EMPIRICAL ANALYSIS AND THE FATE OF CAPITAL PUNISHMENT

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ABSTRACT

In his dissenting opinion in Glossip v. Gross, Justice Breyer attempted to give content to the Supreme Court's prior command in *Atkins v. Virginia* that unless the imposition of the death penalty "*measurably contributes* to one or both of [the legitimate penological goals of deterrence and retribution], it 'is nothing more than the purposeless and needless imposition of pain and suffering,' and hence an unconstitutional punishment." Justice Breyer's opinion illuminates the central role that empirical studies have played in death penalty litigation since *Furman v. Georgia* on issues ranging from the lack of deterrence associated with the death penalty; to racial and ethnic bias in its administration; to the extensive delays, cost, errors, and arbitrary implementation; and to the failure to limit capital punishment to the worst of the worst offenders.

Two months after *Glossip*, the battle over the empirical evaluation of capital punishment played out in the contentious 4-3 decision in *State v. Santiago*, in which the Connecticut Supreme Court found the death penalty unconstitutional in the wake of the state legislature's prior prospective abolition. The bitter judicial contention in both *Glossip* and *Santiago* over the evaluation of evidence of racial and ethnic bias and an array of other empirical issues highlights both the critical importance of empirical analysis to the fate of the death penalty and the difficulty that many judges have in properly evaluating statistical evidence. The statistically unsupportable attempts by the State's expert to undermine the overwhelming evidence of racial disparity in capital charging in Connecticut underscores that highly flawed statistical

evidence will often be pressed upon (or seized upon by) judges who may be ideologically inclined to accept work that true experts would readily reject. If the Supreme Court is able to effectively appraise the best empirical work in applying the *Atkins* standard, it is difficult to see how the death penalty could be sustained as a constitutional punishment.

Unless the imposition of the death penalty "*measurably contributes to one or both of these goals* [deterrence and retribution], it 'is nothing more than the purposeless and needless imposition of pain and suffering,' and hence an unconstitutional punishment."

– *Atkins v. Virginia,* 536 U.S. 304, 318–19 (2002) (emphasis added).

INTRODUCTION

The decline of capital punishment in the United States is evident in the numbers. In 2015, only 49 death sentences were issued in the entire country (down from a peak of 315 in 1996), and only 28 convicts were executed (down from a peak of 98 in 1999).[1] Not only were these the lowest numbers in decades, but nineteen states have formally abolished capital punishment, up from twelve in 2004, and many other states have not executed anyone for years. Only four states executed more than one convict in 2015—Texas (13), Georgia (6), Missouri (5), and Florida (2).[2] But even Texas only handed down two death sentences in all of 2015.[3]

The Supreme Court in *Furman v. Georgia*[4] emphasized that the infrequency of application of the death penalty with no convincing basis for distinguishing the few who are sentenced to death from the many who avoid that penalty rendered capital punishment freakish, arbitrary, ineffectual, and hence unconstitutional. The reduction in the use of capital punishment in the last few years invites a similar critique of the modern capital regime. Even though the U.S. population has grown by over 50 percent in the last 45 years,[5] fewer death sentences were handed out in the last decade than in the decade preceding the *Furman* decision. With this declining use of the death penalty, the

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1. *Death Penalty Use in 2015 Declines Sharply*, DEATH PENALTY INFO. CTR, http://deathpenaltyinfo.org/documents/2015YrEnd.pdf (last visited February 10, 2016).
2. *Id.*
3. *Id.*
4. 408 U.S. 238 (1972).
5. U.S. Population, http://www.worldometers.info/world-population/us-population/ (last visited June 15, 2016).

Supreme Court will have to decide whether the trend should be allowed to play itself out or whether the time is right for a momentous decision that goes beyond *Furman* by rendering the death penalty unconstitutional.

The great eighteenth century Italian criminologist Cesare Beccaria wrote that the death penalty could not be a legitimate punishment because it furthers no acceptable penological objective more effectively than life imprisonment.[6] The U.S. Supreme Court has essentially embraced this Beccarian framework by stating that there are only two permissible penological objectives of the death penalty—deterrence and retribution—and, as quoted above, the Court in *Atkins v. Virginia* asserted that capital punishment cannot be sustained unless it "*measurably contributes*" to one or both of these objectives.[7] Whether the death penalty lives or dies will depend on how courts assess the growing empirical literature highlighting the lack of benefits associated with capital punishment and the burgeoning list of problems with its use.

Two judicial opinions issued during the summer of 2015 previewed the coming battle over the constitutionality of capital punishment. Both Justice Breyer's dissent in *Glossip v. Gross*,[8] and a concurring opinion from the Connecticut Supreme Court in *State v. Santiago*[9] relied heavily on empirical studies to make the case that the death penalty could no longer be deemed a constitutionally valid punishment. At the same time, both cases stimulated harsh attacks on the need for and proper interpretation of the empirical analysis of the death penalty.[10] These judicial skirmishes illustrate the difficulties that some judges have had in separating out the wheat from the chaff in evaluating empirical studies of the death penalty.

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6. Cesare Beccaria, *On Crimes and Punishment*, THE FEDERALIST PAPERS PROJECT 38, http://thefederalistpapers.integratedmarket.netdna-cdn.com/wp-content/uploads/2013/01/Cesare-Beccaria-On-Crimes-and-Punishment.pdf (last visited June 13, 2016).

7. Atkins v. Virginia, 536 U.S. 304, 319 (2002) (emphasis added) (quoting Enmund v. Florida, 458 U.S. 782, 798 (1982)).

8. Glossip v. Gross, 135 S. Ct. 2726, 2755, *reh'g denied*, 136 S. Ct. 20 (2015) (Breyer, J., dissenting).

9. State v. Santiago, 318 Conn. 140, *reconsideration denied*, 319 Conn. 912 (2015) (Norcott and McDonald, Js., concurring).

10. *See infra* text accompanying notes 58, 97, 108; *Glossip*, 135 S. Ct. at 2748–49 (regarding Justice Scalia's criticisms of Breyer's stance on the empirical literature); *infra* text accompanying notes 101, 117; *Glossip* at 2751–53 (regarding Justice Thomas' criticisms of the same); *see generally Santiago*, 318 Conn. at 231 (Rogers C. J., dissenting); *id.* at 341–88 (Zarella, J., dissenting); *id.* at 388–412 (Espinosa, J. dissenting).

It is likely that the fate of the death penalty in the U.S. will depend on whether the *Atkins v. Virginia* mandate that capital punishment must measurably contribute to deterrence or retribution is seriously and intelligently applied in future court challenges. If it is, the death penalty could well be deemed unconstitutional—as it was in *Santiago*[11] and as Justice Breyer suggested it should be in *Glossip*.[12] If the command of *Atkins* is ignored (or disavowed) or the type of empirical malpractice that is sometimes offered by the defenders of the death penalty receives judicial sanction, then the death penalty will live on, immunized from the mounting evidence of its increasingly troubling administration.

This paper will address how empirical evidence has and will continue to shape the debate over the desirability and constitutionality of the death penalty in the United States at both the state and federal level. Part I begins with a brief review of some prominent contributions on the issue of whether capital punishment deters the commission of murder, and highlights how the National Research Council (NRC) report of 2012 on deterrence and the death penalty has essentially foreclosed the argument that the death penalty *measurably* contributes to deterrence. The section ends with a detailed description of how Justice Scalia continued to cite discredited studies on deterrence as though they had been endorsed rather than specifically rejected by the NRC report.

Part II addresses the question of whether empirical evidence could support the position that capital punishment *measurably* contributes to retribution. Drawing on work that I prepared in serving as an expert in a challenge to the Connecticut death penalty, I discuss the finding of my study that the Connecticut death penalty has not limited death sentences to the worst of the worst offenses, and respond to criticisms of my methodology offered by Justices Scalia and Thomas in *Glossip*. Looking at how capital punishment has played out over the last four decades, Justice Breyer noted that over 75 percent of the 183 inmates sentenced to death throughout the United States in 1978 escaped the executioner.[13] This raises serious doubts about the claim that capital punishment plausibly furthers a retributive goal. Certainly, one would not expect such an outcome from a process that rationally separates out the few who will die from the many who will not.

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11.   State v. Santiago, 318 Conn. 140, *reconsideration denied*, 319 Conn. 912 (2015).
12.   *Glossip*, 135 S. Ct. at 2769–70 (Breyer, J., dissenting).
13.   *Id*. at 2768.

Part III discusses yet another aspect of arbitrariness in capital outcomes that undermines its retributive goal—the influence of race. I briefly review the proliferating empirical evidence on race disparities in capital sentencing, and then discuss the battle between me and Connecticut's opposing expert over whether minority on white murders were capitally charged by Connecticut prosecutors at significantly higher rates than minority on minority murders.[14] Interestingly, the expert witness for Connecticut first acknowledged this racial disparity in capital charging, then tried to offer at trial a regression undermining this view based on his mistaken coding of a key explanatory variable, and subsequently engaged in an array of dubious efforts to obscure the racial disparity that was clearly evident in the correct version of the regression that he had presented to the court.

The example underscores the dangers that lurk when judges are unable to weed out inadequate empirical work, and the discussion throughout provides an array of illustrations of how judges have offered invalid statistical evidence, made erroneous factual claims in the face of valid contradictory evidence, or simply ignored cogent empirical findings to defend the death penalty. Part IV offers some concluding remarks on the likely fate of the death penalty if the *Atkins* standard is seriously applied in the face of the current empirical evidence on the administration of capital punishment.

I. DETERRENCE

Cesare Beccaria, writing in 1764 (at age 26!) in his famed treatise *On Crimes and Punishments* argued that all aspects of criminal justice, including whether the death penalty deters crime, needed to "be solved with that geometrical precision which the mist of sophistry, the seduction of eloquence, and the timidity of doubt are unable to resist."[15] For Beccaria, the answer was clear: because life imprisonment "has in it all that is necessary to deter the most hardened and determined," the death penalty could not be a just expression of state power since the death penalty is *not* a more effective deterrent than life imprisonment.[16] Indeed, Beccaria feared that capital punishment might

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14. "Minority on white murders" are cases where a minority defendant has murdered a white victim. "White" refers to a non-Hispanic white individual, and "minority" refers to all others.

15. *See* Beccaria, *supra* note 6, at 19.

16. *Id*. at 39.

independently *decrease* deterrence by making citizens callous to the taking of another's life with "the example of barbarity it affords."[17]

Ultimately, Beccarian thinking has come to influence the belief of a majority of the Justices of the Supreme Court that, if a death penalty regime is to be constitutional, it must serve a legitimate penological interest by advancing the goal of deterrence or retribution.[18] Unless the imposition of the death penalty "*measurably contributes* to one or both of these goals [deterrence and retribution], the Supreme Court has stated, it 'is nothing more than the purposeless and needless imposition of pain and suffering,' and hence an unconstitutional punishment."[19]

For our purposes, the operative word in the above quote is "measurably," which signals the central role that empirical analysis must play in assessing the death penalty's constitutionality under the *Atkins* standard. We begin with the first possible justification for using capital punishment: deterrence. Although Beccaria was confident in his prediction that the death penalty would not deter—just as some judges today are confident in their opposing prediction—we no longer need to rely solely on intuition. Instead, we can statistically evaluate crime data using modern econometric techniques to see if the *Atkins* standard can be satisfied.

A. The Sellin Study Finding No Evidence of Deterrence

The first serious empirical effort to assess the deterrence of the death penalty was undertaken by the sociologist Thorsten Sellin.[20] Based on a careful but simple comparison of the evolution of homicide rates in contiguous states from 1920 to 1963, Sellin buttressed the Beccarian doubt that the imposition of the death penalty would generate any net deterrent effect on murder.[21] Sellin's work may have been one of the many factors that contributed to the waning reliance on capital punishment, as executions virtually ceased in the late 1960s.[22]

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17. *Id*. at 40. Beccaria's work influenced Jeremy Bentham, who agreed that the death penalty could not be a just punishment for the reasons that Beccaria articulated. Hugo Adam Bedau, *Bentham's Utilitarian Critique of the Death Penalty*, 74 J. CRIM. L. & CRIMINOLOGY 1033, at 1036–37, 1044, 1051 (1983).

18. *See* Atkins v. Virginia, 536 U.S. 304, 319 (2002).

19. *Id*. (emphasis added) (quoting Enmund v. Florida, 458 U.S. 782, 798 (1982)).

20. Thorsten Sellin, *Homicides in Retentionist and Abolitionist States*, CAPITAL PUNISHMENT 135 (Thorsten Sellin ed., 1967).

21. *Id.* at 138 (finding no evidence that capital punishment deters homicide).

22. *See* M. Watt Espy & John Ortiz Smykla, *Executions in The United States, 1608-2002: The Espy File (ICPSR 8451)*, NACJD, http://www.icpsr.umich.edu/icpsrweb/NACJD/studies/8451 (last updated Nov 4, 2005).

In 1972, the Supreme Court's decision in *Furman* ruled that existing death penalty statutes were unconstitutional.[23] Although *Furman* appeared to be a setback for supporters of capital punishment, the decision produced a backlash that stimulated support for the death penalty, both in state legislatures around the country and in certain academic circles.[24] In 1975, Isaac Ehrlich's econometric analysis of national time-series data was used to claim that each execution saved eight lives.[25] A year later, Solicitor General Robert Bork presented a highly laudatory assessment of Ehrlich's work (written by his assistant Frank Easterbrook) to the Supreme Court,[26] and the Court, while claiming not to have relied on the empirical evidence, ended the death penalty moratorium when it upheld various capital punishment statutes in *Gregg v. Georgia* and related cases.[27]

B. Ehrlich Finds Deterrence But the NRC Disagrees

The Bork-Easterbrook brief highlighted the potential weaknesses of Sellin's simple cross-state comparisons, which did not control for other factors that might have been changing differently in the treatment and control states (that is, the states adopting the death penalty and the matched states that did not).[28] Because Ehrlich's regression study introduced some controls, it seemed at the time to be an improvement over the Sellin study. Forty years of experience have now taught us that a poorly designed regression study can easily give the wrong answer to any causal question, and the complexity of Ehrlich's particular approach obscured its abundant flaws to all but the most sophisticated analysts.

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23.   Furman v. Georgia, 408 U.S. 238 (1972).

24.   *See* LEE EPSTEIN & JOSEPH KOBYLKA, THE SUPREME COURT AND LEGAL CHANGE: ABORTION AND THE DEATH PENALTY 90 (Univ. of N.C. Press 1992) (documenting the rapid legislative enactment of new state death penalty statutes and increased public support for the death penalty in the wake of *Furman*).

25.   Isaac Ehrlich, *The Deterrent Effect of Capital Punishment: A Matter of Life and Death*, 65 AM. ECON. REV., at 398 (1975).

26.   Gregg v. Georgia, 428 U.S. 153, 233–34 (1976) (Marshall, J., dissenting).

27.   *See id.* at 185. In *Gregg*, Justice Stewart stated, "Although some of the studies suggest that the death penalty may not function as a significantly greater deterrent than lesser penalties, there is no convincing empirical evidence either supporting or refuting this view." *Id.* Yet he then asserted, "We may nevertheless assume safely that there are murderers, such as those who act in passion, for whom the threat of death has little or no deterrent effect. But for many others, the death penalty undoubtedly is a significant deterrent." *Id.* Justice Stewart did not clarify whether he believed that murders would increase if convicted murderers who might otherwise be executed instead received sentences of life without parole and, if so, on what basis this might be safely assumed.

28.   *See* Sellin, *supra* note 20, at 135.

The injection of Ehrlich's conclusions into the legal and public policy arenas, coupled with the academic debate over Ehrlich's methods, led the National Academy of Sciences to convene a panel of experts that issued a 1978 report concluding that Ehrlich's work in support of a deterrent effect of capital punishment was unpersuasive.[29] Over the next two decades, as a series of conflicting academic papers were published on the deterrence question, the rate of executions gradually increased, albeit to levels much lower than those seen in the first half of the twentieth century.[30] While some improvidently claimed that there was strong evidence that the death penalty deterred murder,[31] the growing recognition of the dramatic weaknesses of the pro-deterrence literature led to the release of a second National Academy of Sciences panel report in 2012 entitled "DETERRENCE AND THE DEATH PENALTY,"[32] which again found no valid statistical support for the claim of deterrence.

It is now widely accepted among top-flight empirical scholars that not a single study credibly supports the view that capital punishment as administered anywhere in the United States provides any added deterrent beyond that afforded by a sentence of life imprisonment.[33] The indictment by the NRC report of the studies claiming to find a deterrent effect of capital punishment applied both to studies that examined the death penalty throughout the United States, as well as

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29.   NAT'L ACAD. OF SCIS, DETERRENCE AND INCAPACITATION: ESTIMATING THE EFFECTS OF CRIMINAL SANCTIONS ON CRIME RATES, 59–62 (Alfred Blumstein et al. eds., 1978). While the validity of Sellin's study depended on how well he selected matching states that did and did not use the death penalty, at least he was looking at plausibly meaningful data. Ehrlich's initial study was focused on national time series data, which was inherently defective since it had no way to link changes in executions to homicides in the relevant states. *See* John J. Donohue, *Empirical Evaluation of Law: The Dream and the Nightmare*, 17 AM. L. & ECON. REV. 313, 311–20 (2015).

30.   *See* Espy & Smykla, *supra* note 22.

31.   See discussion *infra* accompanying note 40.

32.   COMM. ON DETERRENCE AND THE DEATH PENALTY, COMM. ON LAW AND JUSTICE, DIV. OF BEHAVIORAL AND SOC. SCIS AND EDUC., NAT'L RESEARCH COUNCIL, DETERRENCE AND THE DEATH PENALTY 3 (Daniel S. Nagin & John V. Peppers eds., 2012) [hereinafter COMM. ON DETERRENCE AND THE DEATH PENALTY]. The NRC panel included an array of impressive scholars with differing political beliefs, who reached a unanimous conclusion regardless of their prior position on the death penalty. In particular, James Q. Wilson, the former Ronald Reagan Professor of Public Policy at the Pepperdine University School of Public Policy, who had previously written in support of the death penalty, joined the final report's conclusion that no existing study credibly supported the deterrent effect of the death penalty.
The particular value of reports emanating from the NAS has been specifically acknowledged in the federal judiciary: "As the National Academy of Sciences was recognized by experts for both parties as the 'most prestigious' scientific association in this country, we will accordingly cite to its opinion where appropriate." Kitzmiller v. Dover Area Sch. Dist., 400 F. Supp. 2d 707, 735 (2005).

33.   *See generally* Donohue, *supra* note 29, at 313.

studies that limited their focus to individual states. Specifically, the report noted that whether one looked at Texas, which vigorously applied the death penalty in the 1990s and 2000s; California, a state that sentenced many convicts to death but which has only executed 13 over the last 30 years; or New York, which has executed no one over this period; the murder rates have moved roughly comparably. In fact, while all three states had roughly similar murder rates in the early 1990s, the only one of the three not to execute anyone–New York–has enjoyed a substantially lower murder rate since the time that Texas executions rose sharply in the late 1990s.[34]

C. Justice Scalia Clings to the Deterrence Argument Despite the NRC Report

But as educated judgment was taking a dim view of the studies purporting to show a deterrent effect of the death penalty, some judges were having a difficult time sorting out the wheat from the chaff. In the face of the unanimous judgment of the NRC panel that Justice Breyer cited in support of his view that the death penalty is not likely to be a greater deterrent than life imprisonment, Justice Scalia disagreed, saying, "[i]t seems very likely to me, and there are statistical studies that say so."[35] This disagreement mimicked a previous exchange between Justices Scalia and Stevens in the case of *Baze v. Rees*,[36] in which Justice Stevens cited research by Donohue and Wolfers and others to justify the claim that "there remains no reliable statistical evidence that capital punishment in fact deters potential offenders."[37] Justice Scalia replied by saying that Justice Stevens' conclusions "are not supported by the available data."[38] Justice Scalia supported his assertion with a cite to a single article by Cass Sunstein and Adrian Vermeule that was *not* an empirical evaluation of the deterrent effect of the death penalty (although it did list some such articles), but rather a philosophical discussion of what would be appropriate policy if the death penalty

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34. *See* Figure 3-3 in COMM. ON DETERRENCE AND THE DEATH PENALTY, *supra* note 32. Similar evidence of the lack of deterrence from the operation of the death penalty based on studies from around the world is summarized in ROGER HOOD & CAROLYN HOYLE, THE DEATH PENALTY: A WORLDWIDE PERSPECTIVE 423–25 (5th ed. 2015).

35. Glossip v. Gross, 135 S. Ct. 2726, 2746, *reh'g denied*, 136 S. Ct. 20 (2015) (Scalia, J., concurring).

36. Baze v. Rees, 553 U.S. 35 (2008).

37. *Id*. at 79 (Stevens, J., concurring). *See also* John J. Donohue & Justin Wolfers, *Uses and Abuses of Empirical Evidence in the Death Penalty Debate*, 58 STAN. L. REV. 791 (2005) [hereinafter *Uses and Abuses*].

38. *Id*. at 89 (Scalia, J., concurring).

were a deterrent.[39] Sunstein soon responded to Justice Scalia's claims by stating directly in a piece with Justin Wolfers that "[i]n short, the best reading of the accumulated data is that they do *not* establish a deterrent effect of the death penalty."[40] Apparently, neither the Sunstein and Wolfers correction of Justice Scalia, my own published discussion of this correction of the Justice,[41] nor the 2012 release of the NRC report[42] moved Justice Scalia to reconsider his reliance on the Sunstein and Vermeule article because this was one of the three "statistical studies" that Justice Scalia again offered to rebut Justice Breyer's claim in *Glossip*.[43]

The two additional studies that Justice Scalia provided in *Glossip* to support his intuition that the death penalty is a deterrent[44]—one by Zimmerman[45] and one by Dezhbakhsh, Rubin, & Shepherd ("DRS")[46]—were specifically identified in the NRC report as studies that should "not be used to inform" discussion about the deterrent value of the death penalty.[47] Indeed, if one merely types these four names into Google, it brings up Donohue and Wolfers, "Uses and Abuses of Empirical Evidence in the Death Penalty Debate,"[48] which, along with the NRC report,[49] and another Donohue and Wolfers' article,[50] catalogs a large array of problems with the Zimmerman and DRS studies.[51]

Perhaps the simplest of these problems to articulate is that both the DRS and Zimmerman results were not statistically significant.[52]

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39.   Cass R. Sunstein & Adrian Vermeule, *Is Capital Punishment Morally Required? Acts, Omissions, and Life-Life Tradeoffs*, 58 STAN. L. REV. 703, 706 (2005).

40.   Cass R. Sunstein & Justin Wolfers, *A Death Penalty Puzzle*, THE WASH. POST (Jun. 30, 2008) (emphasis added), http://www.washingtonpost.com/wp-dyn/content/article/2008/06/29/AR 2008062901476.html.

41.   *See* Donohue, *supra* note 29, at 37.

42.   COMM. ON DETERRENCE AND THE DEATH PENALTY, *supra* note 32, at 102.

43.   Glossip v. Gross, 135 S. Ct. 2726, 2748–49, *reh'g denied*, 136 S. Ct. 20 (2015) (Scalia, J., concurring).

44.   *Id*.

45.   Paul R. Zimmerman, *State Executions, Deterrence, and the Incidence of Murder*, 7 J. APPLIED ECON. 163 (2004).

46.   Hashem Dezhbakhsh et al., *Does Capital Punishment Have a Deterrent Effect? New Evidence from Postmoratorium Panel Data*, 5 AM. L. & ECON. REV. 344 (2003).

47.   COMM. ON DETERRENCE AND THE DEATH PENALTY, *supra* note 33, at 102.

48.   *See* Donahue & Wolfers, *Uses and Abuses*, *supra* note 38, at 836–39.

49.   COMM. ON DETERRENCE AND THE DEATH PENALTY, *supra* note 33.

50.   John J. Donohue & Justin Wolfers, *Estimating the Impact of the Death Penalty on Murder*, 11 AM. L. & ECON. REV. 249 (2009) [hereinafter *Impact of Death Penalty*].

51.   GOOGLE,   https://www.google.com/search?q=Zimmerman+Dezhbakhsh+Rubin+ Shepherd (last visited Apr. 4, 2016).

52.   *See* Donohue & Wolfers, *Impact of Death Penalty*, *supra* note 50, at 30–31. This wasn't

Moreover, the failure of both the DRS and Zimmerman studies to properly implement an econometric technique called "instrumental variables" led them to be specifically rejected by the NRC report because their instruments—and hence their findings—were not credible: "In general, the committee finds that the instruments proposed in the research are not credible and, as a result, this identification strategy has thus far failed to overcome the challenges to identifying a causal effect of the death penalty on homicide rates."[53]

While Justice Scalia remained untroubled by or oblivious to the issues raised in the NRC report, his recidivist pronouncements in *Glossip* after his missteps in *Baze v. Rees* are somewhat troubling.[54] In the wake of the clear discrediting by a unanimous panel of the National Research Council of the two actual statistical studies that Justice Scalia relied on and the subsequent specific rejection of Justice Scalia's conclusion by the lead author of a study he cited,[55] one might have hoped that Justice Scalia would offer something more credible than an effectively unadorned claim of what "seem[ed] very likely"[56] to him as a basis for ignoring a strong expert consensus.

Although it is undoubtedly challenging for a judge to independently sort out the good from the bad statistical studies, all Justice Scalia needed to do was read the abstract of the NRC report, which Justice Breyer cited,[57] to know he was treading on thin ice in

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the fault of the authors since, at the time they published, the correct approach for adjusting one's standard errors by clustering had not been identified. Intuitively, the problem is that without clustering, the calculation of statistical significance assumes, incorrectly, that the observation for say, murder in Illinois in 2000 is independent of the levels of murders in Illinois a year later. In fact, these two observations are highly correlated so there is less independent information available to the researcher than appears. Clustering adjusts for this fact, which will reduce statistical significance. This effect was strong enough to undermine the DRS and Zimmerman findings.

The need for clustering only became widely known in 2004 with the publication of Marianne Bertrand et al., *How Much Should We Trust Differences-In-Differences Estimates?* 119 Q. J. ECON., at 249 (2004). Aneja, Donohue, and Zhang clearly establish that the standard errors in the panel data crime studies that Justice Scalia cites are way too small, thereby exaggerating estimates of statistical significance. *See* Abhay Aneja et al., *The Impact of Right-to-Carry Laws and the NRC Report: Lessons for the Empirical Evaluation of Law and Policy*, 13 AM. L. ECON. REV., at 565 (2011); Abhay Aneja et al., *The Impact of Right to Carry Laws and the NRC Report: The Latest Lessons for the Empirical Evaluation of Law and Policy*, NBER WORKING PAPER NO. 18294 (2012).

53.   COMM. ON DETERRENCE AND THE DEATH PENALTY, *supra* note 32, at 68.

54.   Glossip v. Gross, 135 S. Ct. 2726, 2746, *reh'g denied*, 136 S. Ct. 20 (2015) (Scalia, J., concurring); Baze v. Rees, 553 U.S. 35, 87 (2008) (Scalia, J., concurring).

55.   *See* Sunstein & Wolfers, *supra* note 40.

56.   *Glossip*, 135 S. Ct. at 2748 (Scalia, J., concurring).

57.   *Id.* at 2768 (Breyer, J., dissenting).

offering two discredited statistical studies. It is also not asking too much to expect a judge to at least acknowledge when the primary author of the article he is citing for a certain proposition has specifically disavowed that proposition. Citations to empirical studies are not supposed to be mere props to create an illusion of support for a judge's untutored intuitions.

Having parried with his junk science, Justice Scalia then thrusted at Justice Breyer with the charge that, because federal judges are shielded from violence that plagues other members of the community, Justice Breyer's views on the death penalty reflect a "let-them-eat-cake obliviousness to the needs of others."[58] But, because Justice Breyer was being attentive to the best studies on the issue of deterrence while Scalia was not, the charge of "obliviousness" seems misdirected. Moreover, a majority of murder victims in the United States are black, [59] so attentiveness to the needs of others might lead one to inquire about the attitude towards the death penalty of members of this racial group. In fact, most blacks oppose the death penalty, perhaps reflecting their realization that it both will not promote their safety and is administered in a discriminatory fashion.[60]

Scalia's pronouncements concerning deterrence and the death penalty seem to buttress Judge Richard Posner's claim that Justice Scalia has a tendency to engage in "'motivated thinking,' the form of cognitive delusion that consists of credulously accepting the evidence that supports a preconception and of peremptorily rejecting the evidence that contradicts it."[61] Similarly, another academic critic (and former law clerk) has charged that Justice Scalia has an anti-scientific mindset that essentially believes that the quality of empirical studies is governed not by the dictates of scientific methodology but rather by how closely their findings conform to one's previously held beliefs.[62]

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58. *Id.* at 2749 (Scalia, J., concurring).

59. *Uniform Crime Reports: Expanded Homicide Data Table 1*, FED. BUREAU OF INVESTIGATION,   https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2014/crime-in-the-u.s.-2014/tables/expanded-homicide-data/expanded_homicide_data_table_1_murder_victims_by_race_ethnicity_and_sex_2014.xls (last visited June 13, 2016).

60. "A majority of African Americans (55%) oppose the death penalty . . . ." *Gallup Poll: Support for Death Penalty Declines 2%, Opposition Reaches Highest Level in 43 Years*, DEATH PENALTY INFO. CTR, http://www.deathpenaltyinfo.org/node/6275 (last visited June 14, 2016).

61· Richard Posner, *The Incoherence of Antonin Scalia*, THE NEW REPUBLIC Aug. 23, 2012, https://newrepublic.com/article/106441/scalia-garner-reading-the-law-textual-originalism.

62. As Harvard law professor Bruce Hay, Scalia's former law clerk, recently wrote, "Antonin Scalia generally detested science. It threatened everything he believed in. . . . Scientists should be listened to only if they supported conservative causes, for example dubious studies purporting to demonstrate that same-sex parenting is harmful to children." Bruce Hay, *I*

This is an unappealing and dangerous judicial trait—particularly in a matter of life and death—but unfortunately one that other strong judicial supporters of the death penalty seem to share.[63]

The bottom line is that decades of research examining the impact of capital punishment on the rate of murder have been unable to satisfy the constitutional standard quoted above from Atkins v. Virginia that capital punishment "*measurably contribute*" to the legitimate penological goal of deterrence. If the *Atkins* command is to be retained and given effect, the only basis on which a death penalty could be sustained would be on the grounds that it "*measurably contributes*" to retribution.

II. RETRIBUTION

The most unrelenting invocation of retribution as the rationale for the death penalty came from Immanuel Kant, who stated:

> [W]hoever has committed Murder, must *die*. There is, in this case, no juridical substitute or surrogate that can be given or taken for the satisfaction of Justice. There is no *Likeness* or proportion between Life, however painful, and Death; and therefore there is no Equality between the crime of Murder and the retaliation of it but what is judicially accomplished by the execution of the Criminal.[64]

Ironically, Justice Scalia tried to counter Justice Breyer's contention in *Glossip* that the death penalty was unconstitutional by noting that Kant "believe[d] that death is the only just punishment for taking a life."

The irony is two-fold. First, Scalia famously stated, "[W]e don't have the same moral and legal framework as the rest of the world, and

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Thought I Could Reason With Antonin Scalia: A More Naive Young Fool Never Drew Breath, SALON (Feb. 27, 2016), http://www.salon.com/2016/02/27/i_thought_i_could_reason _with_antonin_scalia_a_more_naive_young_fool_never_drew_breath/

63.   See *infra* text accompanying notes 101–107, 113–125 (discussing Justice Thomas' use of empirical evidence) and text accompanying notes 190, 198 (discussing the trial court decisions in *McCleskey v. Kemp* and in *In Re. Death Penalty Disparity Claims*, Connecticut Superior Court, October 11, 2013).

64.   IMMANUEL KANT, THE PHILOSOPHY OF LAW: AN EXPOSITION OF THE FUNDAMENTAL PRINCIPLES OF JURISPRUDENCE AS THE SCIENCE OF RIGHT 125 (W. Hastie trans., Clark 1887) (emphasis in original). One hesitates to be sharply critical of a philosopher such as Kant, who made a number of important contributions to moral theory, but any fundamentalist notion that there must be "equality" between crime and punishment is so nonsensical that it needs to be aggressively dismissed. We do not rape rapists, nor do we torture torturers. Thankfully, any such inclination to punish in this fashion would be quickly, and appropriately, dismissed on Eighth Amendment grounds.

never have. If you told the framers of the Constitution that [what] we're after is to . . . do something that will be just like Europe, they would have been appalled."[65] Justice Scalia failed to explain his rationale for why European legal concepts would be irrelevant to American constitutional law when Kant's views on the death penalty would merit citation in a constitutional case.[66]

Second, and perhaps more importantly for our purposes, Scalia's statement provides an opportunity to highlight how even the most basic descriptive statistics can illustrate the weakness of theoretical arguments. Rather than buttressing the modern death penalty, the reference to Kant only shows how orthogonal the thinking of that eighteenth century German philosopher is to the current legal debate in America. If the only punishment for taking a life were execution—the Kantian prescription—the state would have to kill over 14,000 individuals every year.[67] This is not only unconstitutional (the Supreme Court emphatically ruled in *Woodson v. North Carolina* that any such mandatory application of the death penalty for murders would be constitutionally barred[68]), but more importantly the American people would never stand for such levels of state-sponsored killing. In the modern era of capital punishment (since *Furman*), the U.S. has never executed more than 98 (in 1999) in a single year and only executed 28 in 2015.[69] This empirical evidence on the relative infrequency of executions in the U.S. compared to what would occur under Kantian principles of appropriate punishment for murderers underscores how Kant's thinking on this issue could scarcely be less informative on any question about the modern death penalty.

In the decidedly non-Kantian world of the U.S. death penalty when the death penalty must be reserved for the worst of the worst

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65. American University, *Transcript of Debate Between Justices Scalia and Breyer on Foreign Law*, FREE REPUBLIC, (Jan. 13, 2005), http://www.freerepublic.com/focus/news/1352357/posts.

66. *See* Roper v. Simmons, 543 U. S. 551, 624–28 (2005) (Scalia, J., dissenting) (arguing that "foreign sources" should "be rejected out of hand").

67. "In 2014, the estimated number of murders in the nation was 14,249." *Uniform Crime Reports: 2014 Crime in the United States*, FEDERAL BUREAU OF INVESTIGATION, https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2014/crime-in-the-u.s.-2014/offenses-known-to-law-enforcement/murder.

68. Woodson v. North Carolina, 428 U.S. 280–81 (1976).

69. *See Searchable Execution Database*, DEATH PENALTY INFO. CTR., http://www.deathpenaltyinfo.org/views-executions?exec_name_1=&exec_year%5B%5D=2015&sex=All&sex_1=All&federal=All&foreigner=All&juvenile=All&volunteer=All (last visited Apr. 6, 2016).

offenders,[70] the use of the death penalty can only measurably contribute to retribution if those who are the most egregious or culpable offenders—the most deserving of death—are executed, and those who commit less egregious crimes, who are less deserving of death, will be spared. Of course, any retributive goal would be undermined if an excessive number of innocent individuals were executed, and Justice Breyer's *Glossip* dissent discusses the uneasy facts concerning errors in capital convictions.[71]

Killing innocent individuals, though, is not the only problem that can undermine the retributive goal of a capital regime. A number of factors subject to empirical investigation can also give content to the Supreme Court edict that a death penalty regime must provide a "meaningful basis for distinguishing the few cases in which [death] is imposed from the many cases in which it is not."[72] A capital regime could fail to measurably contribute to retribution if it did not limit the death penalty to the worst of the worst offenders, or if it was marred by racial or ethnic bias, or a reliance on any morally arbitrary categories in deciding who would be sentenced to death. Justice Breyer addressed all of these issues as he raised concerns about whether retribution could provide a constitutionally valid basis to uphold capital punishment.[73] In Section III, we address the empirical literature on racial disparity. Now, we turn to the empirical evidence on whether capital punishment has been administered in a way that meaningfully furthers a rational retributive goal by limiting the death penalty to the worst of the worst offenders.

A. Limiting the Death Penalty to the Worst of the Worst

The Supreme Court has stated that "[c]apital punishment must be limited to those offenders who commit 'a narrow category of the most

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70. As Justice Breyer states in his *Glossip* dissent, "The Court has . . . sought to make the application of the death penalty less arbitrary by restricting its use to those whom Justice Souter called 'the worst of the worst.'" *Glossip v. Gross*, 135 S. Ct. 2726, 2760, *reh'g denied*, 136 S. Ct. 20 (2015) (Breyer, J., dissenting) (quoting *Kansas v. Marsh*, 548 U.S. 163, 206 (2006) (Souter, J., dissenting)).

71. Some "retributivists, while not opposed philosophically to capital punishment, oppose it because of increasing evidence (particularly in light of the DNA revolution) that innocent persons have been sentenced to death," Lawrence C. Marshall, *The Innocence Revolution in the Death Penalty*, 1 OHIO ST. J. CRIM. L. 573 (2004), or "because of proven racial discrimination in sentencing." JOSHUA DRESSLER, UNDERSTANDING CRIMINAL LAW 54–55 n.12. (7th ed. LexisNexis 2015).).

72. Furman v. Georgia, 408 U.S. 238, 313 (1972) (White, J., concurring).

73. *Glossip*, 135 S. Ct. at 2755 (Breyer, J., dissenting).

serious crimes' and whose extreme culpability makes them 'the most deserving of execution.'"[74] As Justice Breyer noted in *Glossip*, "The Court has . . . sought to make the application of the death penalty less arbitrary by restricting its use to those whom Justice Souter called "the worst of the worst.'"[75]

1. Evaluating Egregiousness of Crimes – Establishing Validity

During litigation challenging the constitutionality of the Connecticut death penalty, I explored whether the Connecticut death penalty system was operating consistently with this command by analyzing the treatment of the 205 death-eligible cases in Connecticut between 1973 and 2007 to see if the nine that ended up with a sustained death sentence conformed to this narrowing requirement.[76] Specifically, I adhered to a well-developed literature in which coders were given summaries of fact patterns and asked to rate them along a category scale. Thorsten Sellin and Marvin Wolfgang initiated this literature in 1964 when they used judges, police officers, and college students to rate criminal acts.[77] They found that the respondents were easily able to handle the rating tasks and that there was "considerable agreement among subgroups about both the relative ordering of criminal acts and the scale scores given."[78]

A decade later, these findings were replicated in "a more representative population" by Peter H. Rossi, Emily Waite, Christine E. Bose, and Richard E. Berk, who also noted that "the more highly educated and the younger respondents were, the more likely were their individual ratings of criminal acts to agree with the average computed for the entire sample."[79] Rossi et al. concluded that "the norms defining how serious various criminal acts are considered to be, are quite widely distributed among blacks and whites, males and females, high and low socioeconomic levels, and among levels of educational attainment."[80]

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74.   Roper v. Simmons, 543 U.S. 551, 568 (2005) (quoting *Atkins v. Virginia,* 536 U.S. 304, 319 (2002)).

75.   Kansas v. Marsh, 548 U.S. at 163 (2006) (Souter, J., dissenting).

76.   John J. Donohue III, *An Empirical Evaluation of the Connecticut Death Penalty System Since 1973: Are There Unlawful Racial, Gender, and Geographic Disparities?*, 11 J. of Empirical Legal Stud. 637–96 (2014) [hereinafter *An Empirical Evaluation*].

77.   Thorsten Sellin & Marvin E. Wolfgang, The Measurement of Delinquency 248–49 (Wiley 1964).

78.   *Id.*

79.   Peter H. Rossi, Emily Waite, Christine Bose, and Richard Berk, *The Seriousness of Crimes: Normative Structure and Individual Differences,* Am. Soc. Rev., 2 Vol. 39, 224–37 (1974).

80.   *Id.*

In 1998, Nobel laureate Daniel Kahneman, David Schkade, and Cass Sunstein used a similar methodology to create a measure of outrageous misconduct that might warrant an award of punitive damages.[81] The authors asked coders to rate the outrageousness and punishment-worthiness of ten different personal injury fact patterns on a scale from 0 to 6 on two measures. On the outrage scale, 0 denoted "completely acceptable" behavior and 6 denoted "absolutely outrageous" behavior.[82] On the punishment scale, 0 denoted "no punishment" as the appropriate level and 6 denoted "extremely severe punishment."[83] They too found that there was substantial consensus on judgments of the outrageousness of defendant conduct and the appropriate severity of punishment the defendant should receive.[84]

2. Measuring Egregiousness of Connecticut Murders

Following this well-established research tradition, I developed two similar measures of egregiousness for each of the 205 death-eligible cases in my dataset.[85] For the first measure of egregiousness, which I call the "Composite Egregiousness Score," I designed a scale based on the following four factors drawn from the relevant Connecticut capital felony statute and judicial decisions and asked coders to rate the egregiousness of each case for each of the factors on a scale from 1 to 3, with 3 being high:

1. **Victim Suffering**, considering 1) the intensity of suffering, as measured by the degree of physical pain and/or mental anguish, and 2) the duration of suffering;

2. **Victim Characteristics**, considering 1) whether the victim was a law enforcement officer and 2) the vulnerability of the victim relative to the defendant, signaled by factors such as the victim's age, any mental or physical disability from which the victim suffered, whether the victim was outnumbered by assailants, whether the defendant held a position of authority over the victim, and whether the victim was intoxicated or high;

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81.   Daniel Kahneman, David Schkade & Cass R. Sunstein, *Shared Outrage and Erratic Awards: The Psychology of Punitive Damages*, 16 J. RISK & UNCERTAINTY 49 (1998). Four years after this work was published, Kahneman, a psychologist by training and Princeton professor, won the 2002 Nobel Prize in Economics.

82.   *Id.* at 57.

83.   *Id.*

84.   *Id.* Interestingly, Kahneman, Schkade, and Sunstein found that while there was widely shared agreement about the outrageousness of the studied conduct, the resulting assessment of punitive damages on a monetary scale did not reflect this underlying outrageousness.

85.   *See* Donohue, *An Empirical Evaluation*, s*upra* note 76, at 11.

3. **Defendant Intent/Culpability**, considering a range of factors including 1) the defendant's motive for committing the murder, 2) whether the death of the victim was planned, 3) whether the defendant acted rashly or in the heat of the moment, and 4) whether the defendant's judgment was compromised by, for example, psychiatric problems, drugs, or intoxication;

4. **Number of Victims.** I asked coders to indicate the number of deaths caused by the defendant, truncated at a maximum value of 3.[86]

I then summed the scores for each of the four component factors, so that the Composite Egregiousness score for a given case could range from 4 to 12 (henceforth referred to as the "4–12 Composite Egregiousness Scale").[87]

Second, I asked coders (eighteen law students from Yale and the University of Connecticut) to rate the overall egregiousness of each case on a scale from one to five, with five being high.[88] The purpose of this second scale was to capture more general reactions to each case and to compensate for any over- or under-inclusiveness of the 4–12 Composite Egregiousness Scale. For example, the murders of law enforcement officers may tend to receive lower scores on the Composite scale because each of these cases involved only one victim and these crimes rarely involved prolonged or brutal victim suffering.[89] If there is a widespread belief that murders of police officers are particularly egregious, notwithstanding the typically low number of victims and relatively low degree of victim suffering, then the Overall Egregiousness scale might better capture the egregiousness of such crimes.[90] This one to five overall egregiousness measure is exactly analogous to the scales used in the work by Kahneman et al and the prior literature assessing the heinousness of crimes.[91]

Critically, coders rated cases on the basis of fact summaries that were scrubbed of any reference to (1) the race of the victim and defendant, and (2) how the defendant was charged and sentenced.[92]

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86. *Id.*
87. *Id.*
88. *Id.*
89. *Id.*
90. One reflection of the similarity between these two egregiousness measures is that the correlation of the average 4–12 egregiousness score and the average 1–5 egregiousness score (across our 18 coders) was .88.
91. Kahneman et al., *supra* note 81, at 5.
92. *Id.*

The goal was to include in the summaries sufficient information for coders to make judgments about the egregiousness of each case, but to exclude information that might bias their judgments. Each case summary included the basic facts of the case, as well as any relevant information about the defendant that might bear upon the defendant's intent or mental state, such as expert or court findings of mental illness.

One of the advantages of the egregiousness coding exercise was that I was able to average the egregiousness assessments for individual cases across eighteen different coders.[93] Averaging across such a large number of coders who have all coded all 205 cases guarantees (1) a greater uniformity of evaluation than would be present if only a subset of cases were scored by the various coders, and (2) increased precision in the egregiousness scores in that the idiosyncratic views of individual coders would tend to cancel out. Of course, the meaningfulness of these results depends on how reliable these coding evaluations are in capturing the underlying egregiousness of the various crimes. It turns out that the egregiousness scores are highly reliable across the eighteen coders, as determined by the high degree of inter-coder agreement. Moreover, if one simply takes the correlation between the average egregiousness scores across our seven Yale coders versus the eleven University of Connecticut coders, it is extremely high: .91 for the 4-12 Composite egregiousness measure and .85 for the 1-5 Overall egregiousness measure.[94]

It is important to note that the data from the egregiousness scales reflect each coder's views on the *relative* egregiousness of offenses. I did not ask coders what punishment they thought was appropriate for each offender. Thus, even a coder who believed that *no* offender should ever be sentenced to death, or that *all* murderers should be sentenced to death, would be able to rate the egregiousness of the cases *in relation to each other*. By having each coder score every case, I sought to determine whether the most egregious cases—the "worst of the worst"—were the ones in which the death penalty was imposed. Whether the coders' general preferences for harsh or lenient punishment varied from that of the general population in Connecticut is largely irrelevant to this study, because only the relative egregiousness of different cases matters. There is no reason why the

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93. The egregiousness scores were calculated by averaging or otherwise amalgamating scores from eighteen coders—seven Yale Law students and 11 University of Connecticut law students.

94. Author's calculation.

relative scoring of cases should depend on coders' overall political or sentencing preferences. Both liberals and conservatives would agree, for example, that killing three is worse than killing one, or that torture resulting in death is worse than a death caused when a stray bullet fired in the course of a robbery kills one of the other robbers.

3. Were the Nine Sustained Death Sentences in Connecticut the Worst Crimes?

The New York Times prepared a graphic capturing the results under the Comprehensive 4-12 Egregiousness measure, which is reprinted as Figure 1 below.[95] Each box in the figure represents one of the 205 death-eligible cases in Connecticut, and the associated egregiousness measure is shown along the horizontal axis. In the Kantian world, where all must die, every box would be shaded reflecting universal execution. If the death penalty were being reserved for the worst of the worst offenses within the category of death-eligible crimes, then we would expect to see the shaded boxes in the right tail of the distribution. In fact, only one case fell in that region, with the rest spread fairly widely across the full universe of cases.

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    95.   Lincoln Caplan, *The Random Horror of the Death Penalty*, N.Y. TIMES (Jan. 7, 2012), http://www.nytimes.com/2012/01/08/opinion/sunday/the-random-horror-of-the-death-penalty.html.

Figure 1

Who Ends Up on Death Row

Egregiousness of crimes committed does not predict who gets the death penalty.

Here, 205 death-eligible murder convictions from 1973-2007 in Connecticut are charted on a scale where 12 equals the most egregious case.

The 9 offenders sent to death row

The 196 convicts eligible for death but avoided it

Only 1 of the 32 worst cases resulted in a death row conviction.

←— LESS   **Egregiousness of crime**   MORE —→

In making the argument that the death penalty in Connecticut had not been limited to those within the class of death-eligible cases that were the worst of the worst, Justice Breyer summarized the result of my study as follows:

> Application of the studies' metrics made clear that only 1 of those 9 defendants was indeed the "worst of the worst" (or was, at least, within the 15% considered most "egregious"). The remaining eight were not. Their behavior was no worse than the behavior of at least 33 and as many as 170 other defendants (out of a total pool of 205) who had not been sentenced to death.

Such studies indicate that the factors that most clearly ought to affect application of the death penalty—namely, comparative egregiousness of the crime—often do not. Other studies show that circumstances that ought not to affect application of the death penalty, such as race, gender, or geography, often do.[96]

B. The Attacks by Justices Scalia and Thomas on the Connecticut Death Penalty Study

Justice Scalia mocked Justice Breyer's citation of my Connecticut death penalty study with a derisive reference to any "system of metrics," stating:

Egregiousness is a moral judgment susceptible of few hard-and-fast rules. More importantly, egregiousness of the crime is only one of several factors that render a punishment condign—culpability, rehabilitative potential, and the need for deterrence also are relevant.[97]

But Justice Scalia's naked incantation that three *additional* factors are relevant to capital sentencing collapses upon reflection. We have already discussed that the findings of the National Research Council report essentially take deterrence off the table as a justification for the death penalty under the *Atkins'* standard because there is simply no *measurable* contribution to be found.[98] Moreover, for capital crimes in Connecticut, the only possible sentences are death and life without possibility of parole;[99] thus, "rehabilitative potential" is not a major concern. Finally, "culpability" is undoubtedly a key element of egregiousness and indeed was the third factor in my Comprehensive 4-12 egregiousness factor and clearly of central importance in any egregiousness measure.[100] In other words, Justice Scalia has not identified any *relevant* factor that is not fully considered in my egregiousness measures.

Perhaps the opinion of Justice Thomas better expresses Justice Scalia's concern:

The Donohue study, on which JUSTICE BREYER relies most heavily, measured the "egregiousness" (or "deathworthiness") of murders by asking lawyers to identify the legal grounds for

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96. Glossip v. Gross, 135 S. Ct. 2726, 2760 (Breyer, J., dissenting).
97. *Glossip*, 135 S. Ct. at 2748 (Scalia, J., concurring).
98. COMM. ON DETERRENCE AND THE DEATH PENALTY, *supra* note 33, at 2.
99. CONN. GEN. STAT., § 53a-46a (g) (2005).
100. Donohue, *An Empirical Evaluation*, *supra* note 76, at 65.

aggravation in each case, and by asking law students to evaluate written summaries of the murders and assign "egregiousness" scores based on a rubric designed to capture and standardize their moral judgments. Donohue, An Empirical Evaluation of the Connecticut Death Penalty System Since 1973, Are There Unlawful Racial, Gender, and Geographic Disparities? 11 J. of Empirical Legal Studies 637, 644–645 (2014). This exercise in some ways approximates the function performed by jurors, but there is at least one critical difference: The law students make their moral judgments based on written summaries—they do not sit through hours, days, or weeks of evidence detailing the crime; they do not have an opportunity to assess the credibility of witnesses, to see the remorse of the defendant, to feel the impact of the crime on the victim's family; they do not bear the burden of deciding the fate of another human being; and they are not drawn from the community whose sense of security and justice may have been torn asunder by an act of callous disregard for human life. They are like appellate judges and justices, reviewing only a paper record of each side's case for life or death.[101]

Justice Thomas' recitation of obvious differences between the judgments of capital jurors and my coders fails to appreciate the demands of a social scientific study. I needed to evaluate all 205 death-eligible cases in Connecticut, not just the 28 that went to a jury for a capital sentencing determination. Furthermore, I needed every one of my coders to evaluate *all* cases (unlike the single one that a capital jury would see) and to be screened from morally-irrelevant information about race and ethnicity (which of course the jury would observe and be influenced by). I discuss these issues below.

1. The Need to Consider All 205 Death-Eligible Cases

We can interpret Justice Thomas' concerns in light of the reasons that the Connecticut death penalty study was undertaken. First, the study was trying to find out whether arbitrary factors (such as race and geography) were influencing capital outcomes and also whether the death penalty was being limited to the worst of the worst offenders. Knowing that a jury has rendered a death penalty verdict in the sole case in which it was empaneled reveals that twelve individuals have had an extended opportunity to consider some or all of the factors that Justice Thomas suggests. But such information tells us virtually nothing about the issues the Connecticut death penalty study was asked to

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101. *Glossip*, 135 S. Ct. at 2751 (Thomas, J., concurring).

address. One needs some methodology for determining, for example, whether a jury was critically swayed by the race of the defendant or victim in making the judgment to execute a defendant. Furthermore, even if every capital jury acted perfectly in deciding who deserves to die, the question analyzed in the Connecticut death penalty study would not yet be answered. One also needs to know whether impermissible factors influence which cases even make it to capital sentencing hearing. In the most obvious illustration of this point, if prosecutors were only to bring to capital juries cases in which minorities killed whites, the capital regime would be fatally defective no matter how exquisite capital juries were in rendering their final sentence.

Thomas asserts, "[r]elying on these studies to determine the constitutionality of the death penalty fails to respect the values implicit in the Constitution's allocation of decision-making in this context."[102] But while there is a constitutional mandate for jury decision-making, capital outcomes are also subject to other demands and we cannot evaluate whether there has been a violation of equal protection or of the Eighth Amendment without looking at the entire population of death-eligible cases. Thus, in 177 of the 205 death-eligible cases included in the Connecticut death penalty study, no jury evaluated the appropriate punishment for the death-eligible defendant for any of a number of reasons: the case was not capitally charged, the prosecutor chose not to seek the death penalty, or a guilty plea or some other factor diverted the case from a capital sentencing jury determination.[103] A scientific study must look at all 205 cases in the population of death-eligible cases (most of which will not entail a jury sentencing determination), and cannot blindly accept the 28 sentencing decisions that were rendered by a jury as somehow validating the entire capital process.

At this point, we see that Justice Thomas has been overly simplistic in extolling the informational advantages available in jury assessments (by virtue of their extended exposure to details of the case before them) in order to criticize the reliance by my egregiousness coders on written summaries. My study gave eighteen coders written information on 205 death-eligible cases in Connecticut.[104] A jury of twelve would be given more detailed information, but it would only be about a single

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102. *Id*.
103. Donohue, *An Empirical Evaluation*, *supra* note 76, at 641.
104. *Id*.

case. Because a critical goal of the coding exercise is to provide a relative assessment of the egregiousness of the 205 cases, our eighteen coders had a much better sense of what cases were unusually egregious than any jury, which would only have information on one case, would possess. In other words, the egregiousness study not only had 50 percent more individuals looking at each case (albeit with less complete information), but each egregiousness coder had information on 205 times as many cases as any juror would have.

2. The Need to Screen out Certain Information from Coders

Justices Scalia and Thomas also showed no understanding of the *disadvantages* posed by some of the information that was available to the jurors, but not to the egregiousness coders. Specifically, the egregiousness coders were not apprised of the race and ethnicity of the defendants and victims.[105] This was of course a critical element of the study because justifying the validity of a jury sentence of death by virtue of the fact that the jury rendered that particular judgment eliminates the possibility of ascertaining whether that decision was the product of racial or ethnic bias.

Moreover, if the summaries have adequately captured the critical details of the crime and the defendant, then stripping away the prejudicial, emotion-laden, and irrelevant information that is generated during the course of a criminal trial—in fact, many of the factors that Justice Thomas specifically extolled[106]—would actually aid in the process of generating valid egregiousness assessments. Unlike actual jurors, my coders were not influenced by inflammatory appeals or misconduct by prosecutors (or defense lawyers for that matter).[107] Thus, even if one had unlimited funds and could assign eighteen coders to sit in on the entirety of every capital sentencing hearing (thereby perfectly replicating everything that the jury heard), it would not give us information on more than a small portion of the 205 cases (because of

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105.   *Id*.

106.   Glossip v. Gross, 135 S. Ct. 2726, 2750 (Thomas, J., concurring).

107.   For example, during the penalty phase of the trial of current Connecticut death row inmate Richard Reynolds, the prosecutor John Connelly "made irrelevant and prejudicial references to the family of Williams [the deceased] during voir dire, cross-examination and closing arguments; invited the jury, during closing arguments to ignore the legal standards governing the determination of when to impose the death penalty; and injected his personal opinions and beliefs into his closing arguments." State v. Reynolds, 836 A.2d 224, 333 (Conn. 2003). While the Connecticut Supreme Court pointedly rebuked Connelly for his misconduct, it did not reverse the death sentence. This was not an isolated instance of improper conduct by Connelly during capital sentencing hearings. *Id.* at 333 n.180.

the infrequency among death-eligible cases of capital sentencing hearings), nor would it provide the appropriately shielded information concerning the race and ethnicity of the defendant and victim.

3. Responding to Justice Scalia's Emotional Claims with Empirical Evidence

Justice Scalia chastised Justice Breyer with the emotional claim that "I would not presume to tell parents whose life has been forever altered by the brutal murder of a child that life imprisonment is punishment enough."[108] He seems to suggest that Justice Breyer is implicitly sending this message to a stock of parents grieving over their murdered children. But for a host of reasons, very few parents whose children have been brutally murdered see the murderer executed. For example, in Connecticut, it is a capital felony to kill a child under age sixteen, and 46 of the 205 death-eligible cases involved such a killing.[109] Yet, only two of those 46 killings led to a sustained death sentence.[110] In other words, Connecticut prosecutors and jurors are indeed telling 44 of 46 parents with a brutally murdered child that "life imprisonment is punishment enough."

Perhaps this rare invocation of the death penalty for child murder in Connecticut serves a retributive rationale because the two worst of these cases led to death sentences? No. Indeed, many death-eligible child killings rated more egregious than the two crimes leading to a death sentence did *not* end up on death row in Connecticut. Under the Composite egregiousness measure, thirteen death-eligible child murders that did not generate the ultimate punishment were rated equally or more egregious to the two on death row. The comparable number of equally or more egregious cases under the Overall egregiousness measure was ten.[111] While Scalia thought his emotional argument buttressed a retributive rationale for the death penalty, the empirical evidence on child murders once again highlights the retributive infirmity in Connecticut's capital punishment regime. Without capital punishment, each horribly suffering parent could take comfort in knowing that the killer of his or her child had received the harshest punishment allowed by law. With it, 94 percent of the suffering

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108.   Glossip v. Gross, 135 S. Ct. 2726, 2748 (Scalia, J., concurring).
109.   Conn. Gen. Stat. § 53a-54b (2005).
110.   The two on death row were Todd Rizzo and Russell Peeler, who both had identical egregiousness scores of 9.56 on the Composite 4–12 measure and 4.28 on the Overall 1–5 measure.
111.   Author's own calculation using data from Donohue, *An Empirical Evaluation*, *supra* note 76.

parents will not find that comfort, and many will be bewildered why their even more atrocious victimization was treated more leniently than the two cases that did receive the ultimate punishment.

4. Justice Thomas's Misguided Critique

Justice Thomas also tries to make a broadside critique against the use of empirical studies, making the following incorrect and misleading statement:

> [T]he results of these studies are inherently unreliable because they purport to control for egregiousness by quantifying moral depravity in a process that is itself arbitrary, not to mention dehumanizing. One such study's explanation of how the author assigned "depravity points" to identify the "worst of the worst" murderers proves the point well.[112] Each aggravating factor received a point value based on the "blameworth[iness]" of the action associated with it. . . . Killing a prison guard, for instance, earned a defendant three "depravity points" because it improved the case for complete incapacitation, while killing a police officer merited only two, because, "considered dispassionately," such acts do "not seem be a sine qua non of the worst criminals." . . . (Do not worry, the author reassures us, "many killers of police officers accrue depravity points in other ways that clearly put them among the worst criminals." . . .). Killing a child under the age of 12 was worth two depravity points, because such an act "seems particularly heartless," but killing someone over the age of 70 earned the murderer only one, for although "elderly victims tug at our hearts," they do so "less" than children "because the promise of a long life is less." . . . Killing to make a political statement was worth three depravity points; killing out of racial hatred, only two . . . . It goes on, but this small sample of the moral judgments on which this study rested shows just how unsuitable this evidence is to serve as a basis for a judicial decision declaring unconstitutional a punishment duly enacted in more than 30 States, and by the Federal Government.[113]

What makes Justice Thomas' statement deceptive is that it appears a paragraph after he explicitly stated that he deemed "the Donohue study [to be the one] on which JUSTICE BREYER relies most heavily."[114] It would be natural then to conclude that Justice Thomas's criticism applies to my study, when it certainly does not. In a deft bait-

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112. David McCord, *Lightning Still Strikes*, 71 BROOKLYN L. REV. 797, 833–34 (2005).
113. Glossip v. Gross, 135 S. Ct. 2726, 2752 (Thomas, J., concurring).
114. *Id.* at 2751.

and-switch argument, Justice Thomas lashes out at a completely different study and criticizes that study for using a methodology that I specifically did not use.[115] That is, I did not go through and assign "depravity points" to various crimes as the criticized study did (nor did any of the other egregiousness studies I cited above from Sellin and Wolfgang to Rossi et al to Kahneman et al).[116] I find it troubling that—in a capital case no less—Justice Thomas would attempt to discredit an empirical study on a basis that he almost certainly understood, or should have understood, did not apply.

5. Giving Content to "the Worst of the Worst"

Justice Thomas dismissed Justice Breyer's arbitrariness analysis, stating: "[i]n my decades, on the Court, I have not seen a capital crime that could not be considered sufficiently "blameworthy" to merit a death sentence. . . . "[117] It is a bit unclear what Justice Thomas is claiming here, but he is almost certainly confusing two distinct, albeit related, issues. The first relates to the absolute threshold level of egregiousness that establishes the basis for a constitutionally permissible sentence of death and the second relates to the relative egregiousness of the cases that actually are sentenced to death within that permissible range. The first point was addressed by the Supreme Court in *Atkins* in 2002, which stated that *Godfrey v. Georgia,* shows that "the culpability of the average murderer is insufficient to justify the most extreme sanction available to the State."[118] Presumably, Justice Thomas means that all of the capital cases that he has seen at the Supreme Court are above this egregiousness threshold (a point about which most other Supreme Court justices have disagreed since 2002).[119]

Justice Thomas ignores Justice Breyer's second point that the way in which one limits arbitrariness in implementation and establishes that a capital regime is *measurably* advancing a retributive goal is to follow the dictates that Justice Souter noted in *Roper v. Simmons* that "within the category of capital crimes, the death penalty must be reserved for

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115.   *Id.* at 2747–48.

116.   Sellin and Wolfgang, *supra* note 77, at 135; Rossi et al, *supra* note 79, at 225; Kahneman et al., *supra* note 81, at 51.

117.   *Glossip*, 135 S. Ct. at 2752 (Thomas, J., concurring).

118.   Atkins v. Virginia, 536 U.S. 304, 319 (2002).

119.   Specifically, the six to three decision in *Atkins*, *id.*, as well as the five to four decision in *Roper v. Simmons*, 543 U. S. 551 (2005), ruled that cases before the court involving a "mentally retarded offender" and a murderer under 18 years of age were *not* sufficiently blameworthy to justify a constitutionally permissible sentence of death. Justice Thomas dissented in both those cases.

'the worst of the worst.'"[120] In other words, within the class of death-eligible cases, the death penalty regime is operating arbitrarily—and not *measurably* furthering a retributive goal—if the penalty of death is not being reserved for the most egregious murders.

An analogy may help to make the point. Assume that there were 205 applicants for an exclusive club, of whom, only nine would be selected. If the relevant metric for acceptance were being very wealthy, a low enough threshold might enable all 205 candidates to satisfy the wealth standard for admission. In this analogy, Justice Thomas would be saying that all 205 candidates meet the wealth criteria for the club. But then, continuing the analogy, Justice Breyer would point out that if this club is very exclusive, the club would not want to accept the nine least wealthy applicants or even a randomly sampled nine candidates, but rather should select the nine wealthiest candidates.

Similarly, even if Justice Thomas determined all nine of the 205 death-eligible cases in the Connecticut study were sufficiently blameworthy to merit a death sentence under the first standard, he would presumably recognize the problems for a retributive rationale if Connecticut were to execute the nine *lowest*-egregiousness cases or just nine randomly selected cases. Rather than being limited to the worst of the worst, the death-penalty under these scenarios would be limited either to the nine least bad of the 205 death-eligible cases or just nine selected at random from the 205. In neither situation would the death penalty be *measurably* furthering a retributive goal since the heart of retribution—that the worst crimes receive the harshest—would be violated.

Figure 1 clearly depicts a problematic distribution of capital sentencing under the *Atkins* standard. Perhaps Justice Thomas would argue that there is no way to differentiate the egregiousness of crimes, so the Figure 1 results are not meaningful. But this argument conflicts directly with both logic[121] and the holdings of *Godfrey*, *Atkins*, and

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120.   Kansas v. Marsh, 548 U.S. 163, 206 (2006) (Souter, J., dissenting).

121.   We have already noted that killing three is worse than killing one, a fact explicitly recognized in the Connecticut death penalty statute in establishing that a killing involving multiple victims qualifies as a capital felony. Similarly, every death penalty statute contains some grading language that can provide a basis for a death sentence when the crime is either "heinous, cruel, or depraved" or "outrageously vile or inhuman." Indeed, most cases that result in a death sentence in Connecticut do so because the crime is deemed to fall within the "heinous, cruel, or depraved" statutory aggravating circumstance. *See* Donohue, *Capital Punishment in Connecticut, 1973-2007: A Comprehensive Evaluation from 4600 murders to One Execution* 114 (2014), http://works.bepress.com/john_donohue/137/ ("This factor was found in ten of the twelve cases resulting in a death sentence, seven times as the sole aggravating factor and three times in

Roper, as well as with the abundant social science evidence establishing that there is a broad social consensus on the relative egregiousness of crimes.[122] Indeed, Justice Thomas refutes any claim that the egregiousness of capital cases cannot be compared by deliberately selecting three particularly horrible murders for gruesome description (following in a misguided tradition blazed by Justice Scalia that I discuss below).[123] And that is precisely my point: one *can* assess different levels of egregiousness, and if the death penalty is not limited to the worst cases, then it is operating in an arbitrary fashion rather than in a way that justifies on legitimate grounds the few cases that lead to execution versus the many that do not.[124]

The respective anecdotes they report provide a telling contrast between Justices Thomas and Breyer. While Justice Thomas is moved by the horrors of three particularly egregious crimes, which he describes in detail to support the death penalty, Justice Breyer's *Glossip* opinion recited the details of three of the six men exonerated from death row in 2014 alone as evidence of the danger of wrongful capital convictions.[125] It is difficult to imagine under what social welfare function, society would be deemed to be better off by killing a few particularly bad defendants (who would otherwise serve life prison sentences) and a similar number of innocent defendants. With zero credible evidence of deterrence, Justice Breyer's anecdotes are clearly focused on a much more important concern for the criminal justice system.

One noteworthy difference between the separate *Glossip* opinions authored by Justices Scalia and Thomas is that Justice Scalia refrained from his earlier tendency to enthusiastically recite the horrific details of various capital crimes, leaving that chore to Justice Thomas. A likely explanation for this division of labor is that Justice Scalia had been badly embarrassed by his miscue in his famed skirmish with Justice

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conjunction with one or more other aggravating factors."). The thousands of judicial decisions upholding death sentences under these (and other) provisions clearly show the factors that courts deem to render a case more or less egregious.

122.   *See* Sellin and Wolfgang, *supra* note 77; Rossi et al, *supra* note 79; Kahneman et al., *supra* note 81.

123.   *Glossip v. Gross*, 135 S. Ct. at 2752–53 (Thomas, J., concurring).

124.   But if my claim that one can ascertain which crimes are most egregious is incorrect, then the effort to justify the constitutionality of the death penalty on retribution grounds fails for another reason. One cannot satisfy the *Atkins* standard that the death penalty "measurably contributes" to retribution if there is no basis for saying that one crime is more egregious than another.

125.   *Id.* at 2755 (Breyer, J., dissenting).

Blackmun in *Callins v. Collins* in which he derided Blackmun's concern for a death row inmate and his failure to reference "the case of the 11-year old girl raped by four men and then killed by stuffing her panties down her throat. See *McCollum* v. *North Carolina*, ... How enviable a quiet death by lethal injection compared with that!"[126]

Justice Scalia's rhetoric was misguided in a number of ways. First, it is illogical to argue that the most egregious possible crime can provide support for the imposition of all death sentences. Justice Scalia stated: "Justice Blackmun begins his statement by describing with poignancy the death of a convicted murderer by lethal injection. He chooses, as the case in which to make that statement, one of the less brutal of the murders that regularly come before us . . . ."[127] In other words, Justice Scalia understood that the degree of egregiousness of crimes leading to sentences of death can vary widely. Citing the most egregious murder as a justification for the death penalty would only make sense if the death penalty would only be applied to the most egregious crimes. Yet, Justice Breyer's point is that, if one looks at the actual administration of capital regimes, the death penalty is *not* limited to "the worst of the worst offenders," as the Supreme Court has said it must be.[128] If Scalia wants to highlight the egregiousness of crimes to support retributive rationality of the death penalty, he should be establishing that the *least* egregious case leading to execution is (or at least tends to be) worse than the *most* egregious cases not resulting in execution. It scarcely needs pointing out that no such claim is even remotely plausible (as Figure 1 makes abundantly clear).

Second, Scalia's reference to the horrific killing of the eleven-year-old girl,[129] which he thought was buttressing his argument for the constitutionality of the death penalty, ironically underscored another problematic feature of capital punishment in the United States. The more heinous the crime, the greater the pressure to solve a case and the greater the likelihood that anger and emotion will undermine the capacity of the criminal justice system to correctly identify and

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126. Callins v. Collins, 510 U.S. 1141, 1143 (1994) (Scalia, J., concurring); McCollum v. North Carolina, 512 U.S. 1254 (1994).

127. *Id*. at 1142.

128. Breyer writes: "JUSTICE THOMAS catalogues the tragic details of various capital cases . . . (concurring opinion), but this misses my point. Every murder is tragic, but unless we return to the mandatory death penalty struck down in *Woodson*, . . . the constitutionality of capital punishment rests on its limited application to the worst of the worst. . . . And this extensive body of evidence suggests that it is not so limited." *Glossip*, 135 S.Ct. at 2762 (Breyer, J., dissenting).

129. *Callins*, 510 U.S. at 1143 (Scalia, J., concurring).

prosecute the perpetrator.[130] As we now know, the death row inmate that Justice Scalia described—Henry Lee McCollum—was completely innocent (as confirmed by the DNA-identified actual perpetrator) and would have been executed if Justice Scalia's opposition to the extensive array of appeals afforded to death row inmates had been heeded.[131]

Remarkably, Justice Scalia actually flirted with the claim (in a 2009 opinion in the Troy Davis case[132]) that it is constitutionally permissible to execute innocent convicts:

> This Court has never held that the Constitution forbids the execution of a convicted defendant who has had a full and fair trial but is later able to convince a habeas court that he is 'actually' innocent. Quite to the contrary, we have repeatedly left that question unresolved, while expressing considerable doubt that any claim based on alleged 'actual innocence' is constitutionally cognizable.[133]

One can only wonder at the plain meaning of "cruel and unusual punishment" if Justice Scalia's claim has any substantive merit.

In *Glossip*, Justice Scalia dismissed the concern that eliminating the death penalty will solve the problem of an enhanced risk of wrongful convictions for the most heinous crimes on the grounds that the defendants would then languish in prison with little hope of correction:

> The reality is that any innocent defendant is infinitely better of off appealing a death sentence than a sentence of life imprisonment … [because] the capital defendant will obtain endless legal assistance from the abolition lobby (and legal favor from abolitionist judges), while the lifer languishes unnoticed behind bars.[134]

I assume that Justice Scalia's use of the word "infinite" is intentionally hyperbolic,[135] but it is unclear why he believed the Innocence Project

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130.   Samuel R. Gross, *The Risks of Death: Why Erroneous Convictions Are Common in Capital Cases*, 44 BUFFALO L. REV. 469, 474 (1996)

131.   McCollum was held on death row for 30 years prior to his DNA exoneration. Dahlia Lithwick, *A Horrifying Miscarriage of Justice in North Carolina,* SLATE (September 3, 2014), http://www.slate.com/articles/news_and_politics/jurisprudence/2014/09/henry_lee_mccollum_cle ared_by_dna_evidence_in_north_carolina_after_spending.html.

132.   *Davis*, 557 U. S. 952, 954 (2009) (Scalia, J., dissenting).

133.   *Id* at 955.

134.   Glossip v. Gross, 135 S. Ct. 2726, 2747 (Scalia, J., dissenting).

135.   For example, while I was working on the evaluation of the Connecticut death penalty, two murder convicts serving life terms were exonerated by DNA evidence after they had served more than two decades in Connecticut prisons. Miguel Roman, arrested in 1988, was prosecuted and convicted of the Carmen Lopez murder. After more than twenty years behind bars, Roman was exonerated by DNA evidence that was tested at the urging of the Connecticut Innocence Project. Roman was released from prison in December 2008, and Connecticut then prosecuted

would close its doors if capital punishment were eliminated. Presumably, it would then be able to devote more of its limited resources to trying to secure release for wrongfully convicted lifers. Executing an innocent person is a uniquely horrible prospect—recall Kant's emphasis, frequently echoed by the Supreme Court, that death is different in kind from other punishments[136]—so one would expect considerable resources would be devoted to avoid this unusually lamentable, and irreversible, outcome.

C. Most Sentenced to Death Will not be Executed

Justice Breyer also cites some particularly compelling descriptive statistics that further undermine the claim of retributive benefit:

> Consider, for example, what actually happened to the 183 inmates sentenced to death in 1978. As of 2013 (35 years later), 38 (or 21% of them) had been executed; 132 (or 72%) had had their convictions or sentences overturned or commuted; and 7 (or 4%) had died of other (likely natural) causes. Six (or 3%) remained on death row.[137]

When 75 percent of those who are sentenced to death are not executed,[138] it is hard to see how this system could possibly be thought to *measurably* contribute to retribution. Every sentence of death—indeed, every capital prosecution—involves an enormous marshalling of a complex and protracted legal process with its attendant emotional strain on the parties, their families, and the criminal justice system. That this lumbering machinery of death must be laboriously engaged for the wide pool of cases for which a death sentence was sought to generate a relatively small percentage of capital sentences that is then

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Pedro Miranda for the murder of Lopez based on a DNA match of the evidence that exculpated Roman. Miranda was convicted of a capital felony in this case in 2011. *See* Alaine Griffin, *State of Connecticut Awards $6 Million to Miguel Roman, Wrongly Imprisoned for Years*, HARTFORD COURANT (Feb. 8, 2016), http://www.courant.com/breaking-news/hc-miguel-roman-wrongfully-imprisoned-award-0209-20160208-story.html.

    Kenneth Ireland was convicted of the 1986 rape-murder of Barbara Pelkey. In 2009, however, the intervention of the Connecticut Innocence Project led to Ireland being cleared by DNA evidence, after he had spent more than 21 years in prison. Four months later the state arrested Kevin Benefield for the murder, based on a DNA match. *See* Bill Leukhardt & David Owens, *DNA Finds New Suspect in '86 Slaying*, HARTFORD COURANT, Dec. 30, 2009, at A1; Alaine Griffin, *Kevin Benefield Convicted of 1986 Murder for Which Another Man Served 21 Years in Prison*, HARTFORD COURANT (Jan. 18, 2012), http://articles.courant.com/2012-01-18/news/hc-benefield-pelkey-0119-20120118_1_barbara-pelkey-connecticut-innocence-project-kenneth-ireland.

  136. Kant, *supra* note 64, at 87.

  137. Glossip v. Gross, 135 S. Ct. 2726, 2755 (2015) (Breyer, J., dissenting).

  138. Tracy L. Snell, *Capital Punishment 2013–Statistical Tables*, 19 BUREAU OF JUST. STAT. (2014).

dramatically reduced to a yet smaller number of executions underscores Justice Breyer's view that massive resources are being expended and social costs imposed to pursue a system that serves no obvious penological justification while being highly morally and constitutionally contentious.

III. RACIAL DISPARITY IN CAPITAL OUTCOMES

Furman v. Georgia[139] catalyzed tremendous academic attention on the relationship between race and capital sentencing. There is now an expansive empirical literature—analyzing numerous states across the country—presenting compelling evidence that race influences the death penalty decisions of prosecutors and jurors. Justice Breyer referenced a few of the studies in this literature, but he only scratched the surface of the voluminous body of research.

A. The Baldus Study

The seminal work in this literature—*Equal Justice and the Death Penalty*[140]—was conducted by a research team led by Professor David Baldus that examined capital sentencing in Georgia. The Baldus study investigated the effect of race on decisions throughout the charging and sentencing process by analyzing a large stratified random sample of 1,066 defendants selected from the universe of cases of the 2,484 defendants who were charged with homicide and subsequently convicted of murder or voluntary manslaughter in Georgia in the years from 1973 to 1979.[141] The researchers then weighted this sample, which included 127 defendants who had been sentenced to death,[142] to evaluate the effect of race on capital sentencing in the case universe as a whole.

Baldus included 39 specific features of each crime as explanatory variables in his base regression model designed to explain capital sentencing using the entire death-eligible sample. Importantly, the model controlled only for features of the crime itself, rather than the system's treatment of the defendant following his/her arrest.[143] This is

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139.   408 U.S. 238 (1972).

140.   DAVID C. BALDUS, GEORGE G. WOODWORTH & CHARLES A. PULASKI JR., EQUAL JUSTICE AND THE DEATH PENALTY: A LEGAL AND EMPIRICAL ANALYSIS (Northeastern Univ. Press 1990) [hereinafter *Equal Justice and the Death Penalty*].

141.   *Id.* at 45, 67 n.10.

142.   *Id.* at 45.

143.   *Id.* at 46–50, 57–59.

true not only for the base model, but also in Baldus's set of extended models, including as many as 230 explanatory variables.[144]

This comprehensive analysis showed that defendants convicted of murdering a white victim were statistically significantly more likely than defendants convicted of murdering a black victim to be sentenced to death.[145] Baldus's logistic regression model that included 39 legitimate variables became the core piece of evidence regarding race-of-victim discrimination in *McCleskey v. Kemp*.[146] It showed that the odds that defendants convicted of murdering a white victim would be sentenced to death were 4.3 times the odds that defendants convicted of murdering a black victim would be sentenced to death.[147] This relationship was statistically significant at the .005 level.[148]

The Baldus team then went on to examine how the race of the defendant and victim interacted to influence capital sentencing outcomes.[149] The study found that, controlling for egregiousness, cases involving black defendants and white victims were substantially more likely to result in a death sentence than cases involving other racial combinations of defendant and victim race.[150]

B. Other Pre-1990 Studies of Racial Disparity

The regression models of the Baldus team that were described above uniformly demonstrated racial disparities in the administration of capital punishment in Georgia during the period of study. Numerous well-controlled studies from jurisdictions across the country have similarly found racial disparities in capital sentencing. In 1990, the United States General Accounting Office reviewed studies by 21 sets of researchers based on 23 distinct datasets and summarized the then-existing literature, as follows:

> In 82 percent of the studies, race of victim was found to influence the likelihood of being charged with capital murder or receiving the death penalty, i.e., those who murdered whites were found to be more likely to be sentenced to death than those who murdered blacks. This finding was remarkably consistent across data sets,

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144.   *See id.* at App. L, 612–15.
145.   *Id.* at 656–70.
146.   McCleskey v. Kemp, 481 U.S. at 279 (1987).
147.   *Equal Justice and the Death Penalty*, *supra* note 140, at 319–320.
148.   *Id.* at 319–20. For a list of the included variables, see *Equal Justice and the Death Penalty*, *supra* note 140, at 630–31.
149.   *Id.*
150.   *Id.*

states, data collection methods, and analytic techniques. The finding held for high, medium, and low quality studies. . . . [Our] synthesis supports a strong race of victim influence.[151]

C. Ten Post-1990 Studies Examining Racial Disparities in 8 States and 2 Counties

Findings of racial disparities in the administration of capital punishment are similarly robust in the post-1990 literature. Table 1 presents the regression results of ten such methodologically rigorous studies on the effect of victim race on capital sentencing outcomes (the Baldus study results on Georgia are shown in Row 2 of Panel A). The relative probabilities in this Table were generated by regression analyses that controlled for variables that may affect decisions related to capital sentencing.[152]

Table 1 summarizes the evidence concerning racial disparity in capital sentencing from eight different states as well as for two counties that are particularly active in employing the death penalty. The major finding is that defendants convicted of murdering a white victim face considerably higher odds of being sentenced to death than similarly-situated defendants convicted of murdering a black victim.[153] At the state level, these relative odds range from roughly 2.5 to 4.5, with only Ohio below that level at 1.66, which is roughly the level observed in Harris County, Texas.[154] The ratio of 37.04 for East Baton Rouge is strikingly large.

151. GENERAL ACCOUNTING OFFICE, DEATH PENALTY SENTENCING: RESEARCH INDICATES PATTERN OF RACIAL DISPARITIES 3, 5, 6–6 (1990), http://archive.gao.gov/t2pbat11/140845.pdf.
152. *See infra* text accompanying notes 155–64.
153. *Id*.
154. *Id*.

Table 1. Regression Analyses on the Race-of-Victim Effect and Capital Sentencing

Location	Period of Study	Cases Analyzed	Relative Odds of Being Sentenced to Death for Killing a White Victim Rather Than a Black Victim (Controlling for Other Relevant Variables)	Statistical Significance
Panel A: States				
California[155]	1990-1999	Reported homicides	2.46	< .001
Georgia[156]	1973-1979	Defendants charged with homicide and subsequently convicted of murder or voluntary manslaughter	4.3	< .005
Florida[157]	1976-1987	Homicides	3.42	< .001
Illinois[158]	1988-1997	defendants convicted of first-degree murder	2.48	< .01
Maryland[159]	1978-1999	death-eligible first- or second-degree murder cases	3.7	< .05

155. Michael L. Radelet & Glenn L. Pierce, *The Impact of Legally Inappropriate Factors on Death Sentencing for California Homicides, 1990-1999*, 46 SANTA CLARA L. REV. 1, 35 (2005).

156. *See Equal Justice and the Death Penalty, supra* note 140, at 319–20.

157. Michael L. Radelet & Glenn L. Pierce, *Choosing Those Who Will Die: Race and the Death Penalty in Florida*, 43 FLA. L. REV. 28 (1991).

158. Glenn L. Pierce & Michael L. Radelet, *Race, Region, and Death Sentencing in Illinois, 1988-1997*, 81 OR. L. REV. 39, 95 (2002).

159. Raymond Paternoster et al, *Justice by Geography and Race: the Administration of the Death Penalty in Maryland, 1978-1999*, 4 U. MD. L.J. RACE, RELIGION, GENDER & CLASS 1, 36 (2004). Additionally, their regression analysis controlling for a wide range of case characteristics revealed that black-on-white murders are significantly more likely to result in a death sentence than black-on-black and white-on-white murders. This is consistent with the raw Maryland data shown in Table 2, below.

Missouri[160]	1977-1991	non-negligent homicides	2.61	< .10
North Carolina[161]	1980-2007	Homicides	2.96	< .001
Ohio[162]	1981-1994	Homicide	1.66	< .01
Panel B: Counties				
East Baton Rouge, LA[163]	1990-2008	defendants convicted of homicide	37.04	< .005
Harris County, TX[164]	1992-1999	defendants indicted for capital murder	1.63	n/a

D. Two National Studies of Racial Disparity

In a sophisticated national-level study, *Explaining Death Row's Population and Racial Composition*, researchers Blume, Eisenberg, and Wells analyzed data on murders and the composition of death row from 1977 through 1999 in the 31 states that admitted ten or more defendants to death row during this time period.[165] This comprehensive study

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160. Jonathan R. Sorensen & Donald H. Wallace, *Capital Punishment in Missouri: Examining the Issue of Racial Disparity*, 13 BEHAV. SCIENCES & L. 61 (1995).

161. Michael L. Radelet & Glenn L. Pierce, *Race and Death Sentencing in North Carolina 1980-2007*, 89 N.C. L. REV. 2119 (2011); *see also* Isaac Unah, *Choosing Those Who Will Die: The Effect of Race, Gender, and Law in Prosecutorial Decision to Seek the Death Penalty in Durham County, North Carolina*, 28 MICH. J. RACE & L. 135 (2009) ("Durham county prosecutors are 43% more likely to seek the death penalty when a Black defendant kills a White victim compared to a situation where a Black defendant kills a Black victim.").

162. Marian R. Williams & Jefferson E. Holcomb, *Racial Disparity and Death Sentences in Ohio*, 29 J. OF CRIM. JUST., 211, 215 tbl.3 (2001).

163. Glenn L. Pierce & Michael L. Radelet, *Death Sentencing in East Baton Rouge Parish*, 71 LA. L. REV. 647, 669 (2011). The county (or "parish") studied in Louisiana, East Baton Rouge, provides important insight into capital sentencing in the state. Of the 84 people on death row in Louisiana at the end of 2009, 16 were convicted and sentenced in East Baton Rouge Parish—more than in any other parish in the state. Moreover, the composition of East Baton Rouge's contribution to death row is strikingly monochromatic: All 16 of the parish's death row inmates are black. *Id.* at 650.

164. Scott Phillips, *Legal Disparities in the Capital of Capital Punishment*, 99 J. CRIM. L. & CRIMINOLOGY 717, 746 (2009). The Texas county examined in this study, Harris County, also provides considerable insight into the relationship between race and capital sentencing. Harris County has executed more people since 1976 than any U.S. state other than Texas. *Id.* at 720.

165. John Blume, Theodore Eisenberg & Martin T. Wells, *Explaining Death Row's Population and Racial Composition*, J. EMPIRICAL L. STUD. 165, 169.

included 5,953 of the 5,988 (99.4%) persons admitted to death row in the U.S. between 1977 and 1999.[166] The researchers obtained data on the characteristics of murders, the racial composition of death row, and several other legal and political dimensions.[167] They then compared the overall population of murderers to the death row population along a number of dimensions to determine which factors are related to the likelihood of being convicted of capital murder and placed on death row.[168]

The researchers found that variation in black representation on death rows in states across the country was powerfully influenced by the proportion of all murders that involve a black offender and a white victim.[169] This finding that black on white murders were treated more harshly than other types of murders was statistically significant at the .01 level.[170]

Blume, Eisenberg, and Wells also calculated the rate at which murder cases involving different combinations of defendant and victim race resulted in death sentences for the eight states for which they had this complete data for the period from 1977-2000.[171] Table 2 displays this data and shows that cases involving a black offender and a white victim are far more likely to result in the offender being placed on death row than cases involving other combinations of offender and victim race. Note that the combination of a black offender and a white victim leads to a death sentence at a rate from roughly three to 23 times the rate seen in black offender-black victim cases. The racial disparities in capital sentencing in the listed states are glaringly large and statistically significant at conventional levels.[172]

A recent study by Harvard economics professor Alberto F. Alesina and his coauthor Eliana La Ferrara entitled *A Test of Racial Bias in*

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166.   *Id*. at 169.
167.   *Id*. at 168–171.
168.   *See id*. at 181, 183, 185, 191, 197.
169.   *Id*. at 193–94.
170.   *Id*. at 190–91.
171.   *Id*. at 197.
172.   For each of the four race of defendant and victim categories, Table 2 provides the raw proportion that is sentenced to death. Conceivably, the black on white murders could be treated more harshly than black on black murders because the former are more egregious. Importantly, this was *not* found to be the case in Georgia. *See Equal Justice and the Death Penalty*, *supra* note 140, at 656–70. Similarly, my Connecticut death penalty regression analysis for both capitally charging and sentencing shows that the harsher treatment of black on white murders is *not* explained by the level of egregiousness of the crimes. *See* Donohue, *An Empirical Evaluation*, *supra* note 76, at 644–645; *infra* Tables 6–7 for capital sentencing. One can see the results for capital charging in Tables 4–6 of this article, *infra*.

Capital Sentencing provides additional support for the Blume et al findings.[173] The paper proposes a novel test of racial bias in capital sentencing based upon patterns of judicial errors in lower courts that vary according to the race of the defendant and victim.[174] Looking at nationwide data from 1973-1995, the authors once again find robust evidence that minority on white murders are treated significantly more harshly than minority on minority murders.[175]

E. The Nature of Racial Bias in Capital Punishment

The studies discussed in the previous section provide strong evidence that minority defendants who kill white victims are treated more harshly by capital regimes, even controlling for possible explanations such as the egregiousness of the crime. An important 2006 study provides insight into the nature of this racial bias.

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173.   Alberto F. Alesina & Eliana La Ferrara, *A Test of Racial Bias in Capital Sentencing*, 104 AM. ECON. REV. 3397 (2014).
174.   *Id.*
175.   *Id.*

Table 2. Capital Sentencing Rates by Race of Defendant and Victim in 8 States (1977-2000)

State	% Sentenced to Death for Murders with a <u>Black Offender</u> and a <u>Black Victim</u> (A)	% Sentenced to Death for Murders with a <u>Black Offender</u> and <u>White Victim</u> (B)	% Sentenced to Death for Murders with a <u>White Offender</u> and <u>Black Victim</u> (C)	% Sentenced to Death for Murders with a <u>White Offender</u> and <u>White Victim</u> (D)	Ratio of (B) / (A)
Georgia	0.5 (35/7091)	9.9 (72/726)	2.1 (4/187)	4.2 (114/2734)	20.1
Indiana	0.6 (12/2151)	4.2 (16/375)	0.0 (0/100)	2.2 (49/2272)	7.6
Maryland	0.2 (10/4174)	5.2 (25/479)	0.7 (1/137)	1.4 (20/1429)	21.8
Nevada	2.5 (11/442)	10.1 (18/178)	1.3 (1/80)	3.7 (46/1244)	4.1
Pennsy-lvania	1.8 (112/6310)	4.9 (46/947)	1.2 (4/335)	2.2 (90/4055)	2.7
South Carolina	0.3 (14/4784)	6.8 (50/738)	5.0 (9/179)	2.7 (72/2654)	23.2
Virginia	0.4 (18/4975)	6.5 (46/713)	2.3 (5/217)	1.8 (58/3167)	17.8
Arizona[*]	0.5 (13/2416)	4.8 (19/400)	2.8 (7/247)	5.9 (95/1613)	8.8

*Note: The data for Arizona combines Blacks and Hispanics into a single "minority" category. Thus, the numbers in the last row of the table for Arizona Black Offender and Black Victim cases also includes Hispanic offenders and victims.

Using a dataset collected by David Baldus, Jennifer Eberhardt and her fellow researchers analyzed over 600 death-eligible cases in Philadelphia, Pennsylvania between 1979 and 1999.[176] Forty-four of the cases involved a black defendant and white victim; another 308 had a black defendant and a black victim.[177] Over 40 (mostly white) Stanford undergrads rated "the stereotypicality of each Black defendant's appearance," using whatever indication they felt appropriate.[178] The study found that "stereotypically black" defendants who had been convicted of murdering a white victim were more likely to receive a death sentence.[179] Specifically, "24.4% of those Black defendants who fell in the lower half of the stereotypicality distribution received a death sentence, whereas 57.5% of those Black defendants who fell in the upper half received a death sentence."[180]

What establishes that this finding represents racial bias in the capital punishment regime is the fact that when a black defendant was accused of killing a black victim, the defendant's "stereotypical blackness" did not predict a sentence of death.[181] In other words, it is not something intrinsic to "stereotypical black" defendants that makes them more likely to be sentenced to death, but rather how the system processes their cases when race becomes salient, as it apparently does in inter-racial killings.

F. Justices Scalia and Thomas in Glossip on Racial Disparities

Given the strength of the evidence showing such widespread racial disparities in capital outcomes, one would imagine that the opinions of Justices Scalia and Thomas in *Glossip* would address this troubling issue in detail.[182] In fact, Justice Scalia's ode to the death penalty that purports to refute the major points of Justice Breyer's opinion makes not a single reference to race or racial discrimination.[183] Justice Thomas

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176.   Jennifer L. Eberhardt et al, *Looking Deathworthy: Perceived Stereotypicality of Black Defendants Predicts Capital-Sentencing Outcomes*, 17 PSYCH. SCI. 383, 383–85 (2006).

178.   *Id*. at 384.

178.   *Id.*

179.   *Id*.

180.   *Id*.

181.   *See id.*

182.   In *Turner v. Murray*, 476 U.S. 28, 35 (1986), Justice White's majority opinion vacating a death sentence for a black defendant convicted of killing a white victim expressed concern that juror discretion in considering mitigation evidence provides "a unique opportunity for racial prejudice to operate but remain undetected."

183.   Right from the start of his tenure on the Supreme Court, Justice Scalia showed little concern about the influence of race on capital outcomes. As my colleague Mugambi Jouet has noted, during the oral argument in *McCleskey v. Kemp* shortly after he became a justice, Justice

addresses the issue in a single sentence characterized by another of his bait and switch arguments.[184]

Specifically, Justice Thomas ignored all of the evidence discussed above concerning racial disparities in capital punishment. He responded to Justice Breyer's reliance on my Connecticut study by stating that "the primary explanation [the Donohue] regression analysis revealed for the gap between the egregiousness scores and the actual sentences was not the race or sex of the offender or victim, but the locality in which the crime was committed."[185] Though Justice Breyer found this geographic influence to be evidence of arbitrary implementation of the death penalty, Justice Thomas thought this was not a problem. Two points should be made on this issue.

First, while geography was the single most important explanation for who received the Connecticut death penalty—far more important than the comparative egregiousness of the crime, which Justice Breyer argued should be paramount—the second most potent factor was race (with minorities who killed whites treated far more harshly).[186] Justice Thomas' insinuation that racial bias was not a serious problem in Connecticut's capital punishment regime because geography was a more potent factor is like saying that cancer isn't a problem because cardiovascular disease kills more Americans.

Second, the geographic factor in Connecticut capital sentencing was driven by the fact that the State's Attorney in Waterbury (John Connelly) was particularly enthusiastic about administering the death penalty—to a degree that troubled some Connecticut attorneys and Supreme Court justices.[187] The Waterbury prosecutor was actually

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Scalia derisively asked: "What if you do a statistical study that shows beyond question that people who are naturally *shifty-eyed* are to a disproportionate extent convicted in criminal cases, does that make the criminal process unlawful?" Mugambi Jouet, *The Human Toll of Antonin Scalia's Time on the Court*, SLATE (Feb. 17, 2016), http://www.slate.com/articles/news_and_politics/jurisprudence/2016/02/antonio_scalia_made_america_s_incarceration_problem_worse.html.

184.   Glossip v. Gross, 135 S. Ct. 2750, 2752, *reh'g denied*, 136 S. Ct. 20 (2015) (Thomas, J., concurring).

185.   *Id*.

186.   Donohue, *An Empirical Evaluation*, *supra* note 76, at 663.

187.   "Twice the Connecticut Supreme Court commented disapprovingly on [Connelly's] unprofessional manner during the penalty phase of a capital punishment case. . . . Norm Pattis, a Waterbury trial attorney (who defended Connelly's friend Martin Minella in the ensuing corruption charges), wrote in his political eulogy for Connelly that 'his almost combative glee in sending people to the death house troubled me." *See* Donohue, *An Empirical Evaluation, supra* note 76, at 691–693.

forced to resign in 2011 following a federal corruption investigation,[188] which underscores that single individuals often play a huge role in generating death sentences even when their judgment can be highly questionable. The Connecticut experience with the imposition of death sentences—to individuals who Connecticut prosecutors still fought to execute despite the State's prospective abolition of the death penalty in 2012 and the subsequent Connecticut Supreme Court decision in *Santiago* striking down the death penalty as violative of the state's constitution in August 2015—is an uncomfortable one for those who believe in a government of laws rather than a government of men.[189]

G. Racial Disparities in Connecticut Capital Outcomes

Despite the strong evidence in the Baldus Report that race influenced capital outcomes, the trial judge in *McCleskey*, a former prosecutor who clearly was searching for reasons to find fault with the Baldus study, rejected its findings as statistically unsound.[190] A similar dynamic existed in Connecticut when the trial judge—also a former prosecutor—labored to avoid crediting the evidence of racial disparities in Connecticut's capital punishment regime. Just as Justice Scalia in *Glossip* side-stepped the issue of racial discrimination, the trial judge in Connecticut ignored the strong evidence of racial disparity in capital charging without even a word of discussion.[191] The evidence was viewed quite differently when the issue came before the Connecticut Supreme Court in *State v. Santiago* two months after *Glossip*, as

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188. *See* Edmund H. Mahoney, *Waterbury State's Attorney John Connelly Pressured to Leave Office; Will Retire Feb. 1*, HARTFORD COURANT, Jan. 14, 2011.

189. After the decision in *Santiago* ruled the imposition of the death penalty to be unconstitutional, the State sought re-hearing and was rebuffed. Since one Justice of the Connecticut Supreme Court who had been a member of the majority retired shortly after *Santiago* was decided, the State refused to accept the *Santiago* decision apparently hoping the new Justice would side with the three dissenting Justices. On January 7, 2016, in the case of *State v. Peeler*, the Connecticut Supreme Court allowed the State to argue that *Santiago* should be overturned. Alaine Griffin, *Death Penalty Back Before State Supreme Court*, HARTFORD COURANT (Jan. 7, 2016), http://www.courant.com/news/connecticut/hc-death-penalty-in-connecticut-20160107-story.html; *see* State v. Peeler, 321 Conn. 375 (Conn. 2016). The prosecutorial push for execution finally ended on May 26, 2016 when the Connecticut Supreme Court upheld the *Santiago* decision in a 5-2 per curiam opinion in the *Peeler* case. *Id.*

190. McCleskey v. Zant, 580 F. Supp. 338, 379-80 (N.D. Ga. 1984). Interestingly, the U.S. Supreme Court, perhaps recognizing the strength of the Baldus study, decided to presume its statistical soundness, but then rejected it on the legal grounds that statistical evidence did not satisfy the requirement of showing intentional racial discrimination in the particular case before it. Remarkably, the author of the 5-4 *McCleskey* decision subsequently conceded that he should have voted the other way in that case. He also acknowledged that he had been hampered by his limited understanding of statistics as he evaluated the claims of racial disparity.

191. *See* Donohue, *An Empirical Evaluation*, *supra* note 76, at 639– 40.

indicated in the concurring opinion of Justices Norcott and McDonald:

> [T]he available evidence supports the conclusion that, when members of minority groups who offend against whites are charged with capital crimes and subjected to execution at far greater rates than other defendants who commit comparable crimes, those disparities are a result of racial biases and cannot be explained away by other, innocuous factors.[192]

The opinion also noted:

> Perhaps the most striking finding was that minority defendants who committed capital eligible felonies against white victims in Connecticut were charged with capital crimes in 85 percent of cases, whereas prosecutors only sought a capital conviction approximately 60 percent of the time for crimes with minority victims.[193]

1. The Racial Disparity in Capital Charging

Indeed, the trial evidence of racial disparity in capital charging was overwhelming, and all of the pre-trial evidence presented by both the experts for the death row inmates (me) and the State (Stephan Michelson) over many years—with a single, temporary and erroneous exception—supported the conclusion that minority defendants who killed white victims were charged at substantially higher rates than minority defendants who killed minority victims.[194] The momentary exception was that Michelson's final pre-trial regression seemed to contradict the finding of racial disparity in capital charging, but this

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192.   State v. Santiago, 318 Conn. 140, 152 *reconsideration denied*, 319 Conn. 912 (2015) (Norcott and McDonald, Js., concurring).

193.   *Id*. at 159.

194.   Michelson testified at trial that two years earlier after having completed seven reports, he had told the prosecutors that his regression analysis showed that there was a racial disparity in capital charging:

> Q Now, you told us . . . at the beginning of your testimony, on direct examination, that when you see things and your client wants to know, you tell your client. So did you tell your client . . . I've done seven reports now, and here we are August 20, 2010. I've corrected my databases. I've amplified my databases. I've had opportunity to review. I've incurred over $655-thousand worth of time, and *I personally, Stephan Michelson, agree with the petitioners' claim and the petitioners' expert that there is statistically significant disparity in capital felony charging based on [minority] race of defendant and race of victim being white in Connecticut;* that there is that same disparity based on gender in capital felony charging in Connecticut, and there is that same disparity based on geography in Connecticut? *Did you tell your client that*?
> A *Of course.*

Trial Transcript at 140, In Re: Racial Disparity v. Commisioner of Correction, (Conn. Super Ct. 2012) (No. cvos-4000632) (emphasis supplied) (on file with author) [hereinafter *Trial Transcript*].

anomalous finding was due to his mis-coding error of the multiple victims' variable.[195] When his coding error was corrected, the large and statistically significant racial disparities were clearly evident.

But the issue did not end there. In perhaps one of the most ludicrous examples of misuse of regression in a judicial setting, the state's expert responded mid-trial to the revelation of his coding error by trying a two-part ploy to wriggle out of the clear finding that minority on white crimes were capitally charged at a substantially higher rate than minority on minority crimes.[196] First, he claimed that because he had made a coding error in the identifier of the multiple victim variable (which he had coded correctly in 8 previous reports), it was now necessary to conduct in mid-trial an entirely new regression analysis (rather than adhere to his own corrected results, which confirmed the racial disparity that had always been present in his earlier reports).[197] Second, he then introduced a new regression which he claimed showed no racial impact, but this was only because his regression dropped the identifier of whether the case involved a minority killing a white.[198] In other words, dropping the key variable

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195.   Donohue, *An Empirical Evaluation supra* note 76, at 640, 657.

196.   *Id.* at 658.

197.   *Id.*

198.   *Id.* Michelson also testified that with his new mid-trial revision of a capitally charging regression he had never run a regression in which a minority on white identifier variable had been included. In fact, he had done so as our discovery revealed. Consider the following exchanges from the trial when Michelson introduced "Exhibit O," which he claimed included *all* of the regressions he had run after his multiple victim error in his capital charging regression (D03) had been pointed out to him:

   ATTY. GOLUB: Is this witness testifying that this document, Ex. O, contains all of the [regressions] on charging with respect to the changes to D03. . . .
   THE WITNESS: That's exactly what I mean.
   ATTY. GOLUB: Is this witness testifying under oath that this document, Ex. O, that he's just identified, contains all of the regressions he did in response to the error found in D03?
   THE WITNESS: Yes, that's what I'm testifying.
Later, on cross-examination, Michelson told a different story, when we showed him the regression he had performed but not included in Ex. O, which both included a black on white variable and showed once again the considerable racial disparity in capital charging:

   ATTY. GOLUB: The document that . . . you testified under oath contained all of your regressions in connection with the correction to D03, that document did not include the regression with black defendant/white victim, did it, sir?
   A   Apparently not.
   Q   When you say apparently not, why is that only apparently not? It didn't, did it?
   A   Well, fine. No.
   Q   And you knew it didn't, didn't you?
   A   No. No, I didn't. I thought. . . . What I said was what I thought it would be until I actually read it.

needed to identify racial disparity made the race effect go away in the same way that telling a child to close her eyes makes the world disappear. One must assume that the State's expert resorted to such tactics because he perceived (apparently correctly) that the trial judge would either not be able to understand these statistical shenanigans or would ignore them because of a desire to overlook evidence of racial bias. Again, this is a troubling commentary on the use of statistical evidence in legal proceedings.

Remarkably, the trial judge wrote an opinion rejecting claims of racial disparity that entirely ignored the overwhelming evidence of racial bias in capital charging.[199] Not a single mention was made of either my regression analysis showing the striking racial disparity in capital charging, nor the clear evidence of racial disparity in Michelson's corrected capital-charging regression (let alone his questionable efforts to disguise this clear evidence).[200]

2. The Connecticut Supreme Court Ends the Death Penalty

The decision in *Santiago* striking down the Connecticut death penalty as unconstitutional in the wake of the legislature's 2012 prospective abolition of capital punishment was momentous. Also striking was the concurrence by Justices Norcott and McDonald that assessed the "abundant . . . statistical evidence [that] strongly suggests that racial disparities in the capital punishment regime exist in Connecticut—as elsewhere—that cannot be accounted for by benign, nonracial factors." *Santiago* seemed to represent the final chapter in what the concurrence called Connecticut's "nearly 400 year struggle with the macabre muck of capital punishment litigation."[201]

After discussing numerous studies from around the country, and the findings from my study of the Connecticut death penalty system, the concurrence concluded, "[a] thorough and fair-minded review of the

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Q Now that you've seen it?
A No, not now that I've seen it. You must have noticed the hesitation when we turned to the last page.
Q I didn't notice any hesitation, Dr. Michelson. I saw a person lying, but I didn't notice any hesitation.
Trial Transcript, *supra* note 194.

199.   *See Trial Transcript*, *supra* note 194.

200.   Indeed, even when the trial judge specifically addressed whether the Waterbury prosecutor was more likely to capitally charge death-eligible cases, he said nothing about whether there was evidence of racial disparity in capital charging.

201.   State v. Santiago, 318 Conn. 140, 140-44, *reconsideration denied*, 319 Conn. 912 (2015) (Norcott and McDonald, Js., concurring).

available historical and sociological data thus strongly suggests that systemic racial bias continues to infect the capital punishment system in Connecticut in the post-*Furman* era."[202] This might be taken as a sign that the strength of good empirical work will carry the day and promote wise judicial decision-making. But some words of caution are in order both because we have seen that some judges have struggled with statistical evidence and can be misled by spurious claims, and because the attachment of some to the death penalty in spite of the evidence that has amassed about its ineffectuality, high cost, and problematic implementation means that extraordinary efforts are sometimes undertaken to revive it, even when it appears to have been finally killed off. I discuss both these points below.

3. Michelson Tries to Cast Doubt on the Racial Disparity in Charging

The 4-3 decision in *State v. Santiago* angered the Connecticut prosecutors who then tried to take advantage of the retirement of one of the members of the majority by resisting the Court's decision.[203] Perhaps trying to influence this re-hearing of the questions that had been decided in *Santiago*, the State's expert offered yet another attempt to cast doubt on the finding of racial disparity in capital charging in Connecticut.[204] The new regression he supplied in this endeavor provides further evidence of how meaningless results can be generated when valid statistical protocols are ignored. Once these meaningless results have been introduced into a policy debate, however, they can be used by those with the type of cognitive delusion that characterized Justice Scalia's credulous marshalling of empirical evidence in *Baze* and *Glossip*.[205]

a. Michelson drops racial identifiers and manipulates the judicial district controls

Table 3 reproduces the new Michelson regression that he devised after the *Santiago* decision to try to argue against the finding of racial

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202. *Id*.
203. See *supra* note 189.
204. Stephan Michelson, Slide 50, PowerPoint Presentation at "Symposium on Race and Arbitrariness in the Connecticut Death Penalty," University of Conn. School of Law (Nov. 20, 2015). Michelson presented his new capital charging regressions in a forum at the University of Conn. School of Law on November 20, 2015.
205. See *supra* text accompanying notes 61–62.

disparity in capital charging.[206] His table uses my sample of 205 death-eligible cases, while dropping certain variables I employed and adding some others of his own. On its face, Michelson's Table 3 regression finds that minorities who kill whites (identified in the first row of the table) are capitally charged at a rate 11 percentage points *higher* than all other crimes, controlling for 11 other variables that relate to where the crime occurred, the nature of the crime and the defendant, and whether the defendant was represented by a public defender.[207] Because the racial effect is not statistically significant at conventional levels, Michelson apparently hopes to persuade others that the 11 percentage point racial disparity in capital charging seen in his Table 3 regression can be ignored.

Instead, Michelson's regression provides a textbook illustration of how one can improperly manipulate regression models to ostensibly achieve desired results that are both meaningless and misleading. The first problem to note is that Michelson dropped the full array of racial identifiers that both he and I had uniformly used in the many pre-trial versions of our respective reports. In Connecticut—and indeed as Baldus had found in Georgia, and Blume, Eisenberg, and Wells as well as Alesino and Ferrera found for the country as a whole—the strongest racial disparities are that minority defendants who kill whites are treated most harshly and minority defendants who kill minority victims least harshly.[208] A regression exploring racial disparity in capital charging that does not include the full racial breakdown of the defendants and victims will not be able to identify such racial disparities.

In Michelson's last previous capital charging regression which he introduced at trial, he had controlled for the following judicial districts: New Haven, New Britain, and Danbury.[209] One might wonder why

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206.   Michelson, *supra* note 204.

207.   The second explanatory variable in Table 3 is the 1-5 egregiousness measure. The third variable in Michelson's regression is the third measure of egregiousness that I created, which took advantage of the fact that the lawyers who had collected detailed information about each of the 205 death-eligible cases had checked off the presence of a list of 23 special aggravators that included, among others, mutilation, multiple gunshot wounds, attempt to dispose of/conceal body after death, victim killed in the presence of family members or friends, physical details of the crime are unusually repulsive (e.g., victim drowned in own blood), and sexual assault of victim prior to killing. This special aggravating factors variable merely tallied the number of these factors that were present in a given case.

208.   *See Equal Justice and the Death Penalty*, *supra* note 140, at 319–20; Blume, Eisenberg & Wells, *supra* note 165, at 165; Alesina & Ferrara, *supra* note 173, at 3399.

209.   This Michelson trial regression is depicted in Table 5 of Donohue, *An Empirical Evaluation*, *supra* note 77, at 657.

Michelson had dropped two of these three districts and added a new one, so that in his new regression, he was only controlling for New Haven and Hartford. The reason for the switch becomes clear in the regression Table 4 below, which corrects Michelson's Table 3 regressions by including the complete set of racial identifiers and then uses his prior set of judicial district controls: had he done so he would have shown that when minority defendants kill white victims they were almost 20 percentage points more likely to be capitally charged. As the highlighted box shows, this finding is highly statistically significant, even exceeding the .01 level of significance.

Table 3: The State's expert's capital charging regression that improperly omits variables pertaining to the race of victims and defendants and manipulates judicial district controls

Dependent Variable = Capital Charges | Death Eligible				
Explanatory Variables	Coefficient	Robust Standard Error	T	P Value
Defendant minority/victim white	0.106	0.077	1.380	0.169
Overall egregiousness (1-5 scale)	−0.040	0.054	−0.729	0.467
Count of special aggravating factors	0.044**	0.016	2.679	0.008
New Haven	−0.234**	0.088	−2.670	0.008
Hartford	0.245**	0.057**	4.326	0.000
Law enforcement victim	0.390**	0.121	3.229	0.001
Attorney Public Defender	0.118*	0.061	1.947	0.053
Defendant abused or neglected as child	0.098*	0.054	1.836	0.068
Murder for hire	0.288**	0.119	2.416	0.017
Defendant admitted guilt and no defense asserted	0.191**	0.062	3.104	0.002
Multiple victims	0.250**	0.063	3.964	0.000
Victim under sixteen	0.223**	0.081	2.757	0.006
Constant	0.282	0.175	1.615	0.108

$N = 205$, $R^2 = 0.3556$

NOTES: ** $= p < 0.05$, * $= p < 0.10$.

Table 4: Capital charging regression that corrects Table 3 by including all variables pertaining to the race of victims and defendants, as well as including Michelson's prior set of judicial district controls

Dependent Variable = Capital Charges	Death Eligible			
Explanatory Variables	Coefficient	Robust Standard Error	T	P Value
Defendant minority/victim white	0.198**	0.075	2.629	0.009
Defendant white/victim white	0.063	0.067	0.944	0.346
Defendant white/victim minority	−0.053	0.184	−0.288	0.773
Overall egregiousness (1-5 scale)	−0.092	0.059	−1.580	0.116
Count of special aggravating factors	0.037**	0.017	2.181	0.030
New Haven	−0.357**	0.084	−4.222	0.000
New Britain	−0.572**	0.164	−3.483	0.001
Danbury	−0.333**	0.165	−2.021	0.045
Law enforcement victim	0.299**	0.098	3.060	0.003
Attorney Public Defender	0.141**	0.062	2.287	0.023
Defendant abused or neglected as child	0.106*	0.058	1.835	0.068
Murder for hire	0.330**	0.087	3.788	0.000
Defendant admitted guilt and no defense asserted	0.171**	0.061	2.807	0.006
Multiple victims	0.238**	0.062	3.818	0.000
Victim under sixteen	0.242**	0.084	2.896	0.004
Constant	0.583**	0.177	3.302	0.001

$N = 205$, $R^2 = 0.3750$

NOTES: ** = $p < 0.05$, * = $p < 0.10$.
The omitted variable is minority defendants who kill minority victims

b. Controlling for all judicial districts

Michelson's selective inclusion and omission of variables to generate desired regression findings is a serious breach of appropriate statistical protocol. Table 4 clearly reveals that the judicial district controls that Michelson himself presented at trial clearly establish racial disparity in capital charging. Since the 2012 trial, Michelson has selectively added and subtracted judicial districts to his Table 3 regression in an apparent attempt to disguise the racial disparity. When I simply restore the racial categories and control for all judicial districts so there can be no claim of cherry-picking of the explanatory variables, the statistically significant racial disparity is unmistakably present in Table 5. This is true without any further change in Michelson's regression. The magnitude of the racial effect for minority on white crimes (versus minority on minority crimes) is over 16 percentage points with a p-value of .052.[210] In other words, the racial disparity in

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210.　*See infra* Table 5. Note there are many other problems and potential difficulties with Michelson's Table 3 regression, including inappropriate variable selection and his use of OLS regression rather than the more appropriate logit model, but for now the point I want to highlight is that any dedicated search that simply combs through hundreds or even thousands of variables without any constraining theoretical rationale in order to try to weaken a regression finding (of

capital charging that was always evident in all ten of Michelson's
reports (correcting for his error in the multiple victims variable), as
well as in his trial regression (when the minority on white variable is
restored) and in all of my capital charging regressions is still
unequivocally present.[211]

Table 5: Capital charging regression that includes all race of defendant/victim variables and
all judicial districts

	Dependent Variable = Capital Charges | Death Eligible			
Explanatory Variables	Coefficient	Robust Standard Error	T	P Value
Defendant minority/victim white	0.162*	0.083	1.955	0.052
Defendant white/victim white	0.100	0.070	1.418	0.158
Defendant white/victim minority	−0.069	0.187	−0.373	0.710
Overall egregiousness (1-5 scale)	−0.093*	0.055	−1.676	0.095
Count of special aggravating factors	0.044**	0.017	2.565	0.011
Danbury	−0.135	0.195	−0.690	0.491
Fairfield	0.159	0.138	1.154	0.250
Hartford	0.322**	0.120	2.677	0.008
Litchfield	0.085	0.238	0.355	0.723
Middlesex	−0.228	0.172	−1.323	0.187
New Britain	−0.331	0.204	−1.620	0.107
New Haven	−0.140	0.146	−0.959	0.339
New London	0.310**	0.136	2.275	0.024
Waterbury	0.175	0.172	1.018	0.310
Windham	0.173	0.162	1.066	0.288
Law enforcement victim	0.323**	0.116	2.775	0.006
Attorney Public Defender	0.130**	0.059	2.208	0.028
Defendant abused or neglected as child	0.076	0.059	1.300	0.195
Murder for hire	0.296**	0.095	3.104	0.002
Defendant admitted guilt and no defense asserted	0.179**	0.061	2.948	0.004
Multiple victims	0.253**	0.064	3.948	0.000
Victim under sixteen	0.238**	0.088	2.701	0.008
Constant	0.345	0.209	1.652	0.100

$N = 205$, $R^2 = 0.4367$

NOTES: ** $= p < 0.05$, * $= p < 0.10$.
The omitted variable is minority defendants who kill minority victims

c. Adding a host of controls does not change the finding of clear
   racial disparity

Everyone who works with regression analysis knows that if one can
choose among a large enough number of explanatory variables
unconstrained by any guiding theoretical principles, one can obscure

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racial disparity in charging in this case) violates the basic precepts of hypothesis testing and can
only yield the type of spurious results that Michelson supplies and that Fisher so cogently warned
against. *See infra* note 212.

211.   At times, Michelson has tried to justify excluding certain variables because they have
low t-statistics. *See* Donohue, *An Empirical Evaluation*, *supra* note 76, at 668. If one alters the
Table 5 regression by eliminating all variables with t-statistics less than one, the resulting racial
disparity is virtually identical and the statistical significance of the minority on white variable is
even greater.

true statistically significant effects by selectively including or omitting variables.[212] Essentially, unprincipled (or simply misguided) variable selection can generate random perturbations in a particular coefficient estimate and if one just selects the variables in a way to always choose the random perturbation that cuts in a particular direction, one can reduce a true effect to statistical insignificance.

In his widely cited paper, "Multiple Regression in Legal Proceedings," the former MIT econometrician Frank Fisher addressed this problem and explained that one should specify one's model in advance of looking at the data based on firm theoretical grounds for variable selection: Adding and deleting variables "by first looking at the data and then including those factors that appear correlated with the dependent variable is a recipe for spurious results."[213] Michelson's cherry-picked Table 3 regression falls into this category and should serve as a cautionary tale.

In my thirty years as an empirical researcher, I have seen few social scientific relationships as strongly robust as the racial disparity in capital charging in Connecticut. Indeed, Table 6 shows, as I testified at trial, that one can add a string of theoretically justified control variables—identifying whether the defendant or victim was female, whether the defendant had prior prison sentences or was a stranger to the victim, and controlling for multiple measures of the strength of the evidence—and the core conclusion remains unchanged and highly statistically significant. Table 6 shows that Connecticut prosecutors capitally charged minorities who killed white victims at a rate that is 20 percentage points higher than the rate that they charged minorities who killed minorities.[214]

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212. *See* Franklin M. Fisher, *Multiple Regression in Legal Proceedings*, 80 COLUM. L. REV. 702, 713–14 (1980).

213. *Id*.

214. As Andrew Gelman observes, the pernicious tactic of inserting variables into regressions to obscure true effects has been employed for decades: "The statistician George L. Saiger from Columbia University received [Council for Tobacco Research] Special Project funds 'to seek to reduce the correlation of smoking and diseases by introduction of additional variables'; he also was paid $10,873 in 1966 to testify before Congress, denying the cigarette-cancer link." Andrew Gelman, *Statistics for Cigarette Sellers,* CHANCE, Vol. 25.3, 43, 45 (2012) http://www.stat.columbia.edu/~gelman/research/published/ChanceEthics4.pdf.

Table 6: Capital charging regression adding a host of controls to Table 5 (Female Defendant and below) does not change the finding of clear racial disparity

Dependent Variable = Capital Charges | Death Eligible				
Explanatory Variables	Coefficient	Robust Standard Error	T	P Value
Defendant minority/victim white	0.198**	0.091	2.176	0.031
Defendant white/victim white	0.136*	0.077	1.757	0.081
Defendant white/victim minority	−0.012	0.152	−0.077	0.938
Overall egregiousness (1-5 scale)	−0.108	0.069	−1.572	0.118
Count of special aggravating factors	0.043**	0.018	2.329	0.021
Danbury	−0.180	0.196	−0.921	0.358
Fairfield	0.175	0.143	1.222	0.223
Hartford	0.321**	0.127	2.534	0.012
Litchfield	0.109	0.243	0.449	0.654
Middlesex	−0.219	0.189	−1.155	0.250
New Britain	−0.341	0.227	−1.501	0.135
New Haven	−0.127	0.157	−0.812	0.418
New London	0.302**	0.148	2.039	0.043
Waterbury	0.163	0.189	0.858	0.392
Windham	0.086	0.177	0.487	0.627
Law enforcement victim	0.350**	0.108	3.238	0.001
Attorney Public Defender	0.150**	0.063	2.372	0.019
Defendant abused or neglected as child	0.077	0.066	1.152	0.251
Murder for hire	0.283**	0.108	2.630	0.009
Defendant admitted guilt and no defense asserted	0.154**	0.065	2.373	0.019
Multiple victims	0.261**	0.070	3.738	0.000
Victim under sixteen	0.236**	0.098	2.418	0.017
Female Defendant	−0.177	0.133	−1.334	0.184
At least 1 female victim	−0.030	0.074	−0.401	0.689
Prior prison sentence imposed	−0.022	0.063	−0.354	0.724
Stranger murder	−0.048	0.065	−0.748	0.456
Defendant provided self incriminating statement to authorities	0.106	0.065	1.619	0.107
Defendant provided self incriminating statement to third party	−0.065	0.057	−1.142	0.255
Prosecutor presents more than circumstantial evidence	−0.123	0.090	−1.373	0.172
Constant	0.500**	0.236	2.122	0.035

$N = 190$, $R^2 = 0.3708$

NOTES: ** = $p < 0.05$, * = $p < 0.10$.
The omitted variable is minority defendants who kill minority victims

CONCLUSION

If the *Atkins* standard for assessing the constitutionality of the death penalty is to be maintained, empirical evaluation will be at the heart of the case, as Justice Breyer's opinion in *Glossip* adumbrates. In a perfect world, one would like judges to have enough quantitative heft to be able to evaluate the quality of statistical studies, but that is clearly an unrealistic goal. The skills needed to fully assess empirical studies are far beyond the capacity of most judges, as well as most legislators and policymakers. Moreover, to fully evaluate one of these statistical studies, one would need to have a very detailed knowledge of the data used and the intricacies of statistical modelling of criminal justice processes, which is a tall order for anyone but academics and policy analysts with sophisticated empirical training.

However, there are a number of practices that can aid judges and policymakers in evaluating statistical studies. At times, one might hope to glean some indication of reliability by assessing the quality of the academic journal in which a study appears and the education, training, reputation, and institutional affiliation of the study authors. Infrequently, meta-analyses by top experts such as the NRC report on deterrence and the death penalty can provide further guidance. Because the NRC critique was so overwhelmingly negative on the two statistical studies that Justice Scalia relied upon, I think the role of the academic is to offer a strong rebuke of his conduct in this matter. Especially on a matter of life and death, one would hope for more from a Supreme Court Justice than citations to studies discredited by a unanimous NRC panel and to a paper whose lead author has published a specific refutation of Justice Scalia's prior conclusion based thereon.

Justice Scalia is not alone in going astray in the domain of econometric evidence concerning capital punishment. We saw that the trial judge in *McCleskey* misappraised the value of the Baldus study showing of racial disparity in capital outcomes in Georgia, as did the trial judge evaluating the evidence of racial disparity in capital outcomes in Connecticut. Although both studies fared better at the appellate level, the dissenting justices in *Santiago* still made claims that were directly contradicted by the best empirical evidence.[215]

Justice Scalia ended his opinion in *Glossip* with a rousing statement that because Justice Breyer advanced the view that the death penalty is unconstitutional, he "does not just reject the death penalty, he rejects the Enlightenment." It is a lovely phrase but exactly the type of "specious reasoning and seductive eloquence" that Beccaria hoped to

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215.   The dissenting opinion by Chief Justice Chase Rogers is a case in point. Rogers criticized the claim that the declining use of the death penalty was a factor undermining its constitutional validity by asserting that the "declining imposition of capital punishment may indicate that the death penalty is being employed precisely as was intended, to punish only the very worst of society's criminals . . . "But this speculation is directly contradicted by the empirical evidence on exactly this point, as Justice Breyer noted in his *Glossip* dissent: the Connecticut death penalty did *not* limit its application to the worst of the worst offenders over the study period from 1973-2007. This finding was true regardless of which of the three different egregiousness scales that I employed or whether one employed the egregiousness scale developed by the State's expert.

Similarly, the Chief Justice's efforts to discern a deterrent value in executing death row inmates *after* the death penalty had been abolished prospectively by the Connecticut legislature stands on an even weaker foundation than Justice Scalia's mythical deterrence claims. Again, the National Research Council report of 2012 finding no credible evidence of deterrence in even active executing states applies *a fortiori* to any deterrence claims asserted when no future criminal act could be punished by death in Connecticut. Again, the critical *Atkins* language should be invoked: executing convicts after prospective abolition cannot be deemed to "*measurably contribute*" to deterrence.

eliminate from discussions of criminal justice.[216] The Enlightenment was characterized by advances in science and the rejection of the influence of tradition, prejudice, superstition, and myth. By his careful recitation of the empirical literature on the operation of the death penalty, Justice Breyer, like Justices Norcott and McDonald in the *Santiago* case, captured the best of the Enlightenment spirit of using human reason to understand the operation of an important American institution and illuminate its infirmities. Any judge who succeeds in properly evaluating the empirical evidence on capital punishment will find it difficult to sustain the validity of capital punishment under the *Atkins* standard that the death penalty is unconstitutional unless it "*measurably contributes*" to one or both of the goals of deterrence and retribution. The empirical evidence buttresses the view that capital punishment "is nothing more than the purposeless and needless imposition of pain and suffering."[217]

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216.   *See supra* text accompanying note 16.
217.   Atkins v. Virginia, 536 U.S. 304, 318–19 (2002).