was read his Miranda rights and whether they were legally waived (Leo 2001). With no verifiable record in hand, these contradictory testimonies turn into swearing contests, hardly a worthy process for determining facts in such sensitive proceedings. Swearing contests leave jurors with little choice but to trust one version, frequently on the basis of superficial and possibly misleading cues.

It should also be noted that fact-finders will on occasion be deprived of potentially pertinent evidence, whether it be incriminating statements not shared by a nontestifying defendant or exculpatory evidence that is unearthed by the police but not shared with the defense and, ultimately, with the fact-finder. To be sure, the US Supreme Court's decision in *Brady v. Maryland* (1963) sought to force the state to disclose exculpatory evidence to the defense, but in

effect the practice of discovery is lacking. The *Brady* doctrine has been whittled down over the years, and it is breached all too often ([Medwed 2010](#)). As a result, criminal jurors can easily end up being provided with scantier evidence than jurors assigned to a simple commercial dispute ([Sklansky & Yeazell 2006](#)).

II. DIFFICULT INFERENCES

We turn now to the article's second section, which marks a shift from problems that cloud the accuracy of witness testimony to the ability of fact-finders to distinguish between accurate and inaccurate witnesses. Judgments of this nature invoke the fundamental role that background knowledge plays in human cognition. At bottom, every judgment, inference, or decision that a person makes is intimately informed by her knowledge of the world ([Read 1987](#), Schank & Abelson 1995, [Wyer & Radvansky 1999](#)). This knowledge is organized mostly in the form of schemas ([Piaget 1926](#), [Rumelhart 1980](#)) and scripts ([Bower et al. 1979](#), Schank & Abelson 1995). Inevitably, a finding of fact will be the result of an interaction between the fact-finder's background knowledge and the evidence presented in court. This is how it should be, though there are situations where the interaction does not promote accurate fact-finding. This section explores such instances. For convenience, the foregoing discussion will first explore domains where people tend to be uninformed, and will then focus on domains in which people's beliefs tend to be excessively strong.

Under-Familiarity

We now examine instances of under-familiarity, wherein most people lack the kind of knowledge needed to perform a correct assessment of the evidence. This usually boils down to insufficient awareness of the moderating factors that tend to indicate the accuracy of the testimony, Eyewitness identification.

The research suggests that distinguishing between accurate and inaccurate identifications is no easy feat. People tend to overestimate both their own capabilities of identification ([Schmechel et al. 2006](#)) and other people's capabilities ([Wells 1984](#)). Studies have shown that simulated jurors tend to be undersensitive to many of the factors that are known to impair identifications, such as viewing conditions ([Lindsay et al. 1986](#)) and cross-race bias ([Abshire & Bornstein 2003](#)).

Simulated jurors have also been found to be largely insensitive to the features of the

identification procedure, such as the retention interval ([Cutler et al. 1990](#)), the biased nature of the instructions ([Wells 1984](#)), the similarity of the suspect to the foils ([Cutler et al. 1990](#)), and whether the procedure was conducted blindly ([Wright et al. 2010](#)).

Simulated jurors seem to rely quite extensively on the witness's confidence in the identification ([Cutler et al. 1990](#)). In recent years, researchers have demonstrated that a witness's confidence is indeed a valid cue of the identification's accuracy ([Sauerland & Sporer 2009](#), [Wixted & Wells 2017](#), [Wixted et al. 2018](#)). Crucially, however, the validity of this cue applies only to unadulterated confidence reports that precede any feedback or other postidentification suggestion from the lineup administrator. In reality, such feedback—typically, confirmatory—is given rather loosely, which invariably leads to confidence inflation ([Douglass et al. 2010](#), [Smalarz & Wells 2014](#)). Confidence is also sensitive to distortion from a variety of other sources, such as identifications by cowitnesses, successive viewings, repetition, biased lineup instructions, and knowledge about other inculpatory evidence against the suspect (Charman et al. 2018, [Simon 2012](#)). Postidentification feedback results also in secondary inflation of the witness's report of the viewing conditions, such as the attention paid to the suspect and the quality of the view of the event ([Smalarz & Wells 2015](#), [Stebly et al. 2014](#)). These inflated reports are bound to make identifications appear more reliable than they really are.

A somewhat different set of issues arises in evaluating in-court identifications, that is, when the witness is asked to identify the defendant in the courtroom. Invariably, these in-court identifications yield strong—if not emphatic—statements that the defendant was indeed the perpetrator of the crime. These statements likely appear believable to the jurors because observing an identification firsthand is bound to be more persuasive than hearing a verbal account of the procedure that took place at the police station, an instantiation of the phenomenon called seeing is believing ([Nash & Wade 2009](#)). But although in-court identifications might seem compelling, they sorely lack diagnostic value. The procedure is grossly suggestive owing foremost to the obvious identity of the defendant in the courtroom setting, namely, the person sitting next to the lawyer at the defense table. The passage of months, even years, since the criminal event is a recipe for both memory decay and contamination. Oftentimes, the procedure marks the culmination of a series of successive viewings, which increase the familiarity of the defendant. More acutely, witnesses will often feel compelled to point out the defendant—regardless of their actual recognition or lack thereof—due to the social dynamics, allegiances,

and expectations borne by the adversarial courtroom environment ([Simon 2012](#)). Fact-finders are likely unaware of the hollowness of this procedure. Indeed, most innocent people who were convicted and subsequently exonerated were misidentified at trial in front of the jury ([Garrett 2011](#)).

Memory for the criminal event.

The research also gives one pause as to the ability of fact-finders to assess the accuracy of a witness's account of the criminal event. One cue that people commonly use to assess other people's memories is the vividness of the memorial account, which often boils down to the richness of detail that it contains. The greater the level of detail, the more trustworthy memories are judged to be, even when the details are trivial and tangential to the core of the event ([Bell & Loftus 1988](#), [Keogh & Markham 1998](#)). A second commonly used accuracy cue is the consistency of the witness's memorial accounts across interviews ([Berman & Cutler 1996](#), [Brewer & Hupfeld 2004](#)). Neither of these cues, however, is as useful as fact-finders might believe. Memories are not monolithic entities. Rather, memories are constructed from multiple fragments that are bound together with different memory sources, emotions, associations, and implications for the person. These components are bound with varying strength and they decay at different rates ([Bartlett 1932](#), [Brainerd & Reyna 2002](#)). It follows that the accuracy of a memorized fragment and the consistency of a memory for a particular fact are not valid indicators of the memory's overall accuracy ([Gilbert & Fisher 2006](#), [Lavis & Brewer 2017](#)). Moreover, memories for different aspects of an event may even be inversely related ([Cutler et al. 1987](#), [Wells & Leippe 1981](#)), which would render the reliance on these cues especially misleading.

A third commonly used accuracy cue is the witness's stated level of confidence. As with judgments of identifications, fact-finders are more likely to believe testimony that is expressed with high levels of confidence ([Brewer & Burke 2002](#), [Leippe et al. 1992](#)). Here too, in principle, confidence is a valid prognostic of the memory's accuracy ([Wixted et al. 2015, 2018](#)), but once again that holds true only with respect to the witness's initial and unadulterated statement of confidence. Research shows that a witness's confidence for event memory is considerably malleable in that it can be inflated by means of various investigative practices, such as repeated questioning ([Shaw & McClure 1996](#)), confirmatory feedback ([Hanba & Zaragoza 2007](#),

[Zaragoza et al. 2001](#)), and prodding to try harder ([Shaw & Zerr 2003](#)). Again, the reliance on inflated confidence can lead a fact-finder toward an unwarranted belief in the testimony.

Perhaps the most serious threat to evaluating event memory is insufficient sensitivity to the prospect of false memory, one of the most frequently studied phenomena in cognitive psychology ([Loftus 2017](#), [Toglia et al. 2007](#)). A wealth of research has demonstrated that memories are highly susceptible to various forms of alteration and manipulation, such as suggesting postevent misinformation ([Drivdahl & Zaragoza 2001](#), [Loftus & Greene 1980](#), [Loftus & Palmer 1974](#)), asking leading questions ([Loftus 1975](#)), communicating with cowitnesses ([Kim et al. 2017](#)), exhorting witnesses to increase their retrieval efforts ([Koriat & Goldsmith 1996](#)), suggesting that witnesses confabulate ([Zaragoza et al. 2001](#)) or guess ([Hastie et al. 1978](#)) the response, and providing the witness with confirmatory feedback ([Hanba & Zaragoza 2007](#), [Zaragoza et al. 2001](#)). The crucial point is that fact-finders, both lay people ([McAuliff & Kovera 2007](#)) and legal professionals ([Knutsson & Allwood 2015](#)), tend to be unfamiliar with the factors that contribute to the creation of false memories and are not sufficiently attuned to the possibility that statements provided by an honest witness might be dramatically different from what that witness actually perceived.

Deceit detection.

In the absence of strong and reliable indicators of factual truth, fact-finders will tend to resort to second-order proxies to relieve themselves of the discomfort of indecision. One such proxy is to judge the honesty of the witness. Given that deceit is strongly perceived to indicate malfeasance, inferring dishonesty can make a strong impact on judgments of guilt. Inferring deceit is relatively easy when a testimonial statement can be tested against objective evidence, such as surveillance video and DNA testing. But in the absence of such evidence, the determination will tend to be based on the witness's demeanor. Indeed, in some jurisdictions, the pattern jury instructions encourage jurors to do so.

Herein lies the rub. Distinguishing between truth and lies on the basis of a person's demeanor is a most difficult—and often erroneous—feat ([Vrij et al. 2019](#)). While there is good reason to believe that liars do indeed behave differently from truth tellers, they do so in ways that are diverse, idiosyncratic, and barely perceptible to third parties ([Hartwig & Bond 2011](#)). Even if a universal set of diagnostic cues of deceit existed, it is doubtful that fact-finders could attend to

them all at once, interpret them correctly, and integrate them into a discrete inference of veracity. Deceit detection is particularly difficult in the courtroom, where nervousness is rampant, as most witnesses—innocent defendants perhaps more than others—are anxious to be deemed honest. In all, the accuracy of deceit detection in laboratory conditions has been found to be 54% ([Bond & DePaulo 2006](#)), and under more realistic conditions it reaches 68% ([Hartwig & Bond 2014](#))—not impressively better than a guess rate of 50%. Detecting deception is particularly difficult to do from the synthesized testimony that is habitually presented at trial. Repeated recitations of the testimony provide witnesses with the opportunity to practice and improve their story, thus making it less distinguishable from honest testimony ([Granhag & Strömwall 2002](#)).

Overbelief

The category of overbelief concerns instances where the fact-finder has a strongly ingrained background knowledge schema of the type of evidence in question. The strength of this belief will tend to overwhelm the evidence presented in court and thus undermine the prospect that it will be assessed accurately. This process could also end up providing a putative justification of the original belief.

Confessions.

As mentioned above, most American police departments obtain confessions by means of heavy-handed psychologically coercive protocols that have the potential to yield confessions from both guilty and innocent suspects. Despite frequent protestations from the defense, confessions are routinely presented in court and are ruled inadmissible on only the rarest of occasions. Confessions are generally deemed by fact-finders as a most powerful type of evidence, a “bombshell which shatters the defense” [[People v. Schader \(1965\)](#), p. 731]. Some 93% of surveyed people in the United States maintain that they would not confess to a serious crime they had not committed ([Costanzo et al. 2010](#)), which could lead to the notion that no innocent person would confess to a crime she did not commit. Extending this logic leads to the conclusion that people who confess must be guilty. This belief seems to be grounded in the ubiquitous tendency to underestimate the potential influence of social situations on human behavior ([Milgram 1974](#), [Ross & Nisbett 1991](#)). In other words, even if fact-finders were privy to everything that transpired in the interrogation room, they may fail to fully appreciate the extent to which the interrogative techniques bore on the suspect’s will. Fact-finders might also underappreciate the

fact that the existence of a confession makes them view the rest of the evidence in a light that coheres with the confession ([Kassin et al. 2013](#)).

Another factor that bolsters people's trust in confessions is that they are invariably accompanied by highly detailed narrative statements signed by the suspect. These statements boost the apparent credibility of the confession because, as mentioned, the richness of detail tends to serve as a cue of reliability and accuracy. The statements also appear valid because they often contain facts that were not publicly known, which suggests that the suspect was somehow involved in the criminal incident. However, both of these cues should be treated with suspicion given that the vast majority of the known false confessions—namely, those given by suspects who were subsequently exonerated—were accompanied by richly detailed statements ([Appleby et al. 2013](#), [Garrett 2010](#)).

Alibis.

Alibis could assist jurors by providing evidence of the defendant's absence from the crime scene. As a practical matter, however, alibis seem to fall short of their promise. The research suggests that alibi claims run up against a string of intuitions that make fact-finders view them with suspicion. For one, people maintain that alibis must be corroborated to be believed and that defendants ought to be able to corroborate them. It is, however, rather rare to possess physical proof of one's whereabouts, as most people's lives are not documented and do not produce a constant stream of time-stamped physical traces. And even when physical corroborating evidence is available, it might well be suspected for being fabricated ([Olson & Wells 2004](#)). Witness corroboration is not always available, as people spend certain amounts of time by themselves, especially people who live alone or are unemployed. Most frequently, corroboration will be offered by family members and close friends, the very people with whom they spend the bulk of their nonsolitary time. But, as the research suggests, such corroborations will be treated with suspicion, thus undermining the value of the alibi ([Hosch et al. 2011](#), [Olson & Wells 2004](#)). Although these intuitions are not necessarily unreasonable, in practice, they can readily gut the alibi defense, which helps explain why many innocent exonerees failed to wage an (actually truthful) alibi defense at trial. In reality, people—especially innocent people—will often have no alibi, will lack physical corroboration, will have nobody to corroborate their alibi, or will offer an alibi from friends and family. Effectively, these difficulties place a burden of proof on the

shoulders of the defendant and deprive the fact-finder of a potential decision aid.

III. UNRULY DECISION-MAKING ENVIRONMENT

The third section of the article examines the courtroom environment, which serves as the habitat in which legal fact-finding is performed. This environment is strongly influenced by the prevailing criminal procedure and its concomitant culture, practices, and values. Unlike continental legal systems, where adjudicators are provided with a single account of the testimony ([van Koppen & Penrod 2003](#)), the Anglo-American trial boasts an adversarial form of adjudication. In the American version of adversarialism, correct legal decisions are said to be achieved by means of a “sharp clash of truths” (Landsman 1988, p. 2) presented with “adversarial zeal” ([Fuller 1961](#), p. 35). That means that fact-finders are habitually presented with conflicting sets of evidence that have been driven through the polarizing force fields of adversarial advocacy, with little regard for the actual truth. As Frank ([1949](#), p. 87) observed, “One party or the other is always supremely interested in misrepresenting, exaggerating, or suppressing the truth.” It has been argued that while sharp clashes of truths presented with adversarial zeal might be a suitable mechanism for debating matters concerning values, principles, and public policy, they are less conducive to the level-headed task of seeking factual truth ([Sevier 2014](#), [Thibaut & Walker 1975](#)). The courtroom environment can hinder the fact-finding task in five ways.

Heuristic Persuasion

Owing to its heavy reliance on live testimony and advocacy, much of the trial is devoted to attempts by lawyers and witnesses to persuade fact-finders to believe and endorse their side of the case. As such, criminal adjudication is an inescapably persuasive endeavor. A large body of social-psychological research shows that human persuasion is conducted through either systemic (or central) routes of persuasion or via heuristic (or peripheral) routes ([Chen & Chaiken 1999](#), [Petty & Cacioppo 1986](#)). Systemic routes prioritize facts and arguments intended to lead to rational inferences and are thus consistent with law’s avowed mission. Heuristic persuasion, in contrast, consists of superficial persuasive devices, such as emotional appeals ([Crano & Prislin 2006](#)), metaphors ([Sopory & Dillard 2002](#)), irony ([Gibbs & Izett 2005](#)), rhetorical questions ([Roskos-Ewoldsen 2003](#)), humor ([Hobbs 2007](#)), and the likeability of the speaker ([Kaplan &](#)

[Miller 1978](#)). Heuristic techniques of persuasion are often more effective than systemic techniques and are particularly effective when the latter are unavailable. However, for all its persuasive power, heuristic persuasion tends to have only a tenuous relationship with factual accuracy. It is thus hardly surprising to observe that skilled attorneys resort to a variety of heuristic forms of persuasion designed to inform, sway, woo, cajole, and even manipulate jurors. Heuristic persuasion is heralded unabashedly in mainstream trial advocacy, as lawyers are advised to dress properly; appear absolutely sincere; entertain the jurors; tell them stories; keep a distance from the jury box; and, tellingly, not sound like a lawyer ([Evans 2010](#)). Lawyers are also advised to appear confident; maintain eye contact with the jury; and vary the tone, volume, and modulation of speech ([Haydock & Sonsteng 2015](#)). Training manuals published by national professional associations include *Acting Skills for Lawyers* (Mathis 2012) and *Theater Tips and Strategies for Jury Trials* (Ball 2003).

Storytelling

Storytelling is a particularly ubiquitous form of heuristic persuasion. Narratives, more than isolated bits of information, serve to mentally transport listeners. Stories have the power of altering the recipient's normal emotional and cognitive reactions to the information presented, primarily by way of weakening their critical evaluation and facilitating the acceptance of accounts that might otherwise be rejected ([Green & Brock 2002](#)). Well-crafted stories also map onto the cognitive tendency to organize complicated evidence in narrative form (Schank & Abelson 1995; for legal applications, see [Bennett & Feldman 1981](#), [Pennington & Hastie 1993](#), [Wagenaar et al. 1993](#)). However, it must not be overlooked that a good story is not necessarily an accurate one. There is a danger that a discerning appreciation for the truth could be overwhelmed by the narrative features of the particular case or by the storytelling acumen of the witnesses and attorneys who deliver it.

Inducing Affect

Another common tool in the heuristic persuasion toolbox is the inducement of affect, namely, a feeling of liking or disliking toward any of the protagonists—defendants, victims, witnesses, lawyers, and experts. The influence of affect on social judgment and decision making is a well-established research finding ([Zajonc 1980](#)). Put plainly, people tend to decide in line with positive affect and against options that connote negative feelings ([Damasio 1994](#), [Lerner et al.](#)

2015). In the context of legal decision making, both lay people ([Holyoak & Simon 1999](#), [Simon et al. 2015](#)) and judges ([Rachlinski & Wistrich 2017](#)) tend to vote in favor of parties they like and reject the positions of parties they disfavor. Not surprisingly, lawyers frequently drench their courtroom presentation with all sorts of affective matter that paints defendants and witnesses in either a contemptible or venerable light, depictions that might have little to do with the facts of the case.

Arousing Emotions

Many criminal trials center around severe human tragedy, and often entail exposure of jurors to disturbing verbal accounts and gruesome imagery. This exposure has the potential to arouse intense negative emotions, particularly anger. The research indicates that high levels of anger tend to result in shallow processing of evidence and hostile judgments of other people (see [Feigenson 2016](#)). Specifically, anger leads to stronger attributions of personal blame for negative outcomes, stronger judgments of intentionality, greater tendencies to discount alternative explanations and mitigating circumstances, and the use of lower thresholds of evidence ([Goldberg et al. 1999](#), [Keltner et al. 1993](#), [Quigley & Tedeschi 1996](#)). Anger also tends to increase judgment certainty ([Tiedens & Linton 2001](#)), reliance on stereotypes ([Bodenhausen et al. 1994](#)), desire for retaliation ([Ferguson & Rule 1983](#)), and motivation to take action to remedy the transgression ([Mackie et al. 2000](#)). Studies also find that anger results in harsh judgments of a defendant even when that person is unrelated to the source of the anger (Semmler & Brewer 2002) (and even in whodunit cases ([Bright & Goodman-Delahunty 2004](#), [Grady et al. 2018](#)), where the arousing information has no probative value for the resolution of the case.

Trafficking in Extra-Evidential Information

A core tenet of the Anglo-American trial is that factual determinations ought to be based entirely on evidence that was legally admitted at trial. All other information must not, as a normative matter, bear any effect on the decision ([Judic. Counc. Calif. 2018](#), p. 101). As it turns out, however, jurors are frequently exposed to extra-evidential facts and insinuations, whether via naïve error or strategically placed communications. As discussed below, the adverse effect of this exposure is not easily cured.

IV. MENTAL GYMNASTICS

This final section of the article is concerned with the ability of fact-finders to conform their reasoning process to the normative dictates of the law. Some of these dictates run against the grain of normal cognitive operation and thus require a degree of mental agility that most people do not possess. We examine five such examples, the first three of which concern the ability of jurors to conform to the mandates of the jury instructions given by the judge.

The Presumption of Innocence

One of the normative pillars of criminal justice is that people should be presumed innocent until proven guilty. A primary justification for this principle is to combat the intuition by which one's status as a criminal defendant suggests a certain degree of guilt, an intuition informed by the belief that people do not get investigated, arrested, and indicted for no reason. To counter this intuition, fact-finders are instructed to presume innocence, which is tantamount to adopting a pre-evidential presumption that the defendant's guilt approximates zero. However desirable, suspending one's intuitive beliefs is an unfamiliar undertaking that is difficult to perform. Indeed, the research shows that simulated jurors adopt higher estimates of presumed guilt, typically around a probability of 0.5 ([Martin & Schum 1987](#), [Scurich et al. 2016](#)). Moreover, research shows that the initial presumption is not altogether supplanted by the incoming evidence and ends up leaving its mark on the verdict ([Scurich & John 2017](#)).

Cautionary Instructions

In addition to the arousal of affect and emotions, the antisocial and violent nature of criminal cases can evoke other hot cognitions, including prejudice, whether racial or otherwise. Indeed, the adversarial process incentivizes lawyers to induce prejudice to their tactical advantage ([Fletcher 1990](#)). Along the lines of the prevalent theory of dual processing, affect, emotion and prejudice are deemed System 1 forms of reasoning, which are inimical to System 2's proper and rational reasoning processes (Evans 1984, [Kahneman 2011](#)). To combat the possible effects of System 1 reasoning on legal decisions, jurors are offered cautionary instructions that direct them to base their judgments on the evidence alone and to avoid being swayed by factors such as bias, sympathy, or prejudice ([Judic. Counc. Calif. 2018](#), p. 101). This admonition is premised on jurors' ability to extricate themselves from these factors (). Research demonstrates intricate links

connecting cognition with emotions ([Lerner et al. 2015](#), [Simon et al. 2015](#)), affect ([Zajonc 1980](#)), and racial bias ([Eberhardt 2019](#)). Accordingly, simulated jurors encounter great difficulties in heeding admonitions to ignore these factors or prevent being influenced by them ([Bornstein & Greene 2017](#), [Saks & Spellman 2016](#), [Stebly et al. 2006](#)). Moreover, the effects of System 1 factors habitually go unnoticed, as they operate under the level of conscious awareness ([Wilson & Brekke 1994](#)) and thus lead people to deny—honestly but mistakenly—being influenced by them (Cush & Goodman-Delahunty 2006, Douglas et al. 1997).

Curative Instructions

When jurors happen to be exposed to extra-evidential information, judges will typically issue an ad hoc admonishment designed to cure the mishap by instructing them to ignore that information ([Judic. Counc. Calif. 2018](#), p. 104). The psychological literature gives reason to doubt the efficacy of such admonitions, especially when the information seems probative to the decision maker. The research offers a number of reasons to doubt the effectiveness of these instructions, including research on ironic mental processing ([Wenzlaff & Wegner 2000](#)), reactance theory ([Wright et al. 2004](#)), the hindsight bias ([Fischhoff 1975](#)), and belief perseverance ([Anderson et al. 1980](#)). These hindrances seem to apply to legal fact-finding ([Bornstein & Greene 2017](#), [Saks & Spellman 2016](#)). Studies show that despite being instructed to ignore extra-evidential information, simulated jurors fail to preclude it from their decision, especially when they are not provided with a reason they deem justified for doing so ([Kassin & Sommers 1997](#), [Lieberman & Arndt 2000](#)). In fact, the instruction might even make them pay more attention to that illicit information (Pickel 1995, [Stebly et al. 2006](#)). Over the years, judges and legal scholars have expressed skepticism toward the efficacy of instructions to ignore information [[Krulwitsch v. United States \(1949\)](#), [United States v. Grunewald \(1956\)](#)], though more recently the US Supreme Court has insisted that juries can and do disregard inadmissible evidence when instructed to do so [[Greer v. Miller \(1987\)](#)].

Probabilistic Evidence

Criminal prosecutions often contain probabilistic evidence, in particular results of forensic testing. Forensic testing tends to provide evidence that is more accurate than human testimony and thus has the potential to enhance the quality of the fact-finding process. However, to serve its diagnostic purpose, it is essential that the testing be performed correctly and based on valid

scientific principles (the record shows a rather spotty history in this regard; see [Natl. Acad. Sci. 2009](#)), and the findings be communicated in a manner that is both scientifically valid and comprehensible to the fact-finder. Crucially, fact-finders must be able to apply the probabilistic evidence correctly, a task that can be challenging for both lay people and experts. For one, people often engage in logical fallacies (Koehler 2014). Most commonly, people inverse the likelihood ratio of a particular item of evidence with the posterior odds that the final proposition is true ([Thompson & Schumann 1987](#)). These inverse fallacies can take the form of equating likelihood ratios with the probability that the defendant is guilty (the prosecutor's fallacy) or of understanding the likelihood ratio to indicate that a sizable number of people could have been the source of the evidence (the defense attorney's fallacy). Second, people find it difficult to properly comprehend probabilistic evidence, especially for extreme values, and seem insufficiently sensitive to those values when adjusting their posterior judgments of guilt (Koehler 2012, [Thompson & Newman 2015](#), [Thompson et al. 2018](#)).

The Coherence Effect

Another cognitive challenge facing fact-finders is that they are called to make binary decisions from evidential arrays that often contain a slew of items that are rife with uncertainty, incommensurability, and conflict. Yet, fact-finders seem to manage to overcome this challenge, just as they do when facing complex decisions in everyday life. Cognitively speaking, the challenge boils down to an integration of multitudes of evidence items. One model by which fact-finders perform this task is coherence-based reasoning ([Simon 2004](#)). Originating in the principles of Gestalt psychology and grounded in a connectionist cognitive architecture, this framework views the decision space as a network in which facts and propositions are represented in the form of nodes that are connected through excitatory links to all nodes that support the same decision, and through inhibitory links to nodes that support the opposing conclusion. Much like an electric network, the network cross-activates and gradually drifts toward a state of equilibrium—or coherence—wherein one subset will be strongly activated and the rival subset will be rejected. The process enables people to transform a cacophonous and conflict-laden set of evidence into a coherent and lopsided representation that enables fact-finders to make discrete judgments with resolve and confidence ([Holyoak & Thagard 1989](#), [Simon & Holyoak 2002](#), [Read & Simon 2012](#)). But it must be appreciated that this adaptive process entails a certain

distortion of the evidence, which means that the eventual state of coherence is not a true reflection of the evidence items, but rather a reconstructed view of them. By the same token, the high levels of confidence are, to an extent, an artifact of the cognitive process (Engel & Glöckner 2013, Holyoak & Simon 1998, Simon et al. 2004, 2015).

This process has at least three important implications for criminal fact-finding (Simon 2019). First, due to the asymmetric standard of proof, the coherence effect has the potential not only to strengthen verdicts, but it can also result in unwarranted verdict changes. A mere leaning toward conviction will tend to intensify the fact-finder's belief in guilt, which might surpass the standard of beyond a reasonable doubt. Thus, the decision maker may reach a decision of guilt, despite the weak probativeness of the evidence. Second, a core requirement of evidence integration is that the probative value of each evidence item be assessed independently from all other evidence items (unless the items are inherently dependent on one another). For example, the probativeness of a confession should not be impacted by an eyewitness's testimony or a fingerprint analysis. But this requirement of insulated probativeness tends to be overwhelmed by the profound interconnectivity of the connectionistic process that drives the network toward a globally coherent resolution (Engel & Glöckner 2013, Holyoak & Simon 1998, Simon et al. 2004, 2015). Such unwarranted—and otherwise inexplicable—influences are observed, often incidentally, across a variety of research projects. For illustration, the undermining of a defendant's alibi results in stronger belief in the prosecution evidence ([Smith et al. 1996](#)), increasing the strength of a prosecution witness's testimony results in lower judgments of police coercion during an interrogation ([Greenspan & Scurich 2016](#)), and learning that the suspect confessed to the crime increases the (erroneous) belief that his handwriting matches the writing on the note used in the robbery ([Kukucka & Kassin 2014](#)). In other words, evidence items will be under- or over-weighted depending on their placement in the broader constellation of evidence. Third, due to the connectionistic nature of the process, exposure to extraevidential information will often seep through the entire representation of the case and contaminate the rest of the (legally admitted) evidence items, typically without conscious awareness (Holyoak & Simon, 1999, Simon & Spiller 2016). Even if fact-finders could follow the curative instruction to ignore the focal piece of extraevidential information, it is doubtful that they could undo these circuitous effects (which probably explains why litigators resort to this tactic).

DISCUSSION

The espoused objective of American criminal adjudication is to reach accurate findings of fact via the rationalist ([Twining 1990](#)) and reasoned judgment ([Fuller 1978](#)) traditions. Yet, when examined up close, the actual manner in which criminal decisions are made seems to fall short of that lofty ideal. The first section showed that the evidence on which jurors feed is collected by inadequate investigative procedures that often fail to elicit true memorial statements and sometimes even distort them. Moreover, by the time the testimony gets aired in court, the statements have often undergone evidence drift in that they intensify, crystallize, and morph toward one of the parties' version of the facts. Excavating the truth is further hindered by the opacity of the investigative process. The second section examined the effect of fact-finder's background knowledge regarding common types of evidence and their judgments of that evidence. We saw that people find it difficult to assess evidence correctly when they lack familiarity with the type of evidence and when they hold overly strong beliefs about it. The third section observed that the adversarial courtroom provides a flawed environment for reasoned decision making. We saw that jurors' hearts and minds become the battlefield for a fierce barrage of heuristic persuasion, oftentimes packaged in compelling narratives and drenched in both genuine and contrived affect and emotion. The fourth section suggested that the fact-finding task is composed of several normative ideals that jurors cannot feasibly be expected to meet. In all, despite jurors' earnest motivation and best efforts, they might not be in a position to provide the astute and thoughtful decisions that befit the seriousness of criminal adjudication.

But jurors rarely complain about the job we assign them. With few exceptions, they perform their role to the best of their ability and then disperse into the dark of night. Any concerns about their fitness for the task are shrouded by their anonymity, their lack of accountability, and the strict veil of secrecy that shrouds the deliberative process. With no reliable way to discern the jury's performance, the criminal justice system ignores the prospect of unmet expectations and heaps praise on the unverifiable prowess of its fact-finders. This halo of reverence seems to explain both the deference that appellate and postconviction courts show toward the jury's verdict and their aversion to interfere with the fact-finding task, which together virtually guarantee the perpetuation of any errors that might be lurking in the decision. Moreover, the unwavering trust in juries has led the Supreme Court to be nonchalant about presenting them

with flawed evidence. As the court explains, “It is part of our adversary system that we accept at trial much evidence that has strong elements of untrustworthiness” [[Manson v. Brathwaite \(1977\)](#), p. 113; [Watkins v. Sowders \(1981\)](#), p. 348]; untrustworthy evidence is said to be “customary grist for the jury mill” [[Manson v. Brathwaite \(1977\)](#), p. 116]. Thus, the criminal jury is deemed as a cleansing agent that purges the failings of other actors in the criminal process ([Fisher 1997](#), [Frank 1949](#)). Ironically, this reverence is bound to fuel the continued resort to inadequate investigative procedures, thus perpetuating the production of murky evidence and further undermining the jury’s performance.

Exposing challenges to jurors’ performance should not necessarily lead us to suggest vesting the fact-finding responsibility in the hands of professional judges. With nothing but murky evidence at their disposal, there seems no reason to believe that professional judges will be appreciably better at uncovering factual truth. Indeed, studies with sitting judges indicate that their performance on fact-finding tasks is not substantially different from that of lay jurors ([Rachlinski & Wistrich 2017](#)).

Rather, we should calibrate the reverence with which hold the jury and reckon honestly with the limitations of jurors’ ability to deliver the exactitude that we attribute to them. Crucially, we must move resolutely to reform the current system to better equip jurors for their pursuit of factual truth (see [Simon 2012, 2014](#)). First, with respect to the murky evidence presented in court, there is much to be gained from reforming the investigative process. Investigative inadequacies can be fixed rather straightforwardly by adopting a series of best-practice investigative procedures that are readily available ([Kassin et al. 2010](#), [Wells et al. in preparation](#)). Investigators should also create a complete record of the investigative process, namely, by recording every interaction with every witness and sharing the record with everyone involved in the criminal process. In other words, the criminal process should preserve witnesses’ statements, much as it preserves specimens of forensic evidence in sealed containers. The newfound transparency is bound to improve the quality of investigations, prevent evidence drift, and spare jurors from having to excavate for the truth in the dark. Indeed, a promising line of emerging research shows that simulated jurors’ judgments of testimony can be improved substantially by providing them with videotaped records of lineups and witness interviews ([Reardon & Fisher 2011](#), [Smalarz & Wells 2015](#)). Second, fact-finders’ underfamiliarity and overbelief with respect to criminal evidence can be mitigated somewhat by more informative

jury instructions and greater use of expert testimony, ideally coming from the mouths of court-appointed experts. Third, the unruly decision-making environment could be greatly improved by reining in the excesses of the adversarial courtroom culture, a reform that would require profound cultural and professional changes in the legal profession. Finally, curbing the excesses of the adversarial practices could also alleviate some of the mental gymnastics demands—namely cautionary and curative jury instructions. The other demands—namely, the presumption of innocence, probabilistic evidence and the coherence effect—seem to pose more stubborn challenges. As long as legal decision making remains a human endeavor, we will be forced to live with a certain degree of error. That, of course, is no reason to refrain from examining this endeavor with an empathic yet critical eye and adopting any feasible measure to make it more accurate.

The range for possible future research is vast. Notable topics include improving presentation of evidence to jurors (including deepening research on showing jurors video recordings of investigative interactions with witnesses), real-time tracking of juror reactions to incoming evidence, the prospect of non-adversarial presentation of evidence, optimal presentation of probabilistic evidence, combatting the coherence effect, and development of guidelines for accuracy promoting jury deliberations.

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LITERATURE CITED

- Abramson JB. 2000. *We, the jury: the jury system and the ideal of democracy*. Cambridge, MA: Harvard University Press
- Abshire J, Bornstein BH. 2003. Juror sensitivity to the cross-race effect. *Law Hum. Behav.* 27:471–80
- Anderson CA, Lepper MR, Ross L. 1980. Perseverance of social theories: the role of explanation in the persistence of discredited information. *J. Personal. Soc. Psychol.* 39:1037–49
- Appleby SC, Hasel LE, Kassin SM. 2013. Police-induced confessions: an empirical analysis of

- their content and impact. *Psychol. Crime Law* 19(2):111–28
- Applegate JS. 1989. Witness preparation. *Tex. Law. Rev.* 68:277–352
- Ball D. 2003. *Theater Tips and Strategies for Jury Trials*. Boulder, CO: Natl. Inst. Trial Advocacy. 3rd ed.
- Bartlett FC. 1932. *Remembering: A Study in Experimental and Social Psychology*. Cambridge, UK: Cambridge Univ. Press
- Bell BE, Loftus EF. 1988. Degree of detail of eyewitness testimony and mock juror judgments. *J. Appl. Soc. Psychol.* 18(14):1171–92
- Bennett WL, Feldman MS. 1981. *Reconstructing Reality in the Courtroom: Justice and Judgment in American Culture*. New Brunswick, NJ: Rutgers Univ. Press
- Berman GL, Cutler BL. 1996. Effects of inconsistencies in eyewitness testimony on mock-juror decision making. *J. Appl. Psychol.* 81:170–77
- Blackstone W. 1791. *Commentaries on the Laws of England*, Vol. 3.
- Bond CF, DePaulo BM. 2006. Accuracy of deception judgments. *Personal. Soc. Psychol. Rev.* 10:214–34
- Bodenhausen GV, Sheppard LA, Kramer GP. 1994. Negative affect and social judgment: the differential impact of anger and sadness. *Eur. J. Soc. Psychol.* 24:45–62
- Bornstein BH, Greene E. 2017. *The Jury Under Fire: Myth, Controversy, and Reform*. Oxford, UK: Oxford Univ. Press
- Bower GH, Black JB, Turner TJ. 1979. Scripts in memory for text. *Cogn. Psychol.* 11(2):177–220
- Brady v. Maryland*, 373 U.S. 83 (1963)
- Brainerd CJ, Reyna VF. 2002. Fuzzy-trace theory and false memory. *Curr. Dir. Psychol. Sci.* 11:164–69
- Brewer N, Burke A. 2002. Effects of testimonial inconsistencies and eyewitness confidence on mock-juror judgments. *Law Hum. Behav.* 26:353–64
- Brewer N, Hupfeld RM. 2004. Effects of testimonial inconsistencies and witness group identity on mock-juror judgments. *J. Appl. Soc. Psychol.* 34:493–513
- Bright DA, Goodman-Delahunty J. 2004. The influence of gruesome verbal evidence on mock juror verdicts. *Psychiatry Psychol. Law* 11:154–66
- Burns RP. 2015. Some limitations of experimental psychologists' criticisms of the American

- trial. *Chic.-Kent Law Rev.* 90:899–925
- Charman SD, Carol RN, Schwartz SL. 2018. The effect of biased lineup instructions on eyewitness identification confidence. *Applied Cognitive Psychology* 32(3):287-97
- Chen S, Chaiken S. 1999. The heuristic-systematic model in its broader context. In *Dual-Process Theories in Social Psychology*, ed. S Chaiken & Y Trope, pp. 73–96. New York: Guilford
- Costanzo M, Shaked-Schroer N, Vinson K. 2010. Juror beliefs about police interrogations, false confessions, and expert testimony. *J. Empir. Leg. Stud.* 7:231–47
- Crano WD, Prislin R. 2006. Attitudes and persuasion. *Annu. Rev. Psychol.* 57:345–74
- Cush RK, Goodman-Delahunty JG. 2006. The influence of limiting instructions on processing and judgments of emotionally evocative evidence. *Psychiatry, Psychology and Law* 13:110-23
- Cutler BL, Penrod SD, Dexter HR. 1990. Juror sensitivity to eyewitness identification evidence. *Law Hum. Behav.* 14:185–91
- Cutler BL, Penrod SD, Martens TK. 1987. The reliability of eyewitness identification: the role of system and estimator variables. *Law Hum. Behav.* 11:233–58
- Damasio AR. 1994. *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Putnam
- Devine DJ. 2012. *Jury Decision Making: The State of the Science*. New York: NYU Press
- Devine DJ, Buddenbaum J, Houp S, Stolle DP, Studebaker N. 2007. Deliberation quality: a preliminary examination in criminal juries. *J. Empir. Leg. Stud.* 4:273–303
- Devine DJ, Kelly CE. 2015. Life or death: an examination of jury sentencing with the Capital Jury Project database. *Psychol. Public Policy Law* 21(4):393–406
- Diamond SS, Rose MR. 2018. The contemporary American jury. *Annu. Rev. Law Soc. Sci.* 14:239–58
- Douglas KS, Lyon DR, Ogloff JRP. 1997. The impact of graphic photographic evidence on mock jurors' decisions in a murder trial: Probative or prejudicial? *Law and Human Behavior*, 21:485-501
- Douglass AB, Neuschatz JS, Imrich J, Wilkinson M. 2010. Does post-identification feedback affect evaluations of eyewitness testimony and identification procedures? *Law Hum. Behav.* 34:282–94
- Drivdahl SB, Zaragoza MS. 2001. The role of perceptual elaboration and individual differences

- in the creation of false memories for suggested events. *Appl. Cogn. Psychol.* 15:265–81
- Drizin SA, Leo RA. 2004. The problem of false confessions in the post-DNA world. *N.C. Law Rev.* 82:891–1007
- Eberhardt JL. 2019. *Biased: Uncovering the Hidden Prejudice That Shapes What We See, Think, and Do*. New York: Viking
- Edwards JR. 1991. *Person-job fit: A conceptual integration, literature review, and methodological critique*. NY: John Wiley & Sons
- Engel C, Glöckner A. 2013. Role-induced bias in court: An experimental analysis. *Journal of Behavioral Decision Making* 26:272-84
- Evans JStB. 1984. Heuristic and analytic processes in reasoning. *British Journal of Psychology* 75:451-68
- Evans K. 2010. *The Common Sense Rule of Trial Advocacy*. St. Paul, MN: West
- Feigenson N. 2016. Jurors' emotions and judgments of legal responsibility and blame: What does the experimental research tell us? *Emot. Rev.* 8(1):26–31
- Ferguson TJ, Rule BG. 1983. An attributional perspective on anger and aggression. In *Aggression: Theoretical and Empirical Reviews*, Vol. 1, ed. RG Geen, EI Donnerstein, pp. 41–74. New York: Academic
- Fischhoff B. 1975. Hindsight is not equal to foresight: the effect of outcome knowledge on judgment under uncertainty. *J. Exp. Psychol.* 1:288–99
- Fisher G. 1997. The jury's rise as lie detector. *Yale Law J.* 107:575–713
- Fisher RP, Schreiber N. 2007. Interview protocols for improving eyewitness memory. See Toglietta et al. 2007, pp. 53–80
- Fletcher GP. 1990. *A Crime of Self-Defense: Bernhard Goetz and the Law on Trial*. Chicago: Univ. Chic. Press
- Frank J. 1949. *Courts on Trial*. Princeton, NJ: Princeton Univ. Press
- Fuller LL. 1961. The adversary system. In *Talks on American Law*, ed. H Berman, pp. 34–47. New York: Vintage Books
- Fuller L. 1978. The forms and limits of adjudication. *Harvard Law Rev.* 92:353–409
- Garrett BL. 2010. The substance of false confessions. *Stan. L. Rev.* 62:1051- 118
- Garrett BL. 2011. *Convicting the Innocent: Where Criminal Prosecutions Go Wrong*. Cambridge, MA: Harvard Univ. Press

- Garvey SP, Hannaford-Agor PL, Hans VP, Mott NL, Munsterman GT, Wells MT. 2004. Juror first votes in criminal trials. *J. Empir. Stud.* 1:371–98
- Gibbs RW, Izett CD. 2005. Irony as persuasive communication. In *Figurative Language Comprehension: Social and Cultural Influences*, ed. HL Colston, AN Katz, pp. 131–51. Mahwah, NJ: Lawrence Erlbaum
- Gilbert JAE, Fisher RP. 2006. The effects of varied retrieval cues on reminiscence in eyewitness memory. *Appl. Cogn. Psychol.* 20:723–39
- Goldberg JH, Lerner JS, Tetlock PE. 1999. Rage and reason: the psychology of the intuitive prosecutor. *Eur. J. Soc. Psychol.* 29:781–95
- Grady RH, Reiser L, Garcia RJ, Koeu C, Scurich N. 2018. Impact of gruesome photographic evidence on legal decisions: a meta-analysis. *Psychiatry Psychol. Law* 25(4):503–21
- Granhag PA, Strömwall LA. 2002. Repeated interrogations: verbal and non-verbal cues to deception. *Appl. Cogn. Psychol.* 16(3):243–57
- Green MC, Brock TC. 2002. In the mind’s eye: transportation-imagery model of narrative persuasion. In *Narrative Impact: Social and Cognitive Foundations*, ed. MC Green, JJ Strange, TC Brock, pp. 315–42. Mahwah, NJ: Lawrence Erlbaum
- Greer v. Miller*, 483 U.S. 756, 767 (1987)
- Greenspan R, Scurich N. 2016. The interdependence of perceived confession voluntariness and case evidence. *Law Hum. Behav.* 40(6):650–59
- Hanba JM, Zaragoza MS. 2007. Interviewer feedback in repeated interviews involving forced confabulation. *Appl. Cogn. Psychol.* 21:433–55
- Hartwig M, Bond CF. 2011. Why do lie-catchers fail? A lens model meta-analysis of human lie judgments. *Psychol. Bull.* 137(4):643–59
- Hartwig M, Bond CF. 2014. Lie detection from multiple cues: a meta-analysis. *Appl. Cogn. Psychol.* 28(5):661–76
- Hastie R, Landsman R, Loftus EF. 1978. Eyewitness testimony: the dangers of guessing. *Jurimetrics* 19:1–8
- Haydock R, Sonsteng J. 2015. *Trial Advocacy before Judges, Jurors, and Arbitrators*. St. Paul, MN: West Thompson. 5th ed.
- Herrera v. Collins*, 506 U.S. 390 (1993)
- Hobbs P. 2007. Lawyers’ use of humor as persuasion. *Humor* 20:123–56

- Hoffman MB. 2007. The myth of factual innocence. *Chic.-Kent Law Rev.* 82:663–90
- Holyoak KJ, Simon D. 1999. Bidirectional reasoning in decision making by constraint satisfaction. *J. Exp. Psychol.* 128:3–31
- Holyoak KJ, Thagard P. 1989. Analogical mapping by constraint satisfaction. *Cogn. Sci.* 13:295–355
- Hosch HM, Culhane SE, Jolly KW, Chavez RM, Shaw LH. 2011. Effects of an alibi witness's relationship to the defendant on mock jurors' judgments. *Law Hum. Behav.* 35(2):127–42
- Inbau F, Reid J, Buckley J, Jayne B. 2011. *Criminal Interrogation and Confessions*. Burlington, MA: Jones & Bartlett
- Judic. Counc. Calif. 2018. *Judicial Council of California Criminal Jury Instructions (CALCRIM)*. Miamisburg, OH: LexisNexis Matthew Bender
- Kalven H, Zeisel H. 1966. *The American Jury*. Boston: Little, Brown
- Kahneman D. 2011. *Thinking, Fast and Slow*, Vol. 1. New York: Farrar, Straus & Giroux
- Kaplan MF, Miller LE. 1978. Reducing the effects of juror bias. *J. Personal. Soc. Psychol.* 36:1443–55
- Kassin SM. 2012. Why confessions trump innocence. *Am. Psychol.* 67(6):431–45
- Kassin SM, Drizin SA, Grisso T, Gudjonsson GH, Leo RA, Redlich AD. 2010. Police-induced confessions: risk factors and recommendations. *Law Hum. Behav.* 34(1):3–38
- Kassin SM, Dror IE, Kukucka J. 2013. The forensic confirmation bias: problems, perspectives, and proposed solutions. *J. Appl. Res. Mem. Cogn.* 2(1):42–52
- Kassin SM, Sommers SR. 1997. Inadmissible testimony, instructions to disregard, and the jury: substantive versus procedural considerations. *Personal. Soc. Psychol. Bull.* 23:1046–54
- Keltner D, Ellsworth PC, Edwards K. 1993. Beyond simple pessimism: effects of sadness and anger on social perception. *J. Personal. Soc. Psychol.* 64:740–52
- Keogh L, Markham R. 1998. Judgements of other people's memory reports: differences in reports as a function of imagery vividness. *Appl. Cogn. Psychol.* 12:159–71
- Kim IK, Kwon ES, Ceci SJ. 2017. Developmental reversals in report conformity: psycho-legal implications. *Appl. Cogn. Psychol.* 31(2):128–38
- Knutsson J, Allwood CM. 2015. Swedish legal professionals' opinions on child and adult witness memory-reporting capabilities: using the method of indirect comparisons. *Appl. Cogn. Psychol.* 29(3):392–406

- Koehler JJ. 2012. Linguistic confusion in court: evidence from the forensic sciences. *J. Law Policy* 21:515–24
- Koehler JJ. 2014. Forensic fallacies and a famous judge. *Jurimetrics* 54:211-19
- Koriat A, Goldsmith M. 1996. Monitoring and control processes in the strategic regulation of memory accuracy. *Psychol. Rev.* 103:490–517
- Kristof-Brown AL, Zimmerman RD, Johnson EC. 2005. Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group and person-supervisor fit. *Personnel Psy.* 58(2):281-342
- Krulewitch v. United States*, 336 U.S. 440, 453 (1949)
- Kukucka J, Kassim SM. 2014. Do confessions taint perceptions of handwriting evidence? An empirical test of the forensic confirmation bias. *Law Hum. Behav.* 38(3):256–70
- Landsman, S. (1988). *Readings on adversarial justice: The American approach to adjudication*. St. Paul, MN: West
- Larrick RP. 2016. The social context of decisions. *Annu. Rev. Organ. Psychol. Organ. Behav.* 3:441–67
- Lavis T, Brewer N. 2017. Effects of a proven error on evaluations of witness testimony. *Law Hum. Behav.* 41(3):314–23
- Lego v. Twomey*, 404 U.S. 477 (1972)
- Leippe MR, Manion AP, Romanczyk A. 1992. Eyewitness persuasion: How and how well do fact finders judge the accuracy of adults' and children's memory reports?. *J. Personal. Soc. Psychol.* 63(2):181–97
- Lempert R. 1998. Why Do Juries Get a Bum Rap-Reflections on the Work of Valerie Hans. *DePaul L. Rev.* 48:453-62
- Leo RA. 2001. Questioning the relevance of Miranda in the twenty-first century. *Michigan Law Review* 99:1000-29
- Leo RA. 2008. *Police Interrogation and American Justice*. Cambridge, MA: Harvard Univ. Press
- Lerner JS, Li Y, Valdesolo P, Kassam KS. 2015. Emotion and decision making. *Annu. Rev. Psychol.* 66:799–823
- Lieberman JD, Arndt J. 2000. Understanding the limits of limiting instructions: social psychological explanations for the failures of instructions to disregard pretrial publicity and

- other inadmissible evidence. *Psychol. Public Policy Law* 6:677–711
- Lindsay RCL, Lim R, Marando L, Cully D. 1986. Mock-juror evaluations of eyewitness testimony: a test of metamemory hypotheses. *J. Appl. Soc. Psychol.* 16:447–59
- Lindsay RCL, Ross DF, Read JD, Toglia MP, eds. 2007. *The Handbook of Eyewitness Psychology, Vol. 2: Memory for People*. Mahwah, NJ: Lawrence Erlbaum
- Loftus EF. 2017. Eavesdropping on memory. *Annu. Rev. Psychol.* 68:1–18
- Loftus EF. 1975. Leading questions and the eyewitness report. *Cogn. Psychol.* 7:560–72
- Loftus EF, Greene E. 1980. Warning: Even memory for faces may be contagious. *Law Hum. Behav.* 4:323–34
- Loftus EF, Palmer JC. 1974. Reconstruction of automobile destruction: an example of the interaction between language and memory. *J. Verbal Learn. Verbal Behav.* 13:585–89
- Lonergan M, Leclerc MÈ, Descamps M, Pigeon S, Brunet A. 2016. Prevalence and severity of trauma-and stressor-related symptoms among jurors: a review. *J. Crim. Justice* 47:51–61
- Mackie DM, Devos T, Smith ER. 2000. Intergroup emotions: explaining offensive action tendencies in an intergroup context. *J. Personal. Soc. Psychol.* 79:602–16
- Manson v. Brathwaite*, 432 U.S. 98 (1977)
- Martin AW, Schum DA. 1987. Quantifying burdens of proof: a likelihood ratio approach. *Jurimetr. J.* 27:383–402
- Mathis L. 2012. *Acting Skills for Lawyers*. Chicago: Am. Bar Assoc.
- McAuliff BD, Kovera MB. 2007. Estimating the effects of misleading information on witness accuracy: Can experts tell jurors something they don't already know? *Appl. Cogn. Psychol.* 21(7):849–70
- Medwed DS. 2010. Brady's bunch of flaws. *Wash. Lee Law Rev.* 67:1533–67
- Meissner CA, Kassin SM. 2002. He's guilty! Investigator bias in judgments of truth and deception. *Law Hum. Behav.* 26(5):469–80
- Meissner CA, Kelly CE, Woestehoff SA. 2015. Improving the effectiveness of suspect interrogations. *Annu. Rev. Law Soc. Sci.* 11:211–33
- Milgram S. 1974. *Obedience to Authority*. New York: Harper & Row
- Narchet FM, Meissner CA, Russano MB. 2011. Modeling the influence of investigator bias on the elicitation of true and false confessions. *Law Hum. Behav.* 35:452–65
- Nash RA, Wade KA. 2009. Innocent but proven guilty: eliciting internalized false confessions

- using doctored-video evidence. *Appl. Cogn. Psychol.* 23(5):624–37
- Natl. Acad. Sci. 2009. *Strengthening Forensic Science in the United States: A Path Forward*. Washington, DC: Natl. Acad. Press
- National Registry of Exonerations. 2019.
<http://www.law.umich.edu/special/exoneration/Pages/about.aspx> (last accessed April, 14, 2019)
- Olson EA, Wells GL. 2004. What makes a good alibi? A proposed taxonomy. *Law Hum. Behav.* 28:157–76
- Pennington N, Hastie R. 1993. The story model for juror decision making. In *Inside the Juror: The Psychology of Juror Decision Making*, ed. R Hastie, pp. 192–221. New York: Cambridge Univ. Press
- People v. Schader*, 62 Cal. 2d 716 (1965)
- Petty RE, Cacioppo J. 1986. *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. New York: Springer-Verlag
- Piaget J. 1926. *Language and Thought of the Child: Selected Works*, Vol. 5. London: Routledge & Kegan Paul
- Pickel KL. 1995. Inducing jurors to disregard inadmissible evidence: A legal explanation does not help. *Law & Human Behavior* 19:407-24
- Quigley BM, Tedeschi JT. 1996. Mediating effects of blame attributions on feelings of anger. *Personal. Soc. Psychol. Bull.* 22:1280–88
- Rachlinski JJ, Wistrich AJ. 2017. Judging the judiciary by the numbers: empirical research on judges. *Ann. Rev Law Soc. Sci.* 13:203–29
- Read SJ. 1987. Constructing causal scenarios: a knowledge structure approach to causal reasoning. *J. Personal. Soc. Psychol.* 52:288–302
- Read SJ, Simon D. 2012. Parallel constraint satisfaction as a mechanism for cognitive consistency. In *Cognitive Consistency: A Fundamental Principle in Social Cognition*, ed. B. Gawronski F. Strack, pp. 66-86. New York: Guilford Press
- Reardon MC, Fisher RP. 2011. Effect of viewing the interview and identification process on juror perceptions of eyewitness accuracy. *Appl. Cogn. Psychol.* 25:68–77
- Roskos-Ewoldsen DR. 2003. What is the role of rhetorical questions in persuasion? In *Communication and Emotion: Essays in Honor of Dolf Zillmann*, ed. J Bryant, D Roskos-

- Ewoldsen, J Cantor, pp. 297–321. Mahwah, NJ: Lawrence Erlbaum
- Ross L, Nisbett RE. 1991. *The Person and the Situation: Perspectives of Social Psychology*. New York: McGraw-Hill
- Rumelhart DE. 1980. Schemata: the building blocks of cognition. In *Theoretical Issues in Reading Comprehension*, ed. RJ Spiro, BC Bruce, WF Brewer, pp. 33–58. Hillsdale, NJ: Lawrence Erlbaum
- Sauerland M, Sporer SL. 2009. Fast and confident: postdicting eyewitness identification accuracy in a field study. *J. Exp. Psychol. Appl.* 15:46–62
- Saks MJ, Spellman BA. 2016. *The Psychological Foundations of Evidence Law*. New York: NYU Press
- Schank RC, Abelson RP. 1995. Knowledge and Memory: The Real Story. In *Knowledge and Memory: The Real Story*, ed. RS Wyer, pp. 1-85. Hillsdale, NJ. Lawrence Erlbaum
- Schmechel RS, O’Toole TP, Easterly C, Loftus EF. 2006. Beyond the kin? Testing jurors’ understanding of eyewitness reliability evidence. *Jurimetrics* 46:177–214
- Scurich N, John RS. 2017. Jurors’ presumption of innocence. *J. Leg. Stud.* 46(1):187–206
- Scurich N, Nguyen KD, John RS. 2016. Quantifying the presumption of innocence. *Law Probab. Risk* 15(1):71–86
- Semmler C, Brewer N. 2002. Effects of mood and emotion on juror processing and judgments. *Behavioral Sciences & the Law* 20(4):423-36
- Sevier J. 2014. The truth-justice tradeoff: perceptions of decisional accuracy and procedural justice in adversarial and inquisitorial legal systems. *Psychol. Public Policy Law* 20(2):212–24
- Shaw JS, McClure KA. 1996. Repeated postevent questioning can lead to elevated levels of eyewitness confidence. *Law Hum. Behav.* 20:629–53
- Shaw JS, Zerr TK. 2003. Extra effort during memory retrieval may be associated with increases in eyewitness confidence. *Law Hum. Behav.* 27:315–29
- Simon D. 2004. A third view of the black box: cognitive coherence in legal decision making. *Univ. Chic. Law Rev.* 71:511–86
- Simon D. 2012. *In Doubt: The Psychology of the Criminal Justice Process*. Cambridge, MA: Harvard Univ. Press
- Simon D. 2014. Criminal Law at the Crossroads: Turn to Accuracy. *Southern Cal. Law Rev.*

87:421-458

- Simon D. 2019. Thin empirics. *The International Journal of Evidence & Proof*, 23:82-89
- Simon D, Holyoak KJ. 2002. Structural dynamics of cognition: from consistency theories to constraint satisfaction. *Personal. Soc. Psychol. Rev.* 6(4):283–94
- Simon D, Snow CJ, Read SJ. 2004. The redux of cognitive consistency theories: evidence judgments by constraint satisfaction. *J. Personal. Soc. Psychol.* 86:814–37
- Simon D, Spiller SA. 2016. The elasticity of preferences. *Psychological science* 27:1588-99
- Simon D, Stenstrom DM, Read SJ. 2015. The coherence effect: blending cold and hot cognitions. *J. Personal. Soc. Psychol.* 109:369–94
- Sklansky DA, Yeazell S. 2006. Comparative law without leaving home: what civil procedure can teach criminal procedure, and vice versa. *Georgetown Law Rev.* 94:683–738
- Slobogin C. 1996. Testilying: police perjury and what to do about it. *Univ. Colo. Law Rev.* 67:1037–60
- Smith BC, Penrod SD, Otto AL, Park RC. 1996. Jurors' use of probabilistic evidence. *Law Hum. Behav.* 20(1):49–82
- Smalarz L, Wells GL. 2014. Post-identification feedback to eyewitnesses impairs evaluators' abilities to discriminate between accurate and mistaken testimony. *Law Hum. Behav.* 38(2):194–202
- Smalarz L, Wells GL. 2015. Contamination of eyewitness self-reports and the mistaken-identification problem. *Curr. Dir. Psychol. Sci.* 24(2):120–24
- Sopory P, Dillard JP. 2002. The persuasive effects of metaphor: a meta-analysis. *Hum. Commun. Res.* 28:382–419
- Stebly N, Hosch HM, Culhane SE, McWethy A. 2006. The impact on juror verdicts of judicial instruction to disregard inadmissible evidence: a meta-analysis. *Law Hum. Behav.* 30:469–92
- Stebly NK, Wells GL, Douglass AB. 2014. The eyewitness post identification feedback effect 15 years later: theoretical and policy implications. *Psychol. Public Policy Law* 20(1):1–18
- Sullivan TP. 2008. Recording federal custodial interviews. *Am. Crim. Law Rev.* 45:1297–345
- Thibaut JW, Walker L. 1975. *Procedural justice: A psychological perspective*. NJ, Hillsdale: Earlbaum
- Thompson WC, Grady RH, Lai E, Stern HS. 2018. Perceived strength of forensic scientists' reporting statements about source conclusions. *Law Probab. Risk* 17(2):133–55

- Thompson WC, Newman EJ. 2015. Lay understanding of forensic statistics: evaluation of random match probabilities, likelihood ratios, and verbal equivalents. *Law Hum. Behav.* 39(4):332–49
- Thompson WC, Schumann EL. 1987. Interpretation of statistical evidence in criminal trials. *Law Hum. Behav.* 11(3):167–87
- Tiedens L, Linton S. 2001. Judgment under emotional certainty and uncertainty: the effects of specific emotions on information processing. *J. Personal. Soc. Psychol.* 81:973–88
- Toglia MP, Read JD, Ross DF, Lindsay RCL. 2007. *The Handbook of Eyewitness Psychology, Vol. 1: Memory for Events*. Mahwah, NJ: Lawrence Erlbaum
- Twining W. 1990. *Rethinking Evidence*. Chicago: Northwest. Univ. Press
- United States v. Grunewald*, 233 F.2d 556, 574 (1956)
- van Koppen PJ, Penrod DS. 2003. *Adversarial versus Inquisitorial Justice: Psychological Perspectives on Criminal Justice Systems*. New York: Kluwer Acad.
- Vidmar N, Hans VP. 2007. *American Juries: The Verdict*. Amherst, NY: Prometheus Books
- Visher CA. 1987. Juror decision making: the importance of evidence. *Law Hum. Behav.* 11:1–17
- Vrij A, Hartwig M, Granhag PA. 2019. Reading lies: nonverbal communication and deception. *Annu. Rev. Psychol.* 70:295–317
- Wagenaar WA, van Koppen PJ, Crombag HFM. 1993. *Anchored Narratives: The Psychology of Criminal Evidence*. New York: St. Martin's
- Watkins v. Sowders*, 449 U.S. 341 (1981)
- Wells GL. 1984. The adequacy of human intuition for judging testimony. In *Eyewitness Testimony: Psychological Perspectives*, ed. GL Wells, EF Loftus, pp. 256–72. New York: Cambridge Univ. Press
- Wells GL, Ferguson TJ, Lindsay RCL. 1981. The tractability of eyewitness confidence and its implications for triers of fact. *J. Appl. Psychol.* 66:688–96
- Wells GL, Kovera MB, Douglass AB, Brewer N, Meissner C, Wixted JT. (in preparation). Policy and Procedure Recommendations for the Collection and Preservation of Eyewitness Identification Evidence.
- Wells GL, Leippe MR. 1981. How do triers of fact infer the accuracy of eyewitness identifications? Using memory for peripheral detail can be misleading. *J. Appl. Psychol.* 66:682–87

- Wells GL, Quinlivan DS. 2009. Suggestive eyewitness identification procedures and the Supreme Court's reliability test in light of eyewitness science: 30 years later. *Law Hum. Behav.* 33:1–24
- Wenzlaff RM, Wegner DM. 2000. Thought suppression. *Annu. Rev. Psychol.* 51:59–91
- Wilson TD, Brekke N. 1994. Mental contamination and mental correction: unwanted influences on judgments and evaluations. *Psychol. Bull.* 116(1):117–42
- Wixted JT, Mickes L, Clark SE, Gronlund SD, Roediger HL. 2015. Initial eyewitness confidence reliably predicts eyewitness identification accuracy. *Am. Psychol.* 70(6):515–26
- Wixted JT, Mickes L, Fisher RP. 2018. Rethinking the reliability of eyewitness memory. *Perspect. Psychol. Sci.* 13(3):324–35
- Wixted JT, Wells GL. 2017. The relationship between eyewitness confidence and identification accuracy: A new synthesis. *Psychol. Sci. Public Interest* 18(1):10–65
- Wright DB, Carlucci ME, Evans JR, Compo NS. 2010. Turning a blind eye to double blind line-ups. *Appl. Cogn. Psychol.* 24(6):849–67
- Wright RA, Greenberg J, Brehm SS, eds. 2004. *Motivational Analyses of Social Behavior: Building on Jack Brehm's Contributions to Psychology*. Mahwah, NJ: Lawrence Erlbaum
- Wyer RS, Radvansky GA. 1999. The comprehension and validation of social information. *Psychol. Rev.* 106:89–118
- Zajonc RB. 1980. Feeling and thinking: Preferences need no inferences. *Am. Psychol.* 35(2):151–75
- Zaragoza MS, Payment KE, Ackil JK, Drivdahl SB, Beck M. 2001. Interviewing witnesses: forced confabulation and confirmatory feedback increase false memories. *Psychol. Sci.* 12:473–77