Placebo Trials: A New Tool to Discourage Wrongful Convictions Caused by Jury Error

Hayley Stillwell*

Despite the foundational principle in the American criminal justice system that it is better to acquit the guilty than to convict the innocent, wrongful convictions remain a persistent issue. Wrongful convictions are sometimes caused by flawed evidence, such as eyewitness misidentifications and unreliable forensic techniques. Researchers and scholars have studied this problem of flawed evidence extensively, leading to many successful reform efforts to address this portion of the wrongful conviction problem. But there is another portion of the wrongful conviction problem that has yet to be the target of reform efforts—wrongful convictions caused by juror error. Implicit biases, forbidden assumptions, and strategic voting are jury errors that can lead to wrongful convictions, yet they are difficult problems to address given the black box of secrecy that surrounds jury deliberations.

This Article proposes the use of "placebo trials" as a novel thought experiment that could transform into a real experimental method to identify and address jury error. Placebo trials simulate real trials in every way, but they are not real. As far as jurors know, however, they are sitting on a real trial. Another important characteristic of placebo trials is that the objectively correct verdict outcome is an acquittal. By inserting a variable into a placebo trial, the experiment can show with firsthand jury data whether the variable impacts acquittal rates. If a variable has such an effect, then it may lead to wrongful convictions and should be the focus of reform efforts.

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* Associate Professor of Law, University of Oklahoma College of Law.

INTRODUCTION

"[I]t is better that ten guilty persons escape than that one innocent suffer."[1] The principle that a criminal justice system should err on the side of acquittals—even acquittals of the guilty—to avoid convicting the innocent is a cornerstone of the American criminal justice system.[2] It is reflected in many defendant-friendly system features, including the criminal defendant's presumption of innocence[3] and the government's high burden of proof required to convict.[4] Notwithstanding these and other protections for the criminal defendant, the American criminal justice system has wrongfully convicted thousands of innocent persons of crimes.[5]

This failure of the system is both indisputable and common knowledge. Even so, only a portion of the wrongful conviction problem gets the attention of the public, researchers, and reformers. Sparked by advances in DNA testing, exonerations of criminal defendants convicted with flawed evidence—from eyewitness misidentifications to debunked bite-mark evidence—have dominated the wrongful conviction narrative. However, flawed evidence is only one cause of the wrongful conviction problem.

Jury error is another cause. Despite society's expectation of jurors to evaluate the evidence presented at trial without any biases or assumptions to the detriment of the criminal defendant, to follow the court's instructions about the law, and to apply those instructions to the facts supported by the evidence to reach a verdict, jurors do not always behave as expected. They sometimes view evidence and reach verdicts under the influence of implicit biases; they make forbidden assumptions to the detriment of the criminal

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1. Coffin v. United States, 156 U.S. 432, 456 (1895) (quoting 2 WILLIAM BLACKSTONE, COMMENTARIES *358).

2. *See* Daniel Epps, *The Consequences of Error in Criminal Justice*, 128 HARV. L. REV. 1065, 1067–69 (2015).

3. *See Coffin*, 156 U.S. at 458–59 (defining "presumption of innocence" as "an instrument of proof created by the law in favor of one accused, whereby his innocence is established until sufficient evidence is introduced to overcome the proof which the law has created").

4. To convict a criminal defendant, the government must provide "proof beyond a reasonable doubt of every fact necessary to constitute the crime with which [the criminal defendant] is charged." *In re* Winship, 397 U.S. 358, 364 (1970).

5. The National Registry of Exonerations has recorded 3,582 exonerations since 1989. NAT'L REGISTRY EXONERATIONS, https://www.law.umich.edu/special/exoneration/Pages/detaillist.aspx [https://perma.cc/E2NP-FM5Y].

Wrongful convictions occur when a criminal defendant is convicted of a crime without proof of guilt beyond a reasonable doubt. This may include not only convictions of the factually innocent, but also convictions of the factually guilty. *Id.*

defendant; they engage in bad behavior; and they take part in strategic voting—all jury errors that can lead to wrongful convictions.

In many ways, wrongful convictions caused by jury error are more problematic than those caused by flawed evidence. Flawed evidence can be attacked following conviction: for instance, research and scientific advances in DNA evidence have exposed the unreliability of eyewitness identifications and bite-mark analysis, which have misidentified criminal defendants.[6] But jury error cannot be similarly attacked post-trial. Jury deliberations are shielded by a black box of secrecy, and a jury's verdict generally cannot be impeached.[7] Unless a juror decides to come forward and report their own or observed biases and misconduct, the criminal defendant's conviction stands.[8] Notwithstanding this pressing problem, the portion of wrongful convictions caused by jury error have been largely ignored in research and reform efforts. A wrongful conviction caused by jury error, however, is just as much a wrongful conviction as one caused by flawed evidence.

The starting point to address this problem is with a novel thought experiment: what if there was a hypothetical trial setting in which the jury should objectively acquit the criminal defendant? Now imagine that a variable is inserted into that trial—gang evidence, or a monetary incentive to reach the correct verdict. What if gang evidence prompts the jury to wrongfully convict? Or, conversely, what if a monetary incentive prevents the jury from ever wrongfully convicting? If so, then these variables should form the bases of reform efforts.

A thought experiment is a useful brainstorming tool, but it lacks the concrete data necessary to support serious reform proposals. But what if this thought experiment could be transformed into a real experiment? With enough funding and resources, it can, in the form of the placebo trial experiment.

Just like placebo pills, placebo trials appear to be the real thing—jurors are summoned and selected, the prosecution and defense present their cases, a judge presides over the case and makes rulings throughout, and jurors deliberate and return a verdict. But, unlike real trials, placebo trials have two distinct characteristics. First, they are not real. The criminal defendant did not commit a crime, nor are they charged with a crime, and the defendant, attorneys, and judge are the only ones that know. But as far as jurors know, they are sitting on a real trial. Second, in placebo trials, the government always fails to prove an element of the crime "charged" beyond a reasonable

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6. *See infra* Section I.A.
7. *See* Pena-Rodriguez v. Colorado, 580 U.S. 206, 210–11 (2017).
8. *See id.* at 211.

doubt, so conviction is the incorrect verdict. As a result, placebo trials should always result in acquittals.

The placebo trial experiment borrows from the scientific method to isolate variables and determine whether they impact jury verdict accuracy. Two groups of juries, whose members all believe they are sitting on a real trial, sit through largely the same placebo trial. The only difference is that a variable appears in one group's trials but not in the other group's trials. A comparison of the groups' acquittal rates will demonstrate whether the variable impacts jury verdict accuracy.

If the introduction of a variable in the experimental group of placebo trials results in a higher acquittal rate compared to the acquittal rate of the control group, then first-hand jury data confirms that the variable should form the basis of potential reforms. Furthermore, if the introduction of a variable in the experimental group prompts those juries to wrongfully convict, then that variable is a point of weakness in the criminal justice system that should be the target of reform efforts.

The ultimate miscarriage of justice is a wrongful conviction, regardless of its cause. Although the black box shields most jury error, it is undeniably a cause of wrongful convictions. Society must stop turning a blind eye to this problem and start contemplating reforms to address it ex ante, before the black box descends. The thought experiment facilitates this contemplation, and the placebo trial experiment provides a source of first-hand jury data to prompt real reforms.

I. THE WRONGFUL CONVICTION PROBLEM

The wrongful conviction problem is indisputable. Although the "overall error rate in the criminal justice system is unknown, and unknowable,"[9] wrongful convictions are "far from rare."[10] The National Registry of Exonerations has recorded 3,582 exonerations since 1989.[11] Moreover, an estimated 46,000 to 230,000 wrongfully convicted persons sit behind bars today.[12] These staggering numbers reflect a severe deviation from the

9. Dan Simon, Are Wrongful Convictions Episodic or Epidemic?, Presentation at the Annual Meeting of Law & Society Association (July 7–9, 2006).

10. Jon B. Gould & Richard A. Leo, *One Hundred Years Later: Wrongful Convictions After a Century of Research*, 100 J. CRIM. L. & CRIMINOLOGY 825, 827 (2010).

11. NAT'L REGISTRY EXONERATIONS, *supra* note 5.

12. *See* John Grisham, Opinion, *Eight Reasons for America's Shameful Number of Wrongful Convictions*, L.A. TIMES (Mar. 11, 2018, 5:15 AM), https://www.latimes.com/opinion/op-ed/la-oe-grisham-wrongful-convictions-20180311-story.html [https://perma.cc/337J-TS4C]; *see also*

criminal justice system's cornerstone principle of erring on the side of acquittals of the guilty rather than convictions of the innocent.[13]

The wrongful conviction problem is also common knowledge. Researchers and scholars frequently gather statistics on and analyze common causes of wrongful convictions.[14] Organizations like The Innocence Project have placed the wrongful conviction problem at the forefront of society's mind by publicly working within the legal system over the last three decades to free the wrongfully convicted.[15] Documentaries covering the stories of the wrongfully convicted litter Netflix, from *Making a Murderer*[16] to *Dream/Killer*,[17] and their subjects become household names. More than ever, the wrongful conviction problem is a familiar flaw of the criminal justice system.

A. Flawed Evidence

Most of the ink that has been spilled on the causes of wrongful convictions focuses on flawed evidence. Eyewitness misidentification is the leading cause of wrongful convictions in those overturned by post-conviction DNA

How Many Innocent People Are in Prison?, INNOCENCE PROJECT (Dec. 12, 2011), https://innocenceproject.org/how-many-innocent-people-are-in-prison [https://perma.cc/2QPE-XNLB].

13. *See* Pat Vaughan Tremmel, *New Study Shows How Often Juries Get It Wrong*, EUREKALERT! (June 28, 2007), https://www.eurekalert.org/news-releases/689296 [https://perma.cc/UBP4-25TN] (discussing university study estimating that juries render inaccurate verdicts, either convicting the legally innocent or acquitting the guilty, about 10% of the time); Gould & Leo, supra note 10, at 835 ("[M]any of the exonerations to date have been based on DNA testing, yet fewer than 20% of violent crimes involve biological evidence, and in the vast majority of past cases, biological evidence was not properly collected or held for future testing."); Coffin v. United States, 156 U.S. 432, 456 (1895) ("[T]he law holds that it is better that ten guilty persons escape than that one innocent suffer." (quoting 2 WILLIAM BLACKSTONE, COMMENTARIES *358)).

14. *See, e.g.*, Gerald M. LaPorte, *Wrongful Convictions and DNA Exonerations: Understanding the Role of Forensic Science*, NAT'L INST. JUST. (Sept. 7, 2017), https://nij.ojp.gov/topics/articles/wrongful-convictions-and-dna-exonerations-understanding-role-forensic-science [https://perma.cc/PJF8-U6DZ].

15. *See Explore the Numbers: Innocence Project's Impact*, INNOCENCE PROJECT, https://innocenceproject.org/exonerations-data [https://perma.cc/VZ4K-VEKR].

16. *Making a Murderer* is a documentary that follows Steven Avery, who was wrongfully convicted of sexual assault and served eighteen years in prison before being exonerated by DNA evidence. *See* MAKING A MURDERER (Synthesis Films 2016). He was later convicted of murder. *See id.*

17. *Dream/Killer* is a documentary about the wrongful conviction of Ryan Ferguson, who was convicted of murder based on a classmate's testimony that he dreamed Ferguson was the killer. *See* DREAM/KILLER (Andrew Jenks 2015).

testing.[18] Scholars agree that eyewitness testimony is generally powerful yet unreliable. Indeed, the truthfulness of a passerby eyewitness with no motive to lie is rarely questionable,[19] but their memory of a face is fleeting, malleable, and often inaccurate.[20] Flawed forensic evidence is another cause of wrongful convictions that scholars have thoroughly explored.[21] For example, the inaccuracy of hair follicle comparisons and bite mark evidence is now proven, and this forensic evidence is generally no longer believed to be scientific and reliable.[22] Finally, misconduct by police or prosecutors is also a widely discussed cause of wrongful convictions.[23]

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18. Sixty-nine percent of the 367 wrongful convictions overturned with DNA testing involved eyewitness misidentification. Alexis Agathocleous, *How Eyewitness Misidentification Can Send Innocent People to Prison*, INNOCENCE PROJECT (Apr. 15, 2020), https://innocenceproject.org/news/how-eyewitness-misidentification-can-send-innocent-people-to-prison [https://perma.cc/2SDX-Y9SL].

19. *See* Jed. S. Rakoff & Elizabeth F. Loftus, *The Intractability of Inaccurate Eyewitness Identification*, 147 DAEDALUS 90, 91 (2018) (explaining that "while there are occasional eyewitnesses (such as accomplices) who have motives to lie, the truthfulness of the typical eyewitness is rarely seriously in doubt" because "the typical eyewitness is someone with whom the typical juror . . . can easily identify: an unfortunate passerby who happened to witness a horrific incident that riveted the passerby's attention and that the passerby, perhaps not without some trepidation, comes forward to report like any good citizen").

20. *Id.* at 93 ("[A] person's memory for faces never seen before fades rapidly . . . ."); *id.* ("A person who picked a photo out of a photo array a few hours after witnessing the crime will often tend, when later called to testify, to merge the crime scene and photo array memories, so that what the witness thinks are facial features she observed at the scene of the crime are actually features she had the opportunity to study, much more carefully, when viewing the photo array."); *id.* ("[M]ost people are considerably less accurate in recognizing faces of persons of a different race than they are at recognizing faces of persons of their own race."); *see also* Gould & Leo, *supra* note 10, at 841–43.

21. *See, e.g.*, Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1 (2009) (study of forensic science testimony offered by prosecution experts in trials of wrongfully convicted persons).

22. *See id.* at 48 ("Forensic hair evidence has increasingly been scrutinized due to studies indicating high error rates."); *id.* at 69 (noting wrongful convictions involving testimony indicating certainty that the defendant left bite marks); Gould & Leo, *supra* note 10, at 852–54.

23. *See* Gould & Leo, *supra* note 10, at 828, 854–55; SAMUEL R. GROSS ET AL., GOVERNMENT MISCONDUCT & CONVICTING THE INNOCENT: THE ROLE OF PROSECUTORS, POLICE & OTHER LAW ENFORCEMENT 3, 4 (Sept. 1, 2020), https://www.law.umich.edu/special/exoneration/Documents/Government_Misconduct_and_Convicting_the_Innocent.pdf [https://perma.cc/PSR5-ZYR3] (examining wrongful convictions and observing that "[o]fficial misconduct contributed to the false convictions of 54% of defendants who were later exonerated"; specifically, "[p]olice officers committed misconduct in 35% of cases [and] were responsible for most of the witness tampering, misconduct in interrogation, and fabricating evidence—and a great deal of concealing exculpatory evidence and perjury at trial" while "[p]rosecutors committed misconduct in 30% of the cases [and] were responsible for most of the concealing of exculpatory evidence and misconduct at trial, and a substantial amount of witness tampering").

This widespread awareness and discussion of the wrongful conviction problem stemming from flawed evidence has resulted in extensive efforts to fix it.[24] Many states have adopted reforms aimed at preventing flawed evidence from causing wrongful convictions prior to conviction. Twenty-five states have implemented reforms to prevent eyewitness misidentification, including requiring double-blind lineups and instructions to the eyewitness that the suspect may or may not be in the lineup.[25] Additionally, police and prosecutorial misconduct has prompted reforms targeting increased transparency and accountability like the creation of databases collecting instances of police misconduct.[26]

State reforms and efforts to fund forensic laboratories also provide post-conviction avenues of relief. Many states have lowered the legal hurdles that previously prevented convicted people from challenging their convictions based on flawed forensic evidence.[27] In addition, programs supplying funding to forensic science laboratories have facilitated post-conviction DNA testing for convicted persons.[28] States have also established conviction integrity units

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24. *See, e.g.*, Garrett & Neufeld, *supra* note 21, at 84–93; Abby L. Dennis, *Reining In the Minister of Justice: Prosecutorial Oversight and the Superseder Power*, 57 DUKE L.J. 131 (2007).

25. *See, e.g.*, Seth Miller & Michelle Feldman, *Innocence Organizations Praise Florida Lawmakers for Passage of Key Eyewitness Identification Reform Legislation to Prevent Wrongful Convictions*, INNOCENCE PROJECT (Apr. 28, 2017), https://innocenceproject.org/innocence-organizations-praise-florida-lawmakers-passage-key-eyewitness-identification-reform-legislation-prevent-wrongful-convictions [https://perma.cc/PVG7-QK4G]; Lynn Kawano, *HPD Changes Photo Lineup Policy to Prevent False Arrests*, HAW. NEWS NOW (Mar. 3, 2015, 12:06 AM), https://www.hawaiinewsnow.com/story/28243684/hpd-changes-its-photo-lineup-policy-to-prevent-false-arrests [https://perma.cc/2A4G-NN33].

26. *See, e.g.*, Innocence Staff, *A Year of Legislative Achievements in Criminal Legal Reform*, INNOCENCE PROJECT (Dec. 21, 2022), https://innocenceproject.org/a-year-of-legislative-achievements-in-criminal-legal-reform [https://perma.cc/HD8W-SKGP] (discussing the creation of a police misconduct database in Oregon, a police licensing program in Oregon and New Jersey, and the passage of a law requiring the recording of custodial interrogations in Delaware); Dennis, *supra* note 24, at 155–61 (discussing reforms addressing prosecutorial misconduct).

27. *See* Daniele Selby, *20 Recent Justice Reform Measures to Celebrate*, INNOCENCE PROJECT (Oct. 6, 2021), https://innocenceproject.org/news/20-recent-justice-reform-measures-to-celebrate [https://perma.cc/9GN4-PTZE] (listing reforms adopted by states making it easier for convicted persons to challenge convictions based on changes in science).

28. *See, e.g.*, Innocence Staff, *Strengthening Forensic Science Includes Supporting Forensic Laboratory Funding*, INNOCENCE PROJECT (Sept. 18, 2017), https://innocenceproject.org/strengthening-forensic-science-includes-supporting-forensic-laboratory-funding [https://perma.cc/RL9E-MTZ9] ("The Bloodsworth Post-Conviction DNA Testing Grant Program has helped forensic science service providers defray the costs associated with postconviction DNA testing where there is a claim of actual innocence. These funds also have helped some laboratories implement the infrastructure they need to locate and analyze biological evidence associated with these cases.").

in the offices of district attorneys to identify and remedy wrongful convictions.[29]

Although these reforms and efforts do not solve the wrongful conviction problem stemming from flawed evidence, they undoubtedly lessen it, and new reform proposals and solutions to address the problem are ongoing.[30]

B. Jury Error

The hyperfocus on flawed evidence ignores another cause of the wrongful conviction problem: jury error. Society trusts and expects juries to evaluate the evidence presented at trial without any biases or assumptions to the detriment of the criminal defendant, to follow the court's instructions about the law, and to apply those instructions to the facts supported by the evidence to reach a verdict.[31] These societal expectations of juries are underlying premises supporting the legitimacy of the jury system.[32] Juries do not, however, always behave as expected. They can be influenced by implicit biases when viewing evidence and reaching verdicts; they make forbidden assumptions that harm criminal defendants; they engage in bad behavior, such as lying or ignoring jury instructions; and they strategically vote—all jury errors that can result in wrongful convictions.

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29. *Conviction Integrity Units*, NAT'L REGISTRY EXONERATIONS, https://www.law.umich.edu/special/exoneration/Pages/Conviction-Integrity-Units.aspx [https://perma.cc/WF8H-WUFK] (listing fifty-two operational conviction integrity units with recorded exonerations in the United States).

30. *See, e.g.*, *End Police Deception During Interrogations Nationwide*, INNOCENCE PROJECT, https://innocenceproject.org/petitions/end-police-deception-nationwide [https://perma.cc/7AKC-JPSA] (discussing efforts to end police deception during interrogations nationwide).

31. *See* Pena-Rodriguez v. Colorado, 580 U.S. 206, 211 (2017) ("Like all human institutions, the jury system has its flaws, yet experience shows that fair and impartial verdicts can be reached if the jury follows the court's instructions and undertakes deliberations that are honest, candid, robust, and based on common sense.").

32. *See, e.g.*, *id.* at 225 ("[T]o prevent a systemic loss of confidence in jury verdicts . . . where a juror makes a clear statement that indicates he or she relied on racial stereotypes or animus to convict a criminal defendant, the Sixth Amendment requires . . . [the court] to consider the evidence of the juror's statement and any resulting denial of the jury trial guarantee.").

1. Implicit Biases

The problem of implicit juror biases is widely acknowledged.[33] Although juries are the last line of defense against conviction for innocent persons, it turns out that jurors are, if anything, biased against the criminal defendant.

For example, a study by Denis Chimaeze E. Ugwuegbu highlights the implicit racial biases of mock jurors by demonstrating that "the race of the defendant and the race of the victim [in a rape case] inappropriately influenced the level of culpability the jurors ascribed to the defendant."[34] The study also shows that where evidence is ambiguous, jurors "judge[] a defendant of a dissimilar race more harshly than a racially similar defendant."[35]

The study required white subjects to read a trial transcript of a simulated rape case.[36] Depending on the experimental group, the subjects read transcripts with varied descriptions of the defendant's and victim's races, as well as different case strengths.[37] In the near-zero probability of guilt condition,

> the victim was not sure whether it was [the defendant] who assaulted her, the prosecution eyewitness testified that it was *not* the defendant that he saw assaulting the victim, and the arresting officer was quoted as saying that he arrested the defendant because of his suspicious presence near the scene of the crime.[38]

In the strong evidence of guilt condition, the victim "was able to identify [the defendant] as the assailant" and "according to [the] police report the defendant had previously admitted to the crime before the police, when he claimed that the victim 'asked for it.'"[39] Additionally, "[t]he prosecution eyewitness had no difficulty identifying [the defendant] from among the people in the court room, as the man he saw assaulting the victim."[40] Finally,

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33. *See, e.g.*, Samuel R. Sommers & Phoebe C. Ellsworth, *White Juror Bias: An Investigation of Prejudice Against Black Defendants in the American Courtroom*, 7 PSYCH. PUB. POL'Y & L. 201 (2001); Jerry Kang et al., *Implicit Bias in the Courtroom*, 59 UCLA L. REV. 1124, 1143–44 (2012); Justin D. Levinson & Danielle Young, *Different Shades of Bias: Skin Tone, Implicit Racial Bias, and Judgments of Ambiguous Evidence*, 112 W. VA. L. REV. 307, 319–26 (2010).

34. Denis Chimaeze E. Ugwuegbu, *Racial and Evidential Factors in Juror Attribution of Legal Responsibility*, 15 J. EXPERIMENTAL SOC. PSYCH. 133, 143 (1979).

35. *Id.*

36. *Id.* at 137.

37. *Id.*

38. *Id.*

39. *Id.*

40. *Id.*

in the marginal evidence of guilt condition, the subjects read about "doubtful evidence which was achieved by pitting the victim's identification of the defendant against the defendant's denial of any responsibility for the crime," as well as ambiguous "evidence presented by the prosecution eyewitness and the arresting officer."[41] Subjects then rated the defendant's culpability and guilt on a scale.[42]

The study found that "when the evidence was strong or near-zero the subject rated the defendants, irrespective of race, as equally culpable. However, when the evidence was marginal a black defendant was rated significantly more culpable by the subject-jurors than a white defendant."[43] Moreover, "when evidence was ambiguous, a black defendant received a more culpable evaluation than a white defendant."[44] Ugwuegbu performed the same experiment with black subjects. He found that the results largely "paralleled the data for the white subjects," suggesting that jurors "would hold a racially dissimilar defendant more culpable than a [racially] similar defendant."[45] And in close evidentiary cases, "ambiguity in the facts of a case serves to liberate the juror to respond to racial prejudices and biases."[46]

In another study highlighting implicit racial biases of mock jurors, mock jurors viewed five crime scene photographs, including a surveillance camera photo of a masked gunman who allegedly committed robbery.[47] The gunman's hand and forearm were visible—for half of the mock jurors, the gunman's hand and forearm were dark-skinned, and for the other half they were light-skinned.[48] Mock jurors were then shown twenty pieces of trial evidence that either tended to indicate the defendant's guilt (e.g., the owner of the store that was robbed identified the defendant's voice), tended to indicate the defendant's innocence (e.g., the defendant had a movie ticket stub for a movie that started just before the robbery), or were neutral (e.g., the defendant was a youth boxing champion)—together creating an ambiguous evidentiary case.[49] They then evaluated and responded to each

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41. *Id.*
42. *Id.* at 138.
43. *Id.* at 139.
44. *Id.* at 140.
45. *Id.* at 141–43.
46. *Id.* at 145; *see also* Kang et al., *supra* note 33, at 1142 ("[J]urors of one race tend to show bias against defendants who belong to another race.").
47. *See* Levinson & Young, *supra* note 33, at 332. Mock jurors were either Japanese American, European American, Chinese American, Native Hawaiian, Pacific Islander, Korean American, or Latino. *Id.* at 335.
48. *See id.* at 332.
49. *Id.* at 333.

piece of evidence.[50] Mock jurors were also asked to rate the defendant's guilt on a scale from 0 to 100.[51]

The study found that the gunman's skin tone significantly affected mock jurors' judgments about evidence and views of the defendant's guilt.[52] Mock jurors "who saw the photo of the perpetrator with a dark skin tone judged ambiguous evidence to be significantly more indicative of guilt than participants who saw the photo of a perpetrator with a lighter skin tone."[53] Merely "showing [mock jurors] a photo of a dark-skinned perpetrator" therefore "introduced racial bias into a crucial jury function—evaluating evidence."[54] In addition, "these biased evidence judgments mattered" as "they predicted guilty and not guilty verdicts"[55]: mock jurors "who saw a darker-skinned perpetrator judged the defendant as more guilty than [those] who saw a lighter-skinned perpetrator."[56] This bias against the darker-skinned perpetrator appears to be implicit—when asked at the end of the study to recall the race of the gunman, many mock jurors could not remember, regardless of the race they had viewed.[57]

These studies reveal the implicit biases of mock jurors and support the conclusion that implicit biases may account for part of the wrongful conviction problem. A criminal defendant's skin tone should not increase or decrease their likelihood of conviction. It turns out that skin tone not only colors how jurors view evidence (more indicative of guilt for darker-skinned defendants than for lighter-skinned defendants), but also indicates whether jurors will view the criminal defendant as guilty (all things equal, jurors may view darker-skinned defendants as guiltier than lighter-skinned defendants).[58] Jurors also tend to judge other races more harshly than their own.[59] And when evidence is ambiguous, jurors are more likely to convict darker-skinned criminal defendants than lighter-skinned criminal defendants.[60] Implicit biases may therefore lead to different verdict outcomes for criminal defendants of different races who commit identical crimes. The inequity stemming from jury error is a failure of the criminal justice system that leaves

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50. *See id.* at 332.
51. *Id.* at 334.
52. *Id.* at 337.
53. *Id.*
54. *Id.* at 338.
55. *Id.* at 339.
56. *Id.* at 337.
57. *See id.* at 338.
58. *See* Ugwuegbu, *supra* note 34, at 137–45.
59. *See id.*
60. *See* Levinson & Young, *supra* note 33, at 337.

affected criminal defendants, particularly those with darker skin tones, vulnerable to wrongful conviction in close cases.

2. Forbidden Assumptions

Not only can the implicit biases of jurors improperly influence their views of evidence and verdicts, but so too can forbidden assumptions. Jurors are forbidden from making certain assumptions to the criminal defendant's detriment. At the beginning of a trial, the criminal defendant is presumed innocent, and the government has the lofty burden of proving that the criminal defendant committed the crime charged beyond a reasonable doubt—the highest burden of proof in American courts—to rebut that presumption.[61] As a result, jurors may not view the indictment as evidence of the criminal defendant's guilt, nor may jurors assume guilt simply because the criminal defendant is on trial.[62] Jurors also may not assume that a criminal defendant's decision not to testify at trial is evidence of guilt,[63] nor may they determine a testifying police officer is more credible than other witnesses just because they are a police officer.[64] And when evidence of a defendant's past criminal conviction is introduced for impeachment purposes, jurors may not also view it as evidence of the defendant's propensity to commit a crime.[65] Despite standard jury instructions that inform jurors about these forbidden assumptions,[66] jurors sometimes still make them.[67]

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61. *See* Coffin v. United States, 156 U.S. 432, 459 (1895); *In re* Winship, 397 U.S. 358, 361 (1970).

62. *See* Bell v. Wolfish, 441 U.S. 520, 533 (1979).

63. *See* Carter v. Kentucky, 450 U.S. 288, 305 (1981).

64. *See* Jonathan M. Warren, *Hidden in Plain View: Juries and the Implicit Credibility Given to Police Testimony*, 11 DEPAUL J. SOC. JUST. 1, 2 (2018).

65. *See* FED. R. EVID. 609; *id.* advisory committee's note to 1972 proposed rules ("As a means of impeachment, evidence of conviction of crime is significant only because it stands as proof of the commission of the underlying criminal act.").

66. Although the Supreme Court has "repeatedly recognized that instructing a jury in the basic constitutional principles that govern the administration of criminal justice is often necessary," *Carter*, 450 U.S. at 302 (citation omitted), legal scholars have long questioned the effectiveness of jury instructions, which are often littered with legalese that may be difficult for jurors to comprehend, *see* Robert P. Charrow & Veda R. Charrow, *Making Legal Language Understandable: A Psycholinguistic Study of Jury Instructions*, 79 COLUM. L. REV. 1306, 1358–59 (1979) (presenting a study supporting the hypothesis that standard jury instructions "are not well understood by jurors").

67. *See* United States v. Perkins, 748 F.2d 1519, 1533 (11th Cir. 1984) (jurors disclosed that juror injected extrinsic evidence into jury deliberations); State v. Kociolek, 118 A.2d 812, 813 (N.J. 1955) (juror disclosed that jury decided to impose the death penalty rather than life

For example, a recent study suggests that defendants who exercise their constitutional right against self-incrimination by choosing not to testify receive a "silence penalty" from juries, as juries are more likely to convict a criminal defendant who does not testify compared to a criminal defendant who does testify.[68] In the study, mock jurors were given trial scenarios involving a defendant who allegedly broke into a store and stole jewelry.[69] The scenarios were identical, "except with respect to whether the defendant testified and, if so, the type of impeachment presented."[70] Either (1) the defendant did not testify, and no prior conviction was introduced; (2) the defendant testified and was not impeached with a prior conviction; (3) the defendant testified and was impeached with a criminal fraud conviction; or (4) the defendant testified and was impeached with a robbery conviction.[71]

Mock jurors "convicted 76% of the defendants who remained silent, but only 62% of equally situated defendants who testified (but added no facts)."[72] This finding of a "silence penalty" could be explained by juries making the very adverse inferences that they are prohibited from making—that a criminal defendant's silence is indicative of guilt, or that a silent criminal defendant has something to hide from the jury.[73]

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imprisonment after considering "another indictment against the defendant, not in evidence, to which the defendant, two weeks before the jury was drawn for [his] trial, pleaded not guilty"); Hopkins v. State, 68 S.W. 986, 986 (Tex. Crim. App. 1902) (juror disclosed that, during deliberations, jurors discussed facts not in evidence, including defendant's age and a past conviction); *see also* Nicholas Scurich & Richard S. John, *Jurors' Presumption of Innocence*, 46 J. LEGAL STUD. 187, 187 (2017) ("[C]ompared to when a suspect had been merely named, jurors thought that the individual was significantly more likely to be guilty after a detective referred the case to the district attorney and when he was formally charged and thus a criminal defendant.").

68. Jeffrey Bellin, *The Silence Penalty*, 103 IOWA L. REV. 395, 410–11 (2018); *see also* Daniel Givelber & Amy Farrell, *Judges & Juries: The Defense Case & Differences in Acquittal Rates*, 33 L. & SOC. INQUIRY 31, 37 (2008) ("[J]uries tend to find for defendants when they offer more evidence in the form of their own or supporting witness testimony.").

69. Bellin, *supra* note 68*,* at 410.

70. *Id.* at 412. "In the scenarios where the defendant testified, his testimony added no new information" and "[t]he defendant's testimony was summarily described as being 'consistent with that of' a defense alibi witness whose testimony (that he and the defendant were watching a baseball game at the time of the crime) appeared in all four scenarios." *Id.*

71. *Id.*

72. *Id.* at 414.

73. *See* COMM. ON PATTERN JURY INSTRUCTIONS, DIST. JUDGES ASS'N FIFTH CIR., PATTERN JURY INSTRUCTIONS (CRIMINAL CASES) 3 (2019), https://www.lb5.uscourts.gov/juryinstructions/fifth/crim2019.pdf [https://perma.cc/R7H8-DQ7P] ("Since the defendant has the right to remain silent, the law prohibits you from arriving at your verdict by considering that the defendant may not have testified."); *see also* People v. Solorio, 225 Cal. Rptr. 3d 579, 584–85 (Ct. App. 2017) (noting that jurors repeatedly discussed the criminal defendant's decision not to

The same study found that juries impose "prior offender penalties" upon defendants, supporting the notion that "prior conviction impeachment does not operate in the manner that the law contemplates."[74] "If prior conviction impeachment speaks only to the defendant's character for truthfulness, crimes of dishonesty would be most damaging."[75] Said another way, with all things equal, a testifying criminal defendant impeached by a crime of dishonesty should be more likely to be convicted than a testifying criminal defendant impeached by any other crime. But the study revealed that while the conviction rate for a testifying defendant impeached by a prior crime of dishonesty was 62%, the conviction rate for a testifying defendant impeached by a prior robbery was 82%—indicating "that jurors [in the impeachment via robbery scenario] indulged a forbidden, criminal propensity inference" rather than using the robbery conviction only as evidence of impeachment.[76] This prior offender penalty, along with the silence penalty, means that "the only defendants who truly enjoy a presumption of innocence at trial are the relatively few defendants without admissible prior crimes who elect to testify."[77]

Another study found that evidence of a criminal defendant's gang affiliation increased the likelihood of conviction.[78] Mock jurors watched identical trials, except that in one version there was no mention that the criminal defendant was affiliated with a gang, in another version the criminal defendant was described as being seen hanging out with gang members on the night of the crime, and in a final version the criminal defendant was described as a gang member with a gang tattoo.[79] When mock jurors heard that the defendant had been seen with gang members, the criminal defendant's conviction rate increased from 44% when no evidence of gang affiliation was introduced to 59%.[80] The conviction rate increased to 63% when evidence of gang membership and a gang tattoo were introduced.[81]

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testify, despite the court's instruction that doing so was impermissible). Although the silence penalty could be attributable to other causes, like the fact that innocent people are more likely to testify, the black box surrounding jury deliberations makes it impossible to know the cause in a given case (and the silence penalty cannot be ruled out).

74. Bellin, *supra* note 68, at 414.

75. *Id.*

76. *Id.*

77. *Id.* at 433.

78. *See* Mitchell L. Eisen et al., *Examining the Prejudicial Effects of Gang Evidence on Jurors*, 13 J. FORENSIC PSYCH. PRAC. 1, 3 (2013).

79. *Id.* at 4.

80. *Id.* at 7.

81. *Id.*

In another variation of this experiment, mock jurors watched one of two versions of the same trial, one without evidence of the criminal defendant's gang membership and another with a police officer claiming to be a "gang expert" "testif[ying] that he knew the defendant to be a long time member of a well-known local criminal street gang that was known for terrorizing the community through intimidation, extortion, and murder."[82] The trial was "designed to establish clear reasonable doubt."[83] After watching the trial and prior to deliberations, mock jurors were polled about how they would vote.[84] Those who watched the trial with gang evidence were nearly three times more likely to vote guilty than those who watched the trial without gang evidence.[85] Following deliberations, 10% of mock jurors who watched the trial with gang evidence still voted guilty, while none of the mock jurors who watched the trial without the gang evidence voted guilty.[86] Because the trial was designed to lack proof beyond a reasonable doubt, "[i]t appeared that the mock jurors who continued to vote guilty in the gang trial after deliberations ignored reasonable doubt and voted to convict the defendant based solely on the fact that he was a member of a criminal street gang."[87] Thus, gang evidence improperly influenced some of these mock jurors to vote to wrongfully convict the criminal defendant.[88]

Like implicit biases, forbidden assumptions made by jurors leave criminal defendants vulnerable to wrongful conviction. Despite the criminal defendant's constitutional right not to testify, jurors impose a "silence penalty" on such defendants, increasing their likelihood of conviction.[89] And even though evidence of a criminal defendant's past crime for impeachment purposes may only go towards the defendant's credibility, juries have still been shown to use it as evidence of the defendant's propensity to commit crime.[90] Such forbidden assumptions to the criminal defendant's detriment

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82. Mitchell L. Eisen & Brenna M. Dotson, *Exploring the Prejudicial Effect of Gang Evidence: Under What Conditions Will Jurors Ignore Reasonable Doubt*, CRIM. L. PRAC., Fall 2014, at 41, 45.

83. *Id.* at 44.

84. *Id.* at 45.

85. *Id.* (noting that 33% of mock jurors who watched the trial with gang evidence voted guilty, compared to only 12% of mock jurors who watched the trial without gang evidence).

86. *Id.*

87. *Id.* at 46.

88. *See id.* Jurors may also be influenced by common assumptions about the strength of the government's case because it is at the trial stage: that the government must have a mountain of evidence against the criminal defendant because it took the case to trial, or that the government prosecutes only guilty people. Both of these forbidden assumptions are false and erode the criminal defendant's presumption of innocence. *See* Scurich & John, *supra* note 67, at 201–02.

89. *See* Bellin, *supra* note 68, at 410–11.

90. *Id.* at 414.

deviate from society's expectations about what evidence juries should consider and how juries should evaluate that evidence. Moreover, when forbidden assumptions enter the evidence pool, a jury may convict a criminal defendant who should otherwise be acquitted but for the jury's consideration of the defendant's silence, their criminal history, or their gang affiliation.

3. Bad Behavior

Jury error is not limited to instances of subconscious biases or forbidden assumptions. Jurors sometimes engage in blatant misconduct. For instance, jurors have repeatedly concealed their ethnic, racial, and religious biases during voir dire and then injected them into jury deliberations.

In *Pena-Rodriguez v. Colorado*, the jury convicted the criminal defendant of unlawful sexual conduct and harassment.[91] After the court discharged the jury, two jurors informed the criminal defendant's counsel that one juror "expressed anti-Hispanic bias toward [the criminal defendant] and [his] alibi witness," who were both Hispanic.[92] During jury deliberations, the biased juror told the other jurors that he "believed the defendant was guilty because, in [his] experience as an ex-law enforcement officer, Mexican men had a bravado that caused them to believe they could do whatever they wanted with women."[93] He believed "that Mexican men are physically controlling of women because of their sense of entitlement."[94] Further, he stated he "th[ought] [the criminal defendant] did it because he's Mexican and Mexican men take whatever they want,"[95] and "in his experience, 'nine times out of ten Mexican men were guilty of being aggressive toward women and young girls.'"[96] Ultimately, "he did not find [the defendant's] alibi witness credible because, among other things, the witness was 'an illegal.'"[97] This juror had a clear bias against Hispanics, but he still made it on the jury despite the trial court, counsel, and the jury questionnaire repeatedly asking all prospective jurors "whether they believed that they could be fair and impartial in the case" and the court "encourag[ing] jurors to speak in private with the court if they had any concerns about their impartiality."[98] The juror—who never spoke up about his bias in voir dire—therefore concealed his strong anti-Hispanic bias

91. 580 U.S. 206, 212 (2017).
92. *Id.*
93. *Id.*
94. *Id.* at 213.
95. *Id.*
96. *Id.*
97. *Id.*
98. *Id.* at 211–12.

and inability to be impartial in voir dire. He then let that bias guide his vote to convict the Hispanic criminal defendant. His biased statements during jury deliberations also indicate his intent for his bias to influence the votes of the other jurors. These facts prompted the United States Supreme Court to announce an exception to the no-impeachment rule[99] if jurors reveal that they "relied on racial stereotypes or animus to convict a criminal defendant."[100] Although this exception to the no-impeachment rule is an important development in the law, it benefits criminal defendants only if jurors decide to alert the court or attorneys to misconduct, which jurors have no obligation to do.[101]

In *State v. Jackson*, the Washington Court of Appeals reversed the conviction of a Black man based on the racial bias of a white juror.[102] During jury deliberations, a juror overheard a conversation between two other jurors, one of whom was white.[103] The white juror spoke about a trip home to attend a reunion and repeatedly referenced "coloreds," stating that "[t]he worst part of the reunion was that I had to socialize with the coloreds."[104] The court concluded that these juror statements "create a clear inference of racial bias" and "reveal [the juror's] aversion toward associating with African-Americans and a predisposition toward making generalizations about African-Americans as a group."[105] This conviction tainted with racial bias was ultimately reversed, but only because a juror overheard the conversation revealing the white juror's racial bias and decided to report the bias to the judge. If the juror had not overheard the conversation, or if she had decided

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99. The "no-impeachment rule" is the principle that "give[s] substantial protection to verdict finality and . . . assure[s] jurors that, once their verdict has been entered, it will not later be called into question based on the comments or conclusions they expressed during deliberations." *Id.* at 211.

100. *Id.* at 225 ("[W]here a juror makes a clear statement that indicates he or she relied on racial stereotypes or animus to convict a criminal defendant, the Sixth Amendment requires that the no-impeachment rule give way in order to permit the trial court to consider the evidence of the juror's statement and any resulting denial of the jury trial guarantee.").

101. Sometimes jurors are prohibited from doing so. *See* FED. R. EVID. 606(b)(1) ("During an inquiry into the validity of a verdict or indictment, a juror may not testify about any statement made or incident that occurred during the jury's deliberations; the effect of anything on that juror's or another juror's vote; or any juror's mental processes concerning the verdict or indictment.").

102. 879 P.2d 307, 312 (Wash. Ct. App. 1994).

103. *See id.* at 309.

104. *Id.*

105. *Id.* at 311.

not to report it to the judge, then the criminal defendant's conviction would have remained intact.[106]

In *State v. Levitt*,[107] the Supreme Court of New Jersey affirmed a lower court ruling setting aside a verdict convicting a Jewish man of lewdness on the grounds that the verdict was "contaminated" with religious prejudice.[108] After the jury returned a guilty verdict, a juror met with the trial judge and revealed that, during deliberations, jurors discussed the weight they should afford character witnesses.[109] One juror who took "a leading role" throughout deliberations asked, "Did you notice the character witnesses[?]" and then, "Did you notice most of them were Jews and even one of them was from the Synagogue[?]"[110] This injection of the character witnesses' religion into jury deliberations—according to the trial judge—was juror misconduct that "vitiate[d] the verdict returned by the jury on the grounds of bias, passion, [and] prejudice."[111] Again, this juror bias was illuminated only because a juror decided to reveal it to the judge after the verdict. When no juror decides to do so, verdicts tainted with purposefully concealed juror bias stand.

Jurors have also engaged in blatant misconduct. For example, one juror consumed so much alcohol at the end of a jury deliberation day that the following day—the day the jury reached a verdict—the juror was too hungover to fully participate, running to the bathroom to throw up every fifteen minutes.[112] Another group of jurors convicted a criminal defendant after using a Ouija board to ask the victims of the crime who had killed them.[113] And despite courts informing jurors that they are prohibited from

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106. *See* Gilford v. State, 92 S.W. 424, 424–26 (Tex. Crim. App. 1906) (setting aside a conviction because of jury misconduct after a juror informed the court that another juror made multiple racist comments about a Black criminal defendant during deliberations); *see also* Sheri Lynn Johnson, *Black Innocence and the White Jury*, 83 MICH. L. REV. 1611, 1619 (1985) (describing the University of Chicago Jury Project which found that in criminal trials of Black defendants that took place in 1954 and 1955, "racial prejudice influenced the jury deliberations"; in the study, "[s]everal jurors explicitly argued during deliberations that the defendant should be convicted simply because he was black," and "other jurors expressed unsolicited derogatory views of blacks to the [post-verdict] interviewer").

107. 176 A.2d 465, 468–69 (N.J. 1961).

108. *Id.* at 469.

109. *Id.* at 466.

110. *Id.*

111. *Id.*

112. People v. Hedgecock, 795 P.2d 1260, 1270 (Cal. 1990).

113. Liam Martin Bird, *The Jury that Asked the Spirit World for a Verdict—and Other Bizarre Takes from the Courtroom*, CONVERSATION (Oct. 27, 2022, 6:14 AM), https://theconversation.com/the-jury-that-asked-the-spirit-world-for-a-verdict-and-other-bizarre-tales-from-the-courtroom-192460 [https://perma.cc/VMU7-7FEM] (describing a jury trial in England).

doing their own outside case research or investigation during trial, jurors often cannot resist googling the case or conducting their own experiments.[114]

Jurors are human—sometimes they lie and sometimes they ignore the court's instructions. When they engage in such bad behavior, they commit jury error that can cause wrongful convictions.

4. Strategic Voting

Jury error also occurs when jurors engage in strategic rather than sincere voting to reach a unanimous verdict. The unanimous verdict requirement for serious criminal offenses rests on the assumption that it lowers the likelihood of convicting an innocent criminal defendant.[115] But a study by Timothy Feddersen and Wolfgang Pesendorfer suggests that the unanimity rule may actually increase the likelihood of convicting an innocent defendant.[116] Instead of incentivizing jurors to vote sincerely, without taking into account how the other jurors are voting, the unanimity rule incentivizes jurors to vote strategically.[117] This "incentive to vote strategically arises because a juror's vote only matters when a vote is pivotal and because the information possessed by other jurors is relevant for a juror's decision."[118] Feddersen and Pesendorfer offer an example of strategic voting:

> [U]nder the unanimity rule, a vote is pivotal only if all the other jurors have voted to convict. The fact that all other jurors have voted

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114. *See* John Schwartz, *As Jurors Turn to Web, Mistrials Are Popping Up*, N.Y. TIMES (Mar. 17, 2009), https://www.nytimes.com/2009/03/18/us/18juries.html; *Peter Avsenew Seeks New Trial, Alleging Jury Misconduct in Second Death Penalty Case for Wilton Manors Double Murder*, CBS NEWS MIAMI (Nov. 21, 2022, 5:55 PM), https://www.cbsnews.com/miami/news/peter-avsenew-seeks-new-trial-alleging-jury-misconduct-in-second-death-penalty-case-for-2010-wilton-manors-double-murder [https://perma.cc/8LN6-EDPE] (reporting a jury misconduct allegation after a juror admitted to watching a documentary about the case before punishment jury deliberations); United States v. Perkins, 748 F.2d 1519, 1529–30 (1984) (noting that in considering a jury misconduct allegation, two jurors reported that "the verdict was not their verdict" because "they had been pressured by the other jurors to vote for conviction, and that they succumbed to this pressure because they were physically and mentally exhausted" from jury deliberations).

115. *See* Timothy Feddersen & Wolfgang Pesendorfer, *Convicting the Innocent: The Inferiority of Unanimous Jury Verdicts Under Strategic Voting*, 92 AM. POL. SCI. REV. 23, 23 (1998); Aliza B. Kaplan & Amy Saack, *Overturning* Apodaca v. Oregon *Should Be Easy: Nonunanimous Jury Verdicts in Criminal Cases Undermine the Credibility of Our Justice System*, 95 OR. L. REV. 1, 29 (2016) (noting that the unanimity rule "has become the manifestation of the reasonable doubt standard").

116. *See* Feddersen & Pesendorfer, *supra* note 115.

117. *Id.*

118. *Id.*

> to convict reveals additional information about the guilt of the defendant. Such information may overwhelm the juror's private assessment of the case and cause a juror otherwise inclined to vote for acquittal to vote for conviction instead.[119]

Because unanimous jury verdicts are constitutionally required,[120] strategic voting to convict because of the unanimity rule is likely a jury error that contributes to the wrongful conviction problem.[121] When this error occurs, criminal defendants can be convicted by a single juror's strategic vote, yet that juror's sincere vote should have hung the jury.

* * *

Despite a general consensus that jury error occurs and the inescapable conclusion that jury error leads to some wrongful convictions, in practice jury error is difficult to identify and redress in a given case. Jury deliberations are shielded by a black box of secrecy: "no one—including the judge presiding at a trial—has a 'right to know' how a jury, or any individual juror, has deliberated or how a decision was reached by a jury or juror."[122]Although the black box promotes the deliberative process among jurors and public confidence in the jury system,[123] it comes at the cost of concealing jury error, including those jury errors that lead to wrongful convictions. And once a criminal defendant is convicted, exoneration is a lofty task that becomes

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119. *Id.* From a psychological perspective, this scenario seems to be an example of *pressures to uniformity*: "[w]hen differences of opinion arise within a group, a palpable tension arises that group members try to resolve . . . [and that] is diminished only when agreement is achieved, typically by the majority pressuring the minority to go along." Nicholas Epley & Thomas Gilovich, *The Mechanics of Motivated Reasoning*, 30 J. ECON. PERSPS. 133, 138 (2016) (citing Leon Festinger, *Informal Social Communication*, 57 PSYCH. REV. 271 (1950)).

120. *See* Ramos v. Louisiana, 590 U.S. 83, 106–07 (2020).

121. *See* Feddersen & Pesendorfer, *supra* note 115, at 23. *But see* Shari Seidman Diamond et al., *Revisiting the Unanimity Requirement: The Behavior of the Non-Unanimous Civil Jury*, 100 NW. U. L. REV. 201, 215–16 (2006) (finding that in a study of real Arizona civil juries, the majority verdict rule led both majority- and minority-view jurors "to believe that the quorum rule made further contributions to deliberations by the minority juror inappropriate").

122. United States v. Thomas, 116 F.3d 606, 618 (2d Cir. 1997). The Federal Rules of Evidence reflect this principle, prohibiting juror testimony about statements made during jury deliberations and juror mental processes in a challenge to the validity of a verdict or indictment. *See* FED. R. EVID. 606(b)(1).

123. *See* Clark v. United States, 289 U.S. 1, 13 (1933) ("Freedom of debate might be stifled and independence of thought checked if jurors were made to feel that their arguments and ballots were to be freely published to the world."); *In re* Globe Newspaper Co., 920 F.2d 88, 94 (1st Cir. 1990) ("[T]he secrecy of jury deliberations fosters free, open and candid debate in reaching a decision."); *Thomas*, 116 F.3d at 618 ("[D]isclosure of the substance of jury deliberations may undermine public confidence in the jury system.").

virtually impossible if the wrongful conviction stems from jury error shielded by the black box of secrecy.[124]

The difficulty of identifying jury error has resulted in a void of proposed solutions to address this portion of the wrongful conviction problem. But whether a wrongful conviction is caused by jury error or flawed evidence, it is still a wrongful conviction. All wrongful convictions, including those that have not yet been (and may never be) overturned, are failures of the criminal justice system that we should strive to prevent from happening again. It is therefore imperative that we work to develop and implement solutions to address the portion of the wrongful conviction problem caused by jury error before the black box descends.

II. CRAFTING PROPOSED SOLUTIONS TO THE JURY ERROR PROBLEM: LESSONS FROM RESEARCH OUTSIDE THE COURTROOM

Jury error occurs when jurors stray from their intended role and responsibilities as jurors. Instead of evaluating the evidence presented at trial without any biases or assumptions, following the court's instructions about the law, and applying those instructions to the facts supported by the evidence to reach a verdict, jurors sometimes allow biases to influence their view of the evidence to the criminal defendant's detriment.[125] Jurors may also engage in misconduct, or vote strategically rather than sincerely, to convict an innocent criminal defendant.[126] In these instances, jurors lose sight of their duty to cast votes based on a careful and impartial analysis of the evidence and whether that evidence constitutes proof beyond a reasonable doubt of the crime charged.[127] A reform that will decrease these jury errors must therefore motivate jurors to reach an accurate verdict and prime jurors to pay attention to the evidence.

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124. *See* FED. R. EVID. 606(b); Kathryn E. Miller, *The Attorneys Are Bound and the Witnesses Are Gagged: State Limits on Post-Conviction Investigation in Criminal Cases*, 106 CALIF. L. REV. 135, 155 (2018) ("Without the ability to conduct free and unencumbered jury investigation post-conviction attorneys have little chance of discovering evidence of this misconduct, giving the defendant no remedy for the violation of his constitutional rights.").

125. *See* Levinson & Young, *supra* note 33, at 339 ("[P]roof of unintentional racial bias in evidence evaluation . . . contradict[s] legal assumptions that verdicts are determined based upon an objective weighing of evidence.").

126. *See* sources cited *supra* note 106; Feddersen & Pesendorfer, *supra* note 115, at 23 (explaining how jurors may feel forced to vote a certain way because of the unanimity rule).

127. *See In re* Winship, 397 U.S. 358, 363 (1970).

A. Motivating Accuracy

Many studies outside the courtroom demonstrate that people who are motivated to be accurate "pay closer attention, think more carefully, and are less likely to rely on general heuristics in reaching a decision."[128] "There is considerable evidence that accuracy goals lead people to invest greater effort in the judgment task and to search harder for the best possible reasoning strategies."[129]

Accountability is a common way to create an accuracy goal. When people believe that their work will be evaluated rather than anonymous, they are motivated to be accurate—no one likes to be wrong and for others to know it.[130] This concept was confirmed by an experiment that asked subjects to predict a candidate's job success based on a tape recording discussing the candidate's behavior, half of which painted the candidate positively and the other half negatively.[131] Subjects rated the candidate's predicted success on a scale of zero to ten.[132] Some subjects "were informed that following task completion they would have to explain their predictions to other members of their group, and that their judgments would be compared with the target person's actual degree of job success as indexed by various objective criteria."[133] Other subjects were told that "they would not be able to find out how well the [candidate] actually did do at the new job, nor could they expect to find out how he was judged by other members of their group."[134] Compared to the subjects that believed their ratings were anonymous, the subjects that believed that they would have to justify their ratings to others experienced less epistemic freezing, a condition "in which the lay-knower becomes less aware of plausible alternative hypotheses and/or inconsistent bits of evidence

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128. *See* Sara Gordon, *What Jurors Want to Know: Motivating Juror Cognition to Increase Legal Knowledge & Improve Decisionmaking*, 81 TENN. L. REV. 751, 770 (2014).

129. ZIVA KUNDA, SOCIAL COGNITION: MAKING SENSE OF PEOPLE 236 (1999). *See generally* Daniel W. McAllister et al., *The Contingency Model for the Selection of Decision Strategies: An Empirical Test of the Effects of Significance, Accountability, & Reversibility*, 24 ORG'L BEHAV. & HUM. PERFORMANCE 228, 228 (1979) (study finding that subjects' knowledge that a task is important, that their decision is irreversible, and that they must defend judgments to peers increased the subjects' motivation to be accurate and prompted subjects to invest more time and effort into reaching a decision).

130. Arie W. Kruglanski & Tallie Freund, *The Freezing & Unfreezing of Lay-Inferences: Effects on Impressional Primacy, Ethnic Stereotyping, & Numerical Anchoring*, 19 J. EXPERIMENTAL SOC. PSYCH. 448, 450 (1983).

131. *Id.* at 452.

132. *Id.*

133. *Id.* at 453.

134. *Id.*

competing with a given judgment."[135] Because these subjects knew that their rating could be wrong and that they would have to explain their potentially wrong rating to others, it appears that the subjects formed their ratings based on a thorough consideration of the full tape recording and not on their initial impressions of the job candidate nor any personal biases they held.[136]

Jurors can also be motivated to be accurate in their verdicts. Accuracy is a common juror motivation.[137] For most jurors, their vote is a heavy and high stakes decision; accuracy goals are often born from the heavy weight of a decision or knowledge that a wrong decision could result in unfair treatment to others.[138] Because the motive to be accurate results in more thoughtfully and carefully rendered decisions and even reduces the influence of epistemic freezing and biases,[139] a reform that further motivates juror accuracy will likely reduce jury errors that cause wrongful convictions.[140]

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135. *Id.* at 448, 453. "Primacy effects" are a type of epistemic freezing that "exist when in judging an object or a person the individual bases [their] inferences predominantly on early information and appears to be affected less by late information." *Id.* at 452.

136. *See generally* Philip E. Tetlock & Jae I. Kim, *Accountability and Judgment Processes in a Personality Prediction Task*, 52 J. PERSONALITY & SOC. PSYCH. 700 (1987) (study demonstrating that subjects with social pressures to justify answers are more accurate than subjects with no accountability for answers).

137. *See* Gordon, *supra* note 128, at 770.

138. *See* KUNDA, *supra* note 129, at 236.

139. *See id.* at 238 (referencing a study finding that people motivated to be accurate "were less likely to show a primacy effect in impression formulation . . . [and] were less influenced by . . . ethnicity"); *see also* Ziva Kunda, *The Case for Motivated Reasoning*, 108 PSYCH. BULL. 480, 482 (1990) ("Several different kinds of bias have been shown to be weakened in the presence of accuracy goals, and such findings have been obtained by different investigators working in diverse content areas and operationalizing the need for accuracy in a variety of different ways.").

140. *See* Gordon, *supra* note 128, at 771 (noting "[t]he reduction in bias of people with strong accuracy goals"). The common juror motivation to be accurate is relatable in everyday life. Imagine that you are an associate attorney tasked with proofreading a lengthy brief for a partner who rarely makes grammatical errors, and who in fact made no errors in this brief. At the outset, "you are motivated to arrive at the most accurate conclusion possible" by correctly identifying all grammatical errors because you expect that failure to do so could tarnish your reputation with the partner or reflect poorly on her. *See* KUNDA, *supra* note 129, at 238. But because you know that the partner rarely makes grammatical errors, you will probably skim the lengthy brief and feel relatively confident when you finish without identifying any grammatical errors. But consider if, before you begin proofreading, the partner tells you that she directs her legal assistant to intentionally insert a grammatical error into random briefs as a check on associate proofreading skills. In this scenario, instead of skimming the brief, you will review the brief much more carefully because you know that an accurate proofreading may render at least one grammatical error. Knowledge that the brief *could* contain at least one grammatical error makes it less likely that a clean proofread is accurate, enhancing your preexisting accuracy goal to correctly identify all grammatical errors.

B. Priming

"Priming" is the concept "that environmental stimuli may affect subsequent responses by activating mental constructs without conscious realization."[141] People are primed by external elements for the purpose of unknowingly altering their later behavior. For example, if a grocery store plays French music, buyers are more likely to buy French wine.[142]

Priming is often used in the workplace by employers to motivate employees to be more productive and improve employee performance.[143] Successful workplace priming techniques include employers using achievement-related words in communications to employees and offering extrinsic incentives, like monetary bonuses tied to performance, all of which alter employee behavior to improve job performance.[144]

In a recent study, achievement-related words in communications from an employer to employees proved to prime employees to be more productive.[145] The CEO of a customer service organization company sent weekly motivational emails to employees.[146] For the experiment, half of the employees received the CEO's weekly email with achievement-related words embedded within, while the other half of the employees received a pared-down version of the email without achievement-related words.[147] Employee

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141. Evan Weingarten et al., *From Primed Concepts to Action: A Meta-Analysis of the Behavioral Effects of Incidentally-Presented Words*, 142 PSYCH. BULL. 472, 474 (2016).

142. *See* Adrian C. North et al., *The Influence of In-Store Music on Wine Selections*, 84 J. APPLIED PSYCH. 271 (1999).

143. *See infra* notes 145–56 and accompanying text.

144. *See* Alexander D. Stajkovic et al., *Prime and Performance: Can a CEO Motivate Employees Without Their Awareness?*, 34 J. BUS. & PSYCH. 791 (2019). *But see* Uri Gneezy et al., *When and Why Incentives (Don't) Work to Modify Behavior*, 25 J. ECON. PERSPS. 191, 206 (2011) (concluding that incentives can sometimes conflict with intrinsic motivations and not have the desired effect and explaining that "the effects of incentives depend on how they are designed, the form in which they are given (especially monetary or nonmonetary), how they interact with intrinsic motivations and social motivations, and what happens after they are withdrawn").

145. Stajkovic et al., *supra* note 144.

146. *Id.* at 794.

147. *See id.* The experimental group received the following email:

> All,
>
> I want to take a minute to celebrate our *accomplishments* at [one-word, name of the company]. As we move past the holiday season, let us remember our *successes*. I see you *master* what you do, *strive* to overcome obstacles, and *prevail*. With such mindset, sky is the limit to what we can *achieve*. As you live our motto—have fun, make money, grow your career—please know that your *triumphs* are appreciated! Our *attainments* are impressive. How we

performance was measured based on the average time an employee handled a customer call (efficiency) and the percent of calls during which an employee resolved the customer's issue (effectiveness).[148] Employees primed with the email containing achievement-related words were more efficient and effective than they were in the week prior to receiving the email.[149] They were also more efficient and effective than the employees who received the pared-down version of the email.[150] These results demonstrate that primed goals can subconsciously improve employee performance.

Monetary incentives have varied effectiveness on improving performance in the workplace. They generally "succeed at securing . . . temporary compliance" and "may increase goal commitment."[151] But "[o]nce the rewards run out, people revert to their old behaviors."[152] Some scholars suggest that combining monetary incentives with a concrete goal creates a strong incentive to achieve the goal.[153] In such a scenario, employers assign employees a difficult goal and "giv[e] them a substantial bonus if they reach [the goal] and no bonus if they do not."[154] But if "goals are seen as impossible, then offering a bonus for goal attainment can lower motivation to perform."[155] Monetary incentives can therefore prime employees to improve their job

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> continue to *thrive* is in our hands. I hope we continue to *compete* each day, *gain* customers, and *win* together. Thank you for your service!
>
> Thank you for your commitment to [one-word, name of the company],
>
> [CEO name]

Id. at 795 (emphasis added to achievement-related words).

148. *Id.*

149. *See id.* at 795–96.

150. *See id.*

151. Alfie Kohn, *Why Incentive Plans Cannot Work*, HARV. BUS. REV. (Sept.–Oct. 1993), https://hbr.org/1993/09/why-incentive-plans-cannot-work [https://perma.cc/4GH7-Y9Z9]; Don Knight et al., *The Relationship of Team Goals, Incentives, and Efficacy to Strategic Risk, Tactical Implementation, and Performance*, 44 ACAD. MGMT. J. 326, 328 (2001).

152. Kohn, *supra* note 151; *see also* Knight et al., *supra* note 151, at 336 (discussing research revealing that "incentives had a consistently positive effect on tactical implementation and, in turn, tactical implementation affected performance").

153. *See* Edwin A. Locke, *Linking Goals to Monetary Incentives*, 18 ACAD. MGMT. EXEC. 130 (2004).

154. *Id.* at 130. But if employees "see that they are not getting the reward, their personal goal and their self-efficacy drop and, consequently, so does their performance." Edwin A. Locke & Gary P. Lathan, *Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-Year Odyssey*, 57 AM. PSYCH. 705, 708 (2002).

155. Knight et al., *supra* note 151, at 328.

performance, but the employer must tie the incentives to attainable goals to achieve that result.[156]

Just as employees can be primed to improve job performance, so too can jurors. Like employees, jurors have a job to do—to determine whether the criminal defendant is innocent or guilty of the crime charged based on the evidence and arguments presented at trial. Priming techniques used on employees to improve job performance—priming with language or monetary incentives—may also improve juror job performance and increase verdict accuracy.[157]

III. STUDYING JURIES

The best method to determine whether a proposed solution decreases jury error is to study its effect on real juries. Studying real juries, however, is a challenge that almost no one has been able to accomplish. The black box of secrecy that surrounds jury deliberations prevents researchers from observing what goes on in the deliberation room.[158] The most prominent methods used by researchers to study jury behavior are mock juries and post-trial interviews—second-best methods that do not penetrate the black box.[159] Mock jury research falls short of producing results that replicate real jury behavior. Indeed, mock jurors know the trial is fake, so they know their decision has no actual impact on the fake defendant. The higher the stakes, the more likely jurors are to take their job seriously, and jurors always think the stakes are higher in real trials versus mock trials. Post-trial juror interviews seek information from real jurors after deliberations conclude.[160] The information can help researchers understand juror decision making, but

156. Outside the workplace, research confirms that incentives lead people to respond to questions more honestly and accurately than they would otherwise. *See* John G. Bullock et al., *Partisan Bias in Factual Beliefs About Politics*, 10 Q.J. POL. SCI. 519, 525 (2015) ("[I]ncentives often reduce the size and frequency of decision-making errors.").

157. The system's current treatment of empaneled jurors lends itself to implementing motivating and priming techniques. Jurors are not active participants in the trial, but passive observers. The court thus has control over what the jurors hear throughout the entire trial process, including before trial begins. At that time, the court can motivate and prime jurors in its preliminary instructions to the jury and with any other interaction the court has with the jury. Motivation and priming techniques can therefore realistically be used on jurors with the objective of improving juror performance, making these techniques viable reforms that may decrease jury errors that cause wrongful convictions.

158. *See* Ashok Chandran, *Color in the "Black Box": Addressing Racism in Juror Deliberations*, 5 COLUM. J. RACE & L. 28, 30–31 (2015).

159. *See, e.g.*, *id.* at 40; Paula L. Hannaford et al., *The Timing of Opinion Formation by Jurors in Civil Cases: An Empirical Examination*, 67 TENN. L. REV. 627, 628 (2000).

160. *See id.*

only to the extent that jurors are forthcoming and honest—unlikely if a juror made decisions on improper bases, and impossible if they did so based on subconscious reasons.

A notable exception to the common practice of studying jury behavior with mock juries and interviews is the Arizona Jury Project.[161] In this 1990s study, researchers reviewed a videotaped sample of real civil jury deliberations.[162] The study revealed, among other things, that during jury deliberations, jurors talk about forbidden topics, like insurance and attorney's fees.[163] The peek into the black box provided by the Arizona Jury Project was short lived. Since the study, only second-best methods have been used to study jury behavior.

IV. PLACEBO TRIALS: A THOUGHT EXPERIMENT WITH REAL POSSIBILITIES

The black box of secrecy shielding jury deliberations prevents a full understanding of wrongful convictions caused by jury error. But it is clear that juror biases and motivations irrelevant to a criminal defendant's guilt, as well as improper juror assumptions to the detriment of the criminal defendant, increase the likelihood of—and have probably caused—wrongful convictions.[164] So too has the unanimity rule, which results in strategic rather than sincere juror voting and may ultimately be unfavorable to the criminal defendant.[165] It is also clear that people can be motivated to be accurate and primed to improve performance.[166] If jurors can be motivated and primed in these ways, then they will likely render decisions more thoughtfully and carefully and will be less susceptible to influence by biases or improper assumptions.[167] But given the black box around jury deliberations, how can any of these hypotheses be tested?[168]

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161. *See generally* Shari Seidman Diamond et al., *Juror Discussions During Civil Trials: Studying an Arizona Innovation*, 45 ARIZ. L. REV. 1 (2003).

162. *See id.* at 16–17.

163. *See* Shari Seidman Diamond & Neil Vidmar, *Jury Room Ruminations on Forbidden Topics*, 87 VA. L. REV. 1857, 1915 (2001).

164. *See supra* Sections I.B.1–3.

165. *See supra* Section I.B.4.

166. *See supra* Part II.

167. *See supra* Part II.

168. Perhaps with mock jury studies, but placebo trials will provide results that more closely reflect real jury outcomes for two reasons. First, placebo trials measure outcomes based on verdicts that emerge following the deliberation process, while mock jury studies typically measure outcomes based on the votes of individual jurors who are never required to reach a

The starting point is with a novel thought experiment. Imagine a criminal jury trial in which the government fails to meet its burden of proof. Objectively, then, the jury should acquit the criminal defendant. Now imagine a variable is inserted into the trial to test its effect on jury verdict accuracy. For example, what if the introduction of gang evidence causes the jury to wrongfully convict? Or what if jurors do not wrongfully convict when they are offered a monetary incentive to reach an accurate verdict? Maybe neither of these variables affect verdict accuracy. But if they do, then they should be the bases of reforms to improve the criminal justice system and prevent wrongful convictions.

Although this thought experiment provides a forum to brainstorm reform ideas to address jury error, reform ideas without proof that they will have the targeted effect of decreasing jury error and wrongful convictions are unlikely to gain serious traction. This thought experiment, however, can be more than just a thought experiment. With funding and resources, it can transform into a real experiment that facilitates the collection of first-hand jury data: the placebo trial experiment.

Just like placebo pills, placebo trials appear to be the real thing—jurors are summoned and selected, the prosecution and defense present their cases, a judge presides over the case and makes rulings throughout, and jurors deliberate and return a verdict. But, unlike real trials, placebo trials have two distinct characteristics. First, they are not real. The criminal defendant did not commit a crime, nor is he charged with a crime, and the defendant, attorneys, and judge are the only ones that know. As far as jurors know, they are sitting on a real trial. Second, in placebo trials the government always fails to prove an element of the crime "charged" beyond a reasonable doubt, so a conviction is the incorrect verdict. As a result, placebo trials should always result in acquittals.

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collective verdict. *See* Christopher Robertson & Michael Shammas, *The Jury Trial Reinvented*, 9 TEX. A&M L. REV. 109, 148 (2021). When required to reach a collective verdict, deliberations can take hours, days, even weeks. Moreover, jurors often change their initial votes following the deliberative process. Since placebo trial experiments require jurors to engage in the deliberative process and reach a verdict, the results will be the product of real juror behavior rather than individual jurors' decisions made in a vacuum. Second, placebo trial jurors think the trial is real, while mock jurors know the trial is fake. For placebo trial jurors, then, the stakes are higher: as far as they know, they are deciding the fate of a real person. Their verdict will determine whether the defendant loses their liberty, which affects not only the defendant and their future, but also the defendant's family and friends. Mock jurors, conversely, know the trial is fake, so they know their decision has no actual impact on the fake defendant. The higher the stakes, the more likely jurors are to take their job seriously, and jurors always think the stakes are higher in placebo trials versus mock trials.

The placebo trial experiment borrows from the scientific method to isolate variables and determine whether they impact jury verdict accuracy. Two groups of juries, whose members all believe they are sitting on a real trial, sit through largely the same placebo trial. The only difference is that a variable appears in one group's trials but not in the other group's trials. A comparison of the groups' acquittal rates will demonstrate whether the variable impacts jury verdict accuracy.

If the introduction of a variable to the experimental group of placebo trials results in a higher acquittal rate compared to the acquittal rate of the control group, then first-hand jury data confirms that the variable should form the basis of potential reforms. For example, what if juror knowledge of the placebo trial practice—which necessarily is knowledge that a conviction may be the wrong verdict—increases verdict accuracy? Or what if monetary incentives do the same? If so, courts should adopt a reform informing jurors of the placebo trial practice prior to all trials, as such juror knowledge seems to motivate jurors to be accurate and decreases the likelihood of wrongful convictions. Courts should likewise adopt a reform incorporating monetary incentives for juries to increase verdict accuracy.

Furthermore, if the introduction of a variable in the experimental group prompts those juries to wrongfully convict, then that variable is a point of weakness in the criminal justice system that should be the target of reform efforts. For instance, what if the introduction of gang evidence in a placebo trial prompts juries to convict an innocent criminal defendant? If so, evidence rules should be reformed to raise the admissibility standard for gang evidence, given its highly prejudicial nature.[169]

A. Proposed Variables

The variables that can be isolated in placebo trial experiments to determine whether they affect jury verdict accuracy and discourage wrongful convictions are endless. Informed by the studies and research discussed above about motivation, priming, and jury error, below are descriptions of proposed variables intended to motivate jurors to be accurate, prime jurors to improve performance, and identify weaknesses in the criminal justice system.

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169. Prior to conducting placebo trial experiments on real juries, variables will be tested on mock juries to identify which variables will likely affect jury verdict accuracy—an initial step that is more cost-effective than placebo trials, and that will provide support for testing variables in full-scale placebo trial experiments.

1. Knowledge of the Placebo Trial Practice

One way placebo trials can be used to discourage wrongful convictions caused by jury error is by informing prospective jurors prior to voir dire that they are in a jurisdiction that conducts placebo trials as a check on jury verdict accuracy, providing a strong incentive to prioritize accuracy. Behavioral research suggests that people who are motivated to be accurate tend to think through decisions more carefully, pay better attention, and are less likely to be influenced by biases than they otherwise would be.[170] Juror awareness that a conviction is *certain* to be the *wrong* outcome in the placebo case provides a strong incentive to assess the evidence in *every* criminal trial with care, because the juror *does not know* whether they are sitting on a placebo trial.[171] And if they are sitting on a placebo trial, the juror knows that the objectively correct verdict is an acquittal. This knowledge will ideally motivate the juror to carefully analyze whether the government has met its high burden of proof as to each element of the crime rather than resorting to an improper jury behavior or assumption to guide their verdict.

Knowledge of the placebo trial practice can also increase juror accountability—instead of rendering a verdict without justification and without an objectively correct verdict, jurors may find out that they were on a placebo trial, so their verdict was objectively correct or incorrect. This knowledge will therefore ideally motivate jurors to be accurate in their verdicts and discourage wrongful convictions caused by jury error.[172]

To test this theory in a placebo trial experiment, an experimental group of juries will be informed about the placebo trial practice,[173] while a control group of juries will not. The juries will view the same placebo trial, and their acquittal rates will be compared. If juror knowledge of placebo trials motivates jurors to be more accurate, then the experimental group will have

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170. *See* KUNDA, *supra* note 129, at 236.

171. Research suggests that the accuracy goal and accountability for jurors created by knowledge of the placebo trial practice will lead jurors "to favor . . . elaborate over cursory processing." *See id.* People generally "alternate between different modes of thinking": (1) "careful, systematic, elaborate processing aimed at arriving at the best judgment possible," and (2) "cursory, superficial, 'quick and dirty,' heuristic processing aimed at arriving at a good enough, if imperfect judgment." *Id.*

172. This knowledge that a guilty verdict may be inaccurate is also knowledge that a wrong decision will result in unfair treatment to the criminal defendant, a result that also creates an accuracy goal. *See id.*

173. Specifically, the court will inform jurors that they could be sitting on an artificial trial in which the objectively correct outcome is an acquittal—a placebo trial—as a check on jury verdict accuracy.

a higher acquittal rate than the control group because the sole variable in the experimental group's experience will be juror knowledge of placebo trials.

2. Monetary Incentives

Another variable that may discourage wrongful convictions and decrease jury error is providing jurors with monetary incentives to prime them to improve their performance as jurors. Although the effectiveness of priming employees to improve performance with monetary incentives depends on different variables,[174] placebo trials can be used to test whether monetary incentives can effectively prime jurors to better perform their job as jurors and ultimately reach the correct verdict.

To test this variable in a placebo trial experiment, juries will be divided into a control group and an experimental group. The control group of juries will sit through a placebo trial and render verdicts. The experimental group of juries will sit through the same placebo trial, but beforehand will be told that a public interest organization will pay monetary bonuses to juries that sit through placebo trials and reach the correct verdict. The experimental group will also be informed that the correct outcome in a placebo trial could be a conviction or acquittal.[175] If the experimental group reaches more accurate verdicts than the control group, then the possibility of a monetary bonus primed jurors to be more accurate in their assessment of the evidence and application of the evidence to the law. The amount of monetary incentive can also be varied to determine the minimum amount of incentive necessary to increase verdict accuracy, as well as whether tying the goal of an accurate verdict to an all-or-nothing monetary incentive will likewise increase verdict accuracy.[176]

3. Preliminary Jury Instructions

The placebo trial experiment can also test whether and how effectively jurors can be primed with preliminary jury instructions to improve performance. For instance, the experiment can determine whether preliminary jury instructions can prime jurors to view the evidence through

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174. *See* Knight et al., *supra* note 151, at 328; Kohn, *supra* note 151.

175. To prevent jurors from concluding that the defendant should be acquitted only because jurors believe they are sitting on a placebo trial jury, jurors should be informed that the correct verdict in placebo trials may be guilty or not guilty. But unbeknownst to jurors, the correct verdict is always an acquittal.

176. *See supra* Section II.B.

the lens of the criminal defendant's presumption of innocence[177]—a view jurors should, but may not always, take.[178] Although all courts provide instructions to juries following the close of evidence in a criminal trial, not all courts provide preliminary instructions to juries, and those that do often provide instructions that vary substantively.[179] If preliminary instructions about the criminal defendant's presumption of innocence lead to more acquittals when acquittal is the correct verdict, then a reform mandating such a preliminary instruction should be seriously considered. Similarly, placebo trials can test the priming effect of preliminary instructions about the government's burden of proof,[180] as well as whether providing jurors with written preliminary instructions increases jury verdict accuracy. Another

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177. *See* Coffin v. United States, 156 U.S. 432, 458–59 (1895) ("[T]his presumption [of innocence] is an instrument of proof created by the law in favor of one accused, whereby his innocence is established until sufficient evidence is introduced to overcome the proof which the law has created.").

178. Dan Simon notes:

> The prevailing trial design rests on the assumption that the complex and vast amount of testimony, presented over the course of days and weeks, can be encoded, retained, and retrieved from memory in an unaltered state. Suspended in a state of cognitive abeyance, the juror dutifully awaits the formal announcement of the legal rules before starting to make sense of the case. Only after the rules are introduced does the juror retrieve the unadulterated evidence, sift relevant facts from irrelevant ones, and begin to generate theories, develop preferences, and lean toward a decision.

Dan Simon, *A Third View of the Black Box: Cognitive Coherence in Legal Decision Making*, 71 U. CHI. L. REV. 511, 551 (2004). Yet research debunks this assumption, demonstrating that "jurors develop preferences and make up their minds before the case is submitted to them." *Id.* at 552; *see, e.g.*, Hannaford et al., *supra* note 159, at 636–38, 640 (finding that, prior to jury instructions, 65% of jurors developed a leaning in favor of one party over the other, and 40% of jurors decided liability prior to jury instructions in a civil jury study).

179. *See* Simon, *supra* note 178, at 558 ("For the most part, judges have broad discretion with respect to the form and timing of jury instructions. Preliminary instructions are explicitly included or suggested in procedural law and pattern jury instructions in some jurisdictions, but not in others."); *see, e.g.*, MANUAL OF MODEL CIV. JURY INSTRUCTIONS FOR THE DIST. CTS. OF THE NINTH CIR., introductory cmt. (NINTH CIR. JURY INSTRUCTIONS COMM. 2024), https://www.ce9.uscourts.gov/jury-instructions/sites/default/files/WPD/Civil_Instructions_2024_03_0.pdf [https://perma.cc/VD8Y-XD89] ("Practices vary among judges on how complete introductory instructions should be. Some judges prefer to instruct initially only on the trial process. Some prefer to instruct not only on the process but also on types of evidence to be presented and/or on deliberations. Finally, some include [these] topics . . . as well as substantive law instructions for particular claims made. There is no right or wrong way to accomplish this task. It depends on the nature of the case, the preliminary rulings and the legal culture of each district." (citations omitted)).

180. To convict a criminal defendant, the government must provide "proof beyond a reasonable doubt of every fact necessary to constitute the crime with which [the criminal defendant] is charged." *In re* Winship, 397 U.S. 358, 364 (1970).

variation could test whether priming jurors with preliminary instructions about the criminal defendant's presumption of innocence or the government's burden of proof at the beginning of each trial day increases jury verdict accuracy, or whether certain language in preliminary instructions is more effective than other language.

4. The Unanimity Rule

Placebo trials can facilitate a first-hand study of the unanimity rule. Although "it is commonly thought that requiring juries to reach a unanimous verdict is exactly the mechanism that protects innocent defendants and that this protection comes at the cost of an increased probability of acquitting a guilty defendant," Feddersen and Pesendorfer's research suggests that the unanimity rule does the opposite.[181] Specifically, their research shows that the unanimity rule increases the likelihood that an innocent defendant will be convicted and that a guilty defendant will be acquitted compared to nonunanimous voting rules.[182]

Placebo trials can put these findings to the test. Juries can sit through the same placebo trials, with one group required to reach unanimous verdicts, while others may reach nonunanimous verdicts—some needing ten or eleven out of twelve votes to convict, and others needing a simple majority. These findings will demonstrate the accuracy of verdicts from juries voting under unanimous and nonunanimous verdict rules, offering valuable insight into which rule leads to the highest jury verdict accuracy. If Feddersen and Pesendorfer's research is confirmed with placebo trials, then this first-hand jury data should prompt reforms—perhaps a constitutional amendment eliminating the unanimity rule, or statutory and procedural rules permitting a criminal defendant to waive the unanimity rule.

V. THE IMPORTANCE OF PLACEBO TRIALS

The thought experiment provides a hypothetical setting to think through ways jurors can be motivated and primed to reach accurate verdicts and to identify weaknesses in the criminal justice system. Once those strategies and weaknesses are identified, placebo trials facilitate the collection of first-hand jury data on the impact that these variables have on jury verdict accuracy and

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181. Feddersen & Pesendorfer, *supra* note 115, at 23.
182. *See id.*

whether they can discourage wrongful convictions—which are crucial to support reform efforts targeting jury error.

As valuable as this information is, the use of placebo trials has costs. Placebo trials do not resolve real criminal cases, so they will necessarily expend judicial resources.[183] Even so, the benefits of placebo trials—including discouraging wrongful convictions caused by jury error, a problem that is poorly understood and largely ignored—overwhelmingly outweigh the costs.

A. Costs

Placebo trials will require vast resources. To test even one variable will require conducting hundreds of trials, which will take an enormous amount of time and funding. There is no way around it. To increase the likelihood that placebo trial experiments will reveal variables that have an impact on jury verdict accuracy, each variable should be tested by mock juries first. Although there is no guarantee that placebo trial results will be the same as mock trial results, this trial vetting will help ensure that a variable is worth testing with placebo trials. Placebo trial experiments will always be costly. But once they confirm that one variable impacts verdict accuracy, revealing invaluable information that can improve the criminal justice system and decrease wrongful convictions, it should be clear to society that such a benefit is worth the cost.

Placebo trials may also risk undermining the legitimacy of the courts. Most citizens are not jumping for joy when they receive notice that they have been called for jury duty. If they begrudgingly serve in a placebo trial, only to discover when it is over that it was not a real trial, jurors may become upset and question the legitimacy of the courts. A couple tactics may, however, stave off such a negative reaction. First, jurors can consent to potentially serving on a placebo trial.[184] If they ultimately do serve on a placebo trial jury, then the existence of placebo trials will not come as a surprise, only that they just served on one (which they consented to doing). Second, if jurors are

183. To be effective, placebo trials must be indistinguishable from real trials to jurors. They will therefore require resources similar to real trials.

184. It must be clear to jurors that the correct verdict outcome in a placebo trial could be acquittal or conviction so that jurors do not use their suspicion that they are sitting through a placebo trial as a shortcut to reach their verdict decision.

educated about the benefits to the criminal justice system of placebo trials, then they will hopefully appreciate the opportunity to participate in them.[185]

B. Primary Benefit: A New Tool to Discourage Wrongful Convictions Caused by Jury Error

Most critically, placebo trials are a new tool that can discourage wrongful convictions caused by jury error. The variables that effectively motivate jurors to be accurate and prime jurors to improve their performance will only benefit criminal defendants. If juror knowledge of the placebo trial practice proves to increase verdict accuracy, then it can form the basis of a reform to decrease wrongful convictions caused by jury error. And if priming jurors with preliminary instructions about the criminal defendant's presumption of innocence and the government's high burden of proof increases the likelihood that jurors look to only the evidence to reach a verdict, not their biases or improper assumptions, then this too can form the basis of a reform. Placebo trials can confirm whether these or any other trial manipulations improve jury verdict accuracy and discourage wrongful convictions caused by jury error. Criminal defendants only stand to benefit from this research.

To the extent that prosecutors may object to use of placebo trials to decrease jury error, they have no good reason to do so. Criminal defendants are entitled to a presumption of innocence, which requires that the prosecution prove its case beyond a reasonable doubt.[186] But this presumption also "conveys for the jury a special and additional caution . . . to consider, in the material for their belief, *nothing but the evidence*."[187] The placebo trial variables aimed at decreasing jury error do exactly that:

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185. There is also a concern that if all jurors know that they may serve on a placebo trial, then that may affect their behavior in real trials. For example, a juror with knowledge of placebo trials who serves on a real jury may mistakenly think it is a placebo trial and not take their role as a juror seriously. Although there is no way of presently knowing if this will happen, the placebo trial tool can test the prevalence, if any, of such a phenomenon.

186. Taylor v. Kentucky, 436 U.S. 478, 485–86 (1978); *see In re* Winship, 397 U.S. 358, 363 (1970) ("The [reasonable-doubt] standard provides concrete substance for the presumption of innocence—that bedrock 'axiomatic and elementary' principle whose 'enforcement lies at the foundation of the administration of our criminal law.'" (quoting Coffin v. United States, 156 U.S. 432, 453 (1895))).

187. *Taylor*, 436 U.S. at 485 (quoting 9 JOHN HENRY WIGMORE, EVIDENCE IN TRIALS AT COMMON LAW § 2511, at 407 (3d ed. 1940)); *see also* Speiser v. Randall, 357 U.S. 513, 525–26 (1958) ("There is always in litigation a margin of error, representing error in factfinding, which both parties must take into account. Where one party has at stake an interest of transcending value—as a criminal defendant his liberty—this margin of error is reduced as to him by the

- Juror knowledge of the placebo trial practice will likely motivate jurors to be more accurate, which will prompt jurors to reason more carefully and diminish the effects of biases and improper assumptions upon verdicts.[188]
- Juror priming with preliminary jury instructions about the presumption of innocence and the government's burden of proof will reinforce the presumption of innocence in the minds of jurors, ideally prompting them to focus solely on the evidence presented at trial and whether it reaches the high burden of proof.[189]
- Juror priming with monetary incentives may increase verdict accuracy.[190]
- Testing of the unanimity rule will illuminate whether it results in juror error, as well as whether a nonunanimous rule leads to more accurate verdicts.[191]

A prosecutor who objects to using placebo trials to identify ways to decrease jury error, then, objects to assuring that the criminal defendant receives their presumption of innocence. Moreover, because placebo trials can identify variables that will reinforce the criminal defendant's presumption of innocence, a prosecutor cannot assert that the experiment and its findings are unfair to the prosecution. The criminal defendant is undoubtedly entitled to the presumption of innocence. If the prosecution views reinforcing the presumption of innocence as unfair, then such sentiment reveals that, without the reinforcement, the prosecution operates with an unfair advantage contrary to the presumption of innocence.

C. Secondary Benefits: Firsthand Jury Research, Addressing Wrongful Convictions via Guilty Pleas, and Trial Experience for Lawyers

Placebo trials also have three secondary benefits. First, they facilitate first-hand jury research that can illuminate whether the underlying assumptions and premises thought to legitimize the jury system are valid. The variables that placebo trials can test and their effects on jury verdict accuracy are endless—from limiting instructions and prejudicial evidence, to the

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process of placing on the other party the burden of producing a sufficiency of proof in the first instance, and of persuading the factfinder at the conclusion of the trial of his guilt beyond a reasonable doubt.").

188. *See supra* Section IV.A.1.

189. *See supra* Section IV.A.3.

190. *See supra* Section IV.A.2.

191. *See supra* Section IV.A.4.

appearances of trial participants. Placebo trial data will expose the strengths and weaknesses of the jury system, ideally prompting rule reforms to improve the jury system and increase the accuracy of verdicts.

Placebo trials also offer a useful glimpse into the black box of jury deliberations. State and federal legislation that create the black box are inapplicable to placebo trials,[192] allowing jury researchers to discard their second-best indirect study methods for access to jury deliberations.[193] Not only will a look into the black box provide insight into what jury deliberations consist of and how they evolve, but it can also uncover how variables in the courtroom impact jury deliberations. For example, deliberations may reveal that jurors found a well-dressed witness more credible than a poorly dressed witness, or that a certain type of evidence was most impactful or prejudicial. Placebo trials can provide concrete data about juror responses to trial variables—information that is in high demand and has so far largely been available only via indirect jury studies using mock juries and juror surveys.[194]

Second, placebo trials have the benefit of offering a proposed solution to an additional facet of the wrongful conviction problem: wrongful convictions via guilty pleas. The wrongful conviction problem is not limited to convictions following trials. Wrongful convictions also occur when innocent criminal defendants are convicted via guilty pleas. Placebo trials will likely lessen the power imbalance enjoyed by prosecutors in the plea-bargaining process and decrease wrongful convictions via guilty pleas.

Many scholars have criticized the power imbalance in plea bargaining.[195] Prosecutors hold virtually all the power in this context by dangling a plea bargain promising "certainty and compromise" before a criminal defendant, whose only alternative is to face the "all-or-nothing judgment of a trial," often at the hands of an unpredictable jury.[196] Moreover, "prosecutors' ability to threaten inflated sentences, combined with their power to trade those

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192. *See, e.g.*, 18 U.S.C. § 1508 (imposing fines and/or imprisonment as punishment for anyone who knowingly and willfully records or listens to jury deliberations or attempts to do so).

193. Placebo trial jury deliberations can be discretely observed, ensuring that jurors do not know that they are being observed and believe that they are in the black box.

194. Private attorneys often seek the assistance of jury consultants to understand the characteristics of jurors that will improve the likelihood of success for their clients. *See* Matthew Hutson, *Unnatural Selection*, PSYCH. TODAY, Apr. 2007, at 90, 92, https://www.psychologytoday.com/intl/articles/200703/unnatural-selection [https://perma.cc/AV4F-JVWA] ("Jury consulting has become a big business over the past three decades. Hundreds of firms now rake in several hundred million dollars a year.").

195. *See, e.g.*, Brandon J. Lester, Note, *System Failure: The Case for Supplanting Negotiation with Mediation in Plea Bargaining*, 20 OHIO ST. J. ON DISP. RESOL. 563, 570 (2005).

196. Gerard E. Lynch, *Screening Versus Plea Bargaining: Exactly What Are We Trading Off?*, 55 STAN. L. REV. 1399, 1405 (2003).

sentences away for pleas of guilt, allows them to control 'who goes to prison and for how long.'"[197] This extreme power imbalance unsurprisingly results in most criminal defendants pleading guilty and accepting plea deals. The United States Sentencing Commission reports that in fiscal year 2022, guilty pleas accounted for 97.5% of all pleas and trials in the federal courts, while trials accounted for only 2.5%.[198] Despite making the decision to plead guilty, some criminal defendants that do so are innocent.[199] Nevertheless, they plead guilty because going to trial is a risk—the jury could convict them and then they may face the maximum sentence—while taking a plea deal, on the other hand, usually involves receiving a guaranteed lesser sentence. In the ideal criminal justice system, innocent criminal defendants should have no reservations about going to trial because they are confident that the jury will reach the correct verdict.

Placebo trials can build this confidence in the jury. For example, if jurors have knowledge that they could be a juror in a placebo trial—knowledge that a guilty verdict may be the incorrect verdict—then this knowledge will motivate jurors in all trials to carefully analyze whether the government has met its high burden of proof as to each element of the crime rather than resorting to an improper jury behavior or assumption to guide their verdict. The risk of jury error leading to a wrongful conviction would subside, along with the accompanying risks of being convicted of the most serious offense and receiving the most severe punishment, leading to an increased likelihood

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197. Andrew Manuel Crespo, *The Hidden Law of Plea Bargaining*, 118 COLUM. L. REV. 1303, 1304 (2018) (quoting William J. Stuntz, *Plea Bargaining and Criminal Law's Disappearing Shadow*, 117 HARV. L. REV. 2548, 2549 (2004)).

198. In 2022, out of 64,142 criminal convictions in federal courts, 62,527 were convictions via guilty plea and 1,615 were convictions via trial. U.S. SENT'G COMM'N, STATISTICAL INFORMATION PACKET, FISCAL YEAR 2022, FIRST CIRCUIT 4 tbl.2, https://www.ussc.gov/sites/default/files/pdf/research-and-publications/federal-sentencing-statistics/state-district-circuit/2022/1c22.pdf [https://perma.cc/G5JS-GEMC].

199. *See, e.g.*, *Darryl Adams*, NAT'L REGISTRY EXONERATIONS (Feb. 18, 2017), https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=5089 [https://perma.cc/XXU5-NCVZ] (describing the wrongful convictions of Darryl Adams and Ronald Eubanks, who both pled guilty to sexual assault but were later exonerated with DNA evidence); *Danial Williams*, NAT'L REGISTRY EXONERATIONS (Dec. 4, 2018), https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=5054 [https://perma.cc/VQ64-JTGB] (describing the wrongful conviction of Danial Williams, who pled guilty to rape and murder despite his "knowledge that lab results had shown that his DNA did not match any evidence from the crime scene"); *Curtis Logan*, NAT'L REGISTRY EXONERATIONS (June 29, 2022), https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=6331 [https://perma.cc/6KP4-PHS4] (describing the wrongful conviction of Curtis Logan, who pled guilty to possession with intent to sell or distribute a counterfeit controlled substance but was later exonerated when the confidential informant and police officer who orchestrated his arrest were exposed as corrupt).

that innocent criminal defendants will exercise their right to a trial by jury with confidence.[200] Placebo trials can therefore address the wrongful conviction problem in an additional way by decreasing the frequency of innocent criminal defendants accepting plea bargains and being convicted via guilty pleas.

Third, placebo trials offer opportunities for lawyers to gain trial experience. Trials are the exception, not the rule, in both civil and criminal litigation.[201] As a result, trial experience is hard to come by—particularly for new attorneys. Because placebo trials simulate real trials, they provide the rare opportunity for participating attorneys to gain trial experience. Just as some courts have a practice of encouraging litigants to provide young attorneys with opportunities for oral argument, thus incentivizing clients and law firms to give new attorneys opportunities to gain argument experience,[202] courts can adopt a similar practice of selecting volunteer attorneys with a preference for those who are new attorneys.

Volunteering to participate in a placebo trial could be considered pro bono work, as it aids in the effort to improve the criminal justice system. At the very least, law firms will likely encourage associates to volunteer to participate in placebo trials to gain the valuable trial experience that many law firms cannot offer.

VI. CONCLUSION

The black box surrounding jury deliberations allows society to turn a blind eye to jury error. But mock jury research and accounts from real jurors confirm that jury error infiltrates the black box: jurors have implicit and explicit biases that influence their views of evidence and verdicts; they make

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200. If criminal defendants exercise their right to trial by jury more frequently, prosecutors will be forced to offer plea deals that are more favorable to criminal defendants. Prosecutors lack the time and resources to take all cases in their current caseloads to trial, so they will necessarily have to either offer more balanced plea deals or pursue fewer criminal cases.

If the other proposed solutions—monetary incentives, priming, and nonunanimous verdict rules—also increase jury verdict accuracy, then they should likewise lead more criminal defendants to exercise their trial right rather than take a guilty plea. Additionally, if placebo trials identify weaknesses in the criminal justice system that prompt targeted reforms, then more innocent criminal defendants should trust the system and exercise their trial right.

201. *See supra* note 200.

202. *See, e.g.*, CT. PROCS. & PRACS. OF JUDGE ALFRED H. BENNETT § A(5) (U.S. DIST. CT., S.D. TEX. 2023), https://www.txs.uscourts.gov/sites/txs/files/Judge%20Alfred%20H.%20Bennett%20Proc%20revised%20212023.pdf [https://perma.cc/VM5E-9TZJ] (encouraging litigants to provide young lawyers with opportunities for speaking opportunities in court).

forbidden assumptions to the criminal defendant's detriment; and they engage in bad behavior and strategic voting. Like flawed evidence, these jury errors are a cause of the wrongful conviction problem. But unlike flawed evidence, these jury errors have been largely ignored in research and reform efforts. And a wrongful conviction caused by jury error is just as much a wrongful conviction as one caused by flawed evidence. Moreover, a wrongful conviction caused by jury error is much more difficult to redress. Jury error rarely comes to light, as jurors are unlikely to report their own biases or misconduct, a reality facilitated by the black box. An effective reform to address jury error must therefore target jury error ex ante, before the black box descends.

Placebo trials can identify the bases of effective reforms to address jury error. Importantly, placebo trials can provide first-hand jury data on whether jurors can be motivated to be accurate or primed to improve performance to discourage wrongful convictions caused by jury error. They can also identify weaknesses in the criminal justice system that leave criminal defendants vulnerable to wrongful conviction. Such first-hand data about the effect of variables on jury verdict accuracy is concrete proof that a reform idea based on a tested variable will have the targeted effect of discouraging wrongful convictions caused by jury error.

The ultimate miscarriage of justice is a wrongful conviction. Although zero wrongful convictions may be asking too much of any criminal justice system, decreasing the likelihood of wrongful convictions with reforms identified by placebo trials is not.