

The Delaware Death Penalty: An Empirical Study

Sheri Lynn Johnson, John H. Blume, Theodore Eisenberg, Valerie P. Hans & Martin T. Wells

We are grateful for the invitation to participate in a symposium that honors a great scholar and great man, a quiet man with a strong passion for justice. David was deeply admired in the academic community in which all of us participate, but in the death penalty litigation community to which two of us, John and Sheri, belong, he was almost worshipped. Unlike many experts, whom capital defense lawyers sometimes try to cajole, bully, or buy, David was valued for his steadfast pursuit of the facts. We knew from the start that he was going to track down the truth, and then tell it.

In fact, the reverence for his work, as well as his integrity, may be why in the death penalty litigation community he was known as “David” rather than “Dave;” the nickname would have seemed insufficiently respectful. That reverence did not, however, make David self-important. When Sheri first met David at Airlie (where he was presenting his findings to a group of death penalty litigators), he just introduced himself by his first name, and he talked about what he was working on, asking her ideas, and asking about her own work. Later, someone whispered to her “Did you know that was David Baldus?” and she was chagrined to have been so unmindful of his stature in spouting her half-baked theories. As it turns out, that was a common experience; three other people told her similar stories. If David knew how monumental his contribution was, he never let on. He just kept on.

*But it **was** monumental. As Ted and Valerie, who are co-editors of the *Journal of Empirical Legal Studies*, and familiar with virtually all manner of empirical work – observed, no empirical study has had as great an impact on law in this country as has the Baldus study. The extraordinary influence of his Georgia study is particularly remarkable given that it did not produce a legal victory.¹*

*Not content with one monumental contribution, David kept on. Despite the as-then unparalleled sophistication and detail of his work in Georgia, and the disparagement of the significance of those findings in *McCleskey v. Kemp*,² David refined his methodology and continued to work on analyzing the operation of the death penalty in other jurisdictions. David’s painstaking work on*

¹ *McCleskey v. Kemp*, 481 U.S. 279 (1987). There is some reason, however, to hope that it will eventually do so. Justice Powell, the author of, and fifth vote in, *McCleskey*, later expressed his regret. JOHN C. JEFFRIES, JUSTICE LEWIS F. POWELL, JR.: A BIOGRAPHY (New York: Scribners 1994). The only other case in which Powell regretted his vote, *Bowers v. Hardwick*, has since been reversed by *Lawrence v. Texas*, 539 U.S. 558 (2003). Should the day come when *McCleskey* too is relegated to the dustbin of history, much of credit will be due to David’s pioneering work.

² 481 U.S. 279 (1987).

the Pennsylvania death penalty, where he added blind independent ratings of aggravation and mitigation -- and found even larger race effects – set a standard that has not yet been matched, or even approached. The same can be said for his work on the death penalty in other states, as well as on the death penalty in the military.

What follows does not meet the standard David set. Were he here, he would no doubt urge us to wait until the last part of our study is complete and our analysis more refined to publish anything. But we publish this now in acknowledgement of the vast influence he has had over this study,³ and over much of our past work. We are grateful for his lead, and grateful to have known him.

I. Introduction.

For the last five years we have been engaged in an empirical study of the “modern” era of capital punishment in Delaware. By modern era, we refer to the time period after the Supreme Court’s 1972 decision in *Furman v. Georgia*,⁴ which invalidated all then existing state death penalty regimes. Some readers might ask, why Delaware? They might observe that it is a small state and is not a significant national player in terms of death sentences imposed or death row inmates executed. While both of these are true, several features of Delaware’s capital punishment system were intriguing to us. First, Delaware has a high death sentencing rate. Prior studies have revealed that in relation to the number of murders, Delaware has the third highest death sentencing rate in the United States.⁵ Studying the Delaware experience allowed us to explore the factors that may account for the relatively high rate of capital punishment in the state.

³ David’s influence on this study was not merely inspirational. He generously gave us coding instruments he had used in studies of other states. We adapted his coding instrument for use in Delaware.

⁴ 408 U.S. 238 (1972).

⁵ John Blume, Theodore Eisenberg & Martin T. Wells, *Explaining Death Row’s Population and Racial Composition*, 1 J. EMPIRICAL LEGAL STUD. 165, 172 (2004).

Second, it is not a Southern state. Most (though not all) previous empirical studies have focused on Southern jurisdictions.⁶ Third, Delaware has used jury sentencing as well as different judge-sentencing schemes in capital cases. Studies of judge versus jury death penalty sentencing have typically compared decision makers across jurisdictions, or have examined judicial overrides of jury decisions within a state.⁷ Comparison of Delaware's capital trial experiences under these diverse sentencing approaches offers a rare opportunity to contrast the operation of jury and judge capital sentencing within a single state. Finally, no previous systematic empirical studies of the death penalty in Delaware have been conducted. Thus, for both theoretical and practical reasons, we determined that it would be a worthwhile capital punishment jurisdiction to examine.

In this article we present our findings to date.⁸ After reviewing the modern history of the Delaware death penalty and describing our methodology, we will describe our findings regarding geographical patterns, racial disparities, judge-jury sentencing differences, and reversal rates.

⁶ See, e.g., John H. Blume, *Twenty-Five Years of Death: A Report of the Cornell Death Penalty Project on the "Modern" Era of Capital Punishment in South Carolina*, 54 S.C. L. REV. 285 (2002).

⁷ Blume et al, *supra* note __ (comparing states with judge versus jury sentencing schemes); William J. Bowers, Wanda D. Foglia, Jean E. Giles & Michael E. Antonio, *The Decision Maker Matters: An Empirical Examination of the Way the Role of the Judge and the Jury Influence Death Penalty Decision-Making*, 63 WASH. & LEE L. REV. 931 (2006) (contrasting the views and experiences of capital jurors in jury sentencing versus states with hybrid judge-jury sentencing systems); Christopher Slobogin, *The Death Penalty in Florida*, 1 ELON L. REV. 17, 47-50 (2009) (describing problems with the Florida approach to capital jury decision making).

⁸ This article presents our findings on the cases in which death was sought in Delaware. We anticipate follow-up articles that examine these cases in more detail. Although it is challenging to obtain full information on homicide cases that do not proceed to capital trial, it would also be of substantial interest to examine the state's selection of cases in which to seek death from the universe of death-eligible cases.

We leave to others to discuss what, if any, legal or policy implications might arise from our findings.

II. A Brief History of the Delaware Death Penalty.

As noted above, in 1972, the Supreme Court effectively held in *Furman v. Georgia* that the death penalty, as then administered in the United States, violated the Eighth Amendment's ban on cruel and unusual punishment. Like most jurisdictions, the death penalty statute in existence in Delaware at the time of *Furman* required the jury to decide the issues of guilt and punishment in the same unitary proceedings and provided no standards for the jury to utilize in making the life or death decision.⁹ In 1973, in *State v. Dickerson*, the Delaware Supreme Court held that the Delaware scheme was invalid under *Furman*.¹⁰

The Delaware legislature quickly enacted a new capital punishment statute.¹¹ Since *Dickerson* interpreted *Furman* as forbidding “the uncontrolled discretion of juries and judges in imposing the death penalty,”¹² the 1974 Delaware statute called for mandatory death sentences

⁹ DEL. CODE ANN. tit. 11, § 3901 (1972). In 1958, Delaware abolished capital punishment. It was the second state to do so. In 1961, however, the Delaware legislature reinstated capital punishment. Then Governor Elbert Carvel vetoed the legislation, but the legislature overrode the veto. See http://doc.delaware.gov/information/deathrow_history.shtml.

¹⁰ 298 A.2d 761 (Del. 1973). Appendix A lists the nine defendants whose death sentences were overturned in *Dickerson*.

¹¹ DEL. CODE ANN. tit. 59, § 284 (1974).

¹² Loren C. Meyers & Gayle P. Lafferty, *Capital Punishment, in DELAWARE SUPREME COURT: GOLDEN ANNIVERSARY 1951-2001* 179 (Justice Randy J. Holland & Helen L. Winslow eds., 2001).

for anyone convicted of first degree murder.¹³ The Delaware Supreme Court upheld the new law in *State v. Sheppard*,¹⁴ and the death penalty in Delaware was back in business. Over the next two years, nine individuals were sentenced to death under the mandatory regime.¹⁵

But, Delaware had backed the wrong constitutional horse. In 1976, the Supreme Court held in *Woodson v. North Carolina*¹⁶ and *Roberts v. Louisiana*¹⁷ that mandatory capital sentencing schemes violated the Eighth Amendment. In *State v. Spence*, the Delaware Supreme Court concluded, as it had to, that the 1974 scheme did not pass constitutional muster and set aside all nine sentences imposed under that scheme.¹⁸

In May of 1977, the legislature enacted a new law modeled after the Georgia capital sentencing statute upheld by the Supreme Court in 1976 in *Gregg v. Georgia*.¹⁹ This scheme provided for a bifurcated trial at which the defendant's guilt or innocence would be decided in the first phase. If the defendant was convicted, the jury would then determine the appropriate punishment in a separate sentencing proceeding.²⁰ The new system allowed for the presentation

¹³ DEL. CODE ANN. tit. 59, § 284 (1974).

¹⁴ 331 A.2d 142 (Del. 1974).

¹⁵ *State v. Spence*, 367 A.2d 983, 986 (Del. 1976).

¹⁶ 428 U.S. 280 (1976).

¹⁷ 428 U.S. 325 (1976).

¹⁸ 367 A.2d 983, 988 (Del. 1976).

¹⁹ 428 U.S. 153 (1976).

²⁰ 395 A.2d 1082 (Del. 1978).

of aggravating and mitigating evidence at the penalty phase.²¹ The jury could only sentence the defendant to death if it unanimously concluded that the prosecution had proven, beyond a reasonable doubt, the existence of at least one statutory aggravating circumstance.²² The jury's decision to sentence the defendant to death had to be unanimous and the jury's sentence determination was binding on the judge.²³ The new scheme also provided for automatic appellate review by the Delaware Supreme Court to determine "whether the evidence supported the finding of a statutory aggravating circumstance, whether imposition of the death penalty was arbitrary or capricious and whether the death sentence was proportionate to the penalty imposed in similar cases."²⁴ Finally, the 1977 statute required preparation of the entire trial transcript, specific identification of the aggravating circumstances found by the jury, a complete report by the trial judge, and "administrative assistance in compiling information on the universe of cases to be reviewed by the Court in performing its proportionality review."²⁵ The Delaware Supreme Court concluded the new regime satisfied the Eighth Amendment in *State v. White*.²⁶

²¹ Loren C. Meyers & Gayle P. Lafferty, *Capital Punishment*, in DELAWARE SUPREME COURT: GOLDEN ANNIVERSARY 1951-2001 181-82 (Justice Randy J. Holland & Helen L. Winslow eds., 2001).

²² Loren C. Meyers & Gayle P. Lafferty, *Capital Punishment*, in DELAWARE SUPREME COURT: GOLDEN ANNIVERSARY 1951-2001 182 (Justice Randy J. Holland & Helen L. Winslow eds., 2001).

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.* (citing *State v. White*, 395 A.2d 1082, 1092-96 (1978)).

²⁶ 395 A.2d 1082, 1097 (Del. 1978) (holding that the 1977 statute was constitutional, "except for the aggravating circumstances identified as 'elderly' and 'defenseless' victims . . .

The jury sentencing regime was in place from 1977 until 1991. In October of 1991, a New Castle County jury decided the highly publicized case of four African American men from outside the state who, in the process of committing a robbery of a Brooks armored car in Wilmington, fatally shot the two Brooks guards.²⁷ The jury convicted all four defendants, Kenneth Rodgers, James Llewellyn, Christopher Long, and Paul Robertson, and a penalty hearing ensued. After a short deliberation of two and a half hours, the jury could not agree unanimously on the death penalty for any of the men. So, all four were sentenced to life in prison without probation or parole.²⁸ Responding to the public outcry, the Delaware legislature amended the death penalty statute in November of 1991 to eliminate jury sentencing.²⁹ Under the new scheme, modeled after Florida's capital punishment system, the jury's recommendation of death was no longer binding on the trial judge; the court, not the jury, was vested with ultimate sentencing authority.³⁰ The new judge sentencing system was upheld by the Delaware

which provisions are declared unconstitutional and are severed from the Statute”).

²⁷Robertson v. State, 630 A.2d 1084 (Del. 1993). For a detailed account of public response to the case and its importance in the effort to reduce the jury's role in Delaware's capital sentencing scheme, see Benjamin D. Fleury-Steiner, Kerry Dunn & Ruth Fleury-Steiner, *Governing Through Crime as Commonsense Racism*, 11 PUNISHMENT & SOC'Y 5, 11-15 (2009).

²⁸ 630 A.2d at 1086.

²⁹ Legislative debate before the Delaware House of Representatives, Oct. 24, 1991; Fleury-Steiner *et al.*, *supra* note __.

³⁰ DEL. CODE ANN. tit. 11, § 4209 (1991); *see* Loren C. Meyers & Gayle P. Lafferty, *Capital Punishment*, in DELAWARE SUPREME COURT: GOLDEN ANNIVERSARY 1951-2001 185 (Justice Randy J. Holland & Helen L. Winslow eds., 2001); State v. Cohen, 604 A.2d 846 (Del. 1992).

Supreme Court in *State v. Cohen*.³¹ Finding the change merely procedural, the Court also upheld the new statute against a challenge that that the new regime could not be used in capital trials where the crime occurred prior to the enactment of the new law.³²

Delaware's current capital punishment scheme was enacted in 2002. Earlier that year, the United States Supreme Court decided *Ring v. Arizona*.³³ In *Ring*, the Court held that the factors which made a defendant eligible for the death penalty, such as the elements of capital murder or the statutory aggravating circumstances, had to be found by a jury. Thus, in July 2002, the Delaware legislature again revised the method for determining how defendants are sentenced to death.³⁴

The current system retains the jury's advisory sentencing role as to whether aggravating circumstances outweigh mitigating circumstances, but requires that a jury must unanimously and beyond a reasonable doubt find at least one statutory aggravating circumstance.³⁵ While the ultimate sentencing power still resides with the judge,³⁶ the Delaware Supreme Court has

³¹ 604 A.2d 846 (Del. 1992).

³²*Id.* In six of the seven cases combined in *Cohen*, the murders had occurred before the 1991 amendments were passed into legislation.

³³ 536 U.S. 584 (2002).

³⁴ DEL. CODE ANN. tit. 11, § 4209 (2002).

³⁵ DEL. CODE ANN. tit. 11, § 4209 (2002).

³⁶ *Id.*

determined that the trial judge must give “appropriate consideration”³⁷ to a jury’s assessment of whether aggravation outweighs mitigation:

The jury's recommendation concerning whether the aggravating circumstances found to exist outweigh the mitigating circumstances found to exist shall be given such consideration as deemed appropriate by the Court in light of the particular circumstances or details of the commission of the offense and the character and propensities of the offender as found to exist by the Court. The jury's recommendation shall not be binding upon the Court.³⁸

III. Methodology.

To examine capital punishment in Delaware, our project relies on three different sets of data. To place Delaware’s experience with its capital punishment system in a national context, we employed two national databases. The first is a Bureau of Justice Statistics (BJS) database, *Capital Punishment in the United States*, which includes defendants sentenced to death during the time period of 1973-2007.³⁹ A second national dataset is the FBI’s Supplementary Homicide Reports (SHR), which provide data about murders nationwide.⁴⁰ Finally, we developed the

³⁷ DEL. CODE ANN. tit. 11, § 4209 (2002).

³⁸ Previously, judges were required to give “great weight” to the jury’s recommendation. *Garden v. State*, 815 A.2d 327, 342 (Del. 2003) (remanding where Superior Judge gave substantial consideration to the jury’s recommendation of life, but imposed a sentence of death); *Garden v. State*, 844 A.2d 311 (Del. 2004) (remanding where Superior Judge failed to give “great weight” to jury’s recommendation of life and where jury’s recommendation of life was supportable). The Delaware legislature subsequently revised the language in 2003 to require only “such consideration as deemed appropriate.” 74 DEL. LAWS 425 (2003).

³⁹ U.S. Dep’t of Justice. Office of Justice Programs. Bureau of Justice Statistics. *Capital Punishment in the United States, 1973-2007* [Computer file]. ICPSR24961-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2009-03-11. doi:10.3886/ICPSR24961.

⁴⁰ James L. Fox & Marc L. Swatt. 1976-2007 [Computer file]. Compiled by the Northeastern University, College of Criminal Justice. ICPSR24801-v1. Ann Arbor, MI: Inter-

Delaware Capital Trials dataset, based on our research team’s coding of the information in legal documents as well as in homicide case files in the offices of the Delaware Prothonotary and in the Delaware Archives, supplemented by information from news coverage and Delaware judges and attorneys.

A. *The Bureau of Justice Statistics Database.*

The BJS database, “Capital Punishment in the United States,” tracks every person sentenced to death from 1973 to 2007.⁴¹ To avoid the effects of early uncertainty in the post-*Furman v. Georgia*⁴² modern death penalty era, the sample is limited to defendants sentenced after 1976, when the Supreme Court in *Gregg v. Georgia* established the foundation for the modern death penalty era.⁴³ The BJS data contain 8,701 observations, 7,603 of which are death sentences imposed from 1977 to 2007, inclusive. Federal death sentences and death sentences in New York’s never-fully-implemented modern capital punishment system are excluded.⁴⁴ Those individuals who entered the death row data set, exited from it (perhaps because of a favorable court decision), and then reentered the sample are limited to one observation. This leaves a

university Consortium for Political and Social Research [producer and distributor], 2009.

⁴¹ BJS dataset, *supra* note __.

⁴² 408 U.S. 238 (1972).

⁴³ 428 U.S. 153 (1976). The Court approved several new death penalty statutes on the ground that they addressed the problems of arbitrariness and discrimination identified in *Furman*. New Jersey’s post-*Furman* death penalty statute became effective in 1982. N.J. STAT. ANN. § 2C:11-3 (West Supp. 2002), New Mexico’s in 1979, N.M. STAT. ANN. § 30-2-1(A) (Michie 2000), and Oregon’s in 1978. OR. REV. STAT. § 163.095(e) (2001).

⁴⁴ *See People v. LaValle*, 3 N.Y.3d 88, 817 N.E.2d 341 (2004).

sample of 7,109 individual state death row defendants from 36 states with capital punishment.

The BJS death row data include the state, year of sentence, year of arrest, race of the defendant, and other information.⁴⁵

B. . The FBI Supplemental Homicide Reports.

The FBI's Supplementary Homicide Reports (SHR) contains information on the vast majority of murders in the United States.⁴⁶ Using murder data and comparing it to capital prosecutions or death sentences measures the "death-proneness" of a state's entire criminal justice process.

For each murder, the data include the year of the offense, the race, sex, age of the victim and of the defendant arrested for the offense, the county in which the offense occurred, and data about the nature of the murder, including whether it was committed in the course of certain crimes such as robbery, rape, burglary, or larceny.⁴⁷ Crime analysts have concluded that despite some imperfections, the murder data are among the most reliable crime data.⁴⁸

⁴⁵ An alternative source of death row inmates is the NAACP's Death Row U.S.A. The NAACP data also do not contain the race of victim for those inmates on death row who have not been executed. NAACP, Death Row U.S.A. Fall 2000 (as of Oct. 1, 2000). The NAACP list does not include a cumulative listing of all those who have entered death row. The BJS list has been said to miscount commutations, *see* Michael L. Radelet & Barbara A. Zsembik, *Executive Clemency in Post-Furman Capital Cases*, 27 U. RICH. L. REV. 289 (1993). But the discrepancy seems minimal in revised BJS data. Hugo Adam Bedau, *Background and Developments*, in THE DEATH PENALTY IN AMERICA: CURRENT CONTROVERSIES 25 n.26 (Hugo Adam Bedau ed., 4th ed. 1997).

⁴⁶ Fox & Swatt, *supra* note __.

⁴⁷ Fox & Swatt, *supra* note __. For discussion of the quality of the SHR data, *see* James Alan Fox & Marc L. Swatt, Multiple Imputation of the Supplementary Homicide Reports, 1976-2005, 25 J. QUANT. CRIMINOL. 51 (2009). For Florida, Kansas, Kentucky, and Montana, SHR data were missing for one or more years of this study. For Florida we used the number of murders from the Florida Department of Law Enforcement for the years 1989 through 2007. For

The SHR include unsolved homicides and recent iterations of the data include imputed information for missing data.⁴⁹ In this study, we use the non-imputed data. The non-imputed data have been reported to contain approximately 90% of murders, with some variation over time.⁵⁰ If the data lack the offender's sex, we treat the case as unsolved, as not producing a candidate for the death sentence, and eliminate it from the death sentence rate calculations.⁵¹ To the extent that arrests are followed by releases, the data overstate the number of offenders at risk of a death sentence. Since the primary purpose for which we use the SHR data is to facilitate

1988, we used the average number of murders for the two surrounding years, 1987 and 1989. For Kansas, we used information from "Kansas Crimes Rates 1960-2008" (Kansas Crime Rates 1960 - 2008, *available at* <http://www.disastercenter.com/crime/kncrime.htm>) for the years 1994 to 2000. These were adjusted to reflect differences in the Kansas-source data and the SHR data for the years in which SHR data were available. For Kentucky we used the average of SHR-reported murders for 1987 and 1989 to estimate the number of murders in 1988. For Montana, we used the average of SHR reported murders for 1986 and 1988 to estimate the number of murders in 1987 and the average of SHR reported murders for 1995 and 1997 to estimate the number of murders in 1996.

⁴⁸ John J. Donohue, *Understanding the Time Path of Crime*, 88 J. CRIM. L. & CRIMINOLOGY 1423, 1425 (1998); John J. Donohue & Peter Siegelman, *Allocating Resources Among Prisons and Social Programs in the Battle Against Crime*, 27 J. LEGAL STUD. 1, 4 (1998); Robert J. Cottrol, Book Review, *Hard Choices and Shifted Burdens: American Crime and American Justice at the End of the Century*, 65 GEO. WASH. L. REV. 506, 517 (1997). *But see* Michael Maxfield, *Circumstances in Supplementary Homicide Reports: Variety and Validity*, 27 CRIMINOLOGY 671, 675-81 (1989). The data exclude negligent manslaughters and justifiable homicides. Fox & Swatt, Multiple Imputation, *supra* note __.

⁴⁹ Fox & Swatt, Multiple Imputation, *supra* note __.

⁵⁰ *Id.* at 53.

⁵¹ Offender sex is missing for 26.8% of SHR observations after 1976, with a low of 21.1% in 1978 and a high of 30.2% in 1992. These rates are reasonably consistent with a report of unsolved homicides ranging from just below 20% in 1976 to just over 30% in the mid-1990s. Fox & Swatt, *supra* note __, at 54. Missing data for unsolved murders are not a concern for this study because unsolved murders do not produce candidates for death row.

interstate comparisons, rather than to ascertain the absolute level of death sentence rates, erroneous murder arrests are of concern only to the extent they vary unevenly across states.

The SHR data allow for reasonable estimates of the number of solved murders in each state in each year. For comparison with the 1977 to 2007 death row population data, we use the SHR for 1976 through 2007 except for Kansas, New Jersey, New Mexico, Oregon, and South Dakota. Kansas's post-*Furman* death penalty statute became effective in 1994. New Jersey's post-*Furman* death penalty statute became effective in 1982.⁵² New Mexico's became effective in 1979,⁵³ as did South Dakota's, and Oregon's became effective in 1978. For these states, we limit the SHR murder data to the years corresponding to the potential exposure of murder defendants to the death penalty.⁵⁴

By comparing death row sizes with murder populations, one can estimate states' relative propensities to impose the death penalty. Murder is clearly the crime category from which the vast majority of death sentences emerge. In 2008, the Supreme Court ruled in *Kennedy v. Louisiana* that the death penalty is unconstitutional for child rape and for other crimes that do not

⁵² New Jersey abolished capital punishment in late 2007, largely after the period covered by this study.

⁵³ New Mexico abolished capital punishment in 2009, after the period covered by this study. Illinois abolished capital punishment in 2011, also after the period covered by this study.

⁵⁴ In New Jersey, we use SHR data from 1982 through 1998. Oregon's post-*Furman* statute became effective on December 7, 1978, so we limit its SHR data to 1979 through 1998. New Mexico's post-*Furman* statute became effective July 1, 1979, and we limit its SHR data to 1980 through 1998.

result in the death of the victim.⁵⁵ Even before *Kennedy*, capital punishment in non-murder cases was rare.

C. The Delaware Capital Trials Database.

The database contains information from Superior Court files at the Delaware Archives and the Prothonotary's offices in all three counties. Trained coders went through the files on site, and used a detailed questionnaire, adapted from that used in David Baldus's research, to code over 700 elements of the cases, crimes, defendants, and victims.⁵⁶ File information was supplemented by other sources of information about the cases, including Delaware trial and appellate court opinions; 3rd Circuit and U.S. Supreme Court opinions, news reports, law review articles, and the personal knowledge of Delaware judges and attorneys. The data include basic case information (defendant name, dates of offense and proceedings, attorneys and judges, trial and penalty phase outcomes; outcomes of appellate proceedings); background information about the defendant and the victim; presence or absence of potentially aggravating circumstances; presence or absence of potentially mitigating circumstances; and written case summaries that offer a narrative perspective on the case.⁵⁷

⁵⁵ 128 S.Ct. 2641 (2008).

⁵⁶ David C. Baldus, George Woodworth & Charles A Pulaski, Jr. EQUAL JUSTICE AND THE DEATH PENALTY: A LEGAL AND EMPIRICAL ANALYSIS (1990). *See also* David C. Baldus, George Woodworth & Charles A Pulaski, Jr. *Law and Statistics in Conflict: Reflections on McCleskey v. Kemp*, 251 HANDBOOK OF PSYCHOLOGY AND LAW (D.K. Kagehiro & W.S. Laufer eds., 1992).

⁵⁷ Despite excellent cooperation from Delaware Superior Court and the Prothonotary's offices that house and manage the Superior Court files, obtaining accurate and complete information for the defendants in the database has presented challenges. The case files vary in their completeness. Police reports, especially valuable because they frequently include race

IV. Geography.

We examined the distribution of death sentences by county and have observed some intriguing geographical patterns. Although the numbers are small when cases and sentences are broken down by county, and the differences don't reach traditional levels of statistical significance, we believe it's important to describe the patterns we have observed. Twenty-nine persons (59% of the total) were sentenced to death in New Castle, 14 (29%) were sentenced to death in Kent County, while only 6 (12%) of the persons sentenced to death in the modern era under the guided discretion statutes were sentenced to death in Sussex County.⁵⁸

That New Castle County produces the most death sentences is not surprising. It is by far the largest county, and has the most murders. During the time period 1976-2007, there were 753 murders in New Castle County (67% of the state's total).⁵⁹ The Kent-Sussex disparity is more difficult to explain, however. During the time period 1976-2007, the number of murders in

information, are often missing. The death cases are the most complete and the most accurate, in part because death cases are automatically appealed and as part of the review process, the penalty phase hearing is transcribed in its entirety. Post-trial litigation of death cases is extensive and we are able to cross-check case file information with judicial reports and appellate opinions. Information about the nature of the crime and the defendant's background is less well-developed in the files of life cases.

⁵⁸ The numbers would be even more stark were it not for the fact that four of the last five individuals sentenced to death in Delaware involved crimes that occurred in Sussex County. See Appendix A. Prior to 2007, there had been only 2 Sussex County death cases. In our initial analyses and talks to the Delaware bar, we reported the very low numbers.

⁵⁹ According to the Supplementary Homicide Reports, from 1976 to 2007, Kent County had 178 murders, New Castle County had 753 murders, and Sussex County had 200 murders.

Sussex County (200, or 18% of the murders in the state) exceeded the number in Kent County (178, or 16% of the total).⁶⁰ But capital trials and death sentences showed a reverse pattern.

Both a willingness to proceed with capital trials and the decision makers' tendency to choose a death sentence appear to contribute to the geographical pattern. According to the capital trial records obtained from the state Prothonotary's offices, Kent County had proportionately more penalty phase trials (28 overall) than might have been expected given the homicide numbers, and half of those resulted in death sentences.⁶¹ The other two counties appeared to be less likely than might have been expected based on the homicide numbers to proceed to full capital trials; furthermore, judges and juries in New Castle and Sussex counties selected death sentences in only about a third of the cases.

Other traditional county characteristics that explain geographic disparity are also missing. Delaware has a single elected Attorney General, who then appoints the State Prosecutor and the County Prosecutors,⁶² and it uses a centralized system for determining whether to seek death in a particular case. Thus the answer is not likely to be found in differences in the death seeking behavior of elected county prosecutors, as has been the case in some other states.

⁶⁰ *Id.*

⁶¹ The analysis was limited to capital trials that proceeded to a penalty phase for the time period 1976-2007. Note that the two most recent Sussex County death sentences (Powell and Small, see Appendix A) fall outside this time frame. For this analysis, only the first trial or first penalty hearing was counted in cases with multiple trials or penalty phases for the same homicide (hence, the second trials or penalty phases for David Dawson, James Riley, and Frank Whalen were not included in the calculations). However, the multiple trials of Steven Pennell were included because they covered different homicides.

⁶² Delaware's Department of Justice website explains the organization of criminal prosecution in Delaware, <http://attorneygeneral.delaware.gov/crime/crimeprevent.shtml>

Sussex County has a smaller African-American population than Kent (12.7% v. 24%),⁶³ and the average incomes and education levels, factors that have been noted in other studies to explain geographical differences in death sentencing, are not significantly different.⁶⁴ In short, Kent County has 16% of the state's murders, but produces 29% of the state's death sentences. New Castle County has 67% of the state's murders and 59% of the state's death sentences. Sussex County has 18% of the state's murders, but, as noted above, only 6 persons (12% of the death sentences) were sentenced to death for crimes committed in Sussex County.

We perhaps should not over-analyze the geographical patterns; because of the small numbers, the differences across counties don't reach traditional levels of statistical significance. Nonetheless, they raise the possibility that homicides in the three counties could be qualitatively different. Alternatively or in addition, there may be distinctive local cultures in the three Delaware counties with respect to the death penalty. We have no strong hypotheses for these geographical patterns, but report them because there may be others who do.

V. Race.

⁶³ See <http://quickfacts.census.gov.qfd/states/1000.html>.

⁶⁴ See Theodore Eisenberg, *Death Sentence Rates and County Demographics: An Empirical Study*, 90 CORNELL L. REV. 348, 359 (2005). The median household income in Sussex County is approximately \$51,000 a year and the median income in Kent is approximately \$53,000, while the percentage of persons below the poverty level is 11.7% and 12.5% respectively. Cite. Similarly, the percentage of high school graduates (85.2% Sussex v. 84.9% Kent) and of persons with a Bachelors degree or higher (21.2% Sussex v. 20% Kent) are also very similar <http://quickfacts.census.gov.qfd/states/1000.html>.

The influence of race upon death sentences has been the subject of many studies, including, of course, the extraordinary work of David Baldus. Here we report racial disparities measured in several ways.

A. Death Sentences Imposed by Race.

Fifty-eight persons – 57 of them men⁶⁵ – have been sentenced to death in the “modern” era of the Delaware death penalty.⁶⁶ Since 9 of those death sentences were imposed under the initial mandatory scheme, and were therefore automatically invalidated,⁶⁷ we will focus on the 49 defendants sentenced to death using one of the three guided discretion statutes. Of those 49, only 19, or 39%, were white. Twenty-six, or 53%, were black, and 4, or 8%, were Hispanic or Native American. In contrast, 69% of the Delaware population is white, 21% is black and (as is proportionate), 8% are Hispanic.⁶⁸ The starkness of the black-white disparity is increasing rather than decreasing over time; all of the last eight death sentences in Delaware were imposed upon African American defendants. The last white defendant to be sentenced to death in Delaware was Linda Charbonneau in 2004.

Thirty-five of the 49 cases, or 73%, involve a white victim. Moreover, half of the 14 black victim cases involved more than one victim, while only 14 percent of the 33 white victim

⁶⁵ Only one woman, Linda Charbonneau, has been sentenced to death in the modern era. Her convictions and sentence were reversed on direct appeal, *Charbonneau v. State*, 904 A.2d 295 (Del. 2006), and she was subsequently resentenced to life imprisonment.

⁶⁶ Appendix A includes a complete list of persons sentenced to death since 1972.

⁶⁷ 367 A.2d 983, 988 (Del. 1976).

⁶⁸ <http://quickfacts.census.gov/qfd/states/10000.html>

cases involved more than one victim, suggesting that the black victim cases that do result in death sentences are more aggravated than are the white victim death cases.

B. The Racial Composition of Delaware's Death Row.

There are currently 17 men on Delaware's death row. Four (23%) are white, 10 (59%) are African-American and 3 (18%) are Hispanic.⁶⁹ The combined minority population thus is 77%. The overall pattern (and racial disparity) is more stark than that observed nationally, where, of more than three thousand death sentenced inmates, 43% are white, 42% are black, 12% are Hispanic and 2% are reported as "other."⁷⁰

Of the current death row inmates, 59% (10) were convicted of murdering whites and 41% (7) were convicted of murdering African-Americans. Three of the 7 black victim cases involved multiple victims, but all of the current death row inmates sentenced to death in a white victim case involved a single victim homicide.

C. Race and Executions.

There have been 15 modern era executions in Delaware, the most recent of which was in July of 2011. Of the 15 death row inmates who were executed, 8 (53%) were white, 6 (40%) were African-American and 1 was Native-American (7%). Eleven (73%) of the executed inmates were sentenced to death for killing one or more white victims, and 4 (27%) were executed for the murder of one – or in three of the four cases, more than one -- black victim.⁷¹

⁶⁹ Appendix B lists, with race of defendant and victim information, the individuals currently on death row in Delaware.

⁷⁰ See www.deathpenalty.org/factsheet.pdf (Death Penalty Information Center website).

⁷¹ Appendix D lists the individuals executed in Delaware.

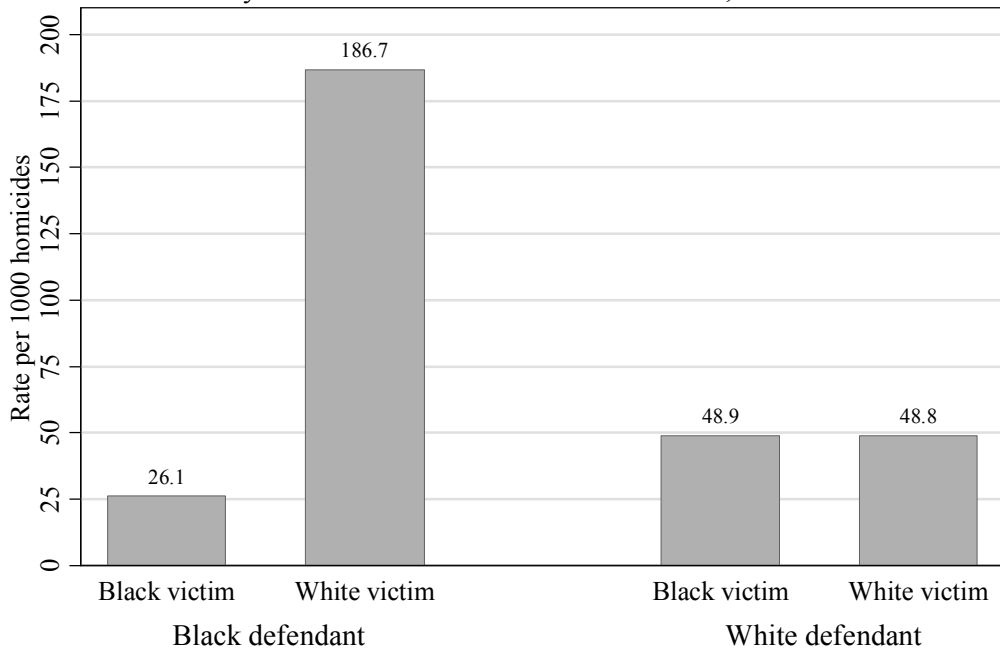
D. Race and Death-Sentencing Rates.

The death sentence rate -- the proportion of all murders that result in a death sentence -- measures “death-proneness” in a jurisdiction. In the next section, we consider changes over time in the death sentence rate in Delaware. But death sentence rates can also be used as a measure of racial disparity. Comparisons between the population and death sentences, such as those reported above, can be striking -- as they are in Delaware -- but standing alone, must be interpreted cautiously. Racial discrimination might explain such disparities, but another obvious possibility is differences in underlying offense rates. Examination of death sentence rates for various race of defendant and race of victim combinations, if it reveals large disparities, is less likely to stem from differences in criminal behavior.

The results of examining Delaware’s death sentencing rate by race of defendant and victim are dramatic. Figure 1 shows the death sentence rate for Delaware as a function of the

race of defendant and victim.

Figure 1. Delaware's Death Sentencing Rate Per 1000 Homicides by Race of Defendant and Race of Victim, 1977-2011



Note. Data for Delaware cover those sentenced to death from 1977 to 2011 and homicides from 1976 through 2008.

From almost any perspective, it is hard to imagine what would cause such stark disparities. Black defendants who kill white victims are seven times as likely to receive the death penalty as are black defendants who kill black victims (186.7 per thousand as compared to 26.1 per thousand death sentencing rates). Moreover, black defendants who kill white victims are more than three times as likely to be sentenced to death as are white defendants who kill white victims (186.7 per thousand as compared to 48.8 per thousand.) Interestingly, white defendants who kill white victims are about as likely to receive a death sentences as white defendants who kill black victims (48.9 per thousand as compared to 48.8 per thousand). The comparisons taken

together suggest that black lives – those of black victims and those of black murderers – are less valued in Delaware; the rate that stands out is for black defendants who kill white victims.

Of course, it is theoretically possible that although these comparisons control for differences in murder *rates*, they fail to capture differences in *kinds* of murders. Is it plausible that African Americans systematically commit – and whites systematically are victims of -- *worse* murders? The final stage of our study of Delaware will attempt to resolve this question in true Baldus fashion, by examining aggravation and mitigation in capital cases, as well as in death eligible murders. In the meantime, a comparison with death sentencing rates in other jurisdictions is instructive. Table 1 includes the Delaware data from Figure 1 and adds data on seven other states for the time period 1977 to 2000.⁷²

Table 1. How Does Delaware Compare to Other States in Death Sentencing Rates?
Rate of Death Sentences Per 1000 Homicides, by Race of Defendant and Victim

State	Black defendant/ black victim	Black defendant/ white victim	White defendant/ white victim	White defendant/ black victim
Delaware	26.1	186.7	48.9	48.8
Georgia	4.5	99.2	41.7	21.4
Indiana	5.6	42.3	21.6	0
Maryland	2.4	52.2	14	7.3
Nevada	24.9	101.1	37	12.5
Pennsylvania	17.7	48.6	22.2	11.9
South Carolina	2.9	67.8	27.1	50.3
Virginia	3.6	64.5	18.3	23

Note. Data for Delaware cover those sentenced to death from 1977 to 2011 and homicides from 1976 through 2008. Periods of included death sentences and homicides for other states are reported in Blume et al., supra note __, at 195 (tbl.7), and generally cover death sentences from 1977 through 2001 and homicides from 1976 through 1998.

Even when compared to southern states, the Delaware rate of death sentencing for black defendants with white victims is extremely high; it is 75 percent higher than the closest contenders, Georgia and Nevada, more than twice as high as that of South Carolina or Virginia,

⁷² The data from the seven other states are from Blume et al., supra note __, at 197.

and more than three times as high as that of its near neighbors, Maryland and Pennsylvania. One problem in comparing these states to Delaware is that the figures we have cover somewhat different time periods. However, because, as we show below, the death penalty has declined nationwide over time, the table's comparison is likely to understate the disparities between Delaware and other states.

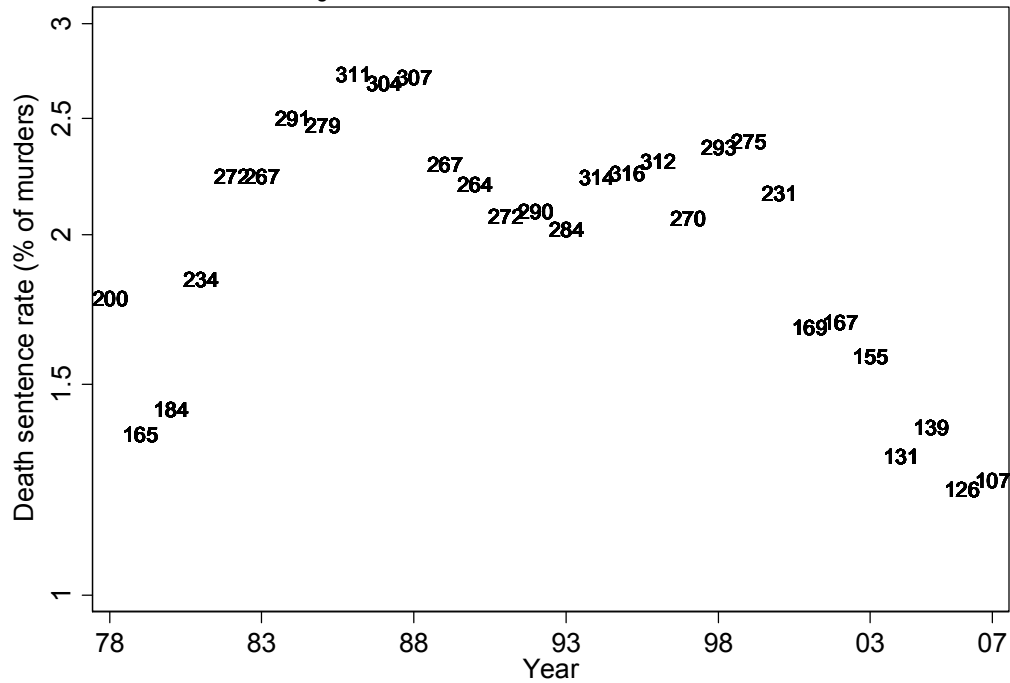
VI. Death-Sentencing Rates and Judge-Jury Differences.

One benefit of describing the national pattern of death sentence rates over time is that the national trend can then provide a background rate, a kind of quasi-control group, against which to evaluate change over time in particular states, such as Delaware. Our strategy is to first describe the national pattern of changes over the time period, and then describe the Delaware-specific factors that we wanted to investigate, and are able to explore with these data.

A. National Death Sentence Rates.

Figure 2 shows the pattern of death sentence rates and the number of death sentences over time. The numbers representing the data points are the number of death sentences in a year. The figure shows a steady increase in death sentence rates in the first decade of the modern capital punishment era, a decline in the late 1980s and early 1990s, a near-steady-state from the early 1990s to about 2000, and a sharp drop beginning at about the turn of the century. The death sentence rate in the most recent years is less than half of its peak from 1986 through 1988. The number of death sentences was fairly steady, about 200 to 300, for well over a decade, from the early 1980s through about 2000. A sharp drop in the number began in 2001 and continued through 2006-2007, and in the most recent data we use, is only about 100 per year.

Figure 2. Death Sentence Rate and Number Over Time



5 -

Explaining this national pattern is methodologically challenging due to interstate variation in death penalty statutes, variation in law enforcement processes, and likely changes over time in the factors that influence death sentence rates. One wants to account for both factors that change over time, such as the time from arrest to sentence discussed below, as well as for any underlying global change associated with time. Capturing both a global time trend as well as the influence of time-varying factors can be difficult.

One important development is the emerging recognition that innocent people are convicted of crimes. Indeed, as this article goes to press, the Death Penalty Information Center lists 140 death row inmates as having been exonerated.⁷³ News coverage of death row exonerations is substantial,⁷⁴ with a peak in 2000 when Illinois Governor Ryan announced a moratorium on executions in Illinois unless he could be convinced that no innocent person would be executed.⁷⁵ Increased concern over sentencing an innocent individual to death might well affect the frequency of death sentences.

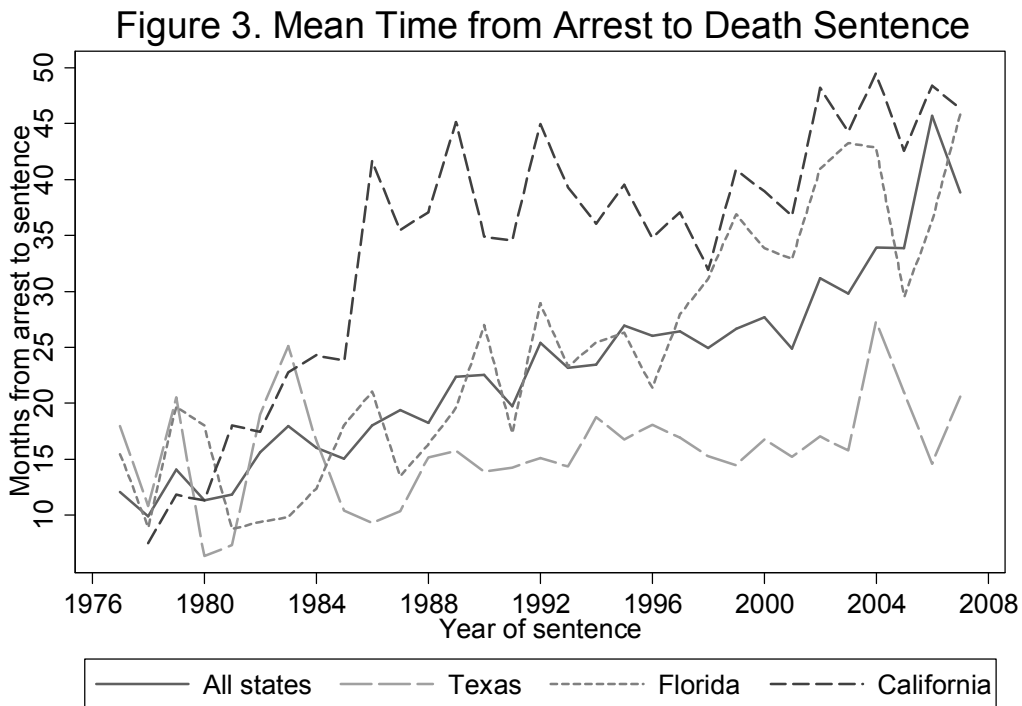
Another likely factor in the rate decline is the increased cost of processing capital cases. One proxy for that cost is the time between arrest and imposition of a death sentence. The available BJS data allow assessing the elapsed time between arrest and death sentence of the period studied, subject to the limitation of substantial missing arrest-year data in the early years. Figure 3 shows a notable change over time in the period between arrest and sentencing. The figure's solid line shows the mean time between arrest and death sentence for all states combined. The mean time grew from about 11 months in 1980 to about 38 months in 2007. So the pool of murders leading to death sentences in the early years of this study is closer in time to the year of death sentence than is the pool of murders for more recent years. The missing arrest data, noted above, do not lead to a materially different trend in the earlier years. But the last few decades indicate that defining the pool of murders using a uniform one-year lag may

⁷³ See <http://www.deathpenaltyinfo.org/innocence-and-death-penalty>, accessed 2/8/2012.

⁷⁴ FRANK R. BAUMGARTNER, SUZANNA L. DE BOEF, & AMBER E. BOYDSTUN, *THE DECLINE OF THE DEATH PENALTY AND THE DISCOVERY OF INNOCENCE* (2008).

⁷⁵ *Id.* at 67.

oversimplify the temporal relation between murders and death sentences. The other lines in Figure 3 show the time trend by state for the three states with the largest death rows, California, Florida, and Texas. The increasing trend over time is not solely a function of these states and the trend in these states is consistent with the overall trend. For death sentences from 1977 through 1994, the median arrest year was about one year earlier.



Death sentences imposed from 1995 through 2005, the median year of arrest was about two years earlier. For death sentences imposed in 2006 and 2007, the median arrest year was about 2.5 years earlier.

There are several other reasons that the number of death sentences may be declining. One is that life without parole is now an option in every death penalty jurisdiction.⁷⁶ The availability of life without parole both makes prosecutors less likely to see death and juries less likely to impose the death penalty.⁷⁷ The decline in death sentences is also almost certainly attributable, at least in part, to declining public support for capital punishment. Over the last decade, the number of American who are in favor of the death penalty has dropped its lowest level in fifty years.⁷⁸ According to recent polling data, “only” 61% of the American people support the death penalty.⁷⁹ However, when offered alternatives to capital punishment, including life without parole, public support drops well below 50%.⁸⁰ This changing view of capital punishment would logically tend to influence both prosecutorial and jury behavior since, in most jurisdictions, the jurors have to unanimously agree that the death penalty is the appropriate punishment.⁸¹ Additional factors that might be associated with change in death sentence rates are Supreme Court rulings with respect to the constitutionality of juveniles and

⁷⁶ John H. Blume, “*The Times They Are A-Changin’*” (or are they?), 36 CORNELL L. FORUM No. 1, p. 18, 20 (2010).

⁷⁷ *Id.* Prosecutors are less likely to seek death because issues of future dangerousness are greatly reduced if it is virtually certain the person will never be released back into society. Additionally, it is easier for prosecutors to persuade surviving victim’s family members to agree to a negotiated settlement of the case and avoid a capital trial when they can be assured that the perpetrator will die in prison.

⁷⁸ *Id.* at 18.

⁷⁹ www.gallup.com/poll/160/death-penalty.aspx.

⁸⁰ *Id.*

⁸¹ See, e.g., S.C. Code §16-3-20(C).

those suffering from mental retardation, but neither of these are believed to have affected relatively large numbers of death sentences.

B. Delaware-Specific Statutory Changes and their Influence on Death Sentence Rates

Many factors are likely at work at the state and local level which cannot be fully accounted for due to difficulty in quantitatively representing them as well as limitations on knowledge of the factors. In any particular state, however, detailed institutional knowledge can supply additional factors to use to compare to the national rate. In this analysis, we consider Delaware's changes in capital sentencing laws over the time period, in particular, the statutory changes in judge versus jury capital sentencing. We now seek to evaluate the impact of these statutory shifts on the death sentence rate by using the national pattern we have identified. Whatever the complex of factors shaping the national pattern, Figure 2 shows the resulting rises and falls in death sentencing rates. One can think of this time pattern as representing all influences on death sentence rates, even if we cannot even identify or observe the influences individually. If Delaware can reasonably be assumed to have experienced roughly the same influences shaping the national pattern, by accounting for the Figure 2 pattern in models, we can then explore how Delaware-specific variations may have influenced changes in Delaware death sentence rates.

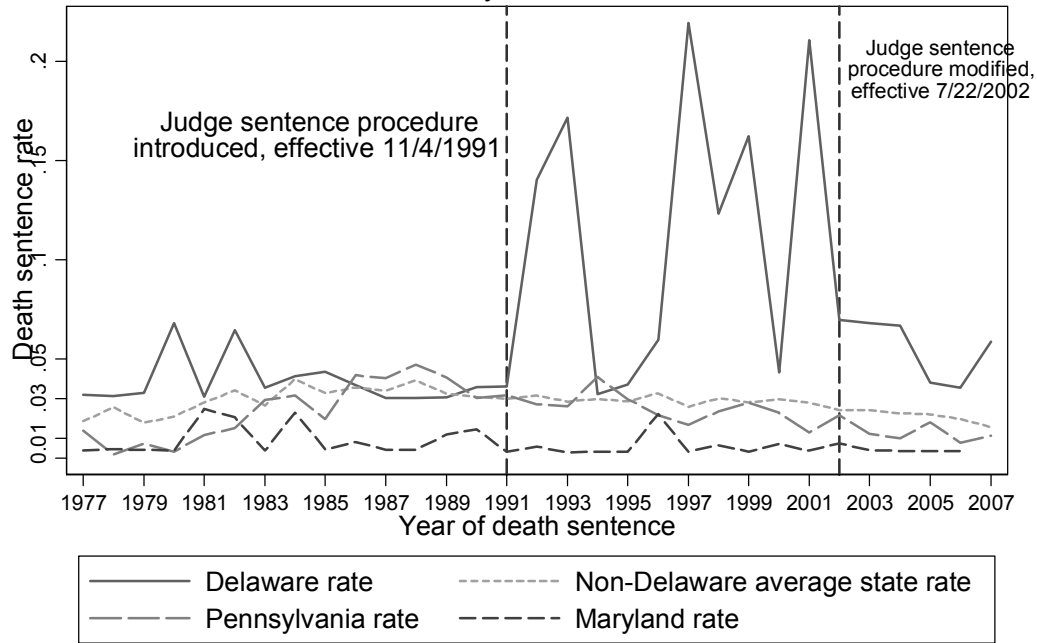
Figure 4 shows death penalty sentencing rates over time, both nationally and in specific states including Delaware. The sentencing rate calculates the number of death sentences over the number of homicides in the time period and in the state. Figure 4 displays the death sentence rate over the years of the modern death penalty era through 2007. The line represented by the shortest dashes represents the death sentence rate for all states other than Delaware. The rate has

remained between one percent of murders and about three percent of murders throughout the modern era.

In addition to excluding Delaware, this line differs from the pattern shown in Figure 2 in a few ways. The Figure 4 line is in a figure that includes a much broader range of death sentence rates than the range in Figure 2. The one percent to three percent range adequate for the national pattern is inadequate to describe Delaware's annual death sentence rates. In some years, the Delaware death sentence rate exceeded 20 percent, though some of this volatility likely stems from Delaware being a small state with a correspondingly small number of murders. The need to expand the scale of the y-axis makes the national trend line in Figure 4 appear to be much smoother than the national pattern as represented in Figure 2.

Figure 4 includes the death sentence rate over time for two states other than Delaware. We chose Pennsylvania and Maryland because both border on Delaware and both have capital punishment. Thus we consider the pattern in those states to evaluate the possibility that some regional factor explains Delaware's deviation from the national pattern. Figure 4 includes vertical lines for 1991 and 2002 that represent major the two major statutory changes in Delaware's death penalty law described above.

Figure 4. All States, Delaware, Pennsylvania, and Maryland Death Sentence Rates, by Year



The Delaware-specific story suggested by Figure 4 is that, until the shift to greater judge involvement in sentencing in 1991, Delaware’s death sentence rates did not materially differ from those of other states. Delaware’s rate was higher from 1977 to 1985, then dipped below the national rate until 1990, and slightly exceeded it in 1991. Corresponding to the adoption of increased judicial involvement in capital sentencing, Delaware’s rate both rose and became volatile through 2002. The volatility was largely unidirectional in the sense that Delaware’s rate rarely dipped below the national death sentence rate, and on average, was much higher. Delaware’s rate calmed down in 2002 but still generally remained above the national rate. Figure 4’s Pennsylvania and Maryland lines support the impression created by comparing the national line with that of Delaware; Delaware’s rate jumped compared to those two states in 1991 as well, and, on average, has remained well above theirs ever since.

C. Regression Models of Delaware Sentencing Rates.

Although Figure 3 is compelling and gives us a sense that the statutory changes in decision maker roles were associated with changes in death sentencing rates, one limitation of Figure 4 is that it cannot establish the statistical significance of Delaware's death sentence rate. To explore whether the pattern suggested by Figure 4 is statistically significant, we employ regression models. In those models, we wish to account for the national "background" time pattern of death sentence rates reflected in Figure 2. The background rate can be thought of as capturing all non-Delaware-specific factors, whatever they are, that produce Figure 2's time pattern.

A simple time term cannot adequately represent time and the background national trend because it is obviously nonlinear. Several techniques exist to capture and control for nonlinear trends.⁸² We use fractional polynomial models, which are often employed to model a nonlinear pattern when primary interest is in the covariates but time must be controlled for.⁸³

⁸² Other approaches to the one we employ (fractional polynomial models) include using time (year) polynomial terms with multiple powers. It appears from Figure 2 that a polynomial of degree five would be needed to capture the various inflection points. They also include splines (which fit different lines to the data at obvious breakpoints) and partial linear models.

⁸³ *E.g.*, David A.M. Peterson, Lawrence J. Grossbeck, James A. Stimson & Amy Gangl, *Congressional Response to Mandate Elections*, 47 AM. J. POLITICAL SCI. 411 (2003); Patrick Royston, Gareth Ambler & Willi Sauerbrei, *The Use of Fractional Polynomials to Model Continuous Risk Variables in Epidemiology*, 28 INT'L J. EPIDEMIOLOGY 964 (1999).

On the issue of lags, the change over the time period of this study in the time between arrest and death sentence complicates estimating death sentence rates. Computing death sentence rates by associating death sentences with murders in single prior year (the year preceding sentence, for example) is not fully satisfactory. Figure 3 shows a notable change over time in the period between arrest and sentencing. The pool of murders leading to death sentences in the early years of this study is closer in time to the year of death sentence than is the pool of murders for more recent years. The last few decades show that defining the pool of murders using a uniform

In addition to accounting for time, we include in our regression models variables that seek to assess any distinctive effect of Delaware. Since Delaware allowed judges to sentence in 1991, we want to assess Delaware's death sentence rate while accounting for any effect that may be distinctive to the sentencing role it gives to judges, but is not unique to Delaware. That is, we want to assess whether Delaware's death sentence rates are a generic consequence of its use of judges or more specific to Delaware. To do this characterized the death sentencing scheme of all states with an eye towards the role of the judge in sentencing.⁸⁴

one-year lag may oversimplify the temporal relation between murders and death sentences. To reflect the changing elapsed time between arrest and sentence, we use a pool of murders that reflects this shifting pattern. We inspected the pattern of arrest years for each death sentence year and employ the following algorithm for constructing a measure of the pool of murders from which death sentences were drawn. For each year of death sentences we calculate a death sentence rate using murder arrests from previous years or the current death sentence year that account for at least 75% of the year's death sentences with known arrest years. For death sentences imposed from 1977 through 1982, we use the average number of murders in the death sentence year and the prior year as the denominator (the pool of murders) in calculating death sentence rates. For death sentences imposed from 1983 through 1987, we use the average annual number of murders in the present year plus the two prior years. For death sentences from 1988 through 1994, we use the average number of murders in the three prior years. For 1995 through 2004, we use the average number of murders in the four prior years. For death sentences in 2005, 2006, and 2007, we use the average annual number of murders in the prior five years.

⁸⁴ Of the judicial sentencing states most directly affected by *Ring*, Arizona and Colorado implemented jury sentencing after *Ring*; Montana enacted anticipatory legislation, making it a hybrid state in 2001 ARIZ. REV. STAT. § 13-703.01(D) (2003) requires full jury participation in capital sentencing. Idaho also moved to full jury participation. MONT. CODE § 46-1-401, passed in 2001, prohibits the judge from increasing a sentence in criminal cases tried before a jury unless the jury unanimously finds that "the enhancing act, omission, or fact occurred beyond a reasonable doubt" See Shapiro, *supra* note 42, at 648-50.

Of the hybrid states, Florida, the largest capital punishment state seemingly affected by *Ring*, has done nothing. See discussion in Slobogin, *supra* note ___. It continues to employ its pre-*Ring* system despite repeated constitutional challenges, all of which have been rejected by the Florida Supreme Court. So Florida continues to be a hybrid state in the Supreme Court's taxonomy. The same appears true for Alabama. Indiana amended its statute in 2002 so that the jury now has to find the presence of aggravating circumstances beyond a reasonable doubt and

A third variable we have included in our model is exonerations. (We include this variable despite the fact that there have been no official exonerations in Delaware to date because, as noted above, exonerations have played a major role in reshaping perceptions of the death penalty and likely help shape the national time pattern in Figure 2.) To pick up state-level exoneration effects, we include a variable that includes the number of death sentence exonerations in each state in each year. An exoneration in a particular year might not be expected to have its maximum effect on death sentences in that year, since the death sentencing process now takes multiple years and is shaped by prosecutorial decisions as well as by judge and jury adjudication. Preliminary analysis suggested the strongest association between exonerations four years before the year of sentencing. Other scholars have also justified a four-year lag.⁸⁵ We therefore use a four year lag of exonerations in our regression models.

Finally, we wish to account for changes in Delaware law. To account for changes in the decision maker, we include three dummy variables in the regression models: The first variable accounts for Delaware law to 1991 and is equal to one for Delaware for years prior to 1991; the second variable accounts for Delaware's initial judge-sentencing regime and equals one for the period 1991 through 2002; and the third variable accounts for the 2002 statutory change and equals one for the period after 2002.

the judge must follow the jury's recommendation as to death, life, or term of years. As of 2002, therefore, Indiana should be characterized as a jury-sentencing state. Delaware changed its statute in 2002 as described above and remains a hybrid state.

⁸⁵ Baumgartner et al., *supra* note __, at 207 (concluding that "...it will take about four years for effects [on death sentences] to reach their full impact....").

A further complication is introduced by the fact that each state in our data is observed multiple times (one death sentence rate for each state for each year), so we also need to account for the non-independence of multiple observations of the same state. The dependent variable, the number of death sentences in a state in a year, is binomial in that a death sentence is imposed or not imposed in each murder case. We therefore need to use a model that accounts for the number of events (murders) from which death sentences might be drawn. To implement all these features, we use appropriate generalized estimating equations with the state as an identifier variable. A fractional polynomial of degree three was used to model background time effects.

Table 3 reports the results. Model (1) includes the Delaware dummy variables, a variable representing lagged exonerations, and the nonlinear time term (not reported). Model (2) adds a variable representing states with hybrid sentencing systems, and model (3) adds a variable for states with judge sentencing systems.

Since the Delaware dummy variables span the time period of the data, the coefficients on those variables are in comparison to states other than Delaware. Thus, the coefficient on the “Delaware to 1991” variable indicates, in all three models, that Delaware’s death sentence rate was not statistically significantly different from that of other states up to 1991. Some caution is in order, because the number of cases in Delaware is relatively small overall, and a failure to find statistical significance could be due to the low numbers. Even so, the coefficient on the “Delaware 1991 to 2002” variable is highly statistically significant in all models. This supports the theory that the 1992 Delaware change to judge sentencing led to Delaware’s death sentence rate increasing relative to that of other states. The coefficient on the “Delaware post-2002” variable is not statistically significant, suggesting that the law change in 2002 (or some

coincident event) brought Delaware's death sentence rate back down relative to that of other states. Note that the positive sign on this coefficient corresponds to the elevated location of Delaware's line in Figure 3, which remained above that of other states after 2002.

Table 3. Binomial Regression Models of the Number Inmates on Death Row

Variables	(1)	(2)	(3)
	Dependent variable=number of inmates on death row		
Delaware to 1991	-0.605	-0.345	-0.338
	(1.151)	(1.009)	(1.005)
Delaware 1991 to 2002	1.468***	1.238***	1.239***
	(0.495)	(0.469)	(0.468)
Delaware post-2002	0.874	0.671	0.672
	(0.743)	(0.684)	(0.683)
Hybrid judge-jury sentencing state		0.377***	0.379***
		(0.093)	(0.093)
Judge sentencing state			0.023
			(0.129)
Exonerations in state, by year, lagged	-0.053**	-0.060**	-0.059**
	(0.024)	(0.023)	(0.023)
Nonlinear time trend variables	Not shown		
Observations	1,021	1,021	1,021
Number of states	36	36	36
Prob. Delaware 1991 to 2002 = Delaware 2002	0.179	0.173	0.0170**
Prob. Delaware to 1991 = Delaware 2002	0.0270**	0.0939*	0.0945*

Note. The regression models cover death sentences from 1978 to 2007 and the observations for each year are at the state level. Standard errors are in parentheses. *p <.1; ** p<.05; ***p <.01

Also of interest are the within-Delaware effects. The highly significant “Delaware 1991 to 2002” coefficient and the consistent negative sign on the “Delaware to 1991” coefficient suggest a statistically significant difference within Delaware for these two time periods. This is consistent with Figure 4’s sharp visual difference between these two time periods. Other within-Delaware effects can be assessed using the probabilities reported in Table 3’s last two rows. The last row tests the hypothesis that the coefficient for Delaware to 1991 equals the coefficient for Delaware after 2002. That difference is significant or near significant in all three models. The reduced effect in models (2) and (3) likely is due to the inclusion in those models of the Hybrid dummy variable, which is coded one for Delaware as of 1991. The Hybrid dummy likely is picking up some of the within-Delaware effect since Delaware was not a hybrid state until 1991.

The penultimate row tests the hypothesis that the coefficient for “Delaware 1991 to 2002” differs from that for Delaware after 2002. The difference is statistically significant in model (3) but not in the other two models. Since model (3) only adds a variable (insignificant) for judge sentencing states, it is not clear what the interpretation of that difference should be.

It is interesting to observe that the exonerations variable is statistically significant in all three models. The (lagged) effect of exonerations in a state is associated with a reduction in death penalty sentences.

VII. Appeals and Error Rates.

The Delaware Supreme Court has decided 54 cases on direct appeal,⁸⁶ reversing the conviction in four cases, and the sentence in 11 more, and the United Supreme Court ordered resentencing for in an additional case after the judgment was affirmed by the Delaware Supreme Court. The combined error rate on direct appeal was thus 29%. Twelve of those 15 individuals (80%) were subsequently resentenced to life imprisonment, 2 were resentenced to death and ultimately executed, and 1 is currently pending pretrial.

Four death sentenced inmates obtained new trials, either as to guilt or penalty, in state post-conviction proceedings, and 2 were successful in federal post-conviction proceedings.⁸⁷

⁸⁶ The number of appeals is greater than the number of persons sentenced to death under the guided discretion statute (42) because some persons had their convictions or sentence reversed and then were resentenced to death and appealed again. A list of all cases decided on direct appeal is found in Appendix E.

⁸⁷ One inmate, Craig Zebrowski, recently obtained a remand to the Superior Court for additional proceedings. *Zebrowski v. State*, 12 A.3d 1115 (De. 2010). As the legality of his conviction and sentence have not been resolved, we did not count the case as a reversal.

This yields an overall error rate of 41%.⁸⁸ Of the 4 inmates who prevailed in state post-conviction, 3 of the 4 were resentenced to death; of the 2 inmates who prevailed in federal habeas corpus, both were resentenced to life imprisonment.⁸⁹

While clemency is not, technically speaking, part of the appellate process, it is relevant to the question of error rates. There has been only one grant of clemency. Robert Gattis was recently granted executive clemency in a high profile decision heralded in a New York Times editorial.⁹⁰ Delaware Governor Jack Markell's decision followed an unusual 4-1

⁸⁸ According to Professor James Liebman, Andrew Gelman, and colleagues's Broken System Studies, nationally, error is found in capital cases at a rate of 68%. Andrew Gelman et al., *A Broken System: The Persistent Pattern of Reversals of Death Sentences in the United States*, 1 J. Empirical Legal Stud. 209, 217 (2004); James S. Liebman et al., A BROKEN SYSTEM: ERROR RATES IN CAPITAL CASES, 1973-1995 (2000) [Broken System I]; James S. Liebman et al, WHY IS THE SO MUCH ERROR IN CAPITAL CASES, AND WHAT CAN BE DONE ABOUT IT (2002) [Broken System II].

⁸⁹ A chart establishing the types of errors found in Delaware cases is found in Appendix F. We would also note that two things of significance have not happened in Delaware. The Delaware Supreme Court has not found that any death sentence imposed by a jury or judge was disproportionate to the offense or to the sentence imposed in a similar case, and there have been no exonerations in the state to date. We also examined whether the error rates were different in the three capital sentencing schemes that Delaware has used. During the jury sentencing era, the overall error rate (including direct appeal and post-conviction was 60%. In the judge sentencing era, the overall error rate is 33% to date with some cases still pending. Under the current scheme, where the jury determines death eligibility and the judge sentences, the overall error rate to date is 50%, again with cases still pending. Appendix C Lists the inmates sentenced to death by capital sentencing scheme.

⁹⁰ Gattis was granted clemency on January 17, 2012. Sean O'Sullivan, *Markell spares Gattis the death penalty*, THE NEWS JOURNAL, Jan. 17, 2012, <http://www.delawareonline.com/article/20120117/NEWS/120117022/Markell-s pares-Gattis-death-penalty>); *Editorial: A Death Penalty Commutation*, NEW YORK TIMES, Jan. 17, 2012, <http://www.nytimes.com/2012/01/18/opinion/a-death-penalty-commutation.html>.

recommendation in favor of clemency by the state's Board of Pardons.⁹¹ Governor Markell based his decision on the fact that the jury that sentenced Gattis to death did not hear a full presentation of the mitigating evidence regarding his family background.⁹² As a result, Gattis's death sentence was commuted to life imprisonment without the possibility of parole, conditional upon his willingness to forego any future challenges to his conviction and life sentence.

The implications of high error rates are open to dispute. Some argue that a high error rate indicates the appellate review system is working, while others argue that high error rates reflect the fallibility of the system, and that a system charged with determining who should live and who should die should not make substantial numbers of mistakes. Another way to look at this question is consider whether the results after retrial validate the original decision to impose death, and here the answer is clearer: In Delaware, 68% of the individuals whose death sentences have been reversed have been resentenced to life imprisonment in subsequent proceedings.

⁹¹ Sean O'Sullivan, *Board recommends commutation for convicted killer*, THE NEWS JOURNAL, Jan. 15, 2012, <http://www.delawareonline.com/article/20120115/NEWS/120115034>. The Board of Pardons cited several reasons for the majority's recommendation. The defendant's significant history of childhood sexual abuse and possible mental illness had not been fully presented to the judge and jury that decided his punishment. Furthermore, Board members noted that the jury had not been unanimous in its punishment recommendation (it had voted in favor of aggravating factors outweighing mitigating factors by a 10-2 split), and they expressed concern "that our death penalty statute permits the imposition of death on the basis of a non-unanimous verdict." The Board's statement also expressed worry about observed disparities in the sentences meted out for comparable crimes in Delaware. *Id.*

⁹² O'Sullivan, *Markell spares Gattis the death penalty*, *supra* note __. Markell concluded: "After my review, I find myself in agreement with the four members of the Board of Pardons who concluded the mitigating evidence here is sufficiently substantial that an act of clemency on my part is warranted. In doing so, I am committed to the fact that Mr. Gattis will spend his remaining life in prison and will pose no threat to public safety." *Id.*

Indeed, more than a third of all individuals sentenced to death in Delaware during the period under study eventually were resentenced to life imprisonment.⁹³

CONCLUSION

Our conclusions are limited to three main observations. First, Delaware's reversal rate, 44 %, while substantial, is also substantially less than that of other jurisdictions. This may not be surprising, given that jury verdicts offer more opportunities for reversal, and indeed, reversal rates during the jury sentencing period approximate the national average.⁹⁴

Our second observation is also unremarkable. Judge sentencing results in more death sentences; this should surprise no one, since greater harshness was the motivation behind the statutory change to judge sentencing. Whether the mechanism behind greater judicial harshness is the absence of a need for unanimity, or political pressure, or something else, our model reveals that judge sentencing produces more death sentences. Moreover, this effect, is more pronounced in Delaware than in other states. Thus, putting aside whether the Delaware Supreme Court was right as a legal matter that judge sentencing could be retroactively applied to cases where the crime occurred during a jury sentencing regime, the change it labeled "procedural," affected the likelihood of receiving a death sentence in a statistically significant way.

⁹³ Since most death-sentenced inmates in Delaware still have appeals pending, the number who eventually leave death row exonerated or with lesser sentences will inevitably be higher.

⁹⁴ See note 89, *supra*.

Finally, we find a dramatic disparity of death sentencing rates by race, one substantially more pronounced than in other jurisdictions. This finding calls for more investigation, and also serves as a fitting conclusion to this article's tribute to David Baldus. Race matters in capital sentencing, as he told us more than a quarter of century ago, and we need to continue to pursue knowledge about where, when, and how it matters.