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HOW LAWYERS' INTUITIONS PROLONG LITIGATION

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JEFFREY J. RACHLINSKI†

ABSTRACT

Most lawsuits settle, but some settle later than they should. Too many compromises occur only after protracted discovery and expensive motion practice. Sometimes the delay precludes settlement altogether. Why does this happen? Several possibilities—such as the alleged greed of lawyers paid on an hourly basis—have been suggested, but they are insufficient to explain why so many cases do not settle until the eve of trial. We offer a novel account of the phenomenon of settling on the courthouse steps that is based upon empirical research concerning judgment and choice. Several cognitive illusions—the framing effect, the confirmation bias, nonconsequentialist reasoning, and the sunk-cost fallacy—produce intuitions in lawyers that can induce them to postpone serious settlement negotiations or to reject settlement proposals that should be accepted. Lawyers' tendencies to rely excessively on intuition exacerbate the impact of those cognitive illusions. The experiments presented in this Article indicate that the vulnerability of experienced lawyers to these cognitive errors can prolong litigation.

[TOC]

I. INTRODUCTION

Settlement is a critical aspect of civil litigation.¹ Although the exact

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settlement rate is unclear, most cases settle.² This is fortunate because, absent settlement, civil litigation would quickly overwhelm the courts and undermine the goals of the legal system.³ Settlement also gives the parties an opportunity to obtain a resolution that is mutually satisfactory, whereas adjudication tends to produce a winner and a loser, or even to impose a solution that neither party wants.⁴ Although an excessively high settlement rate might be undesirable,⁵ most observers recognize that settling civil

1. See Kevin M. Clermont & Theodore Eisenberg, *Litigation Realities*, 88 CORNELL L. REV. 119, 137 (2002) (“A basic truth, then, is that settlement is numerically much more important than actual litigation.”); Theodore Eisenberg & Charlotte Lanvers, *What Is the Settlement Rate and Why Should We Care?*, 6 J. EMPIRICAL LEGAL STUD. 111, 112 (2009) (“[S]ettlement is the modal case outcome.”); Michael J. Saks, *Do We Really Know Anything About the Behavior of the Tort Litigation System—And Why Not?*, 140 U. PA. L. REV. 1147, 1212 (1992) (“Settlement is where the action is.”). By the term “settlement,” we mean any consensual compromise or trade of a claim for value, whether monetary or nonmonetary. See BLACK’S LAW DICTIONARY 1496 (9th ed. 2009) (defining a settlement as “[a]n agreement ending a dispute or lawsuit”).

2. Eisenberg & Lanvers, *supra* note 1, at 146 (“If a single settlement rate is to be invoked, it should be that about two-thirds of civil cases settle”); Marc Galanter & Mia Cahill, *“Most Cases Settle”: Judicial Promotion and Regulation of Settlements*, 46 STAN. L. REV. 1339, 1387 (1994) (“[M]ost litigation results in settlement and . . . the portion of cases settled is increasing.”); Herbert M. Kritzer, *Adjudication to Settlement: Shading in the Gray*, 70 JUDICATURE 161, 162–64 (1986) (estimating that only 22 percent of cases are resolved by trial, arbitration, decisions, or dismissal for cause); Laura Beth Nielsen, Robert L. Nelson & Ryon Lancaster, *Individual Justice or Collective Legal Mobilization? Employment Discrimination Litigation in the Post Civil Rights United States*, 7 J. EMPIRICAL LEGAL STUD. 175, 181, 186–87 (2010) (reporting the results of a study of 1672 employment discrimination cases filed in seven regionally diverse U.S. district courts during the period 1988 through 2003, and asserting that “settlement is the modal outcome”); Robert I. Weil, *This Judge for Hire*, CAL. LAW., Aug. 1992, at 41, 42 (reporting that out of every one hundred cases filed, sixty-seven are settled, thirty are decided on motion, and only three are tried).

3. See Nathalie Chappe, *Demand for Civil Trials and Court Congestion*, 33 EUR. J. L. & ECON. 343, 344 (2012) (“Delays in the resolution of legal disputes create a wide variety of social costs: injured parties do not receive compensation when they most need it, individuals are deterred from bringing cases, future offences are insufficiently deterred”); Michael Mitsopoulos & Theodore Pelagidis, *Does Staffing Affect the Time to Dispose Cases in Greek Courts?*, 27 INT’L REV. L. & ECON. 219, 220 (2007) (“The significance that the presence of the rule of law, which nowadays is described by a coherent, predictable, speedy and consistent judicial decision-making process from case filing until final case disposition, has on economic activity has been stressed repeatedly in economic theory”); Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399, 445 (1973) (“To most experts in judicial administration, delay between the filing and final disposition of a legal claim is an unmitigated evil”); George L. Priest, *Private Litigants and the Court Congestion Problem*, 69 B.U. L. REV. 527, 534 (1989) (expressing the concern that “litigation delay . . . reduces the likelihood of litigation”).

4. See Galanter & Cahill, *supra* note 2, at 1350–51 (listing fifteen reasons why settlement is superior to adjudication); Carrie Menkel-Meadow, *Whose Dispute Is It Anyway? A Philosophical and Democratic Defense of Settlement (in Some Cases)*, 83 GEO. L.J. 2663, 2692 (1995) (listing eight positive attributes of settlement).

5. See Owen M. Fiss, *Against Settlement*, 93 YALE L.J. 1073, 1075 (1984) (“[S]ettlement is a capitulation to the conditions of mass society and should be neither encouraged nor praised.”); Marc Galanter, *The Vanishing Trial: An Examination of Trials and Related Matters in Federal and State Courts*, 1 J. EMPIRICAL LEGAL STUD. 459, 526 (2004) (arguing that a lack of fully adjudicated cases

disputes harnesses the judgment of the attorneys and often a settlement judge or other mediator to offer the parties a satisfactory resolution of their dispute without the expense that further litigation would entail.

The terms of settlements are important, but the timing of settlements also matters. Early settlements can be difficult to achieve for a variety of reasons.⁶ Cases can also settle too early. Settlements consummated before the litigants possess adequate information, whether of factual or a legal nature, may be premature. Premature settlements might send inaccurate signals to the parties and to society about what conduct is permitted and what the consequences of impermissible conduct will be.⁷ Achieving a sensible settlement might sometimes require some litigation to generate adequate information about a case. Moreover, precipitous settlements also might be the product of untoward conduct by lawyers or others with incentives to dispense with a case cheaply and quickly.⁸

On the other hand, settlements can occur too late. Delay in achieving a settlement can entail several undesirable consequences. First, in litigation, time is money. The longer the period of time that elapses between the filing of a lawsuit and its settlement, the more resources the parties are likely to invest in the litigation process.⁹ This is painful for them, and also costly for society, especially if the additional investment does not improve the quality

produces a system in which “[j]udges preside over routine settlements that reflect not legal standards but the strategic position of the repeat players.”)

6. See Thomas J. Miceli, *Settlement Delay As a Sorting Device*, 19 INT’L REV. L. & ECON. 265, 266 (1999) (“[D]elay is beneficial if it allows cases to settle that the defendant otherwise would have taken to trial.”).

7. See Galanter, *supra* note 5, at 526 (“The signals and markers that provide guidance for settlements derive increasingly from pronouncements that are not connected with an authoritative determination of facts.”); Kathryn E. Spier, *Settlement Bargaining and the Design of Damage Awards*, 10 J.L. ECON & ORG. 84, 93 (1994) (“[F]lat awards provide poor incentives for the injurer to take precautions to reduce the severity of an accident [A]wards that are sensitive to the true level of damages . . . provide better incentives for care.”).

8. John C. Coffee, Jr., *Class Wars: The Dilemma of the Mass Tort Class Action*, 95 COLUM. L. REV. 1343, 1371–73 (1995) (describing collusive settlements in mass tort cases); John C. Coffee, Jr., *The Regulation of Entrepreneurial Litigation: Balancing Fairness and Efficiency in the Large Class Action*, 54 U. CHI. L. REV. 877, 883 (1987) (expressing concern with “sweetheart” settlement deals in which a plaintiff’s attorney offers a rapid, favorable settlement in exchange for a high fee); Judith Resnik, *Money Matters: Judicial Market Interventions Creating Subsidies and Awarding Fees and Costs in Individual and Aggregate Litigation*, 148 U. PA. L. REV. 2119, 2178 (2000) (expressing the concern that common fee arrangements “may not provide sufficient incentive for lawyers to represent zealously . . .”).

9. See Stephen G. Bullock & Linda Rose Gallagher, *Surveying the State of the Meditative Art: A Guide to Institutionalizing Mediation in Louisiana*, 57 LA. L. REV. 885, 898 (1997) (“By the time of settlement, the vast majority of the costs, fees, emotional distress, and diversion of time have already been expended.”) (footnote omitted).

of the settlement.¹⁰ Second, the longer a lawsuit is pending, the more resources the court is likely to be required to invest in keeping track of the case, managing the case, deciding motions presented by the parties, and preparing for the possibility of trial.¹¹ Every judge can recall with frustration cases that settled on the day of trial—after the judge had devoted days to ruling on pretrial motions and to preparing jury instructions and verdict forms that were never used.¹² Third, delay in resolution of a case might provide a strategic advantage to one party or the other. For example, a wealthy defendant may use the threat of delay to persuade an indigent plaintiff to accept a lower settlement in exchange for certain immediate payment.¹³ This means that some plaintiffs might recover less than they should, or if the resource disparity runs in the opposite direction, extract more than they deserve. Finally, delay postpones compensation for victims and potentially diminishes deterrence of wrongdoers.¹⁴

An optimally timed settlement requires balancing the risks of premature settlement (which compromises the quality of settlement due to insufficient information, or precludes it because the parties' views of the

10. Edward D. Shapiro, *Settlement Counsel: Is It Right for Your Business?*, MUCH SHELIST KNOWLEDGE CENTER (Oct. 21, 2009), <http://muchshelist.com/knowledge-center/article/is-settlement-counsel-right-for-your-business> (“By settling your case earlier in the process . . . you will automatically reduce your litigation fees and related expenses. In particular, you will limit discovery and trial costs while accomplishing what would likely happen anyway, given that well over 95% of all cases settle before trial.”).

11. See John Dwight Ingram, *Why Aren't More Cases Settled?*, 45 S.D. L. REV. 94, 94 (2000) (“Judges will almost always benefit from the early settlement of cases. Settlements reduce their case loads and judges are often rated, either formally or informally, by the number of cases they have disposed of.”) (footnote omitted); Alan E. Friedman, Note, *An Analysis of Settlement*, 22 STAN. L. REV. 67, 88 (1969) (“Judicial resources are squandered if parties proceed to formal adjudication in cases where settlement would be more profitable for each, and society suffers when litigants devote their own resources to litigation needlessly.”).

12. See Malinda M. Sanders, *Settlement on the Courthouse Steps*, 61 BENCH & BAR MINN. Sept. 2004, at 16, 16 (“While there was some feeling of relief that we could get back to our normal routines, there was also disgust for the complete waste of time and resources the last-minute settlement caused.”); Joel L. Schrag, *Managerial Judges: An Economic Analysis of the Judicial Management of Legal Discovery*, 30 RAND J. ECON. 305, 308 (1999) (“[M]any settlements are reached ‘on the courthouse steps,’ after discovery costs are sunk.”) (footnote omitted); Harry Woolf, *Civil Justice in the United Kingdom*, 45 AM. J. COMP. L. 709, 717 (1997) (“The very high rate of late settlement, especially settlement on the day of the trial, leads to overlisting by the courts in an attempt to ensure full use of judges' time. Where cases fail to settle this results in further cost and delay for the cases which fail to come on. Where cases do settle it results in waste of judicial time.”).

13. See H. LAURENCE ROSS, *SETTLED OUT OF COURT: THE SOCIAL PROCESS OF INSURANCE CLAIMS ADJUSTMENT* 85 (rev. 2d ed. 1980) (“[I]n selected cases delay may well be a tool of considerable power, and on occasions it may well be used consciously to lower the settlement . . .”).

14. See Tyler T. Ochoa & Andrew J. Wistrich, *The Puzzling Purposes of Statutes of Limitation*, 28 PAC. L.J. 453, 491–93 (1997) (noting that delay in resolution of a claim diminishes both compensation and deterrence).

case have not converged) against the cost of unduly delayed settlement (which needlessly consumes litigant, court, and societal resources).¹⁵ Just as there is a spatial sweet spot for hitting a tennis ball, so is there a temporal sweet spot for settlements. Although faster is not always better when it comes to settlements, it is usually better.¹⁶ Late settlements appear to be a more common mistake than premature settlements because a significant percentage of cases settle after most or all discovery has been completed, on the eve of trial, or on the courthouse steps.¹⁷

Why do parties often wait so long to settle civil lawsuits? Research on civil litigation suggests several possible explanations. First, assessing the settlement value of a case might be more difficult than it seems. Experienced lawyers and mediators frequently disagree about what cases are worth.¹⁸ That difficulty might promote procrastination.¹⁹ Second, the

15. See Stephen McGeorge Bundy, *Valuing Accuracy—Filling out the Framework: Comment on Kaplow* (2), 23 J. LEGAL STUD. 411, 433 (1994) (“Accuracy is a central aspiration of any procedural system, but it cannot be the only aspiration.”); Ezra Friedman & Abraham L. Wickelgren, *Chilling, Settlement, and the Accuracy of the Legal Process*, 26 J. L. ECON. & ORG. 144, 154 (2010) (“[A]ttempts to reduce the social costs dedicated to adjudication tend to decrease the accuracy of adjudication and may diminish the effectiveness of the legal process.”).

16. William F. Coyne, Jr., *The Case for Settlement Counsel*, 14 OHIO ST. J. ON DISP. RESOL. 367, 370 (1999) (“While about ninety percent of civil cases settle before trial, there is widespread dissatisfaction with the amount of time and money spent before the cases are resolved.”) (footnotes omitted); Kathryn E. Spier, “*Tied to the Mast*”: *Most-Favored-Nation Clauses in Settlement Contracts*, 32 J. LEGAL STUD. 91, 93 (2003) (“[E]arly settlement is socially desirable . . .”).

17. See Bullock & Gallagher, *supra* note 9, at 897 (“[A] large proportion of . . . settlements occur ‘on the courthouse steps.’”) (footnote omitted); Friedman & Wickelgren, *supra* note 15, at 153–54 (“Of course, settlements ‘on the courthouse steps’ (which are a significant fraction of settlements) result in less litigation cost savings (discovery is often the most costly part of litigation) that are usually considered the primary benefit of settlement.”); Russell Korobkin & Chris Guthrie, *Psychological Barriers to Litigation Settlement: An Experimental Approach*, 93 MICH. L. REV. 107, 128 (1994) (“Many cases in the real world, in fact, do not settle until just before trial or even during trial.”) (footnote omitted); Miceli, *supra* note 6, at 270 (concluding that “a large percentage of cases settle close to trial” and “the settlement amount is increasing in the length of the delay (all else equal)”); Sanders, *supra* note 12, at 16 (“I know that lawsuits are frequently resolved on the courthouse steps, if not late on the eve of trial. I know that last-minute settlements are ‘standard operating procedure’ for many lawyers. I know that the pressure of an imminent trial date sometimes has more influence over parties’ decision to settle than any other factor.”); Stewart J. Schwab & Michael Heise, *Splitting Logs: An Empirical Perspective on Employment Discrimination Settlements*, 96 CORNELL L. REV. 931, 948 (2011) (reporting a study of settlement of employment discrimination claims in the U.S. District Court for the Northern District of Illinois, and asserting that “[s]etting a trial date is the only litigation-stage variable that exerted an important influence on final settlement amounts with some level of consistency.”); Spier, *supra* note 16, at 95 (“[M]any cases settle on the courthouse steps . . .”) (footnote omitted).

18. PHILIP J. HERMANN, *BETTER, EARLIER SETTLEMENTS THROUGH ECONOMIC LEVERAGE* § 2.02 (1989) (reporting that experienced lawyers’ evaluations of the same case for settlement purposes varies widely); DOUGLAS E. ROSENTHAL, *LAWYER AND CLIENT: WHO’S IN CHARGE?* 36–38, 204–05 (1974) (same); GERALD R. WILLIAMS, *LEGAL NEGOTIATION AND SETTLEMENT* 5–7, 110–14 (1983)

parties might possess asymmetric access to information.²⁰ Uncertainty can inhibit or delay settlement because it can cause the parties to persist in divergent predictions of the likely outcome.²¹ Uncertainty also can encourage parties to obtain more information. Third, lawyers' greed might cause delay.²² Even though needless delays might damage their reputations,²³ lawyers paid by the hour face financial incentives to postpone settlement.²⁴ Fourth, parties might experience "regret aversion" and worry that they will later learn that the facts or law favor them far more than they initially believed.²⁵ Finally, many lawyers avoid being the first to mention the possibility of settlement. They fear that proposing settlement

(same).

19. See DWIGHT GOLANN, *MEDIATING LEGAL DISPUTES: EFFECTIVE STRATEGIES FOR LAWYERS AND MEDIATORS* § 2.1.1, at 41 (1996) ("Disputants also delay negotiations . . . because they are reluctant to confront unpleasant issues, such as admitting that their initial assessment of a case was overoptimistic. In such situations, people will often react by procrastinating, perhaps hoping that additional discovery will rehabilitate their position or that the other side will give up."); Rick Carnaroli, *Procrastination*, *ADVOCATE*, Feb. 2006, at 4, 4 ("It is hard to say that procrastination is the cause of settlement on the courthouse steps, but certainly there are cases that settle only because the parties have not adequately prepared for trial, or have put off settlement discussions until the last minute."); Andrew J. Wistrich, *Procrastination, Deadlines, and Statutes of Limitation*, 50 *WM. & MARY L. REV.* 607, 630 (2008) ("If people find a task difficult or unpleasant, they are likely to defer performance of that task . . .").

20. See Spier, *supra* note 16, at 95 ("Private information often leads to inefficiencies in the settlement process; many cases settle in the courthouse steps, and some fail to settle altogether.") (footnote omitted).

21. *Id.* ("Settlement negotiations can fail when the two sides have different beliefs about what will happen at trial.")

22. See Deborah L. Rhode, *Ethical Perspectives on Legal Practice*, 37 *STAN. L. REV.* 589, 635 (1985) ("After an educational process emphasizing the importance of preparation and the indeterminacy of outcomes, most lawyers will prefer to leave no stone unturned, provided, of course, they can charge by the stone. For an attorney anxious to avoid overlooking details and underbilling hours, more is always better.")

23. Attorneys paid on an hourly rate might damage their reputations by extracting unnecessary fees in any single case. See PAUL F. CAMPOS, *JURISMANIA: THE MADNESS OF AMERICAN LAW* 66 (1998) ("Lawyers who incur unnecessary costs for their clients are putting themselves at a systematic competitive disadvantage with lawyers who do not."); Rhode, *supra* note 22, at 635 ("Depending on the press of other business, attorneys who charge by the hour may face considerable temptation to prolong certain tasks or to retain matters that they cannot complete efficiently. And clients are not always well situated to monitor counsels' performance.")

24. See Ingram, *supra* note 11, at 95 ("In most cases, defense attorneys also have little, if any, incentive to seek an early settlement. It is in their best interest to run up a lot of billable hours before achieving a result satisfactory to the client."); Samuel Issacharoff, Charles Silver & Kent D. Syverud, *Bargaining Impediments and Settlement Behavior*, in *DISPUTE RESOLUTION: BRIDGING THE SETTLEMENT GAP* 51, 51 (David A. Anderson ed., 1996) ([L]awyers foment controversy and prolong litigation because they make money by doing so.")

25. Chris Guthrie, *Better Settle Than Sorry: The Regret Aversion Theory of Litigation Behavior*, 1999 *U. ILL. L. REV.* 43, 45-46 (1999) ("[L]itigants base at least some litigation decisions on 'a desire to avoid the unpleasant psychological consequences' of regret arising from 'a decision that turns out poorly.'") (footnote omitted).

suggests weakness. When both parties are represented by lawyers who feel that way, settlement negotiations may be deferred until the last minute.²⁶

Another factor that might account for some of the delay in settlements is that litigants might incorrectly assess the value of their case and the merits of settlement. Researchers have attempted to determine whether litigants are prone to commit cognitive errors in analyzing settlement choices. Empirical studies of settlement-related behavior,²⁷ as well as a wealth of studies on human decisionmaking generally,²⁸ suggest that clients make mistakes in thinking about their cases that distort their choices about whether to settle, when to settle, and on what terms to settle.

Of course, litigants do not make decisions alone. Most litigants are represented by counsel.²⁹ Although decisions about whether and when to settle ultimately belong to the client, lawyers play an important role in the settlement process. They attempt to predict the likely outcome of cases, and advise their clients about which settlement offers to make, when to make them, and which settlement proposals to accept.³⁰ They essentially act as brokers facilitating the exchange of legal claims for money or other

26. Bullock & Gallagher, *supra* note 9, at 898 (“Many lawyers delay initiating discussion of compromise for fear that their actions will be viewed by their opponents as evidence of a lack of confidence in their position.”) (footnote omitted); Harry T. Edwards, *Alternative Dispute Resolution: Panacea or Anathema?*, 99 HARV. L. REV. 668, 670 (1986) (“[T]oo many lawyers view the suggestion of compromise as an admission of weakness and therefore delay the initiation of negotiations with the hope that the onus of suggesting settlement will fall on opposing counsel.”) (footnote omitted).

27. See Korobkin & Guthrie, *supra* note 17, at 164 (demonstrating the susceptibility of nonlawyers to cognitive illusions when making settlement-related decisions); George Loewenstein et al., *Self-Serving Assessments of Fairness and Pretrial Bargaining*, 22 J. LEGAL STUD. 135, 158–59 (1993) (finding that, contrary to the assumption that parties will evaluate information revealed through costly discovery processes in an unbiased fashion in order to settle, self-serving biases can cause parties to obtain what they deem fair rather than seek to maximize their own payoff, even if information is shared perfectly and there is a complete absence of disputed legal issues).

28. See generally PAUL BREST & LINDA HAMILTON KRIEGER, *PROBLEM SOLVING, DECISION MAKING, AND PROFESSIONAL JUDGMENT: A GUIDE FOR LAWYERS AND POLICY MAKERS* (2010) (describing how cognitive errors that are common in the general population can affect lawyers).

29. See Jona Goldschmidt, *How Are Courts Handling Pro Se Litigants?*, 82 JUDICATURE 13, 14 (1998) (reporting that during the period from 1991 through 1994, approximately 21 percent of federal civil litigants were unrepresented).

30. Geoffrey P. Miller, *Some Agency Problems in Settlement*, 16 J. LEGAL STUD. 189, 214 (1987) (“The attorney will always—or almost always—know much more about the lawsuit than the client. The attorney’s advice about the merits of a proposed settlement will often weigh heavily in the client’s decision.”); William H. Simon, *Lawyer Advice and Client Autonomy: Mrs. Jones’s Case*, 50 MD. L. REV. 213, 217 (1991) (“Even where they think of themselves as merely providing information for clients to integrate into their own decisions, lawyers influence clients by myriad judgments, conscious or not, about what information to present, how to order it, what to emphasize, and what style and phrasing to adopt.”) (footnote omitted).

consideration.³¹ Their recommendations typically carry great weight.³² Moreover, sometimes the client's role in assessing settlement options is nominal.³³ Lawyers, then, exert considerable influence over their clients' decision about settlement.

Lawyers might be well suited to help clients overcome their cognitive shortcomings, just as they help clients surmount their deficiencies in legal knowledge.³⁴ Lawyers possess characteristics that differentiate them from most of their clients. On average, lawyers are better educated than their clients and have received training that might facilitate good judgment.³⁵ Lawyers regularly evaluate settlement proposals, and some research suggests that experienced lawyers provide more accurate assessments of case value than law students (and presumably lay people).³⁶ Lawyers also likely have less emotional investment in the outcome, and can provide what psychologists sometimes call an "outside" perspective on choices that can facilitate clearer judgment.³⁷

On the other hand, lawyers are human beings, too. A substantial body of research indicates that in a wide range of decisions involving a variety of potential sources of cognitive errors, people with legal training and litigation-related experience do not consistently make better judgments than lay people. In two comprehensive reviews of this work, Paul Brest and Linda Hamilton Kreiger and Jennifer Robbennolt and Jean Sternlight

31. ROSS, *supra* note 13, at 77 ("Negligence work may be easily regarded as brokerage . . ."). See generally HERBERT M. KRITZER, *THE JUSTICE BROKER: LAWYERS AND ORDINARY LITIGATION* (1990) (describing lawyers as "justice brokers").

32. See DAVID A. BINDER & SUSAN C. PRICE, *LEGAL INTERVIEWING AND COUNSELING: A CLIENT-CENTERED APPROACH* 186 (1977) ("[T]he client may be unduly influenced by what the lawyer, the 'authority figure,' would do . . .").

33. Miller, *supra* note 30, at 213 ("In some cases, effective control is almost entirely in the hands of the attorney.").

34. Russell Korobkin & Chris Guthrie, *Psychology, Economics, and Settlement: A New Look at the Role of the Lawyer*, 76 *TEX. L. REV.* 77, 120 ("[A]t least in some circumstances, lawyers taking an active role in their client's litigation decisionmaking processes probably can affect the extent to which psychological factors, as opposed to the comparison of the expected financial values of alternative litigation options, motivate litigants' ultimate decisions.").

35. See Darrin R. Lehman, Richard O. Lempert & Richard E. Nisbett, *The Effects of Graduate Training on Reasoning: Formal Discipline and Thinking About Everyday-Life Events*, 43 *AM. PSYCHOLOGIST* 431, 440 (1988) (finding that training in psychology, medicine, and law can improve logical reasoning).

36. Jonas Jacobson et al., *Predicting Civil Jury Verdicts: How Attorneys Use (and Misuse) a Second Opinion*, 8 *J. EMPIRICAL LEGAL STUD.* 99, 105-06 (Supp. 2011) (reporting research showing that practicing lawyers provide better estimates of case value than law students).

37. See Daniel Kahneman & Dan Lovallo, *Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 *MGMT. SCI.* 17, 29 (1993) ("[E]rrors of intuitive prediction can sometimes be reduced by adopting an outside view . . .").

document a wide range of situations in which lawyers might be prone to making serious cognitive errors of judgment.³⁸ Brest and Kreiger not only laud the decisionmaking skills many lawyers possess, but they also conclude that “cognitive, social, and motivational phenomena . . . distort people’s perceptions of reality, and impede their understanding and pursuit of their own or their client’s goals.”³⁹

Research on lawyers’ judgment suggests that they are also prone to making errors. For example, lawyers make overly optimistic assessments of cases in ways that might lead them to litigate when they should settle.⁴⁰ Experienced lawyers also stubbornly ignore the suggestions of other experienced lawyers when assessing values, preferring to rely on their own estimates even though they are commonly wrong.⁴¹ Other research suggests that lawyers are prone to making overly risky decisions to avoid losing,⁴² although related research suggests that lawyers sometimes avoid this kind of mistake.⁴³

Do lawyers facilitate good decisions or poor ones? If lawyers themselves make systematic errors in judgment, then not only will they fail

38. See generally BREST & KRIEGER, *supra* note 28; JENNIFER K. ROBBENOLT & JEAN R. STERNLIGHT, *PSYCHOLOGY FOR LAWYERS: UNDERSTANDING THE HUMAN FACTORS IN NEGOTIATION, LITIGATION, AND DECISION MAKING* (2012).

39. BREST & KRIEGER, *supra* note 28, at 31.

40. Craig R. Fox & Richard Birke, *Forecasting Trial Outcomes: Lawyers Assign Higher Probability to Possibilities That Are Described in Greater Detail*, 26 *LAW & HUM. BEHAV.* 159, 168–69 (2002) (showing that lawyers are susceptible to cognitive bias in assessing the likelihood of potential trial outcomes); Jane Goodman-Delahunty et al., *Insightful or Wishful: Lawyers’ Ability to Predict Case Outcomes*, 16 *PSYCHOL. PUB. POL’Y & L.* 133, 149 (2010) (reporting the results of a study and concluding that “[l]awyers frequently made substantial judgmental errors, showing a proclivity to overoptimism”). Law students show a similar excess of self-serving optimism about case value. Loewenstein, *supra* note 27, at 150 (reporting “strong evidence for self-serving interpretations of fairness” in a study of law students’ predictions of settlement amounts).

41. See Jacobson et al., *supra* note 36, at 108–09 (reporting the results of a study asking lawyers to estimate the value of jury verdicts and noting “[a]ttorneys could have reduced their [case estimation] errors even further . . . by simply averaging their own and their partners’ estimates”).

42. Linda Babcock et al., *Forming Beliefs About Adjudicated Outcomes: Perceptions of Risk and Reservation Values*, 15 *INT’L REV. L. & ECON.* 289, 296–97 (1995) (finding that lawyer subjects were just as strongly affected by framing biases in a negotiating experiment as were nonlawyer subjects).

43. Korobkin & Guthrie, *supra* note 34, at 137 (“Our experimental results support the hypothesis that lawyers, on average, evaluate litigation options differently than litigants, with lawyers’ evaluations more likely to be consistent with the expected value analysis presumed by economic models of litigation.”); *id.* at 113 (“Our lawyer subjects were not affected to nearly the same degree as our litigant [that is, college student] subjects by the framing, anchoring, and equity-seeking variables tested.”); *id.* at 82 (“Lawyers are more likely than litigants to apply an expected financial value analysis to the settlement-versus-trial decision, whereas certain cognitive and social-psychological phenomena that can distract from expected value analysis are more likely to influence litigants. In any given situation, this disparity could cause lawyers to be more or less inclined toward settlement than litigants.”).

to assist their clients, they might even make matters worse. The research concerning lawyers' susceptibility to cognitive errors is thus mixed. Lawyers benefit from training and experience, but they are still human beings who might rely on misleading cognitive strategies. The previous research suggests that some of these cognitive strategies might prolong litigation in ways that could explain why cases often settle only after significant resources have been spent. Lawyers' inclination to overvalue their cases facilitates conflict,⁴⁴ as does the tendency for lawyers facing the potential for significant losses to make risky choices.⁴⁵

In this Article, we expand on the research indicating that misleading cognitive strategies for making decisions can prolong litigation. We asked lawyers to make judgments in (mostly) legal contexts in which misleading cognitive strategies might cause poor judgment. Of the five cognitive strategies that we explore in this Article—excessive reliance on intuition, the framing effect, the confirmation bias, nonconsequentialist reasoning, and the sunk-cost fallacy—only the framing effect has previously been directly studied in practicing lawyers.⁴⁶ Overall, we find that lawyers are vulnerable to many of the same kinds of errors that likely mislead their clients.

II. THE CURRENT STUDY

A. METHODOLOGY AND PARTICIPANTS

The methodology we employed to study lawyers' decisionmaking is the same methodology we have used to study judicial decisionmaking for over a decade.⁴⁷ Essentially, we attend continuing education programs for

44. See Linda Babcock & George Loewenstein, *Explaining Bargaining Impasse: The Role of Self-Serving Biases*, 11 J. ECON. PERSP. 109, 116 (1997) (“[I]n negotiations where the costs of impasse are high, the self-serving bias hurts both parties economically.”).

45. See Randall L. Kiser, Martin A. Asher & Blakeley B. McShane, *Let's Not Make a Deal: An Empirical Study of Decision Making in Unsuccessful Settlement Negotiations*, 5 J. EMPIRICAL LEGAL STUD. 551, 566 (2008) (reporting a study of errors in settlement decisions and concluding that “the cost of decision error is higher for defendants than for plaintiffs”); Jeffrey J. Rachlinski, *Gains, Losses, and the Psychology of Litigation*, 70 S. CAL. L. REV. 113, 159 (1996) (reporting the results of research on settlement decisions and concluding that defendants' aggregate decisions “can only be described as risk-seeking”).

46. See, e.g., Korobkin & Guthrie, *supra* note 34, at 100 (presenting the results of a study of the effect of framing on lawyers' decisionmaking).

47. See Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 816–18 (2001) (describing our methodological approach). We have previously reported research on judges in a series of papers. Chris Guthrie, Jeffrey J. Rachlinski, & Andrew J. Wistrich, *Blinking on The Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1 (2007); Chris

judges or lawyers. Before presenting any of our research, we ask the participants at the program to respond to a questionnaire containing three to five hypothetical cases or other tests. We typically use a between-subjects experimental design;⁴⁸ that is, we draft two (or more) versions of a hypothetical case in which one factor of interest varies and participants review only one version of each scenario. Differences between the aggregated decisions made by the two groups are thus attributable to the factor that we varied. We also usually ask the participants to provide demographic information after responding to the surveys. We do not ask participants to identify themselves.

The data presented in this Article were collected at seven different presentations conducted by one or both of us, described below in table 1.

Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *The "Hidden Judiciary": An Empirical Examination of Executive Branch Justice*, 58 DUKE L.J. 1477 (2009) [hereinafter Guthrie, Rachlinski & Wistrich, *Hidden Judiciary*]; Jeffrey J. Rachlinski, Chris Guthrie & Andrew J. Wistrich, *Inside the Bankruptcy Judge's Mind*, 86 B. U. L. REV. 1227 (2006); Jeffrey J. Rachlinski et al., *Does Unconscious Racial Bias Affect Trial Judges?*, 84 NOTRE DAME L. REV. 1195 (2009); Jeffrey J. Rachlinski, Chris Guthrie & Andrew J. Wistrich, *Probability, Probable Cause, and Hindsight*, 8 J. EMPIRICAL LEGAL STUD. 72 (2011); Andrew J. Wistrich, Chris Guthrie & Jeffrey J. Rachlinski, *Can Judges Ignore Inadmissible Information?: The Difficulty of Deliberately Disregarding*, 153 U. PA. L. REV. 1251 (2005). One of us has also reported previous research on lawyers and insurance claims adjusters. Chris Guthrie & Jeffrey J. Rachlinski, *Insurers, Illusions of Judgment and Litigation*, 59 VAND. L. REV. 2017 (2006).

48. For a description of between-subject experimental designs, see ROBERT M. LAWLESS, JENNIFER K. ROBBENOLT & THOMAS S. ULEN, *EMPIRICAL METHODS IN LAW* 104 (2010).

TABLE 1. Demographic Information on Research Participants

<i>Group</i>	<i>#^a</i>	<i>Type of conference</i>	<i>Percent Male^b (and #)</i>	<i>Mean/Median Years of Experience (and #)</i>	<i>Percent Republican/Percent Democratic^c</i>
Oregon	113	CLE ^d	64 (105)	17.3/17.0 (104)	19/65
Texas	35	Texas Bar Assn. ^e	71 (35)	21.7/20.0 (35)	54/37
Maine	38	Inn of Court ^f	82 (38)	15.6/14.0 (38)	...
Ontario	36	CLE ^g	44 (36)	15.6/14.0 (36)	...
Insurance	107	Firm Retreat	48 (104)	15.4/15.0 (104)	...
Missouri	28	CLE
Reinsurance	26	RIA ^h

^aWe excluded all those who identified themselves as judges or as nonlawyers.

^bNot all of the lawyers answered the question about gender and experience.

^cThese do not add up to 100 percent. Those lawyers who listed themselves as "other" or did not respond to this question constitute the remaining percentage. Our question on political affiliation was: "Which of the two major political parties in the United States most closely matches your own political beliefs?"

^dThis was a day-long continuing legal education conference organized by an Oregon professional group that consisted mostly of defense attorneys.

^eThis was a breakout session at the annual meeting of the Texas Bar Association Conference.

^fThe Inns of Court are regional associations of lawyers and judges, who meet to "foster excellence in professionalism, ethics, civility, and legal skills." *Mission and Goals*, AMERICANS INNS OF COURT, <http://home.innsocourt.org> (last visited Mar. 1, 2013).

^gThis event was an hour-long session organized by Osgoode Hall Law School. We thank Professor Poonam Puri, of Osgoode Hall for helping organize this event.

^hThese data were collected at the annual meeting of the Reinsurance Association of America. The participants were in attendance at the conference and consist of senior executives with insurance companies, many of whom were attorneys. Only the attorneys are included in these results.

B. PHENOMENA AND RESULTS

1. Excessive Reliance on Intuition

In a previous article, we described our intuitive-override model of judicial decisionmaking.⁴⁹ This model arose from the widely held view in

49. Guthrie, Rachlinski & Wistrich, *Blinking on the Bench*, *supra* note 47, at 6–9. Others have also applied the two-system model of decisionmaking to legal issues. *See, e.g.*, On Amir & Orly Lobel, *Stumble, Predict, Nudge: How Behavioral Economics Informs Law and Policy*, 108 COLUM. L. REV.

psychology that people rely on two types of mental processes to make decisions: intuitive processes (“System 1”) and deliberative processes (“System 2”).⁵⁰ As we previously explained,

Intuitive processes, also called “System 1” processes, “occur simultaneously and do not require or consume much attention.” They are “automatic, heuristic-based, and relatively undemanding of computational capacity.” Simply stated, they are “spontaneous, intuitive, effortless, and fast.” Emotional influences also tend to arise through System 1 processes. Deliberative processes, also called “System 2” processes, are “mental operations requiring effort, motivation, concentration, and the execution of learned rules.” Associated with “controlled processing,” they are “deliberate, rule-governed, effortful, and slow.” . . . The relationship between the intuitive and deliberative systems is complicated. Because intuition is automatic, quick, and easily invoked, it can easily dominate deliberation as decision makers simply rely on a quick, intuitive response or as intuition affects the judgments that follow. Intuition can be surprisingly accurate, but sometimes good judgment will require purging the deliberative processes of intuition’s influence. Intuitive responses can also emerge from repetition of the same deliberative procedure. Furthermore, some decisions might require shifting between the two systems.⁵¹

Psychologists have shown that most people tend to rely too heavily on intuition in many situations.⁵² Our own research suggests that judges, who are probably somewhat more deliberative than the average person, largely share this characteristic.⁵³ Furthermore, judges even tend to rely excessively on intuition when performing simulated judicial tasks.⁵⁴

Do lawyers also rely too heavily on intuition or are they exceptionally deliberative? To answer this question, we asked lawyers to take a test designed to measure a person’s ability to suppress an incorrect intuitive response and successfully override it with deliberation. The test is called

2098, 2110–16 (2008) (reviewing DAN ARIELY, PREDICTABLY IRRATIONAL: THE HIDDEN FORCES THAT SHAPE OUR DECISIONS (2008) and RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS (2008)).

50. DANIEL KAHNEMAN, THINKING, FAST AND SLOW 20–26 (2011).

51. Guthrie, Rachlinski & Wistrich, *Blinking on the Bench*, *supra* note 47, at 7–8 (footnotes omitted).

52. See Daniel T. Gilbert, *Inferential Correction*, in HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 167, 167 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., 2002) (“[O]ne of psychology’s fundamental insights is that judgments are generally the product of nonconscious systems that operate quickly, on the basis of scant evidence, and in a routine manner, and then pass their hurried approximations to consciousness, which slowly and deliberately adjusts them.”).

53. Guthrie, Rachlinski & Wistrich, *Blinking on the Bench*, *supra* note 47, at 13–19.

54. *Id.* at 19–29. See Rachlinski et al., *Does Unconscious Racial Bias Affect Trial Judges?*, *supra* note 47, at 1217–21.

the “Cognitive Reflection Test” (“CRT”).⁵⁵ It consists of the following three questions:

- (1) A bat and ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost? __ cents.
- (2) If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? __ minutes.
- (3) In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long will it take for the patch to cover half of the lake? __ days.⁵⁶

Each question immediately suggests an intuitive but incorrect answer: ten cents, one hundred minutes, and twenty-four days, respectively. The correct answers, however, are five cents, five minutes, and forty-seven days, respectively. The key to performing well on the CRT lies in suppressing the incorrect intuitive answer that immediately suggests itself, engaging the deliberative process, and then overriding the wrong answer suggested by intuition with the correct answer produced by deliberation. Table 2 reflects the performances obtained from some of the groups of subjects who have taken the CRT from research that Shane Frederick has reported.⁵⁷ The performances of the judges reflected in the chart are taken from studies we have conducted, some previously published.⁵⁸

55. See Shane Frederick, *Cognitive Reflection and Decision Making*, 19 J. ECON. PERSP. 25, 35 (2005) (describing the test as measuring “the ability or disposition to resist reporting the response that first comes to mind”).

56. *Id.* at 27 fig.1.

57. *Id.* at 29 tbl.1.

58. Guthrie, Rachlinski & Wistrich, *Blinking on the Bench*, *supra* note 47, at 13–19 (reporting CRT results for Florida trial court judges); Guthrie, Rachlinski & Wistrich, *Hidden Judiciary*, *supra* note 47, at 1495–1500 (reporting CRT results for administrative law judges).

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TABLE 2. Average Scores on the Cognitive Reflection Test Among Different Groups

<i>Group</i>	<i>Average Number Correct</i>
MIT undergraduates	2.18
Carnegie Mellon University undergraduates	1.51
Harvard University undergraduates	1.43
Florida trial judges	1.23
Administrative law judges	1.33
University of Michigan undergraduates	1.18
Web-based participants	1.10
Michigan State University undergraduates	0.79
University of Toledo undergraduates	0.57

Table 2 suggests three things. First, no one performs particularly well on this seemingly easy test. Even the best-performing group, the MIT students, answered only a little more than two out of three questions correctly, on average. Second, the judges tested performed about as well as students at several of America's leading universities, such as Harvard University and the University of Michigan. Third, despite their relatively good performances, overall the judges did not stand out as adopting an especially deliberative approach to such problems. They performed about as well as other well-educated people, which is to say, not very well.

We also gave the CRT to four groups of lawyers: Oregon lawyers, Texas lawyers, Ontario lawyers, and insurance lawyers. Table 3, below, reports their performance.

TABLE 3. Average Scores on the Cognitive Reflection Test Among Lawyers

Group (and Number)	Average Correct	Percent obtaining each score			
		0 correct	1 correct	2 correct	3 correct
Oregon (92) ^a	1.75	8.7	29.4	40.2	21.7
Texas (31) ^b	1.61	25.8	19.4	22.6	32.3
Ontario (33) ^c	1.45	24.2	33.3	15.2	27.3
Insurance (91)	1.12	39.6	23.1	23.1	14.3
Total (247)	1.46	24.3	26.3	28.3	21.1

Note: In all four groups, we excluded those lawyers who did not respond to all three questions, just as we have done in our research on judges. Guthrie, Rachlinski & Wistrich, *Blinking on the Bench*, *supra* note 47, at 14 n.81. Shane Frederick, who gathered the nonjudge data we report in table 2, above, does not report whether he excluded participants who did not complete all three questions or scored blank responses as incorrect. Frederick, *supra* note 55, at 29. Our results in table 2 thus might slightly overstate the lawyers' scores, relative to the college samples.

^aAmong the Oregon lawyers, twenty-one failed to respond to one or more of the CRT questions: four responded to none of the three questions; five responded only to the first question (four of these got it incorrect and one got it correct); ten responded only to the first two questions (four got them both incorrect and one got the first question correct and the second question incorrect; two got the first question incorrect and the second question correct; one got them both correct); one responded only to the second and third questions (getting them both incorrect); one responded only to the first and third questions (getting the first question incorrect and the third question correct).

^bAmong the Texas lawyers, five failed to respond to one or more of the CRT questions: two responded only to the first and second questions (one got them both incorrect, the other got them both correct); one responded only to the first and third questions (getting both incorrect); one responded only to the second and third questions (getting the second question correct and the third question incorrect); one did not return the CRT page (it may have been missing from this person's packet).

^cAmong the Ontario lawyers, three failed to respond to one or more of the CRT questions: one responded to none of the three questions; one responded only to the first two questions (getting them both incorrect); one responded only to the second and third questions (getting them both correct).

Among the insurance lawyers, sixteen failed to respond to one or more of the CRT questions: two responded to none of the three questions; three responded only to the first question (two of these got it incorrect and one got it correct); eight responded only to the first two questions (six got them both incorrect; two got the first question correct and the second question incorrect); three responded only to the second and third questions (two got them both incorrect and one got them both correct).

Comparing tables 2 and 3 reveals that lawyers perform much the same as judges on the CRT. In addition to scoring about as well (or as poorly), the pattern of responses among lawyers and judges was similar. Like the

judges we studied, lawyers improved from one question to the next.⁵⁹ On the first, second, and third questions, 36.4 percent, 49.8 percent, and 59.9 percent of the lawyers got the correct answer, respectively. As with the judges, the lawyers probably came to see that the questions were not as easy as they might seem at first, thereby triggering more deliberative responses on the second and third questions. Furthermore, just as with the judges, the lawyers who got the question wrong tended to choose the intuitive answer.⁶⁰ Among the lawyers who got the questions wrong, 94.9 percent (149 out of 157), 58.1 percent (seventy-two out of 124), and 62.6 percent (sixty-two out of ninety-nine) chose the intuitive responses (ten cents, one hundred minutes, and twenty-four hours) to the three questions, respectively.

Lawyers thus performed relatively well compared to many college students and other participants who have taken the test, and slightly better than some of the groups of judges we have tested. On the other hand, the lawyers did not perform especially well in absolute terms, and certainly did not perform as well as the MIT students. The performance of the lawyers on the CRT thus suggests that, like most people (including judges), lawyers rely heavily on intuitive rather than deliberative mental processing. This reliance might make them susceptible misleading intuitions that can facilitate poor decisionmaking and predictable errors.⁶¹

Table 3 reveals that the four groups performed somewhat differently on the CRT, with the insurance lawyers scoring the lowest.⁶² Assessing the scores by demographic factors revealed that the 152 male lawyers who completed the three CRT questions scored an average of 1.61, as compared to 1.23 among the ninety-one female lawyers who completed the CRT.⁶³ This difference was statistically significant.⁶⁴ Years of experience,

59. Guthrie, Rachlinski & Wistrich, *Blinking on the Bench*, *supra* note 47, at 15 (reporting that “judges’ performance improved as they progressed through the three questions, scoring 28.2 percent, 44.0 percent and 50.4 percent correct on the first, second, and third questions, respectively”).

60. *Id.* at 16 (reporting, for each question, that 88.4 percent, 57.4 percent and 68.0 percent of the judges who answered each question incorrectly provided the intuitive responses as the wrong answers).

61. See KAHNEMAN, *supra* note 50, at 25 (“System 1 has biases, however, systematic errors that it is prone to make in specified circumstances.”).

62. Analysis of Variance (“ANOVA”) of the CRT score with the four different categories of lawyers produced a statistically significant result. $F(3,243) = 5.75, p < .001$. Throughout this Article, we reserve the term “significant” to denote a statistically reliable result with a probability of less than 5 percent. Also, we treat the CRT score as a continuous, cardinal variable in all statistical analyses.

63. Of the 247 lawyers who completed the CRT, four did not identify their gender.

64. $t(241) = 2.70, p < .001$. Because the percentage of female judges varied by group, and the groups varied in terms of their CRT scores, we worried that the gender effect might be attributable to the variation between groups. To account for this concern, we conducted an ANOVA of the CRT score on gender and group, and an interaction term. Both gender and group remained as significant effects

however, did not correlate significantly with CRT scores.⁶⁵ Nor did the lawyers' political orientations produce different CRT results: the thirty-five Republicans scored an average of 1.66, as compared to 1.68 among the sixty-eight Democrats, which was not a statistically significant difference.⁶⁶

Is the heavy reliance on intuition by lawyers a problem? That depends. Intuition can produce very good judgments, at least in some situations.⁶⁷ The difficulty, though, is that intuition often rests on a weak foundation or is simply misguided. Therefore, while intuition is a necessary part of good judgment,⁶⁸ it should be double checked with deliberation, if possible.⁶⁹ Unchecked intuition leaves decisionmakers vulnerable to cognitive biases and errors.

Ability and willingness to second-guess intuition seems likely to affect tasks other than just the CRT. People who do well on the CRT might be better than those who do poorly at avoiding at least some kinds of cognitive errors. At least one study suggests as much.⁷⁰ Although the connection between suppression of intuition and the ability to avoid reliance on misleading cognitive strategies is an active area of research, we know of no existing studies indicating that higher CRT results correlate with avoiding the misleading cognitive processes we studied. Nevertheless, we examined the extent to which the lawyers who performed poorly on the CRT tended to rely more heavily on the misleading intuitions we studied. To presage our results, we found no correlation between the lawyers' CRT scores and their tendency to rely on misleading intuitions.⁷¹

($F(1, 235) = 3.82, p = .05$ for gender and $F(3, 235) = 5.31, p = .002$ for group), and the interaction term was not significant ($F(3, 235) = 0.74, p = .53$). This result suggests that the differences between the groups and between male and female participants are both independent effects.

65. $r = -.09$, which is not a significant correlation. $t(240) = 1.46, p = .14$.

66. $t(99) = .12, p = .91$. As noted in table 1, *supra*, we only asked lawyers in Oregon and Texas to provide their political affiliations.

67. See MALCOLM GLADWELL, *BLINK* 17 (2005) (“[T]here can be as much value in the blink of an eye as in months of rational analysis”).

68. See KAHNEMAN, *supra* note 50, at 28 (“Constantly questioning our own thinking would be impossibly tedious, and System 2 is much too slow and inefficient to serve as a substitute for System 1 in making routine decisions.”).

69. See FRANK PARTNOY, *WAIT: THE ART AND SCIENCE OF DELAY* 246 (2012) (“A wise decision requires reflection, and reflection requires a pause.”).

70. Jörg Oechssler, Andreas Roeder & Patrick W. Schmitz, *Cognitive Abilities and Behavioral Biases*, 72 J. ECON. BEHAV. & ORG. 147, 149–50 (2009) (reporting that people who score well on the CRT avoid the conjunction fallacy, avoid base-rate fallacies, exhibit consistent time preferences, and avoid overconfidence). More elaborate measures of cognitive ability correlate with an inclination to avoid some misleading intuitive cognitive processes. See Keith E. Stanovich & Richard F. West, *Individual Differences in Reasoning: Implications for the Rationality Debate?* 23 BEHAV. & BRAIN SCI. 645, 658–60 (2000).

71. We found nonsignificant trends for such correlations in our studies of the confirmation bias

2. Framing Effect

Any gallery owner will confirm that choosing the proper frame can make an enormous difference in the appearance of a painting. Some frames enhance a painting, while others leave it looking drab.⁷² Cognitive frames can have a similar effect on choice.

People do not evaluate choices and options without reference to surrounding context. Among many contextual influences on choice, people make decisions about value and risk with respect to a reference point, such as the status quo.⁷³ Economically equivalent options appear different, and depending on the context, frame the choice as reflecting potential gains or losses from the status quo.⁷⁴ As we previously have explained,

When people confront risky decisions—such as deciding whether to settle a case or to proceed to trial—they categorize their decision options as potential gains or losses from a salient reference point such as the status quo. This categorization, or “framing,” of decision options influences the way people evaluate options and affects their willingness to incur risk. People tend to make risk-averse decisions when choosing between options that appear to represent gains and risk-seeking decisions when choosing between options that appear to represent losses. For example, most people prefer a certain \$100 gain to a 50% chance of winning \$200 but prefer a 50% chance of losing \$200 to a certain \$100 loss.⁷⁵

The framing effect is a cognitive error because it leads people to violate a fundamental characteristic of rationality—namely, invariance.⁷⁶

and nonconsequentialist reasoning. The lack of statistically reliable correlations, however, does not mean that a tendency to rely on intuitive reasoning is not connected to these errors, however. Our sample sizes were likely too small to detect the kinds of statistical interactions that such an effect might produce. Also, the CRT is a crude (albeit compelling) measure of the tendency to rely on intuitive reasoning. A more precise measure would be useful to study the connection between a general tendency to rely too heavily on intuition and a vulnerability to relying on misleading intuitions in specific settings.

72. Karla Klein Albertson, *Art 101: The Wrong Frame Does an Artwork No Favors*, AUCTION CTR. NEWS INT'L (Nov. 11, 2009, 3:42 PM), <http://acn.liveauctioneers.com/index.php/component/content/article/70-acn-staff/1653-art-101-the-wrong-frame-does-a-painting-no-favors?format=pdf>.

73. Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263, 277–79 (1979).

74. Mathew Rabin, *Psychology and Economics*, 36 *J. ECON. LITERATURE* 11, 36 (1998) (framing occurs when two “logically equivalent (but not *transparently* equivalent) statements of a problem lead decision makers to choose different options”).

75. Guthrie, Rachlinski & Wistrich, *Inside the Judicial Mind*, *supra* note 47, at 794 (footnotes omitted).

76. Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, 39 *AM. PSYCHOL.* 341, 343–44 (1984) (describing how framing effects violate invariance).

Taking the sure option or gambling are both defensible choices, but making a different choice based on the difference in frame is not. Cosmetic differences in the descriptions of substantively identical options should not cause people to prefer one over the other.⁷⁷ Nevertheless, as we noted, people make cautious choices when assessing gains and risky choices when facing losses.⁷⁸

The framing of decisions as gains or losses has a potent influence on judgment.⁷⁹ Framing even affects experts when the stakes are enormous.⁸⁰ For example, an extensive analysis of putting by professional golfers revealed that framing influences their strategies while competing for monetary prizes in tournaments.⁸¹ Even though golfers win tournaments by having the lowest total score, golfers putting for a “birdie” (below par, which would constitute a gain from the status quo) putt cautiously and commonly leave the ball short of the hole, while those putting to avoid a “bogey” (above par, which would constitute a “loss” from the status quo) putt aggressively and commonly run the ball well past the hole.⁸²

Litigation provides a natural frame for settlement decisions. Plaintiffs generally choose between gains (a certain gain by settling or the prospect of winning more at trial) while defendants generally choose between losses (a certain loss by settling or the risk of losing more at trial).⁸³ Several studies indicate that merely assigning subjects to assess settlement proposals from the perspective of either the plaintiff or the defendant causes them to view the proposals differently. In an experiment using law students as subjects, one of us found that 77 percent of plaintiff-subjects (who were choosing between gains), but only 31 percent of defendant-

77. See *id.* at 343 (“Invariance requires that such changes in the description of outcomes should not alter the preference order.”).

78. *Id.* at 344. (“[A] large majority of subjects made a risk averse choice for the sure gain over the positive gamble in the first decision, and an even larger majority of subjects made a risk seeking choice for the gamble over the sure loss in the second decision.”).

79. See Ayanna K. Thomas & Peter R. Millar, *Reducing the Framing Effect in Older and Younger Adults by Encouraging Analytical Processing*, 67 J. GERONTOLOGY: PSYCHOL. SCI. 139, 139 (2011) (“[T]he bias that results from framing has been shown to be one of the most robust biases in human decision making.”) (citation omitted).

80. See Rachlinski, *supra* note 45, at 124–25.

81. See Devon G. Pope & Maurice E. Schweitzer, *Is Tiger Woods Loss Averse? Persistent Bias in the Face of Experience, Competition, and High Stakes*, 101 AM. ECON. REV. 129, 155 (2011) (“Although professional golfers should strive to hit each putt as accurately as possible, golfers hit birdie putts (in the domain of ‘gains’) less accurately and less hard than they hit par putts (in the domain of ‘losses’).”).

82. *Id.* at 130 (“This finding is consistent with loss aversion; players invest more focus when putting for par to avoid encoding a loss.”).

83. Rachlinski, *supra* note 45, at 118–19, 129.

subjects (who were choosing between losses), believed that an economically equivalent settlement offer should be accepted.⁸⁴ Similarly, in a set of three experiments using college undergraduates as subjects, gains-frame subjects who evaluated a settlement proposal from the plaintiff's perspective consistently found the proposal more attractive than did loss-frame subjects, even though the settlement proposals were economically equivalent.⁸⁵ Finally, in a study using college students and trial attorneys as subjects, researchers found that those assigned to evaluate a settlement proposal from the plaintiff's perspective consistently provided risk-averse reservation prices and were willing to accept 10 to 20 percent less in settlement than the expected value of the litigated outcome.⁸⁶ Those assigned to evaluate a settlement proposal from the defendant's perspective, by contrast, displayed the opposite tendency.⁸⁷

These experiments demonstrate that clients are likely to be subject to the framing effect when evaluating settlement proposals. If they are to make wise decisions about whether to settle, many will need help in surmounting the distortion it produces. Are lawyers well equipped to provide such assistance? We wanted to try to answer this question.

To determine whether lawyers resist the framing effect in a litigation context, we gave a framing problem to four groups: the Maine lawyers, the insurance lawyers, the reinsurance lawyers, and the Ontario lawyers. Our materials informed the lawyers that they were representing one of two corporate parties in a case alleging copyright infringement.⁸⁸ The materials indicated that the plaintiff would recover \$200,000 if successful, that the plaintiff had a 50 percent chance of success, and that each party would incur \$50,000 in nonrecoverable litigation expenses if the case did not settle. We randomly assigned half of the lawyers to represent the plaintiff and the other half to represent the defendant. Each party received a "take it or leave it" settlement offer. We then asked the lawyers whether their client should accept the offer. The lawyers representing the plaintiff learned that the defendant had offered to pay \$60,000 to settle the case; the lawyers assigned to represent the defendant learned that the plaintiff had demanded a payment of \$140,000 to settle the case. From the plaintiff's perspective, the expected value of a trial is equal to \$50,000 (0.50 times \$200,000 minus the expected expenses of \$50,000), so the \$60,000 offer is \$10,000

84. *Id.* at 128–29.

85. Korobkin & Guthrie, *supra* note 17, at 129–38.

86. Babcock et al., *supra* note 42, at 293–97.

87. *Id.*

88. *See infra*, Appendix I.

better than the expected value of litigating. From the defendant's perspective, the expected value of a trial is equal to negative \$150,000 (0.50 times \$200,000 minus the expected expenses of \$50,000), so the \$140,000 offer is \$10,000 better than the expected value of litigating. Because both offers exceed the expected value of proceeding to trial by \$10,000, the offers should have been equally attractive if lawyers were immune to the framing effect.

The results showed, however, that framing influenced the lawyers' evaluations of the settlement offer. Among the lawyers assigned to represent the plaintiff, 43.9 percent (twenty-five out of fifty-seven) found the settlement attractive, compared to just 23.5 percent (twelve out of fifty-one) of the lawyers assigned to represent the defendant. This difference was statistically significant.⁸⁹ For the lawyers assigned to represent the plaintiff, the settlement offer was framed as a choice between gains, rendering them more risk averse and thus more willing to accept the offer than their defense-counsel counterparts. This frame made the settlement seem more attractive, even though the settlement had the same economic advantages for both parties. Neither the lawyer's years of experience, gender, nor CRT score had any effect on the willingness to settle overall, or on the influence of the frame.⁹⁰

89. Fisher's Exact Test, $p = .04$. Fisher's Exact Test computes the precise probability that you would see a given pattern in the data simply as a result of chance. See LAWLESS, ROBBENOLT & ULEN, *supra* note 48, at 258.

90. Because we did not ask for the gender or experience of the lawyers from the reinsurance group and the Missouri insurance group, these two were omitted from the analysis for these two demographic factors. Because we only had CRT scores available for the Ontario lawyers, only this group was used to assess the influence of the CRT.

Throughout this paper, for the three phenomena on which we presented two different scenarios to create an experimental manipulation (framing, nonconsequentialist reasoning, and the sunk-cost fallacy) we assessed the differential effect of the phenomenon on any of the demographic variables available for the different groups. In all instances, we did this by conducting separate logistic regressions of the lawyers' choices (in this case, the decision regarding whether to settle) on three parameters: the experimental condition, the demographic factors, and an interaction term of the experimental condition by the demographic factor. We reported the results of any statistical test that yielded a significant result on the coefficient for the effect of the demographic factor or the interaction. A significant result on the interaction term would indicate that the experimental condition had a differential effect on lawyers of different demographic backgrounds. Assessment of the influence of demographic factors on the CRT score and on the confirmation bias is straightforward (and identified in accompanying footnotes), owing to the lack of an experimental manipulation.

For the framing study, this means that we assessed participants of different genders, levels of experience, and with different CRT scores by conducting three separate logistic regressions of the settlement decision on each of these three factors and an interaction of the factor, the frame, and an interaction term. None of the three factors we examined produced a significant coefficient (z -statistics = 0.66, 0.19, and 0.23 for experience, gender, and CRT score, respectively) or a significant coefficient for the interaction term (z -statistics = 1.51, 1.38, and 0.14 for experience, gender, and CRT score,

Judges are also vulnerable to framing. In a previously published experiment, we gave 163 federal magistrate judges a similar problem. They displayed roughly the same susceptibility to framing. Among the judges evaluating the case from the plaintiff's perspective, 40 percent (thirty-three out of eighty-three) indicated that the plaintiff should accept the defendant's \$60,000 settlement offer, but only 25 percent (twenty out of eighty) of the judges evaluating the case from the defendant's perspective indicated that the defendant should pay the plaintiff's \$140,000 settlement demand.⁹¹

The size of the framing effect for the lawyers and the judges was comparable. This is perhaps not surprising, because all the judges in our research were former practicing lawyers. The results suggest that some experience as a lawyer reduces the tendency to rely on the misleading intuition that framing creates. Though susceptible to framing, lawyers and judges are less vulnerable than law students (and, by analogy, other nonlawyers).⁹² Assessing the case from a judge's perspective, however, does not reduce the influence of framing any further.

The result of our experiment is also consistent with previous studies exploring the quality of attorney-client choices about settlement by comparing them to actual adjudicated outcomes in the same cases. Several studies of settlement decisions in actual cases suggest that defendants adopt riskier settlement strategies than plaintiffs.⁹³ Risk-seeking defendants seem to reject settlement proposals that they would be better off accepting, thereby promoting litigation.⁹⁴ Risk aversion among plaintiffs, by contrast, promotes settlements. Whether the net effect of framing promotes or impedes litigation is unclear, but at least one party is apt to adopt a perspective that promotes litigation.

respectively). The analysis of interactions produced two notable trends, however, that approached statistical significance. First, experience reduced the size of the framing effect. Second, male lawyers showed a smaller framing effect than female lawyers; this result occurred largely because only one of the fifteen female lawyers analyzing the case from the defendant's perspective settled (meaning only 6.7 percent settled).

91. Guthrie, Rachlinski & Wistrich, *Inside the Judicial Mind*, *supra* note 47, at 796–97.

92. Framing had less influence on lawyers and judges than on law students. Rachlinski, *supra* note 45, at 128–29 (reporting a 46 percent shift among law students between the plaintiff's and defendant's perspective, using similar materials).

93. Samuel R. Gross & Kent D. Syverud, *Getting to No: A Study of Settlement Negotiations and the Selection of Cases for Trial*, 90 MICH. L. REV. 319, 378 (1991); Samuel R. Gross & Kent D. Syverud, *Don't Try: Civil Jury Verdicts in a System Geared to Settlements*, 44 UCLA L. REV. 1, 55 (1996); Kiser, Asher & McShane, *supra* note 45, at 589–90; Rachlinski, *supra* note 45, at 158–59.

94. See Kiser, Asher & McShane, *supra* note 45, at 566–67; Rachlinski, *supra* note 45, at 158–59.

The best strategy for mitigating the impact of framing is to evaluate a potential settlement through multiple frames.⁹⁵ Choices often can be characterized as either gains or losses. For example, in our experiment, the defendants' decision about whether to incur a loss by paying \$140,000 to settle the case can instead be characterized as a decision about whether to achieve a gain of \$10,000 over the expected value of continuing to litigate the case. Reframing might not give a party a clear answer as to whether to settle, but it can weaken the force of an arbitrary antisettlement frame.

Another possible mechanism for debiasing is simply to encourage deliberation. Some simple math identifies the value of the settlement offers in our study. Lawyers' susceptibility to excessive reliance on intuition, as reflected in their CRT scores, however, might prevent them from utilizing this strategy as effectively, or as frequently, as they should.⁹⁶ Similarly, generating alternative frames can be difficult, because cognitive illusions create sticky misconceptions. Settlement judges or other mediators can help by using their skill and experience, as well as the objectivity resulting from their lack of involvement in the case, to share with the litigants and their lawyers other perspectives relevant to the evaluation of settlement proposals, although as we have noted, judges seem susceptible to framing as well. Lawyers, judges, and mediators all need to recognize the influence of framing in order to overcome it, and work to suppress their intuitive reactions.

3. Confirmation Bias

Beliefs persist.⁹⁷ People frequently do not test their beliefs fairly and vigorously, but rather seek out information consistent with what they already believe.⁹⁸ This observation about human nature is not new; Sir Francis Bacon described this tendency centuries ago:

The human understanding, once it has adopted opinions, either because they were already accepted and believed, or because it likes them, draws

95. See Guthrie, Rachlinski & Wistrich, *Inside the Judicial Mind*, *supra* note 47, at 822–23.

96. Thomas & Millar, *supra* note 79, at 146 (“Our results suggest that the framing effect can be overcome if participants are encouraged to engage in more effortful analytic processes.”).

97. See 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, 880 (1975) (“[O]nce formed, impressions are remarkably perseverant and unresponsive to new input, even when such input logically negates the original basis for the impressions.”).

98. Anthony Greenwald, *The Totalitarian Ego: Fabrication and Revision of Personal History*, 35 AM. PSYCHOL. 603, 606 (1980) (“[P]eople manage knowledge in a variety of ways to promote the selective availability of information that confirms judgments already arrived at.”).

everything else to support and agree with them. And though it may meet a greater number and weight of contrary instances, it will, with great and harmful prejudice, ignore or condemn or exclude them by introducing some distinction, in order that the authority of those earlier assumptions may remain intact and unharmed.⁹⁹

Modern psychology confirms that people commonly “interpret subsequent evidence so as to maintain their initial beliefs.”¹⁰⁰ Once a hypothesis is formed, people seek information that supports it and overlook the relevance and importance of information that suggests it might be wrong.¹⁰¹ This confirmation bias predisposes people “not merely to interpret evidence in a self-fulfilling manner, but to seek out evidence supporting only one side of a polarized issue.”¹⁰² Part of the reason for this bias is that testing a belief requires engaging in an effortful “System 2” process involving assimilating contrary information.¹⁰³ It is far easier to rely on “System 1,” which will seek out, remember, and emphasize consistent information while ignoring, forgetting, or reinterpreting inconsistent information.¹⁰⁴ Even though a falsifying test strategy usually yields superior results, people are disinclined to adopt it.¹⁰⁵

The most widely discussed demonstration of the confirmation bias in an empirical setting was conducted with abstract materials created by Peter Wason.¹⁰⁶ In a typical version of this study, Wason shows people four

99. FRANCIS BACON, *NOVUM ORGANUM* § 46 at 57 (Peter Urbach & John Gibson eds. & trans., Open Court Publ'g Co. 1998) (1620).

100. Charles G. Lord, Lee Ross & Mark R. Lepper, *Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence*, 37 J. PERSONALITY & SOC. PSYCHOL. 2098, 2099 (1979).

101. Barbara O'Brien, *Prime Suspect: An Examination of Factors That Aggravate and Counteract Confirmation Bias in Criminal Investigations*, 15 PSYCHOL. PUB. POL'Y & L. 315, 316–17 (2010).

102. Scott O. Lilienfeld, Rachel Ammirati & Kristin Landfield, *Giving Debiasing Away: Can Psychological Research on Correcting Cognitive Errors Promote Human Welfare?*, 4 PERSP. PSYCHOL. SCI. 390, 392 (2009).

103. See KAHNEMAN, *supra* note 50, at 81 (“The operations of associative memory contribute to a general confirmation bias.”) (emphasis omitted).

104. See Alafair S. Burke, *Improving Prosecutorial Decision Making: Some Lessons of Cognitive Science*, 47 WM. & MARY L. REV. 1587, 1593–94 (2006) (“Confirmation bias is the tendency to seek to confirm, rather than disconfirm, any hypothesis under study.”) (footnote omitted); Raymond S. Nickerson, *Confirmation Bias: A Ubiquitous Phenomenon in Many Guises*, 2 REV. GEN. PSYCHOL. 175, 175 (1998) (defining confirmation bias as “unwitting selectivity in the acquisition and use of evidence”); O'Brien, *supra* note 101, at 316 (describing confirmation bias as “the tendency to bolster a hypothesis by seeking consistent evidence while minimizing inconsistent evidence”).

105. See Nickerson, *supra* note 104, at 211 (“In the aggregate, the evidence seems to me fairly compelling that people do not naturally adopt a falsifying strategy of hypothesis testing.”).

106. See SCOTT PLOUS, *THE PSYCHOLOGY OF JUDGMENT AND DECISION MAKING* 231–33 (1993) (reviewing the work done by Peter Wason).

cards, each bearing one of the following symbols: “E,” “K,” “4” and “7.” He informs the participants that each card displays a letter on one side and a number on the other side. He then asks the participants which card or cards, if any, they would need to turn over to determine whether the statement, “[i]f a card has a vowel on one side, then it has an even number on the other side,” is accurate.¹⁰⁷ The correct answer to this question is “E” and “7”. On reflection, it is easy to see why. An odd number on the other side of the “E” card, or a vowel on the other side of the “7” card, would falsify the statement. The statement, however, says nothing about what is on the other side of a card displaying an even number, so, turning over the “4” card would accomplish nothing. Neither a vowel nor a consonant on its other side would falsify the statement. Similarly, the statement indicates nothing about what is on the other side of a card displaying a consonant, so turning over the “K” card is equally unnecessary. People perform poorly on this task. The most common response is “E” and “4” followed by those who answer only with “E.”¹⁰⁸ The majority of respondents thus choose to turn over cards that were capable of confirming the statement, but fewer than 5 percent correctly answer “E” and “7.”¹⁰⁹

The abstract nature of the Wason card selection task arguably limits the generality of the finding.¹¹⁰ The card task does not include the kinds of contextual cues that can facilitate sound reasoning in more realistic settings. Wason himself noted that realistic content facilitates accurate reasoning on the task.¹¹¹ Other researchers have found that converting the Wason card selection task into more natural or familiar scenarios sometimes improves performance.¹¹² Even in naturalistic settings, however, the bias persists.¹¹³ In fact, some settings encourage the confirmation bias

107. *Id.* at 231.

108. *Id.* at 231–32.

109. *Id.* at 232.

110. See Leda Cosmides & John Tooby, *Cognitive Adaptations for Social Exchange*, in *THE ADAPTED MIND: EVOLUTIONARY PSYCHOLOGY AND THE GENERATION OF CULTURE* 163, 183 (Jerome H. Barkow, Leda Cosmides & John Tooby eds., 1992) (“[H]uman reasoning changes dramatically depending on the subject matter one is reasoning about.”).

111. P.C. Wason & Diana Shapiro, *Natural and Contrived Experience in a Reasoning Problem*, 23 *Q.J. EXPERIMENTAL PSYCHOL.* 63, 69 (1971) (discussing the “relative success of realistic material in allowing insight to be gained into the problem”).

112. See Nickerson, *supra* note 104, at 184 (“Several experiments have shown that performance of the selection task tends to be considerably better when the problem is couched in familiar situational terms rather than abstractly . . .”).

113. See Erica Dawson, Thomas Gilovich & Dennis T. Regan, *Motivated Reasoning and Performance on the Wason Selection Task*, 28 *PERSONALITY & SOC. PSYCHOL. BULL.* 1379, 1380 (2002) (noting that “[p]roviding familiar thematic content seems to improve performance to a modest extent,” but observing that the effectiveness of other transformations of the Wason card selection task is

because people are highly motivated to identify information that is consistent with beliefs that are important to them.¹¹⁴

Lawyers' familiarity with the legal setting might provide the social cues that facilitate better reasoning processes, but motivation might interfere with this advantage. Lawyers want to win, too; sometimes even more so than clients.¹¹⁵ After all, lawyers' professional obligations require them to find support for their clients' positions.¹¹⁶ Their alignment with their clients might heighten their susceptibility to the confirmation bias.¹¹⁷ Some research suggests, in fact, that the environment in which prosecutors work encourages the confirmation bias.¹¹⁸ On the other hand, lawyers might be able to maintain at least some psychological distance and objectivity from their client's position. In making strategic decisions such as whether to settle a civil case, and in choosing which evidence to collect and present, lawyers need to be able to view the evidence dispassionately and logically in order to make good choices.

To determine whether lawyers are susceptible to the confirmation bias, we administered a variation of the Wason card selection task with a context that lawyers might have to confront in a lawsuit.¹¹⁹ We asked the Oregon lawyers to imagine that they were representing a female plaintiff who was alleging gender discrimination in the employment context. The complaint, they were told, alleged that "male managers never promote

"mixed" and "controversial").

114. See *id.* at 1385 ("Favorable propositions appear to elicit a search for confirmation; unfavorable propositions elicit a search for disconfirmation.").

115. See Donald J. Kochan, *Thinking Like Thinkers: Is the Art and Discipline of an "Attitude of Suspended Conclusion" Lost on Lawyers?*, 35 SEATTLE U. L. REV. 1, 51 (2011) ("Given the lawyer's role as zealous advocate with an occupational commitment to a client's position, the risk of confirmation bias seems high—we want to win for our clients; we are required to zealously defend their position; and we begin our task searching for the ways to win for that predetermined position.").

116. See Nickerson, *supra* note 104, at 175 ("An attorney's job is to make a case for one or the other side of a legal dispute.").

117. See Matthew Rabin & Joel L. Schrag, *First Impressions Matter: A Model of Confirmatory Bias*, 114 Q.J. ECON. 37, 63 (1999) (discussing overconfidence in a principal-agent relationship, which suggests that lawyers may be more prone to overconfidence caused by confirmation bias than clients). Variations in the motivations to reach certain conclusions about the task can also affect accuracy. See Dawson, Gilovich & Regan, *supra* note 113, at 1382–83.

118. See Eric Rassin, Anita Eerland & Ilse Kuijpers, *Let's Find the Evidence: An Analogue Study of Confirmation Bias in Criminal Investigations*, 7 J. INVESTIGATIVE PSYCHOL. & OFFENDER PROFILING 231, 238 (2010) (reporting the results of a study in which law students were asked to determine the guilt of a suspect in a case study and told they could order additional investigation: "[P]articipants who believed that the suspect was innocent looked for information confirming that he, indeed, was innocent. On the other hand, participants who believed that the suspect was guilty were more interested in investigations aimed at gathering more evidence of guilt.").

119. See *infra*, Appendix II.

female employees to the position of software engineer.” The defendant had withheld some personnel files, arguing that the files were irrelevant and burdensome to produce. The materials indicated that the plaintiff then filed a motion to compel the defendant to locate the files necessary to answer interrogatories. The missing four personnel files with the missing necessary information were described as follows:

- (A) the file of employee whose gender is unknown, who was recently promoted by a male supervisor;
- (B) the file of employee whose gender is unknown, who was recently promoted by a female supervisor;
- (C) the file of male employee, who was recently promoted by a supervisor whose gender is unknown; or
- (D) the file of female employee, who was recently promoted by a supervisor whose gender is unknown.

We asked the participants to “identify the file or files that must be examined to determine if the plaintiff’s allegation that ‘male managers never promote female employees to the position of software engineer’ is likely to be true or false.” We also admonished them to avoid excessive discovery by instructing them as follows: “Do not identify any more files than are absolutely necessary.”

Although this problem has the same structure as the Wason card selection task, the Oregon lawyers performed surprisingly well. Among the lawyers who completed this problem (two left it blank), 25.2 percent (twenty-eight of 111) selected the correct two files. Although that compares favorably to the performance of most of those who have responded to the Wason card selection tasks,¹²⁰ it still means that 75 percent of the lawyers answered the question incorrectly.

The superior performance of the Oregon lawyers on this task relative to the overall performance usually observed on the Wason task was not due to the materials alone. We gave similar materials to judges, who scored much worse; only 14.2 percent (twenty out of 141) of the judges got the problem correct.¹²¹ The difference between the lawyers and judges was statistically significant.¹²² We also gave half of the judges the classic

120. See Dawson, Gilovich & Regan, *supra* note 113, at 1380 (“[T]he success rate of the typical [Wason task] study is only around 20%.”) (citation omitted).

121. We asked two different groups of judges to respond to this task: a group of newly elected judges attending New York State’s educational session for new judges and a group of judges in Ohio attending the state’s annual educational conference.

122. Fisher’s Exact Test, $p < .04$.

version of the Wason card selection task, and they performed as poorly as most groups; only 8.1 percent (ten out of 123) answered the problem correctly. Although the judges performed better with the natural context than with the abstract context of the classic Wason card selection task, this difference was not statistically significant.¹²³ Thus, the combination of the context plus the lawyers' perspective improved performance.

Among the lawyers, several variables predicted answering correctly to a statistically significant extent. Years of experience correlated negatively,¹²⁴ meaning that older lawyers were less likely to choose the correct answer. Women were more likely to answer correctly than men: 37 percent (fourteen out of thirty-eight) versus 15 percent (ten out of sixty-six), respectively.¹²⁵ Democrats were more likely to get it right than Republicans: 31 percent (twenty out of sixty-four) versus 9 percent (two out of twenty-two), respectively.¹²⁶ Those who did better on the CRT were more likely to answer correctly: 25 percent, 19 percent, 22 percent, and 40 percent got it right among those who got zero, one, two, and three CRT questions correct, respectively. This trend was not significant, however.¹²⁷

The following table is the pattern of responses we obtained from the 111 lawyers who responded.

123. Fisher's Exact Test, $p < .17$.

124. $r = -.34$; $t(101) = 3.63$, $p < .001$.

125. Fisher's Exact Test, $p = .02$. Only 104 of the 111 lawyers who responded to the Wason task also identified their gender.

126. Fisher's Exact Test, $p = .05$. Only 11 of the lawyers who responded to the Wason task also identified their political affiliation as Democrat or Republican; the rest did not respond or selected "other."

127. $r = .14$, $t(89) = 1.33$, $p = .19$.

TABLE 4. Pattern of Responses on the Confirmation Bias Problem

<i>Answer</i>	<i>Number selecting</i>	<i>Percent selecting</i>
None	2	1.8
A	9	8.1
A and B	3	2.7
A and C	3	2.7
C	9	8.1
A, B, and C	1	0.9
D	10	9.0
A and D ^a	28	25.2
A, B, and D	3	2.7
C and D	9	8.1
A, C, and D	15	13.5
All	19	17.1

^aThis is the correct response.

The distribution of errors seems bewildering, but some interesting patterns emerge. The errors can be summarized as follows: 21.6 percent failed to select file A; 23.4 percent incorrectly selected file B; 50.4 percent incorrectly selected file C; and 24.3 percent failed to select file D. The lawyers found the problem difficult, but they were not answering randomly. Selecting unnecessary files was a more common error than failing to select needed files. More than half of the lawyers committed the classic mistake that the confirmation bias suggests, by choosing file C. In contrast, fewer than a quarter failed to select A, and a similar percentage failed to select D. Overall, 55.9 percent of the lawyers selected a file that they did not need (B or C or both), while only 41.9 percent failed to select one (or both) of the two files that they needed (A or D).

These results clearly demonstrate the influence of the confirmation bias on lawyers in a legal setting. The intuitive reaction of the lawyers in this study was to insist on more evidence than they actually needed. Because much of the cost of producing an excess of information is borne by the party producing the information, rather than by the requesting party, lawyers receive little feedback from which they might learn more cost-effective intuitions. In fact, more experienced lawyers in our sample

displayed an even greater confirmation bias than younger attorneys. Our results with judges also suggest that judges will be unlikely to serve as effective gatekeepers, as they seem to share the same proclivity as lawyers.

Our scenario, though more naturalistic than the abstract version of the Wason card selection task, nevertheless remains somewhat artificial. For example, in a real case, plaintiff's counsel might want to examine file C because if the male employee was promoted by a male supervisor, it would be an instance in which a male supervisor did not promote a female employee. Such evidence, although not logically necessary to confirm or disconfirm the allegation, might be viewed as relevant.¹²⁸ The context of civil discovery, with its broad scope perhaps encourages that kind of reasoning.¹²⁹ Moreover, all of the files would be needed to address the more common allegation that the male managers are more likely to promote male employees.

Our materials also might not have contained the kind of thematic information that facilitates accurate judgment. Researchers have found that versions of the Wason card selection task that test familiar social rules produce decisions that avoid confirmation bias.¹³⁰ For example, when asked to assess whether the rule that one must be twenty-one in order to drink alcohol is being followed, people understand that they must check the age of everyone drinking alcohol and the beverages of anyone under the age of twenty-one.¹³¹ People do not check the beverages of people over twenty-one or the age of anyone drinking nonalcoholic beverages. The familiar rule facilitates accurate inquiries.

We did not test rule-based contexts with lawyers, but expect that

128. Wason suggested that participants might be looking for statistical tendencies in the abstract context as well, essentially assuming that the task calls for inductive logic, even though it calls for deductive logic. Wason & Shapiro, *supra* note 111, at 70 (“[The subjects] may, in fact, have regarded the cards as items in a sample from a larger universe, and reasoned about them inductively rather than deductively.”).

129. See FED. R. CIV. P. 26(b)(1) (“For good cause, the court may order discovery of any matter relevant to the subject matter involved in the action.”); *Herbert v. Lando*, 441 U.S. 153, 177 (1979) (“[T]he deposition-discovery rules are to be accorded a broad and liberal treatment to effect their purpose of adequately informing the litigants in civil trials.”) (citing *Schlagenhauf v. Holder*, 379 U.S. 104, 114–15 (1964)).

130. See Cosmides & Tooby, *supra* note 110, at 183 (describing a version of the Wason card selection task involving a violation of a concrete social rule in which 75 percent of the participants answered correctly); Roger L. Dominowski, *Content Effects in Wason's Selection Task*, in *PERSPECTIVES ON THINKING AND REASONING: ESSAYS IN HONOUR OF PETER WASON* 41, 47–48 (Stephen E. Newstead & Jonathan St. B. T. Evans eds., 1995) (noting that putting the Wason card selection task into the context of a rule violation facilitates sound reasoning about the task).

131. See *id.*

lawyers and judges would also perform well on tasks in which uncovering a cheater or lawbreaker is important. The context we used, however, is both familiar and important to any litigator. Knowing what evidence to gather in discovery and what evidence is unnecessary is critical to efficient investigation of civil disputes. Unfortunately, lawyers (and judges) seem to prefer to gather more evidence than they need.

The influence of the confirmation bias on decisionmaking about discovery can increase the costs of litigation in several ways. Demanding unnecessary information obviously raises the costs of discovery itself. Worse yet, parties might be exposing themselves only to confirmatory information as they procure evidence, thereby inducing overconfidence in their positions. Furthermore, the confirmation bias can lead litigants to interpret conflicting information in biased, self-serving ways as they process only the positive aspects of any ambiguous information.¹³² Research indicates, in fact, that obtaining what looks like confirmatory evidence can bolster the decisionmaker's confidence even though the additional information might not be relevant.¹³³ The confirmation bias can thus produce an excessively optimistic perception of the merits of a case.

How can lawyers avoid the confirmation bias? Although awareness of the bias might help, a serious effort to avoid the bias requires changing how lawyers evaluate a case. The bias arises from a reliance on the cognitive mechanisms that people naturally use to gather supporting evidence in support of a belief. In other words, the bias arises precisely from the process of building one's case. Avoiding the bias requires separating the process of building a case from the process of evaluating a case. In particular, evaluating a case from the opposing perspective and marshaling evidence for the opposite position can reduce the confirmation bias.¹³⁴

132. See Rabin & Schrag, *supra* note 117, at 71 ("Each litigant will interpret the evidence through the prism of his or her own beliefs, and each may conclude that the evidence supports his or her case.").

133. See Lord, Ross & Lepper, *supra* note 100, at 2105 ("The net effect of exposing proponents and opponents of capital punishment to identical evidence—studies ostensibly offering equivalent levels of support and disconfirmation—was to increase further the gap between their views."); Nickerson, *supra* note 104, at 186 ("[T]he confirmation bias should be thought of as a tendency to seek evidence that increases one's confidence in a hypothesis regardless of whether it should."); Rabin & Schrag, *supra* note 117, at 38–39 (arguing that the confirmation bias may increase confidence as more information is collected, regardless of whether the information is confirmatory or disconfirmatory).

134. See Lilienfeld, Ammirati & Landfield, *supra* note 102, at 393 (reporting that studies have "found that 'consider-the-opposite' or 'consider-an-alternative' strategies can be at least somewhat effective in combating confirmation bias"); Charles G. Lord, Mark R. Lepper & Elizabeth Preston, *Considering the Opposite: A Corrective Strategy for Social Judgment*, 47 J. PERSONALITY & SOC. PSYCHOL. 1231, 1239 (1984) (presenting research indicating that "the cognitive strategy of considering opposite possibilities promoted impartiality"); O'Brien, *supra* note 101, at 317 ("One way to reduce preference for hypothesis-consistent information is to instruct people to consider an alternative

Attempting to avoid confirmation by considering the opposite position, however, is more easily said than done.¹³⁵ Asking a member of the litigation team to act as a “devil’s advocate” can be helpful.¹³⁶ Although there is some evidence that a devil’s advocate can be effective,¹³⁷ the technique is most effective when it facilitates sincere (rather than contrived) critical examination or dissent from group members.¹³⁸ Alternatively, lawyers might establish a process in which a lawyer or a committee of lawyers takes a “fresh look” at a file without being tainted by previous views of the case. Similarly, clients should consider retaining settlement counsel.¹³⁹ If they do so, they should retain a true “outsider” who is not affiliated with the litigation counsel. An attorney hired solely as a settlement counsel can contribute a truly fresh perspective, neither tainted by prior discovery or motion practice nor swayed by a personal stake in the outcome.

Without such measures, the confirmation bias can stimulate further litigation. Not only can the bias lead lawyers to demand unnecessary discovery, but the extra evidence can increase their overconfidence.

hypothesis or why a favored hypothesis is wrong.”) (citation omitted).

135. See Charlan Jeanne Nemeth et. al., *Improving Decision Making by Means of Dissent*, 31 J. APPLIED SOC. PSYCHOL. 48, 49 (2001). (“[T]here are literally hundreds of studies documenting how difficult it is for people to seriously question their own judgment, especially when that judgment is bolstered by consensus.”) (citation omitted).

136. See *id.* at 49 (“The role of [a devil’s advocate] is to vigorously criticize plans under consideration by a group. The hope is that such dissent will thwart the rush to judgment and instead foster discussion, a consideration of more alternatives and careful scrutiny of the available information.”).

137. See Charles R. Schwenk, *Effects of Devil’s Advocacy and Dialectical Inquiry on Decision Making: A Meta-Analysis*, 47 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 161, 170–71 (1990) (concluding that the devil’s advocate is more effective in improving decision quality than simply obtaining advice from an expert or consultant).

138. See Nemeth et al., *supra* note 135, at 55 (concluding that “authentic-minority dissent is more effective in stimulating unbiased thinking, consideration of both sides of an issue, as well as original independent thought, relative to a devil’s advocate” but noting that the devil’s advocate was better than nothing); Charlan Nemeth, Keith Brown & John Rogers, *Devil’s Advocate Versus Authentic Dissent: Stimulating Quantity and Quality*, 31 EUR. J. SOC. PSYCHOL. 707, 716 (2001) (concluding that an authentic dissenting minority is superior to a devil’s advocate).

139. See Kathy A. Bryan, *Why Should Businesses Hire Settlement Counsel?*, 2008 J. DISP. RESOL. 195, 202 (“Corporate counsel should take the lead and experiment with using separate settlement counsel”); Coyne, *supra* note 16, at 412–13 (advocating that clients hire separate “settlement counsel,” rather than rely upon litigation counsel to settle cases); John Lande, *The Movement Toward Early Case Handling in Courts and Private Dispute Resolution*, 24 OH. ST. J. DISP. RESOL. 81, 112–13 (2008) (“Settlement counsel often operate in parallel with litigation counsel, who focus exclusively on litigation and do not negotiate the case.”) (footnote omitted); James E. McGuire, *Why Litigators Should Use Settlement Counsel*, ALTERNATIVES TO HIGH COST LITIG., June 2000, at 1, 120 (explaining how settlement counsel can help resolve disputes).

4. Nonconsequentialist Reasoning

The fundamental question looming over the fact-gathering phase of every lawsuit—which includes private informal investigation, mandatory disclosure, and formal discovery—is how much information should be sought?¹⁴⁰ Litigants and lawyers must decide how to prioritize and sequence the acquisition of information, and when the accumulation of information should cease. Unless a litigant is proceeding pro se, these choices are made by lawyers with minimal client supervision¹⁴¹ and with minimal interference from the courts. Cost-effective litigation thus requires that lawyers avoid collecting information that they simply do not need.

Collecting unnecessary information is perhaps an understandable impulse. Pursuing a line of inquiry, even when it can have no effect on judgment, can seem like the responsible course in the face of uncertainty.¹⁴² Most people also “tend to assume that more information cannot hurt.”¹⁴³ Determining when to stop collecting information, however, is a challenging task that requires balancing “information costs, amount of payoff, time pressure, complexity, importance, experience, and the level of confidence.”¹⁴⁴ The information that people actually need might not be the same as what they may feel that they need. People’s judgments about when to stop acquiring information are biased toward acquiring too much information in two ways: “underattention to the probability that actions will differ for different possible answers,” and “overattention to the probability of ruling some hypothesis in, or out, with certainty.”¹⁴⁵ In effect, people adopt the heuristic that more information must be better, without regard for the cost of that information or the need for it.¹⁴⁶

140. *Pearse v. Pearse*, (1846) 63 Eng. Rep. 950, 957 (Ch.) (“Truth, like all other good things, may be loved unwisely—may be pursued too keenly—may cost too much.”).

141. See William J. Stuntz, *Lawyers, Deception, and Evidence Gathering*, 79 VA. L. REV. 1903, 1915 (1993) (“[A]ll major classes of civil litigants seem to view evidence gathering, together with defensive tactics to fight opponents’ evidence gathering, as primarily the job of lawyers.”).

142. See Anthony Bastardi & Eldar Shafir, *Nonconsequential Reasoning and Its Consequences*, 9 CURRENT DIRECTIONS IN PSYCHOL. SCI. 216, 219 (2000) (noting that people “may be led to pursue noninstrumental information out of a desire to be thorough, or to appear responsible”).

143. Donald A. Redelmeier, Eldar Shafir & Prince S. Aujla, *The Beguiling Pursuit of More Information*, 21 MED. DECISION MAKING 374, 377 (2001).

144. See Daniel Hausmann & Damian Läge, *Sequential Evidence Accumulation in Decision Making: The Individual Desired Level of Confidence Can Explain the Extent of Information Acquisition*, 3 JUDGMENT & DECISION MAKING 229, 239 (2008).

145. Jonathan Baron, Jane Beattie & John C. Hershey, *Heuristics and Biases in Diagnostic Reasoning: II Congruence, Information, and Certainty*, 42 ORG. BEHAV. & HUM. DECISION PROCESSES 88, 90 (1988).

146. *Id.* at 109 (noting that many people fail “to carry out different kinds of ‘checks’ on an initial decision to ask a question”).

Psychologists have demonstrated that numerous cognitive processes can promote the tendency to seek out too much information, but they mostly arise from a failure to think through the implications that the information might hold for decisionmaking—so called nonconsequentialist reasoning.¹⁴⁷ This failure is most evident in a phenomenon called the “disjunction effect.”¹⁴⁸ The disjunction effect occurs “when people prefer *x* over *y* when they know that event *A* obtains, and they also prefer *x* over *y* when they know that event *A* does not obtain, but they prefer *y* over *x* when it is unknown whether or not *A* obtains.”¹⁴⁹ In one study demonstrating the effect, psychologists Amos Tversky and Eldar Shafir asked undergraduates a question as to whether they would want to purchase a hypothetical highly attractive, nonrefundable vacation to Hawaii after an important qualifying exam.¹⁵⁰ A majority of students who were told that they had passed the exam indicated that they would purchase the vacation, as did a majority of students who were told that they had failed the exam. The vast majority of a third group told that they did not yet know the results, however, indicated that they would prefer to wait until they learned the outcome of the exam before making their decision.¹⁵¹ Tversky and Shafir argued that when the subjects knew the outcome of the exam, the vacation would be perceived as either a celebration for passing the exam or a consolation for failing the exam.¹⁵² When the outcome was unknown, however, the subjects lacked a clear rationale for taking the trip.¹⁵³ If the subjects facing uncertainty had thought through how they would feel in both cases, they would have recognized that they would have wanted to take the trip either way. Instead, they simply waited for the unnecessary information.

Lawyers commonly are inclined to seek and obtain information first and assess its usefulness later.¹⁵⁴ As we discussed in the context of the confirmation bias above, the fact that lawyers do not bear the costs of their decisions might exacerbate this tendency. Litigators thus suffer from a

147. See Eldar Shafir & Amos Tversky, *Thinking Through Uncertainty: Nonconsequential Reasoning and Choice*, 24 COGNITIVE PSYCHOL. 449, 449 (1992) (“When thinking under uncertainty, people often do not consider appropriately each of the relevant branches of a decision tree, as required by consequentialism.”). For a description of nonconsequentialist reasoning, see *id.* at 451.

148. *Id.* at 451.

149. *Id.*

150. Amos Tversky & Eldar Shafir, *The Disjunction Effect in Choice Under Uncertainty*, 3 PSYCHOL. SCI. 305, 305–06 (1992).

151. *Id.*

152. *Id.* at 306.

153. *Id.*

154. See Friedman, *supra* note 11, at 69 (“Thus, information is generally acquired first and evaluated later . . .”).

double distortion: they overvalue the additional information and then undervalue the costs incurred by the responding party in providing the information. Lawyers also likely do not realize that the additional information might hinder or distort their own judgment.

How can an excess of information distort judgment? A large volume of information can interfere with the processing of useful information,¹⁵⁵ but information that is irrelevant can also distort choice. Having chosen to seek out information, people seem to feel a need to rely upon it as well.¹⁵⁶ In one demonstration of this effect, researchers asked dialysis nurses whether they would (hypothetically) be willing to donate a kidney to a sixty-eight-year-old relative.¹⁵⁷ When the researchers informed half of the nurses that they were a match for the transplant, 44 percent agreed that they would be willing to donate a kidney.¹⁵⁸ Presumably, if they had not known whether they matched the relative, only 44 percent would have been willing to be tested for compatibility, as the remaining nurses were unwilling to donate. Nevertheless, when researchers told the other half of the nurses that it was uncertain whether or not they were compatible, 69 percent agreed to undergo further testing to determine whether they matched.¹⁵⁹ A subset of these nurses thus pursued information that should have been irrelevant to their choice. The researchers demonstrated, however, that deciding to pursue the information affected the nurses' choices. They informed all of the nurses who agreed to be tested to suppose that they matched and then asked whether they would donate. Nearly all (93 percent) agreed to donate,¹⁶⁰ even though they were put in exactly the same position as those nurses who were initially told that they were compatible. Overall, 65 percent of the nurses who were put through a two-stage decisionmaking process in which they could seek information that was largely irrelevant chose to donate, as opposed to 44 percent in the simple version who were told of their compatibility immediately.¹⁶¹ This

155. See Scott S. Wilthermoth & Margaret A. Neale, *Too Much Information: The Perils of Non-Diagnostic Information in Negotiations*, 96 J. APPLIED PSYCHOL. 192, 199 (2011) ("In our studies, possessing NDI [nondiagnostic information] about a counterpart impaired negotiator effectiveness in both face-to-face and electronically mediated negotiations.").

156. See Anthony Bastardi & Eldar Shafir, *On the Pursuit and Misuse of Useless Information*, 75 J. PERSONALITY & SOC. PSYCHOL. 19, 19 (1998) ("Decision makers often pursue noninstrumental information—information that appears relevant but, if simply available, would have no impact on choice. Once they pursue such information, people then use it to make their decision.").

157. Redelmeier, Shafir & Aujla, *supra* note 143, at 376.

158. *Id.*

159. *Id.*

160. *Id.*

161. *Id.* The 35 percent who chose not to donate include the combination of those who refused to be tested and those who tested positive and then refused to donate.

study, which has been replicated with similar materials,¹⁶² demonstrates that people both needlessly pursue irrelevant information and then—despite its irrelevance—rely on such information once they obtain it.

Waiting to obtain missing information causes people to evaluate the information they receive differently and increases its impact on judgment.¹⁶³ As two researchers put it, “Waiting Increases Weighting.”¹⁶⁴

To determine whether lawyers also pursue, and rely on, unneeded information, we presented a scenario to the Oregon and the Texas lawyers. They were asked to assume that they were representing a plaintiff who had suffered severe facial scarring after a welding machine exploded.¹⁶⁵ The cause of the accident, they learned, was either a defect in the defendant’s machine or the plaintiff’s misuse of the machine. The materials indicated that the defendant had offered to pay \$400,000 to settle the case. The materials also stated that the plaintiff “feels that this offer feels low because his injuries have caused him severe embarrassment and depression,” but added that “he might be willing to accept the offer because he is also anxious to get past the lawsuit.”

The participants read one of two versions of the materials. In the simple version, the materials indicated that a government safety report had implicated the defendant’s machine. The simple version then asks the lawyers whether they would advise their client to accept the settlement or reject it and proceed to trial. In the complex version, the materials indicated that a government safety report was due out any day but was not yet available. The complex version then asked the lawyers to choose one of the following: (1) recommend that the plaintiff accept the settlement offer immediately; (2) recommend that the plaintiff reject the settlement offer and proceed to trial; or (3) recommend that the plaintiff wait until after the government safety report was available to decide whether to accept or reject the settlement. The materials stated that the offer would remain open and unchanged regardless of what the report ultimately stated. The next page of the materials then asked those participants who had advised the plaintiff to wait to continue reading. Eventually, the materials revealed that

162. *Id.* at 376–77 (replicating similar results with different materials and practicing urologists and academic physicians). *See generally* Bastardi & Shafir, *supra* note 156 (reporting several similar studies conducted with undergraduate subjects).

163. *See* Bastardi & Shafir, *supra* note 156, at 28 (“Waiting for information that appears relevant to a decision can raise the extent to which it is brought before one’s attention and thus increase its influence on choice.”).

164. *Id.*

165. *See infra* Appendix III.

the government safety report implicated the defendant's machine. The lawyers in the complex condition were then asked whether they would recommend that their client now accept or reject the settlement offer.

The format of our materials thus presents the possibility of waiting for irrelevant material. Participants who agree to settle are analogous to those nurses who refused to donate, because the government report is not truly relevant to them. Lawyers who settle in the face of a favorable report would almost certainly do so if the report was negative, so, the report is not an important piece of information for them. Those who wait for the report ultimately end up in the same position as those lawyers in the simple condition who were told that the report was favorable. Therefore, those who wait should make the same decision as those who did not wait.

Table 5, below, presents the results. A majority of the lawyers, 65.6 percent (forty-two out of sixty-four), evaluating the simple version favored settling. In contrast, only 43.8 percent (thirty-five out of eighty) of the lawyers evaluating the complex version recommended settlement. The difference between the settlement rate in the simple version and the initial settlement rate in the complex version was statistically significant.¹⁶⁶ The lure of waiting for more information thus influenced the lawyers' assessments of whether to settle.

166. Fisher's Exact Test, $p = .01$

TABLE 5. Number (and Percentage) of Lawyers Making Each Choice in the Simple and Complex Versions of the Products Liability Problem

<i>Version</i>	<i>Choice</i>	<i>Timing</i>		<i>Total</i>
		<i>Immediate</i>	<i>After Waiting</i> ^a	
Simple	Settle	42 (65.6%)	...	42 (65.5%)
	Litigate	22 (34.4%)	...	22 (34.4%)
Complex	Settle	35 (43.8%)	8 (10.0%)	43 (53.8%)
	Litigate	7 (8.8%)	30 (37.5%)	37 (46.3%)

^aDespite instructions to the contrary, six of the seven lawyers who indicated that they would recommend rejecting the settlement and also responded to the page revealing the outcome of the report. Of these six, five indicated they would still decline to settle and one changed her mind and endorsed settlement. Also, one of the lawyers who indicated that they would settle changed her mind after reading that the report was favorable. We ignored these additional responses because these subjects failed to follow the instructions. Even if we had included these decisions as the as the final choices, however, the same number of lawyers would ultimately have endorsed settlement because one lawyer who initially indicated that she would litigate ultimately chose to settle, and one lawyer who initially indicated that she would settle ultimately chose to litigate.

The reaction to the uncertainty the missing report created seemed especially pronounced among those lawyers who did not fare well on the CRT. Among the lawyers who answered none of the CRT questions correctly, 88.9 percent (eight out of nine) of those reviewing the simple version recommended settlement, as compared to only 16.7 percent (one out of six) of those reviewing the complex version. This gap was much smaller among those who got at least one CRT question correct: 62.7 percent (twenty-seven out of forty-three) of those reviewing the simple condition agreed to settle, as compared to only 43.5 percent (twenty-seven out of sixty-two) of those reviewing the complex version. This trend was not statistically significant, however.¹⁶⁷

Male and female lawyers reacted differently to the materials. Among the male lawyers, 64.4 percent (twenty-nine out of forty-five) of those reviewing the simple version settled, as compared to the 55.3 percent (twenty-six out of forty-seven) of those reviewing the complex version.

167. This was assessed by running a logistic regression of the decision to settle or not (combining those lawyers in the complex version who chose to litigate and chose to wait into one group) on the condition, the CRT score (treated as a continuous measure), and an interaction term for CRT by condition. Neither the term for the CRT score nor the interaction term produced significant coefficients in the regression ($z = 0.67$, $p = .50$ for the main effect of experience; $z = 0.67$, $p = .51$ for the interaction). The sample size was small, making it hard to detect any effects.

This difference was far more pronounced among the female lawyers, however, as 72.2 percent (thirteen out of eighteen) of those reviewing the simple condition settled, as compared to 26.9 percent (seven out of twenty-six) of those reviewing the complex version. The interaction of gender with the condition (version) was statistically significant.¹⁶⁸ Experience and political orientation, on the other hand, did not affect the lawyers' decisions to settle significantly.¹⁶⁹

Having obtained additional information, the lawyers seemed to want to make use of it. The settlement rate for those lawyers who waited to learn the contents of the report was quite low, as only 21.1 percent (eight out of thirty-eight) settled. This was a statistically significant difference from the settlement rate among lawyers who reviewed the simple version (65.6 percent, as noted above).¹⁷⁰ Having waited and gotten good news about the quality of their case, these lawyers wanted to go to trial—even though they were put in exactly the same position as their colleagues in the simple version.

Overall, lawyers reviewing the complex version were less likely to settle than lawyers reviewing the simple version: 53.8 percent (forty-three out of eighty) settled, as compared to 65.6 percent (forty-two out of sixty-four). Although the overall differences in settlement rates suggest that many of the lawyers not only waited for information that they did not need, but also were then affected by that information, the difference in settlement rates was not statistically significant.¹⁷¹

168. This was assessed by running a logistic regression of the decision to settle or not (combining those lawyers in the complex version who chose to litigate and chose to wait into one group) on the condition, gender, and an interaction term for condition by gender. The main effect of gender was not significant ($z = 0.59$, $p = .56$), suggesting that men and women settled at comparable rates, but the interaction term was significant ($z = 1.94$, $p = .05$).

169. This was assessed by running a logistic regression of the decision to settle or not (combining those lawyers in the complex version who chose to litigate and chose to wait into one group) on the condition, the years of experience (or party), and an interaction term or experience by condition (or party). Neither experience nor the interaction term produced significant coefficients in the regression ($z = 0.73$, $p = .47$ for the main effect of experience; $z = 1.01$, $p = .31$ for the interaction). Likewise, neither party nor the interaction term produced significant coefficients in the regression ($z = 0.41$, $p = .68$ for the main effect of experience; $z = 0.07$, $p = .94$ for the interaction).

170. Fisher's Exact Test, $p < .001$.

171. Fisher's Exact Test, $p = .17$. Just as with the decision as to whether to settle or wait, the ultimate decision as to whether to settle seemed to be influenced by the CRT score. Among the lawyers who answered none of the CRT questions correctly, 88.9 percent (eight out of nine) reviewing the simple condition agreed to settle (as noted above), whereas only 16.7 percent (one out of six) reviewing the complex version ultimately settled (all five of the lawyers who agreed to wait and scored at least one correct on the CRT chose to litigate). This gap was much smaller among those who got at least one CRT question correct: 62.7 percent (twenty-seven out of forty-three) of those reviewing the simple version in the simple condition (as noted above), whereas only 52.9 percent (thirty-six out of sixty-

Given the lack of an overall main effect on settlement rates, we report the influence of the demographic variables only for completeness. Neither the main effect of the CRT score nor the interaction of CRT score with condition were significant.¹⁷² Neither the main effect of gender nor the interaction of gender with the condition was statistically significant.¹⁷³ In addition, experience and political orientation did not affect the lawyers' decisions to settle significantly.¹⁷⁴

These results demonstrate that, like most people, lawyers sometimes pursue useless information. For most of the lawyers, the government safety report could not provide useful information. Even armed with a favorable report that would support rejecting the low settlement offer and going to trial, two-thirds of the lawyers evaluating the simple version thought that the settlement was worth accepting. If the report had been negative, then the plaintiff's odds of success would have been lower, and the defendant's settlement offer would have seemed more attractive. Therefore, at least the same percentage of lawyers reviewing the complex version should have settled. And yet, only a minority did so. Lawyers, it seems, have the instinct to wait for information that seems relevant without thinking through whether they are waiting for information that would actually be valuable.

Furthermore, the lawyers also seemed compelled to rely on the information that they had needlessly pursued. The lawyers who waited for the government safety report all eventually confronted the same facts as the lawyers who were merely told that the report was favorable. But the lawyers who waited for the information essentially all chose to litigate, while those who did not have a chance to wait for the information largely settled. To be sure, offering lawyers a chance to wait might have facilitated

eight) of those reviewing the complex version settled. In an analysis that controlled for the effect of the CRT score, the condition (version) had a significant effect. In the logistic regression of the overall decision to settle or not on the condition, the CRT score (treated as a continuous measure), and an interaction term for CRT by condition, the main effect of condition in this analysis was marginally significant ($z = 1.90, p = .06$).

The materials had different effects on the ultimate settlement decisions of the male and female lawyers. The male lawyers seemed largely unaffected by the condition: 64.4 percent (twenty-nine out of forty-five) reviewing the simple version settled, as compared to 61.7 percent (twenty-nine out of forty-seven) of those reviewing the complex version. This difference was far more pronounced among the female lawyers, however, as 72.2 percent (thirteen out of eighteen) reviewing the simple version settled, as compared to 46.2 percent (twelve out of twenty-six) of those reviewing the complex version.

172. $z = 0.67, p = .50$ for the main effect of experience; $z = 1.27, p = .20$ for the interaction.

173. $z = 0.59, p = .56$ for the main effect of gender, $z = 1.26, p = .21$ for the interaction term.

174. $z = 0.73, p = .47$ for the main effect of experience; $z = 0.40, p = .69$ for the interaction; $z = 0.41, p = .68$ for the main effect of party affiliation; $z = 0.19, p = .85$ for the interaction.

some self-selection, so that the group who waited might have been more litigious than the lawyers who evaluated the simple version. But the data suggest a trend towards greater litigation rates among lawyers who were given the option of waiting for information.

Like the other phenomena explored in this Article, nonconsequentialist reasoning can promote excessive litigation. Nonconsequentialist reasoning has a double effect on litigation rates. Like the confirmation bias, it can lead litigants to engage in excessive discovery. Perhaps worse, it can encourage parties to treat any favorable evidence that they encounter as justification for further litigation.

The pursuit of and reliance on useless information documented in this study and others results from people's inability or unwillingness to count out all possible ramifications of potential future information before obtaining it.¹⁷⁵ Intuitively, it seems better to have more information, even though thorough analysis would reveal that the information is not necessary to make a sound decision. To overcome this tendency, lawyers should "consider the relevance of missing information before it is pursued."¹⁷⁶ Additionally, they might precommit themselves to a particular course of action depending on what they expect the missing information to reveal. For example, before taking a deposition, lawyers should outline what action they will take if the deponent's testimony is favorable, unfavorable, or equivocal. That would encourage them to assess its relevance ahead of time, which might cause them to forgo the deposition, and also might enable them to avoid giving the missing information undue emphasis when it eventually becomes available.¹⁷⁷ Finally, they might ask a colleague for a recommendation once all the information is available, so that they can benefit from "a fresh perspective that is free of the investments made during a difficult or long search" and the resulting delay.¹⁷⁸

5. Sunk-Cost Fallacy

"There's no use crying over spilled milk."¹⁷⁹ Giving that advice,

175. See Eldar Shafir, *Uncertainty and the Difficulty of Thinking Through Disjunctions*, 50 COGNITION 403, 404–05, 425–27 (1994) (arguing that people are naturally disinclined to perform the mentally taxing task of thinking through disjunction).

176. See Redelmeier, Shafir & Aujla, *supra* note 143, at 378. Although Redelmeier, Shafir & Aujla's paper discusses physicians' decisionmaking, we believe the same analysis is relevant to lawyers' decisionmaking.

177. *Id.*

178. *Id.* ("Colleagues who are presented with all the data at one time often see things differently than the physician who obtains the same data through gradual struggle.")

179. A DICTIONARY OF AMERICAN PROVERBS 129 (Wolfgang Meider et al. eds., 1992).

however, seems easier than following it.¹⁸⁰ People “often incur further losses (‘throw good money after bad’) or take great risks in order to recover those losses.”¹⁸¹ They tend “to continue an endeavor once an investment in money, effort, or time has been made,”¹⁸² even if they would be better off abandoning it from an objective point of view. Further, the greater the investment, the stronger is the inclination to continue.¹⁸³ This tendency, which is often called the “sunk-cost fallacy,”¹⁸⁴ “can lead to sub-optimal economic decisions, because such decisions should be based solely on future costs and benefits, not ones which have already occurred.”¹⁸⁵ Most economists agree that considering sunk costs when making decisions is a mistake because “[a] prior investment should not influence one’s consideration of current options; only the incremental costs and benefits of the current options should influence one’s decisions.”¹⁸⁶ As Richard Posner explained, “Rational people base their decisions on their expectations of the future rather than on their regrets about the past. They treat bygones as bygones.”¹⁸⁷

The sunk-cost fallacy has been widely studied. In a striking experiment, researchers gave a group of participants the following problem:

As the president of an airline company, you have invested 10 million dollars of the company’s money into a research project. The purpose was to build a plane that would not be detected by conventional radar, in

180. See Samuel Issacharoff & George Loewenstein, *Second Thoughts About Summary Judgment*, 100 YALE L.J. 73, 113 (1990) (“Although economists exhort decision-makers to ignore sunk costs and to attend only to the prospective benefits and costs of alternative courses of action, few attain this ideal.”).

181. *Id.*

182. Hal R. Arkes & Catherine Blumer, *The Psychology of Sunk Cost*, 35 ORG. BEHAV. & HUM. DECISION PROCESSES 124, 124 (1985).

183. See William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7, 37 (1988) (“[T]he larger the past resource investment in a decision, the greater the inclination to continue the commitment in subsequent decisions.”) (footnote omitted).

184. See Hal R. Arkes & Peter Ayton, *The Sunk Cost and Concorde Effects: Are Humans Less Rational Than Lower Animal?*, 125 PSYCHOL. BULL. 591, 597 (1999) (“The sunk cost fallacy is due to the inability to segregate prior losses from the current decision as to whether the incremental benefits outweigh the incremental costs.”).

185. Hal R. Arkes & Laura Hutzler, *The Role of Probability of Success Estimates in the Sunk Cost Effect*, 13 J. BEHAV. DECISION MAKING 295, 295 (2000).

186. Arkes & Ayton, *supra* note 184, at 591. See JONATHAN BARON, THINKING AND DECIDING 305 (4th ed. 2008) (“Once you have determined that the best course of action for the future is to change plans—having weighed the effect on others and all of the relevant factors—the time, effort, and money you have spent in the past does not matter one bit.”); RICHARD A. BREALEY & STEWART C. MYERS, PRINCIPLES OF CORPORATE FINANCE 95 (3d ed. 1988) (“Sunk costs are like spilt milk: They are past and irreversible outflows.”).

187. RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 8 (4th ed. 1992).

other words, a radar-blank plane. When the project is 90% completed, another firm begins marketing a plane that cannot be detected by radar. Also, it is apparent that their plane is much faster and far more economical than the plane your company is building. The question is: should you invest the last 10% of the research funds to finish your radar-blank plane?¹⁸⁸

They divided their subjects into two groups. Of those responding to the version of the problem quoted above, 85 percent recommended completing the project,¹⁸⁹ even though, as the problem explained, the plane would be inferior to another plane already on the market. They gave a second group a version of the problem that was similar, except that there was no reference to the prior investment of ten million dollars. Of the participants in the second group, only 17 percent recommended spending more money on the project.¹⁹⁰

The sunk-cost fallacy is not confined to the laboratory. Real-world examples abound.¹⁹¹ In a speech to veterans two years into the war in Iraq, President George W. Bush justified his administration's decision to carry on with the war by reference to the soldiers already lost, arguing that "[w]e owe them something" and asserting that "[w]e will finish the task that they gave their lives for."¹⁹² The lives lost in the war at that point could not be regained, regardless of the course the administration pursued thereafter, but their loss seemed to influence policy nonetheless.

In a different context, professional basketball teams also express a

188. Arkes & Blumer, *supra* note 182, at 129.

189. *Id.*

190. *Id.*

191. See Brian H. Bornstein & Gretchen B. Chapman, *Learning Lessons from Sunk Costs*, 1 J. EXPERIMENTAL PSYCHOL.: APPLIED 251, 251 (1995) (noting that sunk costs influence choice in diverse situations including "personal decisions, financial decisions in business, evaluation of employees' performance, and competitive behavior") (citations omitted); Tobias Greitemeyer, Stefan Schulz-Hardt & Dieter Frey, *The Effects of Authentic and Contrived Dissent on Escalation of Commitment in Group Decision Making*, 39 EUR. J. SOC. PSYCHOL. 639, 644 (2009) ("The reluctance to quit failing courses of action is a widespread phenomenon."). Some have argued that the many supposed examples of the sunk-cost fallacy are actually situations in which attending to the loss is a reasonable strategy because the loss is informative in some way. See Thomas Kelly, *Sunk Costs, Rationality and Acting for the Sake of the Past*, 38 NOÛS 60, 68 (2004) (arguing that in some circumstances, "the pure honorer of sunk costs fares better than the pure expected utility maximizer"); R. Preston McAfee, Hugo M. Mialon & Sue H. Mialon, *Do Sunk Costs Matter?*, 48 ECON. INQUIRY 323, 334 (2010) (concluding that ignoring sunk costs is rational in situations in which "past investments are not informative, reputation concerns are unimportant, and budget constraints are not salient").

192. Quoted in Barry Schwartz, *The Sunk Cost Fallacy: Bush Falls Victim to a Bad Argument for the Iraq War*, SLATE (Sept. 9, 2005, 6:24 AM), http://www.slate.com/articles/news_and_politics/hey_wait_a_minute/2005/09/the_sunkcost_fallacy.html.

sunk-cost fallacy by playing high draft choices more than low draft choices, even when the latter outperform the former.¹⁹³ Measuring the level of teams' investment by the order in which players were selected in the college draft, with an earlier pick representing a larger investment by the team than a later pick, researchers studied whether players' playing time and longevity would be determined by their performance on the court, or alternatively, by the level of the team's investment in them. They found that players in whom teams had a greater investment received more playing time and enjoyed longer retention rates than other players, even after controlling for the players' performance, injuries, trade status, and position played.

The sunk-cost fallacy has both motivational and cognitive causes. Having incurred sizeable costs in pursuit of some endeavor, people want to believe that the undertaking will ultimately succeed. A desire to avoid cognitive dissonance induces them to believe that that they have undertaken the right course of action,¹⁹⁴ and people like to be consistent in their support for an undertaking¹⁹⁵ and follow through with commitments.¹⁹⁶ Sunk costs associated with an undertaking also frame the decision in terms of whether to spend further resources on an undertaking.¹⁹⁷ In effect, people might take some extra risk in hopes of achieving spectacular, but low probability, gain that allows them to avoid locking in a sure loss.¹⁹⁸ Finally, people might overgeneralize a simple rule that it is wrong to waste resources.¹⁹⁹

193. Barry M. Staw & Ha Hoang, *Sunk Costs in the NBA: Why Draft Order Affects Playing Time and Survival in Professional Basketball*, 40 ADMIN. SCI. Q. 474, 474 (1995). See generally Colin F. Camerer & Roberto A. Weber, *The Econometrics and Behavioral Economics of Escalation of Commitment: A Re-Examination of Staw and Hoang's NBA Data*, 39 J. ECON. BEHAV. & ORG. 59 (1999) (discussing and analyzing Staw and Hoang's data).

194. See Arkes & Hutzel, *supra* note 185, at 304 (suggesting cognitive dissonance and impression management as two potential causes of the sunk-cost fallacy); Daniel Friedman et al., *Searching for the Sunk Cost Fallacy*, 10 EXPERIMENTAL ECON. 79, 83 (2007) ("Self-justification (or cognitive dissonance) induces people who have sunk resources into an unprofitable activity to irrationally revise their beliefs about the profitability of an additional investment, in order to avoid the unpleasant acknowledgement that they made a mistake and wasted the sunk resources.").

195. See ROBERT B. CIALDINI, *INFLUENCE: SCIENCE AND PRACTICE* 52–97 (4th ed. 2001).

196. *Id.* at 61–97.

197. See Samuelson & Zeckhauser, *supra* note 183, at 37 ("The greater the investment in the status quo alternative, the more strongly it will be retained.").

198. See Friedman et al, *supra* note 194, at 83 ("[L]oss aversion (with respect to a reference point fixed before the costs were sunk) might induce people to choose an additional investment whose incremental return has negative expected value but still has some chance of allowing a positive return on the overall investment.").

199. See Arkes & Ayton, *supra* note 184, at 595 ("[A] major contributor to the sunk cost effect is people's desire not to appear to be wasteful.").

The sunk-cost fallacy illustrates another difficulty that collecting an excessive amount of information in discovery might pose for lawyers and their clients. Acquiring and analyzing information requires investment. In most lawsuits in the United States, attorney's fees incurred in litigation is a sunk cost that cannot be recovered, even if a litigant ultimately prevails.²⁰⁰ This feature of litigation in the United States means that the attorney's fees create a sunk cost for most litigants.²⁰¹ Having spent large sums on litigation, lawyers and their clients might be reluctant to settle.²⁰²

To determine whether sunk costs influence lawyers' litigation-related decisions, we presented settlement decision materials to the insurance lawyers.²⁰³ We asked the lawyers to assume that they were representing the plaintiff in a breach-of-contract case. The materials indicated that the plaintiff claimed that the defendant had delivered defective machines used in fabricating semiconductors; that discovery had closed; that the plaintiff's maximum possible recovery was \$1,000,000; and that the contract did not contain a provision authorizing the award of attorney's fees to the prevailing party. The plaintiff had suffered an unacceptably high defect rate relative to industry norms, but the evidence regarding the cause of the defect conflicted. The material gave the plaintiff's likelihood of succeeding at trial as 50 percent. Further, the additional nontaxable costs and attorney's fees that the plaintiff would incur by litigating the case through trial would be \$70,000. The materials then stated that the defendant had offered to settle the case for \$480,000, an amount that should have been attractive because it exceeded the expected value of proceeding to trial by \$50,000.²⁰⁴

200. *Alyeska Pipeline Serv. Co. v. Wilderness Soc'y*, 421 U.S. 240, 247 (1975). In the United States, hundreds of fee-shifting statutes and rules create fee shifting of one kind or another, but the backdrop is always a rule that each party pays their own expenses. See ALAN J. TOMKINS & THOMAS E. WILLING, *TAXATION OF ATTORNEYS' FEES: PRACTICES IN ENGLISH, ALASKAN, AND FEDERAL COURTS* 49 (1986) (asserting that each side usually pays their own expenses in litigation in the United States, although exceptions abound).

201. See David A. Anderson, *Improving Settlement Devices: Rule 68 and Beyond*, 23 J. LEGAL STUD. 225, 232 n.18 (1994) ("Attorney fees already incurred represent sunk costs that should have no bearing on the settlement decision . . ."). The use of contingency-fee arrangements complicates matters because the lawyer has incurred the costs. See Miller, *supra* note 30, at 189–90 (explaining how counsel representing plaintiffs on a contingent fee basis become "partial owners" of the plaintiff's claim).

202. See Jay Folberg, Joshua Rosenberg & Robert Barrett, *Use of ADR in California Courts: Findings and Proposals*, 26 U.S.F. L. REV. 343, 369 (1992) ("[A]s a case progress [sic], 'sunk costs' and emotional preparation for trial make settlement more difficult."); Issacharoff & Loewenstein, *supra* note 180, at 113–14 (stating that the sunk-cost fallacy can hinder settlement after the parties have invested in litigation).

203. See *infra*, Appendix IV.

204. The expected recovery of \$1,000,000, reduced to \$500,000 to take into account the 50 percent chance of success, and further reduced by \$70,000 in prospective attorney's fees, yields an expected value of trial for the plaintiff of \$430,000.

Subjects were given one of two versions of the scenario: half were told that they had already spent \$90,000 in attorney's fees litigating the case, and the other half were told that they had already spent \$420,000 in attorney's fees litigating the case. If lawyers are not susceptible to the sunk-cost fallacy, then the settlement proposal should have been equally appealing to both groups.

Our results, however, revealed a substantial difference between the groups. Among lawyers who learned that they had already spent \$90,000, 76 percent (forty-one out of fifty-four) recommended that the settlement proposal be accepted, as contrasted with only 45 percent (twenty-four out of fifty-three) of those lawyers who learned that they had already spent \$420,000. This difference was significant, statistically.²⁰⁵ We observed no statistically significant differences among the lawyers by gender, CRT score, years in practice, or litigator versus nonlitigator.²⁰⁶

These results clearly demonstrate the influence of sunk costs on lawyers' decisions. The money that had already been spent on litigation could not be recovered, and yet it influenced the lawyers' assessments of the case. Instead of assessing the settlement offer with respect to the future expected outcomes alone, the lawyers assessed it relative to past events that could not be undone.

This experiment displays the power of the sunk-cost fallacy. The lawyers did not need to invest the sunk costs personally in order to be vulnerable to its influence. The lawyers who were simply told that they were representing someone else who had previously made a nonrecoupable investment were affected. The lawyers might have identified with the client's position and adopted the same perspective of the case that would produce the sunk-cost fallacy in the clients themselves.²⁰⁷

Alternatively, the lawyers' recommendations in this problem might have reflected more of an anticipation of how their client would react, as opposed to feeling the influence of the sunk costs personally. The lawyers facing \$420,000 in sunk costs might have worried that their clients would blame them for the highly unfavorable total outcome (a net gain of only

205. Fisher's Exact Test, $p < .005$.

206. We observed a nonsignificant trend toward more experienced lawyers to show a less pronounced effect, $z = 1.36$, $p = .17$, and a marginally significant trend for more experienced lawyers to favor settlement more, $z = 1.72$, $p = .09$.

207. See Brian G. Gunia, Niro Sivanathan & Adam D. Galinsky, *Vicarious Entrapment: Your Sunk Costs, My Escalation of Commitment*, 45 J. EXPERIMENTAL SOC. PSYCHOL. 1238, 1243 (2009) ("Participants escalated whenever they experienced a psychological connection to the earlier decision-maker . . .").

\$60,000 on a million dollar claim) that the settlement would have produced. Hence, the lawyers' recommendations in this condition might have reflected their concern that they bore some responsibility for the level of prior investment.²⁰⁸ The lawyers might have felt that the possibility of losing at trial was more appealing than having to explain to the client how they spent so much of the client's money in an unproductive cause. Regardless of which explanation is correct, the level of sunk costs influenced the lawyers' judgment.

In some situations, appearing to honor sunk costs in evaluating a settlement proposal would not be erroneous, but our scenario is not one of them. Efforts to create or protect a reputation for commitment²⁰⁹ or a reputation for ability²¹⁰ are potentially good reasons for continuing a course of action despite mounting costs. In our scenario, however, the lawyers who accepted the settlement offer were not abandoning a losing endeavor prematurely. Rather, they were accepting a deal that exceeded the present expected value of the case. Persisting with litigation under these circumstances marks them as irrational rather than steadfast. Similarly, nothing in our scenario suggests that the degree of completion is correlated with eventual success. Nor does our experiment suggest a repeat-player situation in which, to discourage future litigation, a litigant might behave "irrationally" in the short run in order to create maximum incentives for its adversary to adopt the long-run behavior which the litigant desires.

If the lawyers' advice was colored by their self-interest in avoiding blame for overinvesting in the case,²¹¹ they may have avoided cognitive

208. See Arkes & Ayton, *supra* note 184, at 597 ("[I]t has been shown a number of times that if the decision maker bears personal responsibility for an initial investment, that person is more likely to 'throw good money after bad' compared with the situation in which the decision maker bears no responsibility for the initial investment decision.") (citations omitted); Staw & Hoang, *supra* note 193, at 474 ("[P]eople responsible for a losing course of action will invest further than those not responsible for prior losses.").

209. See McAfee, Mialon & Mialon, *supra* note 191, at 328 ("Refusing to abandon projects with large sunk costs might be rational because it creates a reputation for commitment.").

210. See *id.* at 330 ("Abandoning a project may also reveal an agent as a poor forecaster, leading agents to rationally persist with unprofitable projects to conceal their poor skills.").

211. There are two senses in which maintaining reputation might promote the sunk-cost fallacy: internal (protecting one's view of oneself) and external (protecting others' views of oneself). See Joyce E. Berg, John W. Dickhaut & Chandra Kanodia, *The Role of Information Asymmetry in Escalation Phenomena: Empirical Evidence*, 69 J. ECON. BEHAV. & ORG. 135, 135 (2009); Fredrick V. Fox & Barry M. Staw, *The Trapped Administrator: Effects of Job Insecurity and Policy Resistance upon Commitment to a Course of Action*, 24 ADMIN. SCI. Q. 449, 453 (1979) ("When faced with an external threat or evaluation, individuals may be motivated to prove to others that they were not wrong in an earlier decision and the force of such external justification could well be stronger than the protection of individual self-esteem.") (emphasis omitted).

error but failed their client in a different way, specifically, by placing their client's interest in whether to settle beneath their own selfish interest in avoiding blame for their choices that led to the excessive sunk costs. In either case, then, the existence of large sunk costs caused lawyers to advise their client against accepting an attractive settlement offer. In effect, our result might reflect a combination of the sunk-cost fallacy with the agency costs associated with the structure of the attorney-client relationship. Whether the lawyers' reason was the sunk costs themselves, or a fear of being blamed for having unwisely incurred them, does not really matter. In either event, the existence of sunk costs triggered rejection of a settlement that probably should have been accepted, thereby prolonging the case and multiplying the resources invested in it.

The sunk-cost fallacy, if widespread in litigation, obviously has an untoward effect on the settlement process. Notably, the same settlement offer made at different times (and after varying investments of sunk costs) can result in different recommendations by attorneys. This suggests that serious consideration of settlement should occur sooner rather than later, and that large investments of nonrecoupable costs should be deferred until the possibility of settlement has been thoroughly explored. This makes mandatory pre-discovery disclosures of essential information—preferably both favorable and unfavorable—highly advisable.²¹² It also suggests that discovery should be staged thoughtfully in order to control the timing of discovery costs, with the most important and most accessible discovery occurring first, followed by settlement negotiations, and only if those negotiations fail should less important and less accessible discovery be permitted.

The sunk-cost fallacy might also interfere with lawyers' ability to make sound decisions about discovery. As an example, it might induce them to continue pursuing discovery long after it is clear to an objective, disinterested observer that further discovery is unlikely to yield helpful information. Commitment to a case likely escalates in direct relation to the duration of litigation, although mitigating factors such as changed conditions, deadline effects, and the like might eventually overcome its influence, at least when trial is imminent.

Various measures might be adopted to mitigate the sunk-cost fallacy, including requiring precommitment,²¹³ assigning someone other than the

212. At present, only information a party may use to support its claims or defenses must be disclosed before discovery commences. See FED. R. CIV. P. 26(a)(1).

213. See Itamar Simonson & Barry M. Staw, *Deescalation Strategies: A Comparison of*

initial decisionmaker to determine whether continued investment in the project is warranted,²¹⁴ assigning a member of the decision group the role of devil's advocate to challenge future investment,²¹⁵ and focusing on the potential future regret of further investment.²¹⁶

Finally, susceptibility to the sunk-cost fallacy might be reduced by partitioned decisionmaking. However, this would only work if the client and the initial lawyer could be "walled off" from choices about whether to settle or continue investing in discovery, an unrealistic prospect in most circumstances. Otherwise, subsequent choices would be tainted by the desire or need to justify previous choices.²¹⁷ This suggests that if settlement counsel are retained, they should be hired from a different firm, not be acquainted with litigation counsel, and be, in all other aspects, an impartial and objective third party, untainted by involvement in prior investments in the lawsuit.

III. DISCUSSION

A. GENERAL OBSERVATIONS

Considered together, the results of our experiments suggest that lawyers rely on intuitive cognitive mechanisms to evaluate cases. Consequently, these evaluations can be misleading and can encourage wasteful litigation strategies. Lawyers' intuition leads them to want to take chances on trial that are not worth taking (framing effect); to accumulate unnecessary information about their cases while avoiding information that might undermine the value of their cases (confirmation bias); to seek

Techniques for Reducing Commitment to Losing Courses of Action, 77 J. APPLIED PSYCHOL. 419, 425 (1992) ("[S]etting precise decision rules before knowing the outcome should make it more difficult for a manager to interpret negative evidence as ambiguous or supporting continuation of the project.").

214. See Eyal Biyalogorsky, William Boulding & Richard Staelin, *Stuck in the Past: Why Managers Persist with New Product Failures*, 70 J. MARKETING 108, 118 (2006) (recommending that decisions about whether to continue or stop an ongoing project be made by someone possessing no prior beliefs about the project).

215. See Greitemeyer, Schulz-Hardt & Frey, *supra* note 191, at 644 ("[E]scalation tendencies over multiple decisions appear to be reduced by using heterogeneous groups in which one group member is additionally assigned the role of a devil's advocate.").

216. See Kin Fai Ellick Wong & Jessica Y.Y. Kwong, *The Role of Anticipated Regret in Escalation of Commitment*, 92 J. APPLIED PSYCHOL. 545, 551 (2007) (recommending that decisionmakers be primed to anticipate their future regret if they are misled into erroneously continuing investment).

217. See Gunia, Sivanthan & Galinsky, *supra* note 207, at 1243 ("[O]rganizations truly intent on de-escalating should identify decision-makers who are not only competent but psychologically removed from prior decision-makers.").

information that they do not need and then rely on that information in ways that promote litigation (nonconsequentialist reasoning); and to throw good money after bad (sunk-cost fallacy). Combined with previous research on self-serving biases that suggests lawyers suffer from an excess of overconfidence about their ability to win at trial,²¹⁸ it is clear that lawyers rely on several intuitive processes that encourage needless litigation.

Deliberative reasoning is never perfect, of course. Anyone who has ever made a simple math error knows that deliberative reasoning can lead to bad judgment as well.²¹⁹ Researchers have identified circumstances in which deliberative reasoning produce worse decisions than relying on intuition.²²⁰ In the main, these studies involve aesthetic judgments about consumer goods, however.²²¹ We endorse the prescription that lawyers should be more deliberative because we believe that the settlement of civil disputes is not the kind of setting in which that intuitive reasoning would provide any advantages over deliberation.

To be sure, lawyers might rely on other processes that we did not study that facilitate settlement. An aversion to the pressure and risks associated with trial might well come into play as the trial approaches.²²² The research we present here cannot determine whether intuitions that facilitate settlement outweigh intuitions that facilitate litigation in the

218. See *supra* note 40 and accompanying text.

219. For a discussion of a costly and embarrassing example of a System 2 error made by highly deliberative engineers, see ARTHUR G STEPHENSON ET AL., MARS CLIMATE ORBITER MISHAP INVESTIGATION BOARD PHASE 1 REPORT (1999), available at ftp://ftp.hq.nasa.gov/pub/pao/reports/1999/MCO_report.pdf (attributing the failure of a Mars mission to the use of the wrong units of measurement).

220. See Leonard Lee, On Amir, Dan Ariely, *In Search of Homo Economicus: Preference Consistency, Emotions, and Cognition*, 36 J. CONSUMER RES. 173, 179 (2009) (presenting research showing greater preference consistency for consumer goods when emotional reasoning is encouraged); Itmar Simonson, *Regarding Inherent Preferences*, 18 J. CONSUMER PSYCHOL. 191, 193–94 (2008) (describing research suggesting that intuitive processes will produce worse judgments in some settings); Timothy D. Wilson & Jonathan W. Schooler, *Thinking Too Much: Introspection Can Reduce the Quality of Preferences and Decisions*, 60 J. PERSONALITY & SOC. PSYCHOL. 181, 185–87 (1991) (describing studies in which inducing deliberative reasoning produces regret about choices).

221. *But see* Kelly Goldsmith & On Amir, On the Antecedents of Rational Choice Under Uncertainty 11–12 (June 19, 2012) (unpublished manuscript), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1938787 (showing that certain errors in judgment can be reduced by relying more heavily on intuitive processes).

222. See Robert N. Beaudoin, *University of Windsor Mediation Services 10th Anniversary: Remarks on the Civil Justice Review Task Force*, 21 WINDSOR REV. LEGAL & SOC. ISSUES 5, 8 (2006) (“Any case could be settled, no matter how difficult, no matter the amount of lawyers involved with these words: ‘You’re On Tomorrow!’ Upon receipt of the notice of an impending trial date, negotiations between the parties would intensify and, in the majority of cases, a settlement would be reported by the next day.”).

aggregate. Furthermore, cognitive strategies for assessing cases are not the only factors that make litigation unnecessarily costly. The cognitive illusions studied in the experiments reported in this Article are merely some of the pieces of the puzzle. They may be dispositive in some cases, but get swamped by one or more different factors in others. Nevertheless, the intuitions we have identified present obstacles to settlement. Lawyers and judges interested in streamlining the litigation process would be well served by taking these intuitions into account when evaluating cases.

B. BEST PRACTICES AND POTENTIAL REFORMS

How can these impediments to efficient litigation be addressed? No panacea exists, of course. Each of the cognitive processes we studied has different causes and consequences. The phenomenon-specific nature of those suggestions makes it difficult to identify practices or reforms that would counteract these influences in all cases. We already have identified some measures that might ameliorate the influence of those particularly misleading intuitions. Nevertheless, we sketch out steps that lawyers, judges, and reformers can take to reduce the influence of intuitions that tend to prolong litigation.

1. Encourage Deliberative Processing

As we have discussed, most people rely too heavily on intuition, and too little on deliberation. As the lawyers' responses to the CRT demonstrate, lawyers display this same tendency. Expending the time and effort necessary to engage in deliberate processing might mitigate, if not entirely eliminate, errors caused by the cognitive illusions we have tested. For example, psychologists have found that deliberative processing can overcome framing effects²²³ and mitigate the confirmation bias.²²⁴

It seems hard to believe that lawyers do not already consider litigation-related decisions as carefully as possible. Lawyers are busy, however, and often short of resources. In some circumstances, they might

223. See Todd McElroy & David L. Dickinson, *Thoughtful Days and Valenced Nights: How Much Will You Think About the Problem?*, 5 JUDGMENT & DECISION MAKING 516, 519 (2010) (“[R]esearch on framing effects has shown that more effortful and deliberative processing will attenuate framing effects, whereas less effort and more automatic processing will enhance this framing effect.”); Thomas & Millar, *supra* note 79, at 146.

224. See JONATHAN, ST. B.T. EVANS, BIAS IN HUMAN REASONING: CAUSES AND CONSEQUENCES 108 (1989) (suggesting that poor performance on the Wason card selection task is attributable to subjects' reliance on a “preconscious heuristic judgment of relevance”).

tend to trust their intuition more than they should.²²⁵ Nevertheless, they should expend the effort to engage in deliberative processing, because the cost of doing so is likely smaller than the costs they will incur if their decisions are distorted by misguided intuitions.

2. Expand Training

Another strategy might be to teach lawyers about cognitive illusions and how to dispel them. This could be done either in law schools or as part of lawyers' continuing legal education while in practice. Tutoring seems to improve performance on the Wason card selection task, for example.²²⁶ Additionally, some data suggest that lawyers with extensive training or experience in mediation might make fewer mistakes in analyzing settlements.²²⁷ Lawyers seeking to reduce their error rates should consider seeking training by or advice from skilled and experienced mediators.

3. Strengthen Initial Disclosure

Expanding the initial disclosure requirements under Federal Rule of Civil Procedure 26(a) would simplify or eliminate many of the decisions parties presently must make concerning what information to pursue. That Rule currently limits the scope of initial disclosure to information favorable to the disclosing party²²⁸ and exempts material intended to be used solely for impeachment. Because of these limitations, parties must still make complicated decisions about the scope of discovery they will pursue. Because of the incompleteness of initial disclosure, litigators recognize that they must approach the discovery process with the kind of suspicion that might facilitate the intuitions we have identified, which lead lawyers to

225. See Dan Sperber, Francesco Cara & Vittorio Girotto, *Relevance Theory Explains the Selection Task*, 57 *COGNITION* 31, 90 (1995) (“[P]eople are nearly-incorrigible ‘cognitive optimists.’ They take for granted that their spontaneous cognitive processes are highly reliable, and that the output of these processes does not need re-checking. Just as they trust their perceptions, they trust their spontaneous inferences and their intuition of relevance.”).

226. See Magda Osman, *Can Tutoring Improve Performance on a Reasoning Task Under Deadline Conditions?*, 35 *MEMORY & COGNITION* 342, 349 (2007) (reporting that tutoring improved performance on a Wason card selection task).

227. See Kiser, Asher & McShane, *supra* note 45, at 587–88 (reporting that parties represented by an attorney who also was an experienced mediator are less subject to framing effects in settlement decisions).

228. FED. R. CIV. P. 26(a)(1)(A)(i)–(ii) (limiting initial disclosure of names and contact information of individuals and documents in the disclosing party's possession to those likely to have discoverable information “that the disclosing party may use to support its claims or defenses”). The scope of initial disclosure was not always so limited. See 4 JAMES WILLIAM MOORE ET AL., *MOORE'S FEDERAL PRACTICE* §§ 26.21, 26.28[3] (3d ed. 2012).

pursue unimportant information. Further, receiving more information earlier and more cheaply would minimize the “waiting causes weighting” phenomenon without unduly increasing costs.

Protocols encouraging or requiring the prefiling exchange of information should be considered.²²⁹ Allowing parties to assess the strength of their opponent’s case without investing in preparing a complaint or a responsive pleading might discourage lawsuits and lead to earlier settlements. Although initial disclosure has its flaws,²³⁰ and some have argued that initial disclosure does not improve the speed or efficiency of litigation,²³¹ it does hold out the prospect of reducing the incidence of cognitive errors that lead to overdiscovery and settlement delay.

4. Tighten Limits on Discovery

In addition to forcing parties to disclose more evidence unilaterally at the outset, limiting their ability to gather other evidence would also reduce lawyers’ tendencies to gather too much information. Although the Federal Rules of Civil Procedure currently restrict the number of depositions that may be noticed²³² and the number of interrogatories that may be served,²³³ they place no restrictions on the number of requests for production and requests for admission that may be served. Since requests for production are the most burdensome type of discovery request, it makes sense to limit their use as well. Therefore, numerical limits on the number of requests for admissions and the number of requests for production that may be served should be considered.²³⁴

Parties could attempt to circumvent such limits by stipulating around them, of course. That possibility, however, has not prevented limits on

229. See HARRY WOOLF, ACCESS TO JUSTICE: FINAL REPORT TO THE LORD CHANCELLOR ON THE CIVIL JUSTICE SYSTEM IN ENGLAND AND WALES 107–11 (1996) (establishing prefiling protocols for the exchange of information and settlement negotiations).

230. See Samuel Issacharoff & George Loewenstein, *Unintended Consequences of Mandatory Disclosure*, 73 TEX. L. REV. 753, 785–86 (1995) (criticizing mandatory disclosure).

231. See Kuo-Chang Huang, *Mandatory Disclosure: A Controversial Device with No Effects*, 21 PACE L. REV. 203, 262 (2000) (concluding that mandatory disclosure has not expedited case disposition or saved litigation costs).

232. FED. R. CIV. P. 30(a)(2)(A)(i) (limiting the number of depositions that may be taken to ten per side absent stipulation or leave of court).

233. FED. R. CIV. P. 33(a)(1) (“Unless otherwise stipulated or ordered by the court, a party may serve on any other party no more than 25 written interrogatories, including all discrete subparts.”).

234. See Stephen N. Subrin, *Fudge Points and Thin Ice in Discovery Reform and the Case for Selective Substance-Specific Procedure*, 46 FLA. L. REV. 27, 46 (1994) (“[W]e should provide a more constricted presumptive amount of discovery and a short period to a certain trial date in the vast majority of cases.”).

interrogatories and depositions from being effective, and courts could impose restrictions on the scope of parties' stipulations if necessary. Furthermore, requiring parties to use such stipulations to obtain extra discovery could force them to stop and think before gathering unneeded information.

Tighter restrictions on discovery have worked well in some circumstances. For example, Stephen Susman has proposed a protocol for reducing the cost of discovery in large-scale litigation.²³⁵ The limits he suggests that parties adopt by agreement are stricter than those presently prescribed by the Federal Rules of Civil Procedure. As an example, his suggested protocol addresses the problem of document requests, which presently are unlimited, in a creative and efficacious way.²³⁶ Similarly, even very strict limits on the duration of trial presentations have been well received.²³⁷

Adopting these proposals would not be costless. Some cases might be adjudicated based on less information than is needed to optimize the opportunity for a correct result.²³⁸ Also, some deserving plaintiffs may lose cases they should have won because they were unable to find helpful information in the defendant's possession (actually, this would be true of either plaintiffs or defendants, although in certain types of litigation, it may be expected that it would adversely affect plaintiffs more often). On the other hand, it would avoid other costs, such as by saving a great deal of money, time, and effort that otherwise would be invested in unnecessary discovery, decreasing pressure to tighten pleading standards even further, encouraging movement out of the public court system and into the realm of private dispute resolution, and so on. In our view, there is more sweet than bitter in restricting discovery more tightly, but admittedly this particular proposal may contain some of each. Doing nothing, however, risks the further withering of the civil justice system as unaffordable discovery and other elaborate procedural protections render it useless and prohibitively

235. Lorna G. Schofield, *Greater Efficiency in Civil Procedure*, 36 LITIG., Spring 2010, at 1, 2 (describing Susman's protocols, including forbidding depositions longer than three hours).

236. See Stephen Susman, *Pretrial Agreements Made Easy*, TRIAL BY AGREEMENT (May 4, 2011), <http://trialbyagreement.com/pretrial-agreements/pretrial-agreements-made-easy/> (recommending that documents be produced on a rolling basis).

237. See Patrick E. Longan, *The Shot Clock Comes to Trial: Time Limits for Federal Civil Trials*, 35 ARIZ. L. REV. 663, 665 (1993) (identifying jurisdictions that have adopted time limits on discovery).

238. See FED. R. CIV. P. 26 advisory committee's note to 1970 amendments ("Discovery frequently provides evidence that would not otherwise be available to the parties and thereby makes for a fairer trial or settlement.").

expensive for almost every purpose.²³⁹

5. Continuing Active Judicial Case Management

During the past three decades, judges have been encouraged, and even required, to take a more active role in managing their cases.²⁴⁰ If nothing else, courts should continue to increase their supervision of the discovery process. Although judges are not immune to cognitive error, they bring an outsider perspective to decisions about discovery and settlement.

One step judges should take is to encourage parties to pursue the most diagnostic or important discovery first. This runs counter to the common practice of beginning with less important depositions and gradually building toward the more important ones. Although that practice may result in lawyers acquiring more familiarity with the case or even performing somewhat better by the time the most important depositions are taken, it also tends to lock in settlement, discouraging sunk costs before the most diagnostic information is obtained.

Judges also might continue and increase their management of motion practice, such as by limiting the number of motions that parties may file or limiting the length of those that are permitted. Although some summary judgment motions succeed (or at least provide diagnostic information regarding the likely case outcome if they fail), others are obviously futile and provide no diagnostic information. They do, however, increase sunk costs.²⁴¹ Therefore, preventing or limiting investment in unpromising motions may increase the odds of settlement.

IV. LIMITATIONS

Our study obviously has limitations. First, our experiments—like all experiments—are unavoidably artificial. No hypotheticals in a written

239. See CAMPOS, *supra* note 23, at 21, 24, 87; Gordon W. Netzorg & Tobin D. Kern, *Proportional Discovery: Making It the Norm, Rather Than the Exception*, 87 DENV. U. L. REV. 513, 515 (reporting the results of a survey of members of the American College of Trial Lawyers, “Participants complained ‘[w]e have sacrificed the prospect of attainable justice for the many in the interest of finding that one needle in the [forest of] haystacks’”) (quoting AM. COLL. OF TRIAL LAWYERS TASK FORCE ON DISCOVERY & INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., INTERIM REPORT & 2008 LITIGATION SURVEY OF THE FELLOWS OF THE AMERICAN COLLEGE OF TRIAL LAWYERS app. B, at B-1 (2008), available at http://www.law.northwestern.edu/jep/symposia/documents/2008_CJS_Materials/7_Perspectives_on_eDiscovery_%28pt1%29.pdf).

240. See, e.g., Jeffrey A. Parness, *American General Jurisdiction Trial Courts: New Visions, New Guidelines*, 55 U. KAN. L. REV. 189, 189, 224 (2006); Judith Resnik, *Managerial Judges*, 96 HARV. L. REV. 374 (1982).

241. See Issacharoff & Loewenstein, *supra* note 180, at 113–14 (discussing this phenomenon).

questionnaire, no matter how detailed or carefully crafted, can recreate the rich environment in which lawyers' litigation-related decisions are made. Nevertheless, as we have explained elsewhere, our methodology has value;²⁴² in particular, it allows us to identify the kinds of cognitive strategies lawyers use to assess cases. We cannot determine whether lawyers adopt additional approaches in actual cases, of course, and so caution should be exercised in interpreting and applying our results.

Second, although we had over four hundred lawyer subjects from several states, our population of subjects is neither as broad nor as diverse as might be desirable. Our results might deserve greater confidence if we also had run additional experiments using different problems on the cognitive illusions we tested, and drawn subjects from a wider and more diverse population. In particular, lawyers accustomed to representing plaintiffs may be underrepresented in the experiments reported in this Article. This might matter because plaintiffs' counsel may differ systematically from defendants' counsel. In particular, the different approach that contingency-fee lawyers (who usually represent plaintiffs) must adopt in litigating cases because their compensation is not assured may make them less susceptible to some of the cognitive phenomena we tested (such as nonconsequentialist reasoning). On the other hand, it may make them more susceptible to other cognitive phenomena we tested (such as confirmation bias and the sunk-cost fallacy) because they have a more direct financial interest in both the costs incurred and the potential recovery than do defendants' counsel, who are typically paid by the hour.²⁴³

Third, we tested lawyers individually. In practice, lawyers typically collaborate with other lawyers, especially in substantial cases. Two or more lawyers might perform better than a single lawyer.²⁴⁴ Additionally, others—such as nonparty insurers and their counsel—are sometimes involved in the evaluation of settlement. The delegation of negotiating authority to other agents might mitigate the biases of litigants and their

242. Guthrie, Rachlinski & Wistrich, *Inside the Judicial Mind*, *supra* note 47, at 819–21.

243. See Herbert M. Kritzer, *Defending Torts: What Should We Know?*, 1 J. TORT L. 3, 7 (2007) (noting the widespread assumption that “defense counsel is presumably being paid on an hourly basis”).

244. See JAMES SUROWIECKI, *THE WISDOM OF CROWDS* xiii (2004) (“[U]nder the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them.”). *But see* George Loewenstein & Don A. Moore, *When Ignorance Is Bliss: Information Exchange and Inefficiency in Bargaining*, 33 J. LEGAL STUD. 37, 54 (2004) (“Even if individual attorneys are subject to bias, however, important cases are generally pursued by teams of attorneys, and one might hope that groups would be more reasonable and less extreme in their judgments. But . . . evidence suggests otherwise; research on group polarization and the ‘severity shift’ suggests that groups may come to more extreme judgments than individuals.”) (citations omitted).

counsel.²⁴⁵ Furthermore, lawyers seldom make decisions about the timing and content of settlements entirely independently of their clients. It is the clients who ultimately must decide whether, and if so when, to settle.²⁴⁶ They also may be consulted by their counsel at various points in the pretrial process, such as before an additional expensive round of discovery is initiated. It is unclear whether this collaborative aspect of litigation-related decisionmaking would increase, decrease, or leave undisturbed the impact of psychological biases on lawyers. Lawyers usually are more experienced at making litigation-related decisions than are their clients, even clients who are sophisticated corporations with experienced in-house counsel. Therefore, it is not clear that consulting with their clients would enable lawyers to avoid psychological biases more successfully than they could on their own.

V. CONCLUSION

Researchers have found that people commit cognitive errors in a variety of situations. In the litigation context, these errors can cause litigants to make poor choices about whether and when to settle. The results of our experiments demonstrate that these same cognitive errors likely distort lawyers' choices about what advice to provide their clients concerning settlement. As a result, lawyers sometimes may be encouraging their clients to delay settlement when they should not, and advising them to reject settlement offers that they should accept. Unfortunately, it appears that lawyers are about as susceptible to cognitive error as their clients, so the hope that lawyers will be able to mitigate their clients' cognitive shortcomings in evaluating possible settlements appears to be unwarranted. This means that, despite the assistance of counsel, some cases will settle later than they should, and other cases that ought to have been settled will not settle at all. Consequently, litigants will invest more resources in litigation than they need to, their excessive investments will drain from the economy resources that could be more productively deployed elsewhere, and courts will be forced to waste their limited resources by making decisions that are unnecessary. In our view, more attention should be

245. See Guthrie & Rachlinski, *Insurers, Illusions of Judgment and Litigation*, *supra* note 47, at 2033, 2036, 2047 (presenting research showing that insurance executives avoid several common cognitive errors); Michael J. Meurer, *The Gains from Faith in an Unfaithful Agent: Settlement Conflicts Between Defendants and Liability Insurers*, 8 J.L. ECON. & ORG. 502, 504 (1992) (“[P]arties find . . . the delegation of bargaining authority to the insurer to be a valuable device for improving the bargaining position of the insurer against potential plaintiffs.”) (footnote omitted).

246. See MODEL RULES OF PROF'L CONDUCT R. 1.2(a) (2012) (“A lawyer shall abide by a client's decision whether to settle a matter.”).

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devoted to ensuring that more cases settle, and that they settle as early as they should. Although we have attempted to suggest some palliative remedies, they are neither easy nor complete cures. There may be conflicting views about how many cases should settle and how early they should settle, but few would argue that attractive settlements should be delayed or spurned simply because lawyers commit cognitive errors in analyzing them.

APPENDIX I: FRAMING SCENARIO; COPYRIGHT DISPUTE

Imagine that you are representing a [plaintiff /defendant] in a copyright action. [Your client/The plaintiff] is claiming \$200,000 in damages against the defendant. Both the plaintiff and the defendant are midsized publishing companies with annual revenues of about \$2.5 million per year. The [defendant/plaintiff] is represented by competent attorneys with whom you do not have previous experience. You believe that the case is a simple one, but it presents some tough factual questions. There is no dispute as to the amount at stake, only as to whether the defendant's actions infringed on the plaintiff's copyright. You believe that the plaintiff has a 50 percent chance of recovering the full \$200,000 and a 50 percent chance of recovering \$0. You expect that should the parties fail to settle, each will spend approximately \$50,000 at trial in litigation expenses. Assume that there is no chance that the losing party at trial will have to compensate the winner for these expenses.

The case is approaching a trial date and the [defendant/plaintiff] has offered to settle with your client for [\$60,000/\$140,000]. The [defendant/plaintiff] has proposed this as a take-it-or leave-it offer and asserts that they will go to trial if your client rejects the offer. Your client has asked for your opinion as to whether to accept the offer. Should the [plaintiff/defendant] agree to [accept \$60,000/pay \$140,000] to settle the case?

Yes No

APPENDIX II: CONFIRMATION BIAS SCENARIO; *GENDER DISCRIMINATION PROBLEM*

Imagine that you are representing a plaintiff in a case alleging gender discrimination. The plaintiff works as a computer programmer at a large software firm. She contends that she was passed over for promotion to the position of "software engineer" because of her gender. The plaintiff's complaint alleges that the firm's "male managers never promote female employees to the position of software engineer." The defendant denies this contention.

During the deposition of a human resources officer, you learned about four former employees who had been promoted to the position of "software engineer" and who had qualifications similar to her own. The officer could not remember all of the details, however. The defendant asserted that it can only fill in the details about these four former employees by having this officer spend roughly thirty hours searching for each file. This is partly because a recent flood badly damaged the personnel records at the defendant's central offices.

You have served a set of interrogatories seeking the missing information about these four former employees. The defendant objected to the interrogatories and you moved to compel answers. The defendant has asserted that the information is not relevant to the plaintiff's allegation, and that even if it is, the burden of providing it likely outweighs its likely benefit.

You are planning to file a motion to compel responses to your interrogatories. Several discovery motions have already been filed in this case, and in frustration, the judge has warned both sides to seek only information that is truly necessary. Therefore, you want to limit the scope of your motion as much as possible.

Please identify the file or files that must be examined to determine if the plaintiff's allegation that "male managers never promote female employees to the position of software engineer" is likely to be true or false. Do not identify any more files than are absolutely necessary. (Please check the line next to the file or files that are relevant.)

A. The personnel file of an employee whose gender is unknown, but who was recently promoted by a male supervisor to the position of software engineer.

B. The personnel file of an employee whose gender is unknown, but

who was recently promoted by a female supervisor to the position of software engineer.

C. The personnel file of a male employee who was recently promoted to the position of software engineer by a supervisor whose gender is unknown.

D. The personnel file of a female employee who was recently promoted to the position of software engineer by a supervisor whose gender is unknown.

APPENDIX III: NONCONSEQUENTIALIST REASONING;
SETTLEMENT DECISION

You represent the plaintiff in a product liability suit. The plaintiff is twenty-seven years old, unmarried, and is a line worker at an automobile assembly plant. He was injured while working with a high-temperature robotic welding unit manufactured by the defendant. The unit exploded suddenly, shattering the worker's safety face shield (which is a specialized shield that the defendant also supplied). The plaintiff suffered severe facial scarring.

The plaintiff has obtained a recovery from his employer through the state worker's compensation system for all lost wages and medical expenses, but is also suing the manufacturer of the unit for damages not covered by the worker's compensation system (including emotional distress and harm arising from his disfigured appearance). The plaintiff alleges that the unit was improperly manufactured. The defendant, however, contends that the worker was using the unit improperly.

Discovery is largely complete, and has produced much conflicting evidence regarding the source of the accident. Determining the cause is difficult because the unit was completely destroyed in the explosion.

Simple version: A report concerning the cause of the accident has been issued by a government workplace safety agency. It concludes that "although an exact cause of the worker's injury cannot be conclusively assigned, a defect in the welding unit was the more likely cause of the explosion, rather than misuse of the unit by the worker."

Complex version: A report concerning the cause of the accident will be issued by a government workplace safety agency in two days. This report might attribute the primary cause of the accident as either to a defect in the unit or to operator misuse.

The report will not be dispositive, but it will be admissible and you believe that it will likely be compelling to the jury.

Earlier today, the defendant offered to settle the case for \$400,000. It has agreed to leave this offer open for one week. Your client feels that this offer feels low because his injuries have caused him severe embarrassment and depression. He is so badly disfigured that he is reluctant to appear in public. His longtime girlfriend has also abandoned him. Nevertheless, he has said that he might be willing to accept the offer because he is also anxious to get past the lawsuit and get on with his life. He is also worried

about his chances at trial. He has asked your advice on whether he should settle.

Earlier today, the defendant offered to settle the case for \$400,000. It has agreed to leave this offer open for one week.

What would you advise the client to do?

Accept the settlement

Reject the settlement and get ready for trial

Complex version adds the following option and the text that follows (on the subsequent page):

Wait to decide whether to accept or reject the settlement until the government report is available

If you advised your client to wait, please answer the following additional question:

It is now two days later. The report has been issued. It concludes that “although an exact cause of the worker’s injury cannot be conclusively assigned, a defect in the welding unit was the more likely cause of the explosion, rather than misuse of the unit by the worker.”

The defendant has called to state that the \$400,000 settlement offer still stands as is. What is your advice now?

Advise your client to accept the settlement

Advise your client to reject the settlement and get ready for trial

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APPENDIX IV: SUNK-COST SCENARIO; *CONTRACT DISPUTE*

You are advising one of your clients, one of the nation's leading manufacturers of semiconductor components, in a lawsuit alleging breach of contract. Your client is the plaintiff. The defendant is a large engineering firm that designs and sells highly specialized equipment for the electronics industry. The lawsuit arises out of the defendant's sale of machines used to produce semiconductors.

The parties agree that the machines, as installed in the plaintiff's facility, are producing an unacceptably high defect rate relative to industry norms. The plaintiff asserts that the machines are flawed and must be replaced. The defendant contends that flaws in the design of plaintiff's fabrication facility are causing the defects. Discovery has been completed and has produced conflicting evidence. The best estimate you can make as to the likelihood of success for the plaintiff is 50 percent. If the case goes to trial, it will be decided by a jury.

If the plaintiff is successful, it would likely recover about \$1,000,000 in damages, inclusive of interest (which is the cost of completely replacing the machines, and related consequential damages). The contract does not contain a provision authorizing the award of attorney's fees to the prevailing party.

Discovery has concluded and the case is close to its trial date. At the insistence of the court, the parties participated in a settlement conference. After lengthy negotiations, the defendant finally offered to pay \$480,000 in exchange for a dismissal of the lawsuit and a general release of all claims arising out of the contract. The defendant insists that this is its final offer, and that it will not agree to pay a penny more. You are confident that if the plaintiff does not accept the offer, the case will proceed to a trial, which you estimate will cost the plaintiff roughly \$70,000 in attorney's fees, expert witness fees, and other nontaxable costs.

To date, the plaintiff has spent a total of [\$90,000/\$420,000] in pursuing its claim, including attorney's fees, expert witness fees, and other nontaxable costs.

The plaintiff has asked for your advice concerning defendant's settlement proposal, and you have agreed to provide it. What advice would you give your client?

_____ Accept defendant's settlement offer

_____ Reject defendant's settlement offer

