

The Media, the Innocent, and the Public:
A Nuanced Look at Exonerations and Public Opinion of Capital Punishment

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Abstract

Starting in the mid-1990s—for the first time since the *Furman* era—public approval of the death penalty took a dramatic dive. Baumgartner argues that this wave of opposition was brought about by the “innocence frame,” a novel media frame bringing public awareness to the possibility that innocent people may be, and likely have been, executed for crimes that they did not commit. I expand upon Baumgartner’s macro-level approach to the innocence frame, focusing instead on the inner workings of the innocence frame and the implications thereof. Specifically, I identify and investigate one of the innocence frame’s two sub-frames—“actual innocence” and “fallibility”—which dictate the extent to which the innocence frame moves public opinion of the death penalty. Having narrowed the scope of my analysis from the innocence frame to actual innocence, I conducted an experiment seeking to identify factors that might assertively establish (or, alternatively, cast into doubt) the innocence of those who were wrongfully convicted and exonerated. I then observe how these factors affect evaluations of exoneree innocence and, in turn, how these evaluations affect attitudes toward the death penalty—thus demonstrating an “actual innocence” framing effect. Finally, I conduct a content analysis in order to assess how the media utilizes the actual innocence frame over time. Results indicate that the presence of DNA evidence in media coverage of exonerations affects evaluations of exoneree innocence, though the extent to which these evaluations shape attitudes toward the death penalty remains uncertain. Results also indicate that the media *does* utilize the actual innocence frame—especially during periods of time slightly preceding or coinciding with periods of skepticism regarding capital punishment. Together, the data shed light on the problematic nature of “innocence” in America, warranting further examination of the actual innocence frame and, moreover, our fundamental assumptions about modern criminal justice.

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“The only statement I want to make is that I am an innocent man convicted of a crime I did not commit. I have been persecuted for twelve years for something I did not do. From God’s dust I came and to dust I will return, so the Earth shall become my throne.”¹

- Cameron Todd Willingham, minutes before his execution
February 17, 2004

¹Grann, David. “Trial by Fire.” *The New Yorker*. September 7, 2009. accessed April 26, 2015.
<http://www.newyorker.com/magazine/2009/09/07/trial-by-fire?yrail>.

Introduction

Capital punishment is as much a fixture of civil society as criminal justice itself. In the 18th century B.C.—long before the birth of the modern republic—King Hammurabi of Babylon first codified the death penalty into law. Men and women have since been boiled, burned, stoned, hung, shot, drowned, beheaded, mutilated, electrocuted, and poisoned by their governments for murder, rape, theft, blasphemy, and witchcraft—even so much as cutting down a tree.

The United States inherited this long tradition from its English ancestors, whose own history of executing its citizens is exceptionally gruesome. Less than a century before the pilgrims first landed on Plymouth Rock, King Henry VIII authorized the deaths of an estimated 72,000 British citizens (including two of his wives). His progeny, unsurprisingly, adopted a similar lack of punitive restraint: within one year of Jamestown's founding, Captain George Kernell was put to death by firing squad for alleged acts of treason. His death marks the first of 1,406 executions on American soil since that date².

In recent years, however, the world has begun a swift and unified retreat from the death penalty. As little as two decades ago, an average of 37 countries would put at least one of its citizens to death each year; by 2013, that number was reduced by almost half to 22³. Among those who remain, the United States trails only four in terms of total number of executions—Iran, Iraq, Saudi Arabia, and Somalia⁴.

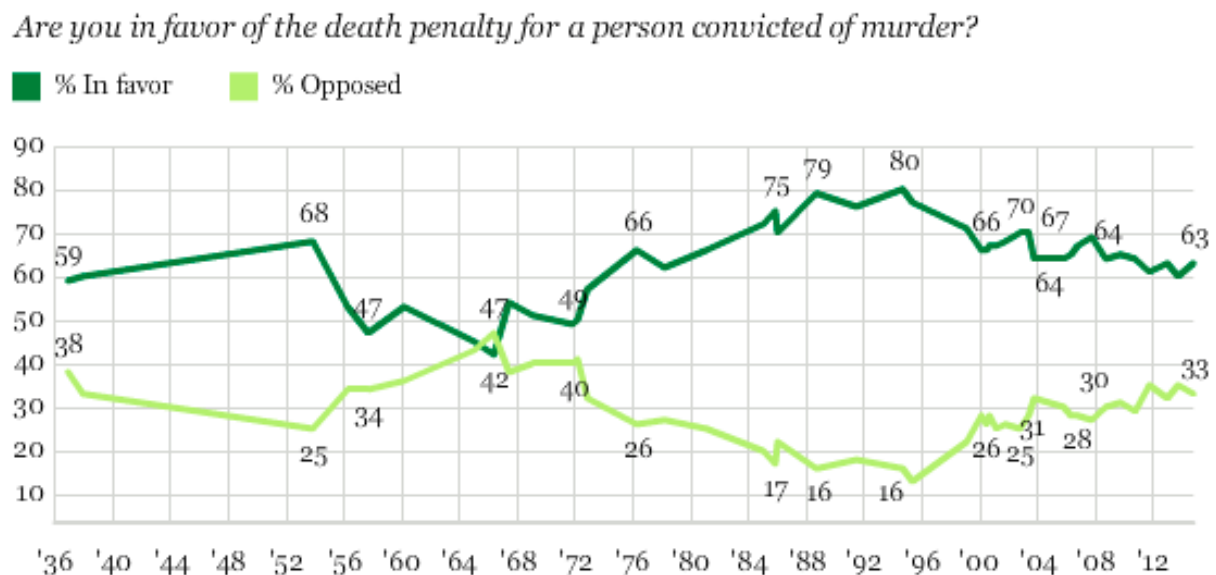
² It actually marks the first of more than 1,406 executions since 1976—the first year that accurate records of executions were kept. The real number is likely far higher. See “Executions by Year.” *Death Penalty Information Center*. Last modified April 16, 2015. Accessed April 26, 2015. <http://www.deathpenaltyinfo.org/executions-year>.

³ “Death Sentences and Executions 2013.” *Amnesty International*, 7. Accessed April 26, 2015. <https://www.amnesty.org/en/documents/act50/001/2014/en/>.

⁴ *Ibid*, 7.

Despite America's reluctance to follow the lead of fully three fourths of its fellow G8 nations, evidence suggests that the U.S. is finally beginning to reconsider its position regarding capital punishment⁵: since its peak in 1995, public support for the death penalty has plummeted from 80% to a low of 60% in 2013 (Figure A). Approval has hovered in the mid-60s thereafter.

Figure A. Public Opinion of the Death Penalty⁶.



This sudden groundswell of opposition is unprecedented. Over time, of course, abolitionists have proffered many arguments against the death penalty—some cite the \$1 million bill footed by taxpayers each time a person is sentenced to death, rather than life in prison⁷; others decry the fact that convicted murderers are 3.5 times more likely to receive a death

⁵ "Death Sentences and Executions," 6.

⁶ "Death Penalty." *Gallup*. Accessed April 26, 2015. <http://www.gallup.com/poll/1606/death-penalty.aspx>.

⁷ "Costs of the Death Penalty." *Death Penalty Information Center*. Accessed April 26, 2015. <http://www.deathpenaltyinfo.org/costs-death-penalty>.

sentence for killing a white person than a black one⁸; still others take issue with retributive justice all together, asserting that rehabilitation is a nobler end. But the recent and precipitous decline of support for the death penalty, it seems, can be traced to the rise of a single phenomenon in the public consciousness: innocence-based exonerations.

Since 1989, more than 1,580 individuals have been exonerated⁹ for crimes that they did not commit¹⁰. 152 of those individuals were exonerated from death row¹¹: in 1993, Walter McMillan was freed from prison after an investigation revealed that the prosecution at his original trial had withheld exculpatory evidence; in 1998, Robert Lee Miller was released when DNA evidence excluded him as the perpetrator of the double homicide for which he was convicted; in 2003, Leroy Orange was pardoned by the Governor of Illinois after it became clear that he played no part in the murders of four family members nearly twenty years earlier¹².

The public appears to have taken note. While support for the death penalty dipped between 1991 and 2003, the number of people citing “persons may be wrongly convicted” as the reason for their opposition to the death penalty more than doubled from 11% to 25%¹³. Unnever and Cullen (2005) suggest that these phenomena may be closely related, as surveys have indicated “innocents being executed” would make them more wary of supporting capital

⁸ “Facts about the Death Penalty.” *Death Penalty Information Center*. Accessed April 26, 2015. <http://www.deathpenaltyinfo.org/documents/FactSheet.pdf>.

⁹ For the purpose of this study, a person is “exonerated” when they have: 1) been acquitted of all charges related to the crime for which they were convicted; 2) had all charges related to the crime for which they were convicted dismissed by the prosecution; or 3) been granted a complete pardon based on evidence of innocence. Modified from the *Death Penalty Information Center*. <http://www.deathpenaltyinfo.org/innocence-list-those-freed-death-row?scid=6&did=110>.

¹⁰ *National Registry of Exonerations*. Accessed April 26, 2015. <https://www.law.umich.edu/special/exoneration/Pages/about.aspx>.

¹¹ “Facts about the Death Penalty.” *Death Penalty Information Center*.

¹² “Innocence Cases.” *Death Penalty Information Center*. Accessed April 26, 2015. <http://www.deathpenaltyinfo.org/node/4900#2>.

¹³ “Death Penalty.” *Gallup*.

punishment¹⁴. Indeed, individuals who believe that an innocent person has been executed within the past 5 years are 18% less likely to support the death penalty than those who do not¹⁵.

Given these trends, Baumgartner, DeBoef, and Boydston (**YEAR?**) find it somewhat perplexing that “the absolute numbers [of exonerations] are not huge, and there has been no spike in the numbers over the years”¹⁶. They postulate that a dramatic change in media framing¹⁷ of the death penalty, moving away from the traditional focus on morality to what they call the “innocence frame,” is ultimately responsible for America’s retreat from capital punishment¹⁸. As Baumgartner observes, “a few people have been found innocent every year since the beginning of the modern system, though with little notice paid”¹⁹—but beginning in roughly 1996, the media for the first time raised “the possibility that the justice system, dealing as it does with thousands of cases every year, could potentially make mistakes, sending the wrong person from time to time to death row or even, tragically, to the gallows”²⁰.

Unlike previous frames, the innocence frame is “especially potent” in that “the novel elements of the innocence frame are how many different arguments have come together to form a single coherent story,” which means “arguments [that] have been raised—unsuccessfully—at other points in time... are now finding unprecedented traction in the death penalty debate by ‘piggybacking’ on the innocence frame”²¹. For example, Baumgartner notes, unequal application of the death penalty along racial lines becomes all the more appalling when communicated in the

¹⁴ Unnever, James D., and Francis T. Cullen. "Executing the innocent and support for capital punishment: Implications for public policy." *Criminology & Public Policy* 4, no. 1 (2005): 3-38. Citing surveys conducted in Doble Research Associates. "The Death Penalty in North Carolina: The Public Considers the Options." Englewood Cliffs, N.J.: Doble Research Associates, Inc. 2004.

¹⁵ Ibid, 16.

¹⁶ Baumgartner, Frank R., Suzanna L. De Boef, and Amber E. Boydston. *The decline of the death penalty and the discovery of innocence*. Cambridge University Press, 2008. 42.

¹⁷ Baumgartner defines framing as “defining issues along a particular dimension (eg., fairness and innocence) at the exclusion of alternate dimensions (e.g., morality, constitutionality, or cost).” Ibid, 4.

¹⁸ Ibid, 5.

¹⁹ Ibid, 42.

²⁰ Ibid, 8.

²¹ Ibid, 139 & 140.

context of wrongful convictions²². He adds that “as the innocence frame raises practical questions about the functioning of the justice system rather than theoretical questions about what is right and wrong, this new set of arguments is easier for opponents to accept than the more controversial morality argument”²³. Together, he argues, these factors have made the innocence frame an unprecedented success as a tool for death penalty reform.

Baumgartner’s research is groundbreaking on a number of levels. For the purpose of the present study, it is critical to note that unlike the vast majority of his predecessors, Baumgartner aimed to “examine the process and effects of framing at the system rather than at the individual level”²⁴. All though this approach allows him to draw a persuasive causal connection between the innocence frame and public opinion of the death penalty, its exclusively macro-level analysis leaves room for considerable expansion upon his work. Specifically, his broad view of framing effects begs a nuanced (though essential) question: are all iterations of the innocence frame created equal?

This study seeks an answer. It identifies two sub-frames within the innocence frame—what I call the “actual innocence” and “fallibility” frames—through which both individual and aggregate support for the death penalty are manipulated. These sub-frames recognize the malleability of two key assumptions underlying the innocence frame: first, that individuals exonerated from death row are, in fact, innocent; and second, that these exonerations are not indications of the criminal justice system catching its own mistakes, but rather of errors that likely have—and will again—cost innocent people their lives.

In the following chapters, I will first explore the innocence frame in detail, as well as elucidate the roles of the actual innocence and fallibility sub-frames therein. Next, I will delve

²² Ibid, 160.

²³ Ibid, 141.

²⁴ Ibid, 13.

further into the actual innocence frame by discussing how perceptions of innocence are shaped in a criminal justice context. Through an experiment, I will then uncover the ways in which exoneree race and the presence of DNA evidence in media coverage of exonerations affect evaluations of exoneree innocence—thus demonstrating an actual innocence framing effect. Finally, I will conduct a content analysis of news coverage of exonerations in order to establish the manner in which the actual innocence frame is employed by the media over time, as well as identify factors beyond race and DNA that may contribute to evaluations of innocence. In doing so, I will reveal the fatal insufficiency of our most fundamental standards for justice in America: “guilty” and “not guilty.”

Literature Review

Though scholars have struggled to adopt a universal definition for the phenomenon known as “framing,” Druckman (2001) notes that most conceptions “refer to the words, images, phrases, and presentation styles that a speaker uses when relaying information to another”²⁵. Speakers thus “select some aspects of a perceived reality and make them more salient... in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation”²⁶. “For example,” writes Druckman, “a politician who emphasizes economic issues when discussing the campaign uses an ‘economy frame’ that suggests economic considerations are pertinent”²⁷.

²⁵ Druckman, James N. "The implications of framing effects for citizen competence." *Political Behavior* 23, no. 3 (2001): 226-227.

²⁶ Entman, Robert M. "Framing: Toward clarification of a fractured paradigm." *Journal of communication* 43, no. 4 (1993): 52-53.

²⁷ Druckman, 227.

The extent to which framing shapes “an individual’s (cognitive) understanding of a given situation” is well documented²⁸. Perhaps the most illustrative example can be found in Kahneman and Tversky’s hallmark study (1984), which featured an experiment presenting participants with the following scenario:

Imagine that the U.S. is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimates of the consequences of the programs are as follows: If Program A is adopted, 200 people will be saved. If Program B is adopted, there is a one-third probability that 600 people will be saved and a two-thirds probability that no people will be saved. Which of the two programs would you favor? (1984, p. 343)

Here, 72% of participants selected Program A, whereas 28% of participants selected Program B²⁹.

In a factually identical scenario, another group of participants was presented with a choice between Programs C and D, rather than Programs A and B. Their stipulations were as follows:

If Program C is adopted, 400 people will die. If Program D is adopted, there is a one-third probability that nobody will die and a two-thirds probability that 600 people will die. (1984, p. 343)

Programs C and A are substantively exactly the same program, as are Programs D and B. Yet while a vast majority of participants selected Program A over Program B, only 22% selected Program C over Program D³⁰. By simply framing alternatives as gains or losses, respectively, Kahneman and Tversky generated a robust “framing effect” through which attitudes and preferences were manipulated.

²⁸ Druckman, 227 & 228.

²⁹ Kahneman, Daniel, and Amos Tversky. "Choices, values, and frames." *American psychologist* 39, no. 4 (1984): 343.

³⁰ Ibid, 343.

Framing effects extend far beyond the laboratory. In his highly acclaimed book, *Why Americans Hate Welfare*, Martin Gilens chronicles the media's racialization of poverty throughout the latter half of the twentieth century. Gilens observes an "important shift in poverty coverage involving the transition from whites 1950s and early 1960s to images of African Americans in the mid-1960s," followed by a pattern of "larger proportions of blacks appearing during periods of negative poverty stories and smaller proportions during periods when press coverage of the poor was more sympathetic"³¹. This evolution served to perpetuate two noteworthy fallacies: first, that a majority of the poor are black³², and second, that blacks are "lazy" and "undeserving"³³. It is thus unsurprising that Americans desire more government spending in *every* social welfare domain—"improving the nation's education system," for instance—except for "food stamps," "unemployed people," and by an extraordinary margin, "welfare" and "people on welfare"³⁴.

With respect to the death penalty in particular, there is no dearth of evidence pointing to media framing as instrumental in shaping public opinion of capital punishment. Prior to the 1990s, the death penalty was debated almost exclusively in terms of morality and constitutionality. Between the 1960 and 2005, the *New York Times* debuted 1,467 articles regarding the constitutionality of the death penalty and 622 stories regarding its moral

³¹ Gilens, Martin. *Why Americans Hate Welfare: Race, Media, and the Politics of Antipoverty Policy*. University of Chicago Press, 2009. 133.

³² The proportion of African Americans is actually closer to 27%. Ibid, 68.

³³ Ibid, 68 & 140.

³⁴ Ibid, 28. For additional examples of how framing shapes real-world phenomena, see: Druckman, James N., and Michael Parkin. "The impact of media bias: How editorial slant affects voters." *Journal of Politics* 67, no. 4 (2005): 1030-1049; Bell, Carole V., and Robert M. Entman. "The Media's Role in America's Exceptional Politics of Inequality Framing the Bush Tax Cuts of 2001 and 2003." *The International Journal of Press/Politics* 16, no. 4 (2011): 548-572; Gamson, William A., and Andre Modigliani. "Media discourse and public opinion on nuclear power: A constructionist approach." *American journal of sociology* (1989): 1-37; and Chong, Dennis, and James N. Druckman. "Dynamic public opinion: Communication effects over time." *American Political Science Review* 104, no. 04 (2010): 663-680.

implications³⁵; both frames peaked in the mid-1970s, during which time attention related to the death penalty was largely focused on the Supreme Court cases *Furman v. Georgia* (1972) and *Gregg v. Georgia* (1976)³⁶.

Yet over the past twenty years, as the number of articles regarding the moral and constitutional aspects of capital punishment steadily declined, attention paid to exonerations skyrocketed. Despite the fact that there are only “marginally more” exonerations today than there were twenty years ago, “the average number of stories an individual exonerated from death row today is likely to get is more than 13 times the number that someone exonerated [before the 1990s] could expect”³⁷. These stories accompanied a shift focus from the victims of capital crimes—where it had remained comfortably for decades—to the defendants³⁸. As Baumgartner notes, “This change, of course, is strongly associated with the increased concern with innocence, fairness, and the accuracy of judicial proceedings”³⁹.

Though it is impossible to isolate a single catalyst, Baumgartner identifies a number of factors that likely contributed to the dramatic rise of the innocence frame. The first is Illinois Governor George Ryan’s highly publicized moratorium on the death penalty in 2000, followed by his subsequent commutation of all 167 death row inmates’⁴⁰ sentences to life in prison in 2003⁴¹. The second is the rise of DNA profiling, a “truth machine”⁴² that breathed new life into

³⁵ Baumgartner, Frank R., Suzanna Linn, and Amber E. Boydston. “The decline of the death penalty: How media framing changed capital punishment in America.” *Winning with words: The origins and impact of political framing* (2010): 159-184. Accessed at http://psfaculty.ucdavis.edu/boydstun/CV_and_Research_files/Baumgartner_Linn_Boydston_Ch9_final_draft.pdf. 11.

³⁶ Ibid, 11.

³⁷ Ibid, 26.

³⁸ Ibid, 13.

³⁹ Ibid, 14.

⁴⁰ Wilgoren, Jodi. “Citing Issues of Fairness, Governor Clears out Death Row in Illinois.” *New York Times*. January 12, 2003. Accessed April 26, 2015. <http://www.nytimes.com/2003/01/12/us/citing-issue-of-fairness-governor-clears-out-death-row-in-illinois.html>.

⁴¹ Baumgartner, Linn, & Boydston, 17.

⁴² Ashcroft, John. News Conference on DNA Initiative. March 4, 2002. Accessed April 16, 2015.

exonerations when it facilitated Gary Dotson's release from prison in 1993⁴³. Baumgartner also cites the corresponding "newfound (or renewed) public fascination with scientific evidence," which was "captured and fueled by popular television shows like *CSI* and the O.J. Simpson trial"⁴⁴. Together, Baumgartner posits, these phenomena resulted in a "cascade of attention produced by multiple independent yet mutually reinforcing factors operating in a positive-feedback system"⁴⁵.

The public responded accordingly. As death penalty approval plummeted from 80% to 60% between 1992 and 2012, the proportion of death penalty opponents raising the issue of false convictions more than doubled⁴⁶. Not coincidentally, throughout this same period, the average number of death sentences per year declined by nearly half⁴⁷.

The innocence frame did more than redefine our understanding of the death penalty—it's redefined the death penalty, itself.

Actual Innocence

Baumgartner's broad approach to the innocence frame is at once his greatest strength and his Achilles heel. Having situated his analysis in a comprehensive historical narrative, he is able to trace a complex web of interactions between the media, the public, and the death penalty, ultimately concluding that "for capital punishment in America, the 'discovery' of innocence may

<http://www.justice.gov/archive/ag/speeches/2002/030402newsconferncednainitiative.htm>

⁴³ Baumgartner, Linn, & Boydston, 18.

⁴⁴ Baumgartner, Linn, & Boydston, 18.

⁴⁵ Baumgartner, Linn, & Boydston, 19.

⁴⁶ "Death Penalty." *Gallup*.

⁴⁷ Baumgartner, DeBoef, & Boydston, 5.

well be the beginning of the end”⁴⁸. The significance of this finding, of course, cannot be overstated—but it is incomplete.

In his eagerness to uncover far-reaching implications of the innocence frame, Baumgartner adopts a simplistic conceptualization of the frame, itself. For him, the innocence frame’s promulgation of “the vulnerability of... state justice systems to potentially fatal errors”⁴⁹ is static and unequivocal. He fails to observe that, in order to move public support for capital punishment, the innocence frame must first accomplish two critical objectives: it must disprove the notion that exonerations are “proof that the system works,” rather than “a sign of imperfections perhaps pervading the system;” and it must communicate that exonerees are, in fact, *innocent*⁵⁰.

This is not a straightforward endeavor. It goes without saying that exonerations are, in and of themselves, extremely persuasive evidence of exoneree innocence—no politically savvy prosecutor will release a convicted felon without good reason to do so—but, in the inherent absence of an objective “truth,” innocence remains a matter of interpretation. As a result, it is subject to manipulation. The same can be said of justice system fallibility, which might vary along such dimensions as perceived frequency of exonerations and familiarity with flawed criminal procedures.

I suggest that the innocence frame is not what it purports to be. It is not one-dimensional and its implications are not self-evident. Rather, it is composed of two sub-frames—what I will call “fallibility” and “actual innocence”—that work *together* to effectuate it. The strength of the innocence frame thus depends wholly on the strength of its parts.

⁴⁸ Baumgartner, DeBoef, & Boydston, 230.

⁴⁹ Baumgartner, DeBoef, & Boydston, 4.

⁵⁰ Baumgartner, DeBoef, & Boydston, 4.

This study offers detailed analysis of the actual innocence frame, leaving its (equally essential) counterpart to future research. It seeks to identify a number of dimensions along which exoneree innocence might be assertively established or, alternatively, cast into doubt. It then observes how these dimensions affect evaluations of exoneree innocence and, in turn, how these evaluations affect public opinion of the death penalty.

Evaluating Innocence

There is perhaps no better place to begin an examination of innocence than the American jury. Though juries hardly provide a representative sample of the United States adult population⁵¹, jury behavior in the aggregate nonetheless offers critical clues into the cognitive processes underlying perceptions of innocence.

Pennington and Hastie's "Story Model" is the preeminent cognitive model of judicial decision-making⁵². According to the Story Model, "jurors engage in an active, constructive comprehension process in which evidence is organized, elaborated, and interpreted by them during the course of the trial," resulting in "stories constructed by reasoning from world knowledge and from evidence"⁵³. In the end, "jurors will choose the verdict that best matches the story they constructed while interpreting the evidence"⁵⁴.

Kalven and Zeisel's "liberation hypothesis" refines the Story Model by articulating exactly how "world knowledge" and "evidence" contribute to juror assessments of guilt.

Liberation hypothesis stipulates that, in cases where strong evidence is presented, jurors will

⁵¹ See: Kairys, David, Joseph B. Kadane, and John P. Lehoczky. "Jury representativeness: A mandate for multiple source lists. *California Law Review* (1977): 776-827; and Munsterman, G. Thomas, and Janice T. Munsterman. "The search for jury representativeness." *The Justice System Journal* (1986): 59-78.

⁵² Levett, Lora M., et al. "The Psychology of Jury and Juror Decision Making." In *Psychology and Law: An Empirical Perspective*. Edited by Neil Brewer and Kipling D. Williams. Guilford Press, 2005. 365-406.

⁵³ Pennington, Nancy, and Reid Hastie. "Cognitive theory of juror decision making: The story model, A." *Cardozo Law Review* 13 (1991): 523.

⁵⁴ Levett, 374.

follow the direction of the evidence before their own “world knowledge.” In cases lacking strong evidence, however, “the closeness of the evidence makes it possible for the jury to respond to sentiment *by liberating* it from the discipline of the evidence”⁵⁵ (emphasis in original).

Story Model and liberation hypothesis both point, first, to the centrality of evidence in assessments of guilt. While it’s certainly true that strength of evidence is subjective and, often, a product of context, it is worth exploring further the kinds of evidence that juries tend to find especially persuasive.

DNA evidence is arguably the single most reliable indicator of a defendant’s guilt. Since “absent fraud or an error in labeling or handling, the probabilities of a false positive are miniscule,”⁵⁶ DNA is somewhat of a gold standard of truth for juries and judges. Juries have come to expect DNA evidence in all trials for violent offenses, and whether or not this expectation is met has serious implications for defendants: when presented with DNA evidence linking a defendant to a victim, jurors are significantly more confident that the defendant is guilty⁵⁷. Indeed, jurors are 5 times more likely to convict a defendant when prosecutors present them with DNA evidence versus when they do not⁵⁸.

Juries are also extremely trusting of witness testimony. Loftus’ hallmark study (1975) of the power of eyewitness testimony revealed that 72% of mock jurors presented with eyewitness testimony voted to convict a given defendant, whereas 82% of those who were presented no eyewitness testimony voted to acquit⁵⁹. Even after participants were exposed to information that

⁵⁵ Kalven, Harry, Hans Zeisel, Thomas Callahan, and Philip Ennis. *The American Jury*. Boston: Little, Brown, 1966. 165.

⁵⁶ Shelton, Hon Donald. *Forensic Science in Court: Challenges in the Twenty First Century*. Rowman & Littlefield Publishers, 2010. 28.

⁵⁷ Nance, Dale A., and Scott B. Morris. "Juror Understanding of DNA Evidence: An Empirical Assessment of Presentation Formats for Trace Evidence with a Relatively Small Random-Match Probability." *The Journal of Legal Studies* 34, no. 2 (2005): 408.

⁵⁸ *Ibid*, 410.

⁵⁹ Loftus, Elizabeth F. "Reconstructing memory: The incredible eyewitness." *Jurimetrics J.* 15 (1974): 188-193.

discredited the eyewitness, they voted to convict the defendant 68% of the time⁶⁰. Juries overweigh informant testimony, as well: Neuschatz (2005) notes that “the presence of a secondary confession provided by a cooperating witness had a strong influence on conviction rates when compared with the absence of such testimony,”⁶¹ even when those witnesses were jailhouse informants who “had an enormous motivation to fabricate evidence”⁶².

Unsurprisingly, reliance on eyewitness and informant testimony as barometers for guilt may be highly problematic. Lindsay (1981) laments that “there is a relatively small relationship between individual [eye]witness accuracy and witness confidence”⁶³. This is particularly troubling given that jurors “gave disproportionate weight to the confidence of the witness” yet are “insensitive to the effects of disguise, weapon presence, retention interval, suggestive lineup instructions, and procedures used for constructing and carrying out the lineup” on witness accuracy⁶⁴. Jurors also “diminish the contextual influence of the incentive” for jailhouse informants to testify “in favor of the dispositional attributions of trustworthiness and truthfulness in accepting the testimony at face value”⁶⁵. For these reasons, informant testimony is “the leading cause of wrongful convictions in U.S. capital cases—followed by erroneous eyewitness testimony”⁶⁶.

⁶⁰ Ibid, 189.

⁶¹ Neuschatz, Jeffrey S., Deah S. Lawson, Jessica K. Swanner, Christian A. Meissner, and Joseph S. Neuschatz. “The effects of accomplice witnesses and jailhouse informants on jury decision making.” *Law and human behavior* 32, no. 2 (2008): 146.

⁶² Ibid, 142.

⁶³ Lindsay, R. C., Gary L. Wells, and Carolyn M. Rumpel. “Can people detect eyewitness-identification accuracy within and across situations?.” *Journal of Applied Psychology* 66, no. 1 (1981): 86.

⁶⁴ Cutler, Brian L., Steven D. Penrod, and Hedy Red Dexter. “Juror sensitivity to eyewitness identification evidence.” *Law and Human Behavior* 14, no. 2 (1990): 190.

⁶⁵ Neuschatz, 142.

⁶⁶ Warden, Rob. “The Snitch System.” *Northwestern University School of Law Center on Wrongful Convictions*. Accessed April 26, 2015. <http://www.innocenceproject.org/causes-wrongful-conviction/SnitchSystemBooklet.pdf>.

Other measures are equally or more problematic. A robust body of literature suggests that whites associate African Americans with crime⁶⁷, introducing a dangerous element of “world knowledge” to perceptions of guilt. Indeed, though studies have proffered mixed results on the subject, some indicate that white jurors tend to view black defendants as more aggressive, violent, and guilty than white defendants⁶⁸. This tendency is evident in overall sentencing disparities between black and white offenders: controlling for type of offense, African Americans receive sentences that are an average of 5.5 months longer than whites’⁶⁹. For African Americans convicted of murder, however, such disparities are particularly damning—while not a single white person convicted of murdering a black person has *ever* been sentenced to death in the state of Florida, a black person convicted of murdering a white person has a 47% chance of receiving a death sentence⁷⁰.

The behavior of juries thus suggests that DNA evidence, witness testimony, and race all play a substantial role in evaluations of defendant innocence. It is not unreasonable, then, to use these three elements as preliminary benchmarks for the actual innocence frame: when informed that an exoneree could not have committed the crime because s/he was exonerated using DNA evidence, the public may become confident in his/her innocence than they would in the absence of that information; when informed that an exoneree was released because witnesses recanted their testimony, the public may again become more confident in his/her innocence; and when

⁶⁷ See: Roberts, Julian V., and Loretta Jane Stalans. *Public opinion, crime, and criminal justice*. Boulder, CO: Westview Press, 1997; Peffley, Mark, and Jon Hurwitz. "The racial components of “race-neutral” crime policy attitudes." *Political Psychology* 23, no. 1 (2002): 59-75; Soss, Joe, Laura Langbein, and Alan R. Metelko. "Why do white Americans support the death penalty?." *Journal of Politics* 65, no. 2 (2003): 397-421; and Gilliam Jr, Franklin D., and Shanto Iyengar. "Prime suspects: The influence of local television news on the viewing public." *American Journal of Political Science* (2000): 560-573.

⁶⁸ Sommers, Samuel R., and Phoebe C. Ellsworth. "Race in the courtroom: Perceptions of guilt and dispositional attributions." *Personality and Social Psychology Bulletin* 26, no. 11 (2000): 1367-1379.

⁶⁹ Mustard, David B. "Racial, Ethnic, and Gender Disparities in Sentencing: Evidence from the US Federal Courts." *Journal of Law and Economics* 44, no. 1 (2001): 285-314.

⁷⁰ Zeisel, Hans. "Race bias in the administration of the death penalty: The Florida experience." *Harvard Law Review* (1981): 460.

presented with information indicating the exoneree's race, the public may become more confident in a white exoneree's innocence than a black exoneree's.

In the following chapter, I will conduct an experiment to explore the effects of these three elements on perceptions of exoneree innocence. In doing so, I will seek to accomplish two objectives. First, I would like to identify which factors (if any) shape perceptions of exoneree innocence. Second, I would like to determine how perceptions of exoneree innocence affect attitudes toward the death penalty. If both of these objectives are met, I will have demonstrated that perceptions of exoneree innocence *are* malleable, and that these perceptions *do* have implications for attitudes toward the death penalty—in other words, I will have verified the existence of the actual innocence frame.

Experiment

In order to determine whether or not the actual innocence frame exists, I conducted an experiment. In the experiment, participants read a fictional news article about either a white or a black exoneree who was exonerated due to either exculpatory DNA evidence or witness recantation. They then took a survey seeking to gauge their level of support for the death penalty. I was interested in comparing attitudes toward the death penalty amongst participants in each of these conditions relative to the control conditions, wherein cause of exoneration was not indicated.

According to liberation hypothesis, non-evidentiary considerations only affect perceptions of innocence in the absence of strong evidence. As discussed in the preceding section, both DNA evidence and witness testimony constitute strong evidence in a trial context—but DNA, I would argue, is “stronger” evidence in an exoneration context than is witness

recantation. The power of DNA evidence rests in its ability to generate results with the stamp of “scientific certainty;” whether or not that certainty is established in the trial or exoneration phase has no effect on its implications for innocence. The power of witness testimony, however, rests on *trust*—a trust that, likely, diminishes as soon as the witness changes his/her story. For the purpose of my experiment, I therefore expect DNA evidence to constitute “strong evidence” and witness recantations to constitute “weak evidence.” If liberation hypothesis proves true, exoneree race will affect perceptions of innocence in the recantation condition, but not in the DNA evidence condition.

Hypotheses

H₁: DNA-based exonerations will engender greater confidence in exoneree innocence (less confidence in exoneree guilt) to the same extent for both black and white exonerees.

H₂: Exonerations resulting from witness recantation of confession evidence will increase confidence in exoneree innocence for white exonerees to a greater extent than for black exonerees.

H₃: Greater confidence in exoneree innocence will decrease support for the death penalty.

H₄: Greater confidence in exoneree innocence will decrease confidence in the overall accuracy of convictions.

Methodology

In order to conduct this study, I utilized a sample of 132 Northwestern University undergraduate students taking introductory courses in the Political Science department⁷¹. I also

⁷¹ In the first Political Science course that each undergraduate student takes, he/she fulfills a research requirement as part of his/her final grade. In order to fulfill the requirement, students must participate in a certain number of studies

sought to recruit Northwestern staff members, though ultimately only 4 non-students participated in this study. In total, there were 136 participants. Each participant took a survey in which they first read the following:

During this study, you will be asked to read an article about one of the following scenarios: police officers who fell in the line of duty, innocent people who were wrongfully convicted, or offenders who committed violent crimes. Next, you will complete a follow-up survey about your thoughts regarding various aspects of the American criminal justice system. Finally, you will be asked to answer a brief series of questions regarding your age, race, gender, and similar demographic information. You may choose not to disclose any information that you would prefer not to share.

This paragraph was not entirely forthcoming. In fact, every participant would read an article about “innocent people who were wrongfully convicted;” none would read about “police officers who fell in the line of duty” or “offenders who committed violent crimes.” This deception was intended to prevent participants from discerning my hypothesis—namely, that manipulating perceptions of exoneree innocence tempers support for the death penalty—and adjusting their responses accordingly.

There were, in truth, six conditions in my study. Each participant read a version of the same *New York Times* article discussing the exoneration of a man named Charles Fain⁷². The versions of the article differed in the following ways:

1. *Exoneree Race*: Instead of using the name “Charles Fain,” I altered the article so that participants would either read about “Darryl Reynolds” or “Jacob Goldstein.” This modification was intended to communicate the race of the exoneree⁷³.

conducted by Political Science graduate and undergraduate students. All students fulfilling their research requirement in Winter 2015 participated in this study.

⁷² Bonner, Raymond. “Death Row Inmate is Freed After DNA Test Clears Him.” *The New York Times*. August 24, 2001. Accessed April 26, 2015. <http://www.nytimes.com/2001/08/24/us/death-row-inmate-is-freed-after-dna-test-clears-him.html>.

⁷³ Darryl is one of the top-20 “blackest-sounding names” and Jacob is one of the top-20 “whitest-sounding names.” Levitt, Steven D., and Stephen J. Dubner. *Freakonomics*. Vol. 61. Sperling & Kupfer, 2010. 188.

2. *Cause of Exoneration*: While one version of the article attributed Mr.

Reynolds/Goldstein's exoneration to DNA evidence (strong evidence), another attributed it to the recantation of witnesses claiming that Mr. Reynolds/Goldstein had confessed to them (weak evidence). As a control, a third version of the article did not mention the cause of Mr. Reynolds/Goldstein's exoneration at all.

The conditions, therefore, were as follows:

1. White exoneree x DNA
2. White exoneree x Recantation
3. White exoneree x No Mention
4. Black exoneree x DNA
5. Black exoneree x Recantation
6. Black exoneree x No Mention

After reading the article in one of its six iterations (selected at random), participants answered two questions intended to gauge whether or not they had internalized the information therein⁷⁴. If a participant answered both questions incorrectly, his/her results were not taken into account in my statistical analysis⁷⁵.

Next, participants were asked to use a Likert scale to respond to thirteen statements regarding their attitudes toward various aspects of the criminal justice system⁷⁶. I was only interested in their responses to six of those statements⁷⁷. They were:

⁷⁴ The questions were: Why was the exoneree originally brought in for questioning by police? and, For how long was the exoneree in prison?

⁷⁵ Two participants answered both questions incorrectly.

⁷⁶ Statements 2, 5, 6, and 7 were taken directly from Gallup death penalty polls. "Death Penalty." *Gallup*.

1. If a person is convicted of a crime, they definitely did it.
2. Life without the possibility of parole is a suitable alternative to the death penalty.
3. I believe that the individual in the article I just read is guilty of the crime for which he was convicted.
4. If I were accused of a crime that I did not commit, I might be found guilty.
5. I believe that an innocent person has been sentenced to death and executed in the United States within the past 5 years.
6. I am in favor of the death penalty for a person convicted of murder.

I was also interested in participants' estimates regarding "about what percent of people who are executed under the death penalty are really innocent of the crime they were charged with?"⁷⁸

Finally, participants were prompted by a series of optional questions regarding their age, race, gender, and similar demographic information. This allowed me to control for demographic variables when assessing the relationship between my treatments, perceptions of innocence, and support for the death penalty.

This survey was conducted in person in the Political Science Research Laboratory on Northwestern's campus. While I may have been able to recruit more participants if I had conducted the survey online, I chose to facilitate the survey in person in order to preserve the internal validity of my results.

In sum, following the guidance of liberation hypothesis, I sought to manipulate two factors through this experiment: "world knowledge"—here, the race of the exoneree—and "strength of evidence"—here, the cause of exoneration. In so doing, I hoped to uncover the effect that these factors have on perceptions of exoneree innocence, as well as their effect on attitudes toward the death penalty.

⁷⁷ The remaining six were intended to prevent participants from recognizing what responses were expected of them. For example, I asked participants to respond to the statement "I feel safe in my neighborhood." This has nothing to do with innocence and the death penalty, but would be an appropriate question to ask if they had just read an article about an offender who committed a violent crime or a police officer who fell in the line of duty.

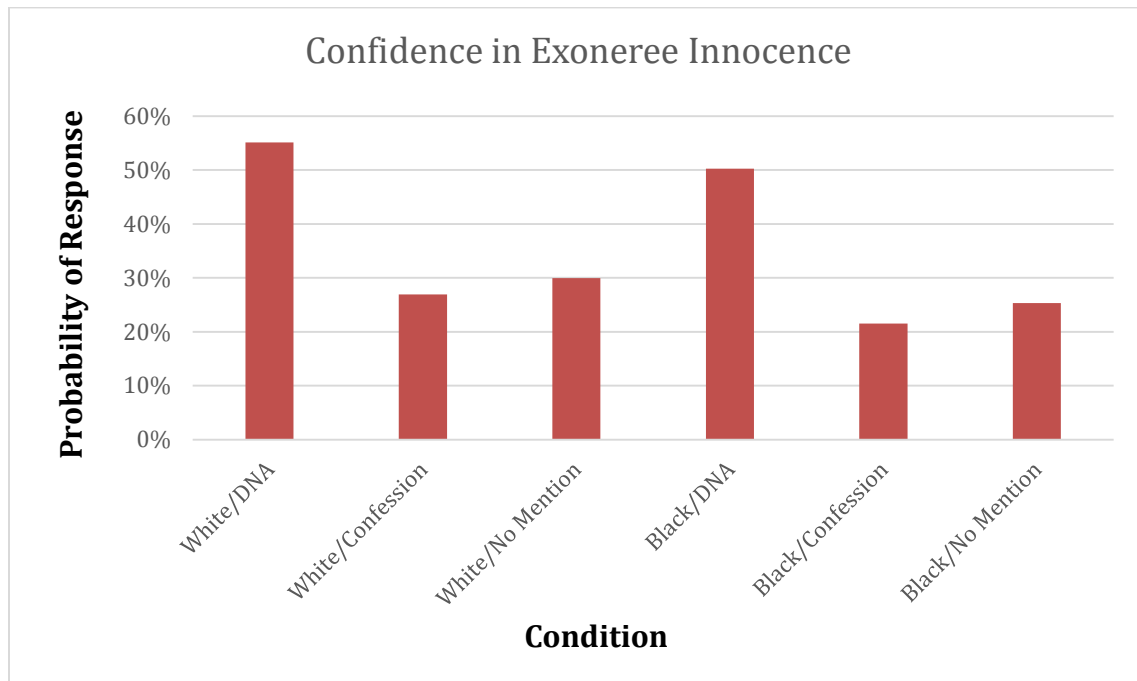
⁷⁸ See Appendix A.

Results

In order to discern the effects of exoneree race and cause of exoneration on perceptions of exoneree innocence, I conducted an ordered logistic regression on responses to the statement, "I believe that the individual in the article I just read is guilty of the crime for which he was convicted" (Figure B)⁷⁹. I found that DNA evidence increases confidence in exoneree innocence to the same extent for black exonerees and white exonerees: introducing DNA evidence increases the probability of respondents "strongly disagreeing" that they believe the exoneree is guilty by almost exactly 25% in both cases. I also found that recantation of confession evidence does not have a statistically significant effect on confidence in exoneree innocence whatsoever. These findings provide support for H_1 , which predicted that DNA-based exonerations would engender greater confidence in exoneree innocence (less confidence in guilt) for both black and white exonerees. They do not support H_2 , which predicted that exonerations resulting from recantation of confession evidence would increase confidence in exoneree innocence for white exonerees to a greater extent than for black exonerees.

⁷⁹ Complete results and statistical analyses can be found in Appendix A.

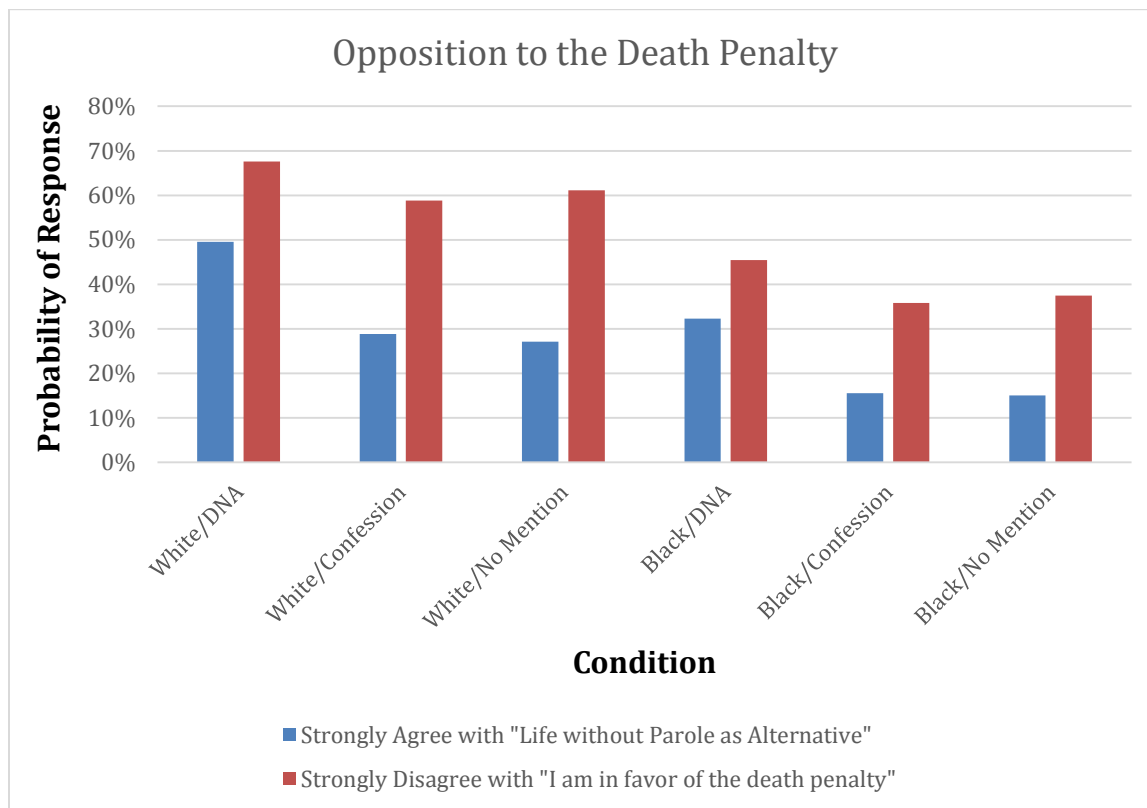
Figure B. Probability selecting “strongly disagree” in response to the statement, “I believe that the individual in the article I just read is guilty of the crime for which he was convicted.”



In order to discern how perceptions of exoneree innocence affect support for the death penalty, it is necessary to evaluate both baseline death penalty support and support for life without the possibility of parole as an alternative. Preliminary statistical analysis indicates that confidence in exoneree innocence is unrelated to attitudes toward the death penalty⁸⁰. Other factors, however, do affect death penalty support: those who read about a black exoneree were generally more likely to indicate support for the death penalty than those who read about a white exoneree, and those who read about DNA-based exonerations were more likely to “strongly agree” with the statement that “life without the possibility of parole is a suitable alternative to the death penalty” than those who did not (Figure C).

⁸⁰ See Appendix A.

Figure C. Probability of selecting “strongly disagree” in response to the statement, “I am in favor of the death penalty for a person convicted of murder” and “strongly agree” in response to the statement, “Life without the possibility of parole is a suitable alternative to the death penalty.”



H_4 predicted that greater confidence in exoneree innocence would decrease confidence in the overall accuracy of convictions. Indeed, confidence in exoneree innocence appears to increase certainty that “an innocent person has been sentenced to death and executed in the United States within the past 5 years”⁸¹. But confidence in exoneree innocence has no significant effect on responses to the statements, “If I were accused of a crime that I did not commit, I might be found guilty” and “If a person is convicted of a crime, they definitely did it,” or estimates generated by the question, “According to your best guess, about what percent of people who are

⁸¹ See Appendix A.

executed under the death penalty are really guilty of the crime they were charged with?”⁸²

Together, these findings offer minimal support for H_4 .

In addition to analyzing the results for each question individually, I created a measure that I called the “innocence liberalism scale.” I first recoded survey responses in order to align their directionality⁸³. I then averaged each participant’s seven responses of interest. Participants with higher scores on the innocence liberalism scale were generally more confident that the exoneree they had just read about was innocent and less likely to support the death penalty. Results from OLS regression analysis indicate that both DNA evidence and exoneree race have a significant effect on the innocence liberalism scale. However, recantation-based confessions have no effect on innocence liberalism⁸⁴.

Discussion

In order to verify the existence of the actual innocence frame, two questions must be answered. They are:

1. What factors affect perceptions of exoneree innocence?
2. Do perceptions of exoneree innocence affect attitudes toward the death penalty?

I will first endeavor to identify what factors manipulate perceptions of exoneree innocence.

To this question, the results of the experiment suggest a definitive answer. Though exoneree race and witness recantations had no statistically significant effects on confidence in exoneree innocence, DNA evidence did: in both DNA conditions, participants were 25% more

⁸² See Appendix A.

⁸³ For statements 1, 3, and 6, wherein higher levels of agreement indicated greater confidence in the overall accuracy of convictions, confidence in the guilt of the exoneree, and support for the death penalty, respectively, I recoded responses so that 1=6, 2=4, 3=5, and 4=4. In so doing, I aligned responses to all questions of interest so that greater values universally indicated liberal perceptions of innocence and criminal justice.

⁸⁴ See Appendix A.

likely to strongly disagree that the individual in the article they had just read was guilty of the crime for which he was convicted. The presence of DNA evidence thus increases confidence in exoneree innocence, demonstrating that innocence is not, as Baumgartner assumes it to be, an unqualified premise of the innocence frame.

Addressing the second question—namely, whether or not perceptions of exoneree innocence affect attitudes toward the death penalty—is more complicated. At a glance, it appears as though confidence in exoneree innocence is unrelated to attitudes toward the death penalty: only exoneree race affects responses to the statement “I support the death penalty for a person convicted of murder,” and only DNA affects responses to the statement “Life without the possibility of parole is a suitable alternative to the death penalty.” Confidence in exoneree innocence affects neither.

Two things, however, are worth noting. First, it is interesting that exoneree race has a significant effect on support for the death penalty and not on perception of exoneree innocence. It must be the case, then, that a mechanism other than innocence is at work. Perhaps it is a manifestation of the actual innocence frame’s twin, fallibility—white exonerees somehow trigger an overall lack of confidence in the criminal justice system—or perhaps it is something else entirely. One particularly disturbing alternative is suggested by Peffley et al., whose study found that support for the death penalty *increases* among whites when they are made aware of racial biases in its application⁸⁵. It is not far-fetched to posit that our largely white sample is simply less perturbed about the near execution of a black man than the near execution of a white one.

It is also interesting to note that DNA, alone, has a significant effect on responses to the statement, “Life without parole is a suitable alternative to the death penalty.” This effect, too,

⁸⁵ Peffley, Mark, and Jon Hurwitz. "Persuasion and resistance: Race and the death penalty in America." *American Journal of Political Science* 51, no. 4 (2007): 996-1012.

may be the fallibility frame at work: since, absent fortuitous technological advancement, wrongful convictions catalyzed by DNA evidence may have permanently evaded detection, DNA exonerations catalyze “broad social acceptance of the notion that the state has nearly executed factually innocent people, may well have executed some factually innocent people, and stands at risk to eventually execute a factually innocent person if capital punishment continues”⁸⁶. In this way, DNA evidence has the capacity to simultaneously strengthen both the actual innocence and fallibility components of the innocence frame.

Actual innocence and fallibility may, in fact, strengthen one another. Despite the finding that confidence in exoneree innocence has no significant effect on either measure of support for the death penalty, confidence in innocence does increase agreement with the statement “I believe that an innocent person has been sentenced to death and executed within the past 5 years.” This suggests that confidence in one exoneree’s innocence may cause a person to grow increasingly confident in the innocence of others who remain on death row (or have already been executed)—actual innocence thus facilitates perceptions of the fallibility of the justice system, more generally.

But the lack of significant results for the other three measures of criminal justice fallibility—namely, “If I were accused of a crime that I did not commit, I might be found guilty,” “If a person is convicted of a crime, they definitely did it,” and estimates generated by the question, “According to your best guess, about what percent of people who are executed under the death penalty are really guilty of the crime they were charged with?”⁸⁷—suggests otherwise. If actual innocence facilitates fallibility, one would expect confidence in exoneree innocence to produce significant effects on these measures, as well. In light of these conflicting data, I will

⁸⁶ Aronson, Jay D., and Simon A. Cole. “Science and the death penalty: DNA, innocence, and the debate over capital punishment in the United States.” *Law & Social Inquiry* 34.3 (2009): 603-633.

⁸⁷ See Appendix A.

leave future research the task of more closely examining the relationship between actual innocence and fallibility.

Returning to the experiment's central question, then, it is critical to determine whether or not confidence in exoneree innocence affects attitude toward the death penalty. As stated above, confidence in exoneree innocence had no effect on either independent measure of death penalty support (baseline approval and life without parole as an alternative sentence). It *did*, however, affect the innocence liberalism scale: participants who were more confident in exoneree innocence generally indicated less confidence in the overall accuracy of convictions, higher estimations of innocent executions, and lower levels of support for the death penalty.

There are a number of reasons why the innocence liberalism scale may be a superior measure of attitudes toward the death penalty than responses to the death penalty measures, themselves. For one, responses to individual survey items are subject to significantly greater measurement error than are aggregate responses: as Nunnally and Bernstein (1994) observe, "measurement error averages out when individual scores are summed to obtain a total score"⁸⁸. In addition, single measures lack both the precision and scope of aggregated measures—they cannot "discriminate among fine degrees of an attribute,"⁸⁹ nor can they "fully represent a complex theoretical concept or any specific attribute for that matter"⁹⁰. The fact that confidence in exoneree innocence engenders greater "innocence liberalism," therefore, suggests that it may yet temper support for the death penalty.

⁸⁸ Nunnally, Jum C., Ira H. Bernstein, and Jos MF ten Berge. *Psychometric theory*. Vol. 226. New York: McGraw-Hill, 1967. 67

⁸⁹ Gliem, Joseph A., and Rosemary R. Gliem. "Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales." Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, 2003. 82.

⁹⁰ McIver, John and Edward G. Carmines. *Unidimensional scaling*. Vol. 24. Sage, 1981. 15.

Having established that perceptions of exoneree innocence are *not* static, and that these perceptions *may* affect attitudes toward the death penalty, it is worthwhile to investigate how the media presents exonerations in the real world—paying particular attention to factors such as DNA evidence that might affect perceptions of innocence and, in turn, public opinion of capital punishment.

Content Analysis

Though innocence-based exonerations have appeared in the media for decades, the 1990s ushered in an entirely new era for media coverage of exonerations. As Baumgartner notes, “the average number of stories an individual exonerated from death row today is likely to get is more than 13 times the number that someone exonerated [before the 1990s] could expect”⁹¹. This spike “is strongly associated with... increased concern with innocence, fairness, and the accuracy of judicial proceedings”⁹²—concerns which resulted in the “redefinition of American public discourse about the death penalty”⁹³ and the steepest decline in support for the capital punishment since *Furman v. Georgia* (1972)⁹⁴.

If perceptions of exoneree innocence, in particular, contribute to this phenomenon—as the experiment suggests they may—it is worth investigating how the media manipulates perceptions of innocence in the real world. In other words, it is worth examining the actual innocence frame as it exists beyond the laboratory.

Deconstructing the actual innocence frame is, itself, a difficult task. The results of the experiment indicate that DNA evidence is one dimension along which the actual innocence

⁹¹ Baumgartner, Linn, & Boydston, 26.

⁹² Baumgartner, Linn, & Boydston, 14.

⁹³ Baumgartner, Linn, & Boydston, 5.

⁹⁴ “Death Penalty.” *Gallup*.

frame is strengthened. Another, I posit, is the extent to which exonerees come across as empathetic figures—it certainly stands to reason that relatable exonerees will engender more favorable impressions than their less relatable counterparts. The precise definition of “empathetic” figures, however, I will leave others to discern; for the aim of the content analysis is primarily to shed light on as many means as possible through which the media *may* establish exoneree innocence. It will thus serve as a foundation upon which future research may, through experimental analysis and other means, refine our understanding of the many facets of actual innocence.

In sum, the content analysis of media coverage of exonerations seeks to accomplish three objectives. First, I will gather as much detailed information as possible about the ways in which the media covers exonerations. Second, I will consider how these differences in coverage may engender different perceptions of exoneree innocence (with a particular eye toward DNA evidence and exoneree empathy). I will also consider the ways in which those differences align with public opinion of the death penalty over time. In so doing, I hope to evaluate how the actual innocence frame is utilized in a real-world context, thereby beginning to establish a chain of causality between actual innocence and public opinion of capital punishment.

Methodology

In order to conduct a content analysis of media coverage of exonerations, I coded 30 news clips from the *Vanderbilt Television News Archives*⁹⁵. These clips originally aired on a

⁹⁵ 36 clips were originally coded, but 6 were discarded for the following reasons: one was entirely unrelated to exonerations; two were about inmates with strong claims of innocence, but were not yet exonerated; one was about exonerations in general (not one in particular); and two were about the trials of prosecutors whose misconduct resulted in a wrongful conviction.

variety of news stations between 1981 and 2014. They were randomly selected from a pool of 59 news clips relating to exonerations that were available in the *Vanderbilt* archives⁹⁶.

Coders sought to note any and all information that may affect perceptions of exoneree innocence. This information was placed in one of four categories: General Information, Specific Information, Characteristics, or Time. In the General Information section, coders took note of the clip's basic storyline. This included elements such as the factors contributing to an exoneree's conviction, factors contributing to his/her exoneration, and who was mentioned or discussed in the clip. In the Specific Information section, coders answered yes or no questions such as "Death row exoneration?" and "Actual perpetrator identified through exoneration?" In the Characteristics section, coders noted various attributes of the exoneree and victim (race, gender, age), as well as of the original crime (rape, murder). In the Time section, coders calculated the amount of time featuring various parties to the exoneration—for example, the exoneree's friends and family—as well as the overall length of the clip.

Results

The content analysis reveals a number of noteworthy trends in news coverage of exonerations⁹⁷. First, the average length of clips steadily increases by roughly 15 seconds per decade over time (Figure B). In addition, the average proportion of the clip featuring the exoneree increases from 46% to 59% over time, though it dips slightly from 1991-2000 (Figure C).

⁹⁶ Clips were located in the archive using the following search terms: exoneration, wrongful conviction, false conviction, false imprisonment, wrongful imprisonment. They were excluded from random sampling if they contained any of the following elements: military trials; "special program" airing, rather than "evening news;" claims of innocence, rather than exoneration; focus on more than one case.

⁹⁷ Complete results can be found in Appendix A.

Figure B. Average length of clip over time.

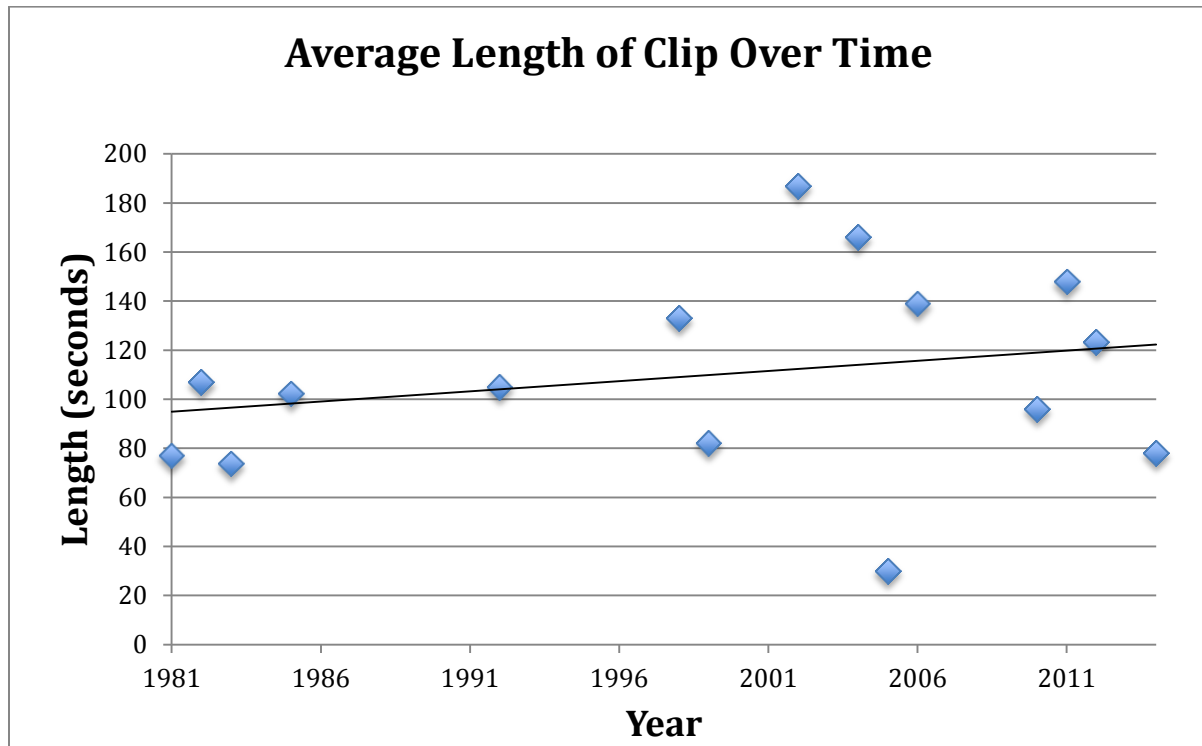
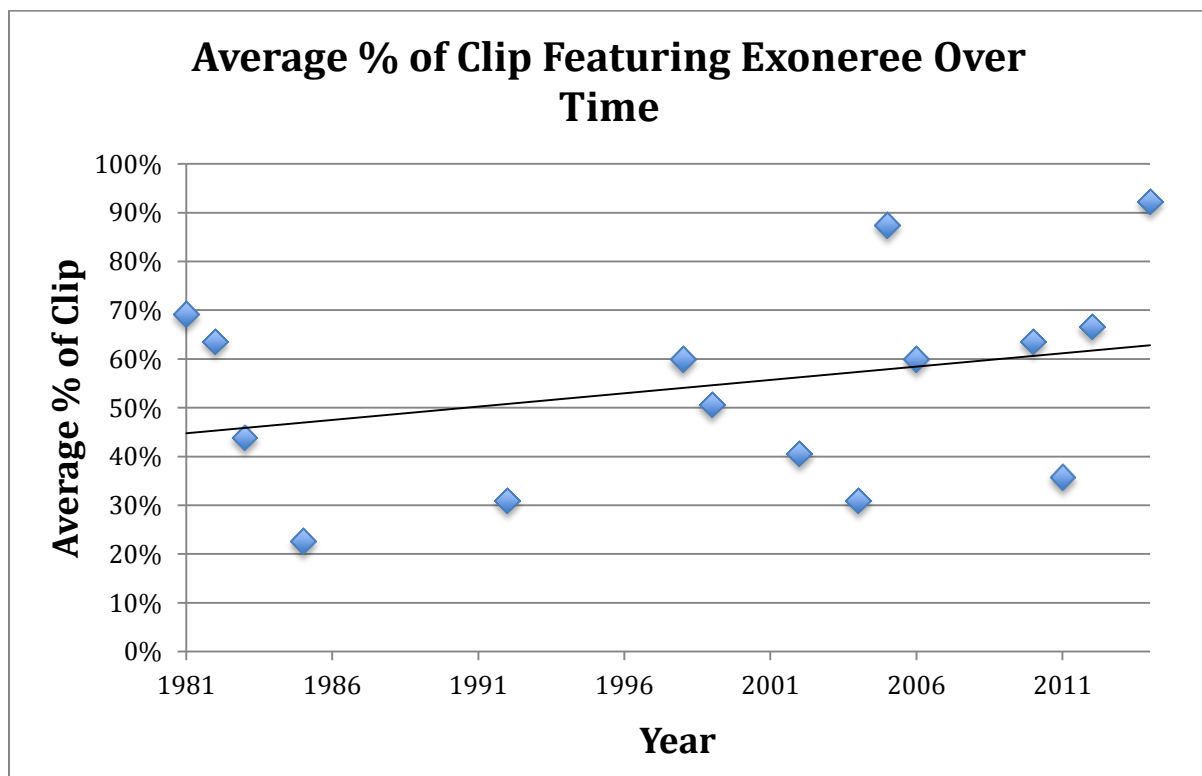


Figure C. Average proportion of clip featuring exoneree (visually).



Analysis also reveals that media coverage of exonerations consistently and disproportionately features white, female victims (Table A). In total, clips feature female victims 37% of the time, male victims 13% of the time, and do not indicate the gender of the victim 50% of the time. More striking, however, is that 73% of victims are female when gender is indicated⁹⁸. Similarly, 75% of victims are white when race is indicated (Table B)⁹⁹. These findings are especially interesting in light of the fact that, according to the Bureau of Justice Statistics, victims of violent crimes are—and long have been—disproportionately black and male¹⁰⁰.

Table A. Victim gender.

Victim Gender		
Male	Female	Not indicated
13%	37%	50%

Table B. Victim Race.

Victim Race		
White	Black	Not indicated
10%	3%	87%

The locations featured in clips provide additional insight. Table C reveals two trends of interest: first, a dramatic jump in the number of clips featuring “inside courthouse,” and second, a corresponding decline in number of clips featuring “outside prison.” While both locations are featured 40% of the time in the 1980s and 50% of the time in the 1990s, “inside courthouse” is featured 71% of the time after the year 2000, whereas “outside prison” is only featured 14% of

⁹⁸ See Appendix A.

⁹⁹ See Appendix A.

¹⁰⁰ “Criminal Victimization.” *The United States Department of Justice*. Last modified September 19, 2014. Accessed April 26, 2015. <http://www.bjs.gov/content/pub/pdf/cv13.pdf>.

the time thereafter. In addition, scientific laboratories are featured 0% of the time until 2000, after which point they are featured in 29% of clips.

Table C. Locations featured.

Locations Featured (%)			
	1981-1990	1991-2000	2001-2014
inside courthouse	40%	50%	71%
outside courthouse	10%	0%	21%
inside prison	20%	17%	29%
outside prison	40%	50%	14%
location of crime	10%	0%	14%
laboratory	0%	0%	29%

Examination of the individuals mentioned or discussed in news clips indicates that a greater number of clips feature the exoneree’s lawyer, wrongful convictions experts, and laboratory technicians over time (Table D). In addition, a decreasing number of clips mention or discuss the exoneree’s friends/family and the government’s lawyer post-exoneration over time. Police are the only group mentioned that first increases dramatically—from 0% in the 1980s to 67% in the 1990s—then decreases dramatically to 21% after the year 2000.

Table D. Mentioned or discussed.

Either Mentioned or Discussed (%)			
	1981-1990	1991-2000	2001-2014
exoneree lawyer	10%	33%	36%
exoneree advocate (non-lawyer)	0%	17%	7%
post-exoneration government lawyer	20%	0%	0%
pre-exoneration judge	10%	0%	14%
post-exoneration judge	20%	33%	29%
family of victim	0%	0%	0%
family of exoneree	50%	17%	14%
victim	50%	67%	50%

police	0%	67%	21%
wrongful conviction expert(s)	0%	0%	14%
DNA expert/technician	0%	0%	7%
actual perpetrator of original crime	20%	33%	21%

The pattern of police mentions/discussions is likely related to the fact that convictions resulting from police misconduct follow the same pattern almost exactly: while 0% of convictions involved police misconduct in the 1980s, 67% involved police misconduct in the 1990s. Only 7% involved police misconduct after 2000 (Table E). Prosecutor misconduct, too, contributed to 0% of convictions in every decade except the 1990s, during which time it contributed to one in three convictions. More generally, the media identified factors contributing to conviction in the 1990s twice as often as it did in the decades preceding or forthcoming (83% of the time versus 40% and 43%, respectively). The only factor contributing to conviction that moves consistently over time is perjured testimony, which shrinks from 40% in the 1980s to 14% in the 2000s.

Table E. Factors contributing to conviction.

Factors Contributing to Conviction (%)			
	1981-1990	1991-2000	2001-2014
false confession	10%	33%	14%
police misconduct	0%	67%	7%
prosecutor misconduct	0%	33%	0%
eyewitness misidentification	10%	17%	14%
perjured testimony	40%	17%	14%
faulty science	0%	17%	14%
not indicated	40%	17%	43%

The only factor contributing to exoneration that increased steadily over time is DNA evidence (Table F). Whereas there was a roughly even distribution of factors contributing to

exoneration before 2000, DNA became the frontrunner by far thereafter. It is worth noting, too, that while factor contributing to exoneration was indicated only 50% of the time in the 1980s and 33% of the time in the 1990s, it was indicated 86% of the time in the 2000s.

Table F. Factors contributing to exoneration.

Factors Contributing to Exoneration (%)			
	1981-1990	1991-2000	2001-2014
DNA evidence	0%	17%	64%
Witness recantation	10%	17%	0%
Someone else confessed	10%	0%	7%
Scientific non-DNA evidence	10%	0%	0%
not indicated	50%	67%	14%

As DNA became a more frequently cited factor contributing to exoneration, it was also more frequently discussed¹⁰¹. Table G indicates that, while DNA was discussed 0% in the 1980s—it was used in an exoneration for the first time in 1989—it was discussed in 17% of clips in the 1990s, and fully 29% of clips in the 2000s. In addition, while DNA technicians were mentioned, discussed, or featured in 0% of clips in the 1980s, they were mentioned, discussed, or featured in 17% and 23% of clips in the 1990s and 2000s, respectively¹⁰².

Table G. Discussion of DNA.

Discussion of DNA (%)		
	Yes	No
1981-1990	0%	100%
1991-2000	17%	83%
2001-2014	29%	71%
TOTAL	17%	83%

¹⁰¹ Discussed, for the purpose of this study, means talked about (in any context) for 5 seconds or more.

¹⁰² See Appendix A.

Finally, it may be meaningful that as DNA evidence became a more integral component of media coverage of exonerations, death row exonerations became less so. Table H indicates that death row exonerations composed roughly one in three throughout the 1980s and 1990s, then plummeted to 7% in the 2000s.

Table H. Death row exonerations.

Death Row (%)			
	Yes	No	Not indicated
1981-1990	30%	50%	20%
1991-2000	33%	17%	50%
2001-2014	7%	79%	14%
TOTAL	20%	57%	23%

Discussion

Results from the content analysis suggest that media coverage of exonerations does, in at least some capacity, utilize the actual innocence frame. Given the results of the experimental portion of this study, the introduction of DNA exonerations in the 1990s seems particularly pertinent. After the innocence frame's rise to prominence in 1996¹⁰³, DNA was mentioned in nearly one in three news stories relating to exonerations¹⁰⁴. Prior to that time, it never appeared once. The number of clips that mentioned, discussed, or featured a DNA/laboratory technician followed a similar pattern, accounting for 0% of clips before 1996 and 28% thereafter¹⁰⁵. Laboratories, themselves, were featured in 0% of clips prior to 1996 and 22% of clips in the years following¹⁰⁶. If DNA causes consumers of news media to have increased confidence in

¹⁰³ Baumgartner, DeBoef, & Boydston.

¹⁰⁴ See Appendix A.

¹⁰⁵ See Appendix A.

¹⁰⁶ See Appendix A.

exoneree innocence, as the experiment suggests that it does, the actual innocence frame exists not only in the laboratory—but also in the world at large.

Though it is difficult to say with any degree of certainty, other elements of media coverage may well build the salience of actual innocence. For example, it is worth noting that news stories that explicitly mentioning death row exonerations remained roughly constant throughout the 1980s and 1990s, then decreased dramatically throughout the 2000s. This pattern does not mirror the occurrence of exonerations from death row, which actually increased over the same period of time¹⁰⁷. I suggest that this may arise out of infatuation with the scientific certainty of DNA exonerations—of which there were more for rapes than murders in every year prior to 2008—as opposed to higher-stakes wrongful convictions¹⁰⁸. Indeed, the media appear to have a particular affinity for DNA exonerations: over time, there was not only an increase in proportion of clips citing DNA as a factor contributing to exoneration, but there was also an overall increase in proportion of clips mentioning cause of exoneration in general. Together, these phenomena indicate that DNA evidence contributing to an exoneration is, in itself, a newsworthy occurrence.

Findings also show that a greater number of clips feature the exoneree's lawyer and wrongful convictions experts over time. In addition, a decreasing number of clips feature the exoneree's friends/family and government attorney at or after exoneration. The shift from focus on government to exoneree attorneys signifies a corresponding shift in perspectives: the voice of the exoneree, by proxy, becomes more prominent in later news clips. At the same time, the shift from featuring exoneree friends/family to wrongful convictions experts alerts viewers to the fallibility of the justice system as a whole (often with respect to capital punishment, in

¹⁰⁷ *National Registry of Exonerations*. Accessed April 26, 2015.

¹⁰⁸ Gross, Samuel R., Kristen Jacoby, Daniel J. Matheson, Nicholas Montgomery, and Sujata Patil. "Exonerations in the United States 1989 through 2003." *Journal of Criminal Law and Criminology* (2005): 523-560.

particular). In both circumstances, exoneree empathy—and thus, “actual innocence”—appear to play some role.

Exposure, too, may make exonerees more empathetic figures. The proportion of each clip that visually portrays exonerees has grown from an average of 46% to 59%¹⁰⁹ over time. Meanwhile, the average length of each clip has grown 30%, from 90 seconds in the 1980s to 121 seconds in the 2000s¹¹⁰. In this way, the number of seconds that the public spends interacting with exonerees has steadily increased.

Numerous studies point to the effect of exposure on intergroup attitudes. Research by Vescio, Sechrist, and Paolucci (2003) indicates that “when situational patterns of attributes are encouraged in a context where group membership is salient (e.g. when explaining group relevant negative or discriminatory experiences)... one’s self-construal (e.g. ideas about why bad things happen to the self) and beliefs about outgroups (e.g. why bad things happen to outgroups) may come to overlap”¹¹¹. With respect to media coverage of exonerations, group membership—namely, that of the wrongfully convicted—becomes salient every time the exoneree is featured onscreen. In addition, “situational patterns of attributes” (for example, factors contributing to conviction) are indeed “encouraged.” As a result, consumers of television news may experience a more empathetic view toward exonerees, facilitating their confidence in his or her innocence.

Another such factor is location(s) featured in a given news clip. Over time, courtrooms and courthouses were displayed more frequently, just as the outside of prison complexes began to appear less frequently. Often, courthouse scenes would show footage of an exoneration as it was taking place, or just after; scenes outside of prisons were used, for the most part, as little

¹⁰⁹ See Appendix A.

¹¹⁰ See Appendix A.

¹¹¹ Vescio, Theresa K., Gretchen B. Sechrist, and Matthew P. Paolucci. "Perspective taking and prejudice reduction: The mediational role of empathy arousal and situational attributions." *European Journal of Social Psychology* 33, no. 4 (2003): 455-472. 458.

more than stock footage. I suggest that emotional and suspenseful courtroom scenes are more likely to arouse empathy and interest in viewers than images of prisons more or less on their own, though future research with more detailed analysis is necessary to confirm or deny this conjecture.

The brief jump in police and prosecutor misconduct as factors contributing to conviction is another area within which future research may wish to explore. The 1990s was the only decade of the three studied during which factor(s) contributing to exoneration were mentioned more than 80% of the time; they were mentioned 60% of the time or less in both the 1980s and 2000s. Within this same period (and this period only), police and prosecutor misconduct were the primary factors contributing to exoneration. I suggest that these patterns likely manifestations of professional misconduct at the time of the exonerees' convictions, rather than a framing effect. Future studies may stake a more definitive claim in this realm than my data allow for at present.

Conclusion

It is not an exaggeration to stipulate that justice is perhaps the single most important ideal of the American polity. Our system of government was built on the belief that "all men are created equal," and as a result, they are endowed with "certain inalienable rights." As a measure of protection for these rights, the government has adopted the standard that anyone accused of a crime is simply "innocent until proven guilty."

It is clear, however, that innocence is not a simple calculation—indeed, it is both complex and deeply flawed. Time and time again, Americans have proven themselves incapable of weighing the circumstances surrounding witness testimony, removing personal prejudice from deliberations, and coming to rational conclusions about whether or not a defendant is guilty. As a

result, over 1,500 individuals and counting have spent years in prison for crimes that they did not commit.

The findings of this study suggest that an even more disturbing phenomenon may be plaguing American criminal justice. Not only are exonerees forced to give up years of their lives in prison as a result of distorted perceptions of innocence—but their innocence *after* having been exonerated remains subject to similarly problematic interpretation. Individuals are more likely to believe that a person who is exonerated using DNA evidence is innocent than one who is not, even if the criminal justice system was confident enough in both to set them free; individuals are more likely to support the death penalty after reading about a black exoneree than a white one, even after that same prejudice nearly took a man's life in the first place. Misconceptions about innocence deliver exonerees not one, but two earth-shattering blows.

The most troubling implications of this study, however, are a testament to the longevity of death penalty as an institution. Baumgartner finds that the innocence frame has brought about an unprecedented shift in public opinion of the death penalty; but if, as the results of this study suggests it may, the actual innocence frame has an independent effect on public opinion of the death penalty, the same biases that put an exoneree in prison may ultimately serve to perpetuate a policy that nearly took his life in error.

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Appendix A: Results and Statistical Analysis

```
regress Liberalism i.ExonRace i.DNA i.Confession RaceDNA RaceConf i.PartRace i.Female i.Democrat
i.Mi
> dwest i.Northeast i.Southeast i.Southwest i.Student
```

Source	SS	df	MS	Number of obs =	133
Model	7.49437222	13	.576490171	F(13, 119) =	2.71
Residual	25.3363781	119	.212910741	Prob > F =	0.0022
				R-squared =	0.2283
				Adj R-squared =	0.1440
Total	32.8307503	132	.248717806	Root MSE =	.46142

Liberalism	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
1.ExonRace	.3314436	.1441857	2.30	0.023	.0459416 .6169456
1.DNA	.3119049	.1367732	2.28	0.024	.0410804 .5827294
1.Confession	.0093624	.1373327	0.07	0.946	-.2625702 .281295
RaceDNA	-.6395351	.2068006	-3.09	0.002	-1.049021 -.2300493
RaceConf	-.0614553	.2080479	-0.30	0.768	-.4734108 .3505002
1.PartRace	-.0025281	.0956317	-0.03	0.979	-.1918885 .1868322
1.Female	-.1149832	.0886152	-1.30	0.197	-.2904502 .0604838
1.Democrat	.1617401	.0885862	1.83	0.070	-.0136695 .3371496

1.Midwest		.0216282	.108026	0.20	0.842	-.192274	.2355305
1.Northeast		.1579943	.174309	0.91	0.367	-.1871549	.5031435
1.Southeast		-.3407495	.1238645	-2.75	0.007	-.5860136	-.0954854
1.Southwest		.62157	.3591779	1.73	0.086	-.0896381	1.332778
1.Student		-.2386583	.2443634	-0.98	0.331	-.7225223	.2452057
_cons		3.871115	.2941906	13.16	0.000	3.288588	4.453642

```
. regress Q27_3 i.ExonRace i.DNA i.Confession RaceDNA RaceConf
```

Source		SS	df	MS	Number of obs	=	133
Model		2.65701418	5	.531402836	F(5, 127)	=	0.91
Residual		74.2753166	127	.584845013	Prob > F	=	0.4777
Total		76.9323308	132	.582820688	R-squared	=	0.0345
					Adj R-squared	=	-0.0035
					Root MSE	=	.76475

Q27_3		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
1.ExonRace		5.26e-16	.2207648	0.00	1.000	-.4368536 .4368536
1.DNA		-.3333333	.2207648	-1.51	0.134	-.770187 .1035203
1.Confession		.0452899	.2231515	0.20	0.839	-.3962867 .4868664
RaceDNA		.3869048	.3177348	1.22	0.226	-.241835 1.015645
RaceConf		-.2046036	.3294962	-0.62	0.536	-.8566172 .44741
_cons		2.041667	.1561043	13.08	0.000	1.732764 2.350569

```
. ivregress 2sls Liberalism (Q27_3=i.ExonRace i.DNA i.Confession RaceDNA RaceConf) i.PartRace
i.Female
> i.Democrat i.Midwest i.Northeast i.Southeast i.Southwest i.Student, first
```

First-stage regressions

Number of obs	=	133
F(13, 119)	=	1.53
Prob > F	=	0.1173
R-squared	=	0.1430
Adj R-squared	=	0.0494
Root MSE	=	0.7443

Q27_3		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
1.PartRace		.0737346	.1542694	0.48	0.634	-.2317343 .3792035
1.Female		.0514948	.1429507	0.36	0.719	-.2315619 .3345515
1.Democrat		.0045534	.1429039	0.03	0.975	-.2784106 .2875173
1.Midwest		.1122727	.1742634	0.64	0.521	-.2327862 .4573317
1.Northeast		-.0581555	.2811886	-0.21	0.837	-.6149371 .4986261
1.Southeast		.5969939	.1998135	2.99	0.003	.2013433 .9926446
1.Southwest		.541436	.5794121	0.93	0.352	-.6058578 1.68873
1.Student		.5410729	.3941978	1.37	0.172	-.2394781 1.321624
1.ExonRace		-.112039	.2325948	-0.48	0.631	-.5726 .348522
1.DNA		-.4201186	.2206373	-1.90	0.059	-.8570024 .0167652
1.Confession		.0672147	.22154	0.30	0.762	-.3714566 .5058859
RaceDNA		.6110986	.3336028	1.83	0.069	-.0494683 1.271665
RaceConf		-.1669328	.3356149	-0.50	0.620	-.8314838 .4976181
_cons		1.287055	.4745771	2.71	0.008	.3473452 2.226765

Instrumental variables (2SLS) regression

Number of obs	=	133
Wald chi2(9)	=	18.42
Prob > chi2	=	0.0306
R-squared	=	.
Root MSE	=	.60028

Liberalism	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Q27_3	-.6876708	.3018969	-2.28	0.023	-1.279378	-.0959636
1.PartRace	.0157354	.1222067	0.13	0.898	-.2237853	.2552562
1.Female	-.1135635	.1114866	-1.02	0.308	-.3320733	.1049463
1.Democrat	.2117023	.1096064	1.93	0.053	-.0031224	.4265269
1.Midwest	.0945981	.1436131	0.66	0.510	-.1868785	.3760746
1.Northeast	.1494099	.2223963	0.67	0.502	-.2864788	.5852986
1.Southeast	.1225778	.2200698	0.56	0.578	-.3087511	.5539067
1.Southwest	1.00133	.4963578	2.02	0.044	.0284867	1.974174
1.Student	.122765	.3394466	0.36	0.718	-.5425382	.7880682
_cons	4.851502	.5349248	9.07	0.000	3.803069	5.899936

Instrumented: Q27_3

Instruments: 1.PartRace 1.Female 1.Democrat 1.Midwest 1.Northeast
1.Southeast 1.Southwest 1.Student 1.ExonRace 1.DNA
1.Confession RaceDNA RaceConf

estsimp ologit Q27_1 ExonRace DNA Confession RaceDNA RaceConf PartRace Female
> Democrat Midwest Northeast Southeast Southwest Student

Iteration 0: log likelihood = -130.69012
Iteration 1: log likelihood = -125.9492
Iteration 2: log likelihood = -125.91595
Iteration 3: log likelihood = -125.91592

Ordered logit estimates	Number of obs	=	133
	LR chi2(13)	=	9.55
	Prob > chi2	=	0.7304
Log likelihood = -125.91592	Pseudo R2	=	0.0365

Q27_1	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ExonRace	-.6830627	.6250809	-1.09	0.274	-1.908199	.5420735
DNA	-.7851292	.6096429	-1.29	0.198	-1.980007	.409749
Confession	.1640581	.582093	0.28	0.778	-.9768232	1.304939
RaceDNA	1.775909	.8961316	1.98	0.048	.0195233	3.532295
RaceConf	-.3523326	.9083073	-0.39	0.698	-2.132582	1.427917
PartRace	-.046434	.4182266	-0.11	0.912	-.866143	.773275
Female	.2249272	.3856483	0.58	0.560	-.5309296	.9807841
Democrat	-.0851771	.379151	-0.22	0.822	-.8282994	.6579452
Midwest	.0986347	.4621442	0.21	0.831	-.8071512	1.004421
Northeast	-.2995708	.7522526	-0.40	0.690	-1.773959	1.174817
Southeast	.7645913	.5405832	1.41	0.157	-.2949323	1.824115
Southwest	-.6669531	1.456075	-0.46	0.647	-3.520807	2.186901
Student	1.332788	1.207037	1.10	0.270	-1.032961	3.698537

_cut1	1.372868	1.387585	(Ancillary parameters)			
_cut2	3.549628	1.418822				
_cut3	5.532575	1.563293				
_cut4	6.241495	1.71542				

Simulating main parameters. Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000 observations in order to accommodate the simulations. This will append missing values to the bottom of your original dataset.

% of simulations completed: 5% 11% 17% 23% 29% 35% 41% 47% 52% 58% 64% 70% 76% 8
> 2% 88% 94% 100%

Number of simulations : 1000

Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
> b17

. setx PartRace 1

. setx Female 1

```
. setx Midwest 1
. setx Northeast 0
. setx Southeast 0
. setx Southwest 0
. setx Student 1
. setx ExonRace 1
. setx DNA 1
. setx Confession 1
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_1=1)	.6894514	.2149343	.2196886	.9733649
Pr(Q27_1=2)	.2407493	.1460363	.022526	.5111908
Pr(Q27_1=3)	.0560323	.0665906	.0022567	.2449943
Pr(Q27_1=4)	.0048013	.0137168	-.0117683	.0361359
Pr(Q27_1=5)	.0089657	.0211355	.0001234	.0577829

```
. setx DNA 0
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_1=1)	.5564837	.193654	.1729961	.8809019
Pr(Q27_1=2)	.3352813	.1206879	.1031331	.5422189
Pr(Q27_1=3)	.0869941	.0744078	.0090354	.2917011
Pr(Q27_1=4)	.0080936	.0177972	-.0175201	.0517031
Pr(Q27_1=5)	.0131473	.0213032	.000423	.0759173

```
. setx Confession 0
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_1=1)	.5999204	.1526023	.2822327	.8722603
Pr(Q27_1=2)	.3167987	.1053518	.1129809	.5048344
Pr(Q27_1=3)	.0680511	.0490012	.0115806	.2002939
Pr(Q27_1=4)	.0058649	.0120555	-.0149836	.0308555
Pr(Q27_1=5)	.0093649	.0140081	.0004372	.0464579

```
. setx ExonRace 0
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_1=1)	.4463182	.1278963	.2096744	.7094913
Pr(Q27_1=2)	.4137152	.0778956	.2437494	.548184
Pr(Q27_1=3)	.112532	.060943	.0299965	.2697091
Pr(Q27_1=4)	.0106684	.0195666	-.0278758	.0579512
Pr(Q27_1=5)	.0167662	.0210005	.0010784	.0774017

```
. setx DNA 1
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_1=1)	.6235232	.1262056	.3505063	.8449325
Pr(Q27_1=2)	.3043504	.0924643	.1318662	.4895818

```

Pr(Q27_1=3) | .0589943 .0365845 .0137709 .1532846
Pr(Q27_1=4) | .0048212 .0103981 -.0135653 .0258579
Pr(Q27_1=5) | .0083109 .0123778 .0005082 .0434303

. setx Confession 1

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_1=1) | .5765495 .1748411 .2413518 .8770728
Pr(Q27_1=2) | .3287611 .1165943 .1063046 .523208
Pr(Q27_1=3) | .0762992 .0589208 .0095984 .23213
Pr(Q27_1=4) | .0066913 .0157079 -.0178928 .0403874
Pr(Q27_1=5) | .0116988 .0191075 .0004391 .0667658

. estsimp ologit Q27_2 ExonRace DNA Confession RaceDNA RaceConf PartRace Female
> Democrat Midwest Northeast Southeast Southwest Student

Iteration 0: log likelihood = -187.43725
Iteration 1: log likelihood = -175.77062
Iteration 2: log likelihood = -175.49652
Iteration 3: log likelihood = -175.49569
Iteration 4: log likelihood = -175.49569

Ordered logit estimates                                Number of obs = 133
LR chi2(13) = 23.88
Prob > chi2 = 0.0322
Pseudo R2 = 0.0637
Log likelihood = -175.49569

-----+-----
Q27_2 | Coef. Std. Err. z P>|z| [95% Conf. Interval]
-----+-----
ExonRace | .7613306 .5791578 1.31 0.189 -1.3737979 1.896459
DNA | 1.021077 .5677279 1.80 0.072 -.0916496 2.133803
Confession | .0058637 .5364454 0.01 0.991 -1.04555 1.057277
RaceDNA | -1.385025 .8562164 -1.62 0.106 -3.063178 .2931286
RaceConf | .1749485 .8316522 0.21 0.833 -1.45506 1.804957
PartRace | -.2160125 .3798139 -0.57 0.570 -.960434 .5284091
Female | -.3037871 .3572323 -0.85 0.395 -1.00395 .3963755
Democrat | .8283607 .3641129 2.28 0.023 .1147125 1.542009
Midwest | -.0153507 .4338249 -0.04 0.972 -.8656318 .8349305
Northeast | .2792339 .6696948 0.42 0.677 -1.033344 1.591812
Southeast | -1.420322 .5174724 -2.74 0.006 -2.434549 -1.4060945
Southwest | -.1056341 1.28802 -0.08 0.935 -2.630108 2.418839
Student | -.4013096 .9296949 -0.43 0.666 -2.223478 1.420859
-----+-----
_cut1 | -2.955668 1.187459 (Ancillary parameters)
_cut2 | -1.619061 1.150706
_cut3 | -.6592351 1.142464
_cut4 | 1.69661 1.154698
-----+-----

Simulating main parameters. Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000
observations in order to accommodate the simulations. This will append
missing values to the bottom of your original dataset.

% of simulations completed: 5% 11% 17% 23% 29% 35% 41% 47% 52% 58% 64% 70% 76% 8
> 2% 88% 94% 100%

Number of simulations : 1000
Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
> b17

. setx PartRace 1

.

. setx Female 1

```

```

.
. setx Democrat 1

.
. setx Midwest 1

.
. setx Northeast 0

.
. setx Southeast 0

.
. setx Southwest 0

.
. setx Student 1

. setx ExonRace 1

. setx DNA 1

. setx Confession 1

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_2=1)	.0186846	.0289904	.0008944	.0993659
Pr(Q27_2=2)	.0410855	.0478163	.0027746	.1801236
Pr(Q27_2=3)	.0673673	.0570285	.0057787	.2234396
Pr(Q27_2=4)	.3717822	.1377214	.0901274	.5859053
Pr(Q27_2=5)	.5010804	.2270997	.0961636	.8983949

```

. setx DNA 0

```

```

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_2=1)	.0359999	.0337628	.0046924	.1312669
Pr(Q27_2=2)	.0786144	.0553824	.0142139	.2217319
Pr(Q27_2=3)	.1209049	.0595828	.0303069	.2500392
Pr(Q27_2=4)	.4765001	.078705	.2868733	.594675
Pr(Q27_2=5)	.2879806	.15063	.074242	.6226625

```

. setx Confession 0

```

```

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_2=1)	.0316447	.0212449	.0072344	.0879072
Pr(Q27_2=2)	.0735747	.0390104	.0213912	.1709456
Pr(Q27_2=3)	.1210193	.0476841	.0488816	.2323403
Pr(Q27_2=4)	.5024356	.05761	.3752364	.6024397
Pr(Q27_2=5)	.2713257	.1023042	.1077804	.4889519

```

. setx ExonRace 0

```

```

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_2=1)	.061849	.0336493	.0184029	.1416715
Pr(Q27_2=2)	.1298057	.0513098	.0498262	.2482454
Pr(Q27_2=3)	.1805875	.0479184	.0924307	.2740388
Pr(Q27_2=4)	.477548	.0673345	.3265667	.5908753
Pr(Q27_2=5)	.1502099	.0623244	.0597733	.3013868

```

. setx DNA 1

```

```

. simqi

      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----
      Pr(Q27_2=1) |      .0242125      .0157324      .0055855      .0641456
      Pr(Q27_2=2) |      .0578019      .0302289      .0175077      .137437
      Pr(Q27_2=3) |      .1012748      .0416271      .0395939      .199315
      Pr(Q27_2=4) |      .4938152      .0616095      .357147      .5991707
      Pr(Q27_2=5) |      .3228956      .1066232      .1425135      .5603714

. setx Confession 1

. simqi

      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----
      Pr(Q27_2=1) |      .0279333      .0273972      .0037361      .102117
      Pr(Q27_2=2) |      .0627719      .0465706      .0106649      .2017354
      Pr(Q27_2=3) |      .1027692      .0550651      .0241619      .2296711
      Pr(Q27_2=4) |      .4680316      .0827776      .2613222      .5909522
      Pr(Q27_2=5) |      .338494      .1566374      .0946843      .6848042
. estsimp ologit Q27_3 ExonRace DNA Confession RaceDNA RaceConf PartRace Female
> Democrat Midwest Northeast Southeast Southwest Student
NOTE: NO ONE SAID 4 or 5 FOR THIS ONE
Iteration 0:   log likelihood =  -143.8376
Iteration 1:   log likelihood = -133.54008
Iteration 2:   log likelihood = -133.44195
Iteration 3:   log likelihood = -133.44176

Ordered logit estimates                                Number of obs   =          133
                                                        LR chi2(13)    =           20.79
                                                        Prob > chi2    =           0.0772
Log likelihood = -133.44176                            Pseudo R2      =           0.0723

-----+-----
      Q27_3 |      Coef.      Std. Err.      z    P>|z|      [95% Conf. Interval]
-----+-----
      ExonRace |  -.2284456      .5988729     -0.38  0.703     -1.402215      .9453237
      DNA |  -1.158676      .5740997     -2.02  0.044     -2.28389     -.0334608
      Confession |   .217939      .585612      0.37  0.710     -.9298394      1.365717
      RaceDNA |   1.68562      .8720916      1.93  0.053     -.0236478      3.394888
      RaceConf |  -.5268891      .8635755     -0.61  0.542     -2.219466      1.165688
      PartRace |   .2489855      .4006866      0.62  0.534     -.5363458      1.034317
      Female |   .1481093      .3745148      0.40  0.692     -.5859262      .8821448
      Democrat |  -.0896733      .3725266     -0.24  0.810     -.8198121      .6404655
      Midwest |   .2123456      .4455451      0.48  0.634     -.6609067      1.085598
      Northeast |  -.2830124      .7350053     -0.39  0.700     -1.723596      1.157572
      Southeast |   1.529194      .5161793      2.96  0.003      .5175015      2.540887
      Southwest |   1.161064      1.458387      0.80  0.426     -1.697323      4.01945
      Student |   1.384841      .9886013      1.40  0.161     -.5527823      3.322463

-----+-----
      _cut1 |   .7670602      1.205032              (Ancillary parameters)
      _cut2 |   2.796916      1.228943
-----+-----

Simulating main parameters.  Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000
observations in order to accommodate the simulations.  This will append
missing values to the bottom of your original dataset.

% of simulations completed: 6% 13% 20% 26% 33% 40% 46% 53% 60% 66% 73% 80% 86% 9
> 3% 100%

Number of simulations   : 1000
Names of new variables  : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15

. setx PartRace 1

.

```

```

. setx Female 1

.
. setx Democrat 1

.
. setx Midwest 1

.
. setx Northeast 0

.
. setx Southeast 0

.
. setx Southwest 0

.
. setx Student 1

. setx ExonRace 1

. setx DNA 1

. setx Confession 1

. simqi
      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----
      Pr(Q27_3=1) |      .4987383      .2356552      .0928435      .9209768
      Pr(Q27_3=2) |      .3347625      .1239837      .0678584      .5190782
      Pr(Q27_3=3) |      .1664992      .1511598      .0111039      .5742006

. setx DNA 0

. simqi
      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----
      Pr(Q27_3=1) |      .269412      .1526291      .0564257      .6336589
      Pr(Q27_3=2) |      .4116902      .0767669      .2268128      .5296223
      Pr(Q27_3=3) |      .3188978      .1687177      .0684847      .6828217

. setx Confession 0

. simqi
      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----
      Pr(Q27_3=1) |      .2994796      .113597      .1183017      .5515626
      Pr(Q27_3=2) |      .4398218      .0553686      .31551      .5327511
      Pr(Q27_3=3) |      .2606985      .107727      .0947136      .5007758

. setx ExonRace 0

.
. simqi
      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----
      Pr(Q27_3=1) |      .253309      .0914067      .1074552      .4548679
      Pr(Q27_3=2) |      .445958      .0525403      .3347994      .5392002
      Pr(Q27_3=3) |      .300733      .1011292      .1334076      .5213265

. setx DNA 1

. simqi
      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----

```

```

Pr(Q27_3=1) | .5024461 .1173756 .2786478 .7257805
Pr(Q27_3=2) | .3718477 .072902 .2264512 .5012283
Pr(Q27_3=3) | .1257062 .0580274 .0419481 .2633349

. setx Confession 1

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_3=1) | .4495798 .1775423 .1419815 .7940343
Pr(Q27_3=2) | .3809306 .093198 .1659252 .5226485
Pr(Q27_3=3) | .1694897 .1119801 .0280023 .4534833

estsimp ologit Q27_4 ExonRace DNA Confession RaceDNA RaceConf PartRace Female
> Democrat Midwest Northeast Southeast Southwest Student

Iteration 0: log likelihood = -150.97267
Iteration 1: log likelihood = -147.5574
Iteration 2: log likelihood = -147.39357
Iteration 3: log likelihood = -147.39232

Ordered logit estimates                                Number of obs = 133
LR chi2(13) = 7.16
Prob > chi2 = 0.8937
Pseudo R2 = 0.0237
Log likelihood = -147.39232

-----+-----
Q27_4 | Coef. Std. Err. z P>|z| [95% Conf. Interval]
-----+-----
ExonRace | .5586654 .5996415 0.93 0.352 -.6166103 1.733941
DNA | .6466973 .5842554 1.11 0.268 -.4984222 1.791817
Confession | .4238618 .5980611 0.71 0.478 -.7483163 1.59604
RaceDNA | -.7814084 .8847403 -0.88 0.377 -2.515468 .9526506
RaceConf | -.2007037 .9130621 -0.22 0.826 -1.990273 1.588865
PartRace | -.3714427 .4396041 -0.84 0.398 -1.233051 .4901655
Female | -.2992107 .3952552 -0.76 0.449 -1.073897 .4754753
Democrat | -.0052251 .3849981 -0.01 0.989 -.7598076 .7493573
Midwest | -.1306246 .4868783 -0.27 0.788 -1.084888 .8236393
Northeast | -.4825217 .7097766 -0.68 0.497 -1.873658 .9086149
Southeast | -.0595726 .5388487 -0.11 0.912 -1.115697 .9965516
Southwest | 2.545762 1.558745 1.63 0.102 -.5093224 5.600846
Student | -.2831469 1.031844 -0.27 0.784 -2.305524 1.73923
-----+-----
_cut1 | -3.847385 1.358947 (Ancillary parameters)
_cut2 | -1.931677 1.279497
_cut3 | -1.193561 1.276665
_cut4 | 2.333154 1.302421
-----+-----

Simulating main parameters. Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000
observations in order to accommodate the simulations. This will append
missing values to the bottom of your original dataset.

% of simulations completed: 5% 11% 17% 23% 29% 35% 41% 47% 52% 58% 64% 70% 76% 8
> 2% 88% 94% 100%

Number of simulations : 1000
Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
> b17

. setx PartRace 1

.
. setx Female 1

.
. setx Democrat 1

```

```

.
. setx Midwest 1

.
. setx Northeast 0

.
. setx Southeast 0

.
. setx Southwest 0

.
. setx Student 1

.
. setx ExonRace 1

.
. setx DNA 1

.
. setx Confession 1

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_4=1)	.0251571	.0407699	.0009907	.1469834
Pr(Q27_4=2)	.0937384	.0928749	.0068039	.3551849
Pr(Q27_4=3)	.0797654	.055638	.0075934	.2020545
Pr(Q27_4=4)	.6035476	.1298594	.2428589	.7653706
Pr(Q27_4=5)	.1977914	.1690493	.0143302	.6407019

```

. setx DNA 0

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_4=1)	.0341644	.0367318	.0034669	.1498936
Pr(Q27_4=2)	.1326179	.0890118	.0228378	.3623476
Pr(Q27_4=3)	.110697	.0519931	.0268229	.2181316
Pr(Q27_4=4)	.6163831	.1093288	.3279275	.7579969
Pr(Q27_4=5)	.1061376	.0870319	.0152101	.329138

```

. setx Confession 0

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_4=1)	.0436884	.0327864	.0081131	.1350987
Pr(Q27_4=2)	.1703766	.077953	.0544419	.3552244
Pr(Q27_4=3)	.1370614	.0440522	.0596317	.2289746
Pr(Q27_4=4)	.5858546	.1012427	.3567181	.7356033
Pr(Q27_4=5)	.063019	.0389992	.0147329	.1547239

```

. setx ExonRace 0

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_4=1)	.0702802	.0455085	.0160853	.1877147
Pr(Q27_4=2)	.2405464	.0803958	.1020563	.4137052
Pr(Q27_4=3)	.1647116	.0413521	.0841469	.2457199
Pr(Q27_4=4)	.4879528	.1024301	.272818	.6695524
Pr(Q27_4=5)	.036509	.0222675	.010046	.098433

```

. setx DNA 1

```



```
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_4=1)	.0388812	.0270095	.0078274	.1098113
Pr(Q27_4=2)	.1569521	.0670995	.0542253	.3165722
Pr(Q27_4=3)	.132874	.0424523	.059565	.2263077
Pr(Q27_4=4)	.6039932	.0879968	.392251	.740654
Pr(Q27_4=5)	.0672995	.038935	.0195354	.1698613

```
. setx Confession 1
```

```
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_4=1)	.0308513	.0335803	.0033943	.1231387
Pr(Q27_4=2)	.1219866	.0827586	.0220902	.3491004
Pr(Q27_4=3)	.1057248	.0506541	.0259989	.2138576
Pr(Q27_4=4)	.6283701	.1029253	.3593795	.7613191
Pr(Q27_4=5)	.1130672	.0878774	.0180269	.3487058

```
. estsimp ologit Q27_5 ExonRace DNA Confession RaceDNA RaceConf PartRace Female
> Democrat Midwest Northeast Southeast Southwest Student
```

```
Iteration 0: log likelihood = -146.38386
Iteration 1: log likelihood = -137.11623
Iteration 2: log likelihood = -136.98276
Iteration 3: log likelihood = -136.98248
```

```
Ordered logit estimates                                Number of obs   =      133
                                                         LR chi2(13)    =      18.80
                                                         Prob > chi2    =      0.1293
Log likelihood = -136.98248                             Pseudo R2      =      0.0642
```

Q27_5	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ExonRace	.191313	.6184124	0.31	0.757	-1.020753	1.403379
DNA	.3757743	.5799065	0.65	0.517	-.7608217	1.51237
Confession	.2451031	.5916692	0.41	0.679	-.9145472	1.404753
RaceDNA	-.9767701	.8642743	-1.13	0.258	-2.670717	.7171764
RaceConf	-.1795771	.8959064	-0.20	0.841	-1.935521	1.576367
PartRace	.0839182	.4102312	0.20	0.838	-.7201202	.8879567
Female	-.8451401	.3857404	-2.19	0.028	-1.601177	-.0891029
Democrat	.5564826	.3792612	1.47	0.142	-.1868556	1.299821
Midwest	.1950223	.4626699	0.42	0.673	-.711794	1.101839
Northeast	.2100849	.6965521	0.30	0.763	-1.155132	1.575302
Southeast	-.8553866	.5276562	-1.62	0.105	-1.889574	.1788005
Southwest	.505071	1.355522	0.37	0.709	-2.151704	3.161846
Student	-1.794574	1.226217	-1.46	0.143	-4.197916	.608767

_cut1	-7.006216	1.743911	(Ancillary parameters)			
_cut2	-5.334791	1.492489				
_cut3	-3.802806	1.434193				
_cut4	-1.285846	1.404828				

```
Simulating main parameters. Please wait....
```

```
Note: Clarify is expanding your dataset from 133 observations to 1000
observations in order to accommodate the simulations. This will append
missing values to the bottom of your original dataset.
```

```
% of simulations completed: 5% 11% 17% 23% 29% 35% 41% 47% 52% 58% 64% 70% 76% 8
> 2% 88% 94% 100%
```

```
Number of simulations : 1000
Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
```

```

> b17

. setx PartRace 1

.
. setx Female 1

.
. setx Democrat 1

.
. setx Midwest 1

.
. setx Northeast 0

.
. setx Southeast 0

.
. setx Southwest 0

.
. setx Student 1

.
. setx ExonRace 1

.
. setx DNA 1

.
. setx Confession 1

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr (Q27_5=1)	.0073742	.0165032	.0001186	.0509399
Pr (Q27_5=2)	.019102	.0325748	.0001361	.109634
Pr (Q27_5=3)	.0661755	.0722216	.0038668	.2746571
Pr (Q27_5=4)	.3457065	.1573632	.0619237	.5971535
Pr (Q27_5=5)	.5616418	.2349043	.1099118	.9325725

```

. setx DNA 0

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr (Q27_5=1)	.0076781	.0136322	.0002848	.0475818
Pr (Q27_5=2)	.0202072	.0237688	.0005385	.0896409
Pr (Q27_5=3)	.0754274	.0595205	.0106363	.2297514
Pr (Q27_5=4)	.4120251	.123547	.1526786	.6080677
Pr (Q27_5=5)	.4846623	.1857962	.151231	.828741

```

. setx Confession 0

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr (Q27_5=1)	.0081085	.0114446	.0004692	.0385131
Pr (Q27_5=2)	.0219885	.0199202	.0007102	.0726628
Pr (Q27_5=3)	.0841499	.0474403	.025551	.206745
Pr (Q27_5=4)	.4632402	.0838242	.2928201	.6057063
Pr (Q27_5=5)	.4225129	.1280648	.1924592	.6710307

```

. setx ExonRace 0

. simqi

```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_5=1)	.0096124	.012942	.0005558	.0445647
Pr(Q27_5=2)	.0255245	.0216064	.0008499	.0816636
Pr(Q27_5=3)	.0963975	.0465914	.0293474	.2078267
Pr(Q27_5=4)	.4908957	.0702414	.3313464	.6084384
Pr(Q27_5=5)	.3775699	.1101819	.1807724	.6043284

. setx DNA 1

. simqi

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_5=1)	.0065273	.0083424	.0003887	.0320853
Pr(Q27_5=2)	.0178132	.0151093	.0005866	.0610197
Pr(Q27_5=3)	.0704869	.0377977	.0227663	.1687737
Pr(Q27_5=4)	.4389434	.0820909	.2608949	.5787891
Pr(Q27_5=5)	.4662292	.1170622	.2455889	.6987728

. setx Confession 1

. simqi

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_5=1)	.0061946	.0104727	.0002234	.0386383
Pr(Q27_5=2)	.0164943	.0195546	.0005381	.0725425
Pr(Q27_5=3)	.0635967	.0509359	.0099646	.1934651
Pr(Q27_5=4)	.3863436	.1230562	.1421418	.5908386
Pr(Q27_5=5)	.5273708	.1776061	.1950812	.8435133

. estsimp ologit Q27_6 ExonRace DNA Confession RaceDNA RaceConf PartRace Female
> Democrat Midwest Northeast Southeast Southwest Student

Iteration 0: log likelihood = -196.30612
Iteration 1: log likelihood = -186.89647
Iteration 2: log likelihood = -186.79833
Iteration 3: log likelihood = -186.79822

Ordered logit estimates	Number of obs	=	133
	LR chi2(13)	=	19.02
	Prob > chi2	=	0.1226
Log likelihood = -186.79822	Pseudo R2	=	0.0484

Q27_6	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ExonRace	-1.025477	.5907979	-1.74	0.083	-2.18342	.1324651
DNA	-.3588835	.5412275	-0.66	0.507	-1.41967	.7019029
Confession	.0572404	.5347343	0.11	0.915	-.9908195	1.1053
RaceDNA	1.516169	.8245478	1.84	0.066	-.0999153	3.132253
RaceConf	.7649201	.8518148	0.90	0.369	-.9046063	2.434446
PartRace	-.3693123	.3797579	-0.97	0.331	-1.113624	.3749995
Female	-.0433639	.3521206	-0.12	0.902	-.7335075	.6467797
Democrat	-.9276705	.3574679	-2.60	0.009	-1.628295	-.2270463
Midwest	-.1044758	.4215762	-0.25	0.804	-.9307501	.7217984
Northeast	-.0083187	.6357276	-0.01	0.990	-1.254322	1.237685
Southeast	.4269745	.5000289	0.85	0.393	-.5530641	1.407013
Southwest	-2.376961	1.408852	-1.69	0.092	-5.138259	.3843379
Student	.0340732	.9041037	0.04	0.970	-1.737938	1.806084
_cut1	-1.95181	1.119332	(Ancillary parameters)			
_cut2	-.5211933	1.109915				
_cut3	.6709026	1.110606				
_cut4	1.980606	1.140331				

Simulating main parameters. Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000

observations in order to accommodate the simulations. This will append missing values to the bottom of your original dataset.

% of simulations completed: 5% 11% 17% 23% 29% 35% 41% 47% 52% 58% 64% 70% 76% 8
> 2% 88% 94% 100%

Number of simulations : 1000
Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
> b17

. setx PartRace 1

.
. setx Female 1

.
. setx Democrat 1

.
. setx Midwest 1

.
. setx Northeast 0

.
. setx Southeast 0

.
. setx Southwest 0

.
. setx Student 1

.
. setx ExonRace 1

.
. setx DNA 1

.
. setx Confession 1

. simqi

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_6=1)	.6462913	.2091304	.2029736	.9553886
Pr(Q27_6=2)	.210215	.0982577	.0337268	.3755172
Pr(Q27_6=3)	.0876927	.0695538	.0073963	.256471
Pr(Q27_6=4)	.038032	.0420848	.0021885	.1555373
Pr(Q27_6=5)	.017769	.0284124	.0008148	.0959731

. setx DNA 0

. simqi

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_6=1)	.5884461	.1720855	.2412348	.8810969
Pr(Q27_6=2)	.2471087	.07859	.0874331	.3848659
Pr(Q27_6=3)	.1027853	.0622811	.0198295	.251736
Pr(Q27_6=4)	.0429451	.0363338	.0061813	.1406699
Pr(Q27_6=5)	.0187147	.0193388	.0020595	.0705679

. setx Confession 0

. simqi

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_6=1)	.6109092	.1247496	.3544083	.8282795

```

Pr(Q27_6=2) | .2464866 .0644483 .1191826 .3677693
Pr(Q27_6=3) | .0923158 .0449665 .0286153 .2047097
Pr(Q27_6=4) | .0356015 .0223987 .0085137 .0893639
Pr(Q27_6=5) | .0146868 .0105506 .0031481 .0419773

. setx ExonRace 0

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_6=1) | .3744399 .1086772 .1829956 .5940608
Pr(Q27_6=2) | .3247297 .0473766 .2280325 .4099384
Pr(Q27_6=3) | .1796776 .055578 .0841123 .2908667
Pr(Q27_6=4) | .083562 .0396164 .0265313 .1792937
Pr(Q27_6=5) | .0375908 .0227245 .0104686 .0939134

. setx DNA 1

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_6=1) | .4546946 .1098141 .2479461 .6712485
Pr(Q27_6=2) | .3106908 .0510044 .2062751 .4029426
Pr(Q27_6=3) | .1455513 .0491099 .0639437 .2567099
Pr(Q27_6=4) | .0619911 .0301446 .0176897 .1328593
Pr(Q27_6=5) | .0270723 .0169877 .0076013 .0724866

. setx Confession 1

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_6=1) | .4400719 .1641363 .1568776 .7652964
Pr(Q27_6=2) | .2987041 .0635521 .1532471 .4033217
Pr(Q27_6=3) | .1546263 .0681652 .0421155 .2883684
Pr(Q27_6=4) | .0724866 .0491702 .0132354 .1956725
Pr(Q27_6=5) | .0341112 .0316853 .0049475 .1150918

estsimp ologit Q27_7 ExonRace DNA Confession RaceDNA RaceConf PartRace Female
> Democrat Midwest Northeast Southeast Southwest Student

Iteration 0: log likelihood = -179.90455
Iteration 1: log likelihood = -173.87635
Iteration 2: log likelihood = -173.82036
Iteration 3: log likelihood = -173.82023

Ordered logit estimates      Number of obs   =      133
                             LR chi2(13)             =      12.17
                             Prob > chi2              =      0.5139
Log likelihood = -173.82023   Pseudo R2        =      0.0338

Q27_7 | Coef. Std. Err. z P>|z| [95% Conf. Interval]
-----+-----
ExonRace | .6030687 .5765653 1.05 0.296 -1.5269786 1.733116
DNA | .6588246 .5620147 1.17 0.241 -1.442704 1.760353
Confession | -.073607 .5404207 -0.14 0.892 -1.132812 .9855981
RaceDNA | -1.508347 .8554177 -1.76 0.078 -3.184935 .1682411
RaceConf | .0939268 .8154932 0.12 0.908 -1.504411 1.692264
PartRace | -.3769286 .390715 -0.96 0.335 -1.142716 .3888586
Female | -.5958271 .3548743 -1.68 0.093 -1.291368 .0997138
Democrat | .0214053 .3604742 0.06 0.953 -.6851112 .7279218
Midwest | .5263163 .4307325 1.22 0.222 -.3179039 1.370536
Northeast | .7123698 .672648 1.06 0.290 -.6059959 2.030736
Southeast | -.39229 .5071194 -0.77 0.439 -1.386226 .6016458
Southwest | 2.651153 2.716078 0.98 0.329 -2.672263 7.974568
Student | .8083656 .9526908 0.85 0.396 -1.058874 2.675605

```

```

      _cut1 | -4.325013    1.514641          (Ancillary parameters)
      _cut2 |  .1477657    1.157747
      _cut3 |  1.797943     1.16584
      _cut4 |  3.336324    1.205526
      _cut5 |  4.342135    1.270884
      _cut6 |  5.073368    1.368625
-----

Simulating main parameters.  Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000
observations in order to accommodate the simulations.  This will append
missing values to the bottom of your original dataset.

% of simulations completed: 5% 10% 15% 21% 26% 31% 36% 42% 47% 52% 57% 63% 68% 7
> 3% 78% 84% 89% 94% 100%

Number of simulations : 1000
Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
> b17 b18 b19

. setx PartRace 1

.
. setx Female 1

.
. setx Democrat 1

.
. setx Midwest 1

.
. setx Northeast 0

.
. setx Southeast 0

.
. setx Southwest 0

.
. setx Student 1

.
. setx ExonRace 1

.
. setx DNA 1

.
. setx Confession 1

. simqi

      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----
      Pr(Q27_7=1) |      .0074948      .0156791      .0001604      .0506554
      Pr(Q27_7=2) |      .2303033      .1722435      .0260702      .6600701
      Pr(Q27_7=3) |      .3015087      .0946705      .0850751      .4462039
      Pr(Q27_7=4) |      .2637702      .1045288      .0565083      .4354461
      Pr(Q27_7=5) |      .0987766      .079088      .0060772      .2866257
      Pr(Q27_7=6) |      .0399956      .0518079      -.0163874      .1871869
      Pr(Q27_7=7) |      .0581507      .078595      .0021018      .2680533

. setx DNA 0

. simqi

      Quantity of Interest |      Mean      Std. Err.      [95% Conf. Interval]
-----+-----

```

```

Pr(Q27_7=1) | .0106579 .0176808 .000466 .0626074
Pr(Q27_7=2) | .3246485 .1545349 .0839434 .6564362
Pr(Q27_7=3) | .3467253 .0649622 .1951405 .4520204
Pr(Q27_7=4) | .213722 .0934137 .0597461 .4008595
Pr(Q27_7=5) | .0582735 .0478137 .0061552 .1798496
Pr(Q27_7=6) | .0200731 .0259468 -.010038 .0891016
Pr(Q27_7=7) | .0258997 .0329986 .0020371 .1066978

. setx Confession 0

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_7=1) | .0085659 .0118346 .0005389 .0393668
Pr(Q27_7=2) | .305696 .1120773 .1257848 .5593202
Pr(Q27_7=3) | .3673449 .0503209 .2622813 .461832
Pr(Q27_7=4) | .2207036 .0755185 .0876958 .3727804
Pr(Q27_7=5) | .0557979 .035508 .0085949 .143596
Pr(Q27_7=6) | .0186618 .0196903 -.0101316 .0678098
Pr(Q27_7=7) | .0232298 .0230817 .0028539 .0750137

. setx ExonRace 0

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_7=1) | .0149554 .0190914 .0009984 .0723588
Pr(Q27_7=2) | .4300224 .1086558 .2282595 .6543175
Pr(Q27_7=3) | .3490013 .0567938 .2287863 .4502598
Pr(Q27_7=4) | .1504092 .0571853 .0601229 .2799287
Pr(Q27_7=5) | .0324785 .0202804 .0056819 .0819907
Pr(Q27_7=6) | .0104172 .0115412 -.0059734 .0359523
Pr(Q27_7=7) | .012716 .0120089 .0020596 .0426605

. setx DNA 1

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_7=1) | .0077594 .0096134 .0004965 .037463
Pr(Q27_7=2) | .2910234 .0974572 .1295288 .5112638
Pr(Q27_7=3) | .3719455 .0480962 .2807741 .4598163
Pr(Q27_7=4) | .2277637 .0690828 .0966799 .3658942
Pr(Q27_7=5) | .0580874 .0343713 .0103538 .1460583
Pr(Q27_7=6) | .0194226 .0193806 -.0090755 .0692395
Pr(Q27_7=7) | .0239982 .0210338 .0037019 .0868829

. setx Confession 1

. simqi

Quantity of Interest | Mean Std. Err. [95% Conf. Interval]
-----+-----
Pr(Q27_7=1) | .0097389 .0153257 .0004199 .0621316
Pr(Q27_7=2) | .3107063 .146511 .0850325 .6479922
Pr(Q27_7=3) | .3506499 .0633868 .2021568 .4575653
Pr(Q27_7=4) | .2206187 .0901941 .0644237 .3954394
Pr(Q27_7=5) | .0607647 .0479073 .0063514 .1855968
Pr(Q27_7=6) | .0207363 .0249319 -.0102821 .0851513
Pr(Q27_7=7) | .0267852 .0314737 .00237 .1122116

. estsimp ologit Q27_2 ExonRace DNA Confession RaceDNA RaceConf PartRace Female Democrat Midwest
Northe
> ast Southeast Southwest Student

Iteration 0: log likelihood = -187.43725
Iteration 1: log likelihood = -175.77062
Iteration 2: log likelihood = -175.49652
Iteration 3: log likelihood = -175.49569

```

Iteration 4: log likelihood = -175.49569

Ordered logit estimates	Number of obs	=	133
	LR chi2(13)	=	23.88
	Prob > chi2	=	0.0322
Log likelihood = -175.49569	Pseudo R2	=	0.0637

Q27_2	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ExonRace	.7613306	.5791578	1.31	0.189	-.3737979	1.896459
DNA	1.021077	.5677279	1.80	0.072	-.0916496	2.133803
Confession	.0058637	.5364454	0.01	0.991	-1.04555	1.057277
RaceDNA	-1.385025	.8562164	-1.62	0.106	-3.063178	.2931286
RaceConf	.1749485	.8316522	0.21	0.833	-1.45506	1.804957
PartRace	-.2160125	.3798139	-0.57	0.570	-.960434	.5284091
Female	-.3037871	.3572323	-0.85	0.395	-1.00395	.3963755
Democrat	.8283607	.3641129	2.28	0.023	.1147125	1.542009
Midwest	-.0153507	.4338249	-0.04	0.972	-.8656318	.8349305
Northeast	.2792339	.6696948	0.42	0.677	-1.033344	1.591812
Southeast	-1.420322	.5174724	-2.74	0.006	-2.434549	-.4060945
Southwest	-.1056341	1.28802	-0.08	0.935	-2.630108	2.418839
Student	-.4013096	.9296949	-0.43	0.666	-2.223478	1.420859
_cut1	-2.955668	1.187459	(Ancillary parameters)			
_cut2	-1.619061	1.150706				
_cut3	-.6592351	1.142464				
_cut4	1.69661	1.154698				

Simulating main parameters. Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000 observations in order to accommodate the simulations. This will append missing values to the bottom of your original dataset.

% of simulations completed: 5% 11% 17% 23% 29% 35% 41% 47% 52% 58% 64% 70% 76% 82% 88% 94% 100%

Number of simulations : 1000

Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16 b17

. setx PartRace 1

.

. setx Female 1

.

. setx Democrat 1

.

. setx Midwest 1

.

. setx Northeast 0

.

. setx Southeast 0

.

. setx Southwest 0

.

. setx Student 1

.

. setx ExonRace 0

.

. setx DNA 0

.


```
. setx Confession 1
```

```
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_2=1)	.0620104	.0376572	.0174277	.1521902
Pr(Q27_2=2)	.1283351	.0539706	.0423268	.2514556
Pr(Q27_2=3)	.1777013	.0496689	.0837708	.2723987
Pr(Q27_2=4)	.4767071	.069639	.3179665	.5913827
Pr(Q27_2=5)	.1552461	.0698811	.0589223	.3292486

```
. setx ExonRace 1
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```
. setx DNA 1
```

```
. setx Confession 0
```

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. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_2=1)	.0141962	.0158507	.0016514	.0563019
Pr(Q27_2=2)	.0340822	.02959	.0053142	.1100072
Pr(Q27_2=3)	.0619834	.0436179	.0119288	.1809497
Pr(Q27_2=4)	.3944139	.1120186	.1608779	.5746143
Pr(Q27_2=5)	.4953243	.1755499	.1673795	.8197362

```
. estsimp ologit Q27_3 ExonRace DNA Confession RaceDNA RaceConf PartRace Female Democrat Midwest
Northe
```

```
> ast Southeast Southwest Student
```

```
Iteration 0: log likelihood = -143.8376
Iteration 1: log likelihood = -133.54008
Iteration 2: log likelihood = -133.44195
Iteration 3: log likelihood = -133.44176
```

```
Ordered logit estimates                                Number of obs   =      133
                                                         LR chi2(13)      =      20.79
                                                         Prob > chi2       =      0.0772
Log likelihood = -133.44176                             Pseudo R2        =      0.0723
```

Q27_3	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ExonRace	-.2284456	.5988729	-0.38	0.703	-1.402215	.9453237
DNA	-1.158676	.5740997	-2.02	0.044	-2.28389	-.0334608
Confession	.217939	.585612	0.37	0.710	-.9298394	1.365717
RaceDNA	1.68562	.8720916	1.93	0.053	-.0236478	3.394888
RaceConf	-.5268891	.8635755	-0.61	0.542	-2.219466	1.165688
PartRace	.2489855	.4006866	0.62	0.534	-.5363458	1.034317
Female	.1481093	.3745148	0.40	0.692	-.5859262	.8821448
Democrat	-.0896733	.3725266	-0.24	0.810	-.8198121	.6404655
Midwest	.2123456	.4455451	0.48	0.634	-.6609067	1.085598
Northeast	-.2830124	.7350053	-0.39	0.700	-1.723596	1.157572
Southeast	1.529194	.5161793	2.96	0.003	.5175015	2.540887
Southwest	1.161064	1.458387	0.80	0.426	-1.697323	4.01945
Student	1.384841	.9886013	1.40	0.161	-.5527823	3.322463

_cut1	.7670602	1.205032	(Ancillary parameters)			
_cut2	2.796916	1.228943				

```
Simulating main parameters. Please wait....
```

```
Note: Clarify is expanding your dataset from 133 observations to 1000
observations in order to accommodate the simulations. This will append
missing values to the bottom of your original dataset.
```

```
% of simulations completed: 6% 13% 20% 26% 33% 40% 46% 53% 60% 66% 73% 80% 86% 93% 100%
```

Number of simulations : 1000
Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15

```
. setx PartRace 1

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. setx Female 1

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. setx Democrat 1

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. setx Midwest 1

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. setx Northeast 0

.
. setx Southeast 0

.
. setx Southwest 0

.
. setx Student 1

.
. setx ExonRace 0

.
. setx DNA 0

.
. setx Confession 1
```

```
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_3=1)	.2152623	.0918272	.0790149	.4304361
Pr(Q27_3=2)	.4323069	.0622521	.2872893	.5367167
Pr(Q27_3=3)	.3524307	.1224441	.1504905	.617275

```
. setx ExonRace 1

. setx DNA 1

. setx Confession 0

. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_3=1)	.5512052	.1770606	.2075573	.8685105
Pr(Q27_3=2)	.3313073	.1069579	.1150393	.5016167
Pr(Q27_3=3)	.1174875	.0856244	.0197024	.3265291

```
. estsimp ologit Q27_6 ExonRace DNA Confession RaceDNA RaceConf PartRace Female Democrat Midwest
Northe
> ast Southeast Southwest Student
```

```
Iteration 0: log likelihood = -196.30612
Iteration 1: log likelihood = -186.89647
Iteration 2: log likelihood = -186.79833
Iteration 3: log likelihood = -186.79822
```

Ordered logit estimates	Number of obs	=	133
	LR chi2(13)	=	19.02
	Prob > chi2	=	0.1226
Log likelihood = -186.79822	Pseudo R2	=	0.0484

Q27_6	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
ExonRace	-1.025477	.5907979	-1.74	0.083	-2.18342	.1324651
DNA	-.3588835	.5412275	-0.66	0.507	-1.41967	.7019029
Confession	.0572404	.5347343	0.11	0.915	-.9908195	1.1053
RaceDNA	1.516169	.8245478	1.84	0.066	-.0999153	3.132253
RaceConf	.7649201	.8518148	0.90	0.369	-.9046063	2.434446
PartRace	-.3693123	.3797579	-0.97	0.331	-1.113624	.3749995
Female	-.0433639	.3521206	-0.12	0.902	-.7335075	.6467797
Democrat	-.9276705	.3574679	-2.60	0.009	-1.628295	-.2270463
Midwest	-.1044758	.4215762	-0.25	0.804	-.9307501	.7217984
Northeast	-.0083187	.6357276	-0.01	0.990	-1.254322	1.237685
Southeast	.4269745	.5000289	0.85	0.393	-.5530641	1.407013
Southwest	-2.376961	1.408852	-1.69	0.092	-5.138259	.3843379
Student	.0340732	.9041037	0.04	0.970	-1.737938	1.806084
_cut1	-1.95181	1.119332	(Ancillary parameters)			
_cut2	-.5211933	1.109915				
_cut3	.6709026	1.110606				
_cut4	1.980606	1.140331				

Simulating main parameters. Please wait....

Note: Clarify is expanding your dataset from 133 observations to 1000 observations in order to accommodate the simulations. This will append missing values to the bottom of your original dataset.

% of simulations completed: 5% 11% 17% 23% 29% 35% 41% 47% 52% 58% 64% 70% 76% 82% 88% 94% 100%

Number of simulations : 1000

Names of new variables : b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16 b17

```
. setx PartRace 1
.
. setx Female 1
.
. setx Democrat 1
.
. setx Midwest 1
.
. setx Northeast 0
.
. setx Southeast 0
.
. setx Southwest 0
.
. setx Student 1
.
. setx ExonRace 0
.
. setx DNA 0
.
. setx Confession 1
. simqi
```

Quantity of Interest	Mean	Std. Err.	[95% Conf. Interval]	
Pr(Q27_6=1)	.357877	.1098902	.1673623	.5897415

```

Pr(Q27_6=2) | .3251119 .0484822 .2248525 .414933
Pr(Q27_6=3) | .1864158 .0564479 .0866369 .3052698
Pr(Q27_6=4) | .0893721 .044004 .0290532 .1983655
Pr(Q27_6=5) | .0412232 .0264863 .0104616 .1152694

```

```

. setx ExonRace 1

. setx DNA 1

. setx Confession 0

. simqi

```

```

Quantity of Interest |      Mean      Std. Err.    [95% Conf. Interval]
-----+-----
Pr(Q27_6=1) | .6762671 .1527427 .3396073 .916004
Pr(Q27_6=2) | .2080487 .0815578 .0626936 .3554697
Pr(Q27_6=3) | .0747736 .0491101 .0140523 .1980744
Pr(Q27_6=4) | .028758 .0239735 .0039009 .0900732
Pr(Q27_6=5) | .0121526 .0122169 .0014739 .043534

```

Factors Contributing to Conviction		
	1981-1995	1996-2014
false confession	1	4
police misconduct	2	3
prosecutor misconduct	1	1
eyewitness misidentification	1	3
perjured testimony	5	2
faulty science	0	3
not indicated	4	7

Factors Contributing to Conviction (%)		
	1981-1995	1996-2014
false confession	8%	22%
police misconduct	17%	17%
prosecutor misconduct	8%	6%
eyewitness misidentification	8%	17%
perjured testimony	42%	11%
faulty science	0%	17%
not indicated	33%	39%

Factors Contributing to Conviction			
	1981-1990	1991-2000	2001-2014
false confession	1	2	2
police misconduct	0	4	1
prosecutor misconduct	0	2	0
eyewitness misidentification	1	1	2

perjured testimony	4	1	2
faulty science	0	1	2
not indicated	4	1	6

Factors Contributing to Conviction (%)			
	1981-1990	1991-2000	2001-2014
false confession	10%	33%	14%
police misconduct	0%	67%	7%
prosecutor misconduct	0%	33%	0%
eyewitness misidentification	10%	17%	14%
perjured testimony	40%	17%	14%
faulty science	0%	17%	14%
not indicated	40%	17%	43%

Exoneree Race			
	White	Black	Hispanic
1981-1990	8	2	0
1991-2000	1	5	0
2001-2014	4	8	2

Exoneree Race (%)			
	White	Black	Hispanic
1981-1990	80%	20%	0%
1991-2000	17%	83%	0%
2001-2014	29%	57%	14%

Exoneree Gender			
	Female	Male	TOTAL
White	1	12	13
Black	1	14	15
Hispanic	0	2	2
TOTAL	2	28	30

Exoneree Gender (%)			
	Female	Male	TOTAL
White	3%	40%	43%
Black	3%	47%	50%

Hispanic	0%	7%	7%
TOTAL	7%	93%	100%
Locations Featured			
	1981-1990	1991-2000	2001-2014
inside courthouse	4	3	10
outside courthouse	1	0	3
inside prison	2	1	4
outside prison	4	3	2
victim/family home	0	0	0
exoneree/family home	0	0	0
location of crime	1	0	2
laboratory	0	0	4
inside police station	0	0	1
outside police station	0	0	0

Either Mentioned or Discussed			
	1981-1990	1991-2000	2001-2014
exoneree lawyer	1	2	5
exoneree advocate (non-lawyer)	0	1	1
original prosecutor	0	0	0
post-conv gov lawyer	2	0	0
pre-conv judge	1	0	2
post-conv judge	2	2	4
family of victim	0	0	0
family of exoneree	5	1	2
victim	5	4	7
police	0	4	3
wrongful conviction expert(s)	0	0	2
DNA expert/technician	0	0	1
actual perpetrator of original crime	2	2	3

Factors Contributing to Conviction			
	1981-1990	1991-2000	2001-2014
false confession	1	2	2
police misconduct	0	4	1
prosecutor misconduct	0	2	0
eyewitness misidentification	1	1	2
perjured testimony	4	1	2

faulty science	0	1	2
not indicated	4	1	6
Factors Contributing to Exoneration			
	1981-1995	1996-2014	
DNA evidence	0	10	
Witness recantation	1	1	
Someone else confessed	1	1	
Scientific non-DNA evidence	1	0	
Victim says crime never occurred	2	2	
not indicated	7	4	

Factors Contributing to Exoneration (%)		
	1981-1995	1996-2014
DNA evidence	0%	56%
Witness recantation	8%	6%
Someone else confessed	8%	6%
Scientific non-DNA evidence	8%	0%
Victim says crime never occurred	15%	11%
not indicated	54%	14%

Factors Contributing to Exoneration			
	1981-1990	1991-2000	2001-2014
DNA evidence	0	1	9
Witness recantation	1	1	0
Someone else confessed	1	0	1
Scientific non-DNA evidence	1	0	0
Victim says crime never occurred	2	0	2
not indicated	5	4	2

Factors Contributing to Exoneration (%)			
	1981-1990	1991-2000	2001-2014
DNA evidence	0%	17%	64%
Witness recantation	10%	17%	0%
Someone else confessed	10%	0%	7%
Scientific non-DNA evidence	10%	0%	0%
Victim says crime never occurred	20%	0%	14%
not indicated	50%	67%	14%

Factors Contributing to Conviction (%)			
	1981-1990	1991-2000	2001-2014
false confession	10%	33%	14%
police misconduct	0%	67%	7%
prosecutor misconduct	0%	33%	0%
eyewitness misidentification	10%	17%	14%
perjured testimony	40%	17%	14%
faulty science	0%	17%	14%
not indicated	40%	17%	43%

Factors Contributing to Conviction (%)		
	1981-1995	1996-2014
false confession	8%	22%
police misconduct	17%	17%
prosecutor misconduct	8%	6%
eyewitness misidentification	8%	17%
perjured testimony	42%	11%
faulty science	0%	17%
not indicated	33%	39%

Factors Contributing to Conviction		
	1981-1995	1996-2014
false confession	1	4
police misconduct	2	3
prosecutor misconduct	1	1
eyewitness misidentification	1	3
perjured testimony	5	2
faulty science	0	3
not indicated	4	7

Discussion of DNA		
	Yes	No
1981-1995	0	12
1996-2014	5	13

Discussion of DNA (%)		
	Yes	No
1981-1995	0%	100%
1996-2014	28%	72%
TOTAL	17%	83%

Discussion of DNA		
	Yes	No
1981-1990	0	10
1991-2000	1	5
2001-2014	4	10

Discussion of DNA (%)		
	Yes	No
1981-1990	0%	100%
1991-2000	17%	83%
2001-2014	29%	71%
TOTAL	17%	83%

Death Row			
	Yes	No	Not indicated
1981-1995	3	6	3
1996-2014	3	11	4

Death Row (%)			
	Yes	No	Not indicated
1981-1995	25%	50%	25%
1996-2014	17%	61%	22%
TOTAL	20%	57%	23%

Death Row			
	Yes	No	Not indicated
1981-1990	3	5	2
1991-2000	2	1	3
2001-2014	1	11	2

Death Row (%)			
	Yes	No	Not indicated
1981-1990	30%	50%	20%
1991-2000	33%	17%	50%
2001-2014	7%	79%	14%
TOTAL	20%	57%	23%

Actual Perpetrator Identified			
	Yes	No	Not indicated
1981-1990	2	1	5
1991-2000	2	1	3
2001-2014	3	1	9

Actual Perpetrator Identified (%)			
	Yes	No	Not indicated
1981-1990	25%	13%	63%
1991-2000	33%	17%	50%
2001-2014	23%	8%	69%
TOTAL	23%	10%	57%

Discussion of History of Exonerations		
	Yes	No
1981-1990	0	10
1991-2000	1	5
2001-2014	4	10

Discussion of History of Exonerations (%)		
	Yes	No
1981-1990	0%	100%
1991-2000	17%	83%
2001-2014	29%	71%
TOTAL	17%	83%

Appendix B: Consent Form (Political Science Research Pool)

**Northwestern University
Political Science
Consent Form for Research**

PRINCIPAL INVESTIGATOR: Traci Burch, Assistant Professor of Political Science

CO-INVESTIGATOR/STUDENT INVESTIGATOR: Laura Rozier

SUPPORTED BY: Katherine L. Kriegbaum Scholarship

What is the Purpose of this Study?

You are being asked to take part in a research study. This form has important information about the reason for the study, what you will do, and the way we would like to use information about you if you choose to be in the study.

You are being asked to participate in a research study about opinion formation.

The purpose of this study is to better understand factors that affect attitudes toward the United States criminal justice system.

You are being asked to participate in this study because we are interested in the opinions of adults about this topic.

What will I Do if I Choose to be in this Study?

First, you will be asked to read an article about one of the following scenarios: police officers who fell in the line of duty, innocent people who were wrongfully convicted, or offenders who committed violent crimes. Next, you will complete a follow-up survey about your thoughts regarding various aspects of the American criminal justice system. Finally, you will be asked to answer a brief series of questions regarding your age, race, gender, and similar demographic information. You may choose not to disclose any information that you would prefer not to share. After completing the survey, you will be dismissed by the study facilitator.

Your participation in this study will last for approximately 30 minutes and will involve one visit/session.

At any time in the study, you may decide to withdraw from the study. If you withdraw no more information will be collected from you. When you indicate you wish to withdraw the investigator will ask if the information already collected from you can be used.

What are the Possible Risks or Discomforts?

Your participation in this study may involve the following risks:

- You may get tired during the tasks. You can rest at any time.

- You may feel emotional or upset when answering some of the questions and reading the articles. Tell the facilitator at any time if you wish to take a break or stop the survey.

What are the Possible Benefits for Me or Others?

You are not likely to have any direct benefit from being in this research study.

Compensation

Upon your completion of the study, you will receive credit toward your Political Science research participation requirement.

What are my Rights as a Research Participant?

If you choose to be in this study, you have the right to be treated with respect, including respect for your decision whether or not you wish to continue or stop being in the study. You are free to stop being in the study at any time.

Choosing not to be in this study or to stop being in this study will not result in any penalty to you or loss of benefits to which you are otherwise entitled. Specifically, if you choose to not be in this study, this choice will not negatively affect your right to any present or future participation in studies for the Northwestern Political Science department.

If you want to speak with someone *who is not directly involved* in this research, or if you have questions about your rights as a research subject, contact the Northwestern University Institutional Review Board (IRB) Office. You can call them at (312) 503-9338 or send e-mail to irb@northwestern.edu.

Your participation in this study is voluntary and you are free to withdraw at any time.

What about my Confidentiality and Privacy Rights?

Participation in this research study may result in a loss of privacy, since persons other than the investigator(s) might view your study records. Unless required by law, only the study investigator, members of the investigator's staff, the Northwestern University Institutional Review Board, have the authority to review your study records. They are required to maintain confidentiality regarding your identity.

Results of this study may be used for teaching, research, publication, and presentation purposes. If your individual results are discussed, your identity will be protected by using a code number rather than your name or other identifying information.

Whom should I Call if I have Questions or Concerns about this Research Study?

If you have any during your time on this study, call us promptly. Traci Burch is the person in charge of this research study. You can call her at 847-491-4848 Monday through Friday from 9am to 5pm. You can also Laura Rozier at 203-644-6852 with questions about this research.

Consent

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form after I sign it.

Subject's Name (printed) and Signature

Date

Name (printed) and Signature of Person Obtaining Consent

Date

Appendix C: Consent Form (Northwestern Staff)

Northwestern University Political Science Consent Form for Research

PRINCIPAL INVESTIGATOR: Traci Burch, Assistant Professor of Political Science

CO-INVESTIGATOR/STUDENT INVESTIGATOR: Laura Rozier

SUPPORTED BY: Katherine L. Krieghbaum Scholarship

What is the Purpose of this Study?

You are being asked to take part in a research study. This form has important information about the reason for the study, what you will do, and the way we would like to use information about you if you choose to be in the study.

You are being asked to participate in a research study about opinion formation.

The purpose of this study is to better understand factors that affect attitudes toward the United States criminal justice system.

You are being asked to participate in this study because we are interested in the opinions of adults about this topic.

What will I Do if I Choose to be in this Study?

First, you will be asked to read an article about one of the following scenarios: police officers who fell in the line of duty, innocent people who were wrongfully convicted, or offenders who committed violent crimes. Next, you will complete a follow-up survey about your thoughts regarding various aspects of the American criminal justice system. Finally, you will be asked to answer a brief series of questions regarding your age, race, gender, and similar demographic information. You may choose not to disclose any information that you would prefer not to share. After completing the survey, you will be dismissed by the study facilitator.

Your participation in this study will last for approximately 30 minutes and will involve one visit/session.

At any time in the study, you may decide to withdraw from the study. If you withdraw no more information will be collected from you. When you indicate you wish to withdraw the investigator will ask if the information already collected from you can be used.

What are the Possible Risks or Discomforts?

Your participation in this study may involve the following risks:

- You may get tired during the tasks. You can rest at any time.
- You may feel emotional or upset when answering some of the questions and reading the articles. Tell the facilitator at any time if you wish to take a break or stop the survey.

What are the Possible Benefits for Me or Others?

You are not likely to have any direct benefit from being in this research study.

Financial Information

Upon your completion of the study, you will be paid \$15 in cash. \$5 will be awarded for partial participation.

What are my Rights as a Research Participant?

If you choose to be in this study, you have the right to be treated with respect, including respect for your decision whether or not you wish to continue or stop being in the study. You are free to stop being in the study at any time.

Choosing not to be in this study or to stop being in this study will not result in any penalty to you or loss of benefits to which you are otherwise entitled. Specifically, if you choose to not be in this study, this choice will not negatively affect your right to any present or future participation in studies for the Northwestern Political Science department.

If you want to speak with someone *who is not directly involved* in this research, or if you have questions about your rights as a research subject, contact the Northwestern University Institutional Review Board (IRB) Office. You can call them at (312) 503-9338 or send e-mail to irb@northwestern.edu.

Your participation in this study is voluntary and you are free to withdraw at any time.

What about my Confidentiality and Privacy Rights?

Participation in this research study may result in a loss of privacy, since persons other than the investigator(s) might view your study records. Unless required by law, only the study investigator, members of the investigator's staff, the Northwestern University Institutional Review Board, have the authority to review your study records. They are required to maintain confidentiality regarding your identity.

Results of this study may be used for teaching, research, publication, and presentation purposes. If your individual results are discussed, your identity will be protected by using a code number rather than your name or other identifying information.

Whom should I Call if I have Questions or Concerns about this Research Study?

If you have any during your time on this study, call us promptly. Traci Burch is the person in charge of this research study. You can call her at 847-491-4848 Monday through Friday from 9am to 5pm. You can also Laura Rozier at 203-644-6852 with questions about this research.

Consent

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above.

Subject's Name (printed) and Signature

Date

Name (printed) and Signature of Person Obtaining Consent

Date

Appendix D: Experiment Debrief Form

The study in which you just participated seeks to understand the effect of exonerations on individuals' attitudes toward the death penalty. Contrary to what is stated in the consent form that you signed, no participants read articles regarding police officers fallen in the line of duty or offenders who committed violent crimes; all participants were given an article about innocent people who were wrongfully convicted. The variables being manipulated in the experimental condition were the race of the exoneree and whether the cause of exoneration was DNA evidence, witness recantation, or not mentioned. Through this study, we hope to uncover the effects of these variables on the extent to which exonerations influence attitudes toward the death penalty.

If you have further questions or concerns about this study, feel free to call or email Traci Burch at 847-491-4848 or t-burch@northwestern.edu. You can also call or email Laura Rozier at 203-644-6852 or laurarozier2015@u.northwestern.edu.

Appendix E: Experiment Article Manipulations

Key

- Black: all conditions
- **BLUE**: white vs. black exonoree condition
- **RED**: DNA condition
- **GREEN**: eyewitness ID condition
- **PURPLE**: no mention condition

Death Row Inmate Is Freed **[AFTER DNA TEST CLEARS HIM]** **[AFTER WITNESSES RECANT]** **[AFTER 18 YEARS BEHIND BARS]**

By RAYMOND BONNER

Published: August 24, 2001

[DARRYL REYNOLDS / JACOB GOLDSTEIN] has been on death row for almost 18 years for the rape and murder of a 9-year-old girl who was snatched off the street in Nampa, a small town west of Boise, Idaho.

But this afternoon, Mr. **[REYNOLDS / GOLDSTEIN]**, 11 days shy of his 53rd birthday, walked out of a maximum security prison into the blazing sun, a free man. Two hours earlier, a state judge ordered the charges against him dismissed on the basis of **[DNA TESTS INDICATING THAT HAIRS FOUND ON THE GIRL'S BODY, WHICH HAD BEEN USED TO CONVICT MR. REYNOLDS/GOLDSTEIN, WERE NOT HIS / TWO KEY WITNESSES USED TO CONVICT MR [REYNOLDS/GOLDSTEIN] RECANTING THEIR TESTIMONY. / NEWLY DISCOVERED EVIDENCE OF MR. [REYNOLDS/GOLDSTEIN]'S INNOCENCE]**

"Sometimes it looked pretty dark," Mr. **[REYNOLDS/GOLDSTEIN]** said, but he said he had been confident he would be exonerated. "I'm 100 percent innocent. The day the crime happened, I was sound asleep at my dad's" -- 360 miles away in Redmond, Oregon.

Mr. **[REYNOLDS / GOLDSTEIN]** had difficulty today using the seat belts in the car that drove him away from prison -- they were not mandatory when he went to prison -- held on tightly when he rode in an elevator to his lawyer's ninth-floor office and was uneasy walking on thick carpet. "I'm used to walking five steps forward, five steps back, then three steps to the side," he said, describing life in his cell.

The Sommers murder shook the residents of Nampa. The girl had been abducted as she walked

to Lincoln Elementary School, then raped; her body was thrown in a ditch near the Snake River. It was not found for several days.

After seven months, the police were stymied. Then they picked up Mr. [REYNOLDS / GOLDSTEIN]. A Vietnam veteran who had served with the 101st Airborne, Mr. [REYNOLDS / GOLDSTEIN] had difficulty holding a job after his honorable discharge, bouncing between Idaho and Oregon. At the time of his questioning, he was living in Nampa, a block from Alicia's house.

His address [AND HIS DARK HAIR -- SIMILAR TO THAT FOUND ON ALICIA'S BODY -- WERE] was the reason[S] he was called in for questioning, his appellate lawyers said in one filing.

MR. REYNOLDS/GOLDSTEIN WAS AMONG SCORES OF MEN ASKED TO GIVE HAIR SAMPLES. EXPERT EVALUATIONS OF THE SAMPLES CONCLUDED THAT HIS WERE SIMILAR TO THOSE FOUND ON ALICIA.

A month after [EVALUATING THE SAMPLES / THEY FIRST CONTACTED MR. REYNOLDS/GOLDSTEIN / THEY FIRST CONTACTED MR. REYNOLDS/GOLDSTEIN], police interrogated [MR. REYNOLDS/GOLDSTEIN / HIM] for more than two hours, then asked him to take a polygraph test; he agreed.

A state examiner of the test concluded that Mr. [REYNOLDS / GOLDSTEIN] was telling the truth when he denied involvement in the rape and murder. At the trial, though, prosecutors objected to introducing the polygraph results as evidence and the judge agreed.

SOME OF THE MOST DAMNING EVIDENCE AGAINST MR. [REYNOLDS / GOLDSTEIN] WAS THE TESTIMONY OF TWO JAILHOUSE INFORMERS. THE MEN GAVE LURID DETAILS OF WHAT THEY SAID MR. [REYNOLDS / GOLDSTEIN] HAD TOLD THEM ABOUT WHAT HE HAD DONE TO ALICIA.

IT IS NOT CLEAR WHY THE TWO MEN GAVE FALSE TESTIMONY. ONE OF MR. [REYNOLDS / GOLDSTEIN]'S APPELLATE LAWYERS, SPENCER MCINTYRE, SAID IT SHOWED HOW JAILHOUSE INFORMERS MANIPULATE THE SYSTEM, KNOWING THAT IF THEY COOPERATE, THE AUTHORITIES WILL GO EASIER ON THEM -- EVEN WITHOUT AN EXPLICIT PROMISE OR DEAL.

While Mr. [REYNOLDS / GOLDSTEIN]'s attorneys have always maintained his innocence, the original prosecutor on the case, Richard Harris, said that [THE DNA TEST HAD NOT SHAKEN HIS VIEW / THE RECENT TESTS HAD NOT SHAKEN HIS VIEW / HE REMAINED CONFIDENT IN MR. [REYNOLDS / GOLDSTEIN]'S CONVICTION].

"It doesn't really change my opinion that much that [REYNOLDS / GOLDSTEIN]'s guilty," Mr. Harris said. "The case was a circumstantial-evidence case. There was a myriad of circumstances that pointed in his direction."

The trial judge, James Doolittle, also said he had no doubt that Mr. [REYNOLDS / GOLDSTEIN] was guilty. "If I had had the slightest doubt, I certainly would not have imposed the death penalty," said Judge Doolittle, who is retired.

D. Fredrick Hoopes, an Idaho lawyer who has worked on the case for more than a decade, said such reactions reinforced the problems with the death penalty. "We just can't kill people who we are sure are guilty," Mr. Hoopes said.

At least 96 people have been exonerated and freed from death rows in 22 states since the death penalty was reinstated in 1973, according to the Death Penalty Information Center, a nonprofit group in Washington that opposes capital punishment.

Six death-row inmates were exonerated in the first half of this year, Senator Patrick J. Leahy, Democrat of Vermont, said in June. Mr. Leahy, chairman of the Senate Judiciary Committee, has sponsored a bill to improve the quality of defense counsel and ensure the availability of DNA testing in capital cases.

Mr. [REYNOLDS / GOLDSTEIN]'s parents died while he was in prison; he did not know where he would live or what he would do now. "One day at a time," he said at his lawyer's office. Asked what he would have for dinner, he said, "whatever they put on the tray." Then, realizing he was not going to be fed by authorities tonight, he said, "I'll have to start making decisions for myself."

Appendix F: Survey

During this study, you will be asked to read an article about one of the following scenarios: police officers who fell in the line of duty, innocent people who were wrongfully convicted, or offenders who committed violent crimes. Next, you will complete a follow-up survey about your thoughts regarding various aspects of the American criminal justice system. Finally, you will be asked to answer a brief series of questions regarding your age, race, gender, and similar demographic information. You may choose not to disclose any information that you would prefer not to share.

[ARTICLE]

Please answer the following questions to the best of your ability.

- Why was the exoneree originally brought in for questioning by police?
- For how long was the exoneree in prison?

On a scale from 1 to 5, please indicate your level of agreement with each of the following statements. A rating of 1 indicates that you strongly disagree with a statement. A rating of 5 indicates that you strongly agree with a statement. If you feel neutral toward a statement, you may indicate that by giving it a rating of 3.

1. I am in favor of the death penalty for a person convicted of murder.
2. Life without the possibility of parole is a suitable alternative to the death penalty.
3. I believe that an innocent person has been sentenced to death and executed in the United States within the past 5 years.
4. If I were accused of a crime that I did not commit, I might be found guilty.
5. If a person is convicted of a crime, they definitely did it.
6. I believe that the individual in the article that I just read is guilty of the crime for which he was convicted.
7. The criminal justice system doesn't do enough to prevent crime.

8. A person convicted of murder should never be granted parole.
9. Violent crime is a growing problem in the United States.
10. I feel safe in my neighborhood.
11. I would call the police if I felt that I was in danger.
12. A person who kills a police officer should be sentenced to death.
13. I trust the police.

According to your best guess, about what percent of people who are executed under the death penalty are really innocent of the crime they were charged with?

- None
- 1-5%
- 6-10%
- 11-20%
- 21-50%
- More than 50%
- No opinion

Please indicate your:

- Age
- Race
 - White
 - Black or African American
 - Hispanic
 - Asian
 - Native Hawaiian or Other Pacific Islander
 - American Indian or Alaska Native
 - Other
 - Would prefer not to say
- Gender
 - Male
 - Female
 - Would prefer not to say
- Home state (if not a US resident, choose “Non-US Resident”)
- Political party affiliation
 - Republican
 - Democrat
 - Independent
 - Green
 - Other
 - Would prefer not to say
- Highest degree obtained or currently being pursued
 - High school
 - Associate’s
 - Bachelor’s
 - Master’s
 - J.D.

- M.D.
 - PhD
 - None of the above
 - Would prefer to say
- On average, how many times per week do you read the news online or in print?
- On average, how many times do you watch the news online or on TV?