IN THE SUPERIOR COURT OF BUTTS COUNTY
STATE OF GEORGIA

WARREN KING, Petitioner	
vs.	Habeas Corpus
SHAWN EMMONS, WARDEN, GEORGIA DIAGNOSTIC AND CLASSIFICATION PRISON, Respondent	Case No. 2024-SU-HC-0010 The Hon. Robert L. Mack

BRIEF OF *AMICUS CURIAE* FAIR TRIAL ANALYSIS, LLC IN SUPPORT OF WARREN KING'S PETITION FOR WRIT OF HABEAS CORPUS

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STATEMENT OF IDENTITY AND INTEREST

Amicus curiae, Fair Trial Analysis LLC, submits this brief to assist the Court in considering the legal and constitutional issues raised in this case. Fair Trial Analysis LLC is a research and consulting organization founded by Barry Edwards, J.D., Ph.D., a legal scholar and researcher specializing in quantitative analysis of criminal trials. The organization is committed to promoting fair trials through research-based analysis, maintaining neutrality toward all parties.

Dr. Edwards has developed a scientifically grounded method to objectively assess the harmfulness of trial errors and omissions. This method offers courts an evidence-based framework for assessing how alleged constitutional violations impact trial fairness verdict reliability.

Dr. Edwards graduated from Stanford University in 1995 with honors and distinction in both Economics and Political Science. He received his J.D. from New York University School of Law in 1999. After practicing law and starting a family in Georgia, he obtained a Ph.D. in Political Science from the University of Georgia. Dr. Edwards was a faculty member at the University of Central Florida's School of Politics, Security, and International Affairs, where he taught political science research methods, pre-law courses, and American politics electives. He continues to occasionally teach political science for the University of Georgia.

Dr. Edwards has written five textbooks on research methods for political science. The core textbook, The Essentials of Political Analysis, co-authored with Professor Philip Pollock III and published by Sage Publications, is among the most widely used research methods textbooks in political science. Currently in its seventh edition, Essentials is used at colleges and universities including Rutgers, Tufts, Tulane, NYU, Duke, the University of Maryland, the University of Kentucky, UCLA, George Mason, and UC San Diego. The core textbook is supplemented by four companion textbooks that teach students to apply research methods using various statistical

software programs: An R Companion to Political Analysis (now in its third edition); A Stata Companion to Political Analysis (fourth edition); A Microsoft Excel Companion to Political Analysis (first edition); and An IBM SPSS Companion to Political Analysis (sixth edition). His numerous research articles, both solo and co-authored, have been published in the following journals and law reviews: American Politics Research, Congress & the Presidency, Election Law Journal, Emory Law Journal, Georgia Bar Journal, Harvard Negotiation Law Review, The Journal of Politics, NYU Journal of Legislation & Public Policy, Political Research Quarterly, Presidential Studies Quarterly, Public Management Review, State Politics & Policy Quarterly, UCLA Criminal Justice Law Journal, and Virginia Journal of Social Policy & Law (forthcoming).

Fair Trial Analysis LLC has no direct stake in the outcome of this litigation and remains neutral toward both parties. It has not received any compensation for this analysis. Dr. Edwards came across this case while reading news articles on death penalty cases and determined that it would benefit from scientific analysis. Fair Trial Analysis LLC independently funded its research. *Amicus* dedicated its time and resources to support its core belief in fair trials. This brief provides the Court with a neutral, scientifically rigorous analysis of the alleged trial errors and their potential impact on trial outcomes. *Amicus* does not seek to prove a trial was fair or unfair; rather, it aims to provide objective analysis of trial errors and omissions to aid the pursuit of justice. Given the stakes of this post-conviction proceeding, this analysis provides a unique and valuable perspective that may aid the Court in ensuring the fair administration of justice.

SUMMARY OF KEY FINDINGS

In this case, Petitioner Warren King seeks a writ of habeas corpus based, in part, on newly discovered evidence—allegedly suppressed by the prosecution—indicating that a key witness, his cousin, Walter Smith, reached a plea agreement with prosecutors, allowing him to avoid the death penalty in exchange for testifying against the Petitioner at trial.

Fair Trial Analysis, LLC conducted a scientific analysis of the impact of allegedly suppressed evidence on juror sentencing preferences and the probability of a death sentence using a double-blind randomized experiment involving 786 jury-qualified adults representative of Butts County, Georgia. This analysis yields the following key findings:

- The alleged error significantly increased support for a death sentence among jury-qualified adults in a sample representative of Butts County, Georgia, with a reasonable degree of scientific certainty.
- 31.5% of those who support a death sentence in the absence of the disputed evidence change their vote to life imprisonment when presented with the disputed evidence.
- The most common sentiment expressed by jury-qualified adults in the representative sample is distrust of the cousin's testimony and concerns about plea deals, comprising 24.9% of respondent comments.
- The alleged error increased the probability of a death sentence with a reasonable degree of scientific certainty. However, while it certainly increased this probability, the precise magnitude of the increase cannot be estimated with sufficient confidence at this time.

Based on its analysis and findings, Fair Trial Analysis, LLC supports Warren King's petition for writ of habeas corpus.

EFFECT OF ALLEGED TRIAL ERROR ON TRIAL OUTCOME

This section outlines the analytic framework for evaluating the petitioner's claim, describes the survey research conducted to collect data, and presents the results of the analysis. Additionally, it discusses the findings and their implications.

A. Framework For Evaluating Petitioner's Claim

The petitioner contends that the evidence in question would have substantially impacted the outcome of his trial. The petitioner's claim can be framed as a research hypothesis: the omission of impeachment evidence crested a reasonable probability of a different outcome. A research hypothesis is a testable claim. The research hypothesis challenges the null hypothesis, which posits that the claim is not true. Here, the null hypothesis asserts that the alleged error did not create a reasonable probability of a different outcome. The null hypothesis is presumed correct and is rejected only if the data demonstrate that it is implausible. If the data support the null hypothesis or are inconclusive, the null hypothesis cannot be rejected.[1]

The null hypothesis significance testing framework aligns with the burden of proof in this post-conviction proceeding. The petitioner bears the burden of demonstrating that the alleged error was harmful. The error is presumed harmless unless the data render this presumption implausible. If the analysis is inconclusive, the error is not proven harmful, and the presumption of harmlessness

[1] The logic of null hypothesis significance testing is analogous to proving guilt in a criminal trial. The null hypothesis is presumed correct like the defendant is presumed innocent. The research hypothesis asserts that a causal relationship exists the way that charges allege that a crime has occurred. The null hypothesis (innocence) presumption holds until the data (evidence) prove with reasonable scientific certainty (beyond a reasonable doubt) that the null hypothesis should be rejected (found guilty). Further details on null hypothesis significance testing procedures can be found in standard statistics and research methods textbooks. *See, e.g.,* Philip H Pollock III & Barry C Edwards, The Essentials of Political Analysis 82-84, 167-95, 99-215 (6th ed. 2019).

stands. *See* Barry C. Edwards, *A Scientific Framework for Analyzing the Harmfulness of Trial Errors*, 8 UCLA Crim. J. L. R. 1 (2024).

There are two primary approaches to evaluating the harmfulness of trial errors and omissions, each focusing on a different trial outcome. One approach examines whether an error or omission increased the probability of a guilty verdict or a death sentence. The second approach evaluates how errors and omissions influence jurors' perceptions and reasoning, recognizing that errors may harm the trial process as well as the trial result. *See generally* Jason M. Solomon, *Causing Constitutional Harm: How Tort Law Can Help Determine Harmless Error in Criminal Trials*, 99 NW. U.L. Rev. 1053 (2005) (comparing and discussing approaches to harmless error analysis). *Amicus* takes no position on either approach but provides information relevant to both.

In most analyses, a trial error or omission, including a *Brady* violation, constitutes intolerable harm if it creates a "reasonable probability" that the trial outcome would have been different. *United States v. Bagley*, 473 U.S. 667, 682 (1985). A "reasonable probability" is defined as "a probability sufficient to undermine confidence in the outcome." *Strickland v. Washington*, 466 U.S. 668, 694 (1984). These cases suggest that the petitioner's claim is established if evidence demonstrates substantial harm with a reasonable degree of scientific certainty.

In some cases, the threshold for proving harmfulness may be lower than the "reasonable probability" standard. Certain cases suggest a *Napue* violation—where a prosecutor knowingly presents or fails to correct false testimony—constitutes intolerable harm "if there is any reasonable likelihood that the false testimony could have affected the judgment of the jury." *United States v. Agurs*, 427 U.S. 97, 103 (1976). This language suggests that petitioner's claim is proven if evidence demonstrates harm with a reasonable degree of certainty. *Amicus* takes no position on

whether a higher or lower threshold applies but seeks to provide information relevant to both standards.

It is reasonable to hypothesize that evidence undermining the credibility of a prosecution witness substantially impacts the trial outcome. However, the impact of impeachment evidence depends on factors such as the witness's importance and the extent to which the evidence undermines their testimony. Additional considerations include the venue, jury size, and dynamics of deliberation. No type of evidence will *always* or *never* have a substantial impact, but its effect can be estimated through case-specific research. *See* Barry C. Edwards, *If the Jury Only Knew: The Effect of Omitted Mitigation Evidence on the Probability of a Death Sentence*, Va. J. Soc. Pol'y & Law (forthcoming 2025).

In cases requiring an evaluation of the harmfulness of trial errors or omissions, individuals often substitute their personal assessment of the evidence for an analysis of its impact on jurors. Respectfully, the Court's own analysis of the disputed evidence's impact would constitute a non-falsifiable opinion. Research indicates that judicial attempts to predict jury outcomes are often inaccurate, biased, and subject to by cognitive distortions.[2]

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[2] For their comparative analysis of judges and juries, Harry Kalven and Hans Zeisel asked trial judges to record how they would have decided criminal jury trials. Judges reached the same conclusion in 78% of trials. Harry Kalven & Hans Zeisel, The American Jury 56-58 (1966). A replication study found 75% agreement. *See* Theodore Eisenberg, et al., *Judge-Jury Agreement in Criminal Cases: A Partial Replication of Kalven and Zeisel's The American Jury*, 2 J. Empirical Legal Stud. 171 (2005). Kalven and Zeisel also reported a guilt bias; in 19% of trials, juries acquitted when judges would have convicted, and in only 3% of trials did juries convict when judges would have acquitted. Eisenberg et al. reported similar asymmetry in judgments. Hindsight bias and overconfidence warp an individual's attempt to assess the harmfulness of trial errors and omissions after the fact. *See generally* Nassim Nicholas Taleb, Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets 55-56 (2005); Daniel Kahneman, Thinking, Fast and Slow 202-04 (2011); Cass R. Sunstein, *Behavioral Analysis of Law*, 64 U. Chi. L. Rev. 1175 (1997) (discussing problems of rationalization and overconfidence in law); Jonathan Baron & John C. Hershey, *Outcome Bias in Decision Evaluation*, 54 J. of Personality & Soc. Psychol. 569 (1988). Expertise can create

Researchers can form their own opinion of disputed evidence, as if they were jurors, but without survey research, they cannot determine how others would perceive the disputed evidence. None of us can read minds. While we may know our own thoughts, we should not assume that others see things as we do. However, through careful research, one can ascertain the views of a representative sample of individuals and estimate the alleged error's impact with a reasonable degree of certainty.

B. Research Design

A specially designed survey is conducted to assess the harmfulness of the alleged error.[3] This research employs a randomized experiment to assess how the presence or absence of evidence regarding Mr. Smith's deal with prosecutors influences trial outcomes, while keeping all other factors constant. (Scan the QR code, at right, to try the survey.)

Survey respondents first complete a questionnaire to assess their eligibility for jury service. After completing the preliminary questionnaire, respondents are randomly assigned to read either a summary of Mr. King's actual trial or a summary of a hypothetical, error-free trial. The random assignments are double-blind: respondents are informed which version they have been assigned to or that an alternate version exists, and the researcher does not know which trial condition respondents have been assigned.

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a blind spot. While experts may readily concede that others misjudge juries (or markets, elections, talent, etc.), experts may disregard such problems in their own analysis. *See generally* Philip E Tetlock, *Expert Political Judgment*, in Expert Political Judgment (2017); Erik Angner, *Economists as Experts: Overconfidence in Theory and Practice*, 13 J. of Econ. Methodology 1 (2006).

[3] The survey instrument was built using Qualtrics (www.qualtrics.com), a popular survey platform. It is similar to other applications for collecting information using forms, like online quizzes, with more advanced features for randomization, survey flow, validating responses, and quality controls. Original survey instruments, codebooks, and datasets have all been saved.

The trial summaries are vignettes derived from public records, primarily the statements of fact in *King v. State*, 539 S.E.2d 783, 788-789 (Ga. 2000), and *King v. Warden*, 69 F.4th 856, 860 (11th Cir. 2023). In both trial conditions, respondents read summaries of key facts established by surveillance camera footage, witness testimony, and attorneys' closing arguments. For clarity, the summaries omit extraneous details, such as specific dates, locations, and individual names.

The actual and hypothetical trial summaries differ in two key areas: the cousin's trial testimony and the attorneys' closing arguments (see Table 1). These differences are based on the claims in the Petition for Writ of Habeas Corpus filed on or about July 8, 2024.

- Actual trial summary: Smith testifies that he was not promised favorable treatment for his testimony, which the prosecution then cites in closing arguments.
- Hypothetical trial summary: Smith admits that he was promised favorable treatment for his testimony, which the defendant's counsel cites in closing arguments.
- All other trial details remain identical in both conditions.

After reading the trial summaries, respondents indicate their preference for a death sentence or life imprisonment. The survey then allows respondents to volunteer written comments on their reasoning.

This analysis focuses on sentencing outcomes, rather than guilt determination, for both legal and practical reasons. Regardless of who fired the fatal shots, both King and Smith can be found guilty as parties to the crime. However, the factfinder's determination of who shot the gun could influence sentencing. If Smith was the gunman, King played a lesser role in the offense and was not Smith's agent, which negates an aggravating factor. Focusing on the sentencing outcome is also a practical decision. Surveys should be as brief as possible. Shorter surveys minimize respondent fatigue, improve data quality, and reduce costs.

Table 1. Differences Between Actual and Hypothetical Trial Conditions

ACTUAL TRIAL CONDITION	HYPOTHETICAL TRIAL CONDITION
Cousin's Testimony	**Cousin's Testimony**
The defendant's cousin testifies that the defendant was supposed to hold the clerk at gunpoint and act as a lookout while he robbed the store. The cousin testifies that after the alarm was triggered, as he was running away from the store, he heard two gunshots and turned to see the clerk falling to the ground. According to the cousin, the defendant shot and killed the store clerk. He also testifies that the defendant exclaimed, "I hope I killed the bitch."	The defendant's cousin testifies that the defendant was supposed to hold the clerk at gunpoint and act as a lookout while he robbed the store. The cousin testifies that after the alarm was triggered, as he was running away from the store, he heard two gunshots and turned to see the clerk falling to the ground. According to the cousin, the defendant shot and killed the store clerk. He also testifies that the defendant exclaimed, "I hope I killed the bitch."
On cross-examination, the defendant's cousin admits that he has a criminal record, including a history of violent behavior and firearm-related offenses. The cousin testifies that he did not receive any plea deal or promise of leniency from the prosecutor's office for his testimony.	On cross-examination, the defendant's cousin admits that he has a criminal record, including a history of violent behavior and firearm-related offenses. Also, the cousin admits that he was promised a more lenient sentence from the prosecutor's office, life with the possibility of parole rather than a death sentence, in exchange for testifying against the defendant at this trial.
Closing Arguments	**Closing Arguments**
The prosecution argues that there are three aggravating factors. The murder occurred while the defendant was committing the felony of armed robbery. The defendant shot and killed the store clerk as the agent of his cousin. The crime was also committed for monetary gain. These are aggravating factors under the state law. The defendant murdered an innocent person and should be sentenced to death.	The prosecution argues that there are three aggravating factors. The murder occurred while the defendant was committing the felony of armed robbery. The defendant shot and killed the store clerk as the agent of his cousin. The crime was also committed for monetary gain. These are aggravating factors under the state law. The defendant murdered an innocent person and should be sentenced to death.
The defendant's attorney acknowledges that the defendant participated in the robbery but argues that the defendant's cousin was the primary perpetrator. The defendant's attorney argues that the defendant's lessor role in the crime is a mitigating factor. The cousin planned the robbery, brought the gun, and convinced the defendant to participate. The cousin has a criminal history, including violence and firearm-related offenses. The defendant has intellectual deficits. The defendant held the gun during the attempted robbery, but he did not fire it. The defendant's cousin was the one who shot and killed the store clerk.	The defendant's attorney acknowledges that the defendant participated in the robbery but argues that the defendant's cousin was the primary perpetrator. The defendant's attorney argues that the defendant's lessor role in the crime is a mitigating factor. The cousin planned the robbery, brought the gun, and convinced the defendant to participate. The cousin has a criminal history, including violence and firearm-related offenses. The defendant has intellectual deficits. The defendant held the gun during the attempted robbery, but he did not fire it. The defendant's cousin was the one who shot and killed the store clerk.
The prosecutor argues that the defendant did not have a lesser role in the offense. The defendant was the primary perpetrator who shot and killed the store clerk. The prosecutor argues that you should believe the cousin's testimony over the defendant's testimony. The cousin testified honestly with nothing to gain for himself. The prosecutor argues that the defendant falsely testified that his cousin shot and killed the clerk to try to shift the blame and avoid responsibility for his crimes. Aggravating factors outweigh any mitigating factors. The defendant should be sentenced to death.	The defendant's attorney argues that you should not believe the cousin's self-serving testimony that the defendant shot and killed the store clerk. The defendant's cousin was promised a more lenient sentence, life with possibility of parole rather than a death sentence, in exchange for testifying against the defendant at this trial. The defendant's attorney argues that the cousin falsely testified that the defendant shot and killed the store clerk to shift the blame and get a more lenient sentence for himself. The defendant is not a cold-blooded murderer. He should be sentenced to life imprisonment.

After selecting a sentence in their assigned trial condition, respondents are asked to reconsider the case in the other trial condition. Respondents assigned to the actual trial condition are asked to consider the hypothetical condition, while those assigned to the hypothetical condition are asked to consider the actual trial condition. They again indicate which sentence they support and have another opportunity to volunteer comments. This crossover research design, commonly used in medical studies, increases the number of responses per condition and ensures group equivalency. *See, e.g.,* Thomas A. Louis et al., *Crossover and Self-Controlled Designs in Clinical Research*, 310 New Eng. J. Med. 24 (1984).

Table 2. Summary of Cross-Over Condition

ACTUAL → HYPOTHETICAL CONDITION	**HYPOTHETICAL → ACTUAL CONDITION**
For the last few questions, we want you to assume the trial were different than what you read before. You can think of it like an editor changing a story by deleting, adding, or replacing parts of the story. This version of the trial is not necessarily better or worse, but it is different. Please read the description of changes carefully.	*For the last few questions, we want you to assume the trial were different than what you read before. You can think of it like an editor changing a story by deleting, adding, or replacing parts of the story. This version of the trial is not necessarily better or worse, but it is different. Please read the description of changes carefully.*
Change in Cousin's Testimony When the defendant's cousin is cross-examined, you learn that the defendant's cousin was promised a more lenient sentence from the prosecutor's office, life with possibility of parole rather than a death sentence, in exchange for testifying against the defendant at this trial. Assume that the cousin agreed to testify in exchange for a lesser sentence.	**Change in Cousin's Testimony** When the defendant's cousin is cross-examined, you do not hear that the defendant's cousin was promised a more lenient sentence from the prosecutor's office in exchange for testifying against the defendant at this trial. There is no evidence that the defendant's cousin received a lesser sentence for testifying. Assume that there is no such agreement.
Change in Closing Arguments The prosecutor does not argue that the defendant's cousin had nothing to gain by testifying truthfully. Instead, the defendant's attorney argues that the cousin falsely testified that the defendant shot and killed the store clerk to shift the blame and get a more lenient sentence for himself.	**Change in Closing Arguments** The defendant's attorney does not argue that the defendant's cousin falsely testified to shift the blame and get a more lenient sentence for himself. Instead, the prosecutor argues that you should believe the cousin's testimony over the defendant's testimony. The cousin testified honestly with nothing to gain for himself. The prosecutor argues that the defendant falsely testified that his cousin shot and killed the clerk to try to shift the blame and avoid responsibility for his crimes.

Amicus makes innovative use of classic research methods to evaluate the effect of an alleged error using real data. Some features of this analysis may warrant discussion. It evaluates a

hypothetical trial condition, whereas some court opinions advise focusing on an error's actual effect on the jury and avoid speculating about a hypothetical trial's outcome. *See, e.g., Sullivan v. Louisiana*, 508 U.S. 275, 279–80 (1993). However, causal effects cannot estimated without comparing two states of the world, one of which is necessarily counterfactual.[4] This is particularly true when evaluating the effect of omitted evidence that was never presented to the actual jury.

The validity of this research method for assessing jury-qualified adults' sentencing preferences is well documented. Surveys have long been used to study public opinion and are accepted as evidence in litigation. *See Schering Corp. v. Pfizer Inc.*, 189 F.3d 218 (2nd Cir. 1999) (J. Sotomayor). In the legal context, researchers have employed survey research methods to study how varying trial conditions affect jurors. *See, e.g.,* D. Alex Winkelman et al., *An Empirical Method for Harmless Error*, 46 Ariz. St. L.J. 1405 (2014); Cass R. Sunstein, Daniel Kahneman & David Schade, *Assessing Punitive Damages (with Notes on Cognition and Valuation in Law)*, 107 Yale L.J. 2071 (1997). Studies have validated the use of written vignettes for estimating jurors' verdict preferences, as opposed to staging live trials, reading transcripts, or watching videotaped trials. *See, e.g.,* Steffen Bieneck, *How Adequate is the Vignette Technique as a Research Tool for Psycho-Legal Research*, in Social Psychology of Punishment of Crime (Margit E. Oswald et al. eds., 2009); Michael J. Saks, *What Do Jury Experiments Tell Us About How Juries (Should) Make Decisions?*, 6 S. Cal. Interdisc. LJ 1 (1997). Additionally, researchers have demonstrated the

[4] One cannot estimate causal effects without some counterfactual analysis. Donald Rubin has shown that causal analysis necessitates counterfactual analysis of unobserved, potential outcomes. *See* Donald B. Rubin, *Causal Inference Using Potential Outcomes: Design, Modeling, Decisions*, 100 J. Am. Stat. Assoc. 322 (2005). Rubin's framework recognizes that, in any given situation, individuals can only undergo one treatment condition, making the alternative outcomes unobservable. By comparing observed outcomes to these counterfactuals, researchers aim to isolate the causal impact of any variable. For further discussion of the Rubin Causal Model with applications to legal studies, *see* Daniel E. Ho & Donald B. Rubin, *Credible Causal Inference for Empirical Legal Studies*, 7 Ann. Rev. L. & Soc. Sci. 17 (2011).

validity of online surveys as a data collection method. *See, e.g.,* Alexander Coppock, *Generalizing from Survey Experiments Conducted on Mechanical Turk: A Replication Approach*, 7 Pol. Sci. Rsch. & Methods 613 (2019); John Bohannon, *Social Science for Pennies*, 334 Science 307 (2011).

C. Results of Analysis

The survey was published and launched on January 28, 2025, with a target of 1,000 responses. Respondents were recruited via Cloud Research, a platform that connects researchers with participants.[5] Recruitment was geographically limited to the United States and restricted to U.S. citizens. As is standard practice in survey research, respondents were compensated for their participation. A total of 1,010 respondents participated. 99% of responses passed Qualtrics response quality checks for potential bots, ambiguous text, unanswered questions, straight-lined answers, duplicate responses, completion rate, and abnormally fast responses.[6] The study datasets are publicly available to allow independent verification of the reported results. *See* Barry C. Edwards, *Georgia vs. Warren King Study Files*, Harvard Dataverse (Feb. 5, 2025), https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/O2SKO4.

1. Representativeness of Sample

Using respondents' demographic information,[7] sampling weights were calculated to ensure that the sample represents key demographic features of Butts County. Sampling weights adjust for the overrepresentation or underrepresentation of specific groups within a sample relative to the

[5] Cloud Research is a platform to recruit survey respondents for academic research. *See 250+ Papers Using Connect Participants,* Cloud Research (Nd.), https://www.cloudresearch.com/papers-citing-connect/.

[6] For further explanation of these response quality checks, *see Response Quality,* Qualtrics (Nd.), https://www.qualtrics.com/support/survey-platform/survey-module/survey-checker/response-quality/.

[7] Cloud Research makes demographic information available for respondents who are registered on that platform.

target population. *See* Pierre Lavallée and Jean-François Beaumont, *Why We Should Put Some Weight on Weights*, Survey Methods (Feb. 20, 2015), https://surveyinsights.org/?p=6255; Graham Kalton and Ismael Flores-Cervantes, *Weighting Methods*, 19 J. Official Stats. 81 (2003).[8]

As shown in Table 3, the raw, unweighted sample (n = 1,010) overrepresents certain demographics, such as college graduates and Hispanic individuals, while underrepresenting others, such as African Americans and older adults, relatively to their prevalence in Butts County. After applying the appropriate sampling weights, the weighted sample fairly represents the key demographic characteristics of the relevant jurisdiction—in the same way that a jury pool must fairly represents distinctive groups in proportion to their prevalence in the community. *See Duren v. Missouri*, 439 U.S. 357 (1979).

Table 3. Comparison of Respondent Samples and Target Population

Demographic Characteristic	Butts County, Georgia	Weighted Sample	Unweighted Sample	Qualified & Weighted Sample
College graduates	24.7%	26.4%	54.6%	26.7%
Female	46.3%	47.0%	48.8%	45.1%
Hispanic	3.6%	4.1%	9.0%	4.5%
African American	27.6%	26.7%	12.8%	26.7%
Household income over $50k	60.7%	60.9%	63.9%	62.2%
Adults aged 35 and over	69.9%	68.6%	61.1%	68.7%
Number of adults	20,724	1,010	1,010	786

Note: For comparability, target population statistics are based on adults over age 18, U.S. Census Bureau, American Community Survey, 5-Year Estimates for 2023 (Tables S1501, DP05, S1901, S101).

[8] The sampling weights used in this analysis are based on iterative proportional fitting, more commonly called raking. The raking method finds weights that balance the sample and population along multiple dimensions simultaneously. The method resembles leveling a patch of ground with a rake: you smooth the ground in one direction, then rake sideways to fill in low spots, alternating until the patch is level in all directions. This iterative process is necessary because the dimensions being balanced may be correlated. *See* Andrew Mercer et al., *For Weighting Online Opt-In Samples, What Matters Most?*, Pew Research Center (Jan. 26, 2018), https://www.pewresearch.org/methods/wp-content/uploads/sites/10/2018/01/Weighting-Online-Opt-In-Samples.pdf.

Data analysis is limited to survey respondents who meet standard jury qualifications: U.S. citizenship, no felony convictions or pending felony charges, English proficiency, and the physical and mental ability to serve on a jury. Additionally, only respondents who indicate they could follow a judge's instructions in a death penalty case are included in the analysis. Applying these qualifications leaves 786 jury-qualified respondents for analysis.

2. Change in Sentencing Preferences

In the actual trial condition, 27.0% of respondents (n = 786) voted for a death sentence. In the hypothetical trial condition, 19.8% of respondents (n = 786) voted for a death sentence.[9] The difference between these percentages, 7.2 percentage points, indicates that the alleged error increased the jury pool's support for a death sentence. The margins of error of these estimated values, reported in Table 4, quantify the uncertainty inherent to analyzing finite samples.

Table 4. Respondents' Sentencing Preferences in Actual and Hypothetical Trial Conditions

	Actual Trial	Hypothetical Trial	Effect of Alleged Error
Favor Death Sentence	27.0%	19.8%	+7.2%
Margin of Error	2.6%	1.4%	3.5%

The estimated increased in support for the death sentence due to the alleged error is 7.2 percentage points, with a margin of error of ±3.5 percentage points. This means that the lowest plausible effect on juror sentencing preferences is 3.7 percentage points, while the highest plausible estimate is 10.7 percentage points. (The estimated effect on sentencing preferences is dampened by the fact that most respondents support life imprisonment in either condition.) Thus,

[9] Sentencing options were limited to death sentence or life imprisonment so the percentages in favor of death sentences and life imprisonment sum to 100%.

the analysis indicates, to a reasonable degree of scientific certainty, that the alleged error increased jurors' support for a death sentence. (Reject the null hypothesis. Data support Petitioner's claim.)

To further assess the magnitude of the alleged error's effect on jurors, we analyze the impact of the impeachment evidence controlling for respondents' votes in the actual trial condition. Specifically, we examine how the evidence affects those who support a death sentence in the actual trial condition. When death penalty supporters are informed that Smith avoided a death sentence by testifying against King, 31.5% of these respondents (67 out of 213)—nearly one-third—change their minds and support a sentence of life imprisonment.

Table 5. Comparison of Votes in Actual and Hypothetical Trial Conditions

		Sentencing Vote in Actual Trial	
		Life	**Death**
Sentencing Vote in Hypothetical Trial	**Life**	98.2% (563)	31.5% (67)
	Death	1.8% (10)	68.5% (146)

Conversely, when respondents who support life imprisonment in the actual trial condition are informed that Smith avoided a death sentence by testifying against King, only 1.8% (10 out of 573 respondents) change their vote in favor of the death penalty.[10]

The alleged error substantially increased support for a death sentence by preventing jurors from considering impactful impeachment evidence. When jury-qualified respondents learn the information withheld from the original jury, 31.5% of those who supported a death sentence change their vote to life imprisonment, while only 1.8% of those who supported a life sentence change

[10] It appears that being informed of the cousin's plea deal caused a very small group of respondents to prefer more severe punishment for the defendant. "A plea deal means the state wanted to convict the defendant more. That means he is the worse of the two." "If the cousin doesn't get death, then maybe the defendant should instead." These are unusual opinions, but a good reminder that people think differently.

their vote to a death sentence. The disputed evidence substantially decreases support for a death sentence in a representative sample of jury-qualified adults. (Reject the null hypothesis. Data support Petitioner's claim.)

3. Main Themes in Respondents' Comments about Case

The research conducted by *Amicus* offers a unique opportunity to examine the thought processes of a representative sample of jury-qualified adults—as if we could listen in on jurors' deliberations. Respondents submitted 700 written comments to explain their reasoning and perspectives on the evidence at issue in this case.

To analyze the comments systematically, *Amicus* provided respondent comments to ChatGPT, a natural language processing model. The model was instructed to identify and summarize the main recurring themes using weighted content analysis and to highlight respondent comments that best illustrate the predominant themes.[11] The model identifies topics through pure text analysis, without external bias, preconceptions, or plan to confirm some personal opinion.[12] Automated text analysis reveals three major themes in the respondents' comments (see Figure 1).

[11] Weighted content analysis assigns sampling weights to each comment, classifies comments into themes based on their content, and then sums the weights by theme. The analysis reflects comments of a sample with the distinctive demographic characteristics of the target population. *See generally* Rimke Bijker et al., *ChatGPT for Automated Qualitative Research: Content Analysis*, 26 J. Med. Internet Research e59050 (2024); R.N. Rathi & Abhijit Mustafi, *The Importance of Term Weighting in Semantic Understanding of Text: A Review of Techniques*, 82 Multimedia Tools & Applications 9761 (2023).

[12] This text analysis avoids confirmation bias because the researcher does not selectively analyze comments to support specific themes.

Figure 1. Automated Text Analysis of Respondent Commentary

Theme #1: Distrust of the Cousin's Testimony & Concerns About Plea Deals

- Many respondents expressed skepticism about the cousin's credibility, believing that he may have been lying to receive a more lenient sentence. Weight: 174.32.
- Example quotations:
  - "The plea bargain alters the credibility of the key witness and weakens the prosecution's case."
  - "The fact that the witness has something to gain from shifting more blame to the defendant is a huge difference. There is absolutely no reason to believe that the witness is being truthful."
  - "The cousin's testimony is not credible because there is an obvious conflict of interest."

Theme #2: Doubt About Who Fired the Gun & The Need for Certainty in Death Penalty Cases

- Respondents emphasized that uncertainty about the actual shooter meant the death penalty was not appropriate. Weight: 150.82.
- Example quotations:
  - "There is a doubt who shot the gun and the cousin's testimony is in question."
  - "Since there is no way to prove who shot and killed the clerk, life in prison is the better option."
  - "The lack of surveillance footage showing who actually pulled the trigger is important."

Theme #3: Murder During a Robbery Warrants Harsh Punishment, Regardless of Uncertainty

- Many respondents argued that the defendant's participation in the armed robbery made him culpable for the murder, even if it was uncertain who pulled the trigger. Some explicitly supported the death penalty, while others supported life imprisonment but believed the defendant was fully responsible for the crime. Weight: 94.76.
- Example quotations:
  - "The fact remains there is no certainty as to who actually committed the murder, though they are both responsible for the death of the clerk and should be punished accordingly."
  - "It doesn't matter who pulled the trigger; they committed a violent felony, and someone died because of it."
  - "If you take a life in the commission of a crime, your life should be taken as well."

Respondents' comments reinforce and clarify the likely effect of the alleged error's on jurors. Some jurors may advocate for life imprisonment (Theme #2) or support the death penalty (Theme #3) without resolving the conflicting testimony between King and Smith. However, the largest group of jurors is likely to evaluate the conflicting accounts of the shooting to determine whether King deserves a death sentence (Theme #1). A jury-qualified sample of adults,

representative of Butts County, comments heavily on Smith's credibility, particularly in light of his plea agreement. The absence of the disputed evidence from King's trial substantially affected jurors' perceptions of the case and the likely focus of their deliberations. (Reject the null hypothesis. Data support Petitioner's claim.)

4. Change in Verdict Probabilities

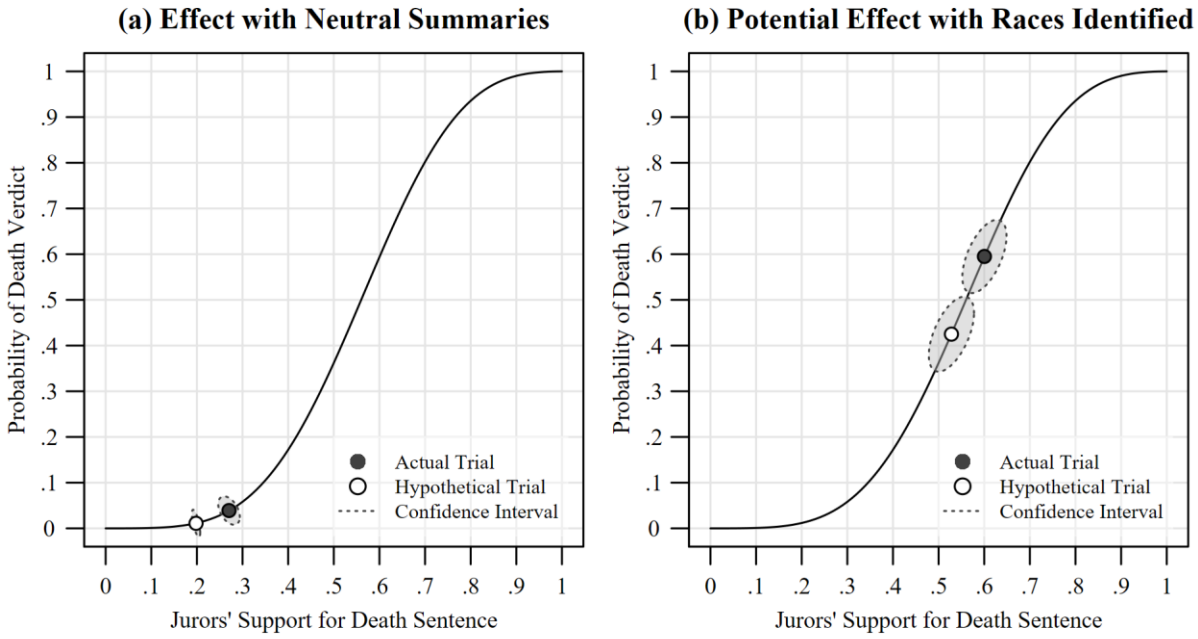
Quantifying the sentencing preferences of a representative sample of jury-qualified adults in both the actual and hypothetical trial conditions allows us to assess the alleged error's impact on the probability that a jury would return a death sentence after deliberation.

There is a direct relationship between the number of jurors who initially support a verdict and the probability their side prevails in deliberation. As Kalven and Zeisel observed, "deliberation does not so much decide the case as bring about the consensus, the outcome of which has been made highly likely by the distribution of first ballot votes. The deliberation process might well be likened to what the developer does for an exposed film: it brings out the picture, but the outcome has been pre-determined." Kalven & Zeisel, The American Jury 489. Subsequent research has refined Kalven and Zeisel's general impressions of jury deliberation. *See* Dennis J. Devine, et al., *Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups*, 7 Psychol., Pub. Pol'y & Law. 622 (2001). By aggregating and analyzing decades of research on jury deliberation, we can precisely estimate the probability that a jury will render a death sentence based on the number of jurors who initially favor it. *See* Barry C. Edwards, *If the Jury Only Knew: The Effect of Omitted Mitigation Evidence on the Probability of a Death Sentence*, Va. J. Soc. Pol'y & Law (forthcoming 2025). This relationship follows an S-shaped curve, as shown in Figure 2.[13]

[13] The S-shaped curve in Figure 2 reflects key findings about jury deliberation. There is a positive relationship between the proportion of jurors who a verdict and the probability of that verdict. The

Given the relationship between individual juror preferences and jury verdicts, we can quantify how a shift in sentencing preferences affects the probability of a death sentence. In this case, the estimated difference in probabilities—on first impression—is relatively small. As shown in Figure 2(a), when the percentage of prospective jurors favoring a death sentence increases from 19.8% to 27.0%, the probability of a death verdict rises by only 2.8 percentage points (from 1.1% to 3.9%). Despite this modest increase, the data demonstrate, to a reasonable degree of scientific certainty, that the alleged error had a statistically significant impact on the probability of a death sentence. With a margin of error of ±1.6 percentage points, the increase in death verdict probability remains statistically significant. (Reject the null hypothesis. Data support Petitioner's claim.)

Figure 2. Change in Verdict Probabilities



While the effect of the alleged error on the death verdict probability was certainty greater than zero, the precise magnitude of its impact on verdict probabilities remains indeterminate. It is

relationship is not linear. There is a leniency shift, thought to reflect heightened standards of proof in criminal trials; if the initial poll is tied, the probability of conviction or death sentence is less than 50%.

not clear whether the increase was relatively small or substantially more than estimated. This uncertainty arises because the survey instrument may underestimate support for the death penalty in both the actual and hypothetical trial conditions. As previously discussed, the trial summaries used in the survey omit certain details to minimize response bias. Most notably, the summaries do not mention that King was a young Black man at the time of the murder, while the victim, Ms. Crosby, was white. Research consistently shows that racial dynamics of this nature increase the likelihood of a death sentence. *See, e.g.,* Eric P. Baumer et al., *The Role of Victim Characteristics in the Disposition of Murder Cases*, 17 Justice Q. 281 (2000); Jefferson E. Holcomb et al., *White Female Victims and Death Penalty Disparity Research*, 21 Justice Q. 877 (2004). By design, the survey instrument seeks to estimate verdict preferences without racial bias. However, in this case, the omission of racial context may systematically underestimate support for a death sentence in both conditions.

Omitting these racial aspects from the trial summaries complicates the estimation of how much the alleged error affected the probability of a death verdict. The relationship between juror preferences and verdict probabilities is nonlinear. When support for the death sentence in the jury pool is either relatively low or overwhelmingly high, small shifts in sentencing preferences have little impact on verdict probabilities. However, when the jury pool is more evenly divided, a 7.2 percentage point shift in jurors' sentencing preferences can substantially alter the verdict probability. As shown in Figure 2(b), under different initial jury conditions, the same 7.2 percentage point shift in juror preferences could increase the probability of a death sentence by 16.8 percentage points—six times the estimated effect observed among survey respondents—if jury pool preferences shift consistently across conditions.

Omitting the racial dynamics from the trial summaries would not affect the estimated 7.2 percentage point change in sentencing preferences, provided that racial dynamics increased support for a death sentence by the same amount in both the actual and hypothetical trial conditions. However, if the impeachment evidence causes 31.5% of those who support a death sentence due to racial dynamics to instead favor life imprisonment—as it does with racially neutral summaries—then the effect of impeachment evidence on sentencing preferences would be greater than 7.2 percentage points. Consequently, the resulting change in verdict probabilities could exceed the 16.8 percentage point shift depicted in Figure 2(b). Given these limitations in the current analysis, the magnitude of the alleged error's effect on the probability of a death verdict cannot be determined with reasonable certainty. While the effect on verdict probabilities is certainly greater than zero, it remains unclear whether the alleged error increased the probability of a death sentence beyond a "reasonable probability." (Fail to reject the null hypothesis. Data are inconclusive.)

Table 6. Proof of Harm by Approach to Evaluating Harm and Harm Threshold

		Approach to Evaluating Harm	
		Effect on Jurors	*Effect on Verdict*
Harm Threshold is…	*Any Reasonable Probability of Effect.*	Yes. Table 4 reports a statistically significant change in respondents' sentencing preferences.	Yes. Section C.4 documents statistically significant increase in probability of death verdict.
	Reasonable Probability of Different Outcome.	Yes. Table 5 shows substantial percentage of death supporters change their votes. Section C.3 documents that it is predominate theme in respondent comments.	Unclear. While the alleged error increased the probability of a death verdict, the magnitude of the effect is unclear, as discussed in Section C.4.

D. Discussion of Results

Amicus does not advocate for a particular framework for evaluating trial errors or endorse a specific threshold of harm in this case. However, the analysis should inform different approaches to assessing the alleged error's impact. Table 6 provides a summary.

This analysis was conducted independently by an organization with no stake in the outcome of this case. Likewise, the 1,010 jury-eligible individuals who participated in the research have no personal interest in the case. They simply read summaries of key facts and provided their sentencing preferences and reasoning. The methodology employed in this analysis is fully transparent and based on established scientific principles. Rather than relying on personal experience or intuition, this research applies a systematic approach to test hypotheses and estimate jury decision-making dynamics with reasonable scientific certainty.

CONCLUSION

For the reasons stated in this brief, *Amicus Curiae*, Fair Trial Analysis LLC, supports Warren King's Petition for Writ of Habeas Corpus. To assist the court, Amicus is willing to clarify the methodology and technical terminology used in this analysis, conduct additional analyses to assess the robustness of the findings, and undertake further research to evaluate the effect of the omitted evidence under alternative conditions.

Respectfully submitted, this 5th day of February, 2025.

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing **BRIEF OF *AMICUS CURIAE* FAIR TRIAL ANALYSIS, LLC IN SUPPORT OF WARREN KING'S PETITION FOR WRIT OF HABEAS CORPUS**, using the PeachCourt electronic filing system, thereby causing it to be electronically transmitted to counsel for all parties of record.

This 5th day of February, 2025

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