CAN JUDGES IGNORE INADMISSIBLE INFORMATION? THE DIFFICULTY OF DELIBERATELY DISREGARDING

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Due process requires courts to make decisions based on the evidence before them without regard to information outside of the record. Skepticism about the ability of jurors to ignore inadmissible information is widespread. Empirical research confirms that this skepticism is well-founded. Many courts and commentators, however, assume that judges can accomplish what jurors cannot. This Article reports the results of experiments we have conducted to determine whether judges can ignore inadmissible information. We found that the judges who participated in our experiments struggled to perform this challenging mental task. The judges had difficulty disregarding demands disclosed during a settlement conference, conversation protected by the attorney-client privilege, prior sexual history of an alleged rape victim, prior criminal convictions of a plaintiff, and information the government had promised not to rely upon at sentencing. This information influenced judges' decisions even when they were reminded, or themselves had ruled, that the information was inadmissible. In contrast, the judges were able to ignore inadmissible information obtained in violation of a criminal defendant's right to counsel and the outcome of a search when determining whether probable cause existed. We conclude that judges are generally unable to avoid being influenced by relevant but inadmissible infor-

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mation of which they are aware. Nevertheless, judges displayed a surprising ability to do so in some situations.

INTRODUCTION

Trials search for truth by excluding certain truths.

An entire field of law—the law of evidence—is devoted to determining what information is admissible, what information is inadmissible, and what information may be admitted for limited purposes only.² Decisions based on inadmissible evidence, or on admissible evidence used for an improper purpose, are illegitimate³ and violate principles of due process.⁴ Unless any resulting error is "harmless," such decisions are subject to reversal.⁵

Evidence rules excluding *relevant* information fall into two categories.⁶ First, "intrinsic exclusionary rules" exclude relevant information on the ground that its omission will promote accurate fact finding.⁷ Rule 403 of the Federal Rules of Evidence, which excludes relevant information where its probative value is outweighed by the risk that it will confuse or mislead the fact finder, is an example.⁸ Second, "ex-

¹ See, e.g., MIRJAN R. DAMAŠKA, EVIDENCE LAW ADRIFT 149 (1997) (noting the "striking emphasis on the screening of information to be submitted to triers of fact").

² See Orie L. Phillips, A Symposium On Evidence: Foreword, 5 VAND. L. REV. 275, 275 (1952) ("Evidence' imports the means by which any alleged matter of fact, the truth of which is submitted to investigation, is established or disproved. It embraces the rules of law governing the admissibility or rejection of proffered proof and the weight to be given to proof that is admitted." (footnote omitted)).

³ See MCCORMICK'S HANDBOOK OF THE LAW OF EVIDENCE § 51, at 109 n.1 (Edward W. Cleary ed., 2d ed. 1972) [hereinafter MCCORMICK'S HANDBOOK] ("The fact issues at the trial should be decided upon the facts 'in the record,' i. e. [sic], facts officially introduced in accordance with the rules of practice, and facts which the court may judicially notice.").

⁴ See Goldberg v. Kelly, 397 U.S. 254, 271 (1970) ("[T]he decisionmaker's conclusion . . . must rest solely on the legal rules and evidence adduced at the hearing.").

⁵ Trial verdicts, however, are seldom reversed due to evidentiary error. *See* Margaret A. Berger, *When, If Ever, Does Evidentiary Error Constitute Reversible Error*?, 25 LOY. L.A. L. REV. 893, 894-96 (1992) (finding that in 1990—a time when the federal district courts conducted about 20,000 criminal and civil bench and jury trials a year—only thirty trial verdicts were reversed for evidentiary error: sixteen for erroneous admission and fourteen for erroneous exclusion).

 $^{^6}$ See, e.g., FED. R. EVID. 401 (defining relevant evidence). Evidence rules also exclude irrelevant information. Id. 402.

⁷ DAMAŠKA, *supra* note 1, at 14.

 $^{^{8}}$ See FED. R. EVID. 403 (excluding relevant evidence on grounds of prejudice, confusion, or waste of time).

trinsic exclusionary rules" exclude relevant evidence to promote a policy interest, regardless of its impact on the accuracy of fact finding. Examples include rules excluding evidence of pretrial settlement proposals as well as various privileges, such as the attorney-client privilege. 11

The best way to prevent inadmissible information from influencing jurors is to shield them from it altogether. Despite the best efforts of courts, however, jurors are sometimes exposed to inadmissible information through media accounts of the case or impermissible comments by lawyers or witnesses during trial. When such exposure occurs, judges attempt to undermine its influence by instructing jurors to limit their use of the information or to disregard it entirely. Judicial opinions on the issue tend to embrace a "strong presumption that proper limiting instructions will reduce the possibility of prejudice to an acceptable level."

Nonetheless, courts and commentators have long worried that jurors cannot "unbit[e] the apple of knowledge." For example, Justice Robert Jackson once argued that "[t]he naive assumption that preju-

⁹ DAMAŠKA, *supra* note 1, at 12.

FED. R. EVID. 408; *see also id.* 410 (excluding guilty pleas). Rule 408 actually is a hybrid. Evidence of settlement offers is excludable for two reasons: "(1) The evidence is irrelevant, since the offer may be motivated by a desire for peace rather than from any concession of weakness of position," and "(2) . . . promotion of the public policy favoring the compromise and settlement of disputes." FED. R. EVID. 408 advisory committee's note. Because the latter is described as "a more consistently impressive ground," *id.*, Rule 408 is best placed in the extrinsic category.

¹¹ See Fisher v. United States, 425 U.S. 391, 403 (1976) (noting that the attorney-client privilege "has the effect of withholding relevant information from the fact-finder").

¹² See J. Alexander Tanford, *The Law and Psychology of Jury Instructions*, 69 NEB. L. REV. 71, 76-78 (1990) (distinguishing between "admonitions" to disregard evidence and "limiting instructions" to confine evidence to its proper scope).

United States v. Kilcullen, 546 F.2d 435, 447 (1st Cir. 1976); *see also* Carter v. Kentucky, 450 U.S. 288, 301, 303 (1981) (claiming that an instruction to disregard inadmissible testimony is a "powerful tool" that can be used "to remove from the jury's deliberations any influence of unspoken adverse inferences" (internal quotation marks omitted)); United States v. Gomez-Pabon, 911 F.2d 847, 858 (1st Cir. 1990) ("There is ordinarily a presumption that a jury will follow such curative instructions. This presumption will be defeated only if there is an overwhelming probability that the jury will . . . be unable to follow the court's instructions, and a strong likelihood that the effect would be devastating to the defendant." (internal quotation marks omitted) (omission in original)); United States v. Steele, 727 F.2d 580, 588 (6th Cir. 1984) ("[T]he subsequent striking of erroneously admitted evidence accompanied by a clear and positive instruction to the jury to disregard cures the error.").

DAMAŠKA, *supra* note 1, at 50.

dicial effects can be overcome by instructions to the jury... all practicing lawyers know to be unmitigated fiction."¹⁵ Judge Learned Hand agreed with this skeptical assessment. He said that when judges attempt to "unring the bell"¹⁶ by telling jurors to limit their use of evidence or to ignore it entirely, they are recommending a "mental gymnastic which is beyond, not only their powers, but anybody[] else['s]."¹⁷ Legal scholars concur that some prohibitory and limiting instructions do not work,¹⁸ and may even be counterproductive.

Consider the cognitive premises of limited admissibility rules, for example. When jurors are told to use a piece of evidence for a narrow inferential purpose, the successful completion of this task often calls for sophisticated mental operations. Preventing one's inference from overflowing into legally forbidden territory can even be a real psychological feat—if it is psychologically possible at all. One of the most obvious examples is the demand that a defendant's criminal record be used only as it affects the credibility of his in-court testimony. To prevent the ripple effects of this information from producing a broader probative impact on belief formation presupposes remarkable self-control and intellectual delicacy. Not much less sophistication is needed to consider an item of information only for the purpose of determining whether it was made (rather than also for its truth) or to employ a piece of information only with regard to one of several joint charges arising from a single event.

DAMAŠKA, supra note 1, at 33.

 $^{^{\}rm 15}$ Krulewitch v. United States, 336 U.S. 440, 453 (1949) (Jackson, J., concurring).

¹⁶ Leighton Bledsoe, Jury or Nonjury Trial—A Defense Viewpoint, 5 AM. Jur. Trials § 12, at 123, 137 (1966).

 $^{^{17}}$ Nash v. United States, 54 F.2d 1006, 1007 (2d Cir. 1932). Damaška elaborates on this as follows:

¹⁸ See, e.g., Paul Bergman, Admonishing Jurors to Disregard What They Haven't Heard, 25 LOY. L.A. L. REV. 689, 691 (1992) ("The effectiveness of admonitions to control juror behavior is open to question."); Tanford, supra note 12, at 86 ("Admonitions . . . are difficult for jurors to understand").

¹⁹ See, e.g., ROBERT E. KEETON, TRIAL TACTICS AND METHODS § 4.18, at 204 (2d ed. 1973) (explaining that the serious disadvantage of requesting an instruction telling the jury to disregard evidence in considering a particular issue is that "it calls to the jury's attention your recognition of the relevance of the evidence to the very issue on which you are seeking to avoid their considering it"); CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, FEDERAL EVIDENCE § 41, at 224 (2d ed. 1994) (explaining that requiring the party seeking to limit the use of evidence to request a limiting instruction "appropriately leaves to the opposing trial counsel the option of concluding that . . . he is better off without an instruction ... [as it] would serve only to remind the jury of what it has heard ... and ... to suggest ... a use for the evidence which is best left unmentioned"); Dennis J. Devine, Laura D. Clayton, Benjamin B. Dunford, Rasmy Seying & Jennifer Payne, Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups, 7 PSYCHOL. PUB. POL'Y & L. 622, 666 (2001) ("In general, limiting instructions have proven to be ineffective and have even been associated with a paradoxical increase in the targeted behavior."); Tanford, supra note 12, at 86 ("Admonishing jurors often provokes the opposite of the intended effect.").

Most observers agree that it is not easy for jurors to deliberately disregard what they know.²⁰

Assessments of *judges*' capabilities tend to be more generous. Some courts²¹ and commentators²² have argued that judges are much

²⁰ See United States v. Delli Paoli, 229 F.2d 319, 321 (2d Cir. 1956) (commenting that it might be "extreme" to say that nobody can control his reasoning and avoid considering relevant evidence he is told to disregard, but observing that "relatively few persons" can do so because "it does a violence to all our habitual ways of thinking," and commenting that limiting instructions are a "placebo" in the context of coconspirator hearsay admitted against the speaker and that such instructions should not be "the final measure of protection" for defendants), aff d, 352 U.S. 232 (1957), overruled in part by Bruton v. United States, 391 U.S. 123 (1968) (concluding that such limiting instructions are inadequate protection for defendants); see also JON ELSTER, SOUR GRAPES: STUDIES IN THE SUBVERSION OF RATIONALITY 47 (1983) (arguing that "it is inherently impossible to will an empty mind").

²¹ See, e.g., Gentile v. State Bar, 501 U.S. 1030, 1077 (1991) (Rehnquist, C.J., dissenting in part) ("[T]rial judges often have access to inadmissible and highly prejudicial information and are presumed to be able to discount or disregard it."); Harris v. Rivera, 454 U.S. 339, 346 (1981) (per curiam) ("In bench trials, judges routinely hear inadmissible evidence that they are presumed to ignore It is equally routine for them to instruct juries that no adverse inference may be drawn from a defendant's failure to testify . . . presum[ably] they follow their own instructions when they are acting as factfinders."); State v. Garcia, 397 P.2d 214, 216 (Ariz. 1964) (holding that in criminal cases, as in civil cases, the court will not consider improper admission of evidence as error on appeal from a bench trial "because of the presumption that the trial judge disregarded all inadmissible evidence in reaching his decision"); Peterson v. State, 61 N.W.2d 263, 265 (Neb. 1953) ("The rule which this court applies in reviewing a finding of a trial court, in either a civil or a criminal case, ... is that it is presumed that improper evidence taken under objection was given no weight in reaching the final conclusion unless the contrary appears." (quoting Birmingham v. State, 279 N.W. 15, 17 (Wis. 1938)); Commonwealth v. Davis, 421 A.2d 179, 183 n.6 (Pa. 1980) ("A judge, as factfinder, is presumed to disregard inadmissible evidence and consider only competent evidence."); Commonwealth v. Glover, 405 A.2d 945, 947 (Pa. Super. Ct. 1979) (per curiam) (concluding that a judge "must be presumed to be able to disregard inflammatory evidence"). The assumption that judges can ignore inadmissible information indirectly colors our expectations of lawyers, in addition to judges. See State v. Moreland, No. 83977, 2004 WL 2829015, at *3 (Ohio Ct. App. Dec. 9, 2004) (holding that failure to object to evidence during a bench trial in a criminal case was not ineffective assistance of counsel because "defense counsel could reasonably assume that the judge would be unaffected by any inflammatory evidence and would disregard any irrelevant evidence").

²² See FED. JUDICIAL CTR., MANUAL FOR COMPLEX LITIGATION (FOURTH) § 11.431, at 64 (2004) (arguing that judges are good at ignoring inadmissible materials because they are "accustomed to reviewing matters that may not be admissible"); MUELLER & KIRKPATRICK, supra note 19, § 3, at 10 ("[I]t is realistic to suppose that judges can do better than juries in relying on what is admissible and ignoring what is not."); A. Leo Levin & Harold K. Cohen, The Exclusionary Rules in Nonjury Criminal Cases, 119 U. P.A. L. REV. 905, 916 (1971) (dismissing the idea "that the rule of admissibility in the nonjury case should be precisely identical" to the rule of admissibility in the case tried to a jury,

better able than jurors to ignore inadmissible evidence. Judges themselves often apply evidentiary rules more loosely in bench trials than in jury trials²³ on the theory that "the judge, a professional experienced in evaluating evidence, may more readily be relied upon to sift and to weigh critically evidence which we fear to entrust to a jury."²⁴ This makes some sense. Experience might enable judges to ignore prejudicial aspects of evidence more readily than jurors, thereby justifying a looser interpretation of the intrinsic exclusionary rules. Judges also likely understand and respect the purposes behind the extrinsic exclusionary rules more so than jurors, thereby providing judges with greater motivation to ignore the evidence that these rules proscribe. Indeed, some commentators have even suggested that legal systems should have separate rules of evidence for jury trials and bench trials because of assumed differences in the motivation and capabilities of jurors and judges.²⁵

since "[f]eats of discrimination are expected of the jurors and it is not unreasonable to allow an added measure of tolerance where it is the judge who will be weighing the evidence").

²³ Based upon the assumption that the greater training and experience of trial judges immunize them against mistakes to which jurors may be susceptible, some courts have stated that the rules of evidence apply less strictly in bench trials than in jury trials. See, e.g., Smith v. Mitchell, 348 F.3d 177, 206 (6th Cir. 2003) ("[T]he argument was to a three-judge panel, so any inflammatory effect was de minimis "); Walker v. NationsBank of Fla. N.A., 53 F.3d 1548, 1554 (11th Cir. 1995) (noting that for certain types of evidence, courts apply a more "liberal admissibility rule" in bench trials than in jury trials, and adding that "the distinction between a bench and a jury trial may affect" the analysis of whether relevant information should be excluded under Rule 403); see also McCormick's Handbook, supra note 3, § 60, at 137 ("It might have been more expedient if these rules [of evidence] had been, at least in the main, discarded in trials before judges. Their professional experience in valuing evidence greatly lessens the need for exclusionary rules." (footnote omitted)); MUELLER & KIRKPATRICK, supra note 19, § 3, at 9-10 (explaining that, although "[t]he Federal Rules of Evidence apply alike in cases tried to courts and cases tried to juries," judges in bench-tried cases "usually apply the Rules with less rigor and let in more evidence"); Levin & Cohen, supra note 22, at 905 ("It should occasion no surprise that the vast welter of doctrine which has become our law of evidence is not applied with equal rigor when a judge rather than a jury sits as trier of the fact."); John MacArthur Maguire & Charles S.S. Epstein, Rules of Evidence in Preliminary Controversies as to Admissibility, 36 YALE L.J. 1101, 1116-17 (1927) (observing that the willingness of some courts to indulge the presumption that judges always weigh evidence in accordance with the law has meant that the trial judge is bound "somewhat less finically" by the evidence rules).

Levin & Cohen, *supra* note 22, at 906.

²⁵ See, e.g., Kenneth Culp Davis, An Approach to Rules of Evidence for Nonjury Cases, 50 A.B.A. J. 723, 725 (1964) (proposing that the evidence rules designed to guide juries should give way to enlarged discretion and broad standards for bench trials); Kenneth Culp Davis, Hearsay in Nonjury Cases, 83 HARV. L. REV. 1362, 1363 (1970) (arguing that

Other courts²⁶ and commentators²⁷ are skeptical that judges are any better than jurors at disregarding inadmissible evidence. In *Summerlin v. Stewart*,²⁸ for example, the Ninth Circuit ruled that the Supreme Court's decision in *Ring v. Arizona*,²⁹ which prohibits judges from conducting fact finding in capital sentencing, applied retroactively. The court based its decision in part on its concern that judges

judges should be allowed to admit hearsay in nonjury cases without ruling on its admissibility and, in some cases, base findings on such evidence); G.D. Nokes, *The English Jury and the Law of Evidence*, 31 TUL. L. REV. 153, 171 (1956) (supporting legislation in England that distinguishes between bench and jury trials in determining the admissibility of hearsay, and urging abolition of the rule against hearsay in civil bench trials). *See generally* F.R. Lacy, "*Civilizing*" *Nonjury Trials*, 19 VAND. L. REV. 73 (1965) (contending that it would be feasible to establish separate procedural rules for bench and jury trials).

See, e.g., United States ex rel. Spears v. Rundle, 268 F. Supp. 691, 696 (E.D. Pa. 1967) (stating that it is "impossible" for a judge to "objectively and reliably determine that the [defendant's allegedly involuntary] confession was voluntary after considering his guilt"), aff'd, 405 F.2d 1037 (3d Cir. 1969) (per curiam); id. at 695 ("[The task of deliberately disregarding] "becomes too great when we require a judge who has heard evidence of guilt, to objectively and coldly assess a distinct issue as to the voluntariness of the confession. Objectivity cannot be guaranteed, and reliability must be questioned."); United States ex rel. Owens v. Cavell, 254 F. Supp. 154, 154 (M.D. Pa. 1966) (questioning, in a case where an allegedly involuntary confession was admitted into evidence, "whether a judge sitting as fact-finder would be able to pass on guilt or innocence without being influenced by evidence relating to the voluntariness issue", cited in Rundle, 268 F. Supp. at 695-96; State v. Hutchinson, 271 A.2d 641, 644 (Md. 1970) (acknowledging that "judges, being flesh and blood, are subject to the same emotions and human frailties as affect other members of the specie [sic]," but going on to state that a judge, due to "his legal training, traditional approach to problems, and the very state of the art of his profession," and his ability "to perceive, distinguish and interpret the nuances of the law," is nevertheless fortified against those frailties).

²⁷ See, e.g., DAMAŠKA, supra note 1, at 50 ("[T]he juryless court is a unitary tribunal: the admissibility of evidence is decided here by the ultimate fact finder, who inevitably comes into contact with tainted information. And when this information is persuasive, the professional judge has as much trouble ignoring the acquired knowledge as do amateur adjudicators."); Bledsoe, supra note 16, § 12, at 137 (questioning "whether anyone can 'unring the bell' once it is heard," that is, whether a judge can "persuade himself not to be influenced by facts which the law in its wisdom, gained from long experience over the centuries, has decreed should not be heard by the trier of facts," and opining that "unfavorable evidence thus received probably does exert an undesirable influence on the court as trier of the facts"); Levin & Cohen, supra note 22, at 910 (recognizing that "it would be wrong to assume a priori that a judge would be immune from prejudice" from inadmissible information); Maguire & Epstein, supra note 23, at 1115 (explaining that some incompetent evidence may affect judges because "[n]ature does not furnish a jurist's brain with thought-tight compartments to suit the convenience of legal theory, and convincing evidence once heard does leave its mark").

 $^{^{28}}$ 341 F.3d 1082, 1121 (9th Cir. 2003) (en banc), $\it rev'd~sub~nom.$ Schriro v. Summerlin, 124 S. Ct. 2519 (2004).

²⁹ 536 U.S. 584 (2002).

are likely to be inappropriately influenced by inadmissible information they may encounter during sentencing. As the court noted,

the judge is exposed to prejudicial information which the law, in its regard for the right of the defendant, aims to screen out of the evaluation of his guilt or innocence. The law's ideal in this situation may be something of a libertarian luxury. Our only point is that the law cannot easily achieve it without a jury.

Still others assert that judges can disregard inadmissible information in some circumstances, but not in others. For example, in a suit brought by the Sierra Club and Judicial Watch against Vice President Cheney, I Justice Scalia implied that judges possess a limited ability to compartmentalize their knowledge. Prior to the Supreme Court hearing in the case, the Vice President and Justice Scalia had gone duck hunting together.³² Defending his refusal to recuse himself, Justice Scalia noted that social contacts between high-level officials and Justices of the Supreme Court have "never been thought improper" in cases involving actions the official took in an "official capacity" rather than a "personal capacity." These assertions imply that if the Vice President were sued in an unofficial capacity, Justice Scalia's personal knowledge of the Vice President's character would impinge on his ability to decide the case fairly. But because the suit involved only the official aspects of the Vice President's life, Justice Scalia argued that he could set aside his personal knowledge about the Vice President. According to Justice Scalia, judges can disregard information outside the record, but this ability has its limits.

This Article reports the results of experiments designed to test the ability of trial court judges to disregard inadmissible information.

³⁰ 341 F.3d at 1113 (quoting HARRY KALVEN, JR. & HANS ZEISEL, THE AMERICAN JURY 127 (1966)). The Supreme Court's reversal of the Ninth Circuit decision arose, in part, from the conclusion that judicial fact finding does not "seriously diminish[]" the accuracy of the sentencing process. 124 S. Ct. at 2525 (emphasis omitted). The majority did not directly address the issue of whether judges can ignore inadmissible information, instead relying on the casual observation that "for every argument why juries are more accurate factfinders, there is another why they are less accurate." *Id.* For the majority, the most notable argument for the superiority of judges is judges' experience and understanding of the law. *Id.*

³¹ *In re* Cheney, 334 F.3d 1096 (D.C. Cir. 2003), *vacated by* Cheney v. United States Dist. Court, 124 S. Ct. 2576 (2004).

³² See David G. Savage, *Trip with Cheney Puts Ethics Spotlight on Scalia*, L.A. TIMES, Jan. 17, 2004, at A1 (noting that the "longtime friends" spent time hunting together just three weeks after the Court agreed to hear Cheney's appeal).

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Based on judges' responses to seven scenarios that simulate the kinds of decisions that judges make (insofar as is possible given the limits of the experimental setting), we found that some types of highly relevant, but inadmissible, evidence influenced the judges' decisions. We also found, however, that the judges were able to resist the influence of such information in at least some cases, namely those directly implicating constitutional rights.

Our Article proceeds as follows. In Part I, we examine the psychological research on ignoring relevant information. We observe that people have difficulty deliberately disregarding information, and we identify three explanations for this phenomenon. We then discuss what psychologists have learned about the impact of this phenomenon on mock jurors. In Part II, we introduce our study of this phenomenon in trial judges. In Part III, we provide the results of our experiments. We describe the seven scenarios we administered, report our findings, and briefly discuss the implications of the data we collected. In Part IV, we explore some of the broader ramifications of our study for the refinement of the justice system.

Our research supports three tentative policy recommendations. First, we recommend that courts should separate "managerial judging"³⁴ from adjudication. In particular, a judge who supervises settlement discussions should not serve as the fact finder in the same case. Second, we contend that jury trials should be favored over bench trials because judges can shield jurors from inadmissible information in ways that they cannot shield themselves. Third, we suggest that guidelines or schedules should be adopted for amorphous categories of damages—like pain and suffering damages—in civil cases. Such guidelines could structure and constrain judicial discretion and thereby limit the effect of inadmissible information encountered on judicial decision making.

³⁴ See Judith Resnik, Managerial Judges, 96 HARV. L. REV. 374, 376-77 (1982) (describing the "managerial" approach" that a growing number of judges have adopted, whereby judges not only adjudicate claims but also actively shape litigation, supervise case preparation, and influence results).

I. THE PSYCHOLOGY OF DELIBERATELY DISREGARDING

People often forget or ignore important information, but they have difficulty doing so intentionally. 35 Several theories might account for a failure to disregard information.³⁶ First, people who face instructions to ignore information might not want to ignore it and might attend to it even in the face of instructions to disregard it (motivation). Second, even if they want to ignore information, people might find it difficult to avoid thinking about information they want to ignore (ironic process theory). Third, even if people can ignore the new information itself, the information might still affect their judgment: information can influence the processing of subsequent events and can inspire beliefs that are not easily dispelled (mental contamination). Information quickly contaminates thinking because it affects how people process and store facts and beliefs. Even if people ignore the initial information, its influence might still be felt. These theories all suggest that suppressing the influence of information that is supposed to be ignored will be difficult.³⁷ Research on deliberate forgetting supports this concern.

A. Motivation

Motivation is critical to ignoring known information. People who do not agree that the relevant information should be ignored are apt to rely on it when making a decision. For example, jurors instructed to ignore a damning piece of evidence might well decide to rely on it anyway, doing a bit of rough justice by convicting a defendant they believe to be guilty. People who are simply told to ignore relevant information are unlikely to do so without being provided an explanation as to why they should ignore the evidence. Direct, but unexplained,

³⁵ See Hollyn M. Johnson, *Processes of Successful Intentional Forgetting*, 116 PSYCHOL. BULL. 274, 274 (1994) (noting that the "success of intentional forgetting depends on how one originally encoded the to-be-forgotten information").

³⁶ See, e.g., Jonathan M. Golding & Debra L. Long, There's More to Intentional Forgetting than Directed Forgetting: An Integrative Review, in INTENTIONAL FORGETTING: INTERDISCIPLINARY APPROACHES 59, 93 (Jonathan M. Golding & Colin M. MacLeod eds., 1998) (reporting that "there is no consensus on the mechanisms that affect intentional forgetting").

³⁷ For a different taxonomy of the theoretical explanations for this phenomenon, see Richard M. Wenzlaff & Daniel M. Wagner, *Thought Suppression*, 51 ANN. REV. PSYCHOL. 59, 66-69 (2000).

instructions to disregard relevant information might well go unheeded.

Indeed, research on "psychological reactance" indicates that instructions to ignore information might increase people's desire to attend to it.38 "Reactance occurs when decision makers feel that their freedom of choice is threatened and they respond by acting in ways that will restore their sense of decision-making freedom . . . [M] ore severe restrictions on decision-making freedom are more likely to arouse reactance." Most people refer to reactance as "reverse psychology." The basic idea is that when an individual is told to do something that limits her freedom, she may rebel against that direction to restore her own sense of autonomy. In studies of consumer behavior, for example, eliminating an option that had been available as a choice increases its attractiveness.40 Reactance can be particularly strong in people who face instructions on how to think. In one study, individuals who initially supported a particular position largely reversed themselves when told that they "ha[d] no choice" but to agree with that position.41

In the context of a trial, jurors might view instructions to ignore evidence as an unwarranted intrusion on their ability to decide a case as they see fit. 42 "Responding to this threat to their freedom, jurors may not only be motivated to ignore the instruction to disregard the

³⁸ See Jack W. Brehm, A Theory of Psychological Reactance 18 (1966) ("[I]f a specific behavioral freedom of a person is eliminated by impersonal events, he will experience reactance and consequently will see increased attractiveness in the eliminated behavior." (emphasis omitted)). See generally Sharon S. Brehm & Jack W. Brehm, Psychological Reactance: A Theory of Freedom and Control (1981) (reviewing the theory of psychological reactance).

³⁹ Jennifer K. Robbennolt & Christina A. Studebaker, *Anchoring in the Courtroom: The Effects of Caps on Punitive Damages*, 23 LAW & HUM. BEHAV. 353, 356 (1999).

⁴⁰ See, e.g., Jack W. Brehm, Lloyd K. Stires, John Sensenig & Janet Shaban, *The Attractiveness of an Eliminated Choice Alternative*, 2 J. EXPERIMENTAL SOC. PSYCHOL. 301, 306 (1966) (reporting results of an experiment indicating that when a particular choice of a selection of music was suddenly eliminated from the options available, it became more attractive).

⁴¹ Melvin L. Snyder & Robert A. Wicklund, *Prior Exercise of Freedom and Reactance*, 12 J. EXPERIMENTAL SOC. PSYCHOL. 120, 122-23 (1976).

⁴² See Shari Seidman Diamond & Neil Vidmar, Jury Room Ruminations on Forbidden Topics, 87 VA. L. REV. 1857, 1865 (2001) (explaining that reactance theory posits that "jurors see the admonition as an attempt to restrict their freedom to weigh and evaluate probative evidence in reaching their verdict").

inadmissible evidence, but may even focus more attention on the evidence they were instructed to ignore."

B. Ironic Process Theory

Motivation aside, suppressing known information presents a challenging cognitive task. Refraining from thinking unwanted thoughts is so difficult that it can produce an "ironic process" in which people ultimately spend even more time thinking about thoughts they are trying to suppress. ⁴⁴ When people attempt to suppress a thought, they monitor their mental activity to verify that suppression is proceeding successfully. To do so, however, they must keep the forbidden thought available so that they can compare it to their existing mental state and confirm that they are not thinking the forbidden thought. ⁴⁵ As psychologists describe it:

[A]ttempts to influence mental states require monitoring processes that are sensitive to the failure of the attempts [W]hen efforts to implement the intended mental control are undermined in any way, the monitoring process itself will surface and ironically overwhelm the intended control to yield the opposite of the mental state that is desired. 46

Thought suppression, then, is an "ironic" process in that "[t]he intention to suppress a thought creates the opposite of what is wanted."⁴⁷

Researchers have used the following example to illustrate the ironic process theory:

[A]n alcoholic who is struggling to keep thoughts of an icy, cold beer completely out of mind may at various points say to himself or herself, "I haven't thought about having a beer for the last 5 hours." Of course, upon making such an observation, the person has thought of the enticing beverage. This monitoring of potential intrusions of an unwanted

⁴³ Id.; see also Joel D. Lieberman & Jamie Arndt, Understanding the Limits of Limiting Instructions: Social Psychological Explanations for the Failures of Instructions to Disregard Pretrial Publicity and Other Inadmissible Evidence, 6 PSYCHOL. PUB. POL'Y & L. 677, 703 (2000) ("It may frequently be that jurors are motivated to maintain their freedom, and thus the ineffectiveness of limiting instructions can be explained by the provocation of reactance.")

tance."). $\,^{44}$ Daniel M. Wegner, *Ironic Processes of Mental Control*, 101 PSYCHOL. REV. 34, 34 (1994).

^{(1994).} $$^{45}\mbox{\it See}$\ id.}$ (describing the difficulty people experience when trying to suppress thoughts).

¹⁶ *Id*.

Daniel M. Wegner & Ralph Erber, *The Hyperaccessibility of Suppressed Thoughts*, 63 J. Personality & Soc. Psychol. 903, 908 (1992).

thought paradoxically keeps the thought accessible to consciousness and may lead to a rebound effect, or a resurgence of the thought following attempts to suppress it \dots .

In one memorable experiment illustrating ironic processing,⁴⁹ researchers instructed undergraduates participating in an elaborate study "not to think of a white bear." The participants had great difficulty carrying out this seemingly simple task. They reported that they thought about a white bear "more than once per minute even when directly instructed to try not to think of a white bear." Furthermore, efforts to suppress thoughts of a white bear increased the rate at which participants reported thoughts of a white bear in a subsequent "free" session in which they were asked only to report thoughts of a white bear (but not actively suppress them). The study suggests two principles of the human mind that make it difficult to ignore relevant material: first, it is difficult, if not impossible, to ignore even an arbitrary and unremarkable image like a white bear; second, efforts to suppress thoughts about a subject might actually produce more thoughts about that subject.

Efforts to control thought processes are subject to both cognitive and motivational limitations that make the task difficult and can lead to ironic results. Whether the thought is of a white bear, a rhinoceros, ⁵² a hippopotamus, ⁵³ or an inadmissible confession, people cannot

We do not pretend that a jury can keep one inference in mind without thinking about the other. An instruction told the jury to do this, but this is like telling someone not to think about a hippopotamus. To tell someone not to think about the beast is to assure at least a fleeting mental image. So it is here. Each juror must have had both the legitimate and the forbidden considerations somewhere in mind, if only in the subconscious.

United States v. DeCastris, 798 F.2d 261, 264-65 (7th Cir. 1986) (footnote omitted). The court went on to describe the unwelcome consequences of admitting evidence of

⁴⁸ Anita E. Kelly & Margaret M. Nauta, *Reactance and Thought Suppression*, 23 Personality & Soc. Psychol. Bull. 1123, 1123 (1997) (emphasis omitted).

⁴⁹ Daniel M. Wegner, David J. Schneider, Samuel R. Carter III & Teri L. White, *Paradoxical Effects of Thought Suppression*, 53 J. PERSONALITY & SOC. PSYCHOL. 5 (1987) (discussing an experiment in which students were "randomly assigned to one of two experimental conditions, an initial suppression condition or an initial expression condition" (emphases omitted)).

⁵⁰ *Id.* at 6-7.

⁵¹ *Id.* at 7.

⁵² See Lang v. Kohl's Food Stores, Inc., 217 F.3d 919, 927 (7th Cir. 2000) (comparing a hypothetical judicial instruction ordering jurors to disregard a report to "telling the jurors that for the remainder of the trial none of them was allowed to say the word 'rhinoceros' to himself").

⁵³ According to the Seventh Circuit:

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easily successfully implement a decision to refrain from thinking a particular thought. Efforts to control the thoughts of others might also induce people to resist such efforts actively. In short, people might not want to suppress thoughts and might not be able to do so, even if they try.

C. Mental Contamination

The prevailing view of belief formation, associated with Descartes, posits that people form beliefs by first comprehending a piece of information and then freely deciding whether to accept it as accurate or dismiss it as inaccurate. An alternate view, associated with Spinoza, posits that people initially accept as accurate every proposition they comprehend and then decide whether to "unbelieve" it. Building on Spinoza's work, psychologists argue that misleading or inaccurate information produces a "mental contamination" that persists even after people become aware that the information is misleading or inaccurate. This "unconscious or uncontrollable mental processing... results in unwanted judgments, emotions, or behavior." The brain does not store information in isolated units, but in a connected whole. Information thus influences how the brain processes new stimuli. New information also facilitates the construction of beliefs that might persist, even if the information is discredited.

other wrongs because the "bad character" inference is frequently inseparable from the "bad intent" inference. Id .

⁵⁴ See Daniel T. Gilbert, Inferential Correction, in HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 167, 180 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., 2002) ("[Descartes] was the first to suggest that understanding and believing are separate and sequential psychological operations."); see also Daniel T. Gilbert, How Mental Systems Believe, 46 Am. PSYCHOLOGIST 107, 108 (1991) (describing Descartes' philosophy).

⁵⁵ See Gilbert, Inferential Correction, supra note 54, at 180 ("[Spinoza] argued that understanding and believing are a single mental operation. [He] suggested that human beings believe assertions as part of understanding them, and that they then 'unbelieve' those assertions that are found to be at odds with other established facts."); see also Gilbert, How Mental Systems Believe, supra note 54, at 108 (describing Spinoza's philosophy).

⁵⁶ Timothy D. Wilson, David B. Centerbar & Nancy Brekke, *Mental Contamination* and the Debiasing Program, in HEURISTICS & BIASES, supra note 54, at 185, 185; see also Timothy D. Wilson & Nancy Brekke, *Mental Contamination and Mental Correction: Unwanted Influences on Judgments and Evaluations*, 116 PSYCHOL. BULL. 117, 117 (1994) (describing "mental contamination").

Wilson, Centerbar & Brekke, *supra* note 56, at 185.

What makes mental contamination particularly pernicious is that it can operate outside of conscious thought. People might not even realize how new information has affected their judgment and are thus ill-equipped to contain its influence. Consequently, merely suppressing thoughts of the unwanted information will not prevent it from affecting judgment. "[T]he failure to appreciate the perils of mental contamination may lead people to design decision-making systems"—including the American legal system—"that are destined to produce biased judgments."

1. Contaminated Information Processing

Insulating a decision-making process from inadmissible information requires preventing this information from influencing how subsequent information is processed. This can be challenging because information changes how we think. It creates beliefs that can guide the integration and assessment of subsequent information. In the jargon of social cognition, information can activate a schema, or organizing principle. An activated schema colors how we think in every way. It makes some memories and beliefs more available than others. ⁶⁰ It also guides attention and interpretation of new information. Suppressing the influence of information thus requires both suppressing the new information and suppressing the influence of the scheme on processing of subsequent information.

Consider the following example. What activity does the following paragraph describe?

The procedure is actually quite simple. First you arrange things into different groups depending on their makeup. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo any particular endeavor. That is, it is better to do too few things at once than too many. In the short run this may not seem important, but complications from doing too many can easily arise. A mistake can be expensive as well. The manipulation of the appropriate mechanisms should be self-explanatory,

 $^{^{58}}$ See id. ("[P]eople have poor access to the processes by which they form their judgments").

⁵⁹ *Id.* at 196.

⁶⁰ See John D. Bransford & Marcia K. Johnson, Contextual Prerequisites for Understanding: Some Investigations of Comprehension and Recall, 11 J. VERBAL LEARNING & VERBAL BEHAV. 717, 718-22 (1972) (concluding that contextual information impacts the interpretation of new information).

and we need not dwell on it here. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to this task in the immediate future, but then one never can tell.⁶¹

Now suppose you learn that the passage is entitled "washing clothes." It is inconceivable that you can read the passage with the same understanding of its meaning after learning the title. The title triggers a psychological schema that inevitably organizes the flow of the information in the passage. Knowing the title influences what people remember about the passage and how they think about it. The influence of knowing the title is impossible to suppress effectively.

The profound influence of activated schemata underlies the dramatic effect of first impressions. Solomon Asch provided one of the most compelling demonstrations of this almost sixty years ago. ⁶² Asch read subjects one of two sets of adjectives said to describe an individual's personality:

- A. intelligent-industrious-impulsive-critical-stubborn-envious
- B. envious—stubborn—critical—impulsive—industrious—intelligent ⁶³

As Asch reported:

The two series are identical . . . differing only in the order

... The impression produced by A is predominantly that of an able person who possesses certain shortcomings which do not, however, overshadow his merits. On the other hand, B impresses [most subjects] as a "problem," whose abilities are hampered by his serious difficulties.... [S]ome of the qualities (e.g., impulsiveness, criticalness) are interpreted in a positive way under Condition A, while they take on, under Condition B, a negative color.

The initial adjectives color the assessment of ambiguous adjectives that follow. The same cognitive process is thought to underlie the widely documented social phenomenon of "halo effects." Halo effects are the tendency to assume that like goes with like: that beautiful or tall

 $^{\rm 62}$ S.E. Asch, Forming Impressions of Personality, 41 J. Abnormal & Soc. Pscyhol. 258 (1946).

ii Id. at 722.

 $^{^{63}}$ Id. at 270 (emphasis added).

⁶⁴ *Id.* (emphasis added).

⁶⁵ See Seymour Rosenberg & Karen Olshan, Evaluative and Descriptive Aspects in Personality Perception, 16 J. PERSONALITY & SOC. PSYCHOL. 619, 619-21 (1970) (reviewing studies of halo effects in judgments of character).

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people are nice, smart, and capable, while ugly and short people are mean, dumb, and incapable. Salient information (such as height or attractiveness) activates positive or negative associations that color how people process everything else they learn about an individual.

When information affects how people think about subsequent information, suppressing its influence on judgment will be most challenging. The organizing schemata that information triggers can be invisible, making it hard to know what would have been different had the information not been available.

2. Belief Perseverance

As the mind continues to dwell on the information to be forgotten, it elaborates on that information and incorporates it into an intricate belief system which in turn affects subsequent information processing. Social psychologists call this "belief perseverance." When people acquire new information, they quickly incorporate it into their knowledge that they already possess. Once they have done so, they are likely to have great difficulty undoing the beliefs that the information inspired.67

Social psychologist Lee Ross and his colleagues were the first to demonstrate belief perseverance directly. They gave undergraduate subjects the grisly task of evaluating ten suicide notes. They informed the subjects that five were actual suicide notes and that five had been created for the experiment. The subjects ostensibly had to identify the real notes. Afterwards, the experimenters told some of the subjects that they had performed well at the task (scoring nine out of ten right) and others that they had performed poorly (scoring below fifty percent). Later, the experimenters informed the subjects that, in fact, all of the notes were fakes. The subjects then had to estimate how well they would perform a real version of such a task. Subjects who had

⁶⁶ See generally Lee Ross, Mark R. Lepper & Michael Hubbard, Perseverance in Self-Perception and Social Perception: Biased Attributional Processes in the Debriefing Paradigm, 32 J. PERSONALITY & SOC. PSYCHOL. 880 (1975). Another way of thinking about this phenomenon is that once individuals encounter information, it may become part of a "schema" or organizing principle that influences how they subsequently evaluate additional information.

See Saul M. Kassin & Christina A. Studebaker, Instructions to Disregard and the Jury: Curative and Paradoxical Effects, in INTENTIONAL FORGETTING, supra note 36, at 413, 415 ("[I]nstructions to disregard may fail when the discredited information has already activated the formation of a theory or explanatory structure.").

 $^{^{68}}$ Ross, Lepper & Hubbard, supra note 66, at 884-88.

been told that they had performed well indicated that they would do well, subjects who had been told that they had performed badly indicated that they would do poorly. Even though they knew that the feedback they had received was completely bogus, the beliefs they had formed about their capabilities persisted. In large part, this belief perseverance resulted from the subjects' tendency to try to explain to themselves why they had performed well or poorly. For example, one subject, told she had done well, stated that she had concluded she was good at evaluating suicide notes because she enjoyed the poetry of Sylvia Plath, who had killed herself. Even though the feedback she had received was discredited, her new beliefs persisted.

In another study of belief perseverance analogous to a courtroom setting, researchers recruited students to participate in a purported "creativity" assessment.⁶⁹ Unbeknownst to the participants, the researchers also recruited confederates. The confederates provided negative information to several of the participants about a teaching assistant involved in the study. Later, the researchers asked all of the participants to rate the teaching assistant on a scale from one (least nice) to ten (nicest). The researchers assigned the participants to four groups: a control group and three experimental groups (Groups Two, Three, and Four). Participants in the control group did not receive the negative information about the teaching assistant and gave her a mean rating of 9.33 on the researchers' "niceness" scale. 70 Participants in Group Two, who heard the negative information about the teaching assistant, gave her a significantly lower rating of 6.58.⁷¹ Participants in Group Three heard the negative information but were instructed by the confederate to disregard it because "I probably shouldn't have told you those things."⁷² They gave the teaching assistant a mean rating of 6.71.73 Group Four participants heard the negative information but were instructed by the confederate to disregard it because "that wasn't the [teaching assistant], it was someone else [whom I was thinking about]."⁷⁴ They gave the teaching assistant a

⁶⁹ Jonathan M. Golding & Jerry Hauselt, When Instructions to Forget Become Instructions to Remember, 20 PERSONALITY & SOC. PSYCHOL. BULL. 178, 180 (1994).

⁷⁰ *Id.* at 182 tbl.1. 71 *Id*.

⁷² *Id.* at 181.

⁷³ *Id.* at 182 tbl.1.

⁷⁴ *Id.* at 181.

mean rating of 8.09, still well below the rating given by the control group participants. 75

In this study, the negative information to which the participants were exposed continued to affect their evaluation of the teaching assistant even when they were told to forget it. Moreover, the effectiveness of the instruction to disregard the information was greater when the confederate discredited the information by explaining that it was incorrect than when the confederate asked the participants to forget the information simply because she should not have revealed it to them. Telling the participants that the information was incorrect did not neutralize its effect on judgment, however. Subjects who had received discredited negative information still rated the teaching assistant as less nice than those subjects in the control group, who were not exposed to the negative information.

Belief perseverance illustrates a critical impediment to ignoring known information. Information triggers a cascade of thoughts as part of the brain's effort to construct and to maintain a coherent set of beliefs. Merely ignoring the information itself is not enough. The inferences that explain and accommodate the information into an integrated picture of the world must also be ignored, or the information will affect decision making indirectly.⁷⁶

The rapid integration of information into a coherent story that produces belief perseverance also produces a related phenomenon, the hindsight bias. The hindsight bias refers to the tendency for the past to seem more predictable than it actually was.⁷⁷ It occurs largely because once events unfold, the mind automatically makes inferences based upon its knowledge of the outcome. When viewed in this light, antecedent events that are likely to have produced the actual outcome seem more significant than those that were likely to have produced different outcomes. Consequently, people think the actual outcome was more predictable or foreseeable than it was. The hindsight bias is thus one instance in which people cannot ignore known information. The fact that the particular outcome occurred cannot easily be ignored, even when people are asked to do so.

See Bransford & Johnson, *supra* note 60, at 717-18 (relating the influence of deep structure and integration of experiences on comprehension of a sentence).

⁷⁵ *Id.* at 182 tbl.1.

⁷⁷ See generally Jeffrey J. Rachlinski, A Positive Psychological Theory of Judging in Hindsight, 65 U. CHI. L. REV. 571 (1998) (explaining the hindsight bias and its presence in the legal system).

Both contaminated information processing and belief perseverance have obvious implications for efforts to disregard inadmissible evidence. Inadmissible evidence presented early in a trial might affect how juries and judges organize and interpret evidence presented later, thereby contaminating their decision-making processes. Inadmissible evidence presented late in a trial might cause juries and judges to reassess their evaluation of the evidence that preceded it. Thus, even if a fact finder can avoid using inadmissible evidence directly, the associations and inferences that flow naturally from that inadmissible evidence can still affect judgment indirectly.

D. Disregarding Information in a Legal Setting: Mock Jury Studies

Many researchers have investigated whether mock jurors are able to disregard inadmissible evidence in experiments involving trial-like settings. With one notable exception, 78 this work has not examined judges. Nevertheless, this research could suggest mechanisms that facilitate or impede judges' ability to ignore known information.

One of the earliest such experiments asked adults eligible for jury service to listen to a tape recording of a hypothetical trial in a negligence case in which the plaintiff had been injured when the car in which she was a passenger collided with a car driven by the defendant. The subjects were divided into three groups of juries. The three groups reviewed the same trial materials except for variations in a discussion of the defendant's insurance coverage. In all cases, liability was reasonably clear; in fact, of the thirty mock juries studied, twenty-eight found for the plaintiff, one jury hung, and one found for the defendant. The first group learned that the defendant had no insurance—a fact admitted into evidence without objection. These juries awarded the plaintiff an average of \$33,000. The second group learned that the defendant had insurance—a fact also admitted into evidence without objection. These juries awarded the plaintiff an average of \$33,000.

⁷⁸ Stephan Landsman & Richard F. Rakos, *A Preliminary Inquiry into the Effects of Potentially Biasing Information on Judges and Jurors in Civil Litigation*, 12 BEHAV. SCI. & L. 113 (1994) (discussed *infra* notes 116-17 and accompanying text).

⁷⁹ Dale W. Broeder, *The University of Chicago Jury Project*, 38 NEB. L. REV. 744, 753-54 (1959).

⁸⁰ Id. at 754.

[&]quot; *Id*

erage of \$37,000. BE The third group learned that the defendant had insurance, but it also heard an objection to that evidence, and was instructed by the judge to disregard it. The third group of juries awarded the plaintiff an average of 46,000.

This experiment suggests that the rule excluding evidence of a defendant's insurance serves its intended purpose. If juries are informed that the defendant has insurance, the damage award will tend to be higher if liability is found. The second important lesson of the experiment, however, is less encouraging. An instruction to disregard such evidence might induce jurors to give the evidence more weight than they otherwise would. The author of the experiment concluded that the "fuss" made over the defendant's insurance emphasized the fact that the defendant was insured. In the second important lesson of the experiment concluded that the "fuss" made over the defendant's insurance emphasized the fact that the defendant was insured.

The results of this early experiment were partly confirmed by a more recent experiment based upon a hypothetical criminal trial. Researchers gave college students a summary of a criminal case in which the defendant was charged with murdering his estranged wife and a male neighbor. The evidence against the defendant was weak. The researchers divided the subjects into four groups. The only difference across the four groups was whether inculpatory statements made by the defendant during a tape-recorded telephone call to a friend were presented, and if so, how the judge reacted to the inculpatory statements. The wiretap evidence was not presented to the first group, and twenty-four percent of the subjects in that group found the defendant guilty. The wiretap evidence was presented to the second group, and was ruled admissible over the defendant's objection. This produced a seventy-nine percent conviction rate among the subjects in the second group. The wiretap evidence was also presented to the

⁸² *Id*.

⁸³ Id.

Whether damage awards would be *unfairly* high if jurors were informed that the defendant had insurance, or whether they would be *unfairly* low if they were not so informed, is a separate issue. For present purposes it suffices to point out that concealing the defendant's insurance coverage does tend to reduce damage awards, whether for good or for ill.

⁸⁵ Broeder, *supra* note 79, at 754.

⁸⁶ Saul M. Kassin & Samuel R. Sommers, *Inadmissible Testimony, Instructions to Disregard, and the Jury: Substantive Versus Procedural Considerations*, 23 PERSONALITY & SOC. PSYCHOL. BULL. 1046, 1047-53 (1997).

⁸⁷ Id. at 1049.

⁸⁸ *Id*.

third and fourth groups, both of which were instructed to disregard it, albeit for different reasons. The third group was told that the defendant's objection was sustained, and that the evidence should be disregarded because it had been illegally obtained without a warrant. Fifty-five percent of the subjects in the third group found the defendant guilty. The fourth group was told that the objection was sustained, and the evidence should be disregarded because the audio tape of the telephone call was so inaudible that it could not be determined what was said. Twenty-four percent of the subjects in the fourth group found the defendant guilty. 90

Contrary to the results of the previous experiment, this experiment suggests that inadmissible evidence receives less weight than admissible evidence. The results are inconsistent with the results in the experiment based on the hypothetical civil trial, which suggest that excluding evidence caused it to be valued more highly than did admitting the same evidence.⁹¹ On the other hand, this experiment shows a difference in the effect of excluding evidence depending upon the nature of the reason given for the exclusion. The subjects in group three were told that the evidence was inadmissible because it had been illegally obtained without a warrant. Although the wiretap evidence influenced them less than it did the subjects in group two, who were told that the evidence was admissible, the subjects in group three were more influenced by the wiretap evidence than were the subjects in group four, who were told that the evidence was inadmissible because it was unreliable. This study suggests that the reason given for exclusion matters. Minimizing the influence of the inadmissible information might require emphasizing the unreliability of the evidence rather than merely its failure to comply with technical legal standards. This experiment also suggests that if the reason for exclusion is compelling, an instruction to disregard the inadmissible evidence allows the decision maker to behave almost as if she had never been exposed to the information. 92

The divergent outcomes of the numerous other experiments conducted on the ability of mock jurors to deliberately disregard inadmis-

⁸⁹ *Id*.

⁹⁰ Id.

⁹¹ See supra notes 79-83 and accompanying text.

⁹² But see Kerri L. Pickel, Inducing Jurors to Disregard Inadmissible Evidence: A Legal Explanation Does Not Help, 19 L. & HUM. BEHAV. 407, 415 (1995) (concluding that a legal explanation did not help jurors disregard inadmissible evidence).

sible evidence, however, present a more confusing picture than these two studies suggest. Some studies replicate the "boomerang" effect found in the early study involving insurance coverage in a tort case.⁹³ Others conclude that instructions to ignore have no effect.⁹⁴ Others

 93 See supra notes 79-85 and accompanying text (describing this experiment). For other studies documenting the boomerang effect, see Russell D. Clark, III, The Role of Censorship in Minority Influence, 24 Eur. J. Soc. Psychol. 331, 335-36 (1994) (supporting experimentally the proposition that attempts to censor a minority message will actually increase the influence of that minority); Michele Cox & Sarah Tanford, Effect of Evidence and Instructions in Civil Trials: An Experimental Investigation of Rules of Admissibility, 4 SOC. BEHAV. 31, 46 (1989) (demonstrating that for "limited use evidence . . . the limiting instruction [may] produce[] a 'backfire' effect, in that judgments were actually harsher with instructions than without"); Richard F. Rakos & Stephan Landsman, Researching the Hearsay Rule: Emerging Findings, General Issues, and Future Directions, 76 MINN. L. REV. 655, 661-62 (1992) (finding that mock jurors disregarded specific hearsay despite being told to consider it, but with a limiting instruction); John C. Reinard & Rodney A. Reynolds, The Effects of Inadmissible Testimony Objections and Rulings on Jury Decisions, 15 J. AM. FORENSIC ASS'N 91, 98 (1978) (finding that jurors only considered the inadmissible testimony when an objection was made, regardless of whether it was sustained or not); Sarah Tanford & Michele Cox, The Effects of Impeachment Evidence and Limiting Instructions on Individual and Group Decision Making, 12 LAW & HUM. BEHAV. 477, 484-85 (1987) (noting that limiting instructions directing jurors not to consider a past perjury conviction when assigning blame actually resulted in more assignment of blame than when no limiting instruction was given).

⁹⁴ See, e.g., A.N. Doob & H.M. Kirshenbaum, Some Empirical Evidence on the Effects of S. 12 of the Canada Evidence Act upon an Accused, 15 CRIM. L.Q. 88, 94-95 (1972) (finding that the judge's instructions to limit the use of previous conviction evidence "had no effect whatsoever on the decisions of the [test] subjects"); Edith Greene & Mary Dodge, The Influence of Prior Record Evidence on Juror Decision Making, 19 LAW & HUM. BEHAV. 67, 73 (1995) ("Apparently, jurors' use of information about a defendant's legal history was not affected by instructions on the appropriate use of that information."); Edith Greene & Elizabeth Loftus, When Crimes Are Joined at Trial, 9 LAW & HUM. BEHAV. 193, 203-04 (1985) (finding that a limiting instruction had no significant effect on the jury, except to "lower [the] guiltiness rating on a lesser included offense"); Saul M. Kassin & Lawrence S. Wrightsman, Coerced Confessions, Judicial Instruction, and Mock Juror Verdicts, 11 J. APPLIED SOC. PSYCHOL. 489, 494-95 (1982) ("[T]he instruction manipulation had no effect on verdicts."); Gregory E. Lenehan & Patrick O'Neill, Reactance and Conflict as Determinants of Judgment in a Mock Jury Experiment, 11 J. APPLIED SOC. PSYCHOL. 231, 237 (1981) (finding that when the judge gave a limiting instruction on evidence relating to an inconsequential witness, the limiting instruction had no effect); Angela Paglia & Regina A. Schuller, Jurors' Use of Hearsay Evidence: The Effects of Type and Timing of Instructions, 22 LAW & HUM. BEHAV. 501, 512 (1998) (finding only marginal differences in results whether or not hearsay instructions were given); Stanley Sue, Ronald E. Smith & Renee Gilbert, Biasing Effects of Pretrial Publicity on Judicial Decisions, 2 J. CRIM. JUST. 163, 168-70 (1973) (finding that the judge's instruction to disregard pretrial publicity had no significant effect on whether mock jurors rendered a guilty verdict); Sarah Tanford & Michele Cox, Decision Processes in Civil Cases: The Impact of Impeachment Evidence on Liability and Credibility Judgments, 2 Soc. Behav. 165, 170 (1987) (finding that instructions limiting the use of prior perjury convictions had no significant effect on the degree of responsibility assigned); Sarah Tanford & Steven Penrod,

indicate that mock jurors might have some ability to ignore inadmissible information. 95 Still others indicate that mock jurors can completely ignore information deemed inadmissible.⁹⁶ Finally, some even

Biases in Trials Involving Defendants Charged with Multiple Offenses, 12 J. APPLIED SOC. PSYCHOL. 453, 462, 465 (1982) (indicating that an "instruction was partially effective, since there were no differences between joined (with instructions) and single conditions"); William C. Thompson, Geoffrey T. Fong & D.L. Rosenhan, Inadmissible Evidence and Juror Verdicts, 40 J. PERSONALITY & SOC. PSYCHOL. 453, 457 (1981) (finding no effect from the judge's instructions limiting either proacquittal or proconviction evidence); Rosell L. Wissler & Michael J. Saks, On the Inefficacy of Limiting Instructions: When Jurors Use Prior Conviction Evidence to Decide on Guilt, 9 LAW & HUM. BEHAV. 37, 43-44 (1985) (finding that, despite an instruction to limit the use of a prior conviction only to assess credibility, "credibility judgments were unaffected by [the] prior conviction condition").

95 See W.R. Cornish & A.P. Sealy, Juries and the Rules of Evidence, 1973 CRIM. L. REV. 208, 222 ("Contrary to common supposition, juries give real weight to an instruction to disregard relevant previous record wrongly admitted."); Steven Fein, Allison L. McCloskey & Thomas M. Tomlinson, Can the Jury Disregard That Information? The Use of Suspicion to Reduce the Prejudicial Effects of Pretrial Publicity and Inadmissible Testimony, 23 Personality & Soc. Psychol. Bull. 1215, 1223 (1997) (suggesting that jurors given reason to be suspicious of inadmissible evidence will discount it); Jonathan L. Freedman, Christiane K. Martin & Victor L. Mota, Pretrial Publicity: Effects of Admonition and Expressing Pretrial Opinions, 3 LEGAL & CRIMINOLOGICAL PSYCHOL. 255, 260-61 (1998) (finding that an admonition not to base the decision on outside facts or discussion had a significant effect on jurors' willingness to find guilt); Kassin & Sommers, supra note 86, at 1049 (finding that jurors considered evidence that was ruled inadmissible on due process grounds, but did not consider the same evidence that was ruled inadmissible on reliability grounds); Jeffrey Kerwin & David R. Shaffer, Mock Jurors Versus Mock Juries: The Role of Deliberations in Reactions to Inadmissible Testimony, 20 PERSONALITY & SOC. PSYCHOL. BULL. 153, 158 (1994) (finding that jurors are more likely to follow the judge's instruction when meeting as a jury than when simply voting for guilt or innocence on their own); Kamala London & Narina Nunez, The Effect of Jury Deliberations on Jurors' Propensity to Disregard Inadmissible Evidence, 85 J. APPLIED PSYCHOL. 932, 934, 936 (2000) (finding that a significant percentage of jurors who heard a due process limiting instruction changed their minds from guilty to not guilty during deliberations); Pickel, supra note 92, at 414, 418 (finding that inadmissible evidence was more likely to not be considered when no explanation was given for the limiting instruction, rather than when the judge explained the reason); Sarah Tanford, Steven Penrod & Rebecca Collins, Decision Making in Joined Criminal Trials: The Influence of Charge Similarity, Evidence Similarity, and Limiting Instructions, 9 LAW & HUM. BEHAV. 319, 328-29 (1985) (finding that instructions designed to eliminate prejudice with regard to joined charges had a significant effect on jurors' results); Carol M. Werner, Dorothy K. Kagehiro & Michael J. Strube, Conviction Proneness and the Authoritarian Juror: Inability to Disregard Information or Attitudinal Bias?, 67 J. APPLIED PSYCHOL. 629, 631-32 (1982) (finding that less authoritarian people were less likely to use inadmissible evidence to convict the accused).

⁹⁶ See Cox & Tanford, supra note 93, at 38-39 ("[T]he curative instruction appears to alleviate the harm produced by the introduction of inadmissible evidence."); Monique A. Fleming, Duane T. Wegener & Richard E. Petty, Procedural and Legal Motivations to Correct for Perceived Judicial Biases, 35 J. EXPERIMENTAL SOC. PSYCHOL. 186, 194show that mock jurors overcompensate in reaction to inadmissible evidence; that is, those exposed to the inadmissible information and told to disregard it make decisions that are even more favorable to the party that requested the instruction to disregard than the subjects who were not exposed to the inadmissible information.⁹⁷

Even the mechanisms that might underlie these effects are in dispute. Some studies suggest that providing a reason why the evidence is inadmissible is helpful, 98 while others reveal this to be useless. 99 Similarly, some indicate that deliberation enhances the effectiveness of instructions to ignore, 100 but others suggest that deliberations make things worse. 101

Can any generalizations be safely made? First, when people attempt to ignore inadmissible information of which they are aware in making decisions or arriving at judgments about other people, they frequently will be unsuccessful. Second, such attempts are more

96 (1999) (suggesting that even if jurors do not change their private perceptions upon hearing evidence is inadmissible, they do change how they vote).

⁹⁷ See, e.g., Evelyn Goldstein Schaefer & Kristine L. Hansen, Similar Fact Evidence and Limited Use Instructions: An Empirical Investigation, 14 CRIM. L.J. 157, 170 (1990) (finding that receiving a limited use instruction greatly reduced the likelihood that a juror would vote to convict); Samuel R. Sommers & Saul M. Kassin, On the Many Impacts of Inadmissible Testimony: Selective Compliance, Need for Cognition, and the Overcorrection Bias, 27 PERSONALITY & SOC. PSYCHOL. BULL. 1368, 1372-73 (2001) (finding that jurors with a high need for cognition were significantly more likely to exhibit bias overcorrection than were jurors with a lower need for cognition); Tanford & Cox, supra note 93, at 484 (finding that jurors who received character evidence of honesty, along with instructions to limit the use of a past perjury conviction, convicted the suspect at a far lower rate than those who were not informed of the perjury conviction).

⁹⁸ See Kassin & Sommers, supra note 86, at 1046-47 (providing an explanation for why the inadmissible evidence facilitated mock jurors' ability to ignore the evidence).

⁹⁹ See Pickel, *supra* note 92, at 414 (finding that an explanation of why evidence should be inadmissible had a significantly worse effect than providing no explanation at all).

See Kerwin & Shaffer, *supra* note 95, at 158 (finding that deliberating juries were more able to follow instructions and disregard inadmissible evidence than individual jurors); London & Nunez, *supra* note 95, at 936 (same).

See Valerie P. Hans & Anthony N. Doob, Section 12 of the Canada Evidence Act and the Deliberations of Simulated Juries, 18 CRIM. L.Q. 235, 243 (1975) (finding that deliberation increased the effect of inadmissible evidence on verdicts).

¹⁰² See Wegner, Schneider, Carter & White, supra note 49, at 6 (concluding that "conscious thought suppression is not a cognitive transformation that people perform with great facility"); see also id. (citing Donald V. McGranahan, A Critical and Experimental Study of Repression, 35 J. ABNORMAL & SOC. PSYCHOL. 212 (1940), among other studies, for the proposition that even the threat of electric shocks did not deter subjects from making forbidden color associations with stimulus words).

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likely to be successful (a) if the inadmissible information is not needed to arrive at a sound decision; ¹⁰³ (b) if the inadmissible information is not highly salient or emotionally charged; ¹⁰⁴ (c) if the decision maker is not simultaneously subjected to heavy extraneous cognitive load; ¹⁰⁵ or, most importantly, (d) if the credibility of the inadmissible information sought to be ignored is destroyed or at least called into question. ¹⁰⁶ Finally, attempting to ignore inadmissible information might backfire or rebound, with the paradoxical result that the inadmissible information becomes more influential than it would have been in the absence of such an attempt. ¹⁰⁷

¹⁰³ See Stanley Sue, Ronald E. Smith & Cathy Caldwell, Effects of Inadmissible Evidence on the Decisions of Simulated Jurors: A Moral Dilemma, 3 J. APPLIED SOC. PSYCHOL. 345, 351 (1973) (concluding that where the evidence was weak, an inadmissible inculpatory tape recording biased jurors and the judge's admonishment to disregard it was ineffective, but when the evidence against the defendant was strong, the inadmissible inculpatory tape recording had no effect on the verdict, regardless of what the judge did).

See, e.g., Kari Edwards & Tamara S. Bryan, Judgmental Biases Produced by Instructions to Disregard: The (Paradoxical) Case of Emotional Information, 23 PERSONALITY & SOC. PSYCHOL. BULL. 849, 856 (1997) ("[I]t is the capacity of information to elicit emotion that renders it particularly difficult to ignore in the context of making judgments.").

¹⁰⁵ See, e.g., Wegner, supra note 44, at 35 (arguing that "mental control exerted during mental load will often produce ironic effects, resulting in mental states that go beyond 'no change' to become the opposite of what is desired"); Daniel M. Wegner, Ralph Erber & Sophia Zanakos, Ironic Processes in the Mental Control of Mood and Mood-Related Thought, 65 J. PERSONALITY & SOC. PSYCHOL. 1093, 1101 (1993) (concluding that subjects failed mental control tasks when they were assigned other mental tasks to perform simultaneously).

¹⁰⁶ See, e.g., Fein, McCloskey & Tomlinson, supra note 95, at 1223 (reporting that exposure to incriminating information in the form of either pretrial publicity or inadmissible testimony negatively influenced individuals' judgments about the defendant regardless of whether the subjects were instructed to disregard the information, but further reporting that creating suspicion about the motives underlying the disclosure of the incriminating information mitigated or eliminated its impact). But see Fleming, Wegener & Petty, supra note 96, at 197 (suggesting that concerns about procedural unfairness can influence decision makers to disregard information even at the cost of diminishing accuracy).

Although some studies find this effect, others do not. *Compare* Broeder, *supra* note 79, at 754 (finding such an effect), *and* Sharon Wolf & David A. Montgomery, *Effects of Inadmissible Evidence and Level of Judicial Admonishment to Disregard on the Judgments of Mock Jurors*, 7 J. APPLIED SOC. PSYCHOL. 205, 216 (1977) (same), *with* Sue, Smith & Caldwell, *supra* note 103, at 350-51 (not finding such an effect).

II. THE STUDY

A. Introduction

Previous studies shed light on *juror* decision making, but what about *judges*? Without denigrating the important role that jurors play in the legal system, we have argued previously that "judges are much more important than juries." After all, about one-third of all civil trials are bench trials, ¹⁰⁹ and judges "determine the outcome of roughly seven times as many cases as juries by ruling on dispositive motions, and they often play an active role in settling cases. Even in those cases that juries decide, judges preside."

For several reasons, judges might be better able than jurors to disregard inadmissible information. Judges are generally better educated than jurors, and thus might have superior abilities to perform this difficult cognitive task. Moreover, judges have legal training that probably makes them more likely than jurors to appreciate the purpose, importance, and desirability of the exclusionary rules. For judges, exclusionary rules are also apt to present a less jarring infringement on sensible decision making. Finally, judges have substantial experience making legal decisions. Judges might thus be better able to compartmentalize admissible evidence from inadmissible evidence and to limit their decisions to the contents of the formal record.¹¹¹

 $^{^{108}}$ Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 781 (2001).

Kevin M. Clermont & Theodore Eisenberg, *Litigation Realities*, 88 CORNELL L. REV. 119, 143-44 (2002); *see also* LEONIDAS RALPH MECHAM, 2003 JUDICIAL BUSINESS: ANNUAL REPORT OF THE DIRECTOR 162-64 tbl.C-7 (2003) (reporting 2603 civil jury trials and 3227 civil nonjury trials during the twelve-month period ending September 30, 2003), *available at* http://www.uscourts.gov/judbus2003/contents.html; Kevin M. Clermont & Theodore Eisenberg, *Trial by Jury or Judge: Transcending Empiricism*, 77 CORNELL L. REV. 1124, 1127 n.7 (1992) (noting two surveys where 55.5% of federal civil trials and about 96% of state civil trials were judge trials).

Guthrie, Rachlinski & Wistrich, *supra* note 108, at 781 (footnotes omitted).

A number of psychology studies have examined the strategies necessary to exclude undesirable thoughts, such as those regarding impermissible evidence, from the decision-making process. See Anita E. Kelley & Jeffrey H. Kahn, Effects of Suppression of Personal Intrusive Thoughts, 66 J. PersonalITY & Soc. Psychol. 998, 1004 (1994) (suggesting that people who are experienced in suppressing intrusive thoughts may be able to do so by tapping into a network of effective distractors allowing them to avoid the rebound effect after the suppression period); see also Richard M. Wenzlaff & Danielle E. Bates, The Relative Efficacy of Concentration and Suppression Strategies of Mental Control, 26 Personality & Soc. Psychol. Bull. 1200, 1210-11 (2000) ("[A] positive mental

On the other hand, judges might not perform better than jurors and might even perform worse—for several reasons. Judges are likely to be exposed to significantly more inadmissible information than jurors, in particular, information that jurors never hear or see. Additionally, judges might be confident that they can disregard inadmissible information.¹¹² Because of this, they may be disinclined to undertake the extra effort necessary to avoid coming into contact with inadmissible evidence and are therefore particularly susceptible to "mental contamination." Finally, most trial judges act alone. Often, they have little, if any, opportunity for group deliberation with their peers. This kind of deliberation is the hallmark of the jury decisionmaking process, and though the evidence is mixed, some studies do suggest that deliberations can improve jurors' ability to disregard inadmissible information.¹¹⁴ Thus, even if judges perform as well as or better than *jurors*, they may not perform as well as *juries*.¹¹⁵

We set out to assess these competing claims empirically. Despite the dozens of prior studies on mock jurors, the ability of judges to disregard inadmissible evidence has been assessed in only one prior experimental study. This study showed that judges were unable to disregard evidence that a tort defendant had undertaken subsequent remedial measures, even when told that the previously assigned judge had ruled the evidence of those measures inadmissible. The authors also found that the influence of the inadmissible evidence on judges

control strategy emphasizing the pursuit of desirable thoughts is preferable to the tactic of suppressing undesirable material.").

See, e.g., Letter to the Editor, 36 HARV. L. REV. 193, 193 (1922) ("[W]e, the judges (of superior mentality) are able to discern and segregate those matters by which you, the jurors, might be led astray or biased." (internal quotation marks omitted)).

See supra Part I.C.

See Kerwin & Shaffer, *supra* note 95, at 160 (reporting results suggesting that "deliberating juries were indeed less likely than individual jurors to recommend a verdict that was tainted by testimony they had been instructed to ignore."); *id.* at 161 ("[A] generalization to juries based on the behavior of mock jurors can be a rather perilous one.").

THAN THE FEW AND HOW COLLECTIVE WISDOM SHAPES BUSINESS, ECONOMIES, SOCIETIES, AND NATIONS 183-84 (2004) (noting Chandra Nemeth's studies of mock juries as proof that "the presence of a minority viewpoint... makes a group's decisions more nuanced and its decision-making process more rigorous," even when the viewpoint is "ill conceived").

¹¹⁶ See generally Landsman & Rakos, supra note 78 (examining reactions of judges and mock jurors to biasing information in a hypothetical case).

was comparable to its effect on a group of jury-eligible adults. 117 While suggestive, the study presented only a single type of inadmissible evidence. Furthermore, to facilitate the comparison between lay persons and judges, the authors did not have the judges actually rule the evidence inadmissible. Normally, judges make their own rulings as to admissibility. Given the role that psychological reactance is thought to play in the evaluation of inadmissible evidence, 118 this could have exaggerated the influence of the inadmissible evidence on judges. Hence, like that study's authors, we regard it as helpful, but preliminary. We undertook a more detailed assessment.

B. The Participating Judges

We recruited a total of 265 sitting judges attending five judicial education conferences to participate in our study: 105 state trial court judges from Maricopa County, Arizona, 119 62 federal magistrate judges

The superior court judges from Maricopa County are the principal trial court judges in the county. They generally rotate through several departments, including the civil, criminal, family, probate, and juvenile departments. In some instances, however, the judges might remain in a department for longer periods of time. In particular, the need for family court judges allows judges who want to adjudicate family cases to volunteer for this assignment indefinitely. Thus, although most of the superior court judges in our study have experience in multiple areas, twelve of these judges reported that they had presided exclusively over family court matters.

The Maricopa County Superior Court judges are appointed for fixed, renewable terms through a merit selection process mandated by the Arizona Constitution. ARIZ. CONST., art. 6, § 37 (amended 1974 and 1992). To obtain appointment to the bench, prospective judges are considered by a judicial nominating commission. Id. § 37, cl. B. The nominating commission recommends at least three candidates to the governor, who then appoints the judges for fixed terms. Id. § 37, cl. B, C. Appointments are based primarily on merit. See id. § 37, cl. C ("In making the appointment, the governor shall consider the diversity of the state's population for an appellate court appointment and the diversity of the county's population for a trial court appointment, however the primary consideration shall be merit."). For a more detailed explanation of the process, see Ariz. Supreme Court, Merit Selection in Arizona, at http:// www.supreme.state.az.us/hr/meritpage.htm (last modified Sept. 25, 2003).

Like the superior court judges, the Maricopa County commissioners are also appointed through a merit selection process. See Superior Court of Ariz., Maricopa

See id. at 125 ("[J]udges and jurors in civil cases react similarly when exposed to material that is subsequently ruled inadmissible—their perceptions of central trial issues are altered.").

¹¹⁸ See supra notes 38-43 and accompanying text (discussing the impact of psycho-

logical reactance on evidentiary considerations).

Of the 105 judges in Maricopa County, 70 were superior court judges, 25 were court commissioners, one was an appellate judge, and two were administrative law

attending national workshops in either San Diego or Minneapolis, ¹²⁰ 26 federal district judges attending a national workshop in Philadelphia, and 71 trial court judges from a large urban trial court. ¹²¹

The judges in our sample share important characteristics. All of the judges participating in this study were appointed, and all function essentially as trial court judges who manage cases, facilitate settlement, hear motions, and preside over trials. The principal difference among the judges is that the federal magistrates conduct trials only in civil cases and misdemeanor criminal cases, and focus most of their attention on pretrial matters, while the federal district judges and the judges from Maricopa County and the urban jurisdiction are responsible collectively for a slightly broader range of civil and criminal matters.

County, Judge Information: Superior Court Commissioners, at http://www.superiorcourt.maricopa.gov/judicialbios/judiciallist.asp?title=2 (last visited Mar. 7, 2005) ("Commissioners are appointed by the Court's Presiding Judge from attorneys who apply and are recommended by a selection committee made up of judges, lawyers and others."). The commissioners function much like the magistrate judges in the federal district courts, performing a subset of the functions of the superior court judges. See id. ("Commissioners handle specific assigned cases and uncontested matters."); see also Administrative Office of the U.S. Courts, Frequently Asked Questions, at http://www.uscourts.gov/faq.html (last visited Mar. 7, 2005) ("A U.S. magistrate judge . . . exercise[s] jurisdiction over matters assigned by statute as well as those delegated by the district judges.").

We described federal magistrate judges at some length in our prior article on judicial decision making. See Guthrie, Rachlinski & Wistrich, supra note 108, at 784-85 (describing the function and selection of federal magistrate judges). Congress created the office of the federal magistrate judge in 1968. Federal Magistrates Act, Pub. L. No. 90-578, 82 Stat. 1107 (1968) (codified as amended at 28 U.S.C. §§ 631-639 (2000 & Supp. 2001)). Federal magistrate judges perform a variety of functions, including making preliminary rulings in civil and criminal cases and organizing settlement conferences. These judges can also preside over civil trials with the litigants' consent. Between September 2002 and September 2003, federal magistrate judges handled 315,455 preliminary criminal proceedings, 82,138 civil pretrial conferences, and entered final judgment in 13,811 cases litigated by civil consent. MECHAM, supra note 109, at 38-39 tbl.S-17. Federal magistrate judges apply for the position and are selected by "merit selection panels" charged with "identifying and recommending persons who are best qualified to fill such positions." 28 U.S.C. § 631(b)(5) (2000 & Supp. 2001). Based on these recommendations, the district judges in the relevant district vote for their preferred applicant. Id. § 631(a). The magistrates serve renewable eight-year terms. Id. § 631(e). This group of judges participated in the study only on the condition that we

This group of judges participated in the study only on the condition that we not identify the jurisdiction. We can roughly identify the characteristics of these judges, however. All are from a single jurisdiction. They are similar to the judges from Maricopa County (although they are not from Arizona). That is, these judges are also the principal trial court judges in their jurisdiction, they are appointed through a merit selection procedure, they serve for renewable fixed terms, and they rotate through multiple departments within their jurisdiction.

We did not ask the judges to identify themselves by name, but we did ask them to identify their gender and number of years of experience on the bench. 122 Overall, approximately one-third of the judges in our sample are women (30.6% in San Diego, 24.0% in Minneapolis, 21.6% in Maricopa County, 14.8% among the federal district judges, and 44.2% in the urban jurisdiction). The judges also have a great deal of judicial experience. On average, the federal magistrate judges attending the San Diego conference had 9.2 years of experience at the time of the conference, the magistrate judges in Minneapolis had 14.2 years of experience, the Maricopa County judges had 7.2 years of experience, the federal district judges had 11.2 years of experience as federal district judges (13.5 years of judicial experience in total, including the prior experience of the 6 judges who reported that they had served as state judges before their appointment to the federal bench), and the urban jurisdiction judges had 9.2 years of experience on the bench.

C. The Procedure

We collected the data reported in this study at five different judicial educational conferences: two for federal magistrate judges, one for federal district judges, and one each for the Maricopa County and urban jurisdiction judges. The Federal Judicial Center (FJC) hosted the conference for federal district judges in Philadelphia in April 2004 and the two conferences for federal magistrate judges, one in San Diego in April 2002 and another in Minneapolis in June 2002. At these three conferences, we presented an optional program on the "Psychology of Judging," which 36 judges in San Diego, 26 judges in Minneapolis, and 28 judges in Philadelphia elected to attend.

We collected data from the Maricopa County judges and the judges from the urban jurisdiction at their respective annual continuing education conferences. At both of these conferences, the three of us presented a program on the "Psychology of Judging." The great majority of the judges in each of these jurisdictions attended these conferences. Further, these two conferences did not include any op-

 $^{^{122}}$ Knowing that we would have a mixed group of judges in Maricopa County, we asked the judges in this group to identify their title as well. *See supra* note 119 (describing the differing roles and functions of Maricopa County Superior Court judges and commissioners).

¹²³ Some of these judges had participated in our earlier study of magistrate judges. Guthrie, Rachlinski & Wistrich, *supra* note 108, at 785.

tional sessions, so the judges did not self-select to attend our programs. In the case of the urban jurisdiction, all but a few of the judges in the jurisdiction attended the conference and participated in our study (the educational conference was described as mandatory by the chief judge of this jurisdiction). In the case of Maricopa County, 85% of the county's superior court judges and 68% of the county's commissioners participated. 124

At all of the conferences, we employed similar methods. We distributed our questionnaires to the judges in person prior to our presentation. We asked the judges to read and respond to each of the questions and to do so independently. At all five conferences, the judges appeared to take the questionnaires seriously. The rooms were silent during the administration of the questionnaires.

Because we did not ask the judges to identify themselves, all responses were anonymous. We also informed the judges that participation in the survey was entirely voluntary. The final page of the questionnaires gave the judges the opportunity to limit the use of their answers to discussion during their particular conference, thereby excluding them from discussion in other contexts and from use in any publication. One magistrate judge in San Diego, one magistrate judge in Minneapolis, one federal district judge, and two judges in the urban jurisdiction exercised this option. The questionnaires completed by judges who exercised this option are not included in our analysis.

D. The Materials

We gave each participating judge a questionnaire that included between four and seven scenarios, only some of which dealt with the

¹²⁴ See Superior Court of Ariz., Maricopa County, Superior Court Judges, at http://www.superiorcourt.maricopa.gov/judicialbios/index.asp (last visited Mar. 7, 2005) (providing links to the number of superior court judgeships and commissioner positions in the jurisdiction, from which we calculated the percentage of judges and commissioners in attendance).

¹²⁵ The title page to the questionnaire consisted of the name of the conference, city, and date, followed by the paragraph below:

Many of the points discussed by this panel are best understood if experienced directly. We therefore ask that before the session starts, you read and respond to each of the questions enclosed in the survey (although doing so is voluntary, of course). Please do so independently and *please do not discuss the surveys with others while you are responding to the questions.* We shall collect these surveys before the discussion and present the results during the panel session.

subject of this Article.¹²⁶ The judges evaluated scenarios designed to assess their ability to disregard the following types of inadmissible evidence:¹²⁷

- 1) settlement demands made during a pretrial conference;
- 2) information protected by the attorney-client privilege and reviewed *in camera* by the judge;
- 3) inadmissible sexual history in a criminal case involving an alleged sexual assault;
 - 4) a presumptively inadmissible criminal record in a civil case;
- 5) information obtained by the prosecution from a criminal defendant which the government had agreed not to use at sentencing under a "cooperation agreement";
- 6) the outcome of a search involving a probable cause determination; and
- 7) a criminal confession obtained during an interrogation conducted after the defendant had invoked his right to counsel.

To assess the judges' ability to disregard this information, we used a "between groups" or "between subjects" experimental design. That is, we created two versions of each scenario, a "control" version and one or more "suppression" versions. In the control version, we

¹²⁶ The materials used at each of the four sessions varied. The questionnaires for all of the groups of federal magistrate judges included four different hypotheticals for the judges to evaluate. The questionnaires for the federal district judges included five scenarios. The trial judges from the anonymous urban jurisdiction responded to seven different scenarios. Finally, each of the questionnaires administered to the Maricopa County judges included four out of five different scenarios (two scenarios were each given to one-half of the judges). We did not vary the order in which the materials were presented within any single educational conference.

Both groups of the federal magistrate judges and judges in the urban jurisdiction also received other scenarios not reported here. The federal magistrates in San Diego received two other questions (involving attractiveness and sentencing, and an assessment of the admissibility of a coerced confession); the federal magistrate judges in Minneapolis received one other question (involving subsequent remedial measures); and judges in the urban jurisdiction received four other questions (involving attractiveness and sentencing, contrast effects in witness credibility, conjunctive effects in a criminal case, and presentation format of DNA evidence).

¹²⁸ See DAVID W. MARTIN, DOING PSYCHOLOGY EXPERIMENTS 150-53, 172 (6th ed. 2004) (explaining that a between-subjects experiment can be advantageous because "participants are exposed to only one level of the independent variable, so the other levels cannot affect the participants' behavior"); JOHN J. SHAUGHNESSY & EUGENE B. ZECHMEISTER, RESEARCH METHODS IN PSYCHOLOGY 176-85 (3d ed. 1994) (describing the elements of a successful experiment, and noting that "[t]he primary reason that experiments are so effective for testing hypotheses is that they allow researchers to exercise a relatively high level of control").

provided a description of the scenario and then asked the judge to make a substantive ruling (i.e., civil liability, criminal liability, or damages). In the suppression version, we provided the same description of the scenario, but we added inadmissible information for the judge to review before we asked the judge to make the very same substantive ruling. We then compared the rulings made by the judges in the control version of each scenario to the suppression version(s). Because the only thing we varied between the control and suppression conditions was the presence of the inadmissible information—that is, because we controlled for all other factors that might influence the judges' decision making—we can attribute any differences in the rulings between the groups to the presence of that information. In other words, the inadmissible information is our "independent variable" and the substantive decision is our "dependent variable."

¹²⁹ See SHAUGHNESSY & ZECHMEISTER, supra note 128, at 182 (explaining that in a random groups design, "if the groups perform differently, it is presumed that the independent variable is responsible").

See id. at 178 (describing independent variables as "[t]he factors that the researcher controls or manipulates").

¹³¹ See id. (describing dependent variables as "[t]he measures that are used to assess the effect (if any) of the independent variables").

Table 1 identifies the scenarios that each group of judges received:

Table 1: Distribution of the Seven Scenarios¹³²

	Scenario						
Group	Settle- ment	A-C Privi- lege	Sexual History	Prior Convic- tion	Co-op Agree- ment	Search Out- come	Crim. Confession
Fed. Mag. Judges: San Diego	Low	All					
Fed. Mag. Judges: Minneapolis	High			All		All, Version 2	
Maricopa County	High / Half	Half	All, Version 2	All			All
Fed. Dist. Judges					All		
Urban Jurisdiction	Low		All, Version			All, Version	

 $^{^{132}\,}$ The settlement scenario had two versions, as described below. All of the judges received one of these, except that only half of the Maricopa County judges received this item. The half of the Maricopa County judges that did not receive this scenario received the attorney-client privilege scenario instead. The first version of the sexual history problem, run in the urban jurisdiction, did not provide a meaningful test of our hypothesis, and hence was changed before being run again in Maricopa County. Specifically, the first version produced an extremely low conviction rate: 12.1%, or 4 out of 33 in the control conviction and 3% (1 out of 33) in the suppression condition. Given that the suppressed evidence was intended to facilitate an acquittal, the low conviction rates made it impossible to discern any effect of the suppressed evidence. The revisions added evidence intended to facilitate convictions: the victim reported the incident immediately, the victim had suffered observable bruises consistent with forcible intercourse, and the victim suffered emotional consequences from the encounter. The prior search problem was also rewritten because of an ambiguity in the question that was remedied for the Minneapolis judges. Copies of all scenarios are described below and full versions are included in their original form in the Appendix.

III. THE RESULTS

A. Anchoring and Settlement Talks

Our first scenario explores whether judges who encounter inadmissible information during a pretrial settlement conference are able to disregard it at trial. Both the Federal Rules of Evidence ¹³³ and state evidence rules or codes ¹³⁴ prohibit the introduction of "conduct or statements made in compromise negotiations" into evidence at trial. ¹³⁵ The rules exclude this information primarily for extrinsic reasons, namely "to foster 'complete candor' between parties" and thereby facilitate settlement. ¹³⁷

We sought to determine whether judges who encounter inadmissible information during a settlement conference might nonetheless be influenced by it when ruling at trial. In particular, judges might be influenced by the offers or demands parties make during settlement talks due to a phenomenon called "anchoring."

Anchoring operates in the following way. When people estimate an uncertain numeric value, they commonly rely on any numeric

¹³³ Fed. R. Evid. 408.

¹³⁴ *E.g.*, ARIZ. R. EVID. 408.

¹³⁵ In full, Rule 408 of both the Federal Rules and the Arizona Rules of Evidence provides as follows:

Evidence of (1) furnishing or offering or promising to furnish, or (2) accepting or offering or promising to accept, a valuable consideration in compromising or attempting to compromise a claim which was disputed as to either validity or amount, is not admissible to prove liability for or invalidity of the claim or its amount. Evidence of conduct or statements made in compromise negotiations is likewise not admissible. This rule does not require the exclusion of any evidence otherwise discoverable merely because it is presented in the course of compromise negotiations. This rule also does not require exclusion when the evidence is offered for another purpose, such as proving bias or prejudice of a witness, negativing a contention of undue delay, or proving an effort to obstruct a criminal investigation or prosecution.

Id. The rule governing the urban jurisdiction is similar.

 $^{^{136}}$ Hernandez v. State, 52 P.3d 765, 768 (Ariz. 2002) (en banc) (citing 23 Charles Alan Wright & Kenneth W. Graham, Jr., Federal Practice & Procedure \S 5314, at 286 (1980)).

see supra note 10 (giving reasons for excluding evidence of settlement offers); see also FED. R. EVID. 408 advisory committee's note (describing the purpose of the rule as "freedom of communication with respect to compromise"). For a statement of the policy favoring settlement in our civil justice system, see Stephen McG. Bundy, The Policy in Favor of Settlement in an Adversary System, 44 HASTINGS L.J. 1 (1992).

¹³⁸ See Amos Tversky & Daniel Kahneman, Judgment Under Uncertainty: Heuristics and Biases, 185 Sci. 1124, 1128-30 (1974) (describing anchoring).

value that happens to be available to them.¹³⁹ The initial value provides a starting point that "anchors" the estimation process.¹⁴⁰ Across dozens of studies, psychologists have found that the adjustment from the anchor is inadequate, thereby giving the anchor greater influence on the estimated numerical value than it should have.¹⁴¹ Even irrelevant or ridiculous anchors that bear no relationship to the actual numerical value can influence estimates.¹⁴²

Legal scholars have expressed concerns about anchoring in the legal system. ¹⁴³ In particular, scholars have worried about the pernicious effects that anchors might have on civil damage awards, especially "pain and suffering" damages and punitive damages. Indeed, several studies have demonstrated that plaintiffs' requests for damages—even absurdly high requests ¹⁴⁴—influence the amounts that mock jurors award. ¹⁴⁵

Some scholars have argued that the influence of anchors calls for an expansion of the judicial role—and concomitant contraction of the jury's role—in the damage assessment process. Such claims, of course, assume that judges are largely immune from the effects of an-

See generally Nicholas Epley & Thomas Gilovich, Putting Adjustment Back in the Anchoring and Adjustment Heuristic: Differential Processing of Self-Generated and Experimenter-Provided Anchors, 12 PSYCHOL. SCI. 391 (2001); Fritz Strack & Thomas Mussweiler, Explaining the Enigmatic Anchoring Effect: Mechanisms of Selective Accessibility, 73 J. PERSONALITY & SOC. PSYCHOL. 437 (1997).

 $^{^{139}}$ See id. at 1128 (showing that providing starting points to subjects influences their estimates).

¹⁴⁰ *Id*.

¹⁴² In one study, for example, people gave higher estimates for the mean daytime temperature in downtown San Francisco if they were first asked whether that mean temperature was greater than 558° Fahrenheit. *See* SCOTT PLOUS, THE PSYCHOLOGY OF JUDGMENT AND DECISION MAKING 146 (1993) (summarizing a 1984 study conducted by George Quattrone and his colleagues).

¹⁴³ See Guthrie, Rachlinski & Wistrich, supra note 108, at 789-90 (discussing anchoring in civil damage awards).

¹⁴⁴ See, e.g., Gretchen B. Chapman & Brian H. Bornstein, *The More You Ask for, the More You Get: Anchoring in Personal Injury Verdicts*, 10 APPLIED COGNITIVE PSYCHOL. 519, 525-26 (1996) (finding in a case involving fairly modest damages that mock jurors were still influenced by a plaintiff's lawyer's request for \$1 billion).

¹⁴⁵ See Guthrie, Rachlinski & Wistrich, supra note 108, at 789-90 (listing several such studies).

¹⁴⁶ See Cass R. Sunstein, Daniel Kahneman, David Schkade & Ilana Ritov, Predictably Incoherent Judgments, 54 STAN. L. REV. 1153, 1182 (2002) ("A more promising strategy for reducing incoherence would be to give relatively greater power to the reviewing court and relatively less power to the jury. . . . [J] udges are in a better position to move toward global coherence, or at least to avoid the worst anomalies.").

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chors. Our prior research on judges makes us skeptical about this assumption. 147

1. Anchoring and Settlement Talks: The Scenario

To assess whether judges might be influenced by anchors supplied in settlement conferences, we created a scenario entitled "Assessment of Damages." In this scenario, the participating judges learn that they are presiding in a bench trial involving a suit arising from an automobile accident. The plaintiff is a 31-year-old high school teacher who lost his right arm after he was hit by a truck driven by one of the defendant's employees. Since the accident, the plaintiff has had problems at work; additionally, he can no longer play recreational softball or even play catch with his son. He also endured a great deal of pain. The defendant, a large package-delivery company, admits fault but disputes the extent of plaintiff's damages.

The materials state that at the request of the parties, the judges agreed to preside over a settlement conference on the eve of trial. At the conference, plaintiff's counsel informed the judges that the plaintiff was eager to recover monetary damages from the defendant. Judges assigned to the control conditions did not receive a specific dollar request from plaintiff's counsel, ¹⁵⁰ while judges assigned to the two suppression conditions learn that the plaintiff had demanded ei-

 $^{^{147}}$ In a prior article, we reported experimental evidence that judges, like mock jurors, are susceptible to the effects of an irrelevant anchor. Guthrie, Rachlinski & Wistrich, *supra* note 108, at 790-92.

¹⁴⁸ *Infra* Appendix, pp. 1332-33.

We gave all of the judges except the federal district judges either the low- or the high-anchor materials and their appropriately matched control conditions. The federal magistrate judges in San Diego reviewed the low-anchor materials while the federal magistrate judges in Minneapolis reviewed the high-anchor materials. The urban jurisdiction judges reviewed the low-anchor materials and half of the Maricopa County judges reviewed the high-anchor materials. *Supra* Table 1, p. 1285.

The two control conditions varied slightly from one another. In the control condition matched with the low-anchor condition, the materials explained to the judge that, "[d]uring the settlement conference, the plaintiff's attorney confided in you that his client could use the money and wanted to eliminate any possibility of an appeal." In the control condition matched with the high-anchor condition, the materials explained that, "[d]uring the settlement conference, the plaintiff's attorney confided in you that his client was intent upon collecting a significant monetary payment." Note that the relevant comparisons for our purposes are between the judges in the first control group vis-à-vis the low-anchor judges and between the judges in the second control group vis-à-vis the high-anchor judges. We do not compare the control groups to one another.

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ther \$175,000 (low-anchor version) or \$10,000,000 (high-anchor version) to settle the case.

The materials state that the settlement conference was unsuccessful, and so the case proceeded to trial. The materials reminded the judges that "[t]he settlement discussions are, of course, not admissible evidence at trial under Rule ___ of the ___ Rules of Evidence." Nonetheless, the settlement demands disclosed in settlement might impermissibly anchor the judges' determinations of pain and suffering damages.

2. Anchoring and Settlement Talks: Results

Tables 2 and 3, below, present the results for this scenario. Both the low anchor (\$175,000) and the high anchor (\$10,000,000) had a significant impact on the pain and suffering damages awarded by the judges. As each table demonstrates, the results were not the product of a few extremely low or extremely high awards in the suppression conditions; rather, the anchors shifted the whole distribution of awards downwards (in the case of the low anchor) or upwards (in the case of the high anchor).

The judges assigned to the low-anchor condition gave the plaintiff a mean award of \$612,000, while the judges assigned to the matched control condition awarded nearly \$1,400,000 on average. Thus, the judges in the low-anchor condition gave the plaintiff a mean award less than half the size of the mean award given by the judges in the control condition. The difference between these two groups was significant, ¹⁵² using both a parametric and a more appropriate nonparametric test. ¹⁵³

¹⁵¹ Infra Appendix, p. 1332. The materials supplied the citation to the rule number for the relevant jurisdiction.

¹⁵² Throughout this paper, the term "significance" denotes only a statistical relationship.

Two-sample t(52) = 2.78, p < .01; Mann-Whitney U = 2270, p < .005. Throughout this paper, all t-tests were performed without assuming equal variances in the two samples. The data are skewed positively, making the nonparametric test more reliable.

Table 2: Low-Anchor Study: Means and Quartile Results (in \$1000s)

Condition (and n)	Mean	1st Quartile	Median	3d Quartile
Low Anchor (53)	612	250	500	750
Control-Low Anchor (47)	1396	366	600	1500

The judges assigned to the high-anchor condition awarded over \$2,200,000 on average, while judges assigned to the matched control condition awarded \$808,000 on average. Thus, the judges in the high-anchor condition gave the plaintiff a mean award almost three times the size of the award given by the judges in the control condition. The difference between these two groups is also significant, using both parametric and non-parametric tests. ¹⁵⁴

Table 3: High-Anchor Study: Means and Quartile Results (in \$1000s)

Condition (and n)	Mean	1st Quartile	Median	3d Quartile
Control-High Anchor (37)	808	325	700	1000
High Anchor (38)	2210	575	1000	3000

We also attempted to assess the effects of gender, court (i.e., court on which the judge sits), and experience on the awards. To do so, we transformed the raw data to create a normal distribution and then performed our analyses on the log-transformed data. For both the low-anchor and high-anchor studies, we regressed the award on condition, gender, court, and an interaction term of condition with gender, type, and experience. We found no significant main effects or interactions for gender or for court in either the low- or high-anchor scenarios. In the high-anchor condition, we observed a trend for female judges to be less affected by the anchor, although this trend was not significant. We also found that, among judges in the two conditions

¹⁵⁴ Two-sample t(44) = 3.44, p < .005; Mann-Whitney U = 1086.5, p < .001.

¹⁵⁵ The *t*-ratio of the coefficient for the interaction was 1.56, p=.12. Among judges in the low-anchor condition, the correlation between experience and the log of the award was .024, whereas among judges in the corresponding control condition, the correlation was -237. This difference produced the trend towards an interaction. Because the correlation between experience and awards was negative in the *control* condition, we cannot conclude that experience in any way mitigated the effect of the low anchor. Such an effect would have produced the opposite tendency (a positive

testing for the effect of low anchors, more experienced judges tended to award less. This effect did not interact significantly with condition. We did not observe any effect of experience on awards in the two conditions testing for the effects of high anchors.

A comparison of Tables 2 and 3 suggests an unexpected trend for the judges in the "no anchor" conditions in each study to have provided different results. Even though the scenarios were identical, judges in the "no anchor" condition in the low-anchor study provided a mean award of \$1.396 million, whereas judges in the "no anchor" condition in the high-anchor study provided a mean award of \$808,000. This apparent difference was not reliable, however. ¹⁵⁸

3. Anchoring and Settlement Talks: Discussion

The anchors appear to have influenced the judges' assessments of the appropriate amount of damages to award. Relative to the judges assigned to the control conditions, the high-anchor judges gave substantially higher awards and the low-anchor judges gave substantially lower awards.

The anchors provided in this study—in contrast to the anchors that psychologists typically provide in their studies of anchoring—are at least arguably relevant to the judges' assessment of damages. The plaintiff's lawyer disclosed valuable information to the judges about his client's sense of entitlement. ¹⁵⁹ Counsel may have made this disclosure for strategic reasons, of course, but the disclosure was presumably grounded in some *perceived* reality and hence is correlated with the harm his client *believes* he has suffered. Despite the anchor's conceivable relevance, however, the applicable evidentiary rules re-

correlation between experience and awards in the low-anchor condition such that the awards among more experienced judges would have been similar in both conditions).

The t-ratio of the coefficient for experience was 2.04, p < .05.

The *t*-ratio of the coefficient for the interaction was 1.56, p = .12.

Two-sample t(63) = 1.97, p = .05; Mann-Whitney U = 2124.0, p = .25. An analysis performed on the log transformation of the damage award also revealed no significant difference between the two samples. Two-sample t(66) = 1.64, p = .11. Note that one judge had awarded \$0; this amount was adjusted to \$1 before the log transformation of the data so as to preserve this observation in the analysis.

¹⁵⁹ See, e.g., FED. R. EVID. 408 advisory committee's note ("The evidence is irrelevant, since the offer [to compromise] may be motivated by a desire for peace rather than from any concession of weakness of position.").

quire the judges to disregard it. The materials explicitly reminded the judges of this rule. 160

Nonetheless, the inadmissible information disclosed in the settlement talks appears to have influenced the judges exposed to it. Surreptitious reliance (even if it was unintentional) on information elicited during the settlement conference undermines the goals of Rule 408 and other rules like it. These prohibitions are designed to encourage parties to be open and candid; but to the extent the parties fear that their discussions will be used against them later, they are more likely to behave strategically in settlement talks and reach a bargaining impasse.

This study obviously has its limits. Anchoring may be a uniquely powerful phenomenon; if so, other disclosures made during settlement conferences might have a lesser impact on judges. Moreover, judges in actual cases would have much more information about the parties and their dispute, so even if anchors are powerful, the effects of anchors might be muted. Nevertheless, there are reasons to believe that the results of this study are generalizable to the real world. The damages demanded by a plaintiff are uniquely salient, so even under circumstances where judges learn substantially more information about the parties or are supplied with alternative anchors, judges are likely to have difficulty disregarding this particular information.¹⁶¹ Moreover, judges, like other decision makers, are most likely to rely on cognitive shortcuts, such as anchoring, when they face time constraints that force them to process complex information quickly. Although judges certainly face time pressure in the courtroom, judges also can delay their decisions in some circumstances so as to allow themselves more time to think. As with all of our results, the data suggest potential obstacles to good decision making, more so than providing definitive evidence of poor decision making.

These results impart some lessons for litigants engaged in settlement talks in front of a judge. Despite the protection of evidentiary restrictions, settlement discussions might affect how a judge thinks about a case. This suggests that parties should be cautious about their discussions, or that they should be strategic. A judge can facilitate the

¹⁶⁰ See supra note 151 and accompanying text.

¹⁶¹ See Guthrie, Rachlinski & Wistrich, supra note 108, at 792-94 (discussing the power of anchors in judicial decision making).

candor that might be essential to settlement only by declining to sit as the presiding judge should the case fail to settle.

These results underscore the importance of judicial recusal and disqualification in maintaining the integrity of the legal system. Judges who learn important facts, from the settlement process or from pretrial rulings, should consider the potential influence of this information, especially in a bench trial or while ruling on dispositive motions. Although our work shows that judges sometimes display a remarkable ability to ignore inadmissible evidence, judges might not be able to discern which evidence they can reliably ignore. By and large, the rules governing recusal and disqualification are generous in facilitating judicial removal when even the appearance of impropriety exists. ¹⁶³

Pockets of law are not so solicitous of this concern, however. Notably, Justices on the United States Supreme Court commonly argue that they have a "duty to sit" on a case that overrides ordinary concerns of impropriety or bias. ¹⁶⁴ Similarly, decision makers in administrative agencies similarly cannot be disqualified from decisions absent a showing by clear and convincing evidence that they have an "unalterably closed mind." Our results suggest either that the law needs to be more vigorous in prescribing disqualification in these areas, or that judges should be receptive to recusing themselves, and perhaps even recuse themselves when they do not sense the influence of extraneous evidence.

¹⁶² See Kovacs v. Szentes, 33 A.2d 124, 125 (Conn. 1943) ("A judge has not such control over his mental faculties that he can definitely determine whether or not inadmissible evidence he has heard will affect his mind in making his decision.").

¹⁶³ See John Leubsdorf, Theories of Judging and Judge Disqualification, 62 N.Y.U. L. REV. 237, 238 (1987) ("Courts declare that impartiality is so important that a reasonable—albeit incorrect—appearance of bias compels recusal"); see also Debra Lyn Bassett, Recusal and the Supreme Court, 56 HASTINGS L.J. (forthcoming 2005) (manuscript at 2, on file with authors) ("Avoiding the appearance of impropriety requires a judge to withdraw from a case when the judge's impartiality in a matter might reasonably be questioned.").

¹⁶⁴ See Bassett, supra note 163 (manuscript at 19-21) (reviewing the "duty to sit" in the United States Supreme Court).

¹⁶⁵ C & W Fish Co. v. Fox, 931 F.2d 1556, 1564 (D.C. Cir. 1991) ("[A]n individual should be disqualified from rulemaking only when there has been a clear and convincing showing that the Department member has an unalterably closed mind on matters critical to the disposition of the proceeding." (internal quotation marks omitted)).

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B. Attorney-Client Privilege

Our second scenario explores the question of whether judges can ignore highly relevant information protected by the attorney-client privilege. The attorney-client privilege is premised on the assumption that clients will disclose critical information to their attorneys only if they know that such disclosures will not come back to haunt them. Because obtaining proper legal advice requires that clients be able to relate this information to their attorneys, the privilege is central to the administration of justice. 168

Nonetheless, we anticipated that the judges might have trouble disregarding privileged information relevant to the merits of the case. In particular, privileged information revealing that a client knows that she is guilty or that she should lose a civil case might be especially difficult to disregard. Such information not only reveals the weaknesses in the litigant's case, but also undermines her credibility and suggests that she might be abusing the justice system. It might be difficult to disregard such information.

1. Attorney-Client Privilege: The Scenario

To assess whether judges are able to ignore disclosures protected by the attorney-client privilege, we created and administered a scenario entitled "Evaluation of a Contract Dispute." In this scenario, the participating judges ¹⁷⁰ learn that they are presiding over a bench trial involving a contract dispute between a freelance consultant named Jones and a movie studio called SmithFilms.

The judges learn that the outcome of the dispute will turn on whether they find that the studio offered Jones "producer credit"

Rule 501 of the Arizona Rules of Evidence and Arizona Statute section 12-2234 protect attorney-client communications. *See* ARIZ. R. EVID. 501 (regarding privileges generally); ARIZ. REV. STAT. ANN. § 12-2234 (West 2003) (privileging communications between lawyer and client in civil cases).

¹⁶⁷ See, e.g., Hunt v. Blackburn, 128 U.S. 464, 470 (1888) (stating that the privilege "is founded upon the necessity, in the interest and administration of justice, of the aid of persons having knowledge of the law and skilled in its practice, which assistance can only be safely and readily availed of when free from the consequences or the apprehension of disclosure").

¹⁶⁸ *Id*.

¹⁶⁹ *Infra* Appendix, pp. 1334-35.

We gave this scenario to all of the federal magistrate judges attending the San Diego conference and half of the judges attending the Maricopa County conference. *Supra* Table 1, p. 1285.

when it retained him to work on a movie. The only writing in the case consists of a short letter, signed both by Jones and the studio's owner (Smith), stating that "Jones will provide various services to SmithFilms, that Jones will continue to be paid a monthly salary as an independent contractor until the film is released, and that Jones will receive such other consideration as was agreed upon by the parties during the presigning breakfast." Jones contends that Smith offered him producer credit as part of the package, and he presents testimony from a waitress who stated that she thought she overheard the parties discussing producer credit at their breakfast meeting. Unfortunately, Smith has fallen ill and is in a coma, so the movie studio's only viable defense is to argue that Smith generally did not offer such credit.

In addition to learning this information, the judges assigned to the suppression group were told that before they decided the merits, they must resolve a discovery dispute. The materials state that the defendant filed a motion to compel production of an audiotaped conversation between Jones and his business attorney (not the attorney representing him in this litigation). The plaintiff argues that the conversation is protected by the attorney-client privilege, but the defendant contends that Jones was seeking business advice, not *legal* advice, from this attorney.

The materials state that the "parties requested that you listen to the audiotape *in camera*," ¹⁷⁴ including the following excerpt from the conversation:

Jones: I really needed this deal and I was afraid that asking for producer credit might be a turn-off, so I got nervous and did not ask for it. But I meant to. I need your legal opinion, Greg. Suppose that I send Smith a letter now saying that I meant for producer credit to be part of the deal. Would that be legally binding?

Gonzalez: No. If you and Smith did not agree on producer credit during breakfast, you don't have a leg to stand on. A letter now won't help.

Jones: Darn. That's a shame. 175

¹⁷¹ Infra Appendix, p. 1334.

Infra Appendix, p. 1334.

¹⁷³ See, e.g., ARIZ. REV. STAT. ANN. § 12-2234 (West 2003) (stating that the attorney-client privilege is applicable only where the communication involves either the "providing [of] legal advice" or "obtaining information in order to" do so).

Infra Appendix, p. 1334.
 Infra Appendix, p. 1334.

The judges learn that "[t]he rest of the audiotape confirms that Gonzalez was functioning solely in a legal capacity." The judges are then asked to "rule on a motion to compel production of the audiotape." 177

Thereafter, the materials return to the same script as in the control condition. Ultimately, the judges in both conditions are asked to indicate whether they would rule for Jones (the plaintiff) or Smith-Films (the defendant) in this contract dispute.

2. Attorney-Client Privilege: The Results

The information protected by the attorney-client privilege had an impact on the judges' resolution of the merits. In the control condition, 55.6% (25 out of 45) of the judges found for the plaintiff. The judges in the suppression condition were less hospitable to the plaintiff's claim. Among those who ruled that the audiotape was privileged, only 29.2% (7 out of 24) found for the plaintiff. The difference between the responses of the judges in these two groups was statistically significant. 178

A substantial percentage of the judges (33.3%, or 12 out of 36) granted the motion to compel production of the audiotape. Among these judges, 25% (3 out of 12) found for the plaintiff. This percentage did not differ significantly from the percentage of judges who had suppressed the audiotape (29.2%).¹⁷⁹

We also conducted additional analyses of demographic variables. Using logistic regression on the verdict, we found no significant main effects of gender or experience, or of the interaction of these two variables with condition. We did, however, uncover a main effect for court. In Maricopa County, 31.6% of the judges (12 out of 38) found for the plaintiff, whereas 64.5% (20 out of 31) of the federal magistrate judges found for the plaintiff. This effect did not interact with condition.

 ¹⁷⁶ Infra Appendix, p. 1335.
 177 Infra Appendix, p. 1335.

Fisher's exact p < .05.

Fisher's exact p > .5.

The *t*-ratio of the coefficient for court was 2.20, p < .05.

3. Attorney-Client Privilege: Discussion

Exposure to the privileged information appears to have influenced the judges' decisions. Although a majority of the judges who had not seen the privileged materials ruled in favor of the plaintiff, fewer than 30% of the judges who determined the materials were privileged ruled the same way. Even though the judges themselves ruled that the information was privileged, and therefore immune from discovery, this information appears to have had a substantial impact on their assessments of civil liability.

The results of this study comport with the intuitions of at least some of the judges in our study who wrote on the questionnaire that they would recuse themselves in this situation. One judge even added a line next to our available answers, wrote "recuse self" with an open box next to it, and then checked the box! Although admittedly anecdotal, these responses suggest that at least some of the judges recognized that they would have a difficult time ignoring the privileged information at trial.

It is worth noting that a third of the judges in the suppression condition granted the motion to compel production, even though the conversation is probably best construed as privileged. One could argue that the crime-fraud exception to attorney-client privilege applies. That is, if the plaintiff had hired his business attorney for the purpose of perpetrating a fraud, then his conversation would not be privileged. But the context of the conversation suggests that the plaintiff consulted his business attorney for purposes of obtaining legal advice, not for purposes of committing a fraud.

At the same time, it is likely that the plaintiff's litigation attorney would have reviewed the audiotape. Hence, the plaintiff's attorney is arguably pursuing a lawsuit that she knows lacks merit. This might give rise to an ethics violation if the plaintiff's attorney does not attempt to withdraw. Neither the rules against frivolous litigation nor the ethics rules, however, create an exception to the attorney-client privilege in this circumstance. Once the judge determines that the

¹⁸¹ See generally United States v. Zolin, 491 U.S. 554 (1989) (discussing the crime-fraud exception to attorney-client privilege).

¹⁸² See Model Rules of Prof'l Conduct R. 3.1 (2003) ("A lawyer shall not bring or defend a proceeding... unless there is a basis in law and fact for doing so....").

See id. R. 1.6(a) ("A lawyer shall not reveal information relating to the representation of a client unless the client gives informed consent...."). But cf. id. R. 3.3(b) ("A lawyer who represents a client in an adjudicative proceeding and who knows that a

conversation is protected by the privilege, the *in camera* review ends, and the judge can make no further use of the materials. Furthermore, the fact that one-quarter of the twelve judges who ordered the production of the audiotape also ruled in favor of the plaintiff suggests that the tape is not dispositive and the suit is not wholly frivolous.

Even though the results of this scenario suggest that the judges' ability to ignore materials they deem privileged will be limited, this scenario has limitations of its own. For instance, judges in actual cases might be better able to disregard this information because they would have learned many more details about the case. Judges in our study who were exposed to the inadmissible evidence about the plaintiff might have inferred that the rest of the plaintiff's case was also quite weak. On the other hand, the privileged information in our materials constitutes the single best piece of evidence available in the case—that is, an admission by plaintiff that he has no case. Extra detail in a real case would be unlikely to undermine the importance of this admission.

Judges might also perform better in actual cases than they did in our study because their motivation to limit their decision to the record would be greater in a real case than in a hypothetical one. Increased motivation might cut both ways, however. On the one hand, a judge has more incentive in the real world to follow the evidence rules and ignore inadmissible information; on the other hand, a judge also has more incentive in the real world to thwart the kind of frivolous claim the plaintiff is advancing and to reach a just outcome on the merits.

C. Rape-Shield Case

Our third scenario explores whether judges can disregard the sexual history of the alleged victim of a sexual assault. The admissibility of a victim's sexual history in sexual assault cases has been the subject of debate and legal reform for some time.¹⁸⁴ The prospect of cross-examination by a hostile attorney delving into one's sexual past can deter the victim of a sexual assault from pursuing a case against a

person intends to engage, is engaging or has engaged in criminal or fraudulent conduct related to the proceeding shall take reasonable remedial measures, including, if necessary, disclosure to the tribunal.").

¹⁸⁴ See Michelle J. Anderson, From Chastity Requirement to Sexuality License: Sexual Consent and a New Rape Shield Law, 70 GEO. WASH. L. REV. 51, 81-86 (2002) (discussing different categories of rape-shield laws).

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perpetrator. 185 Furthermore, a victim's sexual history frequently is of questionable relevance. Arguably, any effect such testimony has arises merely from stereotypes.

On the other hand, one cannot entirely rule out the relevance of sexual history in a case involving a dispute over consent. To some, a history of sexual promiscuity suggests that a sexual encounter is more likely to be consensual. One could argue exactly the opposite, however. After lodging a complaint in a sexual assault case, a sexually experienced woman might be more credible, having had a history of sexual encounters in which she did not make such allegations. The former view appears to be more common. ¹⁸⁶

In the face of these concerns, many jurisdictions have adopted so-called "rape-shield" statutes to limit the admissibility of sexual history evidence. The relevant rape-shield provision in this instance—Arizona's "88—differs somewhat from the norm. Arizona's statute specifically prohibits the introduction of evidence of an alleged victim's *chastity*, rather than evidence of her *sexual history*. Arizona's statute takes this curious approach because the state has long barred evidence of a victim's sexual history through the common law. Arizona adopted its statute in light of this history, and it is intended to extend the rape-shield prohibition from sexual history evidence often proffered by a defendant to demonstrate consent to chastity evidence sometimes proffered by a prosecutor to demonstrate lack of consent. Courts now construe the statute to prohibit both kinds of evidence.

¹⁸⁵ See FED. R. EVID. 412 advisory committee's note ("The rule aims to safeguard the alleged victim against the invasion of privacy, potential embarrassment and sexual stereotyping that is associated with public disclosure of intimate sexual details ").

¹⁸⁶ See Anderson, supra note 184, at 104 ("A pattern of consensual sexual behavior might reveal that the woman has had a considerable amount of sex but has never falsely accused someone of rape."). See generally Morrison Torrey, When Will We Be Believed? Rape Myths and the Idea of a Fair Trial in Rape Prosecutions, 24 U.C. DAVIS L. REV. 1013 (1991).

 $^{^{187}}$ See Anderson, supra note 184, at 81-85 (reviewing in brief the history of rapeshield laws).

¹⁸⁸ ARIZ. REV. STAT. ANN. § 13-1421 (West 2003).

¹⁸⁹ See, e.g., State ex rel. Pope v. Superior Court, 545 P.2d 946, 950 (Ariz. 1976) (en banc) ("The law does not and should not recognize any necessary connection between a witness' veracity and her sexual immorality." (citing, inter alia, Sage v. State, 195 P. 533 (Ariz. 1921))).

¹⁹⁰ See State v. Gilfillan, 998 P.2d 1069, 1074 n.3 (Ariz. Ct. App. 2000) (observing that Arizona's rape-shield statute codified the common law prohibition against the introduction of sexual history evidence, except in rare circumstances).

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Prior studies of mock jurors suggest that they have difficulty disregarding inadmissible information about the sexual history of an alleged sexual assault victim. Generally, mock jurors are less likely to convict the defendant and are more likely to attribute greater responsibility for the events to the victim. Despite significant differences between a typical mock juror and a typical judge, judges, like mock jurors, might be hard pressed to ignore this evidence, even if they deem it inadmissible at trial.

1. Rape-Shield Case: The Scenario

To assess whether judges might be influenced by inadmissible sexual history evidence, we created and administered a scenario entitled "Evaluation of a Criminal Case." In this scenario, the participating judges learn that they are presiding in a bench trial involving a sexual assault allegedly committed by Mr. Geiger against Ms. Smith.

Both the complainant and defendant are students at a local university who were attending a fraternity party on the night in question. The complainant, who had recently become engaged, began drinking heavily at the party and was seen talking with the defendant, whom she had not previously met. At some point, the defendant "seemed to help [her] 'walk' or 'stagger' into [his] room" at the fraternity house. The complainant's fiancé began looking for her, eventually found her in the defendant's room, and "discovered [the defendant] on top of [her]; her skirt was pulled up over her waist. The fiancé "pulled Mr. Geiger off of Ms. Smith, threw him onto the floor, and then stormed off. Ms. Smith got up and ran after him."

¹⁹¹ See Lenehan & O'Neill, supra note 94, at 238 ("[E]arlier evidence against the victim . . . produced significantly higher probability of [a guilty verdict] than where all factors were against the defendant "); Regina A. Schuller & Patricia A. Hastings, Complainant Sexual History Evidence: Its Impact on Mock Jurors' Decisions, 26 PSYCHOL. WOMEN Q. 252, 259 (2002) ("[T]he proposed safeguard of providing jurors with limiting instructions may be ineffective in curbing the pernicious impact of prior [sexual] history evidence.").

See, e.g., Schuller & Hastings, *supra* note 191, at 259 ("[P]articipants who heard that a rape complainant had had a prior sexual relationship with the man accused of her rape, were more negative in their evaluations of the woman ").

¹⁹³ *Infra* Appendix, pp. 1336-37.

We gave Version 1 of this scenario to all of the judges in the urban jurisdiction and Version 2 to all of the judges in Maricopa County. *Supra* Table 1, p. 1285.

¹⁹⁵ *Infra* Appendix, p. 1336.

¹⁹⁶ Infra Appendix, p. 1336.

¹⁹⁷ Infra Appendix, p. 1336.

Ms. Smith reported the alleged assault to the police two hours later. She asserted that she had refused to have sex with the defendant and had shouted "no" a couple of times, but that he had forced himself on her. The police officer who interviewed her reported that she was visibly upset while telling the story; moreover, "[a] physical examination revealed bruises on her upper thighs." Her fiancé initially thought the encounter was consensual, but he subsequently changed his mind. Before the incident, the complainant had been cheerful and extroverted, but since the incident occurred, she had become moody and depressed. The defendant testified on his own behalf, asserting that the encounter had been consensual. He contended that although he had previously had casual sex with other women at parties, he had never engaged in nonconsensual sex with anyone.

In addition to learning this information, the judges assigned to the suppression condition learn that the defendant wants to present evidence of the victim's sexual history:

In his defense, Mr. Geiger is trying to introduce testimony from five other students, 3 male and 2 female, that Ms. Smith had a well-deserved reputation for being sexually promiscuous. This includes one of Ms. Smith's best friends who will testify that before Ms. Smith met her fiancé, she "had trouble remembering what fraternity house she woke up in each Sunday morning." Another witness, a former roommate of Ms. Smith will assert that Ms. Smith "liked to loosen her inhibitions with a few beers too many and then have rough sex with the first guy she saw."

The judges also learn that "the prosecution has moved to exclude such evidence on the ground that it violates Arizona's 'Rape Shield' statute . . . which forbids the introduction of evidence concerning a victim's 'chastity' or 'reputation for chastity' in cases involving sexual assault." The materials then ask the judges in the suppression condition how they would rule on this motion to suppress the evidence. Finally, the judges assigned to both the control group and the suppression group are asked to indicate whether they would find the defendant guilty of sexual assault.²⁰¹

¹⁹⁸ Infra Appendix, p. 1336.

Infra Appendix, p. 1337.

²⁰⁰ Infra Appendix, p. 1337.

We tested this phenomenon in the urban jurisdiction using similar materials. The results from this jurisdiction, however, were inconclusive. In the prior version, the materials identify a longer delay in the victim's reporting of the assault and do not in-

2. Rape-Shield Case: The Results

The judges struggled with this case. In the control condition, 49.1% (27 out of 55) of the judges found the defendant guilty. The judges in the suppression condition were much more likely to find the defendant not guilty. Among the judges in the suppression group who ruled that the sexual history evidence should be excluded, a mere 20% (7 out of 35) convicted the defendant. The difference between these two groups was statistically significant.²⁰²

Some of the judges (27.1%, or 13 out of 48) decided to admit the evidence. Among these judges, 7.7% (1 out of 13) convicted the defendant. The percentage of guilty verdicts in this group did not differ significantly from that among the judges who suppressed the evidence (20.0%).

Further analysis, using logistic regression on the verdict with gender, experience, and the interaction of these two variables with condition as independent variables, revealed no significant main effects of experience or the interaction of experience with condition. The gender of the judges produced an effect that was marginally significant. Specifically, across the two conditions, female judges were more likely to convict (48.2%, or 13 out of 27) than male judges (31.7%, or 19 out of 60). This effect did not interact significantly with condition. The conviction rates among both male and female judges who had suppressed the past sexual history were identical (20.0%), although the conviction rate among female judges in the control condition was higher than among male judges (64.7%, 11 out of 17, versus 40%, 14 out of 35).

clude references to bruising. The victim is also not described as engaging in drinking and voluntarily went with the defendant to his room. These materials produced a low conviction rate in the control condition. Thus, the sexual history had no further power to reduce the conviction rate. In the earlier version, however, we also asked judges to report their confidence in the appropriateness of the verdict on a seven-point scale. Although we observed no differences in the conviction rates, we did obtain a significant difference in the confidence ratings. That is, judges expressed more confidence in their acquittals after viewing the sexual history evidence than judges in the control condition. To determine whether the conviction rate would be affected by the inadmissible testimony, we altered the evidence to increase the conviction rate in the control condition and presented the materials to another group of judges.

Fisher's exact p = .01.

Fisher's exact p = .42.

The Z-score of the coefficient for gender was 1.64, p = 10. Throughout this paper, we refer to any statistical test that produced a significance level between .05 and .10 as "marginally significant."

3. Rape-Shield Case: Discussion

Exposure to the victim's sexual history appears to have influenced the judges' decisions. The conviction rate dropped by nearly 30% among judges who had excluded the evidence compared to judges who were not exposed to the evidence. Even though the judges ruled the evidence inadmissible, it still influenced their assessments of the defendant's guilt.

Although most of the judges decided that the evidence of the victim's sexual history was inadmissible, some decided to admit it. One judge later remarked that he admitted the testimony precisely because it seemed so relevant, so perhaps the judges who admitted the testimony differed from the judges who excluded it in that they believed the testimony was more probative than their colleagues who sustained the objection. Regardless, there is no statistically significant difference between the verdicts rendered by the judges who admitted the evidence and the judges who excluded it (although the numbers are small). Once exposed to the evidence, they were affected by it—regardless of their view of admissibility.

These materials present one important difference from most cases of sexual assault that might limit the generality of the findings. The sexual history evidence matched the circumstances of the sexual encounter closely. The victim's history is not merely one of sexual experience, but one of intoxication, and casual, "rough" sex of precisely the type that would explain how this encounter might have been consensual. It is possible that the judges might have reacted differently to our scenario if the victim's sexual history had been more mundane and less similar to the alleged crime at issue in the case.

Nonetheless, the results suggest that ignoring a victim's sexual history can be challenging, especially if the decision maker believes it to be relevant to the issue of consent. The rape-shield statutes thus might serve the purpose of keeping a victim's private life private, but the evidence they ostensibly protect might still influence those fact finders who learn of it before or during trial.²⁰⁵

²⁰⁵ See Anderson, supra note 184, at 94-137 (providing an extensive review of exceptions to rape-shield laws that allow admissibility of a rape victim's sexual history).

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D. Prior Criminal Conviction

Our fourth scenario explores whether judges can disregard a prior criminal conviction that is presumptively inadmissible under the rules of evidence. Rule 609 of both the Federal Rules and the Arizona Rules of Evidence imposes various limits on the admissibility of prior criminal convictions. Where more than ten years have elapsed since the completion of a sentence resulting from a conviction, the evidence of the conviction is inadmissible unless "the probative value of the conviction [is] supported by specific facts and circumstances [and] substantially outweighs its prejudicial effect." This "time limit" rule is an intrinsic exclusionary rule that limits the admissibility of the prior criminal conviction on the grounds that it might prejudice the fact finder. 208

As with many of the rules that limit admissibility on the grounds that evidence is prejudicial, the rules governing prior criminal convictions rest on an empirical assumption about the effect of admitting such evidence. Rule 609 assumes that a witness's criminal past will lead juries to make inappropriate decisions motivated by animus toward an individual who has committed mistakes in the distant past.²⁰⁹

²⁰⁶ Fed. R. Evid. 609; Ariz. R. Evid. 609.

²⁰⁷ Rule 609(b) of both the Federal and Arizona Rules provides as follows: Evidence of a conviction under this rule is not admissible if a period of more than ten years has elapsed since the date of the conviction or of the release of the witness from the confinement imposed for that conviction, whichever is the later date, unless the court determines, in the interests of justice, that the probative value of the conviction supported by specific facts and circumstances substantially outweighs its prejudicial effect. However, evidence of a conviction more than [ten] years old as calculated herein, is not admissible unless the proponent gives to the adverse party sufficient advance written notice of intent to use such evidence to provide the adverse party with a fair opportunity to contest the use of such evidence.

FED. R. EVID. 609(b); ARIZ. R. EVID. 609(b).

²⁰⁸ See supra text accompanying note 7. Other portions of Rule 609—for example, Rule 609(d), which limits the admissibility of juvenile convictions—are perhaps more appropriately classified as extrinsic exclusionary rules. See supra text accompanying note 9.

²⁰⁹ Indeed, this assumption finds empirical support from mock jury studies. *See*, *e.g.*, Doob & Kirshenbaum, *supra* note 94, at 94-96 (finding that evidence of prior convictions significantly increased the likelihood that jurors would find a defendant guilty, despite a judge's limiting instructions); Greene & Dodge, *supra* note 94, at 76 (finding that jurors who learn of a defendant's prior conviction are more likely to convict him of a subsequent offense); Hans & Doob, *supra* note 101, at 251 (finding that the presentation of a defendant's criminal record to a jury significantly increases the likelihood of a guilty verdict); London & Nunez, *supra* note 95, at 937 (finding that predelibera-

Perhaps judges, who have experience weighing evidence, might be better able than jurors to disregard such potentially prejudicial information.

1. Prior Criminal Conviction: The Scenario

To assess whether judges might be influenced by evidence of a prior criminal conviction, we created and administered a scenario entitled "Assessment of Pain and Suffering Damages." In this scenario, the participating judges are told that they are presiding in a bench trial in which the only issue is the appropriate damage award for pain and suffering.

The judges learn that the case involves a products liability suit filed by an individual plaintiff against a lawnmower manufacturer (for the judges in Arizona) or a snowblower manufacturer (for the judges in Minnesota). The plaintiff is a single, 35-year-old automobile mechanic who was badly injured while operating the piece of machinery. Although it was equipped with a kill-switch that should have prevented the injury, a manufacturing defect caused the switch to fail, resulting in a serious injury to the plaintiff's nondominant arm. The defendant concedes liability and pecuniary damages but disputes the appropriate amount of pain and suffering damages.

With respect to those damages, the plaintiff presents testimony from doctors concerning the extent of his injury and pain. The doctors indicate that his injured arm does not need to be amputated, but is likely to remain useless. The plaintiff also testifies on his own behalf, describing "continuing pain in his arm, the loss of his job, the frustration of adapting to life with just one usable arm, and the nature and extent of his pain and resulting total disability." The plaintiff

tion jurors tend to be biased by the presentation of inadmissible evidence); Reinard & Reynolds, *supra* note 93, at 105 (finding that "jurors do not... consistently disregard sensational inadmissible testimony," even when instructed by a judge to do so); Tanford & Cox, *supra* note 94, at 177 (finding that "impeachment evidence leads to harsher judgements of a civil defendant" for both credibility and liability); Tanford & Cox, *supra* note 93, at 494 (finding that juries told of a witness's prior conviction perceived the witness as less credible and inferred greater propensity for future harm and negligence).

²¹⁰ *Infra* Appendix, pp. 1338-39.

We gave this scenario to all of the federal magistrate judges attending the conference in Minneapolis and all of the Arizona trial court judges attending the conference in Maricopa County. *Supra* Table 1, p. 1285.

²¹² Infra Appendix, p. 1338.

further testifies that "he had to take prescription narcotic pain medication continuously." For its part, the defendant offers testimony suggesting that the plaintiff is exaggerating his injury. The defendant also presents testimony from an occupational therapist, who states that people with such injuries "usually can control their pain and lead relatively normal lives."

The judges assigned to the suppression group²¹⁵ received an extra paragraph after the defendant's testimony. The judges in this group learn that the defendant seeks to introduce evidence that the plaintiff has a criminal record. Specifically, he "had been convicted of swindling schemes in which he obtained the life savings of elderly retirees by falsely promising them exorbitant rates of return, and then using their money to pay his living expenses."216 The materials note that the plaintiff's most recent conviction had been fourteen years ago and that he had spent two years in prison. The plaintiff objects to the introduction of this testimony, even for the limited purpose of impeaching his credibility, on the ground that the probative value of this old conviction does not substantially outweigh its prejudicial effect under the applicable evidentiary rule. The judges are then asked to rule on the objection. Finally, judges in both the control group and the suppression group are asked to indicate how much they would award the plaintiff in compensatory damages.

2. Prior Criminal Conviction: The Results

Table 4 presents the results of the study of prior criminal convictions. The judges who ruled that the prior criminal convictions were not admissible awarded an average of 12% less in pain and suffering damages than did those judges who were not exposed to the plaintiff's criminal history. The difference between these two groups was marginally statistically significant, using a nonparametric test.²¹⁷ Although

²¹³ Infra Appendix, p. 1338.

Infra Appendix, p. 1339.

Among the Arizona judges, two-thirds of the judges received the suppression condition and one-third received the control condition. This was done because many of the judges in Minnesota admitted the testimony. To try to create a more balanced design, we thus decided to oversample the suppression condition. The results demonstrate no differences in the awards from different judges, *see infra* Part II.D.2, and thus this oversampling is unlikely to have skewed the results.

²¹⁶ Infra Appendix, p. 1338.

Mann-Whitney U = 2528.5, p = .075. The suppression condition includes one \$10 million award, which dwarfs the other awards and raises the mean award in the

the judges who sustained the objection and the judges who overruled the objection appear to have produced somewhat different awards, these differences were not significant.²¹⁸

Table 4: Past Criminal Conviction: Means and Quartile Results (in \$1000s)

Condition (and n)		Mean	1st Quartile	Median	3d Quartile
Control (43)		778	300	500	1000
Suppression (73)	Sustain (61)	685	200	400	800
	Overrule (12)	406	163	275	713

We also attempted to assess the effects of gender, court, and experience. We performed these analyses on a logarithmic transformation of the raw awards so as to create a normal distribution of the awards. We regressed the log of the award on condition (using only those judges who sustained the objection in the suppression condition), gender, court, and an interaction term of condition with gender, court, and experience. We found no significant main effects or interactions for any of these terms.

3. Prior Criminal Conviction: Discussion

Exposure to the plaintiff's prior criminal conviction appears to have influenced the judges' decisions, even though most judges ruled to suppress the information. The mean awards were somewhat lower among judges who had seen the evidence and sustained the objection, and the distribution of awards was generally shifted downwards. Much like mock jurors, judges seemed unable to ignore a prior conviction.

Although the results revealed no statistically significant differences between the judges who ruled the conviction inadmissible and the judges who admitted the evidence, few conclusions can be drawn from this result. The number of judges who admitted the conviction is too small to make a meaningful comparison. Judges who admitted the conviction seemed to produce lower awards than judges who sup-

suppression-sustain condition by nearly \$200,000. This award, along with the general skewness of the distributions, makes the parametric test particularly inappropriate. A t-test on the log-transformed data, however, also produced a marginally significant difference. t(101) = 1.82, p = .07.

Mann-Whitney U = 2298.5, p > .50. A t-test on the log-transformed data also was not significant. Two-sample t(68) = 0.67, p > .5.

pressed the conviction, but the trend did not approach significance, possibly due to the small number of judges who admitted the evidence. It could be that the judges who suppressed the conviction were able to discount the conviction to some extent. The groups are not, however, completely comparable. Judges who admitted the testimony presumably did so because they believed that the testimony's probative value substantially outweighed the prejudicial effect. Hence, the judges who admitted the testimony probably gave it more weight than judges who suppressed it.

These results support the general proposition that judges also have difficulty ignoring intrinsically excluded testimony. The results leave the exact mechanisms for how the materials influenced the judges unidentified, however. Because the past crime was one involving fraud, it could be that the judges discredited the plaintiff's account of his injuries. On the other hand, it might be that the judges who learned of it simply awarded less money to the plaintiff because they deemed him a socially undesirable character. Either way, judges were affected by the evidence that they themselves had ruled inadmissible. Future versions of this study (in which the past crime is odious, such as child molestation, but not associated directly with fraud) could help disentangle these potential underlying mechanisms.

E. Postconviction Cooperation Agreement

Our fifth scenario explores whether judges can disregard information a prosecutor obtained from a cooperating criminal defendant and then inappropriately used against him in a sentencing hearing. When the government enters into a plea agreement containing a cooperation clause, it is bound to honor the agreement. The government is not permitted to renege on the agreement and use information it uncovers from the defendant against that defendant. In the

²¹⁹ See, e.g., United States v. Khan, 920 F.2d 1100, 1105 (2d Cir. 1990) ("[C] operation agreements, like plea bargains, may usefully be interpreted with principles borrowed from the law of contract. . . . [T]he government's discretion does not grant it power to turn its back on its promises to the defendant under the cooperation agreement."); United States v. Rexach, 896 F.2d 710, 713-14 (2d Cir. 1990) ("Cooperation agreements, like plea bargains, are interpreted according to principles of contract law. . . . [T]he scope of the government's discretion [does not] permit it to ignore or renege on contractual commitments to defendants.").

The federal sentencing guidelines themselves forbid the use of incriminating information provided by the defendant as part of a cooperation agreement with the prosecution. U.S. SENTENCING GUIDELINES MANUAL § 1B1.8 (2004).

event that a judge is exposed to such information, the judge should disregard it in sentencing the defendant. Despite this, we expect the judges to be influenced by exposure to such information.

1. Postconviction Cooperation Agreement: The Scenario

To assess whether judges might be influenced by such information, we created a scenario entitled "Sentencing."²²¹ In this scenario, the participating judges learn that they are presiding in a criminal sentencing hearing. Appearing in front of the judges is Sam Kaiser, who was found guilty of possession of 150 grams of methamphetamine, which carries a base offense level of "26" under the federal sentencing guidelines.222

Kaiser, who is twenty-seven years old, dropped out of high school when he was seventeen, has never held a job for long, is unmarried, and has no children. The judges learn that Kaiser had several prior convictions for larceny and minor drug possession, so he has four "criminal history points" under the guidelines sum, 223 which puts him in "Category III" for sentencing under the federal sentencing guidelines.²²⁴ The materials inform the judges that the appropriate sentence for him is from 78 to 97 months, given his criminal history points and the offense level.²²⁵

Following his conviction, Kaiser cooperated with the prosecution in exchange for a sentencing recommendation. Additionally, as part of this agreement, the prosecution agreed that it would not use any of the information it learned from him against him.

Judges in the control group also learn that "Kaiser revealed the name of his supplier, but nothing else of substance."²²⁶ Judges in the suppression group learn that Kaiser "had helped his 30-year-old cousin produce methamphetamine in a basement laboratory," and that "his cousin had a 15-year-old girlfriend who frequently 'tried out' their batches for them."227 The judges in this group then learn that the

²²¹ *Infra* Appendix, pp. 1340-41.

U.S. SENTENCING GUIDELINES MANUAL § 2D1.1(c)(7) (providing for a base offense level of 26 for possession of "[a]t least 50 G but less than 200 G of Methamphetamine").

²²³ *Id.* § 4A1.1(c). ²²⁴ *Id.* § 5A.

²²⁵ Id.

²²⁶ Infra Appendix, p. 1340.

²²⁷ Infra Appendix, p. 1340.

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prosecution has asked them to add six levels to Kaiser's offense level because "he had been engaged in the manufacture of methamphetamine in a fashion that had endangered a minor."228 Under the guidelines, if such information was properly presented, it would warrant judges raising the offense level by that amount.²²⁹ If that were to happen here, Kaiser would face a sentence from 151 to 188 months under the guidelines.²³⁰ Kaiser's attorney argues that the prosecution reneged on its deal and cannot use this information against him in sentencing.

Thereafter, the materials inform both groups of judges that "[n]o other circumstances supporting any additional enhancements, departures, or other adjustments are present."²³¹ The materials then ask the judges to sentence Kaiser.

2. Postconviction Cooperation Agreement: The Results

This information had an untoward effect on the sentences handed down by the judges. All but one of the thirteen judges in the control condition sentenced Kaiser to 78 months, the shortest possible sentence under the guidelines. The only judge who deviated from this sentence departed downwardly, sentencing Kaiser to just 60 months (and was dropped from the analysis, having disregarded the instructions).²³² In the suppression condition, 86.7% (13 out of 15) of the judges rejected the prosecution's request to raise the offense level. Nonetheless, exposure to the negative information about the defendant influenced their behavior. In contrast to judges in the control condition, only 46.2% (6 out of 13) of these judges chose 78 months as the sentence.²³³ On average, the thirteen judges who rejected the prosecutor's request sentenced Kaiser to 85.9 months in prison. The difference between the control group judges and the suppression

²²⁸ Infra Appendix, p. 1340.

U.S. SENTENCING GUIDELINES MANUAL § 2D1.1(b) (6) (C).

²³⁰ *Id.* § 5A.

²³¹ Infra Appendix, p. 1341.

Including this judge in the analysis would only have strengthened the observed effect of the improperly presented evidence.

Taking as the dependent measure the binary decision of whether to give the defendant the minimum sentence, the difference between the two conditions was significant. Fisher's exact p = .006.

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group judges who denied the prosecution's motion was statistically significant.²³⁴

3. Postconviction Cooperation Agreement: Discussion

Although nearly 90% of the judges determined that the information the defendant provided while cooperating with the government could not be used against him at sentencing, the availability of this information increased the defendant's sentence. The information that the defendant provided about the nature of his offense seemed to alter the judges' impressions of him. In the control condition, the judges may have viewed the defendant as just another hapless drug dealer for whom the guideline range was too severe. All of the judges in the control condition imposed the minimum sentence. When the defendant's testimony revealed that he had endangered and abused a minor, however, judges meted out stiffer sentences. Neither the government's agreement not to use the information nor the court's obligation to enforce it protected this defendant from its effects on his sentence.

The behavior of the judges in the control condition is also noteworthy. Except for one judge who inexplicably deviated below the sentencing minimum, all provided exactly the same sentence—the minimum under the guidelines. Although complaints that the federal sentencing guidelines are too harsh in drug cases are common, there is little direct empirical evidence that judges view them this way. Our study inadvertently provided some indirect evidence on

An ordinary two-sample *t*-test cannot be run on these data due to the lack of variation among the control group. However, the null hypothesis that the suppression group's true mean is also 78 months can be rejected. t(12) = 3.34, p = .006.

Mandatory Minimums Have Undermined Effective and Just Narcotics Sentencing, 40 AM. CRIM. L. REV. 87, 126 (2003) ("The currently pervasive mandatory minimum statutes make narcotics sentences indefensibly rigid, often unfair and unjustly harsh."); Justice Kennedy Speaks Out, N.Y. TIMES, Aug. 24, 2003, at A16 (noting Justice Kennedy's argument that sentencing guidelines need to be "revised downward"); John S. Martin Jr., Let Judges Do Their Jobs, N.Y. TIMES, June 24, 2003, at A31 (announcing retirement due to the "distress I feel at being part of a sentencing system that is unnecessarily cruel and rigid").

In fact, the academic literature shows that judges disagree over the federal sentencing guidelines and their effects. *Compare* Judge Louis F. Oberdorfer, *Mandatory Sentencing: One Judge's Perspective—2002*, 40 Am. CRIM. L. REV. 11, 16 (2003) (arguing that discrepancies in the treatment of drug offenders under the guidelines are "the most serious vice" in the guidelines), *with* Gerard E. Lynch, *Sentencing Eddie*, 91 J. CRIM. L. & CRIMINOLOGY 547, 560 (2001) ("The guidelines... make a fairly sophisticated

this point. In every other scenario we have presented, in both this paper and in our prior research, we have found variations among judges—especially when the outcome consists of a continuous parameter (such as months or dollars), as opposed to a binary parameter (such as verdict or ruling). That judges of different political parties, different genders, different amounts of experience, and doubtless with different attitudes toward the war on drugs all agree to sentence at the exact bottom of the guidelines range suggests that the judges perceive 78 months to be too harsh a sentence for possessing 150 grams of methamphetamine.

Finally, this study also has implications for the Supreme Court's recent pronouncements on sentencing guidelines in Blakely v. Washington²³⁷ and United States v. Booker.²³⁸ In these cases, the Court struck down both a state sentencing scheme and the federal sentencing guidelines as inconsistent with the right to a jury trial. The Court concluded that any fact that increases a defendant's maximum sentence must be submitted to a jury.²³⁹ The problem with the holding, from our perspective, is that statutory sentencing ranges can be quite broad. Our results suggest that even if a judge does not have an explicit jury finding on a particular fact that would raise the upper limit of the defendant's sentencing, evidence tending to prove this fact might still influence the judge in determining what sentence to impose within that original range. This is what occurred in our study. As we have shown, sentencing guidelines do not eliminate the possibility of such extraneous influences. Sentencing guidelines, however, mitigate the problem by confining the influence of this extraneous information.

effort to assess the weight of an offender's prior record."), and Angela LaBuda Collins, Note, The Latest Amendment to 18 U.S.C. § 924(c): Congressional Reaction to the Supreme Court's Interpretation of the Statute, 48 CATH. U. L. REV. 1319, 1343 n.156 (1999) (noting that Justice Breyer was a strong supporter of the guidelines during his tenure as Chief Judge of the First Circuit).

²³⁷ 124 S. Ct. 2531 (2004).

²³⁸ 125 S. Ct. 738 (2005).

²³⁹ Blakely, 124 S. Ct. at 2543 ("The Framers would not have thought it too much to demand that, before depriving a man of three more years of his liberty, the State should suffer the modest inconvenience of submitting its accusation to 'the unanimous suffrage of twelve of his equals and neighbours' rather than a lone employee of the State." (citation omitted)), quoted with alterations in Booker, 125 S. Ct. at 752.

F. Hindsight and Probable Cause

Our sixth scenario explores whether judges can disregard the outcome of a search when deciding whether the police had probable cause to conduct the search in the first place. The Fourth Amendment requires that police searches be based on "probable cause." Evidence obtained from a search conducted without probable cause is inadmissible on the ground that it violates the Fourth Amendment's "right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures."

Despite this prohibition, judges required to rule on the legality of a search might have difficulty disregarding the outcome of the search due to the hindsight bias. In most aspects of life, the hindsight bias creates few problems because few occasions call for a reassessment of what could have been known in the past. In the courtroom, however, repredicting the past is commonplace. Many situations, from determining what accidents tort defendants should have been able to avoid to assessing whether an invention was "obvious" in patent law, require judges and jurors to ignore the known outcome and assess what was predictable ex ante.

Likewise, when a judge must rule on the admissibility of the fruits of a search conducted without a warrant, she does so with the knowledge that the search produced incriminating evidence. If the hind-sight bias affects judges' assessments of probable cause, then judges in hindsight will admit evidence obtained under circumstances in which police could not have obtained a warrant in foresight. Some commentators²⁴⁴ and even the Supreme Court itself²⁴⁵ have suggested that

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²⁴² See supra note 77 and accompanying text.

²⁴⁰ U.S. CONST. amend. IV.

²⁴¹ Id.

See Rachlinski, supra note 77, at 571 (explaining that despite the obstacle of accurately assessing the predictability of outcomes, the law constantly requires courts to make these determinations).

²⁴⁴ See, e.g., William J. Stuntz, Warrants and Fourth Amendment Remedies, 77 VA. L. REV. 881, 915 (1991) (arguing that granting warrants before a magistrate knows whether the police will find evidence or whether the suspect is a criminal helps eliminate judicial bias).

²⁴⁵ See Beck v. Ohio, 379 U.S. 89, 96 (1964) ("An arrest without a warrant bypasses the safeguards provided by an objective predetermination of probable cause, and substitutes instead the far less reliable procedure of an after-the-event justification for the arrest or search, too likely to be subtly influenced by the familiar shortcomings of hindsight judgment.").

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one of the principal purposes of requiring a warrant is to avoid making assessments of probable cause entirely in hindsight.

Previous studies suggest that the hindsight bias influences judges. In our earlier work, we found that judges overestimated the predictability of outcomes on appeal. Other researchers have found that the hindsight bias influences judicial assessments of negligence. In these studies, researchers found that judges were more likely to identify conduct as unreasonable, negligent, or even reckless after learning that the conduct had produced an accident. None of these studies directly addresses the issue of the hindsight bias in probable cause determinations, although there is some evidence that *mock jurors* are influenced by it. 248

1. Hindsight and Probable Cause: The Scenario

To determine whether judges might be influenced by the outcome of a potentially defective search, we created and administered a scenario labeled "Fourth Amendment Issue." In this scenario, we asked participating judges assigned to the control group to determine whether they would grant a warrant under the circumstances described, and we asked participating judges assigned to the suppression

²⁴⁶ Guthrie, Rachlinski & Wistrich, *supra* note 108, at 801-03 (providing evidence that learning an alleged outcome on appeal significantly affected judges' assessments of the most likely outcome).

²⁴⁷ See John C. Anderson, D. Jordan Lowe & Philip M.J. Reckers, Evaluation of Auditor Decisions: Hindsight Bias Effects and the Expectation Gap, 14 J. ECON. PSYCHOL. 711, 732 (1993) (finding judges' evaluations of auditor performance to be significantly biased by outcome information); Reid Hastie & W. Kip Viscusi, What Juries Can't Do Well: The Jury's Performance as a Risk Manager, 40 ARIZ. L. REV. 901, 906 (1998) (finding a statistically insignificant trend towards hindsight effects among judges evaluating a negligence case); W. Kip Viscusi, How Do Judges Think About Risk?, 1 AM. L. & ECON. REV. 26, 50-51 (1999) (presenting evidence of the role of hindsight bias on judicial decision making).

See Jonathan D. Casper & Kennette M. Benedict, *The Influence of Outcome Information and Attitudes on Juror Decision Making in Search and Seizure Cases, in* INSIDE THE JUROR: THE PSYCHOLOGY OF JUROR DECISION MAKING 65, 81-82 (Reid Hastie ed., 1993) (finding mock jurors' decisions affected by outcome information); Jonathan D. Casper, Kennette Benedict & Jo L. Perry, *Juror Decision Making, Attitudes, and the Hindsight Bias,* 13 LAW & HUM. BEHAV. 291, 300 (1989) (finding, in a laboratory experiment, results consistent with hindsight bias).

²⁴⁹ *Infra* Appendix, pp. 1342-43.

We gave Version 1 of this scenario to all of the judges in the urban jurisdiction and Version 2 to all of the judges in Minneapolis. *Supra* Table 1, p. 1285.

condition to rule on the admissibility of evidence collected without a warrant under the same circumstances.²⁵¹

In both cases, the judges learn that a police officer was on patrol in a parking lot outside a large arena hosting a rock concert. The officer noticed a well-dressed, nervous-looking man exit a BMW and fiddle with something in the trunk of his car. The man then met a friend, bought tickets to the event, and entered the arena. Thirty minutes later, the officer noticed that one of the BMW's windows was rolled down. Concerned that the car might be burglarized, he approached the car to close the window. Upon arriving at the car, the officer stated that he "smelled something that he believed, based on a demonstration at a training session several years earlier, to be burnt methamphetamine. He looked inside the car and didn't see any drugs, but he did notice some Visine, a local map, and a couple of empty beer cans."

In the foresight condition, the materials then stated that the police officer requested a telephonic warrant to search the trunk of the car. The materials asked simply, "Will you issue the warrant?"²⁵³ In the hindsight condition, the materials stated that "[b]ased on these observations," the police officer searched the trunk of the car. The search produced "10 pounds of methamphetamine, other drug paraphernalia, and a gun that had recently been fired."²⁵⁴ The gun turned out to match a weapon used to murder a drug dealer across town earlier that evening. The driver was then arrested and tried. The materials noted that the defense attorney has moved to suppress the evidence obtained in the search, arguing that the police officer lacked probable cause for the search. The materials then asked, "Will you allow the evidence to be admitted?"²⁵⁵

²⁵¹ Infra Appendix, p. 1342.

Infra Appendix, p. 1342.

²⁵³ Infra Appendix, p. 1342.

²⁵⁴ Infra Appendix, p. 1342.

Infra Appendix, p. 1343. There was an error in the phrasing of the two available answers in the version of this question given to the unnamed jurisdiction that makes the answers confusing. Specifically, the judges were given the question "Will you rule to suppress the evidence?" and two options: "Yes, there was probable cause to justify the search" and "No, there was not probable cause to justify the search." Nevertheless, most of the judges reported understanding what the question was asking, and so we include these results here. Also, as discussed, their results did not differ from those of the federal magistrate judges later tested in Minneapolis, for whom we corrected the error.

The materials thus take advantage of an exception to the warrant requirement. Police officers who face "exigent circumstances" may undertake the search even without a warrant, so long as they have probable cause. Later the Automobile searches are considered per se exigent circumstances. Nevertheless, police sometimes do request warrants for automobile searches to ensure the admissibility of evidence uncovered during the search. Hence, both the hindsight and the foresight conditions represent plausible variations on the underlying story.

2. Hindsight and Probable Cause: The Results

In foresight, 23.9% (11 out of 46) of the judges concluded that there was probable cause for a search and granted a warrant; in hind-sight, 27.7% (13 out of 47) of the judges concluded that there was probable cause for a search and ruled the testimony admissible. There obviously was not a statistically significant difference between these two groups. Logistic regression of the decision on court, gender, experience, and the interaction of these variables with condition revealed no significant effects.

It is possible that the lack of a statistically significant effect might have resulted from a limited sample size. We note, however, that the sample size was sufficient in that it had an 87.4% chance of detecting a significant or marginally significant difference if the true difference between foresight and hindsight was 30 percentage points. In other words, if the true difference between the foresight and hindsight conditions was actually similar in magnitude to the differences found in the attorney-client and rape-shield problems, we likely could have detected a significant effect in this problem. This likelihood drops to 56.5% and 20.5% for twenty- and ten-percentage-point differences, respectively.

²⁵⁶ See United States v. Karo, 468 U.S. 705, 718 (1984) ("[I]f truly exigent circumstances exist no warrant is required under general Fourth Amendment principles.").

²⁵⁷ See, e.g., Chambers v. Maroney, 399 U.S. 42, 51 (1970) (holding that police may search automobiles based on probable cause without a warrant); see also United States v. Johns, 469 U.S. 478, 487-88 (1985) (allowing police to search containers without a warrant when the containers were properly seized from an automobile at an earlier time).

Fisher's exact p = .68.

This analysis assumes that the population percentage in foresight is 24%, which is what we found.

3. Hindsight and Probable Cause: Discussion

Our study produced no evidence that the hindsight bias affected the judges' assessments of probable cause. Knowledge of the fruits of the search had no discernible effect on judges' decision making. Judges were able to ignore the damning evidence that the search produced and make essentially the same decision as judges who were unaware of what the search would uncover. The results also reveal only the slightest trend towards a hindsight bias.

These results are somewhat surprising. The vast literature on the hindsight bias includes virtually no studies that fail to uncover evidence of the hindsight bias in ex post assessments of ex ante probabilities. A handful of hindsight-bias studies report only non-significant differences between hindsight and foresight conditions. So what accounts for our findings? It is possible that the facts we presented are simply anomalous, but we doubt it. The circumstances presented closely match the kinds of situations that produce the hindsight bias. The materials asked judges in hindsight to assess how events must have seemed to the police officer beforehand. The materials also include some ambiguous facts that could easily be reinterpreted as more sinister after one learns what the fruits of the search were. These circumstances produced the hindsight bias in numerous other studies.

Nor do we think that judges have necessarily learned how to avoid the hindsight bias. As noted, several other studies show judges are influenced by hindsight bias in other situations. Furthermore, we did not observe any effect of experience on the bias. That result undermines the suggestion that judges eventually learn how to make decisions without being influenced by the hindsight bias in general.

One possibility is that "probable cause" assessments do not actually depend upon the likelihood that a search produces incriminating evidence. Rather, probable cause assessments might reflect a judicial effort to identify police conduct thought to be socially appropriate. Thus, the court simply evaluates whether the conduct is appropriate or excessive. If so, the results of our study are still surprising. It is hard to imagine that the likelihood that the search would produce incriminating evidence is somehow unrelated to the assessment of whether the police engaged in a socially appropriate search. Fur-

 $^{^{260}}$ See Rachlinski, supra note 77, at 580-81 (reviewing previous research on the hindsight bias).

⁶¹ See supra notes 246-47 and accompanying text.

thermore, a judgment of appropriate police conduct would also seem likely to be influenced by the outcome of the search.

Another possibility is that judges have developed informal heuristics which they use to assess probable cause. Perhaps judges do not attempt to assess probable cause de novo every time they encounter a probable cause issue. Rather, they may have rules of thumb for determining probable cause that address common situations, such as vague assertions by police officers that they thought they smelled drugs. Some judges might have just developed the habit of refusing to grant warrants, or admitting evidence seized after a search, when the only real basis for probable cause consists of such an assertion. If judges adopt a set of simple, uncomplicated heuristics to assess probable cause, they might not be so easily swayed by the outcome of the search. Sorting out these issues will require further study.

G. Inadmissible Criminal Confession

Our final scenario explores whether judges can disregard information gleaned from an inadmissible confession in a criminal case. In its famous *Miranda*²⁶³ and *Escobedo*²⁶⁴ decisions, the Supreme Court interpreted the Fifth Amendment's privilege against self-incrimination as providing several procedural safeguards to criminal suspects. Among them is the requirement that once a suspect in custody requests a lawyer, the police must cease interrogation. If the police continue with the interrogation, the resulting confession is inadmissible.²⁶⁵

Judges often confront an uncomfortable reality when sitting in a case involving an illegally obtained confession. Under *Miranda* and *Escobedo*, the judge has an obligation to suppress the confession, but because the confession is often among the most important pieces of evidence against the defendant, the act of suppressing the confession may undermine the prosecution's case against him. Thus, we expect that it will be difficult for judges to ignore the suppressed confession.

 $^{^{262}}$ In a different context, Hillary Sale has argued that judges have developed simple heuristics to guide their decision making in securities fraud cases. Hillary A. Sale, Judging Heuristics, 35 U.C. DAVIS L. REV. 903, 904-05 (2002).

⁶³ Miranda v. Arizona, 384 U.S. 436 (1966).

²⁶⁴ Escobedo v. Illinois, 378 U.S. 478 (1964).

See Miranda, 384 U.S. at 444-45 ("If . . . he indicates in any manner and at any stage of the process that he wishes to consult with an attorney before speaking there can be no questioning.").

Most prior studies indicate that mock jurors commonly ignore instructions to disregard constitutionally infirm evidence. In particular, mock jurors pay attention to the details of coerced confessions, regardless of whether the evidence had been deemed constitutionally infirm and inadmissible. To be sure, extreme police conduct does increase the extent to which mock jurors can discount such evidence. Likewise, a series of studies of the influence of illegal wiretaps on verdicts reveals that mock jurors have some ability to discount such evidence. So to some degree, even mock jurors seem able to account for constitutional constraints. But on the whole, mock jurors seem willing to convict defendants they perceive to be guilty, even if the damning evidence is deemed inadmissible for extrinsic constitutional reasons.

1. Inadmissible Criminal Confession: The Scenario

To assess whether judges can ignore such constitutionally infirm evidence, we created a scenario entitled "Evaluation of a Robbery Trial." In this scenario, the participating judges²⁷¹ learn that they are presiding in a bench trial involving a criminal prosecution for armed robbery. Bench trials are not the norm in criminal cases, but they do occur. We provided the judges with an explanation for why the defendant sought a bench trial in this case: "Concerned that he is a

See Saul M. Kassin & Holly Sukel, Coerced Confessions and the Jury: An Experimental Test of the "Harmless Error" Rule, 21 LAW & HUM. BEHAV. 27, 42 (1997) (stating that the presence of a confession "powerfully increased the conviction rate," even when mock jurors were told to disregard the confession because it was coerced); Kassin & Wrightsman, supra note 94, at 504 (concluding that instructions to disregard coerced confessions may not be effective).

²⁶⁷ See Kassin & Wrightsman, *supra* note 94, at 491, 496 (citing studies that show people are less likely to disregard negative inducement of confessions, and finding that people view negatively induced confessions as less voluntary than positively induced ones).

Kassin & Sommers, *supra* note 86, at 1047-53; Sommers & Kassin, *supra* note 97, at 1372-73; Werner, Kagehiro & Strube, *supra* note 95, at 631-32.

²⁶⁹ See Kassin & Sommers, supra note 86, at 1051 (asserting that experimental results suggest that jurors are influenced not by a judge's ruling per se, but by the causal basis for that ruling).

²⁷⁰ *Infra* Appendix, pp. 1344-45.

We gave this scenario to all of the judges who attended the conference in Maricopa County. *Supra* Table 1, p. 1285.

²⁷² See MECHAM, supra note 109, at 162-64 tbl.C-7 (reporting 3618 nonjury trials in criminal cases and 3500 jury trials between September 2002 and September 2003 in federal court).

member of a small minority in the community and will face an unsympathetic jury, Mr. Jones has waived his right to a jury trial. You are thus presiding in a bench trial."²⁷³

The judges learn that the perpetrator, wearing a ski mask and brandishing a gun, walked into an empty 7-Eleven store at night and demanded that the lone employee place money in a shopping bag. The cashier stuffed \$200 into the bag, and the perpetrator ran off, discarding both the gun and ski mask on the way out. The cashier observed that the suspect got into a white Ford Taurus with an Arizona license plate bearing "GB" as the last two characters. The police retrieved the gun and mask but could obtain no fingerprints from them.

The police surveyed the neighborhood for a matching car. They found one ten blocks away that was a close match (the last two characters of the license plate on the Ford Taurus were "C8"). The police traced the car through the Department of Motor Vehicles and found the address of the owner. They knocked on the door of his apartment, and he answered. He matched the build and race of the perpetrator and was wearing similar clothes (although this consisted of jeans and a white t-shirt). The police then insisted that he accompany them to the station house where they led him to a locked room, read him his Miranda rights, and began interrogating him. At the police station, they allowed the cashier to listen in on the interrogation, and the cashier said, "that sounds like the guy." The police then arrested the defendant and obtained a warrant to search his apartment. search produced shopping bags similar to the one used by the perpetrator, black gloves, and more than \$200 in cash, but nothing else incriminating.

In addition to the aforementioned information, the judges assigned to the suppression condition learn the following:

The police continued questioning the defendant. Even though the defendant clearly requested a lawyer, twice, the police refused to call one and continued the interrogation. Two hours later, the defendant confessed, and agreed to write out a description of the crime. His written description matched the events perfectly, including the fact that he discarded the ski mask and gun outside the store (which the police had not told him).

²⁷³ Infra Appendix, p. 1344.

²⁷⁴ Infra Appendix, p. 1344.

Infra Appendix, p. 1345.

The materials stated that "the defendant's attorney has moved to suppress the confession, arguing that the interrogation violated the defendant's rights under *Miranda* by continuing after the defendant had requested an attorney."²⁷⁶ The judges in the suppression condition were then asked whether they would grant the motion to suppress the evidence. Finally, the materials in both the control and suppression conditions asked the judges to respond to the following question: "Based solely on the evidence admitted at trial, would you convict the defendant?"²⁷⁷

2. Inadmissible Criminal Confession: The Results

In the control condition, 17.7% (9 out of 51) of the judges convicted the defendant. In the suppression condition, 20.7% (11 out of 53) of the judges who suppressed the confession convicted the defendant. The responses of the judges in these two groups were *not* statistically significantly different from one another. Logistic regression of the decision on court, gender, experience and the interaction of these variables with condition revealed no significant effects.

As with the probable cause scenario, the lack of a significant effect might be attributable to the limited sample size, rather than to the lack of any real difference. If the true difference were 30 percentage points, however, our study had a 93.4% chance of producing a significant or marginally significant effect. This percentage drops to 67.1% and 25.6% for detecting differences of 10 and 20 percentage points, respectively.

3. Inadmissible Criminal Confession: Discussion

The judges in this study appeared able to ignore the evidence of the improperly obtained confession. The differences between the control and the suppression conditions were barely distinguishable. The judges were able to uphold the policies underlying the *Miranda* doctrine and ignore the incriminating but inadmissible evidence.

²⁷⁶ Infra Appendix, p. 1345.

Infra Appendix, p. 1345.

Only one of the 54 judges assigned to the experimental condition ruled that the confession was admissible.

Fisher's exact p = .69.

This analysis assumes that 17% is the true conviction percentage in the control condition.

These materials might be idiosyncratic, but we suspect they are not. The confession in our materials was not an unreliable product of coercion; it included information that was known only to the perpetrator, indicating that the defendant had in fact committed the robbery. It could be that the judges missed this important fact, because the materials do not highlight it. We did not ask the judges to assess the likelihood that the defendant actually committed the crime, which would have enabled us to measure this directly. In our other scenarios, however—particularly the sexual assault scenario—important details did not escape the judges' notice and instead had a powerful effect on their judgment. We have no reason to think that judges failed to notice this fact.

It appears instead that the judges simply managed to ignore the tainted evidence. The scenario includes ambiguities that provided plenty of fodder for reconstructing or justifying a guilty verdict. Not only were the judges able to disregard their knowledge that the defendant was guilty, they were also able to keep that information from coloring their assessment of the other facts. How they did this is unclear. It might be that judges were simply compensating for their own knowledge. Perhaps judges, aware that their thinking was influenced by the inadmissible confession, implicitly raised the threshold for their willingness to convict. Even as their knowledge influenced their understanding of the ambiguous facts, the judges also demanded more certainty. Further study is necessary to sort this out.

Compared with other scenarios, this scenario and the hindsight bias scenario raise more serious questions about the applicability of our results to the real world. It might be easy enough in hypothetical assessments to assert that an important constitutional principle would prevent one from convicting a defendant. Exonerating a real, live defendant that a judge knows to be guilty might be a more serious matter. Judges, however, do this when they rule critical evidence inadmissible on constitutional grounds in jury trials, knowing full well that the ruling will destroy the prosecution's case. Whether judges ignore their knowledge of inadmissible evidence in deciding real cases remains uncertain. These results indicate, however, that judges might have more ability to ignore such evidence than intuition might suggest.

H. Summary and Interpretation

In our previous article on federal magistrate judges, we demonstrated that judges, like laypersons and other expert decision makers, are subject to "heuristics and biases" or "cognitive illusions" when making judgments. Based on the research we conducted for that article, we reached the unsurprising conclusion that "[j]udges... are human." The research we report in this Article corroborates that conclusion. Judges are indeed human; like jurors, they are often unable to "close the [v]alves of [their] attention."

Taken together, our studies show that judges do not disregard inadmissible information when making substantive decisions in either civil or criminal cases. We think the reason is that they are unwittingly influenced by inadmissible information and that they cannot ignore it much of the time. Others might argue that our studies show that judges are capable of disregarding inadmissible information but that they choose not to do so. They might claim that judges purposefully flout the evidentiary rules in favor of selecting the substantive outcome that they think is just or that comports with their personal policy preferences. In the rape-shield problem we describe above, for example, the judges who learned of the victim's sexual history were much more likely than the judges who did not learn this information to free the defendant from criminal liability.²⁸⁴ While we believe that these results show that judges had difficulty ignoring the inadmissible sexual history, and that their exposure to it induced them to exonerate the defendant, it is also possible that the judges were capable of disregarding this information but chose not to do so because they felt that justice required them to free the defendant from criminal liability.

Although this alternative account is plausible, we think it is less compelling than our own interpretation for several reasons. First, the weight of psychological evidence—from general psychological studies, mock juror studies, and the one prior study of judges—suggests that people in general have great difficulty deliberately disregarding information. Second, although we do not consider ourselves naïve, we

²⁸¹ See generally Guthrie, Rachlinski & Wistrich, supra note 108 (noting that five different "illusions"—anchoring, framing, hindsight bias, the representative heuristic, and egocentric biases—all had significant impacts on judicial decision making).

²⁸² *Id.* at 821.

 $^{^{283}}$ Emily Dickinson, Complete Poems, No. 303 (Thomas H. Johnson ed., 1970).

See supra Part III.C.

are inclined to believe that trial judges *generally* attempt to comply with the evidentiary rules rather than merely selecting the substantive outcome they prefer. Finally, we think our interpretation is more consistent with our results. Take, for example, the settlement scenario we described above. We believe the only sensible interpretation of this study is that the judges were unable to disregard the settlement demands when they set damages in the case; it strains credulity to think that they could have ignored the demands but chose instead to award less in the low-anchor condition and more in the high-anchor condition to pursue a (nonobvious) sense of justice.

The pattern of results we observed in these seven scenarios defies easy explanation. One might be tempted to assert that judicial solicitude for constitutional rights explains the results in the last two scenarios, both of which had constitutional dimensions. We doubt, however, that judges take constitutionally inspired rules of admissibility any more or less seriously than the non-constitutionally inspired rules implicated by our other problems. Certainly, it is hard to see why judges would treat the attorney-client privilege with any less care than *Miranda* violations.

Alternatively, it also appears that judges were less able to ignore inadmissible evidence when they were making factual determinations that were less amenable to judicial review. In the first five scenarios, the inadmissible evidence supported: lower or higher damage awards, a judgment for the defense in a civil case, an acquittal in a criminal case, and a longer criminal sentence. Some of these issues are not even subject to appeal, and the others would result in reversals only in extraordinary circumstances. By contrast, in the two scenarios in which the judge ignored the inadmissible evidence, it supported a finding of probable cause for a search in a criminal case and a guilty verdict in a criminal case. Both constitute decisions that are likely to be appealed and possibly overturned if deemed erroneous. Thus, judges were more likely to be influenced by inadmissible information if appellate review was deferential or unlikely. Whether this theory truly explains the pattern of results, however, would require more data.

²⁸⁵ See supra Part III.A.

IV. PRESCRIPTIONS

We are somewhat reluctant to make policy recommendations on the basis of the limited data we have collected for this Article. Our findings do raise important questions for the justice system, however. Judges are the key players in this system. They decide a sizable percentage of civil cases at trial, ²⁸⁶ and they decide many more cases on motion than they do at trial. ²⁸⁷ If their judgments at trial and their decisions on motions are tainted by inadmissible evidence, the fairness of the justice system may be undermined.

We believe our results support the following three policy recommendations.

A. Separating "Managerial Judging" from Adjudication

We first propose that courts should separate judges' "managerial" functions from their "adjudicative" functions as a way of reducing the likelihood that judges will be influenced by inadmissible evidence they encounter during *pretrial* proceedings when making merits-based decisions on motions or at *trial*. Courts, in other words, should adopt a kind of divided decision making. For example, courts might emulate the allocation of tasks in some federal district courts in which magistrate judges resolve discovery disputes and conduct settlement conferences while the district judges decide substantive motions and preside over trials as the fact finders. This could be done whether there are two types of judges, or just one. Two judges could be assigned to each case, with one judge addressing the merits and the other judge deciding everything else. They could then swap roles on alternating cases.

Alternatively, courts could divide case management into several subparts, such as litigation motions, settlement, and trial, and assign

See Marc Galanter, Real World Torts: An Antidote to Anecdote, 55 MD. L. REV. 1093, 1100 n.17 (1996) (citing a study where 24% of the 1649 federal and state cases were terminated by some form of adjudication other than trial, such as arbitration or dismissal on the merits).

²⁸⁶ See supra note 109.

²⁸⁸ See Resnik, supra note 34, at 386 (describing managerial judging as involvement, for example, in pretrial case development).

See FED. JUDICIAL CTR., supra note 22, § 22.91, at 446-47 ("Judges who have been involved in unsuccessful settlement negotiations sometimes turn over to another judge the responsibility for trying the case because they have been privy to information on the merits of the case or on issues that would otherwise not have been revealed.").

judges to each task for all cases. Such "master calendar" systems are common in many state courts and were common in the federal courts until the late 1960s. Finally, courts might adopt rules prohibiting the judge assigned to try the case from participating in settlement conferences involving that case. Indeed, various courts, in largely piecemeal fashion, have adopted each of these reforms.

This approach to the "difficulty of deliberately disregarding" problem is not without its costs. In the normal course in federal court, judges are assigned to particular cases and oversee them from beginning to end. This is efficient in that one judge is familiar with the facts, applicable law, procedural history, relationship between the parties, and so forth.²⁹³ Under a system of divided decision making, a different judge might resolve a discovery dispute, rule on a pretrial motion, supervise settlement, and try the case. Each of those judges would have to get up to speed on the case, at least well enough to resolve whatever matters are in front of that particular judge.

Still, the benefits of this approach might outweigh its costs. This approach would dramatically decrease, though certainly not eliminate, the likelihood that a trial judge rendering a merits-based decision would have been exposed to inadmissible information before trial. Consider, for example, the settlement scenario we described above. ²⁹⁴ If that dispute had been litigated in a court characterized by the kind

See Hon. James M. Carter, Effective Calendar Control—Objectives and Methods, 29 F.R.D. 227, 237-40 (1961) (describing the principal advantages and disadvantages of master calendar systems and individual assignment calendar systems).

 $^{^{291}}$ See Richard L. Marcus, Slouching Toward Discretion, 78 NOTRE DAME L. REV. 1561, 1587 (2003) (describing the trend from master calendars to single-judge assignment).

See, e.g., E.D. CAL. L.R. 72-302(c)(1) (referring all discovery motions to magistrate judges); N.D. CAL. ADR L.R. 7-2 ("A settlement conference generally will be conducted by a Magistrate Judge, but in some limited circumstances may be conducted by a District Judge. Upon written stipulation of all parties, the assigned Judge . . . may conduct a settlement conference."); see also Harold Baer, Jr., History, Process, and a Role for Judges in Mediating Their Own Cases, 58 N.Y.U. ANN. SURVEY AM. L. 131, 144-47 (2001) (explaining a "central criticism of judicial mediation . . . that, not only is it a waste of resources for a federal judge to act as mediator, but it is also unethical for a judge to mediate a case that appears on his own docket").

New York, Report Evaluating the Individual Assignment System in the Southern District of New York After Three Years Experience, 69 F.R.D. 493, 497 (1976) (attributing a nearly 40% reduction in civil caseload over a three-year period to the conversion of the United States District Court for the Southern District of New York to an individual assignment system).

See supra Part III.A.

of divided decision making we are proposing here, plaintiff's counsel would have voiced his client's demands not to the eventual trial judge, but rather to a settlement judge. Thus, the trial judge would have made her damage award without having been exposed to the inadmissible settlement demand.

B. Further Justification for the Jury Trial

We also recommend that jurisdictions favor another form of divided decision making. Juries have been the targets of much criticism, especially in recent years.²⁹⁵ The data we report in this Article, however, suggest that even if these criticisms are valid, other reasons support continued reliance on jury trials rather than bench trials. In our earlier study of judges, we made a similar recommendation, arguing that "those clamoring for judges to replace juries should proceed with caution" because juries may be able to make better decisions than judges in some circumstances.²⁹⁶ Here, we reiterate that recommendation, though we do so on a slightly different basis.

Both jurors and judges are likely to have difficulty disregarding in-admissible evidence, but judges presiding in a jury trial can protect juries from encountering inadmissible evidence in a way that they cannot protect themselves. Most obviously, jurors will never be exposed to the inadmissible evidence that judges encounter during the pretrial phase of litigation. Moreover, even during the trial itself, judges have procedural devices at their disposal, such as *in camera* review, to enable them to review potentially inadmissible evidence outside the presence of the jury. In short, the exclusionary rules operate best in a system of divided decision making in which the judge serves as gatekeeper and the jury serves as fact finder.

As a related matter, these results suggest that clear rules of evidence (such as the blanket prohibition on admissibility of privileged information, absent crime or fraud) have an advantage over standards for admissibility (such as the rule allowing old criminal convictions to be admitted if they are highly relevant). Standards encourage parties

²⁹⁵ See, e.g., Thomas A. Eaton, Susette M. Talarico & Richard E. Dunn, Another Brick in the Wall: An Empirical Look at Georgia Tort Litigation in the 1990s, 34 GA. L. REV. 1049, 1097 (2000) (noting the juries have been "the target of much criticism by proponents of tort reform"); Michael J. Saks, Public Opinion About the Civil Jury: Can Reality Be Found in the Illusions?, 48 DEPAUL L. REV. 221, 233-34 (1998) (discussing attacks on the jury system by well-funded interest groups).

Guthrie, Rachlinski & Wistrich, supra note 108, at 827.

to present evidence to the judge in an effort to have it admitted, whereas rules might discourage such activity. Consequently, standards for admissibility will force judges to review more evidence, and possibly be affected by it regardless of whether it is admitted, than clear rules would.

C. Establishing Guidelines for Civil Damages

Third, and finally, we worry that judges might be particularly vulnerable to the inappropriate influence of inadmissible information when assessing damages. Judges supervising settlement conferences, for instance, might inadvertently be exposed to inadmissible anchors, like settlement demands or insurance policy limits, or to other inadmissible information that might influence their assessment of damages, like whether the defendant in a tort suit has taken subsequent remedial measures. This is of particular concern when judges must award damages that are inherently difficult to quantify, such as "pain and suffering" damages or punitive damages. These kinds of damages seem particularly vulnerable to untoward influences such as anchoring.²⁹⁷ Others have expressed the concern that these influences affect juries;²⁹⁸ our results suggest that judges are also vulnerable. The results we report in this Article provide an argument for limiting the fact finder's discretion in this area, whether that fact finder is a judge or a jury.

Judges, like jurors, are vulnerable to inappropriate influences on their determination of damage awards. In our earlier works and here, we observed both enormous variation in the damage awards that judges felt to be appropriate and the undesirable influence of anchoring. We recommend that legislatures or courts adopt damage schedules, akin to criminal sentencing guidelines, to structure and confine judicial discretion. Our goal is not "tort reform"; we are not advocating damage caps. Nor are we advocating ranges so narrow or inflexible that they unduly deprive judges and juries of their discretion. Rather, we suggest that jurisdictions adopt guidelines to inform fact-finder discretion in awarding damages in order to prevent or limit the

Id.

²⁹⁷ See CASS R. SUNSTEIN, REID HASTIE, JOHN W. PAYNE, DAVID A. SCHKADE & W. KIP VISCUSI, PUNITIVE DAMAGES: HOW JURIES DECIDE 244-48 (2002) (discussing the effect of anchoring on punitive damages).

extent of distortions resulting from limitations on human cognitive ability.²⁹⁹

The research on anchoring, in fact, provides insights into the potential value of even a nonbinding damage schedule, akin to workers' compensation systems. The inappropriate influence of anchoring arises from the arbitrary nature of some anchors available to trial judges as they determine the appropriate damage award. Damage requests by attorneys are self-serving, awards in past cases can be idiosyncratic, and reliance on numbers discussed during settlement talks can undermine the settlement process. Damage awards taken from an agreed schedule, however, would ideally represent a consensus view of an appropriate award and hence would inject a meaningful anchor into the process. Judges could use a damage schedule as a starting point and then adjust as may be appropriate.

What we propose for civil damages, in effect, is adoption of something like the federal criminal sentencing system as it exists today, after the Supreme Court's decision in *United States v. Booker*. As Justice Breyer explained in a separate opinion, the Court in *Booker* only declared the sentencing guidelines unconstitutional to the extent that they are binding on a sentencing judge's decision. Federal district judges must still calculate the guidelines range in determining criminal sentences. The guidelines will, in effect, provide a meaningful anchor to guide sentencing. A similar procedure would provide greater predictability and equity to damage determinations in civil cases.

CONCLUSION

Some of the changes to the rules of evidence and procedure suggested by empirical research in psychology may seem too novel or costly to be considered seriously. As we learn more about human de-

²⁹⁹ See Sunstein, Kahneman, Schkade & Ritov, supra note 146, at 1183 (suggesting that the remedy for bias is the adoption of guidelines).

³⁰⁰ 125 S. Ct. 738 (2005).

Id. at 764 (Breyer, J., opinion of the Court in part) ("[W]e must sever and excise two specific statutory provisions: the provision that requires sentencing courts to impose a sentence within the applicable Guidelines range... and the provision that sets forth standards of review on appeal, including de novo review of departures from the applicable Guidelines range...." (emphasis omitted)).

³⁰² *Id.* at 767 ("The district courts, while not bound to apply the Guidelines, must consult those Guidelines and take them into account when sentencing.").

cision making and the operation of our justice system, however, it is likely that we will eventually accept the need for fine-tuning, and perhaps even significant changes. As Professor Damaška has observed:

As science continues to change the social world, greater transformations of factual inquiry lie ahead for all justice systems. These transformations could turn out to be as momentous as those that occurred in the twilight of the Middle Ages, when magical forms of proof retreated before the prototypes of our present evidentiary technology. 303

Of course, it would be prudent to conduct further research before significant changes are made. As studies of jury decision making have shown, well-intentioned efforts to solve problems may be ineffective, and sometimes only succeed in making the problem worse. In addition, because the rules of evidence and procedure are merely parts of the larger legal system, the collateral consequences of tinkering with some parts while leaving others untouched must be taken into account. If the results of existing research are confirmed, however, we may have a responsibility to make the changes sooner rather than later. Judicial decisions have serious consequences for litigants, and undue delay in eliminating sources of error would undermine our commitment to accurate and just adjudication. Litigants, courts, and the community as a whole can only benefit if legal procedures are updated to keep pace with progress in the understanding of human decision making.

The results of our studies show that judges frequently cannot "close the valves of [their] attention." The presumption that people

DAMAŠKA, *supra* note 1, at 151; *see also* Julius Stone, *The Decline of Jury Trial and the Law of Evidence*, 3 RES JUDICATAE 144, 148 (1947) (describing the "overhaul" of the evidence rules, "in the light of changing methods of trial," as "the major task of our century in this branch of the law").

 $^{^{304}}$ Broeder, *supra* note 79, at 753-54.

See Michelson v. United States, 335 U.S. 469, 486 (1948) (noting that much of the law regarding evidence and good character is "archaic, paradoxical and full of compromises and compensations by which a rational advantage to one side is offset by a poorly reasoned counterprivilege to the other," but "somehow it has proved a workable even if clumsy system when moderated by discretionary controls in the hands of a wise and strong trial court," and pulling "one misshapen stone out of the grotesque structure" would more likely "upset its present balance" than "establish a rational edifice").

³⁰⁶ See FED. R. EVID. 102 (describing the purpose of the Federal Rules of Evidence as promoting "the end that the truth may be ascertained and proceedings justly determined").

See supra note 283.

can ignore what they know, or use it for some purposes but not for other purposes, may sometimes be true, but often is little more than a convenient fiction. This may mean that judicial decision making is not as accurate as we hope it is. The time has come to start thinking about how we are going to solve that problem.

 $^{^{308}}$ See Lon L. Fuller, Legal Fictions 9 (1967) ("A fiction is either (1) a statement propounded with a complete or partial consciousness of its falsity, or (2) a false statement recognized as having utility.").

APPENDIX: STIMULUS MATERIALS

Assessment of Damages

Imagine that you are presiding over an automobile accident case in which the parties have agreed to a bench trial. The plaintiff is a 31-year-old male schoolteacher and the defendant is a large package-delivery service. The plaintiff was sideswiped by a truck driven erratically by one of the defendant's drivers. As a result of the accident, the plaintiff broke three ribs and severely injured his right arm. He spent a week in the hospital, and missed six weeks of work. The injuries to his right arm were so severe as to require amputation. (He was right-handed.)

The parties have stipulated that the accident was caused solely by the negligent driving of the defendant's employee. The parties have settled the plaintiff's claim for medical expenses, and the plaintiff's economic claims for lost wages and the like. The only remaining issue in the lawsuit is the amount of damages the plaintiff should receive for pain and suffering and the loss of his right arm.

In an effort to settle the case, the parties requested that you preside over a settlement conference before the commencement of the trial. During the settlement conference, the plaintiff's attorney confided in you that his client [Low anchor version and its control: could use the money and wanted to eliminate any possibility of an appeal. / High anchor version and its control: was intent upon collecting a significant monetary payment.] [Low anchor version: He stated that his client would be willing to settle for \$175,000.] [High anchor version: He stated that his client would not be willing to settle for less than \$10,000,000.] Nevertheless, the parties were unable to reach a settlement and the case proceeded to trial. The settlement discussions are, of course, not admissible evidence at trial under Rule ____ of the ____ Rules of Evidence.

The evidence presented at trial included testimony from the plaintiff, a young father, that he could no longer play recreational softball, or even play catch with his son. Although the plaintiff has continued teaching, he testified that doing his job is somewhat more difficult, and that he is subject to periodic ridicule by the students. Plaintiff also described the severe pain he endured before arriving at the hospital, during the surgery to amputate his arm, and during his post-surgical therapy.

Although both parties presented arguments, neither suggested a specific figure, leaving the amount to be awarded entirely up to you. How much would you award plaintiff for pain and suffering and loss of his right arm?



Evaluation of a Contract Dispute

Suppose that you are presiding over a bench trial in a case in which the plaintiff, John Jones, is suing SmithFilms for breach of contract. Jones was hired by SmithFilms as an independent contractor to assist SmithFilms in making a movie. The contract between the parties consists of a one-page letter signed by Jones and Stan Smith, the president of SmithFilms. The letter simply recites that Jones will provide various services to SmithFilms, that Jones will continue to be paid a monthly salary as an independent contractor until the film is released, and that Jones will receive such other consideration as was agreed upon by the parties during the pre-signing breakfast.

SmithFilms and Jones agree on everything that was discussed at the breakfast except whether SmithFilms would give plaintiff producer credit. Jones contends that Smith promised him producer credit and SmithFilms denies this. Both agree that Jones' efforts turned out to be an invaluable part of the film's production and were in no small measure responsible for the film's ultimate commercial success. Jones is seeking damages arising from SmithFilm's refusal to give him producer credit.

* * *

[Suppression Materials: Prior to trial, the parties became embroiled in a discovery dispute. The dispute concerned a request by Smith-Films that Jones produce an audiotape which Jones made of a confidential telephone conversation with Greg Gonzalez, an attorney, shortly after the contract was signed. (Gonzales is not representing Jones in this lawsuit.) SmithFilms argued that Gonzalez may have been giving Jones business rather than legal advice. To resolve the dispute, the parties requested that you listen to the audiotape *in camera*. You do so. At one point in the tape recorded conversation, the following statements were made:

Jones: I really needed this deal and I was afraid that asking for producer credit might be a turn-off, so I got nervous and did not ask for it. But I meant to. I need your legal opinion, Greg. Suppose that I send Smith a letter now saying that I meant for producer credit to be part of the deal. Would that be legally binding?

Gonzalez: No. If you and Smith did not agree on producer credit during breakfast, you don't have a leg to stand on. A letter now won't help.

Jones: Darn. That's a shame.

The rest of the audiotape confirms that Gonzalez was functioning solely in a legal capacity.

How would you rule on a motion to compel production of the audiotape? (check one)

____ I would grant the motion.
___ I would deny the motion.]

* * *

At trial, Jones testified that during their breakfast meeting, Smith agreed that SmithFilms would give Jones producer credit. He also called as a witness the woman who was their waitress during the breakfast meeting. She testified that she thought that she heard one of the parties say the words, "you can have producer credit." On cross examination, she admitted that she had trouble remembering the breakfast and was not 100% certain of this. Smith had suffered a severe stroke just before his deposition was taken and he has been unavailable to testify ever since. SmithFilms offered evidence that SmithFilms usually did not give producer credit to independent contractors.

How would you decide this case (check one):

____ For Jones, because Smith agreed to give Jones producer credit during their meeting.

____ For SmithFilms, because Smith did not agree to give Jones producer credit during their meeting.

Evaluation of a Criminal Case

Imagine that you are presiding over a bench trial in which Mr. Geiger has been charged with sexual assault. The evidence presented at trial is summarized below:

Mr. Geiger is a senior at a local university, as is the complainant, Ms. Smith. Several months ago, Ms. Smith and her new fiancé attended a party hosted by Mr. Geiger's fraternity. Several witnesses reported that they saw Ms. Smith drinking heavily at the party. Witnesses also reported seeing Mr. Geiger and Ms. Smith talking and drinking together and that at one point, Mr. Geiger seemed to help Ms. Smith "walk" or "stagger" into Mr. Geiger's room. The two had never met before. Apparently, Ms. Smith's fiancé began looking for her and was told that she was in Mr. Geiger's room. He entered Mr. Geiger's room where he discovered Mr. Geiger on top of Ms. Smith; her skirt was pulled up over her waist. He pulled Mr. Geiger off of Ms. Smith, threw him onto the floor, and then stormed off. Ms. Smith got up and ran after him.

A campus police officer testified that two hours after these events, Ms. Smith appeared at the campus police station and charged that she had been raped by Mr. Geiger in his room. She reported to the police that she had been drinking heavily and that Mr. Geiger agreed to help her into his room because she had become dizzy and needed to lie down. Then, she claimed, he forced himself on her. She told police that she clearly refused to consent to sexual intercourse and shouted "no" a couple of times, but Mr. Geiger held her down and continued. According to the police officer, Smith became visibly upset while recounting her story. A physical examination revealed bruises on her upper thighs.

Ms. Smith's fiancé testified that he had initially thought that Ms. Smith's encounter with Mr. Geiger may have been consensual, but that several days later, Ms. Smith convinced him that it was not. They had just gotten engaged a few days before the party and still plan to get married after college. He claims that before the incident, Ms. Smith was cheerful and extroverted, while now Ms. Smith seems moody and depressed. He asserted that she often bursts into tears for no reason and is afraid to attend social gatherings.

* * *

[Suppression Materials: In his defense, Mr. Geiger is trying to introduce testimony from five other students, 3 male and 2 female, that Ms. Smith had a well-deserved reputation for being sexually promiscuous. This includes one of Ms. Smith's best friends who will testify that before Ms. Smith met her fiancé, she "had trouble remembering what fraternity house she woke up in each Sunday morning." Another witness, a former roommate of Ms. Smith, will assert that Ms. Smith "liked to loosen her inhibitions with a few beers too many and then have rough sex with the first guy she saw." The prosecution has moved to exclude such evidence on the ground that it violates Arizona's "Rape Shield" statute (section 13-1421 of the Arizona Criminal Code) which forbids the introduction of evidence concerning a victim's "chastity" or "reputation for chastity" in cases involving sexual assault.

How would you rule?
____ This testimony is admissible.
___ This testimony is not admissible.]

Mr. Geiger testified in his own defense. He admitted having intercourse with Ms. Smith, but he contends that she consented to the encounter. He admitted to having intercourse with seven different women during his time at college, most of which were one-time encounters at parties. He denied that he has ever had sex without a woman's consent.

Based solely on the evidence admitted at trial, would you find Mr. Geiger guilty of sexual assault?

Yes No

Assessment of Pain and Suffering Damages

You are presiding over a bench trial in a civil case. The facts are as follows:

The plaintiff is Bill Post, a single, 35-year-old automobile mechanic. On February 20, 2001, Mr. Post slipped while operating a riding [lawn-mower/snowblower] on a steep driveway. The [mower/blower] tipped onto him, severely damaging his left arm. (Mr. Post is right handed.) Although the [mower/blower] was equipped with a kill-switch that should have turned the [mower/blower] off when it tipped, the switch malfunctioned.

The manufacturer, [Lawn/Snow] King, Inc., admitted that the kill-switch contained a manufacturing defect and admitted that it was liable to Mr. Post. The parties settled on amounts for medical expenses and lost wages, but could not agree on compensatory damages for pain, suffering, and loss of enjoyment of life. This amount is the only issue to be resolved at trial.

During the trial, Mr. Post presented testimony from a surgeon about the three lengthy operations that were required to repair the damage to Post's shoulder and arm, and from a rehabilitation specialist about Post's bi-weekly physical therapy sessions. Both agreed that Mr. Post's condition is unlikely to improve. Although his left arm did not have to be amputated, the nerves and muscles were so badly damaged that it is essentially useless.

Mr. Post testified about the incident, as well as about the continuing pain in his arm, the loss of his job, the frustration of adapting to life with just one usable arm, and the nature and extent of his pain and resulting total disability. Among other things, Mr. Post testified that he had to take prescription narcotic pain medication continuously.

* * *

[Suppression Materials: During its brief cross-examination of Mr. Post, [Lawn/Snow] King sought to introduce evidence of Post's four prior felony convictions. Specifically, Mr. Post had been convicted of swindling schemes in which he obtained the life savings of elderly retirees by falsely promising them exorbitant rates of return, and then using their money to pay his living expenses. His most recent conviction was fourteen years ago, and he had spent two years in prison for this conviction. [Lawn/Snow] King concedes that pursuant to Rule

609 of the Arizona Rules of Evidence, the evidence of Post's prior convictions is admissible only to impeach his credibility. Mr. Post objected to admitting this evidence, even with a limiting instruction. He contended that "the probative value of the conviction" does not "substantially outweigh its prejudicial effect" as required by Rule 609(b) of the Arizona Rules of Evidence (which governs the admission of criminal convictions more than 10 years old).

How would you rule on the plaintiff's objection?
Overrule the objection and allow the plaintiff to be im-
peached with his prior convictions.
Sustain the objection and exclude the evidence of the
plaintiff's prior convictions.]

* * *

[Lawn/Snow] King argued that the plaintiff was exaggerating his injury. The company presented testimony from a physical and occupational therapist who had treated many people with injuries similar to those suffered by Mr. Post. This expert testified that such people usually can control their pain and lead relatively normal lives.

Based solely on the evidence admitted at trial, how much would you award the plaintiff in compensatory damages?



Sentencing

Before you for sentencing is Sam Kaiser, who was found guilty of possession of 150 grams of methamphetamine. The methamphetamine was found in a jacket pocket after a legal search. At trial, Kaiser argued, unsuccessfully, that the jacket was not his.

According to the federal sentencing guidelines, possession of 150 grams of methamphetamine has a base offense level of 26.

Kaiser's criminal history includes several convictions for larceny and a minor drug possession. His total "criminal history points" sum to 4, which puts him in category III for sentencing. Kaiser is 27 years old, dropped out of high school when he was 17, has never held employment for very long, is not married, and has no children. He was raised in poverty by a single mother, who did not appear on his behalf.

At offense level 26 and criminal history category III, the sentencing guidelines provide for a sentence of between 78 and 97 months.

After Kaiser's conviction, he cooperated with the prosecution in exchange for a recommendation that he be sent to a particular prison. The prosecution agreed that none of the information he provided would be used against him as long as he cooperated fully.

[Control: Kaiser revealed the name of his supplier, but nothing else of substance.]

* * *

[Suppression: Kaiser revealed that he had helped his 30-year-old cousin produce methamphetamine in a basement laboratory. Kaiser also revealed that his cousin had a 15-year-old girlfriend who frequently "tried out" their batches for them.

The prosecution asked that you add 6 levels to Kaiser's offense level, pursuant to the sentencing guidelines, because he had been engaged in the manufacture of methamphetamine in a fashion that had endangered a minor. Chapter 2D1.1(b)(4) of the federal sentencing guidelines provides that if the offense "created a substantial risk of harm to a minor, increase by 6 levels." This would raise the sentence to level 32. At offense level 32 and criminal history category III, the sentencing guidelines provide for a sentence of between 151 and 188 months. Kaiser's attorney argued that the prosecution had agreed not to use any of the information he provided against him.

Would you enhance the sentence level by 6 levels, as the prosecution requests?

Yes No]

* * *

No other circumstances supporting any additional enhancements, departures, or other adjustments are present.

What should Kaiser's sentence consist of? _____ months.

Fourth Amendment Issue (Foresight-Warrant Condition)

[Foresight: Imagine that you have been asked to issue a telephonic warrant authorizing Officer John Smoot to search the trunk of a parked car. Here are the facts:]

[*Hindsight*: Imagine that you have been asked to rule on a motion to suppress evidence obtained from a warrantless search of the trunk of a parked car. Here are the facts:]

Officer Smoot was assigned to patrol public parking areas surrounding an arena holding a rock and roll concert. While cruising the area, Officer Smoot noticed a well-dressed man exit a black BMW. The man looked around nervously, opened his trunk, and fiddled around with something in the trunk for a few seconds. After closing the trunk and locking the car, the BMW driver met an apparent friend, bought concert tickets at the ticket window, and entered the arena to attend the concert.

About 30 minutes later, Officer Smoot drove past the BMW again and noticed that the driver's side window was open. Officer Smoot assumed the driver wouldn't return to his car until the concert ended in two or three hours, but he wasn't entirely sure of this. Concerned that the car might be easy prey for an enterprising car thief, Officer Smoot parked his patrol car, got out, and went over to the BMW to roll up the window.

Upon arriving at the BMW, Officer Smoot smelled something that he believed, based on a demonstration at a training session several years earlier, to be burnt methamphetamine. He looked inside the car and didn't see any drugs, but he did notice some Visine, a local map, and a couple of empty beer cans.

[Hindsight: Based on these observations, Officer Smoot believed that there was probable cause to search the trunk of the car. He opened the trunk and found 10 pounds of methamphetamine, other drug paraphernalia, and a gun that had recently been fired. Following the concert, one of Officer Smoot's colleagues arrested the BMW driver when he returned to his car.]

[Foresight: Based on these observations, Officer Smoot believes there is probable cause to search the trunk of this car and has asked you to issue a telephonic warrant authorizing the search. Will you issue the warrant?

_____ Yes, there is probable cause for the search; I would issue the warrant.

_____ No, there is not probable cause for the search; I would not issue the warrant.]

[Hindsight: Subsequent investigative work revealed that the driver's fingerprints were on the gun and that this gun had been used earlier in the day to kill a suspected drug dealer living on the other side of the city. The BMW driver is now being prosecuted for murder, unlawful possession of a firearm, and several drug violations.

His defense attorney has filed a motion to suppress the evidence obtained from the trunk on the ground that there was no probable cause to conduct the search. Will you allow the evidence to be admitted?

	Yes,	there wa	s pro	babl	le cause	for t	he se	earch	ı; l	[wou]	\mathbf{d}	ad	mi	t
the eviden	ce.													

_____ No, there was not probable cause for the search; I would not allow the evidence to be admitted.]

Evaluation of a Robbery Trial

Mr. Jones is on trial for armed robbery. Concerned that he is a member of a small minority in the community and will face an unsympathetic jury, Mr. Jones has waived his right to a jury trial. You are thus presiding in a bench trial. The following summarizes the evidence presented at trial:

In the late evening, an armed assailant wearing jeans, a white t-shirt, a ski mask, and black gloves entered a 7-11 and demanded that the cashier put money in a plastic shopping bag. The cashier complied, quickly emptying roughly \$200 into the bag. The cashier was the only other person in the store at the time. The robbery was captured on a surveillance camera videotape.

When police arrived, the cashier gave a brief description of the suspect. The cashier reported that once outside the store, the perpetrator pulled off his ski mask, discarding both it and a gun as he climbed quickly into a white Ford Taurus and sped off. The cashier stated that he thought that the last two digits of the car's Arizona license plate were "GB". Police retrieved the gun and mask; neither had usable fingerprints. The gun had been reported stolen several years earlier by its original owner, who is now deceased.

Several police officers then began a search of the neighborhood for a white Ford Taurus. Two hours after the crime, they found one, parked 10 blocks from the crime scene. The last two digits of the license plate were "C8." Department of Motor Vehicle records identified the owner as the defendant. The police knocked on the door to his apartment. The defendant matched the height, weight and race of the perpetrator in the surveillance videotape, and was wearing jeans and a white t-shirt. The police then insisted that the defendant accompany them to the station-house to answer questions, which he did.

Upon arrival, the police led him to a room, locked the door, read him his Miranda rights, and began interrogating him. The defendant reported that he had been home alone all evening. The police allowed the cashier to listen in from the next room. The cashier reportedly said "that sounds like the guy." The police then placed the defendant under arrest. They obtained a search warrant and searched his apartment. They found shopping bags similar to the one used by the perpetrator of the crime and a pair of black gloves. The defendant also had several hundred dollars in cash in his wallet. The police did not find firearms or ammunition of any kind.

[*Control condition*: The police continued questioning the defendant, but he requested a lawyer and the interrogation ended.]

[Suppression condition: The police continued questioning the defendant. Even though the defendant clearly requested a lawyer, twice, the police refused to call one and continued the interrogation. Two hours later, the defendant confessed, and agreed to write out a description of the crime. His written description matched the events perfectly, including the fact that he discarded the ski mask and gun outside the store (which the police had not told him).

The defendant's attorney has moved to suppress the confession, arguing that the interrogation violated the defendant's rights under *Miranda* by continuing after the defendant had requested an attorney. Would you grant the motion and suppress the evidence?

Yes No]

Based solely on the evidence admitted at trial, would you convict the defendant?

Yes No