OFFICE OF THE STATE PUBLIC DEFENDER, EVA PATERSON, LATINOJUSTICE PRLDEF, ELLA BAKER CENTER FOR HUMAN RIGHTS, and WITNESS TO INNOCENCE,

Petitioners,

v.

ROB BONTA, California Attorney General, in his official capacity,

Respondent.

EXHIBITS TO PETITION FOR WRIT OF MANDATE

File 1

First of two (1 of 2) exhibit files in electronically filed document supporting Petition for Writ of Mandate.

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EXHIBIT K
CHALLENGING THE DEATH PENALTY WITH STATISTICS: FURMAN, MCCLESKEY, AND A SINGLE COUNTY CASE STUDY

Steven F. Shatz & Terry Dalton†

In the forty-year history of the Supreme Court’s modern death penalty jurisprudence, two cases—Furman v. Georgia (1972) and McCleskey v. Kemp (1987)—stand out above all others. Both cases turned on the Court’s consideration of empirical evidence, but they appear to have reached divergent—even altogether inconsistent—results. In Furman, the Court relied on statistical evidence that the death penalty was infrequently applied to death-eligible defendants to hold that the Georgia death penalty scheme was unconstitutional under the Eighth Amendment. In McCleskey, the Court, despite being presented with statistical evidence that race played a significant role in death-charging and death-sentencing in Georgia, upheld the revised Georgia scheme and McCleskey’s death sentence against Equal Protection and Eighth Amendment challenges. The McCleskey decision called into question the use of statistical evidence to challenge the death penalty.

In the present Article, we report on a unique empirical study of the administration of the death penalty in Alameda County, California—the largest single-county death penalty study and the only study to examine intra-county geographic disparities in death-charging and death-sentencing. The data set, drawn from 473 first-degree murder convictions for murders occurring over a twenty-three-year period, compares death-charging and

† Professor Shatz, A.B., J.D., is the Philip and Muriel Barnett Professor at the University of San Francisco School of Law. Professor Shatz gratefully acknowledges the grant received from the Butler Family Fund to support four law student researchers who did a substantial portion of the empirical research for the study discussed in this Article. The four students—Sarah Fairchild and Allison Sherman from U.S.F. and Jeremy Hendon and Melissa Mortazavi from Boalt Hall—spent the better part of a summer in the Alameda County Clerk’s Office reading murder case dockets and files, and the empirical research for this Article would never have been completed without their efforts. Professor Dalton, B.S.B.A., M.B.A., J.D., Ph.D. in Quantitative Research Methods, is a Lecturer in the Department of Criminology, Law & Society at the University of California, Irvine. The authors thank Susan Freiwald, Michael Radelet, and Nina Rivkind for their thoughtful critiques of drafts of this Article and the participants at the U.S.F. faculty scholarship workshop for their comments and suggestions at any early stage of this project. The authors are grateful for the help they received from research librarian Lee Ryan throughout this project, and they acknowledge Jessica Mohr’s invaluable research assistance and Debra Pinzon-Hamilton’s careful analysis of data contained in Supplemental Homicide Reports.
death-sentencing in the two halves of the county. During the study period, the two halves differed significantly in racial makeup—the population of North County was over 30% African-American, and of South County approximately 5% African-American; and the two halves differed in the race of homicide victims—in North County, African-Americans were homicide victims roughly 4.5 times as often as Whites, while, in South County, Whites were homicide victims more than three times as often as African-Americans. The study reveals that there were statistically significant disparities in death-charging and death-sentencing according to the location of the murder: the Alameda County District Attorney was substantially more likely to seek death, and capital juries, drawn from a county-wide jury pool, were substantially more likely to impose death, for murders that occurred in South County. We argue that, notwithstanding, statistical evidence such as the “race of neighborhood” disparities found in the present study should support constitutional challenges to the death penalty under both the Equal Protection Clause and the Eighth Amendment.

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INTRODUCTION

In the forty-year history of the Supreme Court’s efforts to regulate the administration of the death penalty in the United States, two cases—Furman v. Georgia1 and McCleskey v. Kemp—stand out above all others. In both cases, the Supreme Court considered challenges to the Georgia death penalty scheme on the grounds that it created an unconstitutional risk of arbitrariness in its application and was applied to discriminate against African-Americans. Both challenges were based on empirical data: in Furman, simple data on death sentencing rates and unadjusted data on race-of-victim disparities; and in McCleskey, on a sophisticated empirical study proving the existence of substantial disparities in the administration of the death penalty according to the race of the victim, and, to an even greater extent, according to the combination of the race of the defendant and race of victim. The Supreme Court divided five to four in each case, upholding the defendant’s challenge in Furman and rejecting the defendant’s challenge in McCleskey.

Despite the Court’s apparent message in McCleskey—that demonstrated statistical disparities in the administration of a jurisdiction’s death penalty scheme would not render the scheme unconstitutional—in the twenty-five years since McCleskey, empirical studies of the death penalty have proliferated. They have found disparities in the administration of the death penalty based on race, gender, geography and other factors.3 The present Article adds yet another empirical study to this collection, although one different from all of the studies to date. Previous studies finding geographic disparities have looked at differences in death-sentencing rates among counties in a particular state or among judicial districts in the federal courts. The present study of the death penalty in Alameda County, California—the largest study of the administration of the death penalty in a single county—examines intra-county geographic patterns in regard to the District Attorney’s decision to seek death and the sentencer’s decision to impose death. Examining geographic patterns in a single county, where a single District Attorney’s Office makes all the death-charging decisions and where juries drawn from a single county-wide jury pool make the sentencing decisions, eliminates the possibility that any geographic disparities found, such as those found in studies of inter-county disparities,4 are the product of different decision-makers. Our study finds statistically significant geographic disparities in the

1 408 U.S. 238 (1972).
3 See infra Part II.
4 See infra Part II.C.
administration of the death penalty in the two halves of Alameda County, disparities which correlate with racial differences in the population makeup of the county and in the distribution of homicide victims. Our findings suggest avenues for constitutional challenges to the administration of the death penalty in Alameda County, challenges which might be brought based on appropriate studies, done or yet to be done, in other jurisdictions.

In Part I, we describe the holdings of *Furman* and *McCleskey* and explore the consequences of the *McCleskey* decision—which many observers thought marked the end of arbitrariness and discrimination challenges to the death penalty—for *Furman* and for statistical challenges in general to the death penalty. In Part II, we describe the numerous and varied empirical studies of the death penalty published since the *McCleskey* decision—studies which have consistently found disparities in death-charging and/or death-sentencing with respect to race, gender, and location of the crime. We review their findings in order to give context to our study and to suggest that substantial empirical evidence already exists to support the kind of constitutional challenges we discuss in Part IV. In Part III, we first describe how the California death penalty scheme—the broadest in the country—grants virtually unfettered discretion to prosecutors and juries to select from among the many who are convicted of first-degree murder the few who will be sentenced to death and how the exercise of that discretion has led to disparities documented in previous California studies. Then, we describe the present study of the death penalty in Alameda County and our finding that, during the twenty-three-year period of the study, there were statistically significant disparities in death-charging and death-sentencing depending on the location of the murder. That finding takes on special significance because of the very different racial makeup of the two halves of the county, suggesting that the District Attorney and capital jurors may be engaging in “race of neighborhood” discrimination. In Part IV, we explore how findings such as ours might support Equal Protection and Eighth Amendment challenges to the administration of the death penalty in Alameda County, the same challenges rejected in *McCleskey*. Finally, in the Conclusion, we argue that, *McCleskey* notwithstanding, statistical challenges to particular

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5 During the period of the study, the county was divided in half for purposes of initiating murder prosecutions. Prosecutions for North County murders were initiated in Oakland, and prosecutions for South County murders were initiated in Hayward. However, all murder cases were tried with juries drawn on a countywide basis. The division of the county for criminal prosecution purposes corresponded with census tract lines, so that each half of the county had three Census County Divisions.

6 Although in theory the parties might waive a jury trial and allow the judge to conduct the sentencing hearing, see *Cal. Penal Code* § 190.4 (West 2012), in fact, that rarely occurs and did not occur in any of the cases in our study.
death penalty schemes or their application can be pursued, and must be pursued, if the promise of Furman, that the death penalty would not be applied in an arbitrary or discriminatory manner, is to be realized.

I. Furman AND McCleskey

The future of statistical challenges to the death penalty requires an understanding of what the Supreme Court said about the use of empirical evidence in Furman and McCleskey and an analysis of the effect of McCleskey on Furman.

A. Furman v. Georgia

As the Chief Justice recognized in his opinion for the four dissenters, Furman was an empirical challenge to the death penalty under the Eighth Amendment, the centerpiece of which was a comparison of the number of cases in which the death penalty was imposed with the number of cases in which it was statutorily available.7 Although there was conflicting data before the Court as to the exact death sentence rate at the time,8 the Chief Justice used the figure 15–20%,9 a figure accepted by Justice Stewart in his separate opinion.10 Subsequently, in Gregg v. Georgia,11 and Woodson v. North Carolina,12 the plurality relied on the same estimate.13 Although the five justices constituting the majority in Furman drew somewhat different conclusions from the evidence of a 15–20% death sentence rate, all five justices relied on the infrequency with which the death penalty was imposed to establish its unconstitutionality.14 For Justices Brennan and Marshall, the infrequent imposition of the death penalty indicated the

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8 See id. at 435 n.19 (Powell, J., dissenting) ("No fully reliable statistics are available on the nationwide ratio of death sentences to cases in which death was a statutorily permissible punishment.") The petitioner had argued that the death sentence rate was less than 10%, but Justice Powell cited to several individual state studies finding a death sentence rate of about 20%. Id. Subsequently, David Baldus and his colleagues determined that the pre-Furman death sentence rate in Georgia was 15%. See DAVID C. BALDUS, GEORGE G. WOODWORTH & CHARLES A. PULASKI, JR., EQUAL JUSTICE AND THE DEATH PENALTY: A LEGAL AND EMPIRICAL ANALYSIS 80 (1990).
9 408 U.S. at 386 n.11 (Burger, C.J., dissenting).
10 Id. at 309 & n.10 (Stewart, J., concurring).
13 Gregg, 428 U.S. at 182 n.26; Woodson, 428 U.S. at 295 n.31.
14 See 408 U.S. at 248 n.11 (Douglas, J., concurring); id. at 291–95 (Brennan, J., concurring); id. at 309–10 (Stewart, J., concurring); id. at 313 (White, J., concurring); id. 354 n.124, 362–63 (Marshall, J., concurring).
rejection of the death penalty under contemporary standards. On the other hand, Justices Stewart and White, whose opinions were later cited as embodying the Furman holding, emphasized that the relative infrequency of its application created the risk that it would be arbitrarily applied. Justice Stewart found that the death sentences at issue in Furman were “cruel and unusual” because, of the many persons convicted of capital crimes, only “a capriciously selected random handful” were sentenced to death. Justice White concluded that “the death penalty is exacted with great infrequency even for the most atrocious crimes and . . . there is no meaningful basis for distinguishing the few cases in which it is imposed from the many cases in which it is not.”

In addition to statistics on the infrequent imposition of the death penalty, the Court was presented with empirical data generally tending to show that the death penalty was imposed in a racially discriminatory manner. The data suggested that the death penalty was disproportionately imposed on African-Americans, particularly for the crime of rape, where 89% of those executed were African-American. Justices Douglas and Marshall argued that the racial disparities demonstrated that the broad discretion afforded prosecutors and juries permitted the death penalty to be imposed in a racially discriminatory manner. In the words of Justice Douglas: “[T]hese discretionary statutes are unconstitutional in their operation. They are pregnant with discrimination, and discrimination is an ingredient not compatible with the idea of equal protection of the laws that is implicit in the ban on ‘cruel and unusual’ punishments.” The majority of the justices found the case for racial discrimination not proved by the data, and the dissenters argued further that any such claim would have to be brought under the Equal Protection Clause, rather than the Eighth

15 Id. at 299–300 (Brennan, J., concurring); id. at 362–63 (Marshall, J., concurring).
17 408 U.S. at 309–10 (Stewart, J., concurring).
18 Id. at 313 (White, J., concurring). Justice Brennan voiced a similar objection: “When the punishment of death is inflicted in a trivial number of the cases in which it is legally available, the conclusion is virtually inescapable that it is being inflicted arbitrarily. Indeed, it smacks of little more than a lottery system.” Id. at 293 (Brennan, J., concurring).
19 Id. at 364 (Marshall, J., concurring); see also id. at 249–57 (Douglas, J., concurring). Both of the companion cases to Furman—Branch v. Texas and Jackson v. Georgia—were challenges by African-American men sentenced to death for the rape of white women.
20 Id. at 249–57 (Douglas, J., concurring); id. at 364–66 (Marshall, J., concurring). Two decades later, Justice Stevens reiterated that Furman addressed these two related concerns: “The risk of arbitrary and capricious sentencing, specifically including the danger that racial prejudice would determine the fate of the defendant.” Tuilaepa v. California, 512 U.S. 967, 982 (1994) (Stevens, J., concurring).
21 Furman, 408 U.S. at 256–57 (Douglas, J., concurring).
22 See id. at 310 (Stewart, J., concurring); id. at 389–90 n.12 (Burger, C.J., dissenting).
Amendment.23 With regard to the possibility of succeeding on such a claim, Justice Powell’s dissenting opinion foreshadowed his later opinion for the majority in McCleskey:

The possibility of racial bias in the trial and sentencing process has diminished in recent years. The segregation of our society in decades past, which contributed substantially to the severity of punishment for interracial crimes, is now no longer prevalent in this country. Likewise, the day is past when juries do not represent the minority group elements of the community. The assurance of fair trials for all citizens is greater today than at any previous time in our history. Because standards of criminal justice have “evolved” in a manner favorable to the accused, discriminatory imposition of capital punishment is far less likely today than in the past.24

After Furman held the death penalty unconstitutional as then administered, thirty-five states reenacted death penalty statutes,25 and in 1976, the Court considered Eighth Amendment challenges to five of those statutes.26 In upholding the death penalty schemes of three of the states—Georgia, Florida, and Texas—and rejecting the schemes of North Carolina and Louisiana, the Court elaborated the Eighth Amendment requirements for a constitutional death penalty scheme. Read together, the cases held that: 1) the Eighth Amendment required that the death penalty be a proportionate punishment for the particular crime, and the death penalty was not a disproportionate punishment for intentional murder (“when a life has been taken deliberately”),27 the crime at issue in all five cases; 2) the Eighth Amendment required that the sentencer be granted discretion to consider the circumstances of the crime and the character and record of the defendant and, consequently, mandatory death penalty statutes were unconstitutional;28 and 3) the Eighth Amendment required that the discretion afforded to the sentencer had to be “suitably directed and limited so as to minimize the risk of wholly arbitrary and capricious action,”29 and the Court found that such was the case as to the three statutes that it upheld.30 In particular, as to Georgia’s death penalty scheme, which would later be challenged in McCleskey, the Court found that the risk of arbitrariness

23 Id. at 389–90 n.12 (Burger, C.J., dissenting); id. at 449 (Powell, J., dissenting).
24 Id. at 450 (Powell, J., dissenting).
27 Gregg, 428 U.S. at 187.
28 Woodson, 428 U.S. at 303–05.
29 Gregg, 428 U.S. at 189.
30 See Gregg, 428 U.S. at 198 (Georgia); Proffitt, 428 U.S. at 252–53 (Florida); Jurek, 428 U.S. at 276 (Texas). In each case the Court approved the statute on its face without empirical evidence of the statute’s actual functioning.
was addressed by narrowing the class of murderers subject to capital punishment and providing for comparative proportionality review of the sentence by the Georgia Supreme Court. In his concurring opinion in *Gregg*, Justice White, writing for himself, the Chief Justice, and Justice Rehnquist, explained how the new Georgia statute could be expected to address the *Furman* problem by narrowing the death-eligible class:

As the types of murders for which the death penalty may be imposed become more narrowly defined and are limited to those which are particularly serious or for which the death penalty is peculiarly appropriate...it becomes reasonable to expect that juries—even given discretion not to impose the death penalty—will impose the death penalty in a substantial portion of the cases so defined. If they do, it can no longer be said that the penalty is being imposed wantonly and freakishly or so infrequently that it loses its usefulness as a sentencing device.

Five years later, in *Zant v. Stephens*, the Court again addressed a *Furman* ("risk of arbitrariness") challenge to the Georgia scheme. In *Zant*, the Court held that, to satisfy *Furman*, the states, by statute, had to “limit the death penalty to certain crimes" and the aggravating circumstances adopted for that purpose had to “genuinely narrow the class of persons eligible for the death penalty and...reasonably justify the imposition of a more severe sentence on the defendant compared to others found guilty of murder.” The Court, again without empirical evidence, found that the Georgia scheme satisfied *Furman* because the aggravating circumstances served the categorical narrowing function and because the scheme provided for “meaningful appellate review" of every death sentence. Thus, on the eve of *McCleskey*, the Court had twice held that *Furman* required only genuine narrowing of the death-eligible class and meaningful appellate review and that Georgia’s scheme, on its face, met those requirements.

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31 *Gregg*, 428 U.S. at 196–98.
32 Id. at 222 (White, J., concurring).
34 Id. at 877 n.15.
35 Id. at 877.
36 Id. at 875, 879.
37 In *Gregg*, the petitioner argued that these elements did not in fact limit the imposition of the death penalty in any meaningful way, *Gregg*, 428 U.S. at 200–04, and commentators subsequently have made the same argument. See, e.g., Carol S. Steiker & Jordan M. Steiker, *Sober Second Thoughts: Reflections on Two Decades of Constitutional Regulation of Capital Punishment*, 109 HARV. L. REV. 355, 402 (1995) ("[C]ontemporary death penalty law is remarkably undemanding. The narrowing, channeling, and individualization requirements can be simultaneously and completely satisfied by a statute that defines capital murder as any murder accompanied by some additional, objective factor or factors and that provides for a sentencing proceeding in which the sentencer is asked simply whether the defendant should live or die...[T]he state can seek the death penalty against virtually any murderer."). But see generally Steven F. Shatz & Nina Rivkind, *The California Death Penalty Scheme: Requiem for
B. McCleskey v. Kemp

In 1976, when the Supreme Court approved the Georgia, Florida, and Texas death penalty schemes, the Court did so on the basis of its assumptions about how the schemes would operate because there was not yet any empirical evidence to challenge those assumptions. In the subsequent eleven years, all three schemes were challenged on the basis of new empirical evidence appearing to contradict the Court’s assumptions. In all three cases, the Court refused to reconsider its earlier holdings in light of the new evidence. In Barefoot v. Estelle, the defendant challenged the Texas scheme approved in Jurek v. Texas. Under the Texas scheme, the sentence turned on the sentencer’s finding of future dangerousness, and the Court, in Jurek, had rejected the defendant’s contention that it was impossible to predict future conduct, finding instead that such predictions were commonplace in the criminal justice system. In Barefoot, the defendant challenged the prosecution’s practice of presenting psychiatrists and psychologists to make predictions of future dangerousness (often without even examining the defendants) with studies that showed that “two out of three predictions of long-term future violence made by psychiatrists are wrong.” The Court rejected the challenge because exclusion of psychiatric testimony on future dangerousness “would be asking us to disinvent the wheel” and to, in effect, overrule Jurek. In Spaziano v. Florida, the defendant challenged the Florida scheme approved in Proffitt v. Florida. The Florida scheme provided for judge sentencing after an advisory jury verdict, and, in Proffitt, the Court had upheld this aspect of the scheme because “it would appear that judicial sentencing should lead, if anything, to even greater consistency in the imposition at the trial court level of capital punishment . . . .” Presented with evidence that the Furman?, 72 N.Y.U. L. REV. 1283 (1997) (arguing that whether these limitations are meaningful or illusory cannot be determined because the Court has never considered a challenge based on empirical evidence as to their effect).

41 Id. at 272 (noting that a death sentence may be imposed only on finding that “there is a probability that the defendant would commit criminal acts of violence that would constitute a continuing threat to society”).
42 Id. at 274–76.
43 463 U.S. at 920 (Blackmun, J., dissenting) (citing Brief Amicus Curiae for the American Psychiatric Association at 9, 13, Barefoot v. Estelle, 463 U.S. 880 (1983) (No. 82-6080)).
44 Id. at 896.
45 Id. at 906.
48 Id. at 252.
scheme had not worked to protect the rights of defendants because in all eighty-three cases where a trial judge had overridden a jury verdict, it had been to impose death over a jury’s recommendation of life, the Court disregarded the empirical evidence and again upheld the statute.

McCleskey v. Kemp was the last, and most profound, challenge to the 1976 decisions. McCleskey, a black man sentenced to death in Georgia for killing a white police officer, challenged his death sentence as unconstitutional on the basis of an extensive and sophisticated empirical study that indicated racial considerations entered into capital sentencing decisions in Georgia. The study, conducted by Professor David Baldus and his associates ("Baldus study"), used a multiple regression analysis to examine the effect of the race of defendants and the race of victims in capital sentencing proceedings in Georgia. The study examined over 2000 murder cases that occurred in Georgia during the 1970s. The researchers used a number of different models that took account of numerous variables that could have explained the apparent racial disparities on nonracial grounds. The study found a very strong race-of-the-victim effect and a weaker race-of-the-defendant effect. As the Court described the study:

Baldus subjected his data to an extensive analysis, taking account of 230 variables that could have explained the disparities on nonracial grounds. One of his models concludes that, even after taking account of 39 nonracial variables, defendants charged with killing white victims were 4.3 times as likely to receive a death sentence as defendants charged with killing blacks. According to this model, black defendants were 1.1 times as likely to receive a death sentence as other defendants. Thus the Baldus study indicates that black defendants, such as McCleskey, who kill white victims, have the greatest likelihood of receiving the death penalty.

From these results, McCleskey argued that the Georgia scheme, as applied, violated the Fourteenth Amendment because it denied McCleskey the equal protection of the laws and it violated the Eighth Amendment because it produced the very results condemned in Furman.

Although the Baldus study stands as the most complex and thorough study of its kind, in terms of the size of the sample and the number of variables considered, the district court in McCleskey rejected the study’s methodology and findings. The court of appeals assumed,
arguendo, that the study was valid and reached the constitutional issues, as did the Supreme Court.\textsuperscript{54} Even while accepting the validity of the Baldus study findings, Justice Powell, writing for the majority, seemed to dismiss their significance, emphasizing that the study showed only a "risk" that the factor of race entered into any sentencing decision\textsuperscript{55} and referring to the racial disparities shown as "apparent."\textsuperscript{56} There is good reason to believe, however, that the majority accepted the accuracy of the Baldus study findings. Three months before \textit{McCleskey} was decided, Justice Scalia, a member of the five-justice majority, distributed to the Court a memorandum in which he wrote, "Since it is my view that the unconscious operation of irrational sympathies and antipathies, including racial, upon jury decisions and (hence) prosecutorial decisions is real, acknowledged in the decisions of this court, and ineradicable, I cannot honestly say that all I need is more proof."\textsuperscript{57}

Despite accepting the findings of the Baldus study, the Court rejected both of McCleskey’s challenges.

1. The Equal Protection Challenge

With regard to McCleskey’s challenge under the Equal Protection Clause, the majority held that McCleskey had the burden of proving “the existence of purposeful discrimination” by the decisionmakers in his case\textsuperscript{58} and that the Baldus study was “clearly insufficient” to support an inference of such discrimination.\textsuperscript{59} While acknowledging that statistical evidence might be used to prove discriminatory intent, the majority held that McCleskey’s statewide statistics did not constitute evidence that any of the actors involved in bringing about McCleskey’s conviction and sentence acted with such intent. To the extent McCleskey was contending that the state as a whole had acted with a discriminatory purpose, the majority held that he would have to prove that “the Georgia legislature enacted or maintained the death penalty statute \textit{because of} an anticipated racially discriminatory effect,” and the

\textsuperscript{54} Id. at 291 n.7.
\textsuperscript{55} Id.
\textsuperscript{56} Id. at 312 (emphasis added). “It is true that after making these assumptions Justice Powell employs an array of rhetorical maneuvers to drain them of any potentially disturbing implications.” Anthony G. Amsterdam, \textit{Opening Remarks: Race and the Death Penalty Before and After McCleskey}, 39 COLUM. HUM. RTS. L. REV. 34, 44 n.32 (2007).
\textsuperscript{58} 481 U.S. at 292 (quoting Whitus v. Georgia, 385 U.S. 545, 550 (1967)).
\textsuperscript{59} Id. at 297.
Court found no evidence to that effect. With regard to the intent of prosecutors in seeking the death penalty against particular defendants, again statewide statistics could not prove a discriminatory intent on the part of any particular prosecutor. Finally, each particular decision to impose a death sentence was made by a “unique” jury, so a discriminatory intent could not be inferred as to McCleskey’s jury from statistics about what other juries did in other cases.

However, in addition to statewide statistics, the Baldus study also included data about prosecutions in Fulton County (Atlanta), the county of McCleskey’s conviction and sentence. The data indicated that at each step in the process from indictment to sentence, there was a differential treatment of the cases by the prosecution based on the race of the victim. To the extent McCleskey was claiming discrimination by a single prosecutor’s office, the claim could not be dismissed on the same basis as had been the claims based on statewide statistics. Instead, Justice Powell emphasized the broad discretion granted to prosecutors, suggested that even in the face of a statistical showing of racial disparities, it would be improper to require prosecutors to defend their decisions to seek death, and stated that the Court would require “exceptionally clear proof” to infer discrimination. However, despite the majority’s broad language, the brief holding of the Court was much narrower: the Fulton County sample was too small to create an inference of discrimination.

2. The Eighth Amendment Challenge

McCleskey’s Eighth Amendment challenge caused the Court more difficulty. As Justice Brennan pointed out in dissent, unlike a claim under the Equal Protection Clause, an Eighth Amendment challenge does not require proof of an intent to discriminate and, because it is directed to the risk of arbitrariness in the system as a whole, does not

60 Id. at 297–98.
61 Id. at 295 n.15.
62 Id. at 294–95 & n.15.
63 Id. at 356 n.11 (Blackmun, J., dissenting).
64 Id. at 296–97 (majority opinion).
65 Id. at 295 n.15. The Fulton County sample covered 179 cases where a defendant was convicted of murder by plea or verdict, see BALDUS ET AL. supra note 8, at 337, some portion of which did not involve defendants who were death-eligible, id. at 89, and nineteen of which went to penalty trial, id. at 337, where the decision on death was made by a jury, not the prosecutor. Whether the McCleskey Court would have considered a more substantial study is unclear. “The opinion’s limited and tangential discussion of data for Fulton County, where McCleskey was tried and sentenced to death, leaves unclear whether capital-sentencing patterns specific to a judicial district would be equally ruled out of bounds as a basis for inference of the discriminatory animus of the official actors in that district.” Amsterdam, supra note 56, at 45 n.36.
require proof of arbitrariness in a particular case. McCleskey’s argument may be summarized as follows: Furman held that the death penalty “may not be imposed under sentencing procedures that create a substantial risk that the punishment will be inflicted in an arbitrary and capricious manner”; proof that race played a significant role in whether a defendant was sentenced to death established that the Georgia procedures produced arbitrary results; therefore the Georgia statute was unconstitutional and had to be struck down. Although the logic of the argument seems compelling, given the Court’s prior decisions, there were two problems.

First, the Court, in Gregg and in Zant, had twice approved the Georgia statute on its face, and, as discussed above, the Court had already demonstrated its unwillingness to reconsider death penalty schemes approved on their face in light of empirical evidence. Second, as also discussed above, by the time of the McCleskey case, the Court had determined that Furman required only that a state “genuinely narrow” the death-eligible class and provide for “meaningful appellate review” of the sentence. McCleskey never argued that his empirical evidence showed the Georgia scheme failed to meet either of these requirements.

The Court rejected the Eighth Amendment claim because the “discrepancy indicated by the Baldus study is a far cry from the major systemic defects identified in Furman” and the “risk of racial bias” demonstrated by the Baldus study was not “constitutionally significant.” Justice Powell supported this conclusion with four arguments: 1) the Eighth Amendment requires that prosecutors and juries exercise discretion, and, consequently, “[a]pparent disparities in sentencing are an inevitable part of our criminal justice system”; there were adequate safeguards against racial discrimination in the Georgia scheme and in the Court’s “unceasing efforts to eradicate racial prejudice from our criminal justice system”; 3) recognition of McCleskey’s challenge would lead to similar challenges throughout “the

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66 481 U.S. at 322–24 & n.1.
69 McCleskey did not argue that the statute as it stood violated the Furman/Zant genuine narrowing requirement. Nor is it clear that the Georgia statute was insufficiently narrow. While the Georgia death sentence rate at the time of Furman was 15%, the post-Furman death sentence rate had risen to 23%. BALDUS ET AL., supra note 8, at 88–89. In other words, the revised Georgia statute had narrowed the death-eligible class, and the death sentence rate at the time of McCleskey was above the threshold 15–20% rate discussed in Furman and subsequent cases.
70 McCleskey, 481 U.S. at 313.
71 Id. at 312.
72 Id. at 309.
entire criminal justice system”; 73 and 4) the matter is best left to the legislature.74 As Justice Brennan amply demonstrated in dissent, these specific arguments, taken one by one, are not persuasive,75 but, taken together, they may be read to express Justice Powell’s more fundamental concern, that granting the relief sought by McCleskey—striking down the Georgia death penalty statute—would have led to similar results, based on similar studies, in other states and a de facto abolition of the death penalty in the United States. Justice Powell understood that abolition was the unstated goal of the dissenters,76 and he responded: “As we have stated specifically in the context of capital punishment, the Constitution does not ‘plac[e] totally unrealistic conditions on its use.’”77

C. The Aftermath of McCleskey

The Court’s decision in McCleskey was immediately and sharply criticized for its apparent tolerance of racism in the administration of the death penalty. For example, Hugo Bedau78 likened the decision to such notorious holdings as Dred Scott v. Sandford,79 Plessy v. Ferguson,80 and Korematsu v. United States.81 The Harvard Law Review described the McCleskey decision as “logically unsound, morally reprehensible, and legally unsupportable.”82 And, twenty years later, Tony Amsterdam’s criticism of the case was no less trenchant:

McCleskey is the Dred Scott decision of our time. It is a declaration that African-American life has no value which white men are bound to respect. It is a decision for which our children’s children will

73 Id. at 314–19. “The Constitution does not require that a State eliminate any demonstrable disparity that correlates with a potentially irrelevant factor in order to operate a criminal justice system that includes capital punishment.” Id. at 319.
74 Id.
75 See id. at 320 (Brennan, J., dissenting).
76 Id. at 313 n.37 (majority opinion) (“Given these safeguards already inherent in the imposition and review of capital sentences, the dissent’s call for greater rationality is no less than a claim that a capital-punishment system cannot be administered in accord with the Constitution.”).
77 Id. at 319 (quoting Gregg v. Georgia, 428 U.S. 153, 199 (1976)). In fact, if, as Justice Powell assumed, similar racial disparities could be proved in most states, the result would not have been abolition of the death penalty. Instead, as was the case after Furman, the states would have been free to amend their statutes to eliminate such disparities, e.g., by narrowing the death-eligible class, by imposing limits on prosecutors’ discretion or by permitting defendants to challenge death penalty prosecutions by proof of disparate impact.
79 60 U.S. (19 How.) 393 (1857).
80 163 U.S. 537 (1896).
81 323 U.S. 214 (1944).
reproach our generation and abhor the legal legacy we leave them. One inherent evil of the death penalty is that it extends the boundaries of permissible inhumanity so far that every lesser offense against humanity seems inoffensive by comparison, leading us to tolerate them relatively easily. *McCleskey* extends the boundaries of permissible discrimination and hypocrisy in that same measure. Accept *McCleskey*, and race discrimination in matters less momentous than life or death can be shrugged off. Accept *McCleskey*, and any hypocrisy with less than lethal consequences can be viewed as trivial in a legal system where the highest tribunal sits in a building bearing the proud motto “Equal Justice Under Law” on its west facade and ignores it.83

Most scholars also concluded that *McCleskey* marked the end of statistical challenges to the death penalty. For example, James Acker argued: “Justice Powell’s majority opinion in [*McCleskey*] perhaps signified more than any case in recent memory the Court’s unwillingness to give legal recognition to empirical research results.”84 David Baldus, George Woodworth, and Charles Pulaski, Jr. wrote: “The decision has eliminated the federal courts as a forum for the consideration of statistically based claims of racial discrimination in capital sentencing.”85 Henry Fradella called the Court’s treatment of social science evidence “downright hostile”86 and suggested that the decision rendered statistical evidence “nearly useless in future death penalty challenges based on racial discrimination.”87 Recently, Carol Steiker and Jordan Steiker reiterated that *McCleskey* marked the end of arbitrariness- or discrimination-based challenges to the death penalty.88 On the other hand, some scholars took a more nuanced position, contending that statistics, when coupled with other forms of proof, might yet play a modest role in county-level Equal Protection challenges.89

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83 Amsterdam, *supra* note 56, at 47.
85 David C. Baldus et al., *supra* note 57, at 374.
87 *Id.* at 111.
89 See, e.g., Amsterdam, *supra* note 56, at 49–50 (arguing that statistical evidence supplemented by proof of a history of racial discrimination in the county, such as evidence that African-Americans are underrepresented as jurors, judges, prosecutors, and other officials and any direct evidence of bias on the part of the prosecution, might make out a violation); John H. Blume, Theodore Eisenberg & Sheri Lynn Johnson, *Post-McCleskey Racial Discrimination Claims in Capital Cases*, 83 CORNELL L. REV. 1771, 1806–07 (1998) (arguing that racial discrimination claims should be litigated under the same burden-shifting approach used in employment discrimination cases).
After McCleskey, because it was assumed that a statistical showing of statewide racial disparities in the administration of the death penalty would not support a constitutional challenge, some litigants did turn to county-level equal protection challenges. The federal and state courts consistently rejected such challenges, however, finding that the evidence of discrimination presented was insufficient to make out a prima facie case.90 Some courts rejected the statistical showings on the ground that they failed to consider the various non-racial variables included in the Baldus study.91 Other courts, focusing on Justice Powell’s statements about the “prosecutor’s traditionally ‘wide discretion’”92 and the requirement of “exceptionally clear proof,”93 imposed an all but impossible-to-meet burden of proof on the defendant.94 Still other courts found that, whatever the implications of the statistics and anecdotal evidence for proof of discrimination generally by the prosecutor, the defendant did not establish a prima facie case because he produced no evidence of discrimination in his case and/or failed to identify a similarly situated defendant who was treated differently.95 The Maryland Supreme Court provided perhaps the most thorough consideration of such a claim in Evans v. State.96 In Evans, the defendant relied on a study which found statistically significant disparities by race of victim and by geography in the administration of the Maryland death penalty,97 and, after a thorough examination of the study and the defendant’s various claims, the court concluded:

Since McCleskey, no court has allowed a claim of this kind. The courts accept the reasoning in McCleskey concerning the failure of general statistics to establish a statewide Equal Protection or Cruel

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90 The courts that bothered to discuss the evidence presented “treat[ed] these efforts to comply with McCleskey with varying levels of disdain.” Blume et al., supra note 89, at 1794.
91 See, e.g., People v. McPeters, 832 P.2d 146, 155–56 (Cal. 1992) (finding a county-level study showing that, although only one-third of willful homicide victims were white, all death and life-without-parole sentences involved cases with white victims, to be insufficient to warrant discovery on a racial discrimination claim because of failure to consider other factors); Lane v. State, 881 P.2d 1358, 1362–63 (Nev. 1994) (finding a county-level study tending to show death penalty sought more often against blacks than whites to be insufficient to prove discrimination because of failure to consider case-specific factors: the strengths and weaknesses of the cases, the existence of aggravating and mitigating circumstances, whether plea bargains were offered, and the character of the defendant). As Blume and his coauthors have explained, to require that a county-level study include anything like the range of variables included in Baldus’s statewide study of more than 2000 cases would make a regression analysis meaningless and any results statistically insignificant. Blume et al., supra note 89, at 1800–01.
93 Id. at 297.
96 914 A.2d 25 (Md. 2006).
97 The study by Professor Raymond Paternoster is discussed infra in Part II.
and Unusual Punishment violation and instead require a defendant to assert some specific discriminatory intent in their case.98

Despite the pall cast over statistically-based challenges by McCleskey, nothing in the decision purported to eliminate statistical challenges to state death penalty schemes—like the challenge made in Furman itself—based on the breadth of death-eligibility and the relative infrequency of death sentences. In fact, since the McCleskey decision, the Court repeatedly has reaffirmed the Furman principle. In Lowenfield v. Phelps,99 decided a year after McCleskey, the Court addressed a “failure to narrow” challenge to the Louisiana death penalty scheme and, while rejecting the challenge, made clear what was implicit in Zant, that a capital sentencing scheme as a whole, not just each individual aggravating circumstance, must “genuinely narrow” the death-eligible class.100 In Penry v. Lynaugh,101 decided two years after McCleskey, the Court (quoting Justice White’s explanation of the Furman principle in his concurring opinion in Gregg) stated that the required constitutional narrowing of death-eligible cases should result in the imposition of the death penalty “in a substantial portion of the cases so defined.”102 The statement constituted an invitation to challenge broad death penalty schemes with statistics showing that the death penalty was not being imposed in a substantial portion of death-eligible cases, i.e., statistics showing a low death sentence rate.

In the past ten years, the Supreme Court has repeatedly relied on the essential lesson of Furman, that, to comply with the Eighth Amendment, states must limit death eligibility. The Court has said that the death penalty may only be imposed on defendants “who commit ‘a narrow category of the most serious crimes,’ and whose extreme culpability makes them ‘the most deserving of execution,’”103 the “worst offenders.”104 “Confirmed by repeated, consistent rulings of this Court, [the Eighth Amendment] requires that use of the death penalty be restrained . . . . [R]esort to the penalty must be reserved for the worst of crimes and limited in its instances of application.”105 Plainly, whether a particular state’s death penalty scheme is “restrained” and “limited,” applies to a “narrow category of the most serious crimes,” and results in

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98 914 A.2d at 66.
100 Id. at 244.
102 Id. at 327 (quoting Gregg v. Georgia, 428 U.S. 153, 222 (1976) (White, J., concurring)) (emphasis added).
104 Roper, 543 U.S. at 553.
105 Kennedy, 554 U.S. at 446–47.
a “substantial portion” of those made death-eligible being sentenced to
death, is an empirical question to be answered by statistics.

II. STATISTICAL STUDIES OF DEATH-SENTENCING DISPARITIES
    SINCE MCCLESKEY

The Baldus study was not the only empirical study to find racial
disparities in death-sentencing in the decade and a half following
Furman. Samuel Gross and Robert Mauro studied racial patterns and
disparities in eight states—Arkansas, Florida, Georgia, Illinois,
Mississippi, North Carolina, Oklahoma, and Virginia—for the five-year
period, 1976–1980.106 Their data was obtained from the Supplementary
Homicide Reports (SHRs) filed by local police agencies with the FBI,107
and Gross and Mauro compared the SHR data with the cases of
defendants sentenced to death. Focusing on the three states with the
largest number of death sentences during the period—Georgia, Florida,
and Illinois—and analyzing the race-of-defendant and race-of-victim
data against the non-racial variables that might legitimately justify
sentencing disparities, the study concluded:

Multiple logistic regression (or “logit”) analysis reveals large and
statistically significant race-of-victim effects on capital sentencing in
Georgia, Florida, and Illinois. After controlling for the effects of all of
the other variables in our data set, we found that the killing of a white
victim increased the odds of a death sentence by an estimated factor
of 4 in Illinois, about 5 in Florida, and about 7 in Georgia. This
method of analysis reveals some evidence that the race of the suspect
had an independent effect on capital sentencing in Illinois, but no
evidence of independent race-of-suspect effects in Georgia or
Florida.108

In each of the other five states, the study found similar race-of-victim
effects, although in Virginia and Arkansas, the states with the fewest

106 SAMUEL R. GROSS & ROBERT MAURO, DEATH AND DISCRIMINATION: RACIAL DISPARITIES
    IN CAPITAL SENTENCING 43–94 (1989).
107 Id. at 35. The SHRs included data on:
     (1) the sex, age, and race of the victim or victims; (2) the sex, age, and race of the
    suspected killer or killers; (3) the month and year and the place of the homicide; (4)
    the weapon used; (5) the commission of any separate felony accompanying the
    homicide; and (6) the relationship between the victim(s) and the suspected killer(s).
108 GROSS & MAURO, supra note 106, at 69.
number of death sentences, the results were not statistically significant. 109

In early 1990, the United States General Accounting Office (GAO) issued a report reviewing and critiquing twenty-eight post- *Furman* studies concerning possible race-of-victim and/or race-of-defendant disparities in the administration of the death penalty. 110 The report found that there were significant and consistent race-of-victim disparities, i.e., that those who murdered whites were more likely to be sentenced to death than those who murdered blacks, that these disparities could not be explained by legally relevant variables and that these disparities existed at all stages of the criminal process. 111 On the other hand, the report found that, although more than half the studies found race-of-defendant disparities, overall the evidence that the race of the defendant influenced death penalty outcomes was more equivocal. 112

Despite the cold reception given to the Baldus study in *McCleskey* and the post-*McCleskey* dismissal of discrimination cases in the lower courts, empirical studies of the death penalty in operation have proliferated in the last twenty-five years. In general, the studies have been of two kinds. 113 The majority of the researchers have followed the path taken by Gross and Mauro, comparing general homicide data, usually derived from SHRs, with similar data in death penalty cases (SHR-type studies), rather than conducting “extremely time-consuming and expensive” 114 studies based on the examination of individual murder cases to determine death-eligibility (death-eligibles studies). The SHR-type studies have been broader, but necessarily less precise, than the death-eligibles studies, which included only defendants actually charged with, and/or convicted of murder and factually death-eligible. The studies examined death-charging, death-sentencing, or both for otherwise unexplained disparities, 115 and, irrespective of differences in methodology, the studies consistently found such disparities with regard

109 Id. at 92.
111 Id. at 5–6.
112 Id. at 6.
115 While the inquiries into death-charging (by the prosecutor) and death-sentencing (by the judge or jury) are discrete, they are not independent. The sentencing discretion of the judge or jury is limited to the (often relatively small) sub-category of death-eligible cases where the prosecutor seeks death and pursues the case to a penalty trial.
to the presumably illegitimate factors\textsuperscript{116} of race, gender, and location of the crime.\textsuperscript{117} The findings are described below.

A. Racial Disparities

Since \textit{McCleskey}, there have been numerous empirical studies focused on racial disparities in death-charging and death-sentencing, and virtually all found significant racial disparities in death-charging, death-sentencing, or both.\textsuperscript{118}

Most of the single-state studies were SHR-type studies. The first post-\textit{McCleskey} single-state study was Glenn Pierce and Michael Radelet’s Florida study, covering over 10,000 cases.\textsuperscript{119} They found that, taking all possibly explanatory variables into account, those suspected of

\textsuperscript{116} By “illegitimate” factors, we mean factors other than the nature of the crime or the character and record of the accused.

\textsuperscript{117} These complex studies of disparities in death-charging or death-sentencing aimed at determining \textit{why} the death penalty is sought or imposed should not be confused with simple studies to determine the frequency with which the death penalty is imposed in a particular jurisdiction. See, e.g., Steven F. Shatz & Nina Rivkind, supra note 37; Steven F. Shatz, \textit{The Eighth Amendment, the Death Penalty, and Ordinary Robbery-Burglary Murderers: A California Case Study}, 59 FLA. L. REV. 719 (2007). Of course, some studies encompass both sets of issues. See, e.g., John J. Donohue, \textit{Capital Punishment in Connecticut, 1973–2007: A Comprehensive Evaluation from 4686 Murders to One Execution} (Oct. 15, 2011) (unpublished manuscript), available at http://works.bepress.com/john_donohue/87 (finding a death sentence rate of 4.4% among 205 defendants convicted of homicide and death-eligible and finding disparities based on race and geography); Steven F. Shatz & Naomi R. Shatz, \textit{Chivalry Is Not Dead: Murder, Gender, and the Death Penalty, 27 BERKELEY J. GENDER L. & JUST. 64 (2012) (finding an initial death sentence rate of 5.5% among 1000 defendants convicted of first-degree murder and death-eligible and finding disparities based on gender).


killing whites were 3.42 times as likely to receive a death sentence as those suspected of killing blacks.\textsuperscript{120} The 1990s saw smaller studies in Missouri,\textsuperscript{121} Arizona,\textsuperscript{122} and Ohio\textsuperscript{123}—all of which found racial disparities in capital cases. Radelet and Pierce followed their Florida study with similar SHR studies in California\textsuperscript{124} and, most recently, North Carolina.\textsuperscript{125} Their California study covered the period 1990–1999, comparing SHRs with the 263 single-victim cases where the defendant was sentenced to death.\textsuperscript{126} They found “glaring differences in the rate of death sentences across categories of victim race/ethnicity.”\textsuperscript{127} The North Carolina study covered the period 1980–2007 and encompassed 15,281 homicides and 352 death sentences.\textsuperscript{128} Employing logistic regression models with race and two aggravating factors (multiple victims, contemporaneous felony), Radelet and Pierce found no disparity based on race of the defendant,\textsuperscript{129} but a significant disparity based on the race of the victim.\textsuperscript{130}

Radelet and Pierce also studied death sentencing in Illinois, combining an SHR-type and a death-eligibles approach to 4182 cases of defendants convicted of first-degree murder during the period 1988 through 1997.\textsuperscript{131} They coded the cases according to legally relevant factors—the presence of death-eligibility factors (principally, multiple murders or murders in the course of a felony) and aggravating factors (the defendant’s record), and according to “extra-legal” factors—race, gender, and location of the murder.\textsuperscript{132} Applying logistic regression to


\textsuperscript{125} See Pierce & Radelet, supra at note 124, at 14.

\textsuperscript{126} Id. at 19.

\textsuperscript{127} See Radelet & Pierce, supra note 125, at 2138.

\textsuperscript{128} Id. at 2143–44.

\textsuperscript{129} Id. at 2145 (finding the odds of receiving the death penalty for killing a white victim to be three times higher than for killing a black victim).


\textsuperscript{131} Id. at 50–57.
the twenty-seven factors, they concluded that race of victim was one of the five variables that achieved the highest level of statistical significance. In 2004, Raymond Paternoster and his colleagues published their study of Maryland’s death penalty scheme, done at the request of the Maryland governor. Theirs was a death-eligibles study, examining 1311 murder cases where the murder was committed during the period 1978–1999 and where the defendant was death-eligible. Their purpose was to determine whether race or geography affected the outcome at each of four decision points in the processing of the case. Applying a logistic model using 123 co-variates, they found no evidence that the race of the defendant mattered at any stage. However, they found that the race of the victim did matter in respect to death-charging. Controlling for case characteristics and jurisdiction, the odds of the state’s attorney filing a death notice was almost twice as high in white-victim cases and the odds that the death notice would not be withdrawn once filed was almost three times as high.

Two studies published in 2006 also looked at death charging. In South Carolina, Michael Songer and Isaac Unah examined prosecutors’ decisions to seek death for homicides during the period 1993–1997, comparing SHR reports for cases with known defendants (2319 cases) and the 130 cases where a prosecutor filed a notice of intent to seek the death penalty. Using a logistic regression model, Songer and Unah found that, while the race of the defendant had no statistically significant effect on the death-charging decision, the race of the victim did. In Colorado, Stephanie Hindson, Hillary Potter, and Michael Radelet published the results of a limited study using death certificates compiled by a state agency. With regard to race, Hindson et al. concluded that the probability of the death penalty being sought was 4.2 times higher for those who killed whites than for those who killed blacks.

133 Id. at 65.
135 Id. at 2–3.
136 Id. at 22–23.
137 Id. at 34.
138 Id. at 35. Race of victim has no effect at the subsequent two stages—the prosecutor’s decision to move the case to a penalty trial after conviction and the sentencer’s decision to impose the death penalty. Id. at 36.
140 Id. at 195 (finding an odds multiplier of 3.10 for white victim cases).
142 Id. at 579.
Recently, John Donohue conducted a death-eligibles study of death-charging and death-sentencing in Connecticut for the period 1977–2007. He determined that, out of the 4686 non-negligent homicides committed during the period, 205 defendants convicted of a homicide were death-eligible, and 9 of the 205 were sentenced to death and had their sentences sustained. He conducted a multiple regression analysis to determine the impact on death-charging and death-sentencing decisions of legitimate factors related to death-worthiness—egregiousness of the murder, number of special aggravating factors—and of legally suspect factors—race and gender of the defendant, race of the victim and location of the crime. With regard to race, the study found "Connecticut death-eligible cases that involve a minority defendant and a white victim receive a charge of capital felony and are sentenced to death at a substantially higher rate" and that finding was statistically significant.

Two multi-state reports have found pervasive racial disparities. In 2004, John Blume, Theodore Eisenberg, and Martin T. Wells analyzed data on murders and the composition of death rows from 1977 through 1999 in the thirty-one states that sentenced ten or more defendants to death row during the time period. They found that black on white murders were treated more harshly than other types of murder, and that, in the eight states for which they had complete data, the ratio of the percentage of death sentences for black on white murders to the percentage of death sentences for black on black murders ranged from 2.9 to 23.2. Beginning in 2003, the American Bar Association Moratorium Implementation Project undertook a series of assessments in death penalty states on the administration of capital punishment. The various state task forces conducting the assessments did not

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143 See generally Donohue, supra note 117. In an ongoing study of the Delaware death penalty, Sheri Lynn Johnson and her coauthors report that "[b]lack defendants who kill white victims are more than six times as likely to receive the death penalty as are black defendants who kill black victims... [and] three times as likely to be sentenced to death as are white defendants who kill white victims...." Sheri Lynn Johnson, John H. Blume, Theodore Eisenberg, Valerie P. Hans & Martin T. Wells, The Delaware Death Penalty: An Empirical Study, 97 IOWA L. REV. 1925, 1940 (2012).

144 Donohue, supra note 117, at 1.

145 Id. at 2. Cases were coded for "egregiousness" in two ways: according to a list of specific factors (victim suffering, victim characteristics, defendant intent/culpability, number of victims) and on a composite scale. Id. at 93–95.

146 Id. at 181.

147 Id. at 182–83.


149 Id. at 190–92.

150 Id. at 197.

themselves conduct studies on racial/ethnic disparities, but instead relied on a comparison of sentencing results based on race/ethnicity of defendants and victims or on data developed earlier by the states themselves. In 2007, the ABA reported on its findings from the first eight assessments: “Every state studied appears to have significant racial disparities in its capital system, particularly those associated with the race of the victim.” Since that report, the ABA has conducted two additional assessments and found that race was a significant factor in death-charging and death-sentencing in Kentucky and Missouri.

These empirical studies of racial disparities in death-charging and death-sentencing—done in different jurisdictions, with differing methodologies, covering a variety of time periods—produced results remarkably consistent with the Baldus study findings in Georgia a quarter of a century ago: 1) there is little or no disparity based on race of the defendant alone; 2) there is a statistically significant disparity based on race of the victim(s) alone; and 3) there is an even greater disparity based on the combination of race of the defendant and race of the victim. While these numerous subsequent studies tend to confirm, if any confirmation were needed, the findings presented to the Court in


154 See AM. BAR ASS’n, EVALUATING FAIRNESS AND ACCURACY IN STATE DEATH PENALTY SYSTEMS: THE MISSOURI DEATH PENALTY ASSESSMENT REPORT, xxxvi (2012) available at http://www.americanbar.org/content/dam/aba/administrative/death_penalty_moratorium/final_missouri_assessment_report.authcheckdam.pdf. Consistent with the findings of the state studies, a 2011 study found racial disparities in the administration of the death penalty by the U.S. military. See David C. Baldus, Catherine M. Grosso, George Woodworth & Richard Newell, Racial Discrimination in the Administration of the Death Penalty: the Experience of the United States Armed Forces (1984–2005), 101 J. CRIM. L. & CRIMINOLOGY 1227, 1300–01 (2011) (finding disparities based on race of defendant, race of victim, and a combination of the two, although disparities not statistically significant because of small sample size). Recently, two relatively small single-county studies have also revealed unexplained racial disparities. Isaac Unah examined death-charging in Durham, North Carolina for the period 2003–2007, reviewing 151 cases finding that blacks who killed white victims were 43% more likely to face the death penalty than blacks who killed black victims (a finding statistically significant at the .05 level). See Isaac Unah, Choosing Those Who Die: The Effect of Race, Gender, and Law in Prosecutorial Decision to Seek the Death Penalty in Durham County, North Carolina, 15 MICH. J. RACE & L. 135, 172–73 (2009). Glen Pierce and Michael Radelet examined 191 cases where first-degree murder was charged and the defendant was convicted of a homicide offense in East Baton Rouge Parish, Louisiana during the period 1990–2008. See Glenn L. Pierce & Michael L. Radelet, Death Sentencing in East Baton Rouge Parish, 1990–2008, 71 LA. L. REV. 647, 657–58 (2011). Subjecting their data to a logistic regression analysis with race of victim and three legally relevant variables, they found that, controlling for other variables, “the odds of a death sentence are still 97% higher for those who kill whites than for those who kill blacks.” Id. at 661, 670–71.
McCleskey, they also validate Justice Powell’s assumption that upholding McCleskey’s Eighth Amendment claim would not have invalidated just Georgia death sentences, but would have led to successful challenges under every other post-Furman statute, i.e., that McCleskey would have become a second Furman.

B. Gender Disparities

Although the Baldus study itself found no gender-of-defendant or gender-of-victim disparities, later researchers looking at the Baldus study data concluded that victim gender was an important predictor of outcomes and that “[d]efendants who murder females are more likely to receive a death sentence than defendants who murder males.” Virtually every study since has found gender disparities. Most of the scholarship has focused, as did Justice Marshall in his Furman opinion, on gender-of-defendant disparities. In his latest report, Victor Streib, who has tracked the issue for many years, reports that, in terms of raw numbers, women homicide defendants receive more favorable treatment at each stage of the criminal process, so that, although women constitute 10% of those arrested for murder, they constitute only 2% of those sentenced to death at trial, and only 1% of those actually executed.

In their Florida study, which was focused on disparate sentencing based on race, Radelet and Pierce also noted that there existed significant gender-of-victim disparities in death sentencing. They found that a defendant was 2.8 times as likely to be sentenced to death for killing a woman as for killing a man. In their South Carolina

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155 Baldus et al., supra note 8, at 400.
157 Furman v. Georgia, 408 U.S. 238, 365 (1972) (Marshall, J., concurring) (“There is . . . overwhelming evidence that the death penalty is employed against men and not women . . . . It is difficult to understand why women have received such favored treatment since the purposes allegedly served by capital punishment seemingly are equally applicable to both sexes.”).
160 Id.
162 Id. In their later Illinois study, Pierce and Radelet found convicted first-degree murderers whose victims were women were three and a half times as likely to be sentenced to death as those whose only victims were men, Pierce & Radelet, supra note 131, at 62, but, in their logistic
study, Songer and Unah also found death-charging decisions were influenced by gender: the odds were 2.19 times higher that female victim murders would lead to the death penalty being charged than male victim murders.\textsuperscript{163} Hindson et al., in their Colorado study, also found significant gender-of-victim disparities in death-charging: the probability of the death penalty being sought was 1.81 times higher for those who kill females than for those who kill males.\textsuperscript{164}

A recent substantial study focusing on gender disparities in death sentencing was that of Steven Shatz (co-author of the present Article) and Naomi Shatz in California.\textsuperscript{165} Using data from 1299 first-degree murder convictions during the three-year period 2003–2005, they found substantial gender-of-victim disparities. In single-victim cases, factually death-eligible defendants\textsuperscript{166} convicted of killing women were more than seven times as likely to be sentenced to death as factually death-eligible defendants who killed men.\textsuperscript{167} While more than half that disparity can be accounted for by the extraordinarily high death sentence rate for rape-murderers—almost sixteen times the death sentence rate for all other death-eligible murderers\textsuperscript{168}—when rape-murders were excluded, the death sentence rate in female victim cases remained more than three times the rate for male victim cases.\textsuperscript{169} Shatz and Shatz also found gender-of-defendant disparities in the California data. Because the percentage of death-eligible women defendants in the 2003–2005 study was relatively small, they combined data from three California studies and reported that, while women constituted 5.3% of defendants convicted of first-degree murder and death-eligible, they constituted only 1.2% of those sentenced to death.\textsuperscript{170}

Despite empirical evidence documenting gender disparities, particularly gender-of-victim disparities, in the administration of the death penalty—disparities sometimes as great as the racial disparities documented in the various race studies—the evidence has not evoked the same level of concern from the courts or from commentators. Although, as noted above, Justice Marshall raised the issue of gender

\textsuperscript{163} Songer & Unah, supra note 139, at 194. It appears that they include, in female victim cases, multiple murders with at least one female victim. \textit{Id.} at 190–91. Because multiple victim murder itself is a powerful aggravating factor, \textit{id.} at 192, we have excluded such cases from our gender analysis.

\textsuperscript{164} Hindson, Potter & Radelet, supra note 141, at 580.

\textsuperscript{165} See generally Shatz & Shatz, supra note 117.

\textsuperscript{166} In California, a defendant guilty of first-degree murder is factually death-eligible if one of 32 separately enumerated special circumstances can be proved. \textsc{cal. penal code} § 190.2 (west 2012); see infra part iii.

\textsuperscript{167} Shatz & Shatz, supra note 117, at 107.

\textsuperscript{168} \textit{Id.} at 99.

\textsuperscript{169} \textit{Id.} at 108.

\textsuperscript{170} \textit{Id.} at 106.
disparities in *Furman*, no other justice then or since has mentioned the issue. In fact, in *McCleskey*, Justice Powell, writing for the majority, went out of his way to disparage proof of gender disparities as raising a constitutional claim the Court would ever consider. This lesser concern with gender disparities in the administration of the death penalty presumably reflects at least ambivalence about whether the gender of defendants or victims really is, or should be, an impermissible consideration. Gross and Mauro expressed just this ambivalence in their study, stating, on the one hand, that the sex of the victim is “legally irrelevant and perhaps even prohibited as a sentencing consideration” and, on the other hand, that “we cannot reject the possibility that homicides with female victims might properly be regarded as more aggravated than those with male victims.”

C. Geographic Disparities

In their Illinois and California studies, Pierce and Radelet found significant geographic disparities in the administration of the death penalty. In Illinois, they concluded “the odds of receiving a death sentence for killing a victim(s) in Cook County are on average 83.6% lower than for killing a victim(s) in the rural county region of Illinois controlling for the other twenty-six variables in the analysis.” In California, Pierce and Radelet compared death sentences and homicides per county and considered both the racial/ethnic demographics of the county and its population density. They concluded:

The data...show geographic variations in rates of death sentencing. Excluding counties with smaller populations, death sentencing rates vary from roughly .005% of all homicides to rates five times higher. Those counties with the highest death sentencing rates also tend to have the highest proportion of non-Hispanic whites in their population and the lowest population density. When the effects of all variables are considered simultaneously, death sentencing rates are lowest in counties with the highest non-white population.

173 GROSS & MAURO, supra note 106, at 57.
174 Id. In fact, some states have adopted statutes reflecting the view that violence against women should be punished more heavily than similar violence against men. See, e.g., N.C. GEN. STAT. § 14-33(c)(2) (2012); S.C. CODE ANN. § 16-25-65 (2012).
175 See generally Pierce & Radelet, supra note 124 (California); Pierce & Radelet, supra note 131 (Illinois).
176 Pierce & Radelet, supra note 131, at 65.
177 Pierce & Radelet, supra note 124, at 38; see also ACLU OF N. CAL., DEATH BY GEOGRAPHY: A COUNTY BY COUNTY ANALYSIS OF THE ROAD TO EXECUTION IN CALIFORNIA 3
As we shall see, these findings regarding the patterns of inter-county disparities have particular significance in light of our study of intra-county disparities in Alameda County.

The Maryland study by Paternoster et al. found substantial and statistically significant disparities in death-charging and death-sentencing by county.178

[T]he jurisdiction where the homicide occurs and where the defendant is charged matters a great deal. There are large differences in how different legal jurisdictions process their death penalty cases in Maryland. Our research clearly indicates that these differences are manifested in how state’s attorneys charge death eligible cases and whether they retain a capital charge or decide to withdraw it. Although the jurisdictional differences occur early in the process at the decisions made by local prosecutors, they are propagated to later points and go uncorrected.179

In their South Carolina study, Songer and Unah also examined the effect of geography on death penalty charging.180 They found tremendous variation in death-charging rates that, applying a regression model, could not be explained by any of the legitimate or illegitimate variables.181 Katherine Barnes, David Sloss, and Stephen Thaman studied prosecutorial decision-making in Missouri in 1046 death-eligible cases filed during the period 1997–2001.182 They analyzed the cases for possible racial and geographic disparities on the basis of the information available to the prosecutor at the time of the charging and plea bargaining decisions183 and concluded that there was “significant and enduring geographic variation in the prosecution of homicides and imposition of the death penalty in Missouri.”184 Most recently, Donohue’s Connecticut study found an “extremely large and highly statistically significant” disparity in death-sentencing in the Waterbury Judicial District as compared with the rest of the state.185

(2009) (“[W]hether someone is sentenced to death . . . depends largely on where in the state the crime occurred, not on the facts or common criteria.”).

178 Paternoster et al., supra note 134, at 28–34.
179 Id. at 34. “Given the fact that a death eligible homicide has occurred, the probability that a notification to seek death will be filed in Baltimore County is over 13 times higher than in adjacent Baltimore City, even after taking into account important case characteristics.” Id. at 33.
180 See Songer & Unah, supra note 139.
181 Id. at 203–04.
182 Barnes, Sloss & Thaman, supra note 117, at 309, 311.
183 Id. at 313. In determining whether a case was to be coded as “death-eligible,” the study used a “probable cause” standard as opposed to more conservative standards used by other researchers. Id.
184 Id. at 355.
185 Donohue, supra note 117, at 184.
As is the case with regard to disparities based on race and gender, the empirical data suggests that geographic disparities are pervasive.186 Unlike these other disparities, however, geographic disparities have been defended as an appropriate product of our democratic political system. Of course, interstate disparities are the natural product of our federal system, where each state can choose whether or not to have a death penalty, but intrastate disparities are defended with a similar argument, that they are a product of each county’s different views of the death penalty as expressed through its elected prosecutor and its jurors. For example, Kent Scheidigger, who, as Director of the Criminal Justice Legal Foundation, has long been an outspoken supporter of the death penalty has justified the geographic disparities found in Paternoster’s Maryland study in these terms:

[S]ome counties in Maryland elect tougher-on-crime prosecutors and have tougher juries than other counties. In the tougher counties, a murder in the middle range is more likely to result in a death sentence than a similar murder in a softer county. Support for tough-on-crime measures generally and capital punishment in particular is substantially correlated with race. . . . For this reason, the tougher counties are likely to have a higher proportion of white residents and hence white crime victims.

What the Paternoster group calls “geographic disparity” is, in reality, local government in action. This is exactly the way our system is supposed to work. We elect our trial-level prosecutors by county so that local people have local control over how the discretion of that office is exercised. If the voters of suburban Baltimore County choose to elect a prosecutor who seeks the death penalty frequently, while the voters of downtown Baltimore City elect one who seeks it rarely, that is their choice.187

California prosecutors offered a similar justification for the geographic disparities in California to the California Commission on the Fair Administration of Justice.188 However, this defense of geographic disparities cannot justify geographic disparities in death-charging and death-sentencing within a single county, where the District Attorney and the jury pool are the same for all cases. As we shall see, our study

188 CAL. COMM’N ON THE FAIR ADMIN. OF JUSTICE, FINAL REPORT 151 (Gerald Uelmen ed., 2008) [hereinafter CAL. COMM’N], available at http://www.ccfaj.org/documents/CCFAJFinalReport.pdf (“Prosecutors suggest that geographical variation in utilizing the death penalty is not a problem, because locally elected District Attorneys are responding to the demands of the electorate which they represent.”).
found just such geographic disparities in death-charging and death-sentencing in Alameda County.

III. THE CALIFORNIA DEATH PENALTY SCHEME AND THE ALAMEDA COUNTY STUDY

While the Supreme Court in *Furman* and subsequent cases was insisting that death penalty schemes be narrowly crafted so that the death penalty is in fact imposed on a substantial portion of the death-eligible class, California was proceeding in the opposite direction. In Section A, we describe the California death penalty scheme, which creates the broadest death penalty in the country, giving prosecutors and jurors extraordinary discretion to choose among death-eligible defendants and thereby inviting arbitrary and discriminatory application of the death penalty. In Section B, we describe our study of Alameda County first-degree murder cases arising over a twenty-three year period, and report our findings regarding geographic disparities in both death-charging and death-sentencing.

A. The California Death Penalty Scheme

The present California death penalty scheme was enacted through the 1978 Briggs Death Penalty Initiative six years after *Furman*. According to its author, State Senator John V. Briggs, the initiative was intended to “give Californians the toughest death-penalty law in the country.” By “the toughest death penalty law,” the proponents meant the law “which threatens to inflict that penalty on the maximum number of defendants.” That “toughest death penalty law” has since been expanded by voter initiatives on three occasions since 1978.

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189 The study covers first-degree murder convictions in Alameda County, California for murders committed during the twenty-three-year period from November 8, 1978 to November 7, 2001. The beginning date of the study is the effective date of California’s current death penalty statute. The end date reflects the fact that the data for the study was gathered during the period 2003–2005.


Because the law was enacted by initiative, the legislature has played no role in shaping the law, and, with the exception of two fairly limited holdings more than thirty years ago the California Supreme Court also has taken no role in defining its coverage. Currently, California is thought to have the broadest death penalty scheme in the country.

The California Penal Code starts with an expansive definition of first-degree murder and then enumerates thirty-three special circumstances that make a first-degree murderer death-eligible (i.e., that make the murder "capital murder"). This extensive list of special circumstances:

1. 2 "other murder" circumstances: the defendant was convicted of more than one murder ((a)(3)) or was previously convicted of murder ((a)(2));
2. 8 "victim" circumstances: the defendant intentionally killed a peace officer ((a)(7)), federal law enforcement officer or agent ((a)(8)), firefighter ((a)(9)), witness ((a)(10)), prosecutor or former prosecutor ((a)(11)), judge or former judge ((a)(12)), elected official or former elected official ((a)(13)), or juror ((a)(20));
3. 6 "manner" circumstances: the murder was committed by a destructive device, bomb or explosive planted ((a)(4)) or mailed ((a)(6)) or was intentionally committed by lying in wait ((a)(15)), by the infliction of torture ((a)(18)), by poison ((a)(19)), or by shooting from a motor vehicle ((a)(21));
4. 4 "motive" circumstances: the defendant committed the murder for financial gain ((a)(1)), to escape arrest ((a)(5)), because of the victim's race, color, religion, national origin, or country of origin ((a)(16)), or to further the activities of a criminal street gang ((a)(22));
circumstances covers almost all forms of first-degree murder because virtually all first-degree murders are either premeditated killings or felony-murders. Most premeditated murders are capital murders under California’s unique lying-in-wait special circumstance that makes death-eligible a murderer who intentionally kills his victim by surprise and from a position of advantage. As for felony-murder, currently, all but one of the thirteen felonies (torture) which may be the basis for a first-degree felony-murder conviction are also special circumstances, and California is one of only a handful of states where a defendant would be death-eligible for an unintentional, even wholly accidental, killing during a felony.

The breadth of capital murder in California gives extraordinary discretion to prosecutors and juries to select defendants for death, and that discretion is not otherwise limited. Prosecutors have unfettered discretion in their decisions to seek the death penalty in capital murder cases. After a defendant has been convicted of first-degree murder and a special circumstance has been found true at the guilt phase of a capital trial, the jury is accorded virtually unlimited discretion in its sentencing decision. The jurors are instructed to consider a list of eleven factors and told to weigh the aggravating factors against the mitigating factors in reaching their decision (although they are not told which factors are aggravating or mitigating). The jurors are not required to agree on aggravating and mitigating factors, and they do not have to make findings in support of, or otherwise explain, their penalty decision. And, although the California Supreme Court ostensibly will engage in individual proportionality review (potentially a post hoc

12 “commission of a felony” circumstances: the murder was committed while the defendant was engaged in, or an accomplice to robbery (a)(17)(A)), kidnapping (a)(17)(B)), rape (a)(17)(C)), forcible sodomy (a)(17)(D)), child molestation (a)(17)(E)), forcible oral copulation (a)(17)(F)), burglary (a)(17)(G)), arson (a)(17)(H)), train wrecking (a)(17)(I)), mayhem (a)(17)(J)), rape by instrument (a)(17)(K)), or carjacking (a)(17)(L)); and

1 “catchall” circumstance: the murder was especially heinous, atrocious, or cruel (a)(14)).

Id. This last circumstance was held unconstitutional on vagueness grounds. See People v. Superior Court (Engert), 647 P.2d at 77-78; accord People v. Wade, 750 P.2d 794, 804 (Cal. 1988). Consequently, the “heinous, atrocious, or cruel” circumstance was ignored for purposes of the studies discussed in this Article.

199 PENAL § 190.2(a)(15).
200 Compare id. § 189, with id. § 190.2(a)(17).
201 The other states are: Florida, Georgia, Idaho, Maryland, and Mississippi. See Shatz, supra note 117, at 761.
202 See, e.g., People v. Ramirez, 139 P.3d 64, 117 (Cal. 2006); People v. Gray, 118 P.3d 496, 543 (Cal. 2005).
203 See PENAL § 190.3.
204 See People v. Solomon, 234 P.3d 501, 539 (Cal. 2010).
205 See, e.g., People v. Lenart, 88 P.3d 498, 512–13 (Cal. 2004); People v. Lawley, 38 P.3d 461, 508–09 (Cal. 2002).
limitation on prosecutors’ and juries’ exercise of discretion), in fact, in the 524 direct appeals decided under the 1978 Death Penalty Law through 2011, the court never found a death sentence to be disproportionate.

B. Alameda County: Seeking and Imposing the Death Penalty by Location of the Crime

Alameda County stretches along the eastern shore of San Francisco Bay and is the seventh largest county in California by population. It is a mixed urban/suburban/rural county with Oakland as its principal city. The average population of the county during the study period was 1,276,000. During the study period, there was an average of 156 homicides per year, or 12.6 homicides per 100,000 population, higher than the statewide average of 10.8 homicides per 100,000 population.

The District Attorney’s Office was aggressive about seeking and obtaining death judgments, with the result that, during the study period, 12.8% of defendants convicted of first-degree murder and death-eligible were sentenced to death, and the county ranks fourth in the number of inmates currently on California’s death row. During the period of


207 The data on homicides in Alameda County were obtained from the California Department of Justice pursuant to a request, and the relevant tables are available from the authors. The homicide figures set forth here and below represent an average for the years 1980, 1990, and 2000.

208 In a study covering a five-year period within the timeframe of the present study, the researchers estimated the statewide death-sentence rate for comparable defendants to be 11.4%. See Shatz & Rivkind, supra note 37, at 1331–32. The 12.8% figure substantially overstates the true death sentence rate for defendants made death-eligible by statute because it does not include defendants who could have been convicted of a first-degree special circumstances murder, but were charged with, or allowed to plead to, a lesser crime. For example, murders occurring in the perpetration, or attempted perpetration, of a robbery or burglary are first-degree special circumstances murders, yet, in the present study, seventy-five defendants who committed such murders were convicted only of second-degree murder.

209 Condemned Inmate Summary List, CAL. DEP’T OF CORR. & REHAB., 3 (Mar. 5, 2013), http://www.cdcr.ca.gov/Capital_Punishment/docs/CondemnedInmateSummary.pdf. When Assistant District Attorney James Anderson, who had headed the office’s “Death Team” for the majority of study period, retired in 2004, he had put more defendants on death row (ten) than any other prosecutor in California history. See GLENN CHAPMAN, A Passionate Foe of Killers Cedes Stage After 34 Years, OAKLAND TRIBUNE (Oct. 7, 2004). The District Attorney’s Office’s enthusiasm for the death penalty may not have been shared by county residents. In 2003, the Board of Supervisors voted for a moratorium on the death penalty. Donna Horowitz,
the study, the office enjoyed consistent administration by its two District Attorneys, the second of whom had been the Chief Assistant under the first.\textsuperscript{210} During this time, the District Attorney had no written guidelines regarding when to seek the death penalty; instead, he made the decision in consultation with a committee of deputies specializing in capital cases (the “death team”), whose main concern was whether the prosecution had a “reasonable shot” at getting a death sentence.\textsuperscript{211} When the California Commission on the Fair Administration of Justice sought to survey District Attorneys on their death-charging practices, the Alameda County District Attorney refused to participate.\textsuperscript{212}

1. Overview of the Study\textsuperscript{213}

In the present study, we reviewed 473 Alameda County first-degree murder conviction cases arising out of murders committed during the period from November 8, 1978 to November 7, 2001.\textsuperscript{214} The cases were identified initially from a list of all murder prosecutions produced by the Alameda County District Attorney’s Office in response to a California Public Records Act request. The District Attorney list, when checked against other partial lists of Alameda County cases appeared to omit approximately 12% of the cases, but in a random fashion. Most of the missing cases were identified and included in the study, and we estimate that the 473 cases represent more than 98% of the first-degree

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\textsuperscript{210} John J. Meehan was District Attorney from 1981 to 1994, and Thomas J. Orloff succeeded him and was District Attorney from 1994 to 2009. See History, Office of the District Attorney Alameda County, http://www.alcoda.org/about_us/history (last visited Feb 5, 2013). Lowell Jensen was the District Attorney during the first two years of the study period, but very few of the post-Briggs Initiative murder cases went to judgment during his tenure, and the data on death charging covers the period after he left office. Although the present District Attorney is a woman, throughout the study period the District Attorney was a man, so when we refer to the District Attorney we use a male pronoun.


\textsuperscript{212} CAL COMM’N, supra note 188, at 152 n.129.

\textsuperscript{213} The study figures reported here differ slightly from the figures reported in 2007, see Shatz, supra note 117, because a few additional cases were discovered and added to the present study after 2007.

\textsuperscript{214} The beginning date of the study is the effective date of California’s current death penalty statute. The end date reflects the fact that most of the data for the study was gathered during the period 2003–2005. We also collected data on 333 cases where a defendant was convicted of second-degree murder, but determined to limit our analysis to first-degree murder cases. In some respects, this approach is more conservative than that taken by other researchers who have included cases where the defendant was convicted of a lesser homicide but could have been prosecuted for, and convicted of, first-degree murder. See, e.g., Baldus Declaration, supra note 196, at 2.
murder convictions for murders during the study period. In 382 of the cases, we determined that the defendant was statutorily death-eligible on finding that the defendant was an adult and that a special circumstance was admitted or found true or, on the facts of the case, a special circumstance could have been found true beyond a reasonable doubt by the factfinder. In response to a subsequent California Public Records Act request for a list of all cases since November 8, 1978 where death was charged, the District Attorney identified all murder prosecutions since 1982 in which the Office had notified defense counsel of an intent to seek the death penalty. In the period covered by the District Attorney’s response, there were 351 cases where the defendant was convicted of first-degree murder and was statutorily death-eligible, and the District Attorney initially sought death in 105 (29.9%) of those cases. Thus, because of the breadth of the California scheme, the real “narrowing work” was done by the District Attorney’s use of his unfettered discretion not to seek death against 70% of the death-eligible first-degree murderers.

Data on the cases was collected by examining the trial court files. In addition to case-identifying information, the data obtained included the following data relevant to the present inquiry: the nature of murder(s), as measured by any proved or provable special circumstances, the location of the murder(s), the gender of the defendant and victim(s), and the sentence imposed. Although we attempted to collect data on the race of defendants and victims, many of the case files did not contain that information, and we have insufficient information for meaningful analysis. Our purpose in the study was to determine the effect of the location of the murder(s) on whether a death sentence was sought by

215 Some cases may not have been identified, and other cases were identified but were not surveyed because the case files were missing or incomplete.

216 In making this latter determination, we applied two principles: 1) we treated as controlling a factfinder’s determination that no special circumstance was proved, unless that determination was made by a jury and there was overwhelming evidence of jury nullification; and 2) where no finding was made, we determined, by reference to appellate decisions on similar facts, whether an appellate court would have upheld such a special circumstances finding had such a finding been made.

217 Because the District Attorney could not provide charging data for the first three years of the study, the “charging database” is somewhat smaller than the “sentencing database.”

218 It should be emphasized that these are the figures for initial death charges. In a number of the cases where the District Attorney initially charged death, he exercised his discretion to drop the death charge in the course of entering a plea bargain with the defendant, see, e.g., People v. Collier, No. 127184, or before, or during, the defendant’s trial, see, e.g., People v. Jenkins, No. 141626B. For a description of Collier’s plea, see Man Gets Life Term for Killing Peralta Officer, CONTRA COSTA TIMES, Oct. 3, 1996, at A14.

219 We were able to identify the race of the defendant in only 74% of the cases and the race of the victim(s) in only 67% of the cases. This incomplete data reflected no race-of-defendant disparities in the application of the death penalty, but did suggest possible race-of-victim disparities—the death sentence rate in white victim cases was approximately two and a half times the death sentence rate for cases with non-white victims.
the District Attorney’s Office and on whether it was obtained. As noted above, the county was divided roughly in half for the purpose of initiating criminal cases, and this administrative division corresponded with census-tract divisions of the county. The average population of North County was 576,000, while the average population of South County was 700,000. The two halves of the county differed dramatically in three respects. First, despite its lower population, North County had most of the homicides. The average homicide rate per 100,000 population during the study period was 22.9 for North County and 3.9 for South County. Second, the racial makeup of the two halves of the county was significantly different. North County was more than 30% African-American, and South County was about 5% African-American. Third, the race of homicide victims also differed significantly between the two halves of the county. In North County, African-Americans were homicide victims roughly four and a half times as often as Whites; while, in South County, Whites were homicide victims three times as often as African-Americans. These differences are depicted graphically in Figures 1 and 2.

220 See supra note 5.
221 See supra note 206.
222 See supra note 207.
223 Despite the substantial black/white racial disparity between the two halves of the county, there is no significant disparity by economic class, at least as measured by median family income. The census data on median family income was formerly available online through the Census’s American Factfinder, but is no longer available. The relevant tables may be obtained from the authors.
224 These figures are taken from the SHRs for the period 1980–2001. The SHRs for the first fourteen months of the study period were not usable because they did not give the exact location of the homicides within the county.
Figure 1
Average Population 1980–2000

North Cnty. (Total Pop. 576,000) | South Cnty. (Total Pop. 700,000)

- White: 260,000
- Black: 183,000
- Other: 133,000

Figure 2
Total Homicide Victims 1981–2001

North Cnty. (Total: 3174) | South Cnty. (Total: 522)

- White: 562,000
- Black: 35,000
- Other: 103,000
2. Analysis of the Data

In order to examine whether there are disparities in death-charging or death-sentencing by the location of the murder(s), we needed to control for the nature of the murder(s), the predominant factor properly affecting death sentencing. For this purpose, we categorized capital murder cases according to the proved or provable special circumstances and divided the murders with the most commonly occurring special circumstances into two categories: “aggravated murders” and “ordinary murders.” In the aggravated murder category, we included cases where: 1) the defendant murdered more than one person: prior murder or multiple murder cases; and/or 2) the defendant intentionally inflicted, or attempted to inflict, additional serious physical or psychological harm beyond the killing itself: torture, rape or other sexual assault, mayhem, or kidnapping. In the ordinary murder category, we included cases where: 1) the defendant committed a theft-related felony-murder (robbery, burglary, and carjacking); and/or 2) the defendant committed what might be termed an “ordinary premeditated murder” (lying in wait, drive-by shooting) and there were no other proved or provable special circumstances. These two categories encompass fourteen special circumstances. We categorized as “miscellaneous murders” first-degree murders involving the remaining eighteen special circumstances and not falling within the aggravated murder category (e.g., murders for financial gain, murders of police officers, murders with a hate motive). Miscellaneous murders constituted only 8.4% of the cases in the study and were omitted in our analysis of the data. Our assumption that defendants in our

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225 The prosecution may properly consider the defendant’s record in its charging decision and the jury also may consider mitigation evidence in its sentencing decision, but other studies have established what common sense would suggest: that aggravating factors play the major role in the death sentencing decision. See, e.g., Baldus, et al., supra note 118, at 548–49 (describing how statutory aggravators have a statistically significant effect on explaining death-sentencing outcomes, but mitigating factors do not).


227 Id. § 190.2(a)(3).

228 Id. § 190.2(a)(17)(C)–(F), (17)(K).

229 Id. § 190.2(a)(17)(J).

230 Id. § 190.2(a)(17)(B).

231 Id. § 190.2(a)(17)(A).

232 Id. § 190.2(a)(17)(G).

233 Id. § 190.2(a)(17)(I).

234 Id. § 190.2(a)(17)(L).

235 Id. § 190.2(a)(15).

236 Id. § 190.2(a)(21).

237 Id. § 190.2(a)(1).

238 Id. § 190.2(a)(7).

239 Id. § 190.2(a)(14).

240 The gang murder special circumstance, the most commonly occurring special
aggravated murder category are considered substantially more “death-
worthy” than those in our ordinary murder category is validated by the
data in the study. Although all defendants in both categories were
statutorily death-eligible, defendants committing ordinary murders
were 9.8 times as likely not to be charged with death and 5.6 times as
likely not to be sentenced to death as defendants committing aggravated
murders. Other studies in California\textsuperscript{241} and elsewhere\textsuperscript{242} confirm the
appropriateness of our categories.

Because of the categorical nature of the variables in this study, chi-
squared tests and logistic regression—appropriate statistical methods
for analyzing such categorical data—were used to examine the
relationships among death-charging, death-sentencing, location,
categories of murder and gender of the defendants and victims.\textsuperscript{243}

\begin{itemize}
\item[a. ] Death-Charging and Location
\end{itemize}

The raw data on death-charging for death-eligible defendants
convicted of first-degree murder, by categories of murder and location,
is set out in Table 1.

\section*{Table 1}

\textbf{Death-Eligible Defendants Charged with the Death Penalty}

<table>
<thead>
<tr>
<th></th>
<th>Aggravated</th>
<th>Ordinary</th>
<th>Miscellaneous</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North County</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47/83</td>
<td>56.6%</td>
<td>20/181</td>
<td>11.0%</td>
<td>8/22</td>
</tr>
<tr>
<td>South County</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19/24</td>
<td>79.2%</td>
<td>8/35</td>
<td>22.9%</td>
<td>3/6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66/107</td>
<td>61.7%</td>
<td>28/216</td>
<td>13.0%</td>
<td>11/28</td>
</tr>
</tbody>
</table>

circumstance in first-degree murder cases today, was not added to section 190.2(a) until 2000, a
year and a half before the end date of the study, so it had little effect on the death-charging or
dearth-sentencing rate.

\textsuperscript{241} See Shatz & Shatz, supra note 117, at 95.

\textsuperscript{242} See, e.g., David C. Baldus, \textit{When Symbols Clash: Reflections on the Future of the
Comparative Proportionality Review of Death Sentences}, 26 \textit{Seton Hall L. Rev.} 1582, 1601–03
(1996) (finding that, in New Jersey, the death sentence rates for multiple murder, prior murder,
sexual assault and kidnapping were significantly higher than for robbery and burglary
murders); Pierce & Radelet, supra note 131, at 61, 81–86 (finding, inter alia, that multiple
murder showed the highest correlation with death sentencing and that sexual assault and
kidnapping murders showed a much higher correlation with death sentencing than did robbery
and burglary murders).

\textsuperscript{243} See, e.g., \textsc{Alan Agresti}, \textsc{An Introduction to Categorical Data Analysis} 34 (2d ed.
2007).
It reveals that the District Attorney sought death substantially more often for South County murders, a disparity in death-charging that cannot be explained on the theory that the murders in South County were generally more heinous. Chi-squared tests of the independence of both aggravated and ordinary murders and location reveal no significant relationship in the charging database (aggravated: \( p \)-value = .2116; ordinary: \( p \)-value = .1579). The disparity in death-charging between North County and South County is statistically significant. A chi-squared test of independence with regard to location and death charging reveals a significant relationship (\( p \)-value = .002). This charging disparity cannot be explained by the nature of the murders committed. Logistic regression models demonstrate that, whether the murder was aggravated or ordinary, the chance of the defendant being charged with death was roughly two and a half times greater if the murder was in South County rather than North County (odds ratio = 2.47).\(^{244}\)

Since, in other studies, the gender of the defendant and/or victim has been shown to create significant disparities in death sentencing,\(^{245}\) we examined whether the apparent location disparities in death charging might be influenced by gender. Conducting a chi-squared test for independence, we found a significant relationship between gender of the defendant and location (\( p \)-value = .0397), revealing a greater proportion of women defendants in South County than one would expect by chance, but we found no gender of defendant disparities with regard to death-charging (gender of defendant: \( p \)-value = .8183). We did find significant disparities based on the gender of the victim in the presence of location (odds ratio for gender of victim = 2.39). Nonetheless, logistic regression models using both location and gender of victim as independent variables demonstrate that location remains significant even when gender of victim is included (odds ratio for location = 2.47). Thus, a death-eligible defendant in a South County murder case was 2.47 times more likely to be death-charged than a defendant in a North County case, even when the victim’s gender is taken into account.

\(^{244}\) The pattern is evident even in the case of multiple murder, where the District Attorney charged death in a substantial majority (69.2%) of the cases, but virtually all cases where he did not charge death (nineteen out of twenty) were North County cases, and all three multiple murder cases where the District Attorney agreed to a plea for a sentence less than death were North County cases.

\(^{245}\) See supra Part II.B.
b. Death-Sentencing and Location

The raw data on death-sentencing for death-eligible defendants convicted of first-degree murder, by categories of murder and location, is set out in Table 2.

Table 2
Death-Eligible Defendants Sentenced to Death

<table>
<thead>
<tr>
<th>Location</th>
<th>Aggravated</th>
<th>Ordinary</th>
<th>Miscellaneous</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North County</td>
<td>20/86</td>
<td>8/198</td>
<td>2/26</td>
<td>30/310</td>
</tr>
<tr>
<td></td>
<td>23.3%</td>
<td>4.0%</td>
<td>7.7%</td>
<td>9.7%</td>
</tr>
<tr>
<td>South County</td>
<td>15/26</td>
<td>4/39</td>
<td>0/7</td>
<td>19/72</td>
</tr>
<tr>
<td></td>
<td>57.7%</td>
<td>10.3%</td>
<td>0.0%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Total</td>
<td>35/112</td>
<td>12/237</td>
<td>2/33</td>
<td>49/382</td>
</tr>
<tr>
<td></td>
<td>31.3%</td>
<td>5.1%</td>
<td>6.1%</td>
<td>12.8%</td>
</tr>
</tbody>
</table>

The table reflects disparities even greater than the disparities in death-charging, and, again, those disparities cannot be explained on the theory that the murders in South County were more heinous. Chi-squared tests of the independence of both aggravated and ordinary murders and location reveal no significant relationship in the sentencing database (aggravated: $p$-value = .1599; ordinary: $p$-value = .1264). The location disparity is statistically significant.246 A chi-squared test of independence with regard to location and death-sentencing reveals a significant relationship ($p$-value = .00013), i.e., there were more death sentences for South County murders than one would expect to find by chance. This sentencing disparity persists when the nature of the murder(s) is considered simultaneously. In logistic regression models with location and murder category, location continues to exert a large influence on death-sentencing (odds ratio = 3.31).

Again we examined what role gender played. Although, as with death-charging, we found no gender of defendant disparities with regard to death-sentencing, we found a relationship between the gender of the victim and a death sentence ($p$-value = .0033), i.e., a death sentence was imposed more often in female victim cases than one would

246 This disparity in sentencing outcomes is greater than the disparity in initial death charging. Whether the greater disparity is the result of the District Attorney’s decision to drop the death charge in a higher percentage of North County cases or juries’ rejection of the death penalty in a higher percentage of North County cases cannot be determined from the data gathered.
expect to find if there was no relationship between these two variables. Nonetheless, logistic regression models using both location and gender of victim as independent variables demonstrate that location remains significant even when gender of victim is included (odds ratio for location = 3.60). The likelihood of a death sentence in a South County case was 3.60 times greater than in a North County case, even when the victim’s gender is taken into account.\footnote{There is some risk that our findings, based on a data set of only first-degree murder conviction cases, might be ignoring contrary data in cases involving death-eligible defendants that did not result in first-degree murder convictions. For that reason, as noted above, see supra note 218, some researchers include second-degree murder cases in their data sets. While we do not have complete data on the second-degree murder cases during the study period, we do have complete data on all second-degree murder conviction cases where the defendant was death-eligible based on an ordinary robbery- or burglary-murder, the most common type of death-eligible murder. The distribution of this partial set of death-eligible second-degree murder cases is consistent with our finding that prosecutors and juries treat South County murder more severely than North County murders. Just as South County first-degree murder convictions more often result in a death sentence than do equivalent North County cases, so South County robbery- or burglary-murder cases more often result in a first-degree, rather than second-degree, murder conviction than do equivalent North County cases. Among convicted robbery- or burglary-murderers, 73% of the defendants in South County, but only 65% of the defendants in North County are convicted of first-degree murder.}

In both aggravated murder cases and ordinary murder cases, the District Attorney of Alameda County initially sought the death penalty significantly more often for South County murders than for North County murders. The District Attorney and capital juries combined to impose death sentences for South County murders at a rate, compared with the rate for North County murders, even more disparate than the rate at which the District Attorney sought death initially. These disparities cannot be explained by the nature of the murders, the legitimate factor that most correlates with death sentencing, nor by arguably illegitimate factors such as the gender of the defendant and victim. As we set forth in the next Part, these disparities should raise constitutional concerns.

IV. CONSTITUTIONAL CHALLENGES USING THE STUDY RESULTS

Any argument that statistically significant geographical disparities such as we found in Alameda County raise constitutional questions must contend with \textit{McCleskey}, although whether \textit{McCleskey} remains good law is open to question. \textit{McCleskey} was a five to four decision, over spirited dissents, repudiated by its author four years after he wrote it.\footnote{See \textsc{John C. Jeffries, Jr., Justice Lewis F. Powell, Jr.: A Biography} 451 (1994).} It was arguably inconsistent with \textit{Furman}, where the Court found an unconstitutional risk of arbitrariness on the basis of evidence less compelling than the Baldus study. The decision has been “the consistent
subject of dispute among members of [the] Court since it was handed down. Further, developments in the years since McCleskey have seriously undercut its precedential value. First, the central finding of the Baldus study, that victims’ race has a substantial effect on death-charging and death-sentencing—a finding that was challenged in the district court and was only assumed to be true for purposes of the Supreme Court decision—has been confirmed in numerous subsequent studies. Second, in recent death penalty decisions, particularly in Kennedy v. Louisiana, the Court has emphasized its understanding that the states’ use of the death penalty must be “restrained” and “reserved for the worst of crimes.” In Kennedy, the Court twice suggested that the death penalty should be applied only in the case of intentional murders. With these concerns in mind, the Court might now be receptive to empirical evidence, like that contained in the Baldus study, that race is a factor primarily in the less-aggravated cases. Third, since McCleskey, the United States has ratified the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD). Because ICERD defines racial discrimination in terms of “effect,” rather than just “purpose” and commits the signatories to eliminating laws which have the “effect” of continuing racial discrimination, the ratification of the treaty arguably overturns McCleskey’s Equal Protection holding.

249 See Citizens United v. Federal Election Commission, 130 S. Ct. 876, 921–22 (2010) (Roberts, C.J., concurring) (explaining that a decision which was adopted over “spirited dissents” and “has proved to be the consistent subject of dispute” has diminished precedential value).


252 Id. at 446–47; see also Roper v. Simmons, 543 U.S. 551, 568 (2005); Atkins v. Virginia, 536 U.S. 304, 319 (2002).


256 See Int’l Comm’n of Jurists, Administration of the Death Penalty in the United States, 19 HUM. RTS. Q. 165, 203 (1997) (“[T]he Race Convention’s prescription of effects-based discrimination (Article 2(c) of the ICERD) extends to areas of disparate impact-discrimination not currently proscribed under United States law in the United States.”); Ved P. Nanda, Access to Justice in the United States, 46 AM. J. COMP. L. 503, 527–28 (1998). Whether or not the treaty obligations undertaken by the United States are enforceable by a defendant is unclear, see Carlos Manuel Vasquez, Treaty-Based Rights and Remedies of Individuals, 92 COLUM. L. REV. 1082, 1143–46 (1992), but such standards are relevant to the Court’s Eighth Amendment analysis, see, e.g., Roper, 543 U.S. at 575 (“[A]t least from the time of the Court’s decision in Trop [v. Dulles], the Court has referred to the laws of other countries and to international authorities as instructive for its interpretation of the Eighth Amendment’s prohibition of ‘cruel and unusual punishments.’”). It might also be argued that Bush v. Gore, 531 U.S. 98 (2000), undercuts McCleskey’s Equal Protection holding. In Bush, the Court found an Equal Protection
Even assuming that *McCleskey* remains good law, however, *McCleskey* does not foreclose the use of a study such as ours to challenge a death charge or a death sentence on the same two grounds advanced by *McCleskey*: as a violation of the Equal Protection Clause and as a violation of the Eighth Amendment. In order to illustrate how the study results might support such constitutional challenges by a defendant charged with a South County murder, we consider two hypothetical defendants, one (AM) charged with an “aggravated murder” and the other (OM) charged with an “ordinary murder.” The following facts for the AM and OM cases are taken from two South County cases in the study where death was charged and imposed. AM stabbed to death an elderly couple in their house during the course of a burglary and robbery. Apparently he was under the influence of drugs at the time, and the robbery was for the purpose of getting money to buy drugs. AM had a juvenile record for burglary and petty theft and, while awaiting trial, AM was found with razor blades in his cell. OM responded to an ad for the sale of a motor home by the victim, arranged to meet with the victim, then killed the victim and stole the motor home. OM had suffered a felony theft conviction in another state. Below we explore the constitutional arguments that AM and/or OM might make challenging the death penalty.

**A. Equal Protection**

Both hypothetical defendants could challenge the sentence on the ground that the decision of the District Attorney to seek death significantly more often in the case of death-eligible South County murders, without regard to the nature of the crime, denied residents of North County the equal protection of the laws, in this case the benefits of the death penalty. This discrimination between the two halves of the County cannot be explained on the basis that it serves either of the

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257 The aggravated murder case is *People v. Pollock*, 89 P.3d 353 (Cal. 2004), and the ordinary murder case is *People v. Schmeck*, 118 P.3d 451 (Cal. 2005).

258 The defendant would have standing to make this argument even though he or she might not be a resident of North County, either because, as the Court held in *McCleskey*, the prosecutor’s conduct violates the defendant’s rights because it amounts to enforcing the criminal law on the basis of an “unjustifiable standard” or because the defendant has standing to assert the equal protection rights of North County residents. *McCleskey*, 481 U.S. at 291 n.8; see also *Powers v. Ohio*, 499 U.S. 400, 410–16 (1991) (holding that a white defendant has third-party standing to assert the equal protection rights of black potential jurors excused through the discriminatory use of peremptory challenges).
two principal justifications for a death penalty: general deterrence and retribution.259 A claim that the discrimination serves general deterrence would be dubious given that North County has a far higher homicide rate than South County, so, to the extent the death penalty serves a deterrent function at all, it arguably should have been employed more often in North County rather than in South County. Similarly, a claim that the discrimination serves retribution would have to be based on the pernicious and indefensible contention that South County lives are worth more than North County lives.

The defendants’ claims here would not simply be that the District Attorney’s decision to offer more protection to South County residents, through the use of the death penalty, was irrational, but that, given the substantial racial disparities with respect to the residents and homicide victims between the two halves of the county, the decision amounted to “race of neighborhood” discrimination (and, perhaps, race of victim discrimination as well). In an Article written shortly after the *McCleskey* decision, Randall Kennedy elaborated the logic of such a claim:

I conceptualize *McCleskey* as an instance of racial inequality in the provision of public goods. Whereas other cases have involved the racially unequal provision of street lights, sidewalks, and sewers, *McCleskey* involves racial inequality in the provision of a peculiar sort of public good—capital sentencing.260

In Kennedy’s view, the African-American community suffers two harms—one material, the other symbolic—from such discrimination. The community suffers material harm because the underenforcement of the criminal law in African-American communities breeds a “spirit of lawlessness.”261 The community suffers symbolically because the implicit message is that African-Americans “are assigned a lowlier place in the polity.”262


260 Randall L. Kennedy, *McCleskey v. Kemp*: Race, Capital Punishment, and the Supreme Court, 101 HARV. L. REV. 1388, 1394 (1988). As Kennedy points out, the decision to discriminate between communities in the use of the death penalty may not result from conscious consideration of race, but rather from “the unconscious failure to extend to [blacks] the same recognition of humanity, and hence the same sympathy and care, given as a matter of course to [whites].” Id. at 1420 (quoting Paul Brest, The Supreme Court, 1975 Term—Forward: In Defense of the Antidiscrimination Principle, 90 HARV. L. REV. 1, 7–8 (1976)). Thus, consideration of how the defendants might use this study in support of an equal protection claim should not be understood as an assertion that, in choosing to pursue the death penalty more often for South County murders, the two District Attorneys and the members of their death teams, or any of them, consciously acted from a racial motive.

261 Id. at 1425.

262 Id.; see also RANDALL KENNEDY, RACE, CRIME, AND THE LAW 29 (1997) (“Deliberately withholding protection against criminality (or conduct that should be deemed criminal) is one of the most destructive forms of oppression that has been visited upon African-Americans. The specter of the wrongly convicted black defendant rushed to punishment by a racially biased process is haunting . . . [E]ven worse is racially selective underprotection. This form of
It has been clear since *Yick Wo v. Hopkins* that a municipality violates the Equal Protection Clause when it discriminates in the provision of services on the basis of race. That principle applies to discrimination against distinct racial communities. For example, in *Dowdell v. City of Apopka*, the Eleventh Circuit affirmed a finding of an equal protection violation and the granting of relief to plaintiffs who proved that the city had discriminated in the provision of street paving and water distribution between the African-American community and the White community. More recently, the Ninth Circuit, in *Committee Concerning Community Improvement v. City of Modesto*, reversed the denial of relief to plaintiffs claiming discrimination against predominantly Latino communities in the provision of municipal services, including discrimination in law enforcement and emergency response times. The right to be treated equally in the provision of municipal services applies to protective services. The Supreme Court has said: “The State may not, of course, selectively deny its protective services to certain disfavored minorities without violating the Equal Protection Clause.” And it is no answer that the District Attorney here has not denied the protective service of the death penalty completely to North County residents so long as it appears that he has not furnished it on an equal basis to both communities.

Such a claim would not be foreclosed by *McCleskey*. McCleskey’s equal protection argument was rejected because, although he established a disparate effect, he could not prove discriminatory intent. As noted above, to the extent that McCleskey claimed an equal protection violation based on prosecutors’ charging decisions, his statewide statistics could not prove the discriminatory intent of any particular prosecutor, and his statistics with regard to the Fulton County prosecutor, who prosecuted McCleskey, constituted too small a sample to draw any conclusions. The evidence in the present study suffers from neither of these defects. The study concerns a single prosecutor’s office and covers a sufficient number of cases to permit the conclusion discrimination is worse because it has directly and adversely affected more people than have episodic misjudgments of guilt. Racially selective underprotection is also worse in the sense that society is not as well equipped to combat it. Even before the abolition of slavery, officials everywhere acknowledged, at least in principle, that government is obliged to punish for crimes only duly convicted persons, regardless of race. Much more difficult to establish has been the idea that government is obliged to protect blacks from crime on the same terms as it protects whites.”.

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263 118 U.S. 356 (1886).
264 698 F.2d 1181 (11th Cir. 1983).
265 583 F.3d 690 (9th Cir. 2009).
267 *Elliot-Park v. Manglona*, 592 F.3d 1003, 1007 (9th Cir. 2010) (“[D]iminishing police services, like the seat at the back of the bus, don’t satisfy the government’s obligation to provide services on a non-discriminatory basis.”).
that the Alameda District Attorney has deliberately chosen to employ the death penalty substantially more often in the case of South County murders than in the case of North County murders.\(^{269}\)

The procedural model for making such an equal protection claim in a criminal case should be that set out in *Batson v. Kentucky*\(^{270}\) and its progeny\(^{271}\) involving equal protection challenges to a prosecutor’s discriminatory use of peremptory challenges.\(^{272}\) Under *Batson*, once the defendant has presented a prima facie case raising an inference of discrimination, the burden shifts to the prosecutor to offer a neutral, non-discriminatory explanation for the challenges in question, although the burden of proving purposeful discrimination remains on the defendant.\(^{273}\) In *McCleskey*, Justice Powell, distinguishing *Batson*, hinted that a selective enforcement challenge such as McCleskey’s might never be viable because of the “impropriety” of requiring prosecutors to defend their decisions to seek death, “often years after they were made.”\(^{274}\) It is not clear whether Justice Powell’s objection to requiring prosecutors to explain their death-charging decisions was theoretical—it would constitute too great an interference with their broad charging discretion, or practical—it would be too difficult for a prosecutor to recall or reconstruct his/her reasons for seeking, or not seeking, death years after the fact. With regard to the theoretical concern, requiring the Alameda District Attorney to explain his death-charging decisions no more interferes with his exercise of discretion than requiring a prosecutor to explain her peremptory strikes interferes with her discretion to select a jury. In fact, given the broad range of factors that might legitimately influence the District Attorney’s charging decisions—including institutional factors such as enforcement priorities and office resources in addition to case-specific factors such as the nature of the murder, the defendant’s record, the strength of the case, the impact on the victim’s family—a court is much less likely to question the District Attorney’s explanations for charging decisions than to question a prosecutor’s necessarily case-specific use of peremptory challenges. District attorneys do not seem to share this theoretical concern. When the issue of making district attorneys’ death charging decisions more transparent was raised before the California Commission on the Fair

\(^{269}\) The present study is based on roughly two and half times as many murder convictions and death-eligible cases as the Fulton County portion of the Baldus study.

\(^{270}\) 476 U.S. 79 (1986).


\(^{272}\) In *United States v. Armstrong*, 517 U.S. 456 (1996), a selective prosecution case, although the Supreme Court distinguished *Batson* in terms of the showing required to establish a prima facie case, the Court seemed to assume that the *Batson* three-step procedure applied to selective prosecution claims. *Id.* at 467–68.


Administration of Justice, the Commission—which included district attorneys—unanimously recommended: “That all District Attorney Offices in California formulate and disseminate a written Office Policy describing how decisions to seek the death penalty are made, who participates and what criteria are applied.”

As to the practical concern, Justice Powell’s attempt to distinguish _Batson_ is not altogether persuasive, especially in light of later cases. While it is true that a selective prosecution challenge may require the District Attorney to explain past charging decisions in addition to his decision in the case at hand, the same may be true of _Batson_ challenges, which need not be based solely on conduct of the prosecutor in the particular case, and may require testimony in post-conviction proceedings years after the challenges were made. If anything, given the gravity of the decision whether to seek the death penalty against a given defendant and how infrequently a death charge is filed (an average of a little more than five times a year in the study), the District Attorney’s task in reconstructing those decisions should be far easier than the prosecutors’ task in reconstructing the immediate, “seat-of-the-pants instincts” that dictate peremptory challenges.

With regard to the substance of the equal protection claim, the defendants would have to show that the District Attorney’s policy “had a discriminatory effect and that it was motivated by a discriminatory purpose.” Exactly what a defendant would have to show to make out a prima facie case is not altogether clear. The Supreme Court has stated: “The requirements for a selective-prosecution claim draw on ‘ordinary equal protection standards.’” At the same time, the Court has emphasized the broad discretion enjoyed by prosecutors, the reluctance of the courts to review this “special province” of the executive and the presumption of regularity accorded to prosecutors’ charging decisions, all of which require the defendant to present “clear evidence” of discrimination. At a minimum, the defendants would have to prove a disparate effect with their statistical evidence and also identify similarly situated defendants who were treated differently.

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275 _CAL. COMM‘N_, _supra_ note 188, at 155.
276 See, e.g., _Reed v. Quarterman_, 555 F.3d 364, 382 (5th Cir. 2009) (considering evidence that the prosecutor’s office had a history of discrimination and that one of the prosecutors in the present case had been found to have discriminated in a prior case); _Hightower v. Terry_, 459 F.3d 1067, 1077–78 (11th Cir. 2006) (Wilson, J., dissenting) (considering evidence of particular prosecutor’s past discriminatory conduct).
281 _Id._ at 464–65.
The principal evidence supporting the claim is the statistically significant disparity in death-charging between North and South County, a disparity that cannot be explained by the nature of the murders committed in each location. That "race of neighborhood" may explain the disparities is supported by the finding of Pierce and Radelet in their California study (noted above) that inter-county disparities in the use of the death penalty are correlated with race: death-sentencing rates were lowest in the counties with the highest non-white population. In addition to the statistical evidence, AM's evidence would be that, as egregious as multiple murder might be, the District Attorney did not charge death in all multiple murder cases, and 95% of the cases where he did not charge death, and all of the cases where he charged death but accepted a plea for less than death, were North County cases. Among the North County multiple murder cases where the District Attorney did not charge death, or agreed to a plea dropping the death charge, were the following cases: 1) defendant killed her elderly mother and another older woman, a client of the defendant's, in order to loot their bank accounts and, in the course of killing the second woman, set fire to the woman's house; 2) defendant, a prior felon, engaged in a string of armed robberies during which he killed three victims; 3) defendant tortured and then killed the two victims in the course of a burglary, robbery, and kidnapping; 4) defendant, in the course of a robbery, killed two victims, the second, to eliminate a witness to the crimes. Whether or not there is an explanation for the District Attorney's "leniency" toward these North County defendants, it seems an unlikely explanation that their crimes were less egregious than AM's.

OM can make out an even stronger prima facie case. With regard to ordinary first-degree death-eligible murders, like that committed by OM, the District Attorney charged death in only 13% of the cases, and again, where death was charged, he agreed to pleas for less than death only in North County cases. Among the North County ordinary murder cases where the District Attorney did not charge death were the following: 1) defendant robbed and killed a wheelchair-bound cerebral palsy victim and set fire to his apartment; 2) defendants, guilty of a robbery-murder, were also guilty of attempting to murder a second

283 Pierce & Radelet, supra note 124, at 38.
284 See supra Part III.B.
286 See People v. Ringo, No. 141626A (Alameda Cnty. Super. Ct.).
288 See People v. Sanders, No. 92279 (Alameda Cnty. Super. Ct.).
289 See supra Part III.B.
290 See People v. Pinkston, No. 84479A (Alameda Cnty. Super. Ct.).
person during the crime; defendant and his cohorts committed four armed robberies of businesses, during one of which defendant shot and killed a clerk; defendant was on parole when he committed the robbery-murder of a cab driver. Again, whatever explanation there might be for treating OM differently from these North County defendants who committed ordinary murders and from all the thirty-six North County defendants who committed aggravated murders and were not charged with death, it would not seem to be because his crime was more egregious.

Statistical evidence coupled with evidence that North County defendants who committed murders as egregious, or more egregious, than those committed by the defendants were not charged with death should be sufficient to establish a prima facie case. In theory, the District Attorney would have three potential responses to this prima facie case. First, he might dispute the implication of the statistical showing by proving that his charging decisions can be explained by a (neutral) factor other than location of the crime. For example, the disparities might have resulted from the District Attorney’s decision not to seek the death penalty in the case of gang murders, and the heavy concentration of such murders in Oakland (North County). Such an explanation may be plausible because, across the state, the death penalty is rarely employed in the case of gang killings, but it is doubtful that the explanation is race-neutral since in Alameda County, as elsewhere, most gang killings occur in minority communities. Second, he might admit charging death more often for South County murders, but he might offer a (neutral) justification for the policy. In this regard, the District Attorney might argue—as the California District Attorneys argued to justify inter-county disparities—that he was simply responding to greater demand for use of the death penalty in South County.

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292 See People v. Molsone, No. 76827A (Alameda Cnty. Super. Ct.).
293 See People v. Slaughter, No. 80264 (Alameda Cnty. Super. Ct.).
294 The prima facie case might be supported by anecdotal evidence of race discrimination by the District Attorney’s Office, for example evidence that the office engaged in racial discrimination in jury selection. See Thaai Walker, Surprise Allegation Revives Old Case: Ex-Prosecutor Says He, Judge Colluded to Keep Jews off Jury in Killing, SAN JOSE MERCURY NEWS, Mar. 19, 2005, at 1B (reporting on the declaration under oath of a former Alameda County prosecutor that prosecutors routinely used peremptory challenges against black women and Jews).
296 Shatz & Shatz, supra note 117, at 98 (finding a death sentence rate of 0.3% in single-victim first-degree murders committed for the benefit of street gangs).
297 See CAL COMM’N, supra note 188, at 151.
County, as opposed to North County. This argument would be inconsistent with the District Attorneys’ enthusiastic pursuit of death sentences in the absence of substantial public support for the death penalty in Alameda County, and it is implausible since the District Attorney’s death review committee is not diverse and does not seek input from the community, or even consult with the victim’s family prior to filing a death charge. Third, he might try to prove that the decision to charge death was based on some factor unique to the defendants’ cases (other than the nature of the murders) and unrelated to the general policy to seek death more aggressively for South County murders: perhaps the community reaction to, or the impact on the victim’s families of, the particular murders. Of course, the Alameda District Attorney has never been called upon to explain his charging decisions, so one can only speculate as to what explanation might be offered, but, given the statistical showing and the numerous comparably egregious North County cases where death was not charged, a court should require an explanation and give the defendants the opportunity to carry their burden by proving the explanation to be false.

B. Eighth Amendment

As long as McCleskey remains good law, a statistical showing of disparities in the application of the death penalty—whether the disparities shown are by race, gender, geography, or all three, and whether proved on a statewide or county-level basis—will not prove an Eighth Amendment violation. To establish an Eighth Amendment violation, the defendants would have to prove what Furman proved, that the death penalty was imposed so infrequently in those cases “for which

298 There may well be more support for the death penalty in South County than in North County based on the very different racial makeup of the two halves of the county and the fact that African-Americans have always been far less in favor of the death penalty than Whites. See Michael Tonry, The Social, Psychological, and Political Causes of Racial Disparities in the American Criminal Justice System, 39 CRIME & JUST. 273, 289 (2010) (reporting that there has been a thirty-point racial gap in support for capital punishment since at least 1974).

299 The District Attorney has simply ignored the Board of Supervisors’ 2003 call for a moratorium on use of the death penalty. See supra note 209.


301 In support of the Court’s decision in McCleskey, Justice Powell emphasized that there was a “legitimate and unchallenged explanation” for the prosecutor’s decision to charge death, that McCleskey was death-eligible under the Georgia statute. McCleskey v. Kemp, 481 U.S. 279, 296–97 (1987). That McCleskey was death-eligible is no answer at all to a claim that he was treated differently from other death-eligible defendants because of racial considerations.
death is the authorized penalty’’ as to create an unconstitutional risk of arbitrariness and an unconstitutional likelihood that its imposition was without penal justification. They would have to show that the California statute, or its application, failed to genuinely narrow the death-eligible class and thus failed to result in the death penalty being imposed on a “substantial portion” of the death-eligible class.

There are two versions of this claim, both of which would be supported by the study’s findings. The broader claim that both defendants could make would be based on statewide statistics on the imposition of the death penalty at the time of the charges against them. There is ample evidence that California’s death penalty scheme fails to narrow. David Baldus, in a study completed in 2010, found the scheme so broad that the death-sentencing rate among death-eligible cases was 69% lower than the death-sentencing rate in pre-\textit{Furman} Georgia. An earlier study based on cases decided on appeal during a five-year period within the period of the present study found that approximately 84% of those convicted of first-degree murder were death-eligible, and approximately 11.4% of death-eligible defendants convicted of first-degree murder were sentenced to death, a death sentence rate well below that in Georgia at the time of \textit{Furman}. A death penalty scheme where prosecutors and jurors enjoy virtually unfettered discretion in their selection decision and where better than five out of six first-degree murderers is made death-eligible is not “genuinely narrow,” and a scheme where death is imposed on fewer than one in eight death-eligible defendants is not a scheme where death is being imposed on a “substantial portion” of the class. The findings of our study with regard to death sentence rate confirm the statewide statistics. Although

\footnotesize{\textsuperscript{302} Furman v. Georgia, 408 U.S. 238, 313 (1972) (White, J., concurring). \textsuperscript{303} Baldus Declaration, supra note 196, at 25–26. \textsuperscript{304} Shatz & Rivkind, supra note 37, at 1332. The different death sentence rates reported in the several California studies reflect the difference in the case samples studied—all cases, only appellate cases, only Alameda County cases; whether the study covered only defendants convicted of first-degree murder or included those convicted of lesser homicides; and the version(s) of the death penalty in effect for the cases studied. Nevertheless, regardless of the methodology, the studies all found that the death sentence rate in California is, and always has been, substantially below the 15–20% pre-\textit{Furman} death sentence rate. \textsuperscript{305} Although the California statute is the broadest in the country, that does not necessarily mean California has the lowest death sentence rate. As noted above, Donohue’s study, supra note 116, using cases of defendants convicted of first- or second-degree murder, found a 4.4% death sentence rate in Connecticut. A new study by Justin Marceau, Wanda Foglia, and Sam Kamin, also using cases of defendants convicted of first- or second-degree murder, has found a death sentence rate of less than 1% in Colorado. Joint Declaration and Report of Justin Marceau, Wanda Foglia, and Sam Kamin, Colorado v. Montour (Douglas Cnty. Dist. Ct. Sept. 7, 2012) (No. 02CR782). \textsuperscript{306} The 11.4% death sentence rate is the rate from the late 1980s. More recently, death sentences in California have declined, so that among death-eligible first-degree murderers sentenced during the period 2003–2005, the death sentence rate was 5.5%. Shatz & Shatz, supra note 117, at 93–94.}
the Alameda County death sentence rate among defendants convicted of first-degree murder and death-eligible was 12.8%, higher than the statewide rate, that is not inconsistent with the lower state rate because, during the period of the study, Alameda was a high death county.307

In a properly narrowed California scheme—one where the majority of first-degree murderers were not made death-eligible and the death sentence rate exceeded 15–20%—AM almost certainly would still be death-eligible. The data on death sentencing during the period of the study demonstrate that the multiple murderer is considered by prosecutors and jurors to be the most deserving of death.308 By contrast, OM almost certainly would not be death-eligible under a narrowed scheme. Making death-eligible ordinary theft-related felony-murders, such as that committed by OM, in itself would defeat narrowing because the majority of first-degree murders are theft-related felony-murders.309 However, the fact that AM and OM are differently situated with regard to a hypothetical narrowed statute should not mean that they are differently situated with regard to their challenge to the present statute. Just as the Court in Furman held the Georgia statute unconstitutional without considering the arbitrariness of any given sentence, so the courts would have to hold the California statute unconstitutional in all its applications.

OM, but probably not AM, could also make a narrower Eighth Amendment claim based on the infrequent imposition of the death penalty for the kind of murder he committed.310 In Furman, the Court was addressing the Georgia scheme as a whole, but the same principle—that when too few are selected from too large a death-eligible class, there is an unconstitutional risk of arbitrariness—might be applied to any particular form of murder made death-eligible. The Court recognized as much in Gregg when the plurality cited with approval the Georgia Supreme Court’s understanding that the Eighth Amendment does not permit the imposition of the death penalty “when juries generally do not impose the death sentence in a certain kind of murder case.”311 In Alameda County during the study period juries did not generally

307 See Pierce & Radelet, supra note 124, at 27.
308 Shatz, supra note 117, at 739–44. This finding is consistent with findings in other states. See Baldus, supra note 242 at 1601–03 (New Jersey); Pierce & Radelet, supra note 131, at 61 (Illinois).
309 Shatz, supra note 117, at 738.
310 Statewide, during the 1980s, approximately 27% of defendants convicted of first-degree murder who murdered more than one victim were sentenced to death. Id. at 741. The comparable figure for Alameda County during the period of the study is 34%. Id. at 740. Today, with the overall decline in death sentencing in California during the last decade, even a defendant convicted of first-degree murder with multiple victims would have an Eighth Amendment claim based on the 2003–2005 study showing a death sentence rate for multiple murderers of 16.4%. (Unpublished data in the possession of the author.)
impose the death penalty on convicted first-degree murderers for “ordinary murders,” such as that committed by OM. The death sentence rate for such defendants was 5.1%. If we were to focus only on defendants convicted of murder during a robbery or burglary, but were to include all such defendants convicted of murder (rather than just those convicted of first-degree murder), the death sentence rate was 4.5%.312

The defendants arguably could prove an Eighth Amendment violation with nothing more than statistical evidence demonstrating the infrequent use of the death penalty in California or for defendants committing particular kinds of murders. However, just as Furman’s Eighth Amendment case was supported by statistical evidence of racial discrimination, the proof of disparities in the imposition of the death penalty documented in this study and earlier studies would add substantial support to the defendants’ Eighth Amendment claims. The harm to be feared from overbroad death penalty statutes is that the selection of the few who are sentenced to death from the many who are death-eligible will be done on an arbitrary or, worse, discriminatory basis. In Furman, the Justices in the majority presumed that the infrequent use of the death penalty—in 15–20% of the cases where it was legally available—would necessarily produce arbitrary results, but that presumption also was validated to some degree by background evidence of racial discrimination in death-sentencing, particularly for the crime of rape.313

Similarly, with regard to the California death penalty scheme, broad death-eligibility and a low death-sentence rate create a presumption that death sentences will be imposed in an arbitrary or discriminatory fashion, and that presumption has been validated by statistical evidence of various sentencing disparities. Prior studies have documented disparities based on race of victim,314 gender of defendant and victim,315 and geography.316 The present study finds disparities based on location of the murder as well as gender of the victim. The studies confirm that the California statute is overbroad because its infrequent application has produced the very harms identified in Furman. In sum, while proof of irrational disparities in the administration of the death penalty may not, under McCleskey, prove a constitutional violation, such proof strongly supports the claim that the

312 Shatz, supra note 117, at 745. Calculating the death sentence rate using second-degree murder cases as well as first-degree murder cases may give a more accurate picture since it captures those cases in which the District Attorney initially charged, or allowed the defendant to plead to, a lesser crime than the defendant committed.
313 See supra Part I.A.
314 Pierce & Radelet, supra note 124, at 19.
315 Shatz & Shatz, supra note 117, at 105–10.
316 Pierce & Radelet, supra note 124, at 38–39.
California scheme is constitutionally flawed in its failure to meet the Court’s narrowing requirements.

**CONCLUSION**

The core finding of the Supreme Court in *Furman*—reiterated by the majority in *McCleskey*—is that, when the death penalty is imposed infrequently, i.e., where many are made death-eligible, but few are sentenced to death, the result is inevitably arbitrary and, consequently, unconstitutional.317 That has been the situation in California since the enactment of the 1978 Death Penalty Law—the death-eligible pool is larger than in pre-*Furman* Georgia, and the death sentence rate has never approached the pre-*Furman* Georgia rate found unconstitutional in *Furman*. The size of the death-eligible pool in California during this period is such as to give prosecutors, and then jurors, extraordinary discretion in choosing defendants for death, producing the very arbitrary and discriminatory results prevalent prior to *Furman*. Although California may be an extreme case, it is not unique in having an overbroad death penalty scheme. As noted above,318 studies in other states also have documented death-sentence rates among death-eligible defendants well below the 15–20% rate at the time of *Furman*, and the wealth of studies finding significant disparities in the administration of the death penalty suggest that most states’ schemes might be challenged as overbroad.

The choice of the Alameda County District Attorney and Alameda County capital case jurors to favor South County residents with the protection of the death penalty is a product of the virtually unfettered discretion created by an overbroad statute. Given the very different racial demographics of the two halves of the county and the racially skewed distribution of homicide victims, and viewed in light of the overwhelming empirical evidence of race effects in death-charging and death-sentencing throughout the country,319 an obvious explanation is that racial considerations, conscious or unconscious, underlie those choices. Although our study of a single county is unique in its size and its focus, there is no reason that similar studies could not be done in other “high death counties.”320 Given the racial disparities identified in the numerous statewide studies and in smaller county studies, it would

318 See supra Part II.
319 See supra Part II.A.
hardly be surprising if larger studies in high death counties found a race of neighborhood effect.

The Supreme Court has stated, as a constitutional principle, that the death penalty must be imposed “fairly, and with reasonable consistency, or not at all.”321 Twenty-five years worth of statistical studies since McCleskey have demonstrated that, in jurisdiction after jurisdiction, the death penalty is not being imposed “with reasonable consistency.” The time is ripe for the Court to take another look at statistics.

The authors analyze death penalty charging data for Los Angeles County involving homicides from 1990 to 1994. The data were collected by the Los Angeles Times. This data set is one of the largest tabulations of homicide defendant data yet collected. A Bayesian logistic regression analysis is applied with a proper prior formulated to provide conservative inferences. The authors illustrate procedures for inferences for polytomous predictors and report three analyses with three partially overlapping sets of covariates.

Death Penalty Charging in Los Angeles County
An Illustrative Data Analysis Using Skeptical Priors

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1. INTRODUCTION

There is a considerable literature on the relationship between race and the death penalty. As our earlier studies stress, however, the findings are rarely compelling (Berk, Weiss, and Boger 1993; Weiss, Berk, and Lee 1996). For data covering roughly the past 30 years, there seems to be no consistent relationship between the race of the defendant and the likelihood of a capital charge or death sentence. Indeed, null findings dominate. For the race of the victim, the weight of evidence suggests that defendants who murder whites are more likely to be charged with a capital crime and, if convicted, more likely to be sentenced to death. But such effects may be less important than legally legitimate factors and are subject to all of the usual concerns about omitted variables.

AUTHORS’ NOTE: The authors thank Bruce Western for helpful comments.
When working with observational data, there is no way to definitively rebut charges of omitted variables. Nevertheless, both studies cited above address the problem in some depth and offer a number of constructive suggestions. In this article, we add to those suggestions in two ways.

The first is by showing how prior information can be used in death penalty research to play devil’s advocate. That is, one can formally take on the role of skeptic and build that preconception into the analysis. Although this is not a new idea (Berk, Abramson, and Okami 1995), it has not been introduced before into death penalty research and has not to our knowledge been applied with the latest computational tools. We also illustrate an approach to specifying a correlated prior for coefficients corresponding to polytomous covariates and illustrate appropriate inference procedures for polytomous and crossed polytomous covariates. Although our approach is Bayesian, we recommend that the summaries we present for polytomous covariates be used for non-Bayesian analyses also.

Our second contribution is to fit a model that adjusts for substantially more and different covariates than has been done before, using a sample size that can justify such expansiveness. Although the empirical results are meant primarily to illustrate the use of skeptical priors, the findings may have relevance for the ongoing debates about the role of race in death penalty cases.

The empirical work relies on data collected by the Los Angeles Times for all Los Angeles County homicide cases from 1990 to 1994. These data were collected for a series of seven articles on how homicide cases are handled by the criminal justice system in Los Angeles County. As a result, a wide variety of information was obtained. Data sources included coroner’s reports, arrest records, prosecutor’s files, court documents, and so on. Nearly 600 variables were coded, covering various stages of each case for well over 5,000 defendants. In this article, we focus on the decision to charge a defendant with special circumstances, which in California means that the prosecutor is seeking the death penalty, and address the role of race in such charging decisions. We build heavily on our earlier work and preliminary analyses conducted for the Los Angeles Times.

In the next section, we will describe the general form of our analysis and the data in more detail. Because our response variable is
“charged with special circumstances”—death penalty eligible (DPE) yes or no—we use logistic regression to model the response as a function of covariates. In Section 3, we discuss the priors in more detail. In Section 4, we discuss our treatment of polytomous covariates. Section 5 presents the analyses, and Section 6 presents the results. The article ends with a discussion.

2. THE LOGISTIC REGRESSION MODEL AND THE DATA

Consistent with past research, we use the defendant as the unit of analysis. Our response variable $y_i$ is zero if the defendant is not DPE and one if the defendant is DPE, as charged by the prosecutor. We omitted cases and variables that would have led to substantial missing data. For each defendant $i$, we have a vector of covariate information $x_i = (x_{i1}, \ldots, x_{ip})'$. Given unknown parameters $\beta = (\beta_1, \ldots, \beta_p)'$, the logistic regression model requires that

$$E[y_i|x_i, \beta] = E[y_i|x_i'\beta] = \pi_i,$$

where

$$\logit \pi_i = \log \left( \frac{\pi}{1 - \pi} \right) = x_i'\beta. \quad (1)$$

The first covariate $x_{i1} \equiv 1$ is the intercept. The covariates whose effects we explore are given in Tables 1 through 4, which provide names of variables, short descriptions, and the sample mean. The last column in those tables is described later. Some variables are the absence of a characteristic, the names of which begin with the letter $N$.

The majority of covariates are dichotomous 0-1, where we usually coded the variables so that, a priori, $x_{ij} = 1$ was more likely than $x_{ij} = 0$ to lead to $y_i = 1$. Thus, a priori, we felt that covariates $\beta_j$ were generally likely to be positive, although we did not specify the degree to which they were positive. The column headed “Mean” in Tables 1 through 4 gives the percentage of cases in which these variables are coded one.
Two covariates are nonnegative counts, usually zero. Newspaper coverage given to each defendant’s case prior to trial was represented as the total number of *Los Angeles Times* articles about that case, regardless of the articles’ position in the newspaper (LATSTORY). The mean of the covariate was .16, and the standard deviation was .47, indicating a very skewed predictor (for an analysis of factors driving *Los Angeles Times* coverage of homicide cases, see Sorensen and Berk 1998). Newspaper coverage can be seen as a proxy for the
heinousness of a homicide and may also directly affect prosecutorial charging decisions. The number of homicide victims for which each defendant was responsible was coded as the total number of victims minus one (VICTOTMO), since all defendants had to have at least one
alleged victim. For the number of victims to be an aggravator, there would need to be more than one victim. The mean of VICTOTMO was .082, with a standard deviation of .35 and a maximum of 4, so that the maximum number of victims was 5. As with the other covariates, we felt that the signs of the regression coefficients for both count variables were likely to be positive.

Finally, the last type of covariate is polytomous. These include (primary) victim’s age and defendant’s age, divided into five and four categories, respectively. For multiple homicides, a primary victim was identified, and we used that victim’s characteristics in our analysis. Race of victim and defendant are also polytomous and are of particular interest. For brevity, we use “race” to mean “race/ethnicity” in the remainder of the article. We categorized race into three groups: Hispanic, Black, and White/Asian/Other. Other included Eastern Asian and Pacific Islander, and comprised approximately 4 percent of victims and defendants. Respectively, the three racial groups are DEFHIS, DEFBLA, and DEFOTH for defendants and VICHIS, VICBLA, and VICOTH for victims. Race interactions are also of interest. Previous data sets we have analyzed were too small for us to disentangle race main effects, much less interactions. Also, our tools, such as maximum likelihood or Bayesian inference with flat priors, were not up to the task. Interactions are denoted by variable names such as BVHD, which stands for Black victim, Hispanic defendant. The full set of potentially useful variables can be partitioned into four separate clusters: (1) a priori strong determinants of a DPE charge, (2) defendant and victim characteristics other than race, (3) crime characteristics, and (4) race of victim and defendant and interaction terms. The strong determinants of DPE charging came from previous research, including our own, and from penal code statutes defining characteristics of homicide cases that make them especially aggravated. These variables are the number of victims (VICTOTMO), whether the homicide was premeditated (PREPLAN), whether the victim(s) and defendant were strangers (STRANGR), whether the defendant had committed a prior murder (PRIRMDR), and whether the homicide was committed along with another felony (OTHFLNY). These variables were included in each of our analyses; the other three sets of variables were analyzed in turn to form three analyses.
3. PRIOR CONSTRUCTION

Most commonly, priors are used to represent information available before the data are examined. Historically, this prior information represented subjective prior information; the prior was intended to be a picture of one person’s subjective beliefs prior to seeing the data. Modern prior specification uses the prior for any of several purposes; these may still include the representation of subjective prior beliefs. Other constructions include using prior data to perform model selection (George and McCulloch 1993; Weiss, Cho, and Yanuzzi 1999) and to represent the information in a prior data set (Weiss, Wang, and Ibrahim 1997). Another possibility is to select a prior to represent a particular point of view or scientific hypothesis, not necessarily one’s own. In this analysis, we use skeptical priors to represent a particular class of hypotheses. Specifically, we include prior information that will make it more difficult to find strong relationships between whether a defendant is death penalty eligible and the predictors described above. Then, if important relationships surface, the results are more compelling. This strategy will be especially important for variables that many observers feel cannot and should not affect charging decisions.

Our prior for $\beta$ is constructed as a product of independent priors for the elements $\beta_j$, $j = 1, \ldots, p$,

$$p(\beta) = \prod_{j=1}^{p} p(\beta_j).$$

The priors $p(\beta_j)$ are to be proper and unimodal, with mean zero, and thus are designed to shrink point estimates toward zero not toward our own beliefs, which would have $\beta_j > 0$ with probability greater than .5. We need a specific choice of density; for convenience, we use the normal density. The prior for $\beta$ is then

$$\beta \sim N(0, V),$$

where $V$ is diagonal, with the prior variances $v_{jj}$ down the diagonal. This results in several advantages and features.
First, we are able to fit data sets that could not be fit using maximum likelihood estimation. Suppose one has a logistic regression with an intercept and a single covariate $x_i$ that, when $x_i = 0$, $y_i \equiv 0$ only, although for $x_i = 1$, the $y_i$ are a mix of zeros and ones. That is, there is an empty cell. In this case, regular maximum likelihood estimation will fail (see Clarkson and Jennrich 1991). Because our prior is proper, we are able to estimate coefficients in this data set, and the results will indicate that as $x_i$ switches from 0 to 1, $P(y_i = 1)$ increases. In our previous data sets, race and ethnicity variables consistently had this feature, and it was impossible to use maximum likelihood (or Bayesian approaches with a flat prior) to estimate race and ethnicity effects. Instead, we would drop these variables from the analysis, even when we suspected that they were potentially important.

Second, our prior leads to conservative inferences. By conservative, we mean that point inferences are generally closer to zero than they would be under likelihood inference. Thus, when we estimate a particular $\beta_j$ by the posterior mean $E[\beta_j | Y]$ from our models, the posterior mean is, other things ignored, more likely than not to be between zero and the maximum likelihood estimate, assuming the maximum likelihood estimate exists. More accurately, in a mean square sense, the Bayesian inference using our prior is closer to zero than the maximum likelihood estimates

$$\sum_j (E[\beta_j | Y])^2 < \sum_j \hat{\beta}_j^2.$$  

Third, our inferences are potentially much more reasonable than maximum likelihood inferences. This advantage is particularly visible in smaller data sets of the type we have fit previously (Berk et al. 1993; Weiss et al. 1996). For data sets with many covariates and few cases, maximum likelihood inferences can be quite sensitive to inclusion or omission of individual cases or covariates; by putting a proper prior on coefficients, estimates are smoothed toward zero and away from the unreasonable extremes induced by sampling variability, producing smaller estimates that are generally more reproducible by future studies. Essentially, we accept bias in our coefficient estimates to reduce variability, providing a kind of robustness to inferences. This advantage can be modest if prior variances are made overly large,
since the amount of shrinkage will be small. In large data sets, the robustness is not needed, since the data tell their story regardless of the prior for a wide range of prior specifications.

The logistic regression likelihood is

\[ L(\beta|Y) = \prod_{i=1}^{n} \pi_i^{y_i} (1 - \pi_i)^{1-y_i}, \]

with maximum likelihood estimate \( \hat{\beta} \) and asymptotic covariance matrix \( M = (X'QX)^{-1} \), where \( X \) is the matrix with rows \( x_i' \) and \( Q \) is a diagonal matrix with elements \( \hat{\pi}_i(1 - \hat{\pi}_i) \), where \( \hat{\pi}_i \) is from equation (1) with \( \hat{\beta} \) substituted for \( \beta \). The posterior mean and variance of \( \beta \) are approximately

\[
E[\beta|Y] \approx W\hat{\beta} + (I - W)\theta \\
\text{Var}[\beta|Y] \approx (M^{-1} + V^{-1})^{-1},
\]

(2)

where \( \theta \) is a vector of zeros of the appropriate length and

\[ W = (M^{-1} + V^{-1})^{-1}M^{-1}. \]

The matrix \( W \) has eigenvalues between zero and one, and so the length of \( Wr \) is less than the length of \( r \) for any vector \( r \); that is, \( ||Wr|| < ||r|| \) for all \( r \), where \( ||r||^2 = \sum r_j^2 \). In particular, \( E[\beta|Y] \) should be closer to zero than \( \hat{\beta} \) and \( E[\beta_j|Y] \) will usually be closer to zero than \( \hat{\beta}_j \). It is not true that \( E[\beta_j|Y] \) is always closer to zero than \( \hat{\beta}_j \), but it is true in a mean square or average sense. The proof that the eigenvalues of \( W \) are less than one is straightforward; \( W = (M^{-1} + (V^{-1/2})^2)^{-1}M^{-1} = V^{1/2}(V^{1/2}M^{-1}V^{1/2} + I)^{-1}V^{1/2}M^{-1} \) has the same eigenvectors as \( W^* = (V^{1/2}M^{-1}V^{1/2} + I)^{-1}V^{1/2}M^{-1}V^{1/2} \) because a matrix \( AB \) has the same nonzero eigenvalues as the matrix \( BA \). Finally, any eigenvector of \( V^{1/2}M^{-1}V^{1/2} \) is an eigenvector of \( W^* \), and if \( \lambda_j^* \) is an eigenvalue of \( V^{1/2}M^{-1}V^{1/2} \), then \( \lambda_j^*/(1 + \lambda_j^*) \) is an eigenvalue of \( W^* \) and, therefore, of \( W \).

There is a set of linear combinations \( \gamma = AV^{-1/2}\beta \) of \( \beta \) where \( A \) is an orthogonal matrix, with \( AA' = A'A = I \), and where each
element of $|E[y_j|Y]| < |\hat{y}_j|$. Furthermore, the $y_j$ are a posteriori uncorrelated.

We do hedge our statements slightly because these results are approximate, since the likelihood is not exactly normal. If $L(\beta|Y)$ had an exactly normal shape with mean $\hat{\beta}$ and covariance matrix $V$, then these approximate formulas would be exactly correct, and we would not need to hedge our statements in the previous paragraph. In the limit of proper but very vague prior information, where the elements $v_{jj}^{-1}$ approach zero, these formulas again become exact (for a more detailed analysis, see Chamberlain and Leamer 1976).

In making inferences, we imitate classical practice and report a p value. Because $P(\beta_j > 0|Y)$ is a one-sided p value, we report $P(\beta_j > 0|Y)$ and claim significance if this value is small enough or large enough, say less than .05 or .01 or greater than .95 or .99. In the Bayesian framework, this is the probability that the coefficient is positive. If the sign of a coefficient is well determined, then we know the direction of the effect with reasonable certainty, if not its actual magnitude, and we call the effect statistically significant.

4. DEALING WITH POLYTOMOUS VARIABLES

When our dichotomous covariates are equal to zero, they indicate an absence of the characteristic in question. When they are equal to one, the presence of that characteristic is indicated. In using a prior that shrinks the coefficient toward zero, we assumed that we would typically be underestimating positive coefficients; if we were to use a subjective prior, we would have specified positive means for our normal prior distributions. For the dichotomous variables, the status $x = 1$ is usually relatively rare, with exceptions for NDRUNK, NRELATED, NDRGDEAL, and NDOMESTC. Our prior makes prior predictions for $x = 1$ more variable than the prior prediction for when $x = 0$, which we felt was appropriate. More accurately, the prior variance of $x_j^\prime \beta$ is larger for $x = 1$ than for $x = 0$.

We treat dichotomous (two-category) and polytomous (many-category) variables differently. Polytomous variables with $C$ categories can be handled in a regression analysis by constructing $C - 1$ indicator variables. One group, often the first or last in an alphabet-
atical listing, is set up as a default baseline group, and the coefficients of the indicator variables are the population differences between the indicated subgroup and the baseline group. With our priors, however, this produces an imbalance in the prior distributions for the different group effects.

Let the baseline group be indexed by \( j = 0 \), and let the other groups be indexed by \( j = 1, \ldots, C - 1 \). Suppose that the prior for the intercept is \( \beta_0 \sim N(0, v_{00}) \), whereas the priors for the \( j \)th indicator's coefficient \( \beta_j, j > 0 \), are independent normals \( \beta_j \sim N(0, v_{jj}) \). A member of the baseline group has an intercept of \( \beta_0 \), whereas members of group \( j \) have an intercept equal to \( \beta_0 + \beta_j \). The prior variance for the baseline group intercept \( \beta_0 \) is \( v_{00} \), which is less than \( v_{00} + v_{jj} \); this is the prior variance for \( \beta_0 + \beta_j \), the intercept of group \( j \). The prior covariance for any two intercepts is \( v_{0j} \).

To prevent this imbalance in how prior information is applied, we introduce \( C \) indicator variables for the \( C \) groups; our priors are then symmetric for all groups. Now, however, the regression coefficients lack interpretability. One can subtract an arbitrary constant from the intercept and add that constant to the coefficients of the indicator variables without changing their substantive interpretation. This parameterization is common in older classical treatments for the one-way analysis of variance model. In these older analyses, a linear combination of the coefficients was set equal to zero.

This lack of identifiability or interpretability of coefficients is actually a fairly common problem across many statistical analyses. And in many more models, the parameters alone without transformation do not provide a complete set of inferences. These difficulties can be solved by moving to a predictive framework. For example, the sum \( \beta_0 + \beta_j \) is interpretable—it is the intercept for group \( j \) and the logit of the probability of a DPE charge if all other covariates are equal to zero. This is a shift from directly trying to interpret coefficients. Rather, we go to a predictive scale where we make inference about combinations of parameters that can be interpreted as group means or differences in group means. Differences \( \beta_j - \beta_{j'} \) are interpretable as the difference between group \( j \) and group \( j' \). The \( p \)-value-like calculation between groups \( j \) and \( j' \) is \( P(\beta_j - \beta_{j'} > 0 | Y) \), which tells us whether differences in means between groups are statistically
significant, and we report this in separate tables for victim ages and defendant ages and for the race of defendants and victims.

No matter how the indicator variables for a polytomous variable are coded, the coefficients never supply us with a complete set of inferences. Depending on software, it can be more or less difficult to have the software produce all desired inferences. In our analysis, we illustrate a nearly complete set of inferences. We report on the coefficients $\beta_j$ as routine output from a regression package, but we do not use this for inference for polytomous covariates. Instead, we report odds ratios due to changing groups. Many of these odds ratios had enormous standard errors, suggesting that the posteriors are very skewed. It is possible that mean or variance estimates may not be accurately estimated or that they may not exist at all. Consequently, we report posterior medians and 95 percent confidence intervals for the odds and odds ratios. The $p$-value calculation $P(\beta_j - \beta_j' > 0| Y)$ is equal to the posterior probability that the odds ratio is greater than one, so we need not calculate another $p$ value for the odds ratios.

For ease of interpretation, we also convert to the probability scale and report the posterior mean and standard deviation of the probability of a DPE charge. For example, we do this for the different defendant age groups conditional on victim age group, and similarly for the different victim age groups conditional on defendant age. In calculating these probabilities, we set all other covariates except the intercept equal to zero. Since we have both age of victim and age of defendant in the same model, exactly one of each indicator variable set for both variables must be one to have an interpretable inference.

In our first analysis, we have age of victim and age of defendant, which we treat in this way. In our third analysis, we have race of victim and of defendant. In addition to the main effects of race, we also consider interaction effects. The argument just given for the main effects extends to the interaction terms. With three racial groups, we have nine interaction terms, all of which we include in the analysis. Since, in general, we believe that interactions are likely to be weaker than main effects, the prior variances for the interaction terms are taken to be less than the prior variances for the main effects, so that interaction effects are shrunk more strongly toward zero. Our approach induces additional prior covariation in the group means (black
victim, black defendant, etc.) if they have a common victim race or common defendant race.

The regression coefficients are not interpretable for the race parameterization. Let $\beta_0$ be the intercept, $\beta_j$ be the victim race main effects, $\gamma_k$ be the defendant race effects, and $\delta_{jk}$ be the victim-defendant race interaction terms. For inference, we report on $\logit^{-1}(\beta_0 + \beta_j + \gamma_k + \delta_{jk})$, which is the probability of a DPE charge for the defendant $= j$, victim $= k$ combination with all other covariates set equal to zero. We also report on defendant race differences for fixed victim race, and similarly victim race differences for fixed defendant race, by reporting odds ratios $\exp(\gamma_k - \gamma_{k'} + \delta_{jk} - \delta_{j'k'})$. We report the posterior probability that these odds ratios are greater than one, which is also the probability that the corresponding probabilities $P(\pi_{jk} - \pi_{j'k'} > 0|Y)$, and the median odds ratio and 95 percent posterior intervals. Common approaches to the parameterization problem may (i) force particular main effects and interaction terms to zero or (ii) set linear combinations of main effects and interactions to zero. As before, no parameterization provides all inferences of interest as parameters, and so no matter how we parameterize the model, we must investigate functions of the parameters to make a complete set of inferences typically of interest in these models.

5. ANALYSES

The last column of Tables 1 through 4 gives the prior distribution for each covariate. The intercept had the largest prior variance of 502. This was chosen to make the prior within 2 percent of uniform over the range $(-10, 10)$ (Weiss et al. 1999) and puts 95 percent prior probability to the interval $(-100, 100)$. The variables that were a priori assumed to be important were given weak priors of $N(0, 10^2)$; these variables were assumed to have enough information in the data to easily estimate their coefficients. This prior gives 95 percent prior probability to intervals $(-20, 20)$, which is much larger than necessary. The choice of important variables was based on our previous work (Berk et al. 1993; Weiss et al. 1996) and California death penalty statutes. These variables were included in each analysis.
The exploratory variables in Tables 2 through 4 distinguish our three analyses. The first analysis contains defendant and victim characteristics and the Los Angeles Times stories variables, as well as the variables in Table 1. The second analysis contains crime description variables, and the third analysis contains the race variables and their interactions. These exploratory variables were given moderately strong $N(0, 2^2)$ shrinkage priors. This puts 95 percent prior probability to the interval $(-4, 4)$, since, generally, coefficients outside this range would be a priori rather large and implausible. The race interaction variables in the third analysis were given $N(0, 1)$ priors. Because of the large size of the data set, we were able to fit a large number of variables. As is common in a data set of this size, there were a lot of missing data. In each analysis, we used the maximum number of cases possible. The sample sizes were 4,107, 4,269, and 3,956, respectively, for the three analyses. For the data set with 4,107 cases, 17.8 percent were DPE. These may be the largest samples ever used to study death penalty charging. In contrast, Weiss et al. (1996) had 427 cases and only 6.8 percent DPE.

We used the statistical package BUGS (Bayesian analysis using Gibbs sampling) (Spiegelhalter, Thomas, Best, and Gilks 1996) to do our calculations and Gibbs samples of size 5,000 to analyze each of the models. An excellent overview of Gibbs sampling and some of the issues involved in using it is given in Gilks, Richardson, and Spiegelhalter (1996, chaps. 1-8). Other discussions include Carlin and Louis (1996, sec. 5.4) and Gelman, Carlin, Stern, and Rubin (1995, chaps. 10, 11). We do not repeat these discussions here. We took samples of size 5,000 and looked at time series plots of the output to check for convergence. For nonpolytomous covariates, these plots were fine.

6. RESULTS

6.1. VICTIM AND DEFENDANT CHARACTERISTICS

Table 5 provides standard Bayesian output for a regression analysis. The estimated posterior mean and standard deviation are given for each coefficient, along with a posterior 95 percent probability inter-
These 95 percent probability intervals are not the smallest length intervals, but they have equal posterior probability (2.5 percent) below and above the interval. We also give the posterior probability that the coefficient is positive, which as noted above can be treated as a one-sided p value. It also indicates if the sign of the coefficient is well determined and, therefore, if the direction of the relationship is well determined. In a logistic regression, analysts are often interested in $\exp(\hat{\beta}_j)$, the odds ratio of the group with $x = 1$ to the group with $x = 0$. We report the posterior median and a 95 percent posterior confidence interval for the odds.

Of the variables forced into every analysis, four, VICTOTMO, PREPLAN, STRANGR, and PRIRMDR, are highly significant with strong, positive effects. This is no surprise. However, other contemporaneous felony, OTHFLNY, is not significant, and its coefficient is quite close to zero. We suspect that although California law permits

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Regression Coefficient</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>INTERCEPT</td>
<td>-4.592</td>
<td>1.143</td>
</tr>
<tr>
<td>VICTOTMO</td>
<td>2.439</td>
<td>.155</td>
</tr>
<tr>
<td>PREPLAN</td>
<td>2.578</td>
<td>.215</td>
</tr>
<tr>
<td>STRANGR</td>
<td>1.138</td>
<td>.100</td>
</tr>
<tr>
<td>PRIRMDR</td>
<td>1.773</td>
<td>.544</td>
</tr>
<tr>
<td>OTHFLNY</td>
<td>.076</td>
<td>.121</td>
</tr>
<tr>
<td>D16-19</td>
<td>.664</td>
<td>.900</td>
</tr>
<tr>
<td>D20-29</td>
<td>.555</td>
<td>.899</td>
</tr>
<tr>
<td>D30-64</td>
<td>.979</td>
<td>.899</td>
</tr>
<tr>
<td>D65+</td>
<td>-.345</td>
<td>1.179</td>
</tr>
<tr>
<td>NDRUNK</td>
<td>.393</td>
<td>.242</td>
</tr>
<tr>
<td>NRELATED</td>
<td>1.289</td>
<td>.454</td>
</tr>
<tr>
<td>LAWOFCCR</td>
<td>-.709</td>
<td>.777</td>
</tr>
<tr>
<td>V0-12</td>
<td>-.1263</td>
<td>.864</td>
</tr>
<tr>
<td>V13-19</td>
<td>-.1031</td>
<td>.823</td>
</tr>
<tr>
<td>V20-29</td>
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<td>.819</td>
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<tr>
<td>V30-64</td>
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<tr>
<td>V65+</td>
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<td>.833</td>
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<tr>
<td>VICPUEM</td>
<td>.630</td>
<td>.128</td>
</tr>
<tr>
<td>LATSTORY</td>
<td>.471</td>
<td>.081</td>
</tr>
</tbody>
</table>

NOTE: Column headings are variable names, coefficient posterior mean and standard deviation; 95 percent posterior confidence interval; median posterior odds, 95 percent posterior confidence intervals for odds; probability that $\hat{\beta}$ is greater than zero.
prosecutors to seek the death penalty when there is a contemporaneous felony, contemporaneous felonies are most commonly associated with robberies/homicides, which are relatively frequent and relatively “less aggravated” than many other kinds of homicides (e.g., execution-style homicides). In any case, the four findings hold for all three analyses, suggesting that the relationships are not spurious. Thus, there is no need to discuss them further.

As discussed above, the coefficients of the age-related variables in Table 5 do not provide an appropriate vehicle for inference, and we will present appropriate inferences for those variables shortly. The variables NDRUNK, NRELATED, LAWOFCR, VICFEM, and LATSTORY were coded so that a priori, we assumed the coefficients would be positive. The variable NDRUNK is not quite significant; sensitivity analysis indicated that using a flat prior instead of our proper prior for this variable would not change this conclusion. The variables NRELATED, VICFEM, and LATSTORY are all significant with positive effects. The more stories published in the Los Angeles Times, regardless of location, the higher the chance of a DPE charge. This may or may not be causal; the newspaper may be responding to the same characteristics of the crime, victim, and defendant that the prosecutor eventually does. Surprisingly, LAWOFCR is significant but negative. Apparently, in our data set, if the victim was a law officer, the defendant was less likely to receive a DPE charge, all other things held constant. However, police officer killings are very rare, and the few in our data set may have had some mitigating circumstances. For example, the police officer may have been off duty and indistinguishable from an ordinary citizen.

Appropriate inferences for the age-related variables are given in Tables 6 through 11. Tables 6 through 8 give inferences about the defendant age groups, and Tables 9 through 11 give corresponding inferences for different victim age groups. The estimated probability and standard deviation of a DPE charge assuming all covariates are zero and the victim age group is V65+ are in Table 6. We see that the youngest defendants are more likely to be charged with a DPE charge. Table 9 gives similar information for the victim ages. The older the victim, the greater the probability of a DPE charge.

Tables 7 and 8 give summaries of the posteriors of the odds ratios for different defendant ages. Table 7 gives the median (2.5 percent,
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97.5 percent quantiles) of the odds ratio of a DPE charge for defendants of the row age group versus the column age group. The odds

<table>
<thead>
<tr>
<th>TABLE 6: Mean (standard deviation) of Probability of DPE Charge for Defendants of Different Age Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>D16-19</td>
</tr>
<tr>
<td>p(DPE)</td>
</tr>
</tbody>
</table>

NOTE: Victim age group is 65+, all other covariates set to zero. DPE = death penalty eligible.

<table>
<thead>
<tr>
<th>TABLE 7: Median (95 percent posterior confidence interval) of Odds Ratio Between Row Defendant Age Group Versus Column Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>D16-19</td>
</tr>
<tr>
<td>.898(1.124)</td>
</tr>
</tbody>
</table>

NOTE: The younger the Defendant, the more probable a DPE charge. DPE = death penalty eligible.

<table>
<thead>
<tr>
<th>TABLE 8: Probability That Defendant of Row Age Group Has Greater Chance of DPE Than Defendant of Column Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>D16-19</td>
</tr>
<tr>
<td>.0 .046</td>
</tr>
</tbody>
</table>

NOTE: The calculation is independent of the status of other covariates. The posterior probability is 1.0 and .99 that a Defendant in their 20s is more likely to be DPE than a Defendant 30-64 and 65+ respectively. DPE = death penalty eligible.

<table>
<thead>
<tr>
<th>TABLE 9: Mean (standard deviation) of Probability of DPE Charge for Victims of Different Age Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>V0-12</td>
</tr>
<tr>
<td>p(DPE)</td>
</tr>
</tbody>
</table>

NOTE: Defendant age group is 20-29 and all other covariates are set equal to 0. DPE = death penalty eligible.
ratios are monotonically increasing from left to right and from bottom to top. Table 8 provides the posterior probability that the odds ratios are greater than one. A straightforward calculation shows that this p value is also the posterior probability that the corresponding difference in coefficients is positive. We see that the two oldest defendant age groups are both significantly different from the youngest two age groups, but the two oldest are not significantly different nor are the two youngest.

Tables 10 and 11 give similar calculations for the victim ages. Differences in Table 10 are monotonically decreasing from left to right. The p values in Table 11 show that all victim age groups are significantly different from each other except for the two youngest groups.
6.2. CRIME CHARACTERISTICS

Of the crime characteristic variables, two are not significant: NDOMESTC and OTHERSX. Four are very significant: DWEAPON, RAPE, GAGGED, and TORTURE. The importance of DWEAPON and RAPE are quite different, however. The coefficient of RAPE is nearly 3. This means that a defendant who otherwise would have a probability of .05 in the absence of a rape would have his or her probability increase to .5 with a rape. In contrast, changing the DWEAPON covariate from zero to one increases the probability of a DPE charge from .05 to .06. The sign of NDRGDEAL is negative; originally, we expected that a contemporaneous drug deal would decrease the chances of a DPE charge.

6.3. RACE VARIABLES

Table 13 summarizes the posteriors of the coefficients; inference from this table is difficult. Therefore, we present additional, more
interpretable calculations. Table 14 gives the probability of a DPE charge for each victim-defendant race combination, assuming all other covariates equal zero. Except for Other killing Hispanic, like killing like is the lowest probability in each row. Similarly, except for Hispanic killing Black, which is slightly lower than Black killing Black, the like killing like is the smallest of each column. If the victim is Hispanic or Other, being killed by a Black leads to the highest chance of a DPE charge, whereas if the victim is Black, being killed by Other leads to the highest chance of a DPE charge. Within-group homicides generally seem to be treated as less aggravated. For the between-group killing, the combination of a Black defendant and an Other victim stands out with the largest probability in the table (.41). In effect, Black on Other homicides seem to be treated as the most aggravated.

### Table 13: Analysis #3

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Regression Coefficient</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
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<tr>
<td>INTERCEPT</td>
<td>-2.380</td>
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<tr>
<td>VICTOTMO</td>
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<td>PREPLAN</td>
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<td>STRANGR</td>
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<td>PRIRMDR</td>
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<td>.543</td>
</tr>
<tr>
<td>OTHFLNY</td>
<td>.150</td>
<td>.124</td>
</tr>
<tr>
<td>DEFBLA</td>
<td>.121</td>
<td>.862</td>
</tr>
<tr>
<td>DEFHS</td>
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<td>.803</td>
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<tr>
<td>DEFOTH</td>
<td>.008</td>
<td>.915</td>
</tr>
<tr>
<td>VICHIS</td>
<td>-.074</td>
<td>.915</td>
</tr>
<tr>
<td>VICOTH</td>
<td>-.359</td>
<td>.858</td>
</tr>
<tr>
<td>BVBD</td>
<td>-.390</td>
<td>.709</td>
</tr>
<tr>
<td>BVHD</td>
<td>-.078</td>
<td>.738</td>
</tr>
<tr>
<td>BVOD</td>
<td>.661</td>
<td>.782</td>
</tr>
<tr>
<td>HVBD</td>
<td>.285</td>
<td>.773</td>
</tr>
<tr>
<td>HVHD</td>
<td>-.177</td>
<td>.645</td>
</tr>
<tr>
<td>HVOD</td>
<td>-.142</td>
<td>.752</td>
</tr>
<tr>
<td>OVBD</td>
<td>.471</td>
<td>.901</td>
</tr>
<tr>
<td>OVDH</td>
<td>.014</td>
<td>.707</td>
</tr>
<tr>
<td>OVOD</td>
<td>-.571</td>
<td>.668</td>
</tr>
</tbody>
</table>

**NOTE:** Column headings are Variable names, coefficient posterior mean and standard deviation; 95 percent posterior confidence interval; median posterior odds; 95 percent posterior confidence intervals for odds; probability that β is greater than zero.
The results in Table 14 can be further examined. Table 15 gives p values (top half) for the differences of probabilities in columns of Table 14. The bottom half of the table gives median odds ratios and a 95 percent confidence interval for the odds ratios for switching defendant race for victim of a given race. Thus, Table 15 addresses defendant race effects. Column 2 (the first column of numbers) compares the effects of having a Black versus Hispanic defendant. For victim Black, defendant Other is significantly more likely to get a DPE charge than either defendant Black or Hispanic. For victim Hispanic, a Black defendant is significantly more likely than a Hispanic defendant to get a DPE charge. For Other victim, Black defendants are significantly more likely to get DPE charges than Hispanic or Other defendants. Not surprisingly, these conclusions underscore impressions from Table 14.
Table 16 shows the same calculations, but for fixed race of defendant. The race-of-victim effects are generally about twice as large as the race-of-defendant effects. For defendant Black, there are significant differences among all three victim races, with Black victim least likely and Other most likely to lead to a DPE charge. For Hispanic defendant, victim Other is more likely to produce a DPE charge than victim Hispanic or Black. Finally, for defendant Other, victim Black or Other is more likely than victim Hispanic to lead to a DPE charge. Again, the message is that mixed-race homicides increase the chances of a DPE charge, especially if the defendant is Black and the victim is Other (i.e., White).

### 7. DISCUSSION

Our goals in this article were primarily methodological. In particular, we wanted to illustrate how a Bayesian analysis could use prior information to build in a skeptical stance toward certain results and how results should be reported. In our case, we used a prior that shifted inferences toward zero associations between a DPE charge and selected characteristics of the crime, defendant, and victim.

One issue in the use of such prior information is how firmly convinced the skeptic is and, in turn, how tight the skeptic’s prior hap-
pens to be. In our case, the very large sample size meant that the data would swamp most skeptics’ priors, including the one we specified. For example, comparing some of our results with maximum likelihood results made for only minor differences in point estimates for nonpolytomous variables. With smaller data sets, results will be much more sensitive to the prior, and somewhat greater care is necessary in determining the prior variance. One approach for future work is to note the general range of coefficient estimates in our current analyses; these could form the basis of the variances in a future analysis of death penalty charged data. Stronger priors would not have been out of line for this analysis. The four variances $50^2$, $10^2$, $2^2$, $1^2$ were chosen to be an order of magnitude $5^2$ smaller each time, except for the last. The results show that these could easily have been set to be $3^2$ for the intercept and $2^2$ for the important variables, and perhaps $1^2$ for the exploratory variables, $.5^2$ for race main effects, and $.3^2$ for the race interactions, since the corresponding prior 95 percent intervals easily cover nearly all of the posterior parameter estimates.

Another issue is exactly what is being assumed; one must be very clear about the rules under which the Bayesian game is played. In our case, the skeptic’s priors take as given the particular likelihood that we specify. If the skepticism derives from a belief in a different functional form, then the argument is not being properly joined.

Our empirical analysis is incomplete in the sense that all three analyses need to be combined. Unfortunately, at this point such a large model overwhelmed our available time and software and hardware.

Four of the five variables included in all of the analyses behaved as anticipated, and the fifth had a point estimate in the expected direction. Thus, the posterior distributions were fully consistent with past research and what one would expect from how the California Penal Code is likely to be interpreted by prosecutors. Clear aggravators really matter.

We find age effects for both victims and defendants. The risks of a DPE charge are greater for younger defendants. We also find effects for the gender of the victim. The risks of a DPE charge are greater for defendants who are being accused of killing older persons or women. The mechanisms behind these relationships is unclear, but the gender effect is commonly found; women are perhaps more
sympathetic victims and/or the crimes committed against them are more aggravated in ways we did not adjust for.

Previous analyses (see Berk et al. 1993 for references) generally have found race-of-victim effects but no consistent race-of-defendant effects. Generally, people who kill Whites have been more likely to be charged with capital crimes. This may be the first analysis of death penalty charging data with a large enough sample size to reveal significant and important effects for the race of the victim, the race of the defendant, and interaction between them. Our results show defendants who kill Asians/Whites on the average are more likely to be charged with a DPE homicide. This bolsters previous findings. We also find that Black defendants on the average are more likely to receive a DPE charge than other group members, unless the victim is Black. At the same time, when a homicide is within group, a DPE charge is less likely to result. The defendant race effects contradict most previous null results, and the interaction effects are new. Finally, race-of-victim effects generally are stronger than race-of-defendant effects.

It is important to stress that the nature of the racial interaction effects make it difficult to find a pure defendant main effect without including the interactions. Because of this, and because most previous analyses have small sample sizes, defendant effects really could not have been discovered.

Finally, it is important to stress that our findings are conservative because of our choice of prior. Our prior shrinks results toward no effect. Any significant effects that we find must overcome the influence of our skeptical priors.

REFERENCES


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Examining the Sources of Racial Bias in Potentially Capital Cases: A Case Study of Police and Prosecutorial Discretion

Nick Petersen

Abstract
While prior research has uncovered racial disparities in the administration of death sentences, little attention has been devoted to earlier stages in the capital punishment processes. To understand the locus of racial bias within death penalty institutions, this study examines the entry of homicide cases into Los Angeles County's criminal justice system during a 5-year period. This two-part analysis seeks to answer the following research questions: (1) Does victim/defendant race influence homicide clearance and death penalty charging decisions? and (2) if so, does the likelihood of clearance mediate the effect of victim race on death penalty charges? Logistic regressions indicate that cases involving Latino victims are less likely to be cleared. Moreover, cases with Black and Latino victims are less likely to be prosecuted with a death penalty-eligible charge. Racial disparities accumulate across these stages, with clearance patterns influencing subsequent death penalty charging decisions. Results underscore the cumulative nature of racial within criminal justice institutions. By linking police and prosecution outcomes, these findings also highlight the interrelationship between criminal justice agencies.

Keywords
prosecutorial discretion, cumulative racial disadvantage, racial disparity, capital punishment, death penalty, homicide clearance

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Email: npetersen@miami.edu
In *Furman v. Georgia* (1972), the Supreme Court found the death penalty to be unconstitutional due to its arbitrary and capricious application. In response, states implemented new death penalty laws intended to guide jury decision-making and define death penalty–eligible offenses (Carter, Kreitzberg, & Howe, 2012). Despite these efforts to limit juror and prosecutorial discretion, racial disparities persist today. Cases involving White victims, especially those with minority defendants, are more likely to be prosecuted capitaly and/or receive a death sentence (for a review, see Baldus & Woodworth, 2003; Baldus, Woodworth, & Pulaski, 1990; U.S. General Accountability Office [USGAO], 1990). However, given that much of the literature focuses on the final stages of capital prosecution, it is unclear whether racial disparities result from the failure of “modern” death penalty laws to guide juror and prosecutorial discretion or from earlier biases in the criminal justice system (Baldus, Woodworth, Zuckerman, Weiner, & Grosso, 2009; Sorensen & Wallace, 1999).

Studies focusing on death-sentencing patterns offer invaluable insights about these outcomes, but a thorough understanding of racial bias within death penalty institutions requires looking at the chain of events leading up to these final decision-making points (Pierce & Radelet, 2005; Radelet & Pierce, 1985). Arrest and charging decisions represent two critical junctures in the death penalty process as they determine which cases are eligible for capital prosecution (Pierce & Radelet, 2005; Radelet & Pierce, 2009). Racial disparities at these stages could shrink the pool of death-eligible cases involving Black and Latino victims by making cases involving White victims appear more serious than they actually are, thereby obscuring racial disparities at later stages in the process (Pierce & Radelet, 2005; Radelet & Pierce, 1985, 2009). Despite the relevance of these presentencing stages, relatively few studies have investigated death penalty charging practices, especially the relationship between arrest and charging outcomes. This gap in the literature is particularly problematic because policy reforms aimed at ameliorating racial disparities within death penalty institutions must first identify the source of these patterns.

The current study helps to fill this gap in the literature by examining homicide arrest and charging patterns in Los Angeles (LA) County, California. This two-part analysis seeks to answer the following research questions. Do racial characteristics influence arrest decisions and prosecutors’ filing of death penalty–eligible charges? Does victim race have an indirect effect on prosecutors’ death penalty charging practices, operating through homicide arrests? Findings indicate that cases involving minority victims are less likely to result in an arrest, which in turn, is negatively associated with the odds of a death penalty–eligible charge. As a result, defendants accused of killing minority victims are less likely to be charged with a death penalty–eligible charge. Moreover, cases involving a White defendant and White victim are more likely to involve a death penalty–eligible charge than other victim-by-defendant racial combinations. These results suggest that prior research may underestimate the extent to which race influences capital punishment decision-making by ignoring the racialization of death eligibility and the relationship between arrests and charging patterns.
Literature Review

Racial bias in the American death penalty system has most commonly been identified at the postcharging stages. Homicides involving White victims are more likely to be prosecuted capitally and/or receive a death sentence than those with minority victims (Baldus & Woodworth, 2003; Baldus et al., 1990; USGAO, 1990). And while Black defendants accused of killing White victims are punished more harshly than other defendant by victim racial configurations, victim race primarily accounts for these findings—defendants who kill Whites receive harsher punishment (Baldus & Woodworth, 2003; Baldus et al., 1990; USGAO, 1990). In contrast, comparatively little attention has been devoted to earlier stages of the death penalty process and particularly the point at which the decision to bring a capital charge is weighed. Most studies examine prosecutors’ decision to seek the death penalty and/or jurors’ tendencies to impose a death sentence among a sample of death-eligible defendants, taking for granted the entry of cases into the capital punishment system (Kaplan, Ganschow, Angioli, & Tabin, 2009; Radelet & Pierce, 1985, 2009). In its 1990 report, the USGAO criticized studies for focusing on the final stages of capital prosecution, largely ignoring earlier biases in the system. Similarly, while sentencing scholars have assessed presentencing disparities in a variety of noncapital settings (Kutateladze, Lynn, & Liang, 2012), the issue has received little attention from death penalty researchers.

Racial Bias, Prosecutorial Discretion, and Cumulative Disadvantage

Focal concerns theory is frequently used to help explain racial disparities within the criminal justice system (for a review, see Ulmer, 2012). Steffensmeier, Ulmer, and Kramer (1998, p. 767) note that officials attempt to gauge defendants’ culpability when making decisions, but because legal actors often have incomplete or partial information they tend to invoke racial stereotypes as a kind of “perceptual shorthand”. Stereotypes linking racial/ethnic minorities to criminality may lead prosecutors and judges to use race as a proxy for less easily observable focal concerns (e.g., culpability, future dangerousness, etc.). Studies of homicide charging decisions generally provide support for the focal concerns perspective insofar as race shapes case outcomes. Prior research finds that defendants accused of killing White victims are more likely to be charged with first-degree murder than those accused of killing minority victims (Bowers, 1983; Bowers & Pierce, 1980; Lee, 2007; Radelet, 1981; Weiss, Berk, & Lee, 1996; Weiss, Berk, Li, & Farrell-Ross, 1999). In addition, cases involving minority offenders and White victims are more likely to include an accompanying felony charge, and this “upgrading” process increases the risk of a capital conviction (Radelet & Pierce, 1985).

Focal concerns theory describes the formation of racial bias, while the cumulative disadvantage perspective sheds light on the accumulation of racial bias across multiple stages. Zatz (1987, 2000) argues that racial disparities take two forms: subtle biases which operate through case processing mechanisms such as bail or plea
agreements (i.e., indirect effects) and overt bias arising from more intentional forms of discrimination (i.e., direct effects). Early decisions in the criminal justice system (e.g., arrest) also influence later ones (e.g., charging/sentencing severity) by shaping the pool of potential defendants at each stage (Kutateladze, Andiloro, Johnson, & Spohn, 2014; Kutateladze et al., 2012; Spohn, 2000; Zatz, 1987, 2000). In line with the cumulative disadvantage perspective, research suggests that racial disparities at the charging stage may have implications for death-sentencing outcomes. The proportion of death-eligible homicides with White victims and/or Black defendants increases as cases advance through the death penalty system (Baldus et al., 1990; Bowers, 1983; Bowers & Pierce, 1980; Paternoster, Brame, Bacon, & Ditchfield, 2004; Sorensen & Wallace, 1999). Multivariate analyses suggest that these patterns cannot be explained away by racial differences in offense severity (Sorensen & Wallace, 1999). Research on nonhomicidal crimes indicates that racial disparities compound as cases move through the court system, underscoring the accumulation of race effects across multiple decision-making points (Kutateladze et al., 2014; Schlesinger, 2008; Stolzenberg, D’Alessio, & Eitle, 2013; Sutton, 2013).

On the other end of the criminal justice system, racial disparities can arise before a case even enters into the courts due to differential police enforcement. In the death penalty context, policing patterns can influence punishment outcomes in subtle, but profound ways, by determining the pool of prosecutable cases and availability/quality of evidence presented to the District Attorney’s (DA’s) office (Bright, 1994; Pierce & Radelet, 2005; Songer & Unah, 2006). For example, lower arrest rates among homicides with minority victims could decrease the proportion of prosecutable cases involving Black and Latino victims, simultaneously increasing the proportion of cases with White victims (Pierce & Radelet, 2005). Racial disparities at the arrest stage may also lead to the underdevelopment of evidence in minority victim cases, making the cases of defendants who kill White victims appear more serious than they actually are (Bright, 1994; Pierce & Radelet, 2005; Songer & Unah, 2006).

Indeed, prior research indicates that a disproportionate number of unsolved homicides involve minority victims. While cases with characteristics linked to greater evidence are more likely to be solved (e.g., firearm weapon, residential crime scene), homicides involving minority victims are less likely to result in an arrest even after controlling for such factors (for a review, see Riedel, 2008). Homicide arrest rates also vary at the neighborhood level. Homicides occurring in predominately Black and Latino communities are less likely to result in an arrest even after controlling for victim and offense characteristics (Litwin, 2004; Litwin & Xu, 2007; Petersen, forthcoming; Regoecci & Jarvis, 2013). Low homicide clearance rates in minority areas could stem from the fact that residents may be reluctant to speak with the police because of legal cynicism or strained police–community relations more generally (Puckett & Lundman, 2003). Taken together, these patterns of racial disparity produce a “separate and unequal” system of homicide policing (LaFree, Baumer, & O’Brien, 2010, p. 94), which may have implications for the criminal justice processing of homicide cases once they enter into the court system.
Organizational Dynamics and the Police–Prosecution Nexus

The police–prosecution relationship can also be conceptualized as a loosely coupled system. Weick (1982, p. 380) defines a loosely coupled system as one in which “elements are responsive, but retain evidence of separateness and identity . . . [the] elements affect each other . . . indirectly (rather than directly) . . . .” In other words, loosely coupled systems are responsive to each other but still maintain their independence and identity (Hagan, Hewitt, & Alwin, 1979; Orton & Weick, 1990; Weick, 1976). This implies that loosely coupled systems share few predictors in common and, when they do, their effects differ (Glassman, 1973). In contrast, components in a tightly coupled system depend on each other to function, leaving little room for autonomy and interpretation (Alarid, Sims, & Ruiz, 2011). Based on these definitions, the police–prosecution relationship may represent a loosely coupled system wherein each agency has autonomy to make their own decisions based on information they deem relevant, while still cooperating to advance the commonly shared goal of an eventual criminal conviction.

Several scholars have characterized the criminal justice system as loosely coupled, with each subsystem having relative autonomy to create their own brand of justice (Hagan, 1973, 1989; Hagan et al., 1979; Jackson, Webster, & Hagan, 1982; Reiss, 1973; Sampson & Laub, 1993). In their seminal study, Hagan, Hewitt, and Alwin (1979) find that while probation reports and sentencing decisions are tightly linked on paper, in actuality the autonomy afforded to judges allows them to largely disregard the recommendations of probation officers. Subsequent work has replicated these general findings, demonstrating that although criminal justice agencies share common goals and functions, they are often autonomous and thus rely on different decision-making criterion (Alarid et al., 2011; Bishop, Leiber, & Johnson, 2010; Jackson et al., 1982; Leiber & Jamieson, 1995). The decoupling of criminal justice organizations has also been linked to racial disparities. When criminal justice agencies are loosely coupled, the diversity of organizational goals and interests allows extralegal factors to more easily influence case outcomes by augmenting the discretionary power of legal actors (Bishop et al., 2010; Leiber & Jamieson, 1995).

The Present Research: Conceptualizing Entry into the Death Penalty System

Postcharging studies implicitly assume that prosecutors file death penalty charges when appropriate. Yet, given the organizational pressures placed on securing convictions (Albonetti, 1986, 1987; Landes, 1971; Rasmusen, Raghav, & Ramseyer, 2009), prosecutors may socially construct homicide cases in ways that align with these professional goals. As Radelet and Pierce (1985) note:

... Sentencing studies that take the prosecutor’s case descriptions and the formal charges as objective and unbiased reflections of the seriousness of a crime can lead to the underestimation of race effects on sentencing whenever race has affected earlier processing decisions. To understand the full effects of race (and other variables), the presentencing and precharging decisions that affect the prosecutor’s construction of a case must be examined. (p. 616, emphasis added)
In other words, if prosecutors file death penalty charges in a racially discriminatory manner, postcharging estimates might not fully capture the amount of racial bias within the death penalty system (Baldus, Woodworth, Zuckerman, et al., 2009; Sorenson & Wallace, 1999). Thus, understanding the extent to which postcharging studies may underestimate race effects first requires gauging the influence of race on arrest and charging decisions.

However, little is currently known about death penalty charging practices. Much of the research on the topic has been methodological in nature, focusing on the development of Bayesian or counterfactual techniques for analyzing death penalty data, rather than understanding the role of racial factors (e.g., Berk, Boger, & Weiss, 1993; Weiss et al., 1996, 1999). And even when researchers do explicitly focus on victim/defendant race effects, they often include samples of a few hundred defendants, raising concerns about statistical power (USGAO, 1990). In contrast, this study analyzes the charging outcomes of over 5,000 defendants and includes a wider range of covariates, thereby providing more a comprehensive picture of death penalty charging practices. Moreover, this study includes a large number of Latino victims and defendants, a group which is often neglected in death penalty and sentencing research (Baldus & Woodworth, 2003; Baldus, Woodworth, & Weiner, 2009; Kutateladze et al., 2014; Spohn, 2000; Zatz, 2000).

The present research also examines the police–prosecution nexus. Despite a robust literature on the racialization of homicide arrests (Riedel, 2008), no study has directly examined the relationship between homicide arrest and prosecution outcomes. It has been argued that the police play a critical role in shaping death penalty outcomes by determining which cases enter into the system and the evidence brought to prosecutors, but this argument has not been empirically tested (Bright, 1994; Pierce & Radelet, 2005; Songer & Unah, 2006). By analyzing the full universe of homicides during a 5-year period from the arrest to charging stages, this analysis sheds light on cumulative race effects and the organizational dynamics of the police–prosecutor relationship.

Theoretical expectations. While the present analysis is not solely focused on theory testing, the aforementioned theories can help to guide the interpretation of my findings. According to focal concerns theory, race serves as a proxy for less readily observable indicators such as “social status,” “innocence,” or “dangerousness” in the absence of detailed victim/defendant information (Steffensmeier et al., 1998). As such, focal concerns theory predicts that homicide cases involving minority victims are less likely to result in an arrest or the filing of a death penalty–eligible charge because of stereotypes regarding Black/Latino criminality. I hypothesize that these same racial stereotypes will lead officials to punish minority defendants more harshly than White defendants. It is also expected that death penalty charging rates will be higher in crimes involving White victims and minority offenders given prior research indicating that, in some contexts, cases with White victims and Black defendants receive harsher punishments than other victim–offender racial dyads (Baldus et al., 1990; Baldus & Woodworth, 2003; USGAO, 1990). According to cumulative disadvantage theory, victim race will have an indirect effect on death penalty charging
practices, with racial disparities compounding across stages of the death penalty system. In other words, victim race will have an indirect effect on prosecutorial charging practices through its prior effect on homicide arrest patterns. From an organizational perspective, the magnitude and significance of covariates are expected to vary across police and prosecutorial outcomes if they represent a loosely coupled system (Glassman, 1973). On the other hand, similarities in arrest and charging outcomes would indicate that the system is tightly coupled.

**Data and Methods**

This two-part analysis focuses on willful homicides that occurred in LA County between 1990 and 1994. Part 1 examines the clearance outcomes of all willful homicide incidents in the sample; accidental, vehicular, and justifiable homicides were excluded. Part 2 investigates prosecutors’ death penalty charging decisions among defendants in the sample of cleared homicides (murder and voluntary manslaughter cases), using the estimated likelihood of clearance from Part 1 (i.e., hazard rate) as a predictor. Recognizing that racial disparities may compound as cases move through the criminal justice system, the hazard rate is employed to model this funneling process (Berk, 1983; Bushway, Johnson, & Slocum, 2007; Zatz, 1987).

Data from local and state criminal justice agencies were combined to construct a comprehensive data set. Information on homicide incidents came from local law enforcement agencies, California Department of Justice (CADOJ), California Vital Statistics, and Coroner’s Office. Data on homicide court cases originate from the LA County Superior Court and DA’s Office. Victim information (e.g., name, age and race) and incident characteristics (e.g., date and location) found in court files was used to merge defendants and victims across these various data sources. These data were analyzed because they include the full universe of homicides during the study period, enabling me to examine cumulative race effects by tracking homicides through multiple stages of the criminal justice system (see the online appendix for the full list of variables and their coding schemes).

**Research Setting: LA County’s Sociolegal Landscape During the Early 1990s**

This study focuses on the years 1990 through 1994 for pragmatic and substantive reasons. First, data on both homicide victims and defendants were only made available to me for the years 1990–1994, thus necessitating a focus on this period. Second, the high homicide rates of the early 1990s serve to increase the sample size. In LA County and elsewhere, homicide rates were at historical high levels in the early 1990s (Blumstein & Wallman, 2006), allowing for a robust analysis of criminal justice processing of homicide cases by augmenting the sample size. For example, there were 1,768 homicides in LA County in 1990 versus 600 in 2012 (CADOJ, 2015). Moreover, not only does LA County have one of the largest prosecutorial agencies in the United States (LA County District Attorney’s Office, 2015), but it also accounts for the
majority of death sentences and unsolved homicides in California (CADOJ, 2010; California Department of Corrections and Rehabilitation, 2015).

Entry into LA County’s death penalty system begins with an arrest. Once a homicide is “cleared by arrest,” it is eligible for prosecution by the DA’s office. In California, only first-degree murders that involve a statutorily defined aggravating circumstances enumerated in Penal Code (PC) §190.2 qualify for the death penalty (Kreitzberg, 2008). These aggravating circumstances, known as “special circumstances” in California, include factors such as multiple murder or felony murder that make a case more heinous. Almost 90% of first-degree murder cases factually qualify for the death penalty in California under one or more special circumstance (California Commission on the Fair Administration of Justice [CCFAJ], 2008; Shatz & Rivkind, 1997), rendering the state’s death-eligibility criterion even broader than the one deemed unconstitutional in Furman v. Georgia (Shatz & Rivkind, 1997). California’s exceedingly expansive death penalty statute affords prosecutors considerable charging power, increasing the potential for interjurisdictional and racial disparities (Petersen & Lynch, 2013). Despite the state’s broad death eligibility, it appears that a few special circumstances, especially felony murder and multiple murder, account for the majority of death-eligible homicides (Kreitzberg, 2008; Shatz, 2007).

Dependent Variables: Homicide Clearance and Death Penalty Charge

Dependent variable in Part 1. The first dependent variable focuses on one of the most important turning points in the investigation and prosecution of a homicide—whether the case is cleared by arrest or exceptionally cleared. Based on the CADOJ definition, and in line with prior research (Riedel, 2008), clearance status is measured dichotomously (1 = at least one suspect arrested or identified and 0 = no arrests made or suspects not identified). According to the CADOJ (2010, p. 50), a case is cleared by arrest when “at least one person is arrested, charged with the commission of an offense, and turned over to a court for prosecution.” The CADOJ notes that cases can also be “cleared exceptionally” for crime reporting purposes when an investigation has definitely established the identity of an offender, enough information exists to support an arrest, and the exact location of an offender is known but, for some reason, law enforcement cannot take the offender into custody.”

Dependent variables in Part 2. The second set of dependent variables includes a binary and ordinal measure of special circumstance filings as defined under PC §190.2. For the binary measure, defendants charged with at least one of the special circumstances enumerated in PC §190.2 are coded as 1, otherwise the defendant is coded as 0 (1 = at least one special circumstance and 0 = no special circumstance). This binary measure taps into a critical point in California’s death penalty process—the decision to file charges that make a case death penalty eligible. For the ordinal variable, I measure the number of special circumstances filed (0 = no special circumstance, 1 = one special circumstance, and 2 = two or more special circumstances). Although only one special circumstance is required for death eligibility in
California under PC §190.2, the filing of additional special circumstances is important because it is associated with a higher probability of capital prosecution (Petersen & Lynch, 2013; Yarvis, 2000). Prosecutors often seek to maximize conviction rates when making charging decisions (Albonetti, 1986, 1987; Landes, 1971; Rasmusen et al., 2009), and thus the filing of multiple special circumstances increase the likelihood of advancing to a capital trial (Petersen & Lynch, 2013; Yarvis, 2000). While much of the prior capital punishment research examines prosecutors’ decision to seek the death penalty, I analyze the filing of death-eligible charges, given the paucity of work on this topic and given the focus of this study on earlier decision-making points in the death penalty system.

Predictor Variables

Predictors of homicide arrests in Part 1. Victim racial groups were coded using a series of dummy variables: Latino, Black, and White (reference). Prior research suggests that victim demographics can play a major role in homicide case outcomes, and thus I control for a host of victim characteristics (Baldus & Woodworth, 2003; Baldus et al., 1990; Phillips, 2009a, 2009b). Victim gender, marital status, and citizenship were dichotomously coded, while victim age was measured in years. Victim social status was measured based on their education level, using a series of dummy variables. Like prior research on homicide arrests, suspect demographics are excluded given that this information is not known for unsolved homicides (Riedel, 2008).

Models also adjust for incident characteristics and contextual factors. Some homicides may be harder to solve than others due to the circumstances surrounding the incident and thus it is important to consider such factors (Riedel, 2008). For example, residential homicides usually contain greater evidence because the suspect is typically at the crime scene when police arrive (Riedel, 2008). As such, a series of categorical variables measuring crime characteristics were added, including the number of victims, crime scene location, precipitating circumstance, weapon, incident day, and victim–offender relationship. Dummy variables for years 1990–1994 were included to control for annual effects (Lee, 2005; Litwin, 2004; Litwin & Xu, 2007). In light of research finding jurisdictional variation in homicide arrest patterns, I control for the police agency investigating the case (Borg & Parker, 2001; LaFree et al., 2010). In particular, I include dummy variables comparing the two largest law enforcement agencies in LA County—the LA Police Department (LAPD) and LA Sheriff’s Department (LASD)—to all other police departments in the county (e.g., Long Beach Police, Torrance Police, etc.). Finally, racial/ethnic characteristics of the crime scene community were included, given prior research highlighting neighborhood disparities in terms of homicide arrest rates (Litwin, 2004; Litwin & Xu, 2007; Petersen, forthcoming; Regoezzi & Jarvis, 2013). Racial composition in the crime scene community was measured as the percentage of Black and Latino residents per census tract.

Predictors of death penalty charges in Part 2. Given the cumulative nature of homicide case processing, models predicting death penalty charges in Part 2 utilize many of the
In addition to the covariates listed above, Part 2 includes defendant demographics and characteristics associated with the court case. These factors are used in Part 2, but not Part 1, because defendant demographics and court case characteristics are by definition only available when the courts initiate a criminal case. Defendant race is coded using dummy variables: Latino, Black, and White (reference). Defendant gender is dichotomously coded, whereas defendant age is continuous. The number of prior felony convictions was logarithmically transformed to capture its potential diminishing effect.

In addition, Part 2 controls for court case characteristics. A dummy variable captures whether the case or homicide charges resulted in a dismissal since homicide cases that were eventually dismissed may be less likely to involve a death-eligible charge. Prosecutors may also be more likely to offer a charge/sentence reduction in codefendant cases in exchange for evidence implicating another defendant (CCFAJ, 2008), and thus I control for the presence of multiple defendants. I measure the number of criminal counts charged, which was logarithmically transformed. Felony murder (e.g., robbery murder, rape murder, etc.) and multiple murder are among the most commonly filed death-eligible charges in California and elsewhere (Acker & Lanier, 1993; Kreitzberg, 2008; Peterson & Bailey, 1991; Petersen & Lynch, 2013). Therefore, binary variables capture whether the case involved multiple victims and a contemporaneous felony. Mitigating and aggravating factors identified by Baldus et al. (1990, pp. 526–535) were dichotomously coded based on whether they were present in the case file. Given the rarity of some of these aggravators/mitigators, they were used to construct factor scores via principal components factor analysis rather than included as separate indicators. Aggravating factors include case characteristics that make the crime more heinous like torture or dismemberment, while mitigating factors such as mental impairment during the crime serve to diminish the defendant’s criminal culpability.

**Analysis Strategy**

A two-part modeling strategy was employed. Part 1 estimates the odds of clearance, which is then used as a covariate in Part 2 predicting the odds of a death penalty-eligible charge. This two-part approach has been commonly utilized in the sentencing literature and simulates many of the key features of a Heckman selection model, including the ability to control for selection bias and model entry into the sample (Demuth, 2003; Keil & Vito, 1990; Leiber & Fox, 2005; Leiber & Mack, 2003; Rodriguez, 2010; Steen, Engen, & Gainey, 2005; Steffensmeier & Demuth, 2001; Ulmer & Johnson, 2004). It is unlikely that victims/defendants within the same incident/case are statistically independent, and thus clustered standard errors (SEs) were employed at the incident level for Part 1 and case level for Part 2. Given the large number of coefficients, the interpretation of specific estimates from the various models is largely limited to victim/defendant race variables as those are most germane to the study’s focus.

Like most data sets, this one has some missing data. While missingness levels vary across variables, the average amount of missingness is less than 3%. Moreover, key
variables—victim and defendant race—are missing in less than 1% of the cases. Chained multiple imputation was used in STATA version 13 via the “mi impute chained” command. Ten imputed data sets were constructed as this amount is sufficient to introduce random error into the process (Schafer, 1999; Wang & Mears, 2010a, 2010b).

Part 1 includes a logistic regression model predicting the likelihood of arrest among the full universe of homicides. After running the model, the predicted probability of arrest was saved and used to calculate the hazard rate by dividing the probability density function over the cumulative distribution function. In Part 2 among the sample of cleared homicides, the hazard rate is used as a predictor of death penalty charges, allowing me to model this funneling process. Models predicting homicide arrests (Part 1) and charging decisions (Part 2) include many of the same covariates, with a few notable exceptions. Several key variables were purposefully excluded from Part 2 to fulfill the exclusion restriction requirement (Bushway et al., 2007). Based on the relevant literatures, exclusion restrictions for this study include incident day and crime scene location (Baldus & Woodworth, 2009; Riedel, 2008).

Results

Summary Statistics

Summary measures reveal a dramatic funneling process at the front end, with only 46% of homicides resulting in an arrest (see Table 1). Among cleared cases, special circumstances were charged in 20% of cases (see Table 1). Blacks (35%) and Latinos (50%) comprise the majority of all victims, but only 70% of victims in death-eligible cases. In solved cases, nearly all victims (86%) and offenders (94%) are young men, the majority of whom range from 25 to 28 years old. Offense severity and prior criminal history vary based on death eligibility: Compared to the total pool of defendants, cases with a special circumstance are more serious in terms of aggravating factors, number of victims, contemporaneous felony, and number of counts.

Regression Estimates

Part 1: Predicting the likelihood of homicide clearance. Compared to cases involving White victims, the odds of clearance are 26% lower for Latino victims (see Table 2). For Blacks, however, victim race is not significant (see Table 2). According to Model 1, a 1-unit change in the percentage of Black residents corresponds to a 35% reduction in the odds of clearance, while the odds of clearance decrease by 21% as the Latino population increases by 1%. Like prior research, cases with incident characteristics typically associated with greater evidence are more likely to be cleared (Riedel, 2008). For example, cases with a stranger victim–offender relationship and incidents occurring in public places or residences are more likely to be solved. In contrast, the contemporaneous felony or multiple victim variables were not significant. Social contextual factors influence policing behaviors as well. Homicides occurring after 1992 and those handled by smaller city police departments are less likely to be cleared.
Table 1. Summary Statistics for LA County Homicides.

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Homicide Incidents</th>
<th>Cleared Cases</th>
<th>Death-Eligible Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homicide cleared</td>
<td>0.46 0.50</td>
<td>0.20 0.40</td>
<td>1.31 0.46</td>
</tr>
<tr>
<td>Special circumstances (yes/no)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of special circumstances (ordinal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Victim demographics (Parts 1 and 2)</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Victim race: Black</td>
<td>0.35 0.48</td>
<td>0.36 0.48</td>
<td>0.32 0.47</td>
</tr>
<tr>
<td>Victim race: Latino</td>
<td>0.50 0.50</td>
<td>0.48 0.50</td>
<td>0.38 0.49</td>
</tr>
<tr>
<td>Victim race: White</td>
<td>0.15 0.36</td>
<td>0.16 0.37</td>
<td>0.30 0.46</td>
</tr>
<tr>
<td>Victim gender: male</td>
<td>0.86 0.35</td>
<td>0.85 0.36</td>
<td>0.77 0.42</td>
</tr>
<tr>
<td>Victim age</td>
<td>28.77 13.57</td>
<td>28.62 13.27</td>
<td>33.72 15.03</td>
</tr>
<tr>
<td>Victim edu: non–high school grade</td>
<td>0.32 0.47</td>
<td>0.34 0.47</td>
<td>0.39 0.49</td>
</tr>
<tr>
<td>Victim edu: college grade</td>
<td>0.12 0.33</td>
<td>0.14 0.34</td>
<td>0.22 0.41</td>
</tr>
<tr>
<td>Victim married/widowed</td>
<td>0.23 0.42</td>
<td>0.24 0.43</td>
<td>0.38 0.48</td>
</tr>
<tr>
<td>Victim legal resident</td>
<td>0.74 0.44</td>
<td>0.74 0.44</td>
<td>0.77 0.42</td>
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<tr>
<td><strong>Social contextual factors (Parts 1 and 2)</strong></td>
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</tr>
<tr>
<td>Incident year 1991</td>
<td>0.20 0.40</td>
<td>0.22 0.41</td>
<td>0.23 0.42</td>
</tr>
<tr>
<td>Incident year 1992</td>
<td>0.21 0.41</td>
<td>0.22 0.41</td>
<td>0.23 0.42</td>
</tr>
<tr>
<td>Incident year 1993</td>
<td>0.21 0.41</td>
<td>0.19 0.40</td>
<td>0.18 0.38</td>
</tr>
<tr>
<td>Incident year 1994</td>
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<td>0.16 0.37</td>
<td>0.16 0.37</td>
</tr>
<tr>
<td>LAPD case</td>
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<td>LASD case</td>
<td>0.26 0.44</td>
<td>0.21 0.41</td>
<td>0.21 0.41</td>
</tr>
<tr>
<td>% Latino in neighborhood</td>
<td>0.51 0.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Black in neighborhood</td>
<td>0.24 0.26</td>
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<td></td>
</tr>
<tr>
<td><strong>Crime characteristics (Part 1)</strong></td>
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<tr>
<td>Multiple victims</td>
<td>0.12 0.32</td>
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<td></td>
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<tr>
<td>Firearm offense</td>
<td>0.78 0.41</td>
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</tr>
<tr>
<td>Location: public place</td>
<td>0.66 0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location: residence</td>
<td>0.25 0.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship: stranger</td>
<td>0.36 0.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contemporaneous felony</td>
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<td></td>
</tr>
<tr>
<td>Weekend homicide</td>
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<tr>
<td><strong>Case characteristics (Part 2)</strong></td>
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<td></td>
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<tr>
<td>Factor score: mitigators</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Factor score: aggravators</td>
<td>0.00 1.00 0.43 1.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple victims</td>
<td>0.09 0.28 0.32 0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contemporaneous felony</td>
<td>0.49 0.50 0.89 0.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple defendants</td>
<td>0.40 0.49 0.58 0.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log (# of counts)</td>
<td>0.75 0.25 0.87 0.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case/charges dismissed</td>
<td>0.20 0.40 0.17 0.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firearm weapon</td>
<td>0.75 0.43 0.76 0.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship: stranger</td>
<td>0.19 0.40 0.33 0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship: unclear</td>
<td>0.30 0.46 0.31 0.46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
Table 1. (continued)

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Homicide Incidents</th>
<th>Cleared Cases</th>
<th>Death-Eligible Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Defendant demographics (Part 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defendant race: Black</td>
<td>0.41</td>
<td>0.49</td>
<td>0.48</td>
</tr>
<tr>
<td>Defendant race: Latino</td>
<td>0.46</td>
<td>0.50</td>
<td>0.33</td>
</tr>
<tr>
<td>Defendant race: White</td>
<td>0.13</td>
<td>0.33</td>
<td>0.19</td>
</tr>
<tr>
<td>Defendant gender: male</td>
<td></td>
<td></td>
<td>0.94</td>
</tr>
<tr>
<td>Log (# of prior felony convictions)</td>
<td></td>
<td></td>
<td>0.25</td>
</tr>
<tr>
<td>Defendant age</td>
<td>25.59</td>
<td>8.66</td>
<td>24.54</td>
</tr>
</tbody>
</table>

Note. Listwise deleted sample. M = mean; SD = standard deviation; LAPD = LA Police Department; LASD = LA Sheriff Department. Reference groups: White victim, female victim, high school, single marital status, nonlegal resident victim, single victim case, nonfirearm weapon, other locations, nonstranger relationship, nonfelony, weekday incident, 1990 incident year, other city police agencies, single victim case, nonfelony, single defendant case, case/charges not dismissed, nonfirearm weapon, nonstranger relationship, White defendant race, and female defendant.

Part 2: Predicting the likelihood of death penalty charges. Regression estimates displayed in Table 3 speak to the impact of race on prosecutorial decision-making. Compared to cases with White victims, the odds of a death penalty charge are 62–65% lower for cases with Black victims and 47–49% lower for cases with Latino victims (Models 2 and 3). In addition, victim race indirectly shapes charging practices, as evidenced by the positive effect of the hazard rate (odds ratio = 4.80, p < .01 in Model 2; odds ratio = 4.73, p < .01 in Model 3). Cases involving minority victims are less likely to be cleared (Model 1), which, in turn, decreases the odds of a death penalty charge (Models 2 and 3). While victim race is implicated in clearance and charging outcomes, there are no differences among Black and White defendants in terms of death penalty charges. However, Latino defendants are 36–39% less likely to be charged with a death-eligible crime than White defendants.

In addition, regression estimates in Table 3 uncover the significance of several nonracial predictors. Defendants accused of killing victims who are female or older are more likely to be charged with a death-eligible offense. In contrast to Model 1 predicting the likelihood of homicide clearance, stranger victim–offender relationship and multiple victims have a positive effect, but the presence of a firearm is not significant. Multi-victim cases are 13–14 times more likely to be prosecuted with a death-eligible charge than single-victim cases and defendants charged with a contemporaneous felony are 8–9 times more likely to be charged with a special circumstance.

In light of research highlighting the interactive effects of victim and defendant race, Models 4 and 5 examine various victim-defendant racial interactions, with White-on-White crimes serving as the reference group (Baldus & Woodworth, 2003; Baldus et al., 1990; USGAO, 1990). In the interest of parsimony, Table 4 only lists these racial interaction terms since many of the other variables have similar effects (see the online appendix for full models). Compared to cases with White victims and White
Table 2. Logistic Regression Predicting the Likelihood of Clearance for LA County Homicides.

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Model I</th>
<th>Odds Ratio (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Victim characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim race: Black$^a$</td>
<td></td>
<td>0.91 (0.08)</td>
</tr>
<tr>
<td>Victim race: Latino$^a$</td>
<td></td>
<td>0.79 (0.07)</td>
</tr>
<tr>
<td>Victim edu: non–high school grade$^b$</td>
<td></td>
<td>1.05 (0.06)</td>
</tr>
<tr>
<td>Victim edu: college grade$^b$</td>
<td></td>
<td>1.10 (0.08)</td>
</tr>
<tr>
<td>Victim age squared</td>
<td></td>
<td>1.00 (0.00)</td>
</tr>
<tr>
<td>Victim age</td>
<td></td>
<td>1.00 (0.01)</td>
</tr>
<tr>
<td>Victim married/widowed$^c$</td>
<td></td>
<td>1.10 (0.07)</td>
</tr>
<tr>
<td>Victim gender: male$^d$</td>
<td></td>
<td>0.88 (0.06)</td>
</tr>
<tr>
<td>Victim legal resident$^e$</td>
<td></td>
<td>0.99 (0.05)</td>
</tr>
<tr>
<td><strong>Crime characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple victims$^f$</td>
<td></td>
<td>1.00 (0.09)</td>
</tr>
<tr>
<td>Firearm offense$^g$</td>
<td></td>
<td>0.66 (0.04)</td>
</tr>
<tr>
<td>Location: public place$^h$</td>
<td></td>
<td>1.34 (0.15)</td>
</tr>
<tr>
<td>Location: residence$^h$</td>
<td></td>
<td>1.73 (0.20)</td>
</tr>
<tr>
<td>Victim–suspect relationship: stranger$^i$</td>
<td></td>
<td>0.69 (0.04)</td>
</tr>
<tr>
<td>Circumstance: felony$^j$</td>
<td></td>
<td>0.93 (0.06)</td>
</tr>
<tr>
<td>Weekend homicide$^k$</td>
<td></td>
<td>1.01 (0.05)</td>
</tr>
<tr>
<td><strong>Social contextual factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incident year 1991$^l$</td>
<td></td>
<td>1.03 (0.07)</td>
</tr>
<tr>
<td>Incident year 1992$^l$</td>
<td></td>
<td>0.91 (0.07)</td>
</tr>
<tr>
<td>Incident year 1993$^l$</td>
<td></td>
<td>0.87 (0.06)</td>
</tr>
<tr>
<td>Incident year 1994$^l$</td>
<td></td>
<td>0.78 (0.06)</td>
</tr>
<tr>
<td>LAPD case$^m$</td>
<td></td>
<td>2.10 (0.13)</td>
</tr>
<tr>
<td>LASD case$^m$</td>
<td></td>
<td>0.99 (0.07)</td>
</tr>
<tr>
<td>% Latino in neighborhood</td>
<td></td>
<td>0.79 (0.09)</td>
</tr>
<tr>
<td>% Black in neighborhood</td>
<td></td>
<td>0.65 (0.08)</td>
</tr>
</tbody>
</table>

Note. N = 9,137. SE = standard error; LAPD = LA Police Department; LASD = LA Sheriff Department. Exponentiated coefficients with SEs in parentheses. SEs are clustered by homicide incident using STATA’s “vce(cluster)” command.

Reference groups: $^a$White victim. $^b$High school. $^c$Single marital status. $^d$Female victim. $^e$Nonlegal resident victim. $^f$Single victim case. $^g$Nonfirearm weapon. $^h$“Other” locations. $^i$Nonstranger relationship. $^j$Nonfelony. $^k$Weekday incident. $^l$1990 incident year. $^m$Other city police agencies.

$p < .1. \, **p < .05. \, ***p < .01.

defendants, the odds of a death-eligible charge are 63–67% lower for Black victim/Latino defendant cases, 57–61% lower for Black victim/Black defendant cases, and 63–65% lower for Latino victim/Latino defendant cases (see Models 4 and 5 in Table 4). However, contrary to my expectations, cases with White victims and Black defendants are not statistically more likely to be prosecuted with a special circumstance.

Figure 1, which displays the adjusted probabilities for the various victim–defendant racial dyads from Model 4, speaks to these patterns. For cases with Black or Latino defendants, the predicted probability of a death-eligible charge is higher for White victims than it is for Black or Latino victims (see Figure 1). However, the
Table 3. Logistic and Ordered-Logistic Regressions Predicting the Likelihood of Death Penalty-Eligible Charges in LA County Homicide Cases.

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Logistic, Model 2</th>
<th>Ordered-Logistic, Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio (SE)</td>
<td>Odds Ratio (SE)</td>
</tr>
<tr>
<td>Hazard rate: odds of clearance from Model 1</td>
<td>4.80*** (3.65)</td>
<td>4.73*** (3.40)</td>
</tr>
<tr>
<td><strong>Victim demographics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim race: Black</td>
<td>0.35*** (0.08)</td>
<td>0.38*** (0.07)</td>
</tr>
<tr>
<td>Victim race: Latino</td>
<td>0.53*** (0.10)</td>
<td>0.51*** (0.10)</td>
</tr>
<tr>
<td>Victim gender: male</td>
<td>0.62*** (0.10)</td>
<td>0.57*** (0.09)</td>
</tr>
<tr>
<td>Victim age</td>
<td>1.10*** (0.02)</td>
<td>1.09*** (0.02)</td>
</tr>
<tr>
<td>Victim age square</td>
<td>1.00*** (0.00)</td>
<td>1.00*** (0.00)</td>
</tr>
<tr>
<td>Victim edu: non-high school grad</td>
<td>1.04 (0.15)</td>
<td>1.01 (0.14)</td>
</tr>
<tr>
<td>Victim edu: college grade</td>
<td>1.29 (0.32)</td>
<td>1.18 (0.27)</td>
</tr>
<tr>
<td>Victim married/widowed</td>
<td>1.26 (0.19)</td>
<td>1.24 (0.17)</td>
</tr>
<tr>
<td>Victim legal resident</td>
<td>0.84 (0.13)</td>
<td>0.88 (0.12)</td>
</tr>
<tr>
<td><strong>Defendant demographics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defendant race: Black</td>
<td>1.04 (0.24)</td>
<td>1.01 (0.22)</td>
</tr>
<tr>
<td>Defendant race: Latino</td>
<td>0.61*** (0.13)</td>
<td>0.64*** (0.14)</td>
</tr>
<tr>
<td>Defendant gender: male</td>
<td>0.98 (0.23)</td>
<td>0.95 (0.21)</td>
</tr>
<tr>
<td>Log (# of prior felony convictions)</td>
<td>1.14 (0.13)</td>
<td>1.19 (0.14)</td>
</tr>
<tr>
<td>Defendant age</td>
<td>1.03 (0.04)</td>
<td>1.04 (0.04)</td>
</tr>
<tr>
<td>Defendant age squared</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
</tr>
<tr>
<td><strong>Case characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor score: mitigators</td>
<td>0.81*** (0.05)</td>
<td>0.82*** (0.05)</td>
</tr>
<tr>
<td>Factor score: aggravators</td>
<td>1.66*** (0.13)</td>
<td>1.49*** (0.10)</td>
</tr>
<tr>
<td>Multiple victims</td>
<td>13.05*** (3.97)</td>
<td>14.63*** (3.61)</td>
</tr>
<tr>
<td>Contemporaneous felony</td>
<td>9.34*** (1.45)</td>
<td>8.40*** (1.29)</td>
</tr>
<tr>
<td>Multiple defendants</td>
<td>1.33*** (0.18)</td>
<td>1.40*** (0.17)</td>
</tr>
<tr>
<td>Log (# of counts)</td>
<td>1.28 (0.30)</td>
<td>1.22 (0.25)</td>
</tr>
<tr>
<td>Case/charges dismissed</td>
<td>0.64*** (0.13)</td>
<td>0.62*** (0.12)</td>
</tr>
<tr>
<td>Firearm weapon</td>
<td>1.03 (0.17)</td>
<td>1.03 (0.16)</td>
</tr>
<tr>
<td>Relationship: stranger</td>
<td>2.24*** (0.34)</td>
<td>2.15*** (0.32)</td>
</tr>
<tr>
<td>Relationship: unclear</td>
<td>1.16 (0.19)</td>
<td>1.12 (0.17)</td>
</tr>
<tr>
<td><strong>Social contextual factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incident year 1991</td>
<td>1.29 (0.23)</td>
<td>1.32 (0.22)</td>
</tr>
<tr>
<td>Incident year 1992</td>
<td>1.26 (0.28)</td>
<td>1.33 (0.28)</td>
</tr>
<tr>
<td>Incident year 1993</td>
<td>1.04 (0.19)</td>
<td>1.08 (0.19)</td>
</tr>
<tr>
<td>Incident year 1994</td>
<td>1.23 (0.24)</td>
<td>1.30 (0.24)</td>
</tr>
<tr>
<td>LAPD case</td>
<td>1.13 (0.19)</td>
<td>1.09 (0.18)</td>
</tr>
<tr>
<td>LASD case</td>
<td>0.93 (0.17)</td>
<td>1.03 (0.19)</td>
</tr>
</tbody>
</table>

Note. N = 5,012. SE = standard error; LAPD = LA Police Department; LASD = LA Sheriff Department. Exponentiated coefficients with SEs in parentheses. SEs are clustered by case number using STATA’s “vce(cluster)” command.

Reference groups: aWhite victim. bFemale victim. cHigh school. dSingle marital status. eNonlegal resident victim. fWhite defendant race. gFemale defendant. hSingle victim case. iNonfelony case. Single defendant case. jCase/charges not dismissed. kNonfirearm weapon. lNonstranger relationship. m1990 incident year. nOther city police agencies.

*p < .1. **p < .05. ***p < .01.
Table 4. Victim and Defendant Racial Interactions Predicting the Likelihood of Death Penalty–Eligible Charges in LA County Homicide Cases.

<table>
<thead>
<tr>
<th>Racial Interaction Terms</th>
<th>Logistic, Model 4</th>
<th>Ordered-Logistic, Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black victim and Latino defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.37&lt;sup&gt;***&lt;/sup&gt; (0.13)</td>
<td>0.33&lt;sup&gt;***&lt;/sup&gt; (0.11)</td>
</tr>
<tr>
<td>Black victim and Black defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.39&lt;sup&gt;***&lt;/sup&gt; (0.09)</td>
<td>0.43&lt;sup&gt;***&lt;/sup&gt; (0.10)</td>
</tr>
<tr>
<td>Black victim and White defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.14 (0.51)</td>
<td>1.11 (0.45)</td>
</tr>
<tr>
<td>Latino victim and Latino defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.35&lt;sup&gt;***&lt;/sup&gt; (0.08)</td>
<td>0.37&lt;sup&gt;***&lt;/sup&gt; (0.09)</td>
</tr>
<tr>
<td>Latino victim and Black defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.75 (0.21)</td>
<td>0.70 (0.18)</td>
</tr>
<tr>
<td>Latino victim and White defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.75 (0.33)</td>
<td>0.90 (0.44)</td>
</tr>
<tr>
<td>White victim and Latino defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.76 (0.22)</td>
<td>0.96 (0.26)</td>
</tr>
<tr>
<td>White victim and Black defendant&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.54 (0.50)</td>
<td>1.26 (0.35)</td>
</tr>
</tbody>
</table>

Note. N = 5,012. SE = standard error. Exponentiated coefficients with SEs in parentheses. SEs are clustered by case number using STATA's "vce(cluster)" command. Models 4-5 control for all of the same variables as Models 2-3, but these covariates are excluded for visual simplicity. 
<sup>a</sup>Reference group for all interaction terms is White victim and White defendant.  
*p < .1. **p < .05. ***p < .01.

Figure 1. Predicted Probability of a Death-Eligible Charge by Victim and Defendant Race. Note. Predicted probabilities were calculated based on Model 4 using STATA's "margins" command, holding covariates constant at mean values.
predicted probability of a death-eligible charge is fairly high for White victims regardless of defendant race, which may help to explain the null findings for the dyads “White victim and Latino defendant” and “White victim and Black defendant.” In other words, Figure 1 shows that White victims have a high predicted probability of a death-eligible charge across the various defendant racial groups, and thus these patterns may reflect the fact that White victim homicides are generally treated more punitively.

Discussion and Conclusion

Despite the implementation of modern death penalty laws, racial disparities persist in the post-Furman era. The breadth of California’s death eligibility affords prosecutors considerable latitude at the charging stage (Petersen & Lynch, 2013; Shatz, 2007), producing racially patterned death penalty charges. Consistent with prior research focusing on prosecutors’ decision to seek the death penalty, victim race plays a larger role in death penalty decision-making than defendant race (Baldus & Woodworth, 2003; Baldus et al., 1990; USGAO, 1990). Even after controlling for a host of case characteristics, defendants accused of killing White victims are more likely to be charged with a death-eligible offense than those accused of killing minority victims.

The focal concerns perspective can help shed light on these findings. Victim race effects are consistent with prior research highlighting the influence of officials’ stereotypes on criminal justice processes in southern California (Frohmann, 1991, 1997; Herbert, 1996). Although regression models cannot directly speak to these processes due to the lack of individual-level data on prosecutors’ stereotypes, victim race findings are generally consistent with the expectations of focal concerns theory regarding racial stereotypes (Steffensmeier et al., 1998). In contrast, defendant race alone has little influence on death penalty charging decisions (except for Latino defendants). Moreover, cases involving a White victim and Black defendant were are not statistically more likely to receive a death penalty-eligible charge than those with a White victim and defendant.

Defendant race may influence death penalty charging decisions in other ways. To the extent that police and prosecutors more aggressively investigate White victim homicides, that would mean there is greater evidence available in such cases. And because most homicides in LA County and elsewhere are intraracial, police and prosecutors might have more evidence implicating White defendants (Jacobs & Wood, 1999; Messner & South, 1992; Petersen, 2016; Petersen & Ward, 2015). In other words, these findings may simply reflect the fact that most homicides are intraracial, and as such cases with a White victim generally progress further in the criminal justice system (for a similar discussion, see Spohn, 2000). The prevalence of intraracial homicides could also help to explain the curious finding that Latino defendants were treated more leniently than White defendants. That is, since cases with Latino victims are generally treated less punitively and Latino victims are more
likely to have a Latino victim, this may account for the relative leniency of Latino defendants as compared to White defendants.

Precharging decisions matter too, underscoring the police–prosecution nexus. In line with prior research, incident characteristics shape homicide clearance outcomes, but they cannot explain away victim race effects (Riedel, 2008). Cases with Latino victims and those occurring in predominately minority neighborhoods are less likely to be cleared, which, in turn, decreases their likelihood of receiving a death penalty charge. In this regard, racially disparate death penalty charges are partly a product of lower clearance rates among minority victim cases and those crimes occurring in minority communities. This pattern underscores the cumulative nature of racial bias within the death penalty institutions, beginning with the crime scene investigation (Baldus, Woodworth, Zuckerman, et al., 2009; Radelet & Pierce, 1985, 2009). Given the close working relationship between detectives and prosecutors, the police may help to construct death eligibility by underdeveloping of cases with minority victims (Bright, 1994; Pierce & Radelet, 2005; Songer & Unah, 2006).

Results also speak to the (dis)connect between criminal justice institutions. The differential effect of several variables across clearance and charging decisions speaks to the decoupling of these criminal justice agencies. Crime characteristics associated with evidence (e.g., location and weapon) have a greater impact on clearance outcomes, while offense severity measures (e.g., mitigators, aggravators and number of victims) are more influential for charging decisions. And although victim racial characteristics influence both clearance and charging decisions, they play a bigger role at the charging stage. These divergent effects suggest that police and prosecutors respond to different organizational demands and thus may be regarded as a loosely coupled system (Glassman, 1973). According to organizational theory, this incongruity allows victim race and other extralegal factors to creep into the decision-making process by augmenting the discretion of criminal justice actors (Bishop et al., 2010; Leiber & Jamieson, 1995).

The present study extends the death penalty literature in important ways. While prior research has found racial differences in homicide clearance rates (Riedel, 2008), scholars have not examined the police–prosecution nexus. This study explicitly modeled the funneling of cases into the death penalty system and, in doing so, helps to bridge the literatures on homicide arrests and court processing by highlighting the influence of policing practices on prosecutorial charging decisions. Findings indicate that the pool of Latino victims winnows as homicides enter into the criminal justice system, potentially obscuring victim race effects at later stages (Radelet & Pierce, 1985, 2009). In this regard, existing sentencing studies may actually underestimate the amount of racial bias within death penalty institutions by paying insufficient attention to the racial homogenization of cases at earlier stages in the process. These insights suggest that multistage analyses offer a more holistic assessment of American capital punishment, attending to the multiple, and often subtle, ways in which race matters (Kutateladze et al., 2014).

Like any study, however, the contributions of this research are bounded by its shortcomings. Although evidence can play a key role in both arrest and prosecution
decisions, I was unable to control for the strength of evidence, relying instead on proxy measures—for example, location, victim–offender relationship, murder weapon, and circumstance (Baldus & Woodworth, 2009; Baldus, Woodworth, Zuckerman, et al., 2009; Riedel, 2008). Moreover, the hazard rate helps to control for the availability/strength of evidence at the charging stage by explicitly modeling selection into the system (Bushway et al., 2007; Leiber & Fox, 2005). A second consideration is the study’s limited geographical focus on a single California County. While the study is constrained to one county, the policy and theoretical relevancy of LA County warrants the analysis of this jurisdiction. Death penalty practices are fundamentally local (Liebman & Clarke, 2011) and thus focusing on a single jurisdiction provides a more nuanced account of prosecutorial decision-making. Moreover, LA County’s homicide and death-sentencing rates in the early 1990s were comparable to other large urban jurisdictions, thereby increasing the generalizability of model estimates (Bureau of Justice Statistics, 2014; U.S. Census, 1990).

Future research should examine the relationship between death penalty charging practices and later outcomes in the process. While regression models reveal victim race effects, it is unclear whether these effects translate into racial disparities in terms of capital trial rates. Given the paucity of research on the initial stages of the death penalty system, this study focused on clearance and charging decisions, but future research should examine later stages in the process. Cumulative disadvantage theory predicts that the victim race effects observed here would compound as cases advance through the death penalty system to the trial stage, yet this postulate requires empirical assessment and validation.

Notwithstanding these limitations, the results of this study have a number of implications. Given that the public often views modern capital punishment as a valuation of the victim, such patterns could reinforce stereotypes about “worthy” victims (Baldus & Woodworth, 2003; Baldus, Woodworth, Zuckerman, et al., 2009). More broadly, racial bias in handling of homicide cases can leave minority communities feeling marginalized and undermine the public’s confidence in the criminal justice system as a whole (CCFAJ, 2008; Riedel, 2008). The present study also extends prior research to a broader range of institutional processes and racial/ethnic groups. Research on cumulative race effects and loosely coupled systems has mainly focused on defendants, and thus the findings presented here shed new light on victim-based processes. Moreover, relatively little attention has been devoted to Latinos in the death penalty context as well as the sentencing literature more generally (Baldus & Woodworth, 2003; Baldus et al., 2009; Kutateladze et al., 2014; Spohn, 2000; Zatz, 2000). The inclusion of Latinos in this study offers novel insights into the criminal justice processing of this growing and increasingly criminalized group (Chavez, 2013).

These findings also contribute to ongoing capital punishment debates. In 2012, Proposition 34—a measure that sought to replace California’s death penalty with life-without-parole—was narrowly defeated (Elias, 2012). Cost issues were central to the Proposition 34 campaign given the financial toll that capital cases exact on county budgets, hampering homicide investigations by requiring the diversion of law enforcement resources to the DA’s office (Rupp, 2002). Recognizing these trade-offs,
Proposition 34 sought to reallocate death penalty funds to help solve more murders (California Legislative Analyst Office, 2012). By examining the linkage between police and prosecutorial responses to homicide, this study sheds light on how the reallocation of death penalty funds toward homicide investigations could not only help to improve the quality of homicide investigations but may also aid in reducing racial biases at the charging stage.

In light of these policy debates, assessing the police–prosecution nexus is especially important in California. The CCFAJ (2008, p. 4) report characterized California’s death penalty system as “broken” in terms of its economic costs and the quality of justice it affords, outlining two potential remedies: (1) increased funding for capital litigation and (2) narrowing the number of death-eligible offenses. This study suggests that single-stage reforms may not sufficiently improve the quality of justice afforded to capital defendants in California, as they would not likely deal with the interconnectedness of criminal justice and the cumulative nature of racial inequality. Instead, policy reforms should take a more holistic approach, addressing multiple stages of the death penalty process and their interconnectedness.

In summary, this study finds that cases involving Latino victims are less likely to be cleared. Moreover, homicides with Black and Latino victims are less likely to result in a death penalty–eligible offense. These racially disparate charging practices are partially explained by lower clearance rates among Latino victims, underscoring the cumulative effects of victim race. This study contributes to the death penalty literature by shedding new light on the formation of racial bias in potentially capital cases and its mutation across multiple decision-making points. In LA County, race permeates the policing and prosecution of homicides, shaping the life course of a case from the crime scene investigation onward, ultimately influencing the filing of death penalty–eligible charges.

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Notes
1. As used here, “death eligible” or “death penalty–eligible” refers to a case that qualifies the death penalty under PC § 190.2. In contrast, a “capital” or “death penalty” case refers to a case in which the prosecution seeks the death penalty at trial.
2. For brevity, “race” is used instead of “race/ethnicity.” Similarly, the term “Latino” is used rather than “Latino/a” since most homicide victims and defendants are male.
3. Prior research indicates that a large proportion of cases resulting in second-degree murder or voluntary manslaughter charges at disposition are factually death eligible, thus defendants initially charged with murder or voluntary manslaughter are included in the sample.
regardless of the final disposition charge (Baldus, Woodworth, Zuckerman, et al., 2009; Sorensen & Wallace, 1999).

4. Since few defendants were charged with more than two special circumstances, the upper limit of this variable was placed at two. A handful of cases were listed as having a special circumstance in the DA files, but not in the court files. For the purposes of this analysis, these cases were coded as non-special circumstance cases. The substantive conclusions discussed here remain regardless of how these cases are coded.

5. Asians and “Other” races (Native American, Middle Eastern, etc.) were excluded from the sample due to the small number of victims and defendants in these groups (Demuth, 2003; Spohn & Sample, 2008; Wang & Mears, 2010a, 2010b).

6. For multivictim cases, modal responses for victim demographics were used, with the exception of victim age, which was averaged across the number of victims. For multivictim cases involving a Black victim, the entire case was coded as one involving a Black victim. This coding scheme reflects the fact that Blackness has been central to political concerns about crime and punishment (Beckett, Nyrop, & Pfingst, 2006; Russell-Brown, 1998). As such, in terms of victim racial characteristics, Blackness is most likely to influence case outcomes.

7. A Heckman selection model would require that each defendant and victim represent a row in the data set, thereby artificially inflating the sample size and producing ambiguity in terms of the unit of analysis. For example, a homicide with 2 victims and 1 defendant would produce 5 rows (2 victim rows + 1 defendant row + 2 rows for each victim and defendant combination). As such, I have opted for a two-part modeling strategy.

8. Predicted probabilities could not be calculated for seventy-eight defendants.

9. Exclusion restrictions are variables that affect the selection process but not the substantive equation of interest (Berk, 1983; Bushway et al., 2007). They help to minimize possible multicollinearity induced by inclusion of the hazard rate, reducing the potential for inflated SEs (Berk, 1983; Bushway et al., 2007).

10. Incident time and location serve as proxies for evidence in sense that crimes occurring during the week or public spaces are more likely to have witnesses (Riedel, 2008). Accordingly, these measures should predict the likelihood of arrest but not the filing of death-eligible charges.

11. Existing findings regarding victim–defendant racial interactions are somewhat mixed. In the 1990 USGAO report, the strongest effects were found for victim race, while the effects of defendant race and Victim × Defendant Racial interactions were more mixed. Recent research reveals similar patterns. For example, of the 36 post-GAO studies reviewed by Grosso, O’Brien, Taylor, and Woodworth (2014), 24 found victim race effects, 4 found a defendant race effect (without regard to victim race), and 9 found discrimination against Black defendants accused of killing Whites.

12. For example, roughly one-fourth of cleared homicides in LA County are interracial.

13. The data used here closely resemble patterns from nationally representative data sets for both homicide victims and defendants during the period of analysis. For example, homicide cases in this sample and other data sets most commonly involve racial/ethnic minority male victims and defendants in their mid- to late 20s, firearm offenses, and nonstranger victim–offender relationships (for supporting statistics, see Baumer, Messner, & Felson, 2000; Fox & Swatt, 2009; Langan & Brown, 1997).
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EXHIBIT N
Cumulative Racial and Ethnic Inequalities in Potentially Capital Cases: A Multistage Analysis of Pretrial Disparities

Nick Petersen

Abstract
To understand how racial/ethnic disparities are formed and sustained within death penalty institutions, this study tracks homicide cases through multiple stages of Los Angeles County’s criminal justice system. Drawing upon cumulative disadvantage research, this study focuses on the accumulation of racial/ethnic biases across multiple decision-making points. Logistic regressions seek to answer the following questions: (1) does victim/defendant race/ethnicity influence prosecutorial decision-making? and (2) if so, do these racial/ethnic disparities accumulate across multiple stages of the criminal justice system? Results indicate that cases with minority victims are less likely to involve a death-eligible charge or death notice. Moreover, these racial/ethnic disparities increase as cases advance through the courts, producing a Whiter pool of victims at later stages in the process. Defendant race/ethnicity is not predictive of death penalty charging decisions but does moderate the influence of victim race/ethnicity such that cases with minority defendants and White victims are treated more punitively.

Keywords
capital punishment, corrections, race and crime/justice, other, court, courts/law, quantitative methods, violent behavior

While racial and ethnic disparities in death sentencing have been well established, less attention has been devoted to the pretrial processes generating these patterns, especially the accumulation of racial/ethnic disparities across stages of the court system (for a review, see Grosso, O’Brien, Taylor, & Woodworth, 2014; Urbina, 2012). Despite the long-standing recognition that punishment outcomes stem from multiple pretrial decisions (Blumstein, Cohen, Martin, & Tonry, 1983), most death penalty research focuses on the decision to seek capital punishment and/or the imposition of a death sentence (Kaplan, Ganschow, Angioli, & Tabin, 2009; Radelet & Pierce, 2009). In the death penalty
context, prosecutors have considerable latitude when making charging decisions, thereby amplifying
the potential for racial/ethnic inequalities (Radelet & Pierce, 2009). Moreover, racial/ethnic dispa-
rities at the pretrial stage can artificially increase the proportion of death-eligible cases involving
White victims, thereby obscuring biases at later stages in the process by making dissimilar cases
appear more similar than they actually are (Radelet & Pierce, 2009).

In its 1990 report, the U.S. General Accountability Office (USGAO) criticized death penalty
research for neglecting to examine the decision chain leading to death sentences. The report
remarked that “discretion exercised early in the process may have the effect of concealing (masking)
race effects if analysis is limited only to the later stages” (p. 4). Others have extended the GAO’s
criticism to earlier stages in the death penalty process, arguing that a holistic account of death
penalty outcomes requires looking at the entire decision-making process, beginning with the initia-
tion of a criminal case (Kaplan et al., 2009; Pierce, Radelet, Posick, & Lyman, 2014; Radelet &
Pierce, 2009). And although sentencing scholars have long been aware of selection biases that can
arise from ignoring case progression dynamics, the issue has received surprisingly little attention in
the death penalty literature.

Outside of the death penalty context, sentencing scholars have become increasingly aware of the
need to examine multiple pretrial decision-making points (Kutateladze, Andiloro, Johnson, &
Spohn, 2014; Spohn, 2000; Stolzenberg, D’Alessio, & Eitle, 2013; Sutton, 2013). These studies
frequently rely upon the cumulative disadvantage framework, which argues that initial advantages in
group positionality increase over time, producing large disparities at the final stages. In other words,
the process of cumulative disadvantage is “capable of magnifying small differences over time and
makes it difficult for an individual or group that is behind at a point in time . . . to catch up” (DiPrete
& Eirich, 2006, p. 273). In the criminal justice context, cumulative disadvantage implies that racial/
ethnic disparities arise from the accumulation of biases across multiple decision-making points
(Kutateladze et al., 2014; Spohn, 2000; Stolzenberg et al., 2013; Sutton, 2013).

Literature Review

Modern Racism and Criminal Justice

While racism has historically been displayed through overt animus, modern racism is characterized
by the use of color-blind logics, wherein seemingly race/ethnicity-neutral principles are used to
explain various forms of racial/ethnic stratification (Haney-López, 2010). These dynamics have
contributed to racial/ethnic inequalities within the justice system. Stereotypes linking Blackness
and criminality permeate contemporary discourses on crime, such that the two are often interrelated
in the collective conscience (Welch, 2007). Latinos, especially those of Mexican descent, have been
criminalized through different processes. In recent decades, the Latino threat narrative—an ideology
characterizing Latinos as “invaders” who are reproductively “out of control,” unwilling to assim-
ilate, and criminally inclined—has been used to justify anti-immigration policies and practices
(Chavez, 2013). Yet despite lower crime rates in Latino immigrant neighborhoods (Sampson,
2008), these communities have been stereotyped as crime-prone in part due to exaggerated fears
of undocumented immigrants committing crimes (Chavez, 2013). This immigration–crime myth has
allowed officials to gain political points by igniting racial and ethnic moral panics without explicitly
using racist or ethnically biased language (Chavez, 2013).

In this context, the Latino threat narrative may influence decision-making processes in homicide
cases involving Latino victims and/or defendants. This may be especially true in contexts where
fears of Latino criminality intersect with histories of anti-immigrant sentiment and legacies of racial/
ethnic violence perpetrated against Latinos, such as the southwest. The dearth of research on
intersection of victim-defendant race/ethnicity in homicide cases is especially important for
understanding the role of race/ethnicity in the death penalty. In light of the Latino threat narrative (Chavez, 2013), the relative dearth of research on the intersection of victim–defendant race/ethnicity in homicide cases is especially problematic. While numerous studies have examined racial/ethnic disparities in the Black–White context (Grosso et al., 2014), fewer have examined the intersection of victim–defendant race/ethnicity in homicide cases (Urbina, 2012).

The Role of Race and Ethnicity in Criminal Justice

Against this backdrop, a wealth of research indicates that cases involving minority defendants receive more severe sanctions at nearly every stage of the criminal justice system, from disproportionate policing to longer prison sentences (Kutateladze, Lynn, & Liang, 2012; Spohn, 2000). Minority defendants that fit stereotypical descriptions of a “dangerous offender” (i.e., young, male, violent offender, etc.) are especially likely to receive severe punishments (Doerner & Demuth, 2010; Kautt & Spohn, 2002; Spohn & Holleran, 2001; Spohn & Sample, 2008). Nonhomicide sentencing studies that include victim demographics reveal victim-based racial/ethnic disparities, with cases involving White victims receiving harsher punishment (Holleran, Beichner, & Spohn, 2010; Spohn, Beichner, & Davis-Frenzel, 2001; Spohn & Holleran, 2000). These findings are consistent with death penalty research (Grosso et al., 2014) and underscore a pattern of underenforcement for minority victims and overenforcement for minority defendants. However, the majority of these studies compare Black and White victims/defendants, with the few that included Latinos indicating that they are disadvantaged in similar ways to Blacks, although sometimes through different mechanisms (Kutateladze et al., 2012; Sutton, 2013).

Racial/ethnic bias in the American death penalty system has most commonly been identified at the trial or sentencing phases. Homicides involving White victims or minority offenders are more likely to result in a death sentence (Grosso et al., 2014). At the trial and pretrial stages, homicide cases with White victims or minority offenders are more likely to be solved by the police, prosecuted, charged as first-degree murder, or involve a death-eligible charge (Grosso et al., 2014; Petersen, 2017a, 2017b). However, racial/ethnic differences in offense severity do not fully explain these patterns—cases with White victim and/or minority defendant are more likely to be thoroughly investigated or “upgraded” to a death-eligible offense, suggesting that prosecutors consider such cases to be more heinous (Pierce et al., 2014; Radelet & Pierce, 1985). Race/ethnicity may also serve as a proxy for less readily observable indicators of culpability such as “innocence” and “dangerousness” (Fleury-Steiner, 2004). Given Whites’ fears of victimization at the hands of minorities (Chavez, 2013; Urbina, 2012), victim and defendant race/ethnicity can interactively shape punishment outcomes as well. While there has been limited research on the intersectionality of victim and defendant race/ethnicity in nonhomicide cases (Kutateladze et al., 2012), several death penalty studies find that Black defendants accused of killing White victims are punished more harshly than other defendant-by-victim racial/ethnic configurations (Grosso et al., 2014). More recent research find similar patterns of disadvantage among Latino victims/defendants (Urbina, 2012).

Cumulative Racial and Ethnic Disadvantage

Cumulative disadvantage refers to a general social process by which initial advantages in group positionality lead to additional relative gains overtime (DiPrete & Eirich, 2006). For example, educational tracking can lead to further monitoring, which, in turn, may adversely influence academic performance. Research has uncovered reiterations of this phenomenon in a variety of other contexts, including neighborhoods, crime, education, and human development (DiPrete & Eirich, 2006). When it comes to criminal justice, cumulative disadvantage implies that racial/ethnic
disparities arise from the accumulation of biases across multiple decision-making points (Kutateladze et al., 2014; Spohn, 2000). Like institutional theories of racism, the cumulative disadvantage perspective stresses the ways in which the accumulation of ostensibly color-blind actions can produce stark racial/ethnic disparities overtime (Haney-López, 2010).

Racial/ethnic disparities may also be compounded via confirmation bias. Because prosecutors are likely subject to the same types of implicit racial/ethnic biases as the public more generally, confirmation bias could lead them to rely on racial/ethnic stereotypes as a kind of “perceptual shorthand” when making charging decisions. In the death penalty context, confirmation bias may contribute to cumulative racial/ethnic disadvantage by leading police and prosecutors to systematically underdevelop cases with minority victims and overdevelop those with minority defendants. To the extent that police and prosecutors more aggressively investigate cases with White victims or minority defendants, that could mean there is greater evidence available in such cases (Pierce et al., 2014). Taken together, these processes could shrink the pool of death-eligible cases involving minority victims by making cases involving White victims appear more serious than they actually are, thereby obscuring racial/ethnic disparities at later stages in the process (Pierce et al., 2014; Radelet & Pierce, 2009).

Social contextual factors can further exaggerate the underdevelopment and overdevelopment of certain cases. For example, increased levels of legal cynicism in minority communities could make residents less likely to cooperate with the investigation and prosecution of homicides (Regoeczi & Jarvis, 2013). Moreover, the effects of legal cynicism may compound across stages of the criminal justice system (Regoeczi & Jarvis, 2013). Initially, friends and family of minority victims might be motivated to aid authorities out of an urgent sense of longing for retribution and safety. But as cases move through the courts, higher levels of legal cynicism among minority community members could make it increasingly difficult to prosecute minority victim cases effectively.

Prior research lends some support to the cumulative disadvantage perspective. Multistage studies typically find that minority defendants in noncapital cases are treated more severely than White defendants at multiple pretrial stages, with racial/ethnic disparities at earlier stages influencing subsequent sentencing outcomes (Kutateladze et al., 2014; Stolzenberg et al., 2013; Sutton, 2013). A related literature on pretrial detention and charge bargaining speaks to the indirect effects of defendant race/ethnicity in felony cases, indicating that initial charging disparities help to explain inequities at the sentencing stage (Piehl & Bushway, 2007; Rehavi & Starr, 2014; Shermer & Johnson, 2010). Moreover, minority felony defendants are more likely to be detained pretrial, which is positively linked to guilty pleas, conviction at trial, and sentence severity (Demuth, 2003; Rodriguez, 2010; Wooldredge, Frank, & Goulette, 2016).

Multistage research focusing on death penalty trial and sentencing decisions reveals similar insights. Across the trial process, the proportion of homicides with White victims and/or Black defendants increases (Keil & Vito, 1990; Paternoster, Brame, Bacon, & Ditchfield, 2004). Multivariate analyses reveal similar trends, highlighting the predictive influence of victim and defendant race/ethnicity at multiple stages of the trial and sentencing processes (Baldus, Woodworth, Grosso, & Christ, 2002; Baldus Woodworth, & Pulaski, 1990; Baldus, Woodworth, Zuckerman, & Weiner, 1997; Paternoster et al., 2004). However, it is unclear whether such patterns stem from pretrial racial/ethnic disparities, since these studies did not directly assess the link between initial charging decisions and prosecutors’ decisions to seek the death penalty.

**Contributions of the Extant Research**

Much of the death penalty literature has focused on prosecutors’ decision to seek the death penalty among a pool of death-eligible cases, paying relatively less attention to the filing of death-eligible charges. Only a handful of studies have analyzed death-eligible charging practices within a
regression framework (e.g., Berk, Boger, & Weiss, 1993; Lee, 2007; Weiss, Berk, & Lee, 1996; Weiss, Berk, Li, & Farrell-Ross, 1999; Petersen, 2017a), none of which have examined the accumulation of racial/ethnic disparities across the court process by linking death-eligible charges and death notice filings. This is an important gap in the literature because studies focusing on prosecutors’ decision to seek the death penalty implicitly assume that prosecutors file death-eligible charges in a racially/ethnically equitable manner. As Pierce, Radelet, Posick, and Lyman (2014, p. 771) note, “Research that attempts to document racial/ethnic or gender disparities in the criminal justice system inevitably paints a distorted picture if only one point in the criminal justice process is examined. For example, studies that look at who is sentenced to death among a group convicted of first-degree murder will miss exposure of biases that occur at earlier stages of the criminal justice process.” Thus, if prosecutors file death-eligible charges in a racially/ethnically discriminatory manner, studies focusing on the filing of death notices may not fully capture the amount of racial/ethnic bias within the death penalty system (Baldus, Woodworth, & Weiner, 2009; Sorensen & Wallace, 1999).

The present research attempts to address this gap in the literature by analyzing the link between death-eligible charges and death notice filings. We employ a two-staged modeling approach to estimate racial/ethnic disparities in prosecutors’ decisions to seek the death penalty, conditional upon the hazard rate of death-eligible charges. This approach attends to criticisms by the USGAO (1990) and others of single-stage death penalty studies by helping to mitigate the influences of potential selection biases and, in doing so, sheds light on a wider range of penal processes than typically considered in the death penalty literature. Despite long-standing awareness of selection bias and the importance of examining multiple stages in the punishment process (e.g., see Blumstein et al., 1983), only one death penalty study has utilized a two-staged modeling approach (Keil & Vito, 1990). In an analysis of death-sentencing outcomes, Keil and Vito (1990) include the hazard rate of a death notice to account for prosecutorial discretion that might influence juror decision-making. Their results reveal that inclusion of the hazard rate helps to explain racial/ethnic disparities observed at the sentencing phase, highlighting the importance of modeling selection mechanisms within death penalty systems.

This study also extends prior research to a broader range of institutional processes and groups. Research in the cumulative disadvantage tradition has primarily focused on defendant-based racial/ethnic disparities, and as such, the findings presented here shed new light on the accumulation of victim-based racial/ethnic disparities. As Kutateladze, Andiloro, Johnson, and Spohn (2014, p. 542) note, “future research on [cumulative] criminal case processing in person offenses should strive to collect additional information on victim characteristics to explore the possible ‘benign neglect’ effect on prosecutorial and judicial decisions.” Our examination of victim–defendant racial/ethnic dyads across multiple decision-making points provides novel insights regarding the intersectional impact of victim–defendant race/ethnicity on death penalty charging decisions. In addition, relatively less attention has been devoted to Latinos in the death penalty context, which is problematic, given that this is an increasingly criminalized group (Chavez, 2013; Salinas, 2015; Urbina & Álvarez, 2016). For example, Urbina’s (2012) review of over 100 death penalty studies found 24 that included Latinos, the vast majority of which focused on death-sentencing outcomes. Moreover, many of these studies had a small sample of Latinos, with most including less than 100 Latino victims/defendants. Thus, while some death penalty studies have included Latinos, they tend to have a small sample size or focus on death-sentencing patterns rather than charging trends, making it difficult to draw conclusions about death penalty charging practices among Latino victims and defendants. The extant study builds upon and extends this small, but growing, literature on the death penalty and Latinos by analyzing the influence of race/ethnicity across multiple decision-making points among a large and diverse sample of defendants. The inclusion of Latinos here offers novel insights, revealing that while Black and Latino victims both experience discrimination, these patterns stem from different institutional pathways.
Data and Method

This analysis focuses on the full universe of willful homicides (i.e., murder and voluntary manslaughter) occurring in Los Angeles (LA) County between 1990 and 1994. Given that a large percentage of willful homicide cases are factually death-eligible under California’s expansive death penalty law (California Commission on the Fair Administration of Justice [CCFAJ], 2008), all defendants charged with willful homicide were analyzed. Data were triangulated from multiple sources, including local enforcement agencies, the California Department of Justice, the California Vital Statistics, the county Coroner’s Office, the county Superior Court, and the District Attorney’s (DA) Office. A key feature of the data set is its longitudinal structure, which allows for the examination of cumulative racial/ethnic disadvantage by following defendants through the court system. Moreover, this data set includes a number of variables absent from publicly available homicide data sets such as newspaper coverage and educational attainment (Auerhahn, 2007).1 Appendix A outlines the variables used here and their coding schemes.

This study focuses on LA County homicides in the early 1990s for both pragmatic and substantive reasons. The fact that the majority of LA County’s nearly 9 million residents in 1990 were minorities allows for the estimation of pretrial racial/ethnic disparities across a wide range of groups (U.S. Census, 1990). Moreover, like other large urban areas during the 1990s, LA County had high homicide and death-sentencing rates, and thus focusing on this period helps to augment the sample size. Roughly one third of California capital cases during this period originated in LA County, making it an important locale for the state’s death penalty (California Department of Corrections and Rehabilitation [CDCR], 2015; Liebman & Clarke, 2011). Because of the long delays in California’s capital appeals process, cases from this era continue to influence policy and legal debates (CCFAJ, 2008). Yet despite the sample size advantages cited above, focusing on LA County in the 1990s may limit the generalizability of findings to contemporary death penalty schemes, given the high levels of violence and racial/ethnic tensions during that period.

Dependent Variables

California’s death penalty process begins with the filing of aggravating circumstances. Only first-degree murders that involve at least one of the 22 aggravators (i.e., “special circumstances”) enumerated in Penal Code §190.2 qualify for the death penalty (Kreitzberg, 2008). California’s death penalty is among the most expansive in the nation, with almost 90% of first-degree murder cases qualifying for a special circumstance (CCFAJ, 2008). In LA County, special circumstances are alleged in the complaint at initial filing by a deputy DA if the evidence would support such a claim, regardless of whether the death penalty is ultimately sought (LA County District Attorney [LACDA], n.d.; Minsker, 2008). After the preliminary hearing, a committee determines whether the death penalty will be sought by weighing any aggravating and mitigating circumstances present in the case as well as the appropriateness of capital punishment (LACDA, n.d.; Minsker, 2008). Within 90 days of the preliminary hearing, the DA’s office issues a memo to the defense counsel indicating whether the death penalty will be sought and the various aggravators used to support the decision (LACDA, n.d.). If the death penalty is sought, a “death notice” is filed and the case proceeds as a capital one.

In light of the study’s focus on cumulative racial/ethnic disadvantage, we analyze two binary dependent variables—death-eligible charge and death notice. For the first dependent variable, defendants charged with a death-eligible crime are coded as 1 and 0 otherwise (special circumstance charge = 1, no special circumstance charge = 0). The second dependent variable, death notice, is coded as 1 if the prosecution seeks the death penalty and 0 otherwise (death notice = 1, no death notice = 0). Since these dependent variables have a natural ordering, they speak to the funneling of
cases through LA County’s death penalty system. Although there are certainly other stages in the death penalty process, we focus on these pretrial prosecutorial decision-making points because they are central to determining the trajectory of a capital case (Carter, Kreitzberg, & Howe, 2012; Radelet & Pierce, 2009). For example, special circumstances define death-eligibility and death penalty cases, by definition, require a death notice (Carter et al., 2012).\(^2\)

### Independent Variables

**Victim and defendant demographics.** Victims and defendants were divided into three groups, which were coded dichotomously: Latino (1 = yes, 0 = no), Black (1 = yes, 0 = no), and White (referent group).\(^3\) Asians and “Other” races (Native American, Middle Eastern, etc.) were excluded from the sample due to the small number of victims and defendants in these groups. Prior research suggests that nonracial/ethnic victim demographics can play a major role in death penalty decision-making, and thus models control for a host of nonracial/ethnic victim characteristics (Grosso et al., 2014). Victim and defendant gender were dichotomously coded (1 = male, 0 = female), while victim and defendant age were measured in years. Victim and defendant age were squared to capture their hypothesized u-shaped functional form (i.e., cases with youthful/elderly victims or offenders may receive different treatment than those with middle-aged ones). Victim marital status and educational level were measured using categorical indicators: (a) marital status (1 = married/widowed, 0 = not married) and (b) education (lower than high school, high school [reference], college grad). Models also control for each defendant’s number of prior felony convictions, which were measured continuously; this variable was logarithmically transformed to capture its potential diminishing effect.

**Case characteristics.** Given the absence of direct evidence measures, crime characteristics serve as proxies. Variables shown to positively predict homicide arrest rates serve as indicators for evidence, including location, weapon, incident time, and victim–offender relationship (for a review, see Riedel, 2008). For example, residential homicides usually contain greater evidence because the suspect is typically at the crime scene when the police arrive (Riedel, 2008). Likewise, it is often easier to locate suspects in crimes where the victim and offender know each other, while homicides with contact weapons (e.g., knives, blunt objects) generally contain more forensic evidence than firearm offenses because of the close physical contact involved (Riedel, 2008). Incident time (1 = weekday, 0 = weekend), quick arrest (1 = incident and arrest occurred on the same day, 0 = more than one day from the incident to the arrest date), and murder weapon (1 = firearm, 0 = non-firearm) were dichotomously coded. Crime scene location (residence, other locations, public area [reference]) and victim–offender relationship (stranger, relationship unclear, non-stranger [reference]) were measured using a series of indicator variables.

Models control for offense characteristics and features of the case that could influence its progression through the courts. The number of counts in the present case, which is a continuous measure, was logarithmically transformed to capture its potential diminishing effect. A binary measure captures whether the case had multiple defendants (1 = multiple defendants, 0 = single defendant) since prosecutors may offer a charge reduction in exchange for evidence implicating a codefendant (CCFAJ, 2008). Felony murder (e.g., robbery-murder, rape-murder) and multiple murder are among the most commonly filed death-eligible charges in California (Kreitzberg, 2008; Petersen & Lynch, 2013). Therefore, dummy variables capture whether the case involved multiple victims (1 = yes, 0 = no) and a contemporaneous felony (1 = yes, 0 = no). Given that jurors weigh aggravating and mitigating evidence when making sentencing decisions (Grosso et al., 2014), these factors can influence pretrial prosecutorial decision-making. Mitigating and aggravating factors identified by Baldus et al. (1990, pp. 526–535) were dichotomously coded based on whether they were present in the case file. Given the rarity of some of these aggravators/mitigators, they were used
to construct factor scores via principal components factor analysis rather than including them as separate indicator variables. Aggravators include case characteristics that make the crime more heinous, while mitigators diminish the defendants’ criminal culpability. Aggravators include (a) preplanned murder, (b) victim begged for mercy, (c) torture, (d) defenseless victim, (e) victim dismemberment/disembowelment, (f) gagging/bondage, and (g) multiple weapons. Mitigators include (a) defendants’ first offense; (b) physical provocation by victim; (c) defendant used drugs/alcohol during crime; (d) defendant was mentally impaired; (e) defendant had a history of substance abuse; and (f) defendant had a history of physical, mental, or emotional problems.

Social contextual factors. Given that prosecutorial decision-making does not occur in a vacuum and may be influenced by forces outside the DA’s office, our models include a series of social contextual variables. Prior research indicates that homicide arrest rates differ across law enforcement agencies (Roberts, 2014), and thus the quality of evidence given to prosecutors may also vary by police agency. As such, we include a series of dummy variables indicating which law enforcement agency handled the case (Los Angeles Police Department [LAPD], Los Angeles County Sheriff’s Department [LASD], and other city-level agencies [reference]). Models include incident year dummy variables (1994, 1993, 1992, 1991, and 1990 [reference]) to help control for case-processing differences that might stem from changes in court policies and practices across these years (Wang & Mears, 2010a). The media climate surrounding a case can also shape criminal justice outcomes by placing officials under increased public scrutiny, and thus we continuously measure the number of prearrest newspaper stories written about each case in the Los Angeles Times.

Analysis Strategy

Defendants represent the unit of analysis and are nested within nearly 4,000 criminal cases. Given this data structure, standard errors were clustered at the case level. We employ a two-part modeling strategy that has been utilized in cumulative disadvantage studies and helps to model the funneling of cases through the court system (Keil & Vito, 1990; Rodriguez, 2010). Part 1 includes a logistic regression model predicting the likelihood of a special circumstance charge. After running the model in Part 1, the predicted probability of a special circumstance charge was saved and used to calculate the hazard rate by dividing the probability density function over the cumulative distribution function. In Part 2, the hazard rate is used as a predictor of a death notice. This analytic approach allows us to compare the influence of race/ethnicity at various stages after controlling for the effects of previous decisions, thereby shedding light on the role of race/ethnicity in regard to the under/overdevelopment of cases.

Like most data sets, this one has some missing data. While missingness levels vary across variables, the key variables—victim and defendant race/ethnicity—are missing in less than 1% of the cases. Chained multiple imputation was used in STATA 13 via the “mi impute chained” command. Ten imputed data sets were constructed as this amount is sufficient to introduce random error into the process (Wang & Mears, 2010b).

The two-part analysis proceeds as follows for models predicting special circumstance charge (Part 1) and death notice (Part 2). First, models with both victim and defendant race/ethnicity were estimated (Models 1 and 4). Next, models were estimated with and without victim/defendant race/ethnicity to determine their relative impact on prosecutorial decision-making (Models 2 and 3 and Models 5 and 6). After assessing these main effects, various victim-by-defendant racial/ethnic combinations were examined (Models 7–10). Given the large number of coefficients, the interpretation of specific estimates is largely limited to victim/defendant race/ethnicity variables as those are most germane to the study’s focus. Victim/defendant race/ethnicity and other binary variables are interpreted as percentage changes in the odds using the formula \((\frac{\beta_{xi} - 1}{100})\).
Hypotheses

In light of stereotypes linking racial and ethnic minorities to crime (Barak, 1994; Chavez, 2013; Urbina, 2012), we predict that minority defendants will advance further in the system than White defendants. In contrast, cases with minority victims will be treated more leniently than White victim cases because of the devaluation of minority victims. Moreover, we hypothesize that cases with White victims and minority defendants will advance further in the death penalty process, given Whites’ fears of being victimized by minorities (Chavez, 2013; Urbina, 2012; Urbina & Álvarez, 2016). According to the cumulative disadvantage perspective, racial/ethnic disparities will increase as cases advance through the court system. In other words, the magnitude of racial/ethnic disparities will increase at each successive stage (e.g., racial/ethnic disparities at the death notice stage will be larger than the stage at the special circumstance charging stage).

Results

Descriptive Statistics

Table 1 speaks to the funneling of cases based on victim and defendant race/ethnicity. Only a small percentage of cases result in a death-eligible charge (21%) or death notice (3%). And even among death-eligible cases, relatively few (16%) involve a death notice. The proportion of minority victims decreases at each stage, although the pattern is more pronounced for Latinos. For example, Latino victims represent 48% of all victims but account for 38% of special circumstance cases and 27% of death notice cases. The funneling of cases based on defendant race/ethnicity is less dramatic. From the beginning to the final stage, the proportion of Black defendants increases 16%, while the proportion of Latino defendants decreases 27%. Case progression is also influenced by victim–defendant racial/ethnic dyads. Across the entire system, the proportion of White defendant–White victim cases increases 9%, while the proportion of Latino defendant–Latino victim decreases 28% and the proportion of Black defendant–Black victim cases decreases 5%, respectively. Conversely, the proportion of Latino defendant–White victim and Black defendant–White victim increases 3% and 18%, respectively.

Model Results

According to Models 1 and 4, victim race/ethnicity is statistically significant, but defendant race/ethnicity is not significant (see Table 2). Disparities between cases with minority and White victims increase at each successive stage, with the largest differences between Latino and White victims. Compared to White victim cases, those with Latino victims are 42% less likely to involve a special circumstance (Model 1) and 69% less likely to contain a death notice (Model 4). Similarly, cases with Black victims are 67% less likely to involve a special circumstance (Model 1) and 64% less likely to contain a death notice than White victim cases are (Model 4). Turning to defendant race/ethnicity, we see no differences between Whites and non-Whites in the full models (Models 1 and 4).

Several nonracial/ethnic variables predict case progression. Defendants accused of multiple murder are more likely to receive a special circumstance and death notice, whereas felony-murder defendants are more likely to receive a special circumstance but not a death notice. Cases with a greater number of aggravating factors are more likely to involve a special circumstance, while the number of mitigating characteristics is negatively associated with the odds of a special circumstance filing. Homicides involving a stranger victim–offender relationship are more likely to involve a special circumstance but not a death notice. Cases with greater media coverage are more likely to involve a special circumstance and a death notice, while many of the other social contextual
### Table 1. Summary Statistics for LA County Homicide Cases.

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Cases</th>
<th>Nonspecial Circumstance</th>
<th>Special Circumstance</th>
<th>Death Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special circumstance charge</td>
<td>0.21 (0.40)</td>
<td>0.00 (0.00)</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
</tr>
<tr>
<td>Death notice</td>
<td>0.03 (0.18)</td>
<td>0.00 (0.00)</td>
<td>0.16 (0.37)</td>
<td>1.00 (0.00)</td>
</tr>
<tr>
<td><strong>Victim demographics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim race/ethnicity: Black</td>
<td>0.36 (0.48)</td>
<td>0.36 (0.48)</td>
<td>0.32 (0.47)</td>
<td>0.31 (0.46)</td>
</tr>
<tr>
<td>Victim race/ethnicity: Latino</td>
<td>0.48 (0.50)</td>
<td>0.51 (0.50)</td>
<td>0.38 (0.49)</td>
<td>0.27 (0.44)</td>
</tr>
<tr>
<td>Victim race/ethnicity: White</td>
<td>0.16 (0.36)</td>
<td>0.12 (0.33)</td>
<td>0.29 (0.45)</td>
<td>0.42 (0.49)</td>
</tr>
<tr>
<td>Victim gender: Male</td>
<td>0.85 (0.36)</td>
<td>0.87 (0.34)</td>
<td>0.78 (0.42)</td>
<td>0.69 (0.46)</td>
</tr>
<tr>
<td>Victim age</td>
<td>28.62 (13.27)</td>
<td>27.31 (12.43)</td>
<td>33.67 (15.02)</td>
<td>33.27 (13.72)</td>
</tr>
<tr>
<td>Victim edu: Nonhigh school grad</td>
<td>0.34 (0.47)</td>
<td>0.33 (0.47)</td>
<td>0.39 (0.49)</td>
<td>0.41 (0.49)</td>
</tr>
<tr>
<td>Victim edu: College grad</td>
<td>0.14 (0.34)</td>
<td>0.11 (0.32)</td>
<td>0.22 (0.42)</td>
<td>0.31 (0.46)</td>
</tr>
<tr>
<td>Victim married/widowed</td>
<td>0.24 (0.43)</td>
<td>0.20 (0.40)</td>
<td>0.38 (0.49)</td>
<td>0.52 (0.50)</td>
</tr>
<tr>
<td><strong>Defendant demographics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defendant race/ethnicity: Black</td>
<td>0.41 (0.49)</td>
<td>0.39 (0.49)</td>
<td>0.48 (0.50)</td>
<td>0.55 (0.50)</td>
</tr>
<tr>
<td>Defendant race/ethnicity: Latino</td>
<td>0.46 (0.50)</td>
<td>0.50 (0.50)</td>
<td>0.33 (0.47)</td>
<td>0.23 (0.42)</td>
</tr>
<tr>
<td>Defendant race/ethnicity: White</td>
<td>0.13 (0.33)</td>
<td>0.11 (0.32)</td>
<td>0.19 (0.39)</td>
<td>0.22 (0.41)</td>
</tr>
<tr>
<td>Defendant gender: Male</td>
<td>0.94 (0.23)</td>
<td>0.94 (0.24)</td>
<td>0.95 (0.23)</td>
<td>0.92 (0.27)</td>
</tr>
<tr>
<td>Log (# of prior felony convictions)</td>
<td>0.25 (0.47)</td>
<td>0.25 (0.46)</td>
<td>0.27 (0.51)</td>
<td>0.32 (0.53)</td>
</tr>
<tr>
<td>Defendant age</td>
<td>25.59 (8.66)</td>
<td>25.86 (8.99)</td>
<td>24.54 (7.09)</td>
<td>25.88 (6.59)</td>
</tr>
<tr>
<td><strong>Victim–defendant racial dyads</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White victim and Latino defendant</td>
<td>0.05 (0.21)</td>
<td>0.04 (0.20)</td>
<td>0.07 (0.25)</td>
<td>0.07 (0.25)</td>
</tr>
<tr>
<td>White victim and Black defendant</td>
<td>0.04 (0.20)</td>
<td>0.02 (0.15)</td>
<td>0.11 (0.32)</td>
<td>0.20 (0.40)</td>
</tr>
<tr>
<td>White victim and White defendant</td>
<td>0.08 (0.27)</td>
<td>0.07 (0.25)</td>
<td>0.12 (0.32)</td>
<td>0.16 (0.37)</td>
</tr>
<tr>
<td>Latino victim and Latino defendant</td>
<td>0.38 (0.49)</td>
<td>0.42 (0.49)</td>
<td>0.24 (0.43)</td>
<td>0.14 (0.35)</td>
</tr>
<tr>
<td>Latino victim and Black defendant</td>
<td>0.07 (0.25)</td>
<td>0.06 (0.24)</td>
<td>0.11 (0.31)</td>
<td>0.09 (0.29)</td>
</tr>
<tr>
<td>Latino victim and White defendant</td>
<td>0.03 (0.17)</td>
<td>0.03 (0.17)</td>
<td>0.04 (0.19)</td>
<td>0.04 (0.19)</td>
</tr>
<tr>
<td>Black victim and Latino defendant</td>
<td>0.04 (0.19)</td>
<td>0.04 (0.20)</td>
<td>0.03 (0.17)</td>
<td>0.02 (0.15)</td>
</tr>
<tr>
<td>Black victim and Black defendant</td>
<td>0.30 (0.46)</td>
<td>0.31 (0.46)</td>
<td>0.26 (0.44)</td>
<td>0.26 (0.44)</td>
</tr>
<tr>
<td>Black victim and White defendant</td>
<td>0.02 (0.14)</td>
<td>0.02 (0.12)</td>
<td>0.03 (0.18)</td>
<td>0.02 (0.15)</td>
</tr>
<tr>
<td><strong>Case characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor score: Mitigators</td>
<td>-0.00 (1.00)</td>
<td>0.04 (1.02)</td>
<td>-0.14 (0.90)</td>
<td>-0.02 (0.97)</td>
</tr>
<tr>
<td>Factor score: Aggravators</td>
<td>0.00 (1.00)</td>
<td>-0.11 (0.58)</td>
<td>0.43 (1.82)</td>
<td>0.55 (2.10)</td>
</tr>
<tr>
<td>Multiple victims</td>
<td>0.09 (0.28)</td>
<td>0.03 (0.16)</td>
<td>0.32 (0.47)</td>
<td>0.61 (0.49)</td>
</tr>
<tr>
<td>Contemporaneous felony</td>
<td>0.49 (0.50)</td>
<td>0.39 (0.49)</td>
<td>0.89 (0.31)</td>
<td>0.90 (0.30)</td>
</tr>
<tr>
<td>Multiple defendants</td>
<td>0.40 (0.49)</td>
<td>0.35 (0.48)</td>
<td>0.58 (0.49)</td>
<td>0.57 (0.50)</td>
</tr>
<tr>
<td>Log (# of counts)</td>
<td>0.75 (0.25)</td>
<td>0.71 (0.15)</td>
<td>0.87 (0.45)</td>
<td>1.12 (0.69)</td>
</tr>
<tr>
<td>Weekday homicide</td>
<td>0.38 (0.48)</td>
<td>0.38 (0.49)</td>
<td>0.35 (0.48)</td>
<td>0.43 (0.50)</td>
</tr>
<tr>
<td>Quick arrest (i.e., single day arrest)</td>
<td>0.36 (0.48)</td>
<td>0.38 (0.49)</td>
<td>0.26 (0.44)</td>
<td>0.30 (0.46)</td>
</tr>
<tr>
<td>Firearm weapon</td>
<td>0.75 (0.43)</td>
<td>0.75 (0.43)</td>
<td>0.76 (0.43)</td>
<td>0.80 (0.40)</td>
</tr>
<tr>
<td>Location: Public place</td>
<td>0.66 (0.47)</td>
<td>0.66 (0.47)</td>
<td>0.63 (0.48)</td>
<td>0.62 (0.49)</td>
</tr>
<tr>
<td>Location: Residence</td>
<td>0.26 (0.44)</td>
<td>0.26 (0.44)</td>
<td>0.27 (0.44)</td>
<td>0.30 (0.46)</td>
</tr>
<tr>
<td>Relationship: Stranger</td>
<td>0.19 (0.40)</td>
<td>0.16 (0.37)</td>
<td>0.33 (0.47)</td>
<td>0.38 (0.49)</td>
</tr>
<tr>
<td>Relationship: Unclear</td>
<td>0.30 (0.46)</td>
<td>0.29 (0.46)</td>
<td>0.32 (0.47)</td>
<td>0.34 (0.47)</td>
</tr>
<tr>
<td><strong>Social contextual factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incident year 1991</td>
<td>0.22 (0.41)</td>
<td>0.22 (0.41)</td>
<td>0.23 (0.42)</td>
<td>0.31 (0.46)</td>
</tr>
<tr>
<td>Incident year 1992</td>
<td>0.22 (0.41)</td>
<td>0.21 (0.41)</td>
<td>0.23 (0.42)</td>
<td>0.17 (0.37)</td>
</tr>
<tr>
<td>Incident year 1993</td>
<td>0.19 (0.40)</td>
<td>0.20 (0.40)</td>
<td>0.18 (0.38)</td>
<td>0.16 (0.37)</td>
</tr>
<tr>
<td>Incident year 1994</td>
<td>0.16 (0.37)</td>
<td>0.16 (0.37)</td>
<td>0.16 (0.37)</td>
<td>0.14 (0.34)</td>
</tr>
</tbody>
</table>

(continued)
variables are not significant. Finally, the hazard rate of receiving a special circumstance charge was not a significant predictor of death notice filings in Models 4–6.

Models 2 and 3 as well as 5 and 6 compare the relative influence of victim and defendant race/ethnicity on case progression. Since victim and defendant race/ethnicity often overlap, we estimated victim racial/ethnic disparities without defendant race/ethnicity in the model and vice versa. Comparing Models 2 and 3 as well as 5 and 6 to Models 1–4, victim racial/ethnic disparities are fairly similar regardless of whether or not defendant race/ethnicity is included. In contrast, the influence of defendant race/ethnicity on case progression changes once victim race/ethnicity is excluded from the model. Defendant race/ethnicity becomes negative and significant for Blacks and Latinos at the special circumstance stage but not a death notice. These findings suggest that victim race/ethnicity is more predictive of death penalty charging decisions and thus likely absorbs some of the influence of defendant race/ethnicity on case progression.

In light of prior research highlighting the combinational influence of victim and defendant race/ethnicity, Models 7–10 examine victim–defendant racial/ethnic dyads (Grosso et al., 2014). To assess the hypothesis that minority defendant–White victim cases progress further in the system, we estimated models with two different reference groups—Black defendant–White victim and Latino defendant–White victim. While there are a number of interesting comparisons in Table 3, the most theoretically relevant estimates pertain to Black defendant–Black victim and Latino defendant–Latino victim as these allow us to assess the aforementioned hypothesis. Among Black defendants, in Model 7, those who kill Black victims are 74\% less likely to have a special circumstance than those with White victims (β_{Black defendant–Black victim, Model 7} = .26) and in Model 9, those who kill Black victims are 58\% less likely to have a death notice than those with White victims (β_{Black defendant–Black victim, Model 9} = .42). For Latino defendants, in Model 8, those who kill Latino victims are less 50\% less likely to have a special circumstance than White victim cases (β_{Latino defendant–Latino victim, Model 8} = .50) and in Model 10, those who kill Latino victims are 78\% less likely to have a death notice than White victim cases (β_{Latino defendant–Latino victim, Model 10} = .22). These findings indicate that minority defendants who kill White victims receive harsher punishments than those who kill minority victims, with a pattern of cumulative racial/ethnic inequality for Latino defendant–Latino victim cases. Taken together, this pattern indicates that minority defendants who kill White victims receive harsher punishments than those who kill minority victims, with a pattern of cumulative racial/ethnic inequality for Latino defendant–Latino victim cases. These findings convey a general favoritism for White victim cases and speak to fears of White victimization at the hands of minority offenders (Chavez, 2013; Urbina, 2012; Urbina & Alvarez, 2016).

Table 1. (continued)

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Cases</th>
<th>Nonspecial Circumstance</th>
<th>Special Circumstance</th>
<th>Death Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAPD case</td>
<td>0.63 (0.48)</td>
<td>0.64 (0.48)</td>
<td>0.61 (0.49)</td>
<td>0.46 (0.50)</td>
</tr>
<tr>
<td>LASD case</td>
<td>0.21 (0.41)</td>
<td>0.21 (0.40)</td>
<td>0.21 (0.41)</td>
<td>0.28 (0.45)</td>
</tr>
<tr>
<td># of pre-arrest LA Times stories</td>
<td>0.27 (0.94)</td>
<td>0.21 (0.79)</td>
<td>0.52 (1.34)</td>
<td>1.08 (2.16)</td>
</tr>
</tbody>
</table>

Table 2. Logistic Regressions Predicting Death Penalty Outcomes in LA County.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Circumstance Charge (Part 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard rate: Odds of special circumstance charge</td>
<td>1.41 (0.44)</td>
<td>1.38 (0.42)</td>
<td>1.13 (0.34)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim demographics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim race/ethnicity: Black</td>
<td>0.33** (0.07)</td>
<td>0.38** (0.07)</td>
<td>0.36** (0.13)</td>
<td>0.45* (0.15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim race/ethnicity: Latino</td>
<td>0.58** (0.11)</td>
<td>0.50** (0.09)</td>
<td>0.31** (0.13)</td>
<td>0.31** (0.12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim gender: Male</td>
<td>0.65** (0.10)</td>
<td>0.64** (0.10)</td>
<td>0.65** (0.10)</td>
<td>0.74 (0.22)</td>
<td>0.72 (0.21)</td>
<td>0.73 (0.21)</td>
</tr>
<tr>
<td>Victim age</td>
<td>1.10** (0.02)</td>
<td>1.10** (0.02)</td>
<td>1.11** (0.02)</td>
<td>1.03 (0.04)</td>
<td>1.03 (0.04)</td>
<td>1.03 (0.04)</td>
</tr>
<tr>
<td>Victim age squared</td>
<td>1.00** (0.00)</td>
<td>1.00** (0.00)</td>
<td>1.00** (0.00)</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
</tr>
<tr>
<td>Victim edu: Non-high school grad</td>
<td>1.05 (0.15)</td>
<td>1.07 (0.15)</td>
<td>1.03 (0.14)</td>
<td>0.74 (0.24)</td>
<td>0.73 (0.23)</td>
<td>0.88 (0.27)</td>
</tr>
<tr>
<td>Victim edu: College grad</td>
<td>1.21 (0.32)</td>
<td>1.23 (0.32)</td>
<td>1.24 (0.33)</td>
<td>1.43 (0.51)</td>
<td>1.40 (0.50)</td>
<td>1.97* (0.65)</td>
</tr>
<tr>
<td>Victim married/widowed</td>
<td>1.29 (0.19)</td>
<td>1.33* (0.19)</td>
<td>1.28 (0.18)</td>
<td>1.96** (0.51)</td>
<td>1.95* (0.49)</td>
<td>1.79* (0.45)</td>
</tr>
<tr>
<td>Defendant demographics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defendant race/ethnicity: Black</td>
<td>1.08 (0.25)</td>
<td>0.58** (0.11)</td>
<td>1.71 (0.66)</td>
<td>1.14 (0.41)</td>
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<tr>
<td>Defendant race/ethnicity: Latino</td>
<td>0.66 (0.15)</td>
<td>0.50** (0.10)</td>
<td>1.22 (0.54)</td>
<td>0.78 (0.33)</td>
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</tr>
<tr>
<td>Defendant gender: Male</td>
<td>1.03 (0.25)</td>
<td>1.01 (0.25)</td>
<td>1.06 (0.25)</td>
<td>0.89 (0.42)</td>
<td>0.89 (0.42)</td>
<td>0.84 (0.37)</td>
</tr>
<tr>
<td>Log (# of prior felony convictions)</td>
<td>1.11 (0.13)</td>
<td>1.15 (0.13)</td>
<td>1.08 (0.13)</td>
<td>0.95 (0.23)</td>
<td>1.01 (0.23)</td>
<td>0.94 (0.22)</td>
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<td>1.03 (0.04)</td>
<td>1.03 (0.04)</td>
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<td>1.34** (0.14)</td>
<td>1.31** (0.13)</td>
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<tr>
<td>Defendant age squared</td>
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<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
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<td>Case characteristics</td>
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<tr>
<td>Factor score: Mitigators</td>
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<td>0.82** (0.05)</td>
<td>0.82** (0.05)</td>
<td>1.03 (0.13)</td>
<td>1.02 (0.13)</td>
<td>1.08 (0.14)</td>
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<tr>
<td>Factor score: Aggravators</td>
<td>1.68** (0.14)</td>
<td>1.68** (0.14)</td>
<td>1.67** (0.14)</td>
<td>1.14 (0.09)</td>
<td>1.14 (0.08)</td>
<td>1.11 (0.08)</td>
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<tr>
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<td>13.20** (4.15)</td>
<td>12.49** (4.21)</td>
<td>6.53** (3.10)</td>
<td>6.28** (2.94)</td>
<td>4.61** (2.09)</td>
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<tr>
<td>Contemporaneous felony</td>
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<td>1.31 (0.69)</td>
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<td>Multiple defendants</td>
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<td>1.32** (0.18)</td>
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<td>0.96 (0.23)</td>
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<td>Log (# of counts)</td>
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<td>Weekday homicide</td>
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<td>0.80 (0.11)</td>
<td>0.79 (0.12)</td>
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<td>1.76* (0.41)</td>
<td>1.72* (0.40)</td>
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<td>Quick arrest (i.e., single day arrest)</td>
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<td>0.60** (0.08)</td>
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<td>Firearm weapon</td>
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<td>1.09 (0.17)</td>
<td>1.02 (0.16)</td>
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<td>1.28 (0.42)</td>
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<td>Location: Public place</td>
<td>0.54* (0.13)</td>
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<td>0.54* (0.14)</td>
<td>0.67 (0.37)</td>
<td>0.70 (0.40)</td>
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<td>Location: Residence</td>
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<td>0.61 (0.16)</td>
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<td>0.86 (0.50)</td>
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<tr>
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<td>2.50** (0.38)</td>
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<td>1.79 (0.62)</td>
<td>1.92 (0.64)</td>
<td>1.60 (0.55)</td>
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<tr>
<th>Variables</th>
<th>Model 1</th>
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<td>Odds Ratio (SE)</td>
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<td>Special Circumstance Charge (Part 1)</td>
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<tr>
<td>Relationship: Unclear</td>
<td>1.25 (0.21)</td>
<td>1.28 (0.21)</td>
<td>1.26 (0.21)</td>
<td>1.40 (0.45)</td>
<td>1.46 (0.46)</td>
<td>1.24 (0.38)</td>
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<td>Social contextual factors</td>
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<td></td>
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<tr>
<td>Incident year 1991</td>
<td>1.27 (0.23)</td>
<td>1.24 (0.22)</td>
<td>1.26 (0.22)</td>
<td>0.84 (0.27)</td>
<td>0.81 (0.26)</td>
<td>0.93 (0.30)</td>
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<td>Incident year 1992</td>
<td>1.21 (0.27)</td>
<td>1.18 (0.26)</td>
<td>1.23 (0.29)</td>
<td>0.45 (0.17)</td>
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<td>0.51 (0.19)</td>
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<td>Incident year 1993</td>
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<td>0.95 (0.17)</td>
<td>0.96 (0.17)</td>
<td>0.43 (0.15)</td>
<td>0.43 (0.14)</td>
<td>0.55 (0.18)</td>
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<td>Incident year 1994</td>
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<td>1.32 (0.26)</td>
<td>1.34 (0.26)</td>
<td>0.74 (0.30)</td>
<td>0.73 (0.28)</td>
<td>0.76 (0.30)</td>
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<td>LAPD case</td>
<td>0.88 (0.14)</td>
<td>0.87 (0.14)</td>
<td>0.85 (0.14)</td>
<td>0.70 (0.23)</td>
<td>0.70 (0.23)</td>
<td>0.67 (0.21)</td>
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<tr>
<td>LASD case</td>
<td>0.85 (0.16)</td>
<td>0.81 (0.15)</td>
<td>0.85 (0.15)</td>
<td>0.98 (0.32)</td>
<td>0.92 (0.30)</td>
<td>1.04 (0.33)</td>
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<tr>
<td># of pre-arrest LA Times stories</td>
<td>$1.14^{**}$ (0.06)</td>
<td>$1.14^{**}$ (0.06)</td>
<td>$1.16^{**}$ (0.06)</td>
<td>$1.32^{**}$ (0.10)</td>
<td>$1.31^{**}$ (0.10)</td>
<td>$1.34^{**}$ (0.10)</td>
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<tr>
<td>Observations</td>
<td>5,090</td>
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<td>5,090</td>
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*p < .05. **p < .01.
Table 3. Victim–Defendant Racial/Ethnic Combinations in Logistic Regressions Predicting Death Penalty Outcomes in LA County.

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<tr>
<th>Variables</th>
<th>Model 7</th>
<th>Model 8</th>
<th>Model 9</th>
<th>Model 10</th>
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<td>Hazard rate: Odds of special circumstance charge</td>
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<tr>
<td>White victim and Black defendant</td>
<td>Reference</td>
<td>1.78 (0.60)</td>
<td>Reference</td>
<td>Reference</td>
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<tr>
<td>White victim and Latino defendant</td>
<td>0.56 (0.19)</td>
<td>Reference</td>
<td>1.03 (0.53)</td>
<td>Reference</td>
</tr>
<tr>
<td>White victim and White defendant</td>
<td>0.68 (0.22)</td>
<td>1.21 (0.34)</td>
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<td>0.71 (0.40)</td>
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<tr>
<td>Latino victim and Latino defendant</td>
<td>0.28** (0.09)</td>
<td>0.50** (0.13)</td>
<td>0.23** (0.12)</td>
<td>0.22* (0.13)</td>
</tr>
<tr>
<td>Latino victim and Black defendant</td>
<td>0.57 (0.19)</td>
<td>1.03 (0.29)</td>
<td>0.48 (0.26)</td>
<td>0.46 (0.30)</td>
</tr>
<tr>
<td>Latino victim and White defendant</td>
<td>0.49 (0.25)</td>
<td>0.87 (0.43)</td>
<td>0.17 (0.19)</td>
<td>0.17 (0.19)</td>
</tr>
<tr>
<td>Black victim and Latino defendant</td>
<td>0.25** (0.10)</td>
<td>0.45* (0.16)</td>
<td>0.42 (0.29)</td>
<td>0.41 (0.30)</td>
</tr>
<tr>
<td>Black victim and Black defendant</td>
<td>0.26** (0.08)</td>
<td>0.46** (0.12)</td>
<td>0.42* (0.17)</td>
<td>0.40 (0.21)</td>
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<tr>
<td>Victim demographics</td>
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<tr>
<td>Victim gender: Male</td>
<td>0.65** (0.10)</td>
<td>0.65** (0.10)</td>
<td>0.75 (0.22)</td>
<td>0.75 (0.22)</td>
</tr>
<tr>
<td>Victim age</td>
<td>1.10** (0.02)</td>
<td>1.10** (0.02)</td>
<td>1.03 (0.04)</td>
<td>1.03 (0.04)</td>
</tr>
<tr>
<td>Victim age squared</td>
<td>1.00** (0.00)</td>
<td>1.00** (0.00)</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
</tr>
<tr>
<td>Victim edu: Nonhigh school grad</td>
<td>1.06 (0.15)</td>
<td>1.06 (0.15)</td>
<td>0.76 (0.25)</td>
<td>0.76 (0.25)</td>
</tr>
<tr>
<td>Victim edu: College grad</td>
<td>1.22 (0.33)</td>
<td>1.22 (0.33)</td>
<td>1.46 (0.53)</td>
<td>1.46 (0.53)</td>
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<tr>
<td>Victim married/widowed</td>
<td>1.29 (0.19)</td>
<td>1.29 (0.19)</td>
<td>1.92* (0.49)</td>
<td>1.92* (0.49)</td>
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<tr>
<td>Defendant demographics</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Defendant gender: Male</td>
<td>1.05 (0.25)</td>
<td>1.05 (0.25)</td>
<td>0.86 (0.40)</td>
<td>0.86 (0.40)</td>
</tr>
<tr>
<td>Log (# of prior felony convictions)</td>
<td>1.11 (0.13)</td>
<td>1.11 (0.13)</td>
<td>0.97 (0.23)</td>
<td>0.97 (0.23)</td>
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<tr>
<td>Defendant age</td>
<td>1.04 (0.04)</td>
<td>1.04 (0.04)</td>
<td>1.35** (0.14)</td>
<td>1.35** (0.14)</td>
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<tr>
<td>Defendant age squared</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
<td>1.00* (0.00)</td>
<td>1.00* (0.00)</td>
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<tr>
<td>Case characteristics</td>
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</tr>
<tr>
<td>Factor score: Mitigators</td>
<td>0.81** (0.05)</td>
<td>0.81** (0.05)</td>
<td>1.03 (0.13)</td>
<td>1.03 (0.13)</td>
</tr>
<tr>
<td>Factor score: Aggravators</td>
<td>1.68** (0.14)</td>
<td>1.68** (0.14)</td>
<td>1.15 (0.09)</td>
<td>1.15 (0.09)</td>
</tr>
<tr>
<td>Multiple victims</td>
<td>13.89** (4.47)</td>
<td>13.89** (4.47)</td>
<td>6.58** (3.19)</td>
<td>6.58** (3.19)</td>
</tr>
<tr>
<td>Contemporaneous felony</td>
<td>8.56** (1.32)</td>
<td>8.56** (1.32)</td>
<td>1.28 (0.71)</td>
<td>1.28 (0.71)</td>
</tr>
<tr>
<td>Multiple defendants</td>
<td>1.32* (0.18)</td>
<td>1.32* (0.18)</td>
<td>0.94 (0.23)</td>
<td>0.94 (0.23)</td>
</tr>
<tr>
<td>Log (# of counts)</td>
<td>1.25 (0.28)</td>
<td>1.25 (0.28)</td>
<td>1.28 (0.26)</td>
<td>1.28 (0.26)</td>
</tr>
<tr>
<td>Weekday homicide</td>
<td>0.82 (0.12)</td>
<td>0.82 (0.12)</td>
<td>1.80* (0.43)</td>
<td>1.80* (0.43)</td>
</tr>
<tr>
<td>Quick arrest (i.e., single day arrest)</td>
<td>0.61** (0.08)</td>
<td>0.61** (0.08)</td>
<td>1.24 (0.33)</td>
<td>1.24 (0.33)</td>
</tr>
<tr>
<td>Firearm weapon</td>
<td>1.10 (0.18)</td>
<td>1.10 (0.18)</td>
<td>1.25 (0.40)</td>
<td>1.25 (0.40)</td>
</tr>
<tr>
<td>Location: Public place</td>
<td>0.53* (0.13)</td>
<td>0.53* (0.13)</td>
<td>0.69 (0.39)</td>
<td>0.69 (0.39)</td>
</tr>
<tr>
<td>Location: Residence</td>
<td>0.60 (0.16)</td>
<td>0.60 (0.16)</td>
<td>0.82 (0.47)</td>
<td>0.82 (0.47)</td>
</tr>
<tr>
<td>Relationship: Stranger</td>
<td>2.41** (0.38)</td>
<td>2.41** (0.38)</td>
<td>1.73 (0.60)</td>
<td>1.73 (0.60)</td>
</tr>
<tr>
<td>Relationship: Unclear</td>
<td>1.24 (0.21)</td>
<td>1.24 (0.21)</td>
<td>1.36 (0.44)</td>
<td>1.36 (0.44)</td>
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<tr>
<td>Social contextual factors</td>
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</tr>
<tr>
<td>Incident year 1991</td>
<td>1.27 (0.23)</td>
<td>1.27 (0.23)</td>
<td>0.83 (0.27)</td>
<td>0.83 (0.27)</td>
</tr>
<tr>
<td>Incident year 1992</td>
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<td>1.21 (0.28)</td>
<td>0.44* (0.17)</td>
<td>0.44* (0.17)</td>
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<tr>
<td>Incident year 1993</td>
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<td>0.95 (0.17)</td>
<td>0.44* (0.15)</td>
<td>0.44* (0.15)</td>
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<td>Incident year 1994</td>
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<td>1.32 (0.26)</td>
<td>0.73 (0.29)</td>
<td>0.73 (0.29)</td>
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<tr>
<td>LAPD case</td>
<td>0.89 (0.15)</td>
<td>0.89 (0.15)</td>
<td>0.69 (0.22)</td>
<td>0.69 (0.22)</td>
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</table>

(continued)
This study finds that cases with minority victims are treated more leniently than those with White victims at multiple stages of the death penalty process. Moreover, victim-based racial/ethnic disparities accumulate as cases traverse through the court system, producing a Whiter pool of victims at each phase. In contrast, defendant racial/ethnic disparities are largely suppressed by victim race/ethnicity. Although defendant race/ethnicity is less influential, it moderates the impact of victim race/ethnicity such that cases with White victims and minority defendants are more likely to result in a death-eligible charge or death notice. These patterns offer support for a cumulative disadvantage explanation of victim-based racial/ethnic disparities and are consistent with prior research finding that White victim cases, especially those with a Black defendant, are treated more punitively. Prior research indicates that victim race/ethnicity is typically more predictive of death penalty decision-making than defendant race/ethnicity (Grosso et al., 2014; USGAO 1990), perhaps because death penalty discussions often center on victim’s rights (Zimring, 2003).5

While prior research has mainly focused on prosecutors’ decision to seek, we employed a two-stage modeling approach to examine the relationship between multiple death penalty charging decisions. Our results do not reveal a statistically significant relationship between the filing of death-eligible charges and a death notice. This null relationship most likely stems from the breadth of California’s death penalty laws, under which nearly all first-degree murders qualify for the death penalty (CCFAJ, 2008). Moreover, these findings, which are consistent with previous research citing the breadth California’s death penalty scheme (Shatz, 2007; Shatz & Rivkind, 1997), suggest that the state’s capital punishment laws may not sufficiently narrow the pool of death-eligible cases as mandated in Furman v. Georgia (1972). Aside from such justice concerns, another consequence of California’s overbroad “narrowing” scheme is that prosecutors’ charging power is thereby increased. Prosecutors’ ability to file death-eligible charges in such a wide range of cases, and then more selectively file death notices down the line, opens the door to the influence of extralegal factors such as race/ethnicity.

The accumulation of victim-based racial/ethnic disparities speaks to the cumulative disadvantage perspective. Victim racial/ethnic disparities stem from the compounding effects of multiple decision-making points, rather than originating from any single decision. Like other contemporary institutions, the criminal justice system’s adherence to color-blind logics helps to structure the policies and practices that govern the lives of minorities in fundamental, but seemingly race/ethnicity-neutral ways (Urbina & Alvarez, 2016). For example, while homicide laws are ostensibly race/ethnicity-neutral, their breadth provides prosecutors with considerable discretionary power,
allowing race/ethnicity to creep into the decision-making process (Radelet & Pierce, 2009). Prosecutors generally characterize White victim cases as more serious than those with minority victims in terms of death-eligibility, and as a result, they contain death notices at higher rates (Pierce et al., 2014). This “upgrading” process simultaneously compounds and obscures cumulative racial/ethnic disparities by homogenizing the racial/ethnic composition of victims and artificially inflating the “death-eligibility” of White victim cases. Cumulative victim racial/ethnic disparities may stem from prosecutorial confirmation bias, whereby prosecutors systematically underdevelop White victim cases. Conversely, higher levels of legal cynicism among minority residents could make it more difficult to punish offenders in minority victim cases, especially as cases progress through the courts.

Results highlight the importance of victim race/ethnicity for death penalty decision-making. Victim racial/ethnic disparities may tap into racial/ethnic crime stereotypes about the “worthiness” of White victims in terms of societal attention and criminal justice resources (Urbina & Álvarez, 2016). Given that the public views contemporary criminal justice responses to homicide as affirmations of the state’s valuation of victims (Zimring, 2003), racial/ethnic disparities in death penalty decision-making may also perpetuate racialized beliefs about victimhood. In contrast, defendant race/ethnicity is not significant when victim race/ethnicity is included in the model. However, the influence of defendant race/ethnicity on prosecutorial decision-making could be subtler. To the extent that White victim homicides are more aggressively prosecuted, that may mean that prosecutors have more evidence implicating White defendants since most homicides are intraracial/intraethnic (Baldus, Woodworth, Zuckerman, Weiner, & Catherine, 2009). Thus, the findings could simply reflect the fact that White victim cases generally progress further in the criminal justice system (for a similar discussion, see Spohn, 2000). Not only do the analyses presented here suggest that victim race/ethnicity absorbs some of the predictive power of defendant race/ethnicity, but national statistics also indicate that the underrepresentation of Black victims in capital cases is partially explained by a reluctance to capitally prosecute Black defendant–Black victim cases (Blume, Eisenberg, & Wells, 2004). A similar argument could help explain the null findings regarding defendant race/ethnicity for Latinos. That is, the effects for victim race/ethnicity among Latinos could reflect a reluctance to prosecute Latino defendant–Latino victim cases.

Case progression also depends on the interplay between victim and defendant race/ethnicity. We find that Black defendant–Black victim disparities are larger at the special circumstance stage but smaller at the death notice phase. In contrast, disparities are smaller among Latino defendant–Latino cases at the special circumstance stage but larger at the death notice phase. Cases with a White victim and minority defendant are treated more punitively and these disparities compounded across the court process for Latino defendant–Latino victim cases. While prosecutors generally favor White victim cases, this preference is especially pronounced when the defendant is a racial/ethnic minority. In this way, minority defendant–White victim cases may speak to fears regarding the victimization of Whites at the hands of minorities (Urbina, 2012; Urbina & Álvarez, 2016). These results extend prior research finding that Black defendants accused of killing White victims are more likely to be prosecuted capitally and/or sentenced to death by revealing similar disparities among Latino defendant–White victim cases. Such patterns are also consistent with research on cumulative disadvantage which reveals that while Black and Latino defendants are both disadvantaged in the court process, it occurs through differing mechanisms (Kutateladze et al., 2014; Sutton, 2013). In this way, our findings speak to the importance of examining victim–defendant racial/ethnic dyads within a cumulative disadvantage perspective by illustrating differing mechanisms of racial/ethnic disparities for Black and Latino defendants/victims.

But what explains the cumulative disadvantage of Latino defendant–Latino victim cases vis-à-vis Latino defendant–White victim cases? It may be that prosecutors are correcting for disparities at one stage or another by treating certain types of cases more harshly/leniently than previous stages (Kutateladze et al., 2014). For Black defendant–Black victim cases, prosecutors might seek to reduce large disparities at the special circumstance stage by filing death notices in a smaller
percentage of Black defendant–Black victim cases. In contrast, prosecutors could be responding to smaller disparities among Latino defendant–Latino victim cases at the special circumstance phase by more aggressively filing death notices in these cases; in other words, prosecutors may perceive the first stage as being too lenient for Latino defendant–Latino victim cases and thus respond more harshly to these types of cases at the death notice stage.

An alternative explanation stems from the “Latino threat” narrative. Increased punitiveness among Latino defendants that kill White victims might tap into the “Latino threat” narrative, which portrays Latinos as criminally inclined (Chavez, 2013; Urbina, 2012; Urbina & Álvarez, 2016). While numerous studies outside of the Southwest have shown that Black defendants who kill White victims receive harsher punishment (Grosso et al., 2014), the pattern of cumulative disadvantage for Latino defendants who kill White victims may be especially pronounced in southwestern states such as California. The convergence of anti-immigrant sentiment, fear of Latino violence, and the historic lynching of Latinos in the Southwest could mean that stereotypes linking Latinos to crime are stronger in the region (Urbina, 2004). In turn, the amplification of the “Latino threat” narrative may lead Latino defendants, especially those who kill White victims, to receive harsher punishments. Although a thorough test of these potential explanations is beyond the scope of this text, future research should further interrogate these unique findings to shed light on the mechanisms behind these patterns.

Limitations and Future Directions

These findings should be evaluated in light of the study’s limitations. Like much of the prior research, we were unable to directly control for evidence (Kutateladze et al., 2014). Instead, crime characteristics typically associated with greater evidence (e.g., quick arrest, weapon, location) serve as proxies for the availability and strength of evidence (Baldus, Woodworth, Zuckerman, et al., 2009). A fuller understanding of cumulative racial/ethnic disparities would not only emerge from the inclusion of such measures but also arise from analyses employing a wider range of methodologies and data sources. Observational data sets, including the one analyzed here, contain a limited range of variables (Kutateladze et al., 2014), while regression techniques say less about how or why these patterns exist (Álvarez & Urbina, 2014; Baumer, 2013).

This study is also restricted to one jurisdiction—LA County—in the 1990s. Similar to several other studies, we focus on a single jurisdiction in order to provide a more nuanced account of prosecutorial death penalty decision-making in a particular locale (e.g., see Baldus et al., 1997; Lee, 2007; Phillips, 2009; Sorensen & Wallace, 1999; Weiss et al., 1996, 1999). And given that LA County accounted for the majority of California death sentences from 1990 to 1994 (CDCR, 2015), it is an important site of inquiry. Although LA County’s homicide rate in the 1990s was comparable to other large urban jurisdictions (see Appendix B), it was characterized by a particularly tumultuous racial/ethnic climate at that time. The Orenthal James (OJ) Simpson trial, Rodney King beating, and subsequent riots make this a unique moment in U.S. racial/ethnic relations, which may limit the generalizability of these findings to other locations and time periods. In this way, the study can be thought of as a historical snapshot of California’s death penalty at its apex, revealing the racialization of this most extreme punishment at a moment of tremendous racial/ethnic tensions.

Notwithstanding these sociohistorical circumstances, we argue that the results are relevant to other locales and time periods. Although prosecutorial charging practices and public opinion may have changed in LA County and elsewhere since the early 1990s, race/ethnicity continues to permeate American criminal justice (Gonzalez-Van Cleve, 2016; Salinas, 2015), and as recent social movements have demonstrated, the United States remains racially/ethnically divided in many respects (Gutierrez, 2016). Moreover, because of long delays in California’s death penalty system, cases from 1990 to 1994 continue to shape contemporary legal and political debates. California capital appeals take an average of more than 25 years to complete (see Jones v. Chappell, 2014), and
thus, nearly 40 inmates currently on California’s death row had cases originating between 1990 and 1994 (CDCR, 2015). For example, *Jones v. Chappell* (2014), which found the state’s death penalty to be unconstitutional due to excessive delays in the appellate process, originated in LA County during this period—Ernest Dewayne Jones was sentenced to death for a 1992 murder in LA County. More recently, Proposition 66, which was designed to speed-up California’s death penalty process, was placed on the November 2016 ballot in large part because of public concerns regarding excessive delays in California’s death penalty appeals (CA Legislative Analyst’s Office, 2016). On November 8, 2016, California voters approved Proposition 66, and as a result, capital appeals must be completed within 5 years. These recent appellate cases and Proposition 66 speak to the continuing importance of death penalty cases in the early 1990s for the future of California’s death penalty.

**Conclusion**

Too often, research advances a narrow view of “‘when and where’ race [and ethnicity] may shape sentencing outcomes,” focusing on sentencing outcomes, rather than a broader range of penal processes (Baumer, 2013, p. 238; Bushway & Forst, 2013; Frase, 2013). Yet, this approach ignores the multitude of pretrial processes that shape these decisions, and as such “underestimates and excludes from consideration the vast, interrelated penal processes that produce racial/ethnic inequality” (Murakawa & Beckett, 2010, p. 715). In this way, the current examination of cumulative racial/ethnic bias not only sheds light on “when and where” race/ethnicity matters but also speaks to the institutional processes that generate and perpetuate racial/ethnic disparities within American death penalty systems (Baumer, 2013, p. 238; Bushway & Forst, 2013; Frase, 2013). In doing so, this analysis helps to advance mechanism-based explanations often neglected in sentencing studies (Baumer, 2013).

This research indicates that pretrial processes play a critical role in shaping the racial/ethnic composition of death penalty cases. While studies typically examine decisions to seek the death penalty and/or death-sentencing outcomes among a sample of death-eligible cases, these data indicate that cases with White victims are more likely to be charged a death-eligible offense. Such “upgrading” processes filter-out cases with minority victims while simultaneously expanding the pool of White victims (Pierce et al., 2014; Radelet & Pierce, 1985). These findings echo claims by the Blumstein et al. (1983) and USGAO (1990) regarding the importance of conceptualizing punishment outcomes as products of long and complex decision-chains.

Differences in the impact of victim and defendant race/ethnicity across pretrial decision-making points speak to the fluidity of racial/ethnic disparities within death penalty institutions. In contrast to prior research on death penalty case progression (Bienen, Weiner, & Mills, 1989; Sorensen & Wallace, 1999), the disaggregation of these pretrial stages and the inclusion of a larger and more diverse sample of defendants revealed insights about the institutional pathways producing racial/ethnic disparities. Although Black and Latino victims are both underrepresented in capital cases, these disparities arise from different mechanisms. The gap between Black and White victims is larger at the front-end, but differences between Latino and White victims increase across stages of the court system. Similarly, disparities among victim–defendant racial/ethnic dyads increase across the court process for Latino defendant–Latino victim cases, but not for Black defendant–Black victim cases. In line with prior research outside of the death penalty context (Kutateladze et al., 2014; Sutton, 2013), Blacks and Latinos experience different case-processing trajectories, pointing to the need for more precise accounts of the mechanisms generating punishment disparities (Baumer, 2013; Murakawa & Beckett, 2010; Salinas, 2015; Urbina & Álvarez, 2016).

Given the influence of race/ethnicity at multiple decision-making points, this study also underscores the need for multistage policy reforms. Efforts to guide jury decision-making, for example, may not produce racial/ethnic parity at the death-sentencing stage due to the cumulative effects of race/ethnicity at the pretrial stages. Moreover, as research on federal sentencing reforms has shown,
removing discretion from one point in the system can inadvertently increase discretion in others (Spohn, 2000). In light of the systematic racial/ethnic disparities found here, coupled with the potential displacement of discretion, it is unlikely that single-stage policy reforms will lead to greater racial/ethnic proportionality in California and other death penalty states. As such, remedial efforts should strive to disrupt patterns of cumulative racial/ethnic disadvantage by fundamentally reforming criminal justice processes at multiple levels.

In closing, race/ethnicity profoundly shapes the life-course analysis of homicide cases in ways that have significant theoretical and policy implications. Results indicate that racial/ethnic disparities in capital trials identified by prior research are shaped by earlier pretrial decisions. These findings speak to the processes by which racial/ethnic disparities are formed and sustained within death penalty institutions, underscoring the dynamic and contextually contingent role of race/ethnicity. In LA County at least, racial/ethnic bias permeates the prosecution of homicide cases, shaping the trajectory of a case early on in the process.

Appendix A

Table A1. Variables and Coding Schemes.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
</tr>
<tr>
<td>Death-eligible charge</td>
<td>Death-eligible charge = 1, no death-eligible charge = 0</td>
</tr>
<tr>
<td>Death notice</td>
<td>Death notice = 1, no death notice = 0</td>
</tr>
<tr>
<td><strong>Victim demographics</strong></td>
<td></td>
</tr>
<tr>
<td>Victim race/ethnicity</td>
<td>Latino (1 = yes, 0 = no), Black (1 = yes, 0 = no), and White (referent group)</td>
</tr>
<tr>
<td>Victim age and victim age²</td>
<td>Continuous: Victim and defendant age were squared to capture their hypothesized u-shaped functional form (i.e., cases with youthful/elderly victims may receive different treatment than those with middle-aged ones)</td>
</tr>
<tr>
<td>Education</td>
<td>Lower than high school (1 = yes, 0 = no), high school (reference), college grad (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>Marital status</td>
<td>1 = married/widowed, 0 = not married</td>
</tr>
<tr>
<td><strong>Defendant demographics</strong></td>
<td></td>
</tr>
<tr>
<td>Defendant race/ethnicity</td>
<td>Latino (1 = yes, 0 = no), Black (1 = yes, 0 = no), and White (referent group)</td>
</tr>
<tr>
<td>Defendant age and defendant age²</td>
<td>Continuous: See discussion of victim age above</td>
</tr>
<tr>
<td>Log (# of prior felony convictions)</td>
<td>Continuous: Variable was logarithmically transformed to capture its potential diminishing effect</td>
</tr>
<tr>
<td><strong>Case characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Factor score: Aggravators⁵</td>
<td>Factor score combining: (a) Preplanned murder (λ = .46); (b) victim begged for mercy (λ = .43); (c) victim was tortured (λ = .65); (d) unusually defenseless victim—that is, handicapped, pregnant, and so on (λ = .34); (e) victim was disemboweled or dismembered (λ = .64); (f) victim was bound and gagged (λ = .45); and (g) multiple murder methods used (λ = .39)</td>
</tr>
<tr>
<td>Factor score: Mitigators⁵</td>
<td>Factor score combining: (a) defendant’s first offense (λ = .46), (b) victim physically provoked defendant (λ = .48), (c) defendant was on drugs or alcohol during crime (λ = .47), (d) defendant was mentally impaired during crime (λ = .49), (e) defendant had history of substance abuse (λ = .32), and (f) defendant had history of physical, mental, or emotional problems (λ = .58)</td>
</tr>
</tbody>
</table>

(continued)
Table A1. (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple victims</td>
<td>1 = multiple victims, 0 = single victim</td>
</tr>
<tr>
<td>Contemporaneous felony</td>
<td>1 = felony murder, 0 = not felony murder</td>
</tr>
<tr>
<td>Multiple defendants</td>
<td>1 = multiple defendants, 0 = single defendant</td>
</tr>
<tr>
<td>Log (# of counts)</td>
<td>Continuous: Variable was logarithmically transformed to capture its potential diminishing effect</td>
</tr>
<tr>
<td>Weekday homicide</td>
<td>1 = weekday, 0 = weekend</td>
</tr>
<tr>
<td>Quick arrest (i.e., single day arrest)</td>
<td>1 = incident and arrest occurred on the same day, 0 = more than one day from the incident to the arrest date</td>
</tr>
<tr>
<td>Firearm weapon</td>
<td>1 = firearm, 0 = non-firearm</td>
</tr>
<tr>
<td>Crime scene location</td>
<td>Residence (1 = yes, 0 = no), other locations (1 = yes, 0 = no), and public area (reference)</td>
</tr>
<tr>
<td>Victim–offender relationship</td>
<td>Stranger (1 = yes, 0 = no), relationship unclear (1 = yes, 0 = no), and nonstranger (reference)</td>
</tr>
</tbody>
</table>

Social contextual factors

- # of pre-arrest LA Times articles: Number of prearrest stories that appeared in the Los Angeles Times newspaper (continuous). Prearrest articles were used to maintain causal ordering.
- Year of incident: 1994 (1 = yes, 0 = no), 1993 (1 = yes, 0 = no), 1992 (1 = yes, 0 = no), 1991 (1 = yes, 0 = no), and 1990 (reference).
- Police agency: LA Police Department (1 = yes, 0 = no), LA County Sheriff’s Department (1 = yes, 0 = no), and other city-level agencies (reference).

*Factor scores constructed via principal components factor analysis with oblique rotation.

Appendix B

Table B1. Comparative Table of Homicide Summary Statistics.

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Victim demographics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim race: Black</td>
<td>.36</td>
<td>.59</td>
<td>.59</td>
<td>.57</td>
<td>NA</td>
</tr>
<tr>
<td>Victim race: Latino</td>
<td>.48</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Victim race: White</td>
<td>.16</td>
<td>.38</td>
<td>.39</td>
<td>.41</td>
<td>NA</td>
</tr>
<tr>
<td>Victim gender: Male</td>
<td>.85</td>
<td>.84</td>
<td>.85</td>
<td>.82</td>
<td>NA</td>
</tr>
<tr>
<td>Victim age: 18- to 34-years old</td>
<td>.59</td>
<td>.59</td>
<td>.58</td>
<td>.57</td>
<td>NA</td>
</tr>
<tr>
<td>Defendant demographics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offender/defendant race: Black</td>
<td>.41</td>
<td>.65</td>
<td>.63</td>
<td>.62</td>
<td>.46(^a)</td>
</tr>
<tr>
<td>Offender/defendant race: Latino</td>
<td>.46</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>.27(^b)</td>
</tr>
<tr>
<td>Offender/defendant race: White</td>
<td>.13</td>
<td>.34</td>
<td>.34</td>
<td>.36</td>
<td>.23(^c)</td>
</tr>
<tr>
<td>Offender/defendant gender: Male</td>
<td>.94</td>
<td>.86</td>
<td>.87</td>
<td>.85</td>
<td>.91</td>
</tr>
<tr>
<td>Offender/defendant age: 18- to 34-years old</td>
<td>.77</td>
<td>.62</td>
<td>.64</td>
<td>.62</td>
<td>.7</td>
</tr>
</tbody>
</table>

Note. LA County Homicides = Data set analyzed in this study; SCPS = State Court Processing Statistics; SHR = Supplementary Homicide Reports; NA = not applicable. 
\(^a\)Black non-Hispanic. \(^b\)Hispanic any race. \(^c\)White non-Hispanic.
Appendix B compares homicide victim/offender demographic characteristics from this study and other large urban areas. State Court Processing Statistics (SCPS) data come from homicide defendants in 75 urban counties between 1990 and 2002; these figures were taken directly from Reaves’s (2006) report “Violent Felons in Large Urban Counties” (see Note 1). SCPS is a defendant-based database, and thus it does not include victim information. In contrast to the data for this study, SCPS distinguishes Hispanic origin for Blacks and Whites. Supplementary Homicide Report (SHR) data on homicide victims and suspects between 1976 and 2007 come from a cumulative file constructed by Fox and Swatt (2009); these figures were constructed by downloading Fox and Swatt’s data set and restricting the analysis to “large cities” as defined by Fox and Swatt (2009; i.e., cities with more than 100,000 residents). In addition to including statistics for the full range of SHR data (1976–2007), the table displays information from years most adjacent to the study period (1990–1994) and from the 5 most recent years of data in the cumulative file (2003–2007). These narrower intervals allow for more nuanced and direct comparisons across these data sets and time periods. SHR includes both victim and suspect information for homicide incidents, although it does not distinguish between solved homicides that result in a court cases versus unsolved homicides that do not. Moreover, the SHR only distinguishes between Blacks/Whites and does not capture information Hispanic origin.

As Appendix B illustrates, the data analyzed here are fairly similar to data on large urban areas between the various time periods. For example, homicides in all of these data sets most commonly involved racial/ethnic minority male victims and offenders between the ages of 18 and 34 (see Note 1). There are, however, some differences between these data sources. The SHR contains a larger proportion of White/Black victims and offenders than our LA County data. In contrast, the SCPS database includes a larger percentage of White defendants than our LA County data, but a smaller proportion of Latino defendants. These similarities and differences are fairly consistent across the earlier (1990–1994) and later (2003–2007) years.

Several factors likely explain these differences. Foremost, the SHR does not collect data on Hispanic origin, and thus many of the victims/offenders coded as “White” in the SHR may actually be of Hispanic origin. As such, the proportion of White victims/suspects is higher in the SHR than our data. Second, LA County’s Latino population is larger than most of the counties included in the SCPSS data set. Latinos represented roughly 30% of LA County in 1990, but on average Latinos only accounted for 13% of the population in 1990 among counties in the SCPS data set (see appendix 1 in Wang and Mears, 2010b). LA County’s larger Latino population helps to explain why our dataset includes more Latino defendants and fewer White defendants as compared to the SCPS. Taken together, these statistics suggest that homicide victims and offenders/defendants in the data analyzed herein are fairly representative of large urban areas across the time periods being analyzed.

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Notes

1. Publicly available homicide data sets do not contain information on these predictor variables as well as death penalty charging decisions (e.g., State Court Processing Statistics, Offender-Based Transaction Statistics, PA Sentencing Data, Supplementary Homicide Reports, Changing Patterns of Homicide and Social Policy).

2. Death-sentencing stages are not examined because the present research concentrates on prosecutorial decision-making, which is largely purged once the defendant advances to a capital trial since the imposition of a death-sentence hinges on jury dynamics (Baldus et al., 2009).

3. In multivictim cases, modal responses for victim demographics were used, with the exception of victim age, which was averaged across the number of victims. For multivictim cases involving a Black victim, the entire case was coded as one involving a Black victim. This coding scheme reflects the fact that Blackness has been central to political concerns about crime and punishment. As such, in terms of victim racial/ethnic characteristics, Blackness is most likely to influence case outcomes.

4. These reference groups allow us to make theoretically relevant comparisons between minority defendant–White victim cases and White defendant–minority victim cases (Baldus, Woodworth, Zuckerman, et al., 2009). Black victim–White defendant cases were removed from the analysis due to the small number of such cases.

5. Existing findings regarding defendant race/ethnicity effects and victim–defendant racial/ethnic dyads are somewhat mixed. For example, of the 36 studies reviewed by Grosso et al. (2014), 24 found victim race/ethnicity effects, 4 found a defendant race/ethnicity effect (without regard to victim race/ethnicity), and 9 found discrimination against Black defendants accused of killing Whites.

6. More than 50% of California’s death row population, including Mr. Jones, have been on death row for more than 19 years (Jones v. Chappell, 2014).

References


Furman v. Georgia, 33 L. Ed. 2d 346 (Supreme Court 1972).


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EXHIBIT O
RACE, ETHNICITY, AND THE DEATH PENALTY IN SAN DIEGO COUNTY: THE PREDICTABLE CONSEQUENCES OF EXCESSIVE DISCRETION

Steven F. Shatz, Glenn L. Pierce & Michael L. Radelet*

ABSTRACT

Two Supreme Court cases, Furman v. Georgia (1972) and McCleskey v. Kemp (1987) provide the framework for the study discussed in this essay, the largest single-county death penalty study. In Furman, although the issue of race discrimination in death sentencing was central to the litigation and was discussed by several of the justices, the “holding” addressed the issue only indirectly. The Court held that the discretionary death penalty schemes at issue were unconstitutional under the Eighth Amendment because death sentences were imposed so infrequently as to create too great a risk of arbitrariness. The Court’s subsequently developed remedy was to require state legislatures to “genuinely narrow” death penalty schemes and state courts to engage in “meaningful appellate review” of death sentences. In McCleskey, the Court rejected a death sentence challenge based on a statistical showing of racial discrimination in the state’s administration of the death penalty, but left open the possibility that a sufficiently large single-county study finding such racial

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discrimination could establish an equal protection violation. Our study of capital case charging in San Diego County, California, under California’s 1978 Death Penalty Law is just such a study. That law produced a death penalty scheme giving prosecutors the discretion to seek death in the vast majority of murder cases, resulting in a death sentence rate among death-eligible defendants even lower than that of Georgia at the time of *Furman*. Our study, covering a fourteen-and-a-half-year period and using data from 1081 cases in which San Diego prosecutors charged an adult defendant with murder and obtained a homicide conviction, examines whether the race or ethnicity of defendants and/or victims affects how that broad prosecutorial discretion is used. We found that race/ethnicity is a significant factor in whether a defendant is charged capitally and whether the death penalty is sought, with the most substantial disparities occurring in cases with black defendants and white victims.
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INTRODUCTION

In 1972, in the seminal case of Furman v. Georgia,1 the Supreme Court held (5–4) that the Georgia death penalty scheme was, and, by implication, all discretionary state death penalty schemes were, unconstitutional. Because each of the Justices in the majority wrote his own opinion, the scope of, and rationale for, the decision was not determined by the case itself. However, all five Justices focused on the infrequency with which the death penalty was imposed,2 a conclusion based on evidence that only 15–20% of death-eligible defendants convicted of murder were sentenced to death.3 Justice Stewart held the death penalty was unconstitutional because it was like being “struck by lightning”: only “a capriciously selected random handful” were sentenced to death.4 Justice White found the death penalty was unconstitutional because “there is no meaningful basis for distinguishing the few cases in which it is imposed from the many cases in which it is not.”5 The opinions of these two Justices came to stand for the holding in Furman.6 In subsequent cases, the Court would hold that to limit the risk of such arbitrary and capricious sentencing, state legislatures would have to “genuinely narrow the class of persons eligible for the death penalty”7 and state courts would have to engage in “meaningful appellate review” of death sentences.8

1. 408 U.S. 238 (1972).
2. See id. at 248 n.11 (Douglas, J., concurring); id. at 291–95 (Brennan, J., concurring); id. at 309–10 (Stewart, J., concurring); id. at 313 (White, J., concurring); id. at 354 n.124, 362–63 (Marshall, J., concurring).
3. Chief Justice Burger, writing for the four dissenters, cited that statistic, as did Justice Powell, also writing for the four dissenters. Id. at 386 n.11, 435 n.19. In turn, Justice Stewart cited the Chief Justice’s statement to argue that the imposition of death was “unusual.” Id. at 309 & n.10. Later, the plurality in Gregg v. Georgia, 428 U.S. 153, 182, n.26 (1976), made reference to the same statistic. Post-Furman research indicates that the pre-Furman death sentence rate in Georgia was 15%. David C. Baldus et al., Equal Justice and the Death Penalty: A Legal and Empirical Analysis 80 (1990) [hereinafter Equal Justice].
5. Id. at 313 (White, J., concurring).
8. Parker v. Dugger, 498 U.S. 308, 321 (1990). The Court had earlier held that the required sentence review need not include intercase proportionality review unless the capital sentencing scheme was “so lacking in other checks on arbitrariness that it would not [otherwise] pass constitutional muster.” Pulley v. Harris, 465 U.S. 37, 51 (1984).
Race was a central issue in the *Furman* litigation.\(^9\) *Furman* and its two companion cases each involved a black defendant and a white victim, and *Furman* and several of the *amici* argued that the death sentences were the products of racial discrimination.\(^10\) Nevertheless, Justice Stewart only noted this argument before putting it to one side,\(^11\) and Justice White did not even mention it.\(^12\) Justices Douglas and Marshall did discuss the possibility of racial discrimination, and both expressed the view that the discretion afforded by overbroad statutes all but ensured such discrimination.\(^13\) Justice Powell, for the four dissenters, also addressed the claim of racial discrimination, but dismissed it for two reasons that he would later rely on in his majority opinion in *McCleskey v. Kemp*:\(^14\) claims of racial discrimination should be brought under the Equal Protection Clause, not the Eighth Amendment; and past discrimination does not prove present discrimination because “discriminatory imposition of capital punishment is far less likely today than in the past.”\(^15\)

Fifteen years later, in *McCleskey*, the Court directly addressed, for the first time, a claim of racial discrimination in death sentencing. *McCleskey* introduced an extensive and sophisticated empirical study of over 2000 murder cases in Georgia in the 1970s (the “Baldus study”).\(^16\) The study, conducted by Professor David Baldus and his colleagues, found statistically significant racial disparities in death sentencing.\(^17\) *McCleskey’s* attorneys did not challenge the Georgia scheme on the ground that it failed to satisfy *Furman*’s narrowing

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10. Id. at 87–88.
11. 408 U.S. 238, 310 (1972) (Stewart, J., concurring).
12. Id. at 310–14 (White, J., concurring).
13. Id. at 256–57 (Douglas, J., concurring); id. at 364–65 (Marshall, J., concurring). Although the focus of the discussion in *Furman* and subsequent cases was on the discretion afforded to juries, as Justice White recognized in *Gregg*, prosecutors make charging decisions on the same basis as juries make sentencing decisions, and the Court’s remedy—statutory narrowing of the death-eligible class—would also limit the discretion of prosecutors. *Gregg* v. Georgia, 428 U.S. 153, 225 (1976) (White, J., concurring). As the Court has repeatedly found in the context of peremptory challenges, prosecutors are not above engaging in racial discrimination. See, e.g., Flowers v. Mississippi, 139 S. Ct. 2228 (2019) (showcasing prosecutorial racial discrimination); Miller-El v. Cockrell, 537 U.S. 322 (2003) (same).
15. 408 U.S. at 449–50.
17. Id. at 286–87.
requirement. Instead, they argued that his death sentence violated the Eighth Amendment because racial disparities in outcomes proved the risk of arbitrariness in the scheme. They also followed Justice Powell’s suggestion in Furman and challenged McCleskey’s sentence under the Equal Protection Clause. Writing for the majority, Justice Powell assumed the validity of the study, but rejected both claims. He rejected the Eighth Amendment claim by minimizing the significance of the study, finding “[t]he discrepancy indicated by the Baldus study is ‘a far cry from the systemic defects identified in Furman.’” He also argued that recognizing McCleskey’s claim would lead to the placing of “unrealistic conditions” on the use of the death penalty, and he specifically rejected Justice Stevens’s contention that narrowing of the death-eligible class was a realistic remedy. Justice Powell rejected the Equal Protection claim because McCleskey’s statewide statistics about outcomes could not prove discriminatory intent by any particular actor—the legislature, the prosecutors, or the sentencing jurors. The same was true of his county statistics, and, in addition, the Court found that the Fulton County sample was too small to create an inference of discrimination.

18. They may have concluded that such a challenge would not likely succeed because the Court approved the Georgia scheme on its face in Gregg and impliedly approved it in Zant, the very case that elaborated on the narrowing requirement. Further, the Baldus study itself showed that the post-Furman Georgia scheme was significantly narrower than the pre-Furman scheme—the death sentence rate rose from 15% (pre-Furman) to 23% (post-Furman). EQUAL JUSTICE, supra note 3, at 88–89.

19. Justice Scalia, in a memorandum circulated to the other justices went so far as to say, “it is my view . . . that the unconscious operation of irrational sympathies and antipathies, including racial, upon jury decisions and (hence) prosecutorial [decisions], is real, acknowledged by the [decisions] of this court and ineradicable, I cannot honestly say that all I need is more proof.” Dennis D. Dorin, Far Right of the Mainstream: Racism, Rights, and Remedies from the Perspective of Justice Antonin Scalia’s McCleskey Memorandum, 45 MERCER L. REV. 1035, 1038 (1994) (quoting Memorandum to the Conference from Justice Antonin Scalia in No. 84-6811—McCleskey v. Kemp of Jan. 6, 1987, McCleskey v. Kemp File, in Thurgood Marshall Papers (on file with Library of Congress, Washington, D.C.)).


21. Id. at 314–19 & n.45.

22. Id. at 291–92.

23. Id. at 295 n.15. The Fulton County sample covered 179 cases where the defendant was convicted of murder by plea or verdict, some portion of which did involve defendants who were death-eligible and 19 of which went to penalty trial where the decision on death was made by a jury, not the prosecutor. EQUAL JUSTICE, supra note 3 at 89, 337.
The present essay reports on a study that takes up the challenge presented by *Furman* and *McCleskey*. The study is the largest and most comprehensive single-county death penalty study ever done—a study examining all cases where, from 1978 to 1993, the San Diego County District Attorney charged the defendant with murder. The county had a single District Attorney, Edwin Miller, during the entire period, and he personally made all decisions regarding the seeking of the death penalty. The study examines a number of aspects of the cases, but focuses on two decision points: the decision whether to charge special circumstances, thereby making a defendant death-eligible, and the decision whether to seek the death penalty. Part I describes the California death penalty scheme, a scheme which has been characterized as the broadest in the country, and various previous empirical studies of that scheme. Part II describes the present study and findings related to the California scheme. Part III sets out the study’s findings regarding racial and ethnic disparities in special circumstances charging and death-charging by the San Diego District Attorney’s Office. Finally, this Article concludes that this study both provides the basis for a finding of purposeful discrimination under the Equal Protection Clause and supports a broader constitutional challenge to the California scheme.

I. THE CALIFORNIA DEATH PENALTY SCHEME

The current California death penalty scheme, and the scheme in effect during the study period, was enacted in 1978 by Proposition 7, the so-called “Briggs Initiative.” According to its author, State...
Senator John V. Briggs, the initiative was intended to “give Californians the toughest death-penalty law in the country.”27 The intent was to apply the death penalty to “every murder.”28 The scheme and the various empirical studies of the scheme are described below.

A. Description of the Scheme

California criminal law, which, to a large extent, constitutes a codification of the common law, provides for four categories of criminal homicide: two forms of murder (first-degree and second-degree) and three forms of manslaughter (voluntary, involuntary, and vehicular).29 Death is a possible penalty only for first-degree murder.30 First-degree murder in California is broadly defined. At the time of the Briggs Initiative, it encompassed eleven forms of murder: premeditated murder, six forms of felony murder, and four forms of murder by particular means.31 During the period of this study, first-degree murder was expanded by the addition of one more “means” in 198232 and six more felony murders in 1990.33 The base penalty for first-degree murder during the study period was twenty-five years to life. The Briggs Initiative enumerated twenty-seven special circumstances that would raise the penalty to death or life without the possibility of

28. STATE OF CALIFORNIA, VOTER’S PAMPHLET 34 (1978). Under California law, ballot arguments constitute part of the “legislative history” used to interpret initiative measures. See, e.g., Long Beach City Emps. Ass’n v. City of Long Beach, 719 P.2d 660, 663 n.5 (Cal. 1986) (“Election ballot arguments have long been used as an aid in construing constitutional amendments adopted via the initiative process.”).
30. CAL. PENAL CODE § 190(a) (West 2019).
32. 1982 Cal. Stat. ch. 950, § 1 (adding murder perpetrated by “knowing use of ammunition designed primarily to penetrate metal or armor”).
33. Cal. Proposition 115, § 9 (1990) (adding kidnapping, train wrecking, sodomy, lewd acts with minors, oral copulation, and rape by instrument). In 2018, first-degree murder was narrowed somewhat with regard to accomplices. S.B. 1437 provided that, to convict an accomplice of first-degree murder, the prosecution had to prove, in addition to the other elements of first-degree murder, that the accomplice had the intent to kill or was a major participant in an underlying felony and acted with reckless indifference to human life. CAL. PENAL CODE § 189(e) (West 2019). This change had a limited effect on special circumstances and the death penalty because the special circumstances already required proof of reckless indifference as to an accomplice. See CAL. PENAL CODE § 190.2(d) (West 2019).
According to the California Supreme Court, these special circumstances performed the “constitutionally required ‘narrowing’ function.” The scope of the special circumstances underwent two changes during the study period. For the period of December 13, 1983 through October 13, 1987, under the mandate of Carlos v. Superior Court, the special circumstances were limited by the requirement that the prosecution had to prove the defendant’s intent to kill. By initiative, effective June 6, 1990, two special circumstances were added and the former intent to kill requirement for accomplices was eliminated.

Prosecutors enjoy complete discretion over whether to charge a special circumstance and, if so, whether to seek the death penalty. If the prosecutor charges a special circumstance, and, if the case proceeds to trial, the special circumstance allegation is tried along with the underlying murder charge at the guilt phase of the trial. If the defendant is found guilty of first-degree murder and one or more special circumstances is found true, the case proceeds to a penalty phase if the District Attorney is seeking death. At the penalty phase, additional aggravating and mitigating evidence may be introduced, and the jury is read a list of factors to consider in reaching its sentencing decision. The jury is instructed that it is to weigh the aggravating circumstances against the mitigating circumstances in reaching its decision. If a death judgment is returned, it is reviewed...

34. One of the special circumstances, the catchall “heinous, atrocious, or cruel” circumstance (CAL. PENAL CODE § 190.2(a)(14) (West 2019)), was held unconstitutional in People v. Superior Court (Engert), 647 Cal. P.2d 76 (1982), and was not considered for purposes of this study.


38. While special circumstances must be charged in the Information or Indictment and the defendant must enter a plea as to the truth of the circumstances, the prosecution’s notice that it intends to seek the death penalty follows no prescribed form, and may be given long after the defendant’s arraignment. See CAL. COMM’n ON THE FAIR ADMIN. OF JUSTICE, CALIFORNIA COMMISSION ON THE FAIR ADMINISTRATION OF JUSTICE FINAL REPORT 105–06 (N. Cal. Innocence Project Publications, 2008). Nonetheless, for convenience, we refer to the giving of such a notice as “charging death.”

39. CAL. PENAL CODE § 190.4(a) (West 2019).

40. CAL. PENAL CODE § 190.3 (West 2019).

41. The instruction as to how the jury was to conduct this weighing process changed mid-way through the study period. See Boyd v. California, 494 U.S. 370, 375 n.3 (1990). Since 1988, to bring in a judgment of death, each juror “must be persuaded that the aggravating circumstances are so substantial in comparison...
first by the trial court, and then on automatic appeal to the California Supreme Court where the court, in addition to considering claimed legal errors, may review the proportionality of the death penalty.

B. Previous Empirical Studies

There have been several studies, covering different time periods and using different samples and methodologies, that have measured the degree to which the California death penalty scheme “narrows” the death-eligible class. The first was a study conducted in 1997 by one of the present authors, using a sample of appellate first-degree murder cases decided in the period from 1988 to 1992. The study estimated that 87% of convicted first-degree murders were factually death-eligible, but that only approximately 11.4% of such death-eligible murders resulted in a death sentence. A more comprehensive study of all first-degree convictions during the period from 2003 to 2005, some 1299 cases, reported a death eligibility rate of 84.6% and a death-sentence rate of only 5.5%. The most recent statewide narrowing study was conducted by Professor Baldus and his colleagues ten years ago. Using a 1900-case stratified sample of convictions for non-negligent homicides during the period from 1978 to 2002, the study found a death eligibility rate, under the 2008 version of the state scheme, of 95% for first-degree murderers and 59% for

with the mitigating circumstances that it warrants death instead of life without parole.” Cal. Jury Instructions (CALJIC) No. 8.88 (2010).

42. CAL. PENAL CODE § 190.4(e) (West 2019).


45. Id. at 1330–32. Subsequently, this death eligibility figure was adopted by the California Commission on the Fair Administration of Justice in its review of the death penalty. CAL. COMM’N ON THE FAIR ADMIN. OF JUSTICE, supra note 38, at 131.

46. See Steven F. Shatz & Naomi R. Shatz, Chivalry Is Not Dead: Murder, Gender and the Death Penalty, 27 BERKELEY J. GENDER L. & JUST. 64, 93 (2012). Because both studies used only cases resulting in a first-degree murder conviction, they necessarily overstated the death-sentence rate because they excluded all those defendants who were death-eligible by statute but who were able to plead to a lesser charge.

47. Furman at 45, supra note 26.
those convicted of second-degree murder and voluntary manslaughter, and an overall
death-sentence rate of 4.3%.\(^{48}\)

Statewide studies have also documented various aspects of arbitrariness in the California scheme. Two of the present authors studied the effects of race and geography on death sentencing in California during the period from 1990 to 1999 and found “glaring differences in the rate of death sentences across categories of victim race/ethnicity.”\(^{49}\) Comparing death sentences and homicides per county in light of both the racial/ethnic demographics of the county and its population density, that study also found substantial geographic disparities and concluded that “death sentencing rates are lowest in counties with the highest non-white population.”\(^{50}\) The 2003–2005 study mentioned above found substantial gender-of-victim disparities in death sentencing. In single-victim first-degree murder cases, “factually death-eligible defendants convicted of killing women were more than seven times as likely to be sentenced to death as factually death-eligible defendants who killed men.”\(^{51}\)

There have been three previous county-level studies of race/ethnicity and the death penalty in California. One, covering the period from 1977 to 1986, examined death-eligible charging in 128 San Joaquin County cases involving Hispanic defendants or victims.\(^{52}\) Using a logistic regression model incorporating a number of factors, the study found a pattern of racial and gender discrimination in the charging of special circumstances—a defendant charged with killing a white victim and/or a woman victim was significantly more likely to be

\(^{48}\) Id. at 1. There has been one study of the other Furman requirement, meaningful appellate review, conducted by one of the present authors. It found that (as of 2014), the California Supreme Court had never set aside a death sentence as disproportionate or excessive. Shatz, supra note 43, at 140–41 (“[T]his ‘inexorable zero’ establishes that . . . the court simply does not engage in appellate review (meaningful or otherwise) of death sentences.”) (quoting Int’l Bhd. of Teamsters v. United States, 431 U.S. 324, 342 n.23 (1977)).


\(^{50}\) Id. at 38.


capitally charged. A study of 473 cases where the defendant was convicted of first-degree murder in Alameda County during the period from 1978 to 2001 disclosed substantial “race of neighborhood” disparities in death charging and death sentencing. The county was divided roughly in half according to census tracts, and the two halves had very different racial/ethnic makeups: the population of North County had a white/black ratio of approximately 3:2, while the white/black ratio in South County was almost 19:1. Using a logistic regression model with a number of variables, the study found the District Attorney was more likely to seek death, and a death sentence was more likely to be imposed, for South County murders. The most recent of the single county studies was a study of Los Angeles County willful homicide cases during the period from 1990 to 1994. The study examined special circumstances in charging and death charging and found that “cases with minority victims are treated more leniently than those with White victims at multiple stages of the death penalty process . . . producing a Whiter pool of victims at each phase.”

II. THE PRESENT STUDY AND FINDINGS REGARDING THE CALIFORNIA SCHEME

The present study of murder prosecutions in San Diego County was based on data obtained by attorneys for the defendant in People v. La Twon Weaver. Our universe of cases was murder prosecutions for homicides committed on or after November 8, 1978 (the effective date of the Briggs Initiative) with prosecutions begun during or before May 1993 (the month the defendant in Weaver was sentenced to death).

53. Id. at 21–22.
54. See Shatz & Dalton, supra note 51, at 1275.
55. Id. at 1263.
56. Id. at 1265, 1267. The finding that the death sentence rate was significantly lower for North County murders corresponds with the Pierce & Radelet finding mentioned above that death sentence rates were lowest in counties with a high non-white population.
58. Id. at 15.
60. Our database of murder prosecutions allows us to analyze post-charge decision-making for bias, but, of course, it provides no information about decision-making at earlier stages of the criminal justice process. The universe of cases and the facts we have regarding those cases may have been affected by the bias of various actors, including the police who investigated the crime and decided whether
A. Data Collection and Methodology

The primary data used to code cases in this study consists of two sets of documents: (a) charging documents during the relevant time period for cases in which a violation of California Penal Code section 187(a) (murder) was alleged, provided by the District Attorney’s Office in response to a Public Records Act request; and (b) the presentence reports (“PSRs”) for defendants in those cases who suffered a conviction, provided by the Superior Court pursuant to petitions filed under California Penal Code section 1203.05(b). This data from the charging documents and PSRs was supplemented with information from the State of California Department of Justice Willful Homicide Charts, the Federal Bureau of Investigation Supplementary Homicide Reports, appellate court opinions, and newspaper accounts of the crimes or prosecutions.

Data were obtained on 1647 cases. We eliminated cases from the data set if the case was outside the relevant time period; the defendant was not charged with murder or was charged on the basis of facts that could not have supported a first-degree murder conviction; the defendant was a juvenile; the defendant was not convicted of a homicide; the case was still pending; or significant information concerning the case was unobtainable. After eliminating these cases, 1081 cases remained for analysis—cases in which, during the relevant time period, an adult defendant was charged with a violation of Penal to make an arrest, and the prosecutor who decided whether to file murder charges. This type of bias can arise in systems wherein actors who are responsible for making key decisions (e.g., charging) are also responsible for collecting and producing information that forms the basis for their decisions. Under these conditions, actors may bias the way they collect, organize, disseminate, present or interpret information in order to achieve expected or predetermined outcomes. As a result, at least some of the information used by us to evaluate the charging decisions may itself be biased and thus may obscure evidence of arbitrariness or discrimination. See generally Michael L. Radelet & Glenn L. Pierce, Race and Prosecutorial Discretion in Criminal Homicide Cases, 19 LAW & SOC’Y REV. 587 (1985) (finding patterns of evidence enhancement related to the race of victims and offenders); Glenn L. Pierce, Michael L. Radelet, Chad Posick & Tim Lyman, Race and the Construction of Evidence in Homicide Cases, 39 AM. J. CRIM. JUST. 771 (2014) (finding that the amount of evidence submitted to defense attorneys by prosecutors during discovery in homicide cases is strongly associated with the race and gender of victims).

61. Pending cases were those where the defendant had fled and was not recaptured.

62. There were 78 cases (4.7%) with insufficient information, most due to the County Clerk’s inability to locate a PSR.
Code section 187(a) and was convicted of a homicide (first- or second-degree murder; voluntary or involuntary manslaughter).

Each case was coded for a variety of factors concerning the defendant, the victim, the crime and the prosecution. The initial coding was done by attorneys and students trained and supervised by Professor Shatz. Since our focus was on the death penalty, each case was coded for the presence or absence of the special circumstances set forth in Penal Code section 190.2(a) that would have made the defendant death-eligible. A special circumstance was coded as present if the circumstance was found by a fact-finder or admitted by the defendant, or if the facts of the case were such that a reasonable fact-finder could have found the circumstance true beyond a reasonable doubt. We determined that 493 of the 1081 cases had a proved or provable special circumstance (hereinafter, “special circumstances cases”). Those 493 cases resulted in 218 defendants being convicted of first-degree murder and 275 convicted of lesser homicides. For purposes of our analysis, we aggregated the special circumstances into eight categories:

1. multiple murders;
2. sexual assault;
3. torture and kidnapping;
4. theft felonies;
5. designated victims;
6. prior murder and multiple murder. See CAL. PENAL CODE § 190.2(a)(2), (3) (West 2019);
7. rape, sodomy (forcible or with a minor), lewd act with minor, oral copulation (forcible or with a minor), and rape by instrument. See CAL. PENAL CODE § 190.2(a)(17)(C), (D), (E), (F), (K) (West 2019). During the period of the study, the felony-murder special circumstances in § 190.2(a)(17) were identified with Roman numerals. They are currently designated with capital letters. For convenience here and in subsequent footnotes, the current citations are used.
9. peace officer, federal law enforcement officer, firefighter, witness, prosecutor, judge, and elected or appointed official. See CAL. PENAL CODE § 190.2(a)(7)–(13) (West 2019).

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63. If a factfinder determined that no special circumstance was proved, we treated that finding as controlling.
64. All subsequent references to “special circumstances” refer to these categories. For example, a statement that the District Attorney charged a single special circumstance means that he charged circumstances from a single category even if he charged multiple circumstances within that category.
66. Rape, sodomy (forcible or with a minor), lewd act with minor, oral copulation (forcible or with a minor), and rape by instrument. See CAL. PENAL CODE § 190.2(a)(17)(C), (D), (E), (F), (K) (West 2019). During the period of the study, the felony-murder special circumstances in § 190.2(a)(17) were identified with Roman numerals. They are currently designated with capital letters. For convenience here and in subsequent footnotes, the current citations are used.
69. Peace officer, federal law enforcement officer, firefighter, witness, prosecutor, judge, and elected or appointed official. See CAL. PENAL CODE § 190.2(a)(7)–(13) (West 2019).
(6) financial gain;⁷⁰ (7) lying in wait;⁷¹ and (8) miscellaneous.⁷² A
special circumstance, if found, not only makes a defendant death-
eligible, it is also an “aggravating factor,” a circumstance of the crime
that can be considered by the sentencer at the penalty phase.⁷³

In addition, we coded for other circumstances of the crime:
whether there was a vulnerable victim (a child or elder); whether the
victim was a stranger or was known to the defendant; whether the role
played by the defendant in the killing was as a principal or non-killing
accomplice or co-conspirator; whether a firearm was used; and whether
the defendant caused injuries to persons other than the homicide
victim. We also coded for the other two statutory aggravating factors:
prior felony convictions⁷⁴ and other proved or provable crimes involving
violence or the threat of violence.⁷⁵ We coded for two non-statutory
factors about the defendant that may have influenced the charging
decision: whether the defendant was on parole or probation at the time
of the crime and whether the defendant was a gang member. Lastly,
we coded for the race/ethnicity and gender of the defendant and the
victim(s).⁷⁶

B. General Findings

Before addressing the issue of race/ethnicity and charging in
potential death penalty cases, we set forth some general findings to
give context to that discussion. Table 1 below details the outcomes in
the 1081 cases, indicating whether special circumstances were present,

⁷⁰. See CAL. PENAL CODE § 190.2(a)(1) (West 2019). Financial gain murders,
e.g., contract killings or killings for insurance proceeds, should not be confused with
ordinary robbery-murders.
⁷². Murder by a hidden bomb or by a mailed or delivered bomb, murder to
escape custody or avoid arrest, murder with a hate motive, murder during arson,
train wrecking or mayhem, and murder by poison. See CAL. PENAL CODE
§ 190.2(a)(4), (5), (6), (16), (17)(H), (17)(I), (17)(J), (19) (West 2019). These
circumstances are rarely occurring and are dissimilar to the circumstances in the
other categories. See infra Table 2.
⁷³. CAL. PENAL CODE § 190.3(a) (West 2019).
⁷⁴. Id. § 190.3(c).
⁷⁵. Id. § 190.3(b).
⁷⁶. We made no attempt to code for non-crime mitigating evidence, e.g., a
defendant’s possible childhood deprivation or mental impairments. While such
evidence at a penalty phase might affect the penalty outcome, the present study
concerns charging decisions. We were unable to determine what, if any, mitigating
evidence prosecutors knew of prior to making those decisions.
whether prosecutors charged special circumstances and whether the District Attorney sought the death penalty.

**Table 1: Case Outcomes, Presence of Special Circumstances (“SC”), and Charging Among All Cases that Resulted in a Homicide Conviction**

<table>
<thead>
<tr>
<th>Conviction Level</th>
<th>Total Cases</th>
<th>SC Present</th>
<th>SC Charged (% of SC present)</th>
<th>Death Charged (% of SC present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-Degree Murder</td>
<td>269</td>
<td>218 (81.0%)</td>
<td>110 (50.5%)</td>
<td>65 (29.8%)</td>
</tr>
<tr>
<td>Death Penalty</td>
<td>23</td>
<td>23 (100%)</td>
<td>23 (100%)</td>
<td>23 (100%)</td>
</tr>
<tr>
<td>SC Found (LWOP)</td>
<td>53</td>
<td>53 (100%)</td>
<td>53 (100%)</td>
<td>30 (56.6%)</td>
</tr>
<tr>
<td>No SC Found</td>
<td>193</td>
<td>142 (73.6%)</td>
<td>34 (23.9%)</td>
<td>12 (8.5%)</td>
</tr>
<tr>
<td>Second-Degree Murder</td>
<td>300</td>
<td>138 (46.0%)</td>
<td>17 (12.3%)</td>
<td>3 (2.2%)</td>
</tr>
<tr>
<td>Voluntary Manslaughter</td>
<td>398</td>
<td>120 (30.2%)</td>
<td>8 (6.7%)</td>
<td>2 (1.7%)</td>
</tr>
<tr>
<td>Involuntary Manslaughter</td>
<td>114</td>
<td>17 (14.9%)</td>
<td>1 (5.9%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1081</strong></td>
<td><strong>493 (45.6%)</strong></td>
<td><strong>136 (27.6%)</strong></td>
<td><strong>70 (14.4%)</strong></td>
</tr>
</tbody>
</table>

In the 1081 cases where prosecutors filed potential first-degree murder charges and where the defendant was convicted of a homicide, the prosecution obtained a first-degree murder conviction just under 25% of the time (269/1081). Prosecutors charged special circumstances in only 27.6% of the cases (136/493) where the facts would have supported a special circumstances finding, and the District Attorney sought death in 51.5% (70/136) of the cases where special circumstances were charged. The death-sentence rate for all death-

77. We note that 61.6% of the convictions (666/1081) were obtained by pleas. As is the case with charging, prosecutors have complete discretion whether to reduce charges in the course of plea bargaining and by how much, so the homicide level of the defendant’s conviction may have nothing to do with the facts of the case.
eligible defendants was 4.7% (23/493). The death-eligibility rate for defendants convicted of first-degree murder was 81.0% (218/269) and the death sentence rate was 10.6% (23/218). These findings—a high death-eligibility rate and a low death-sentence rate—are consistent with the findings of prior studies concluding that the California death penalty scheme fails to “genuinely narrow” the death-eligible class.78

Table 2 breaks down the 493 special circumstances cases and sets out numbers for special circumstances charges, death charges and death sentences.

Table 2: Charges by Categories of Special Circumstances, in Cases in Which Special Circumstances Were Present (n=493)

<table>
<thead>
<tr>
<th>Specials</th>
<th>Total Cases</th>
<th>SC Charged</th>
<th>Death Charged</th>
<th>Death Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 or More Categories</td>
<td>45</td>
<td>31 (68.9%)</td>
<td>20 (44.4%)</td>
<td>12 (26.6%)</td>
</tr>
<tr>
<td>2 Categories</td>
<td>119</td>
<td>54 (45.8%)</td>
<td>36 (30.3%)</td>
<td>8 (6.7%)</td>
</tr>
<tr>
<td>1 Category</td>
<td>329</td>
<td>51 (15.5%)</td>
<td>14 (4.3%)</td>
<td>3 (0.9%)</td>
</tr>
<tr>
<td>Multiple Murder Only</td>
<td>25</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Sex Assault Only</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Torture/Kidnapping Only</td>
<td>13</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Theft Felony Only</td>
<td>105</td>
<td>28</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Special Victims Only</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Financial Gain Only</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Lying in Wait Only</td>
<td>163</td>
<td>8</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Miscellaneous Only</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>493</strong></td>
<td><strong>136 (27.6%)</strong></td>
<td><strong>70 (14.2%)</strong></td>
<td><strong>23 (4.7%)</strong></td>
</tr>
</tbody>
</table>

Two aspects of the data in Table 2 are particularly striking. First, the District Attorney sought death in only 14.2% of the cases, even though, by statute, death was an authorized penalty in all of the

78. See supra Section I.B.
Thus, it was the District Attorney’s discretionary decision not to pursue a death sentence against over 85% of the defendants made statutorily death-eligible—not the statutory scheme—that “narrowed” the death-eligible class. Second, the data reveal that murder accompanied by a single special circumstance (or special circumstances in a single category) rarely results in a special circumstance charge, a death charge or, in the end, a death sentence. Earlier California studies found that murders aggravated by certain of the special circumstances—multiple-murder and sexual assault—were much more likely to lead to a death charge and a death sentence than murders with other special circumstances. We made similar findings, but, in addition, as Table 2 indicates, we found that the number of different special circumstances present has a significant effect on charging and sentencing. As compared with single-special circumstance cases, cases with multiple different special circumstances were more than three times as likely to have a special circumstance charge, almost eight times as likely to have a death charge, and more than thirteen times as likely to result in a death sentence.

Our data confirm previous findings that the most common special circumstances murders—theft-based felony-murders and lying in wait murders (making death-eligible most premeditated murders)—rarely become death penalty cases. Of the 493 special circumstances cases in our study, there were 305 cases (61.9%), where the only special circumstances were theft felonies, lying in wait or both. Special circumstances were charged in 43 of those cases (14.1%), and death was sought in 11 of those cases (3.6%). Only 3 defendants of the 305 were sentenced to death (1%).

79. The District Attorney further exercised his discretion to drop his request for death in 23 of the 70 cases resolved by a plea bargain.

80. This “narrowing” through the prosecutor’s decisions not to seek death is not the legislative narrowing mandated by the Court. Hidalgo v. Arizona, 138 S. Ct. 1054, 1057 (2018) (statement of Justice Breyer regarding denial of certiorari).


82. See infra Tables 6 and 7.


84. A death-sentence rate so low calls into question the constitutional validity of these circumstances. The risk of arbitrariness is patent. See Gregg v. Georgia, 428 U.S. 153, 205–06 (1976) (plurality) (citing with approval the Georgia Supreme Court’s understanding that the Eighth Amendment disallows the imposition of the death penalty “when juries generally do not impose the death sentence in a certain kind of murder case”). A death-sentence rate so low for these commonplace murders also raises proportionality concerns. See Roper v. Simmons, 543 U.S. 551, 571 (2008) (“[T]he culpability of the average murderer is insufficient
are statistically significant racial/ethnic disparities as to defendants prosecuted for these less egregious murders. Of the death-eligible black and Latinx defendants, 68.2% (161/236) were charged with such a murder, whereas the comparable figure for white defendants was 53.9% (124/230). This finding is generally consistent with the findings of Professor Grosso et al. in their statewide study. They found that, among death-eligible defendants, black defendants were significantly overrepresented in robbery/burglary murders and Latinx defendants were significantly overrepresented in lying in wait murders.\footnote{Catherine M. Grosso, Jeffrey A. Fagan, Michael Laurence, David C. Baldus, George W. Woodworth & Richard Newell, \textit{Death by Stereotype: Race, Ethnicity, and California’s Failure to Implement Furman’s Narrowing Requirement}, UCLA L. REV. 42–43 (forthcoming 2019).} Thus, both studies reveal that the inclusion of these less egregious murders in the California scheme has the effect of significantly increasing the percentage of black and Latinx defendants in the death-eligible pool.

III. RACE/ETHNICITY AND CHARGING IN SAN DIEGO COUNTY

In examining the data for possible race/ethnicity effects, we focused on potential differences between white defendants and victims on the one hand and black or Latinx defendants and victims on the other.\footnote{The other two categories coded in the study, “Asian” and “Other,” were too small to allow for meaningful statistical analysis.} As a result, for purposes of the race effects analysis, we did not include the 46 cases in which the defendant was not white, black or Latinx and/or there was no white, black or Latinx victim.\footnote{There were 13 cases with no white, black or Latinx defendant and no white, black or Latinx victim; 14 additional cases with no white, black or Latinx defendant; and 19 additional cases with no white, black or Latinx victim.} That left 447 cases to be analyzed for race/ethnicity effects.

We built statistical models to study three “dependent variables” or three outcomes: (a) whether prosecutors charged special circumstances; (b) whether or not the District Attorney sought the death penalty; and (c) whether or not a death sentence was obtained. Prosecutors charged special circumstances in 27.1% (121/447) of the cases. Table 3 below shows whether special circumstances were to justify the most extreme sanction available to the State . . . ”). As Justice Scalia put it, “[t]he Court has prohibited the death penalty for all crimes except murder, and indeed even for what might be called run-of-the-mill murders, as opposed to those that are somehow characterized by a high degree of brutality or depravity.” Antonin Scalia, \textit{God’s Justice and Ours}, 123 FIRST THINGS 17, 17 (2002).
charged in the cases, broken down by the race of the victim and race of the defendant.  

### Table 3: Special Circumstances Charged (SCC) by Race/Ethnicity of Victim and Race/Ethnicity of Defendant

<table>
<thead>
<tr>
<th>Special Circ.</th>
<th>WV-WD</th>
<th>WV-LD</th>
<th>WV-BD</th>
<th>B/LV-WD</th>
<th>B/LV-LD</th>
<th>B/LV-BD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No SCC</td>
<td>131</td>
<td>21</td>
<td>20</td>
<td>29</td>
<td>65</td>
<td>60</td>
<td>326</td>
</tr>
<tr>
<td>%</td>
<td>69.7%</td>
<td>72.4%</td>
<td>42.6%</td>
<td>80.6%</td>
<td>92.9%</td>
<td>77.9%</td>
<td>72.9%</td>
</tr>
<tr>
<td>SCCs</td>
<td>57</td>
<td>8</td>
<td>27</td>
<td>7</td>
<td>5</td>
<td>17</td>
<td>121</td>
</tr>
<tr>
<td>%</td>
<td>30.3%</td>
<td>27.6%</td>
<td>57.4%</td>
<td>19.4%</td>
<td>7.1%</td>
<td>22.1%</td>
<td>27.1%</td>
</tr>
<tr>
<td>Total</td>
<td>188</td>
<td>29</td>
<td>47</td>
<td>36</td>
<td>70</td>
<td>77</td>
<td>447</td>
</tr>
<tr>
<td>%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Chi-Square = 39.090, 5 degrees of freedom, \( p = .000^{89} \)

The table reveals that the rate at which prosecutors charged special circumstances differed substantially by race/ethnicity. Specifically, prosecutors charged special circumstances in 57.4% of the cases with white victims and black defendants (n=27), almost twice as often as they charged special circumstances in other white victim cases (n=63) and almost four times as often as they charged special circumstances in black and Latinx victim cases (n=29). Combining the above figures, we find that prosecutors charged special circumstances in 34.8% of the cases ((57+8+27)/(188+29+47)) with white victims (n=92) and in 15.8% of the cases ((7+5+17)/(36+70+77)) with black or Latinx victims (n=29). The Chi-Square calculation demonstrates that

88. In this and subsequent tables, we use the following abbreviations: D=Defendant; V=Victim; W=White; L=Latinx; B=Black.

89. The chi-square test is one of the most common measures used by quantitative researchers to show the relationship between two variables. It is affected by both the strength of the relationship and sample size. For example, if we flipped a coin ten times and got ten heads, the chi-square measure would be statistically significant, indicating that it would be extremely unlikely to get ten heads in a row with an unbiased coin. Or, if we obtained heads in 70 or 80 percent of the flips, the chi-square might say this is unlikely if we flip the coin 100 times but could happen by chance with ten flips. The convention is to use the .05 level of significance, which means we would conclude that the observed patterns would be expected when flipping an unbiased coin less than five percent of the time. See ALAN AGRESTI, STATISTICAL METHODS FOR THE SOCIAL SCIENCES 218–23 (5th ed. 2018).
these racial and ethnic effects are statistically significant, with the probability of obtaining the observed patterns by chance close to .000.

Table 4 examines whether the District Attorney sought death in the 447 cases, broken down by the race/ethnicity of the victim and race/ethnicity of the defendant.

**Table 4: Death Penalty Sought (DPS) by Race/Ethnicity of Victim and Race/Ethnicity of Defendant**

<table>
<thead>
<tr>
<th></th>
<th>WV-WD</th>
<th>WV-LD</th>
<th>WV-BD</th>
<th>B/LV-WD</th>
<th>B/LV-LD</th>
<th>B/LV-BD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No DPS</td>
<td>N 157</td>
<td>23</td>
<td>31</td>
<td>35</td>
<td>66</td>
<td>72</td>
<td>384</td>
</tr>
<tr>
<td></td>
<td>% 83.5%</td>
<td>79.3%</td>
<td>66.0%</td>
<td>97.2%</td>
<td>94.3%</td>
<td>93.5%</td>
<td>85.9%</td>
</tr>
<tr>
<td>DPS</td>
<td>N 31</td>
<td>6</td>
<td>16</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>% 16.5%</td>
<td>20.7%</td>
<td>34.0%</td>
<td>2.8%</td>
<td>5.7%</td>
<td>6.5%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Total</td>
<td>N 188</td>
<td>29</td>
<td>47</td>
<td>36</td>
<td>70</td>
<td>77</td>
<td>447</td>
</tr>
<tr>
<td></td>
<td>% 100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Chi-Square = 32.490, 5 degrees of freedom, $p = .000$

The table reveals that the rate at which the District Attorney sought death differed substantially by race/ethnicity, and there was an even greater disparity here than in special circumstance charging. The District Attorney sought death in 20.0% of the cases with a white victim (53/264), but only 5.5% of the cases with black or Latinx victims (10/183). As was the case with specials circumstances charging, the black defendant/white victim cases showed the greatest disparity: The District Attorney sought death in 34.0% of black defendant/white victim cases (16/47), but only 11.8% of the time (47/400) for all other cases. Again, the Chi-Square calculation demonstrates that these racial and ethnic differences are statistically significant, with the probability of obtaining the observed patterns by chance close to .000.

A death sentence was ultimately imposed in 20 of the 447 cases (4.5%). Table 5 sets out the racial/ethnic breakdown of the death sentences:
### Table 5: Death Sentence Imposed (DSI) by Race/Ethnicity of Victim and Race/Ethnicity of Defendant

<table>
<thead>
<tr>
<th></th>
<th>WV-WD</th>
<th>WV-LD</th>
<th>WV-BD</th>
<th>B/LV-WD</th>
<th>B/LV-LD</th>
<th>B/LV-BD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No DSI</td>
<td>N 182</td>
<td>26</td>
<td>40</td>
<td>36</td>
<td>68</td>
<td>75</td>
<td>427</td>
</tr>
<tr>
<td></td>
<td>% 96.8%</td>
<td>89.7%</td>
<td>85.1%</td>
<td>100.0%</td>
<td>97.1%</td>
<td>97.4%</td>
<td>95.5%</td>
</tr>
<tr>
<td>DSI</td>
<td>N 6</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>% 3.2%</td>
<td>10.3%</td>
<td>14.9%</td>
<td>0.0%</td>
<td>2.9%</td>
<td>2.6%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Total</td>
<td>N 188</td>
<td>29</td>
<td>47</td>
<td>36</td>
<td>70</td>
<td>77</td>
<td>447</td>
</tr>
<tr>
<td></td>
<td>% 100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Chi-Square = 17.749, 5 degrees of freedom, $p = .003$.

A death sentence was imposed in 13.2% of the cases with a white victim and a black or Latinx defendant (10/76), but only 2.7% of the time in all other cases (10/371). None of the 36 cases with black or Latinx victims and white defendants resulted in a death sentence. As the Chi-Square calculation demonstrates, the probability of obtaining the observed patterns by chance is less than .003, or less than 3 chances out of 1000.

Using a multivariate logistic regression analysis, we statistically controlled for a number of variables to allow us to determine if the race/ethnicity correlations identified in Tables 3 and 4 continue to be present even after other variables are held constant.\(^{90}\) Logistic regression is the appropriate tool to employ in predicting a dichotomous (two-value) dependent variable with a series of independent variables. Tables 6 and 7 below model two dependent variables. Table 6 examines the 447 cases to predict whether prosecutors charged one or more special circumstances. Table 7 examines the 447 cases to predict whether the District Attorney sought the death penalty. We predict these variables with four measures of race/ethnicity. Three are included in the logistic regressions: cases with white victims and white defendants, white victims and Latinx defendants, and white victims and black defendants (WV/WD, WV/LD, WV/BD, respectively). We omitted the fourth race/ethnicity variable, cases with black or Latinx victims regardless of the race of the defendant.

---

90. There were too few death sentences to permit a similar regression analysis with regard to Table 5.
defendant, from the logistic regression analyses, so this variable could be used as the comparison or reference group. In addition, we used nineteen dichotomous variables to predict each dependent variable.

Table 6: Logistic Regression Analysis of Victim/Defendant Race/Ethnicity and Other Factors

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
<th>S.E.</th>
<th>Sig.</th>
<th>Exp(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WV/WD</td>
<td>.617</td>
<td>.361</td>
<td>.088</td>
<td>1.852</td>
</tr>
<tr>
<td>WV/LD</td>
<td>.534</td>
<td>.571</td>
<td>.350</td>
<td>1.706</td>
</tr>
<tr>
<td>WV/BD</td>
<td>1.318</td>
<td>.460</td>
<td>.004</td>
<td>3.734</td>
</tr>
<tr>
<td>Prior Felony Conviction</td>
<td>.225</td>
<td>.353</td>
<td>.524</td>
<td>1.252</td>
</tr>
<tr>
<td>Other Crimes of Violence</td>
<td>.108</td>
<td>.331</td>
<td>.744</td>
<td>1.114</td>
</tr>
<tr>
<td>Use of a Firearm</td>
<td>.869</td>
<td>.315</td>
<td>.006</td>
<td>2.386</td>
</tr>
<tr>
<td>On Probation or Parole at Time of Murder</td>
<td>.321</td>
<td>.328</td>
<td>.328</td>
<td>1.379</td>
</tr>
</tbody>
</table>

91. The analysis and that in the following table (Table 7) also includes the gender of the victim(s) and the defendant.

92. This table and Table 7 present four statistical measures. The β coefficient in a logistic regression model measures the relationship between the particular independent variable x and the dependent variable y (special circumstances charging in this table, death charging in Table 7). The relationship can be positive (as x increases, the probability of y increases); negative (as x increases, the probability of y decreases); or 0 (the variables are not related). The “S.E.,” or standard error, is the standard deviation of its sampling distribution (the expected or typical deviation from the true value of the effect if one could observe multiple samples of the same size). “Sig.” measures statistical significance (or p-value)—the probability that a relationship between two or more variables is caused by something other than chance. It measures how likely a given relationship can be expected to be found in a sample if there is not a relationship in the larger population. By convention, a relationship is deemed to be significant if that probability is less than .05. The Exp(β) coefficient is the β coefficient converted (by using the mathematical exponential transformation) to an odds ratio, which is the ratio of the odds of obtaining the outcome of interest for a particular group divided by the odds of receiving that outcome for a second group; in this case the odds of a special circumstances charge (or, in Table 7, a death charge) in cases where the independent variable is present (as opposed to not present, or in the case of the race variables as opposed to the omitted category—minority victim cases). See AGRESTI, supra note 89, at 460–68.
<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coefficient Mean</th>
<th>Standard Error</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Gang at Time of Murder</td>
<td>.684</td>
<td>.481</td>
<td>.155</td>
<td>1.982</td>
</tr>
<tr>
<td>Principal Role in Crime</td>
<td>-.237</td>
<td>.363</td>
<td>.515</td>
<td>.789</td>
</tr>
<tr>
<td>Victim(s) a Stranger to Defendant</td>
<td>.840</td>
<td>.332</td>
<td>.012</td>
<td>2.316</td>
</tr>
<tr>
<td>Child or Elderly Victim</td>
<td>-.061</td>
<td>.500</td>
<td>.903</td>
<td>.941</td>
</tr>
<tr>
<td>Injuries to Non-Homicide Victims</td>
<td>-.398</td>
<td>.296</td>
<td>.431</td>
<td>.672</td>
</tr>
<tr>
<td>Female Victim</td>
<td>1.549</td>
<td>.362</td>
<td>.000</td>
<td>4.705</td>
</tr>
<tr>
<td>Female Defendant</td>
<td>-.090</td>
<td>.581</td>
<td>.877</td>
<td>.914</td>
</tr>
<tr>
<td>Multiple Murder Special</td>
<td>2.298</td>
<td>.401</td>
<td>.000</td>
<td>9.957</td>
</tr>
<tr>
<td>Sex Crime Special</td>
<td>1.696</td>
<td>.618</td>
<td>.006</td>
<td>5.453</td>
</tr>
<tr>
<td>Torture/Kidnapping Special</td>
<td>1.123</td>
<td>.400</td>
<td>.005</td>
<td>3.075</td>
</tr>
<tr>
<td>Theft Felony Special</td>
<td>1.573</td>
<td>.355</td>
<td>.000</td>
<td>4.823</td>
</tr>
<tr>
<td>Victim Special</td>
<td>.831</td>
<td>1.020</td>
<td>.415</td>
<td>2.296</td>
</tr>
<tr>
<td>Financial Gain Special</td>
<td>3.563</td>
<td>.613</td>
<td>.000</td>
<td>35.258</td>
</tr>
<tr>
<td>Lying in Wait Special</td>
<td>.261</td>
<td>.314</td>
<td>.407</td>
<td>1.298</td>
</tr>
<tr>
<td>Other Special</td>
<td>1.125</td>
<td>.631</td>
<td>.074</td>
<td>3.082</td>
</tr>
<tr>
<td>Constant</td>
<td>-4.819</td>
<td>.654</td>
<td>.000</td>
<td>.008</td>
</tr>
</tbody>
</table>

Using the conventional level of significance for statistical studies (<.05), there are nine predictor variables that had a statistically significant effect on special circumstance charging. Seven of those variables concerned the nature of the crime: use of a firearm, stranger victim and five special circumstances—multiple murder, sex crime, theft felony, torture/kidnapping and financial gain. These variables are arguably legitimate considerations in the charging decision. However, the other two variables with a statistically significant effect—race/ethnicity (WV/BD) and gender of the...
vict—are not. With regard to the WV/BD variable, column Exp(β) in Table 6 shows the strength of the predictive power of this variable to be 3.734. Thus, in cases involving a white victim and a black defendant, the odds of prosecutors alleging special circumstances were 3.734 times higher for WV/BD cases than in the category omitted from the model, the BV or LV (or minority victim) cases.

Table 7: Logistic Regression Analysis of Victim/Defendant Race/Ethnicity and Other Factors on Whether Death Penalty Sought (n=447)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
<th>S.E.</th>
<th>Sig.</th>
<th>Exp(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WV/WD</td>
<td>.804</td>
<td>.496</td>
<td>.105</td>
<td>2.234</td>
</tr>
<tr>
<td>WV/LD</td>
<td>1.993</td>
<td>.713</td>
<td>.005</td>
<td>7.337</td>
</tr>
<tr>
<td>WV/BD</td>
<td>1.874</td>
<td>.592</td>
<td>.002</td>
<td>6.516</td>
</tr>
<tr>
<td>Prior Felony Conviction</td>
<td>-.022</td>
<td>.460</td>
<td>.961</td>
<td>.978</td>
</tr>
<tr>
<td>Other Crimes of Violence</td>
<td>.348</td>
<td>.430</td>
<td>.419</td>
<td>1.416</td>
</tr>
<tr>
<td>Use of a Firearm</td>
<td>.548</td>
<td>.398</td>
<td>.169</td>
<td>1.729</td>
</tr>
<tr>
<td>On Probation or Parole at Time of Murder</td>
<td>1.144</td>
<td>.436</td>
<td>.009</td>
<td>3.139</td>
</tr>
<tr>
<td>In Gang at Time of Murder</td>
<td>-.513</td>
<td>.788</td>
<td>.515</td>
<td>.599</td>
</tr>
<tr>
<td>Principal Role in Crime</td>
<td>-1.020</td>
<td>.467</td>
<td>.029</td>
<td>.361</td>
</tr>
<tr>
<td>Victim(s) a Stranger to Defendant</td>
<td>.393</td>
<td>.433</td>
<td>.363</td>
<td>1.482</td>
</tr>
<tr>
<td>Child or Elderly Victim</td>
<td>.250</td>
<td>.587</td>
<td>.670</td>
<td>1.284</td>
</tr>
<tr>
<td>Injuries to Non-Homicide Victims</td>
<td>-.210</td>
<td>.366</td>
<td>.566</td>
<td>.811</td>
</tr>
<tr>
<td>Female Victim</td>
<td>1.427</td>
<td>.427</td>
<td>.001</td>
<td>4.166</td>
</tr>
<tr>
<td>Female Defendant</td>
<td>.381</td>
<td>.657</td>
<td>.562</td>
<td>1.464</td>
</tr>
<tr>
<td>Multiple Murder Special</td>
<td>2.555</td>
<td>.480</td>
<td>.000</td>
<td>12.877</td>
</tr>
<tr>
<td>Sex Crime Special</td>
<td>.831</td>
<td>.667</td>
<td>.213</td>
<td>2.297</td>
</tr>
<tr>
<td>Torture/Kidnapping Special</td>
<td>1.706</td>
<td>.464</td>
<td>.000</td>
<td>5.505</td>
</tr>
</tbody>
</table>

In Table 7, eight variables had a statistically significant effect on death charging. Five of the variables reflected legitimate charging considerations: that the defendant was on probation or parole, that the defendant was the principle in the killing and three special circumstances—multiple murder, torture/kidnapping, and financial gain. As was the case with special circumstances charging, a female victim has a significant effect on death charging. The two race variables (WV/LD, and WV/BD) show even larger effects (compared to the omitted category of BV and LV) on the decision to seek the death penalty. The column labeled “Exp(β)” shows that the odds of the District Attorney seeking the death penalty were more than twice as high in WV/WD cases as in cases with black and Latinx victims. In cases with white victims and minority defendants, the odds the District Attorney would seek death were over seven times as high in WV/LD cases and six and a half times as high in WV/BD cases as in cases with black or Latinx victims. Those racial/ethnic combinations were stronger predictors that the District Attorney would seek death than any other variables except multiple murders and financial gain murders.

A. Summary

In his opinion in *Furman*, Justice Stewart referred to the death penalty being imposed on a “random handful” of defendants and equated it to being “struck by lightning.” Justice Brennan likened death sentencing to a “lottery system.” However, this study confirms what other studies have found: capital case charging, death charging and death sentencing are not imposed on the selected “handful” in an entirely random fashion. If the process is a lottery, the tickets are not

<table>
<thead>
<tr>
<th>Variable</th>
<th>Exp(β) Value</th>
<th>VIF Value</th>
<th>Standard Error</th>
<th>Odds Ratio</th>
</tr>
</thead>
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<tr>
<td>Theft Felony Special</td>
<td>.734</td>
<td>.419</td>
<td>.080</td>
<td>2.084</td>
</tr>
<tr>
<td>Victim Special</td>
<td>.124</td>
<td>1.276</td>
<td>.923</td>
<td>1.132</td>
</tr>
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<td>Financial Gain Special</td>
<td>3.291</td>
<td>.641</td>
<td>.000</td>
<td>26.857</td>
</tr>
<tr>
<td>Lying in Wait Special</td>
<td>.356</td>
<td>.389</td>
<td>.360</td>
<td>1.427</td>
</tr>
<tr>
<td>Other Special</td>
<td>.784</td>
<td>.666</td>
<td>.239</td>
<td>2.191</td>
</tr>
<tr>
<td>Constant</td>
<td>-5.401</td>
<td>.827</td>
<td>.000</td>
<td>.005</td>
</tr>
</tbody>
</table>

94. The odds of a defendant being charged with special circumstances and the odds of the District Attorney seeking death are both more than four times as high if a victim was a woman than if the defendant killed a man or men.


96. *Id.* at 293 (Brennan, J., concurring).
of equal value because two factors, one legitimate—the “egregiousness” of the crime—and one illegitimate—the race/ethnicity of the defendant and victim—significantly impact the selection. We measured egregiousness in two ways, by looking at the particular special circumstance(s) in the case and by looking at the number of different special circumstances in the case. We found, for example, that multiple-murder cases and financial-gain cases made a special circumstances charge and a death charge substantially more likely. We found that cases where two or more different special circumstances were present were also substantially more likely to produce a special circumstances charge or a death charge. However, the fact that, as a general matter, the prosecutors’ special circumstances charging and District Attorney’s death charging correlated with the egregiousness of the crime, does not minimize the risk of arbitrariness in light of the relative infrequency of those charges. Only a little over a quarter of the death-eligible defendants (27.6%) were charged with special circumstances. And, the District Attorney did not seek death against most defendants committing the most egregious crimes: almost two-thirds of the defendants with multiple special circumstances were not death-charged; and almost two-thirds of the defendants who murdered two or more victims were not death-charged.

Beyond the risk of arbitrariness, the study documents discrimination. We found that, in murder prosecutions during the relevant time period—particularly in cases with white victims and black defendants—a substantial factor in prosecutors’ decision whether to charge special circumstances and in the District Attorney’s decision whether to seek the death penalty was the race/ethnicity of the victims and defendants.

CONCLUSION

In McCleskey, the Court emphasized that “prosecutorial discretion cannot be exercised on the basis of race.” However, as noted above, McCleskey’s Equal Protection claim failed because he

97. See supra Tables 6, 7.
98. See supra Table 2.
99. See supra Table 2.
100. And while the substantial majority of the defendants who committed the most egregious murders were not death-charged, 11 defendants who committed lying-in-wait and/or theft felony-murders were death-charged.
could not identify a single person or entity whose purposeful discrimination caused the racial disparities identified in the Baldus study and his single-county evidence apparently was based on too small a sample. The present study meets both of the objections to McCleskey’s study: special circumstances charging was done by a single entity (the San Diego District Attorney’s Office) and death charging by a single person (District Attorney Edwin Miller); and the present study is far larger than McCleskey’s Fulton County study (covering roughly three times as many death-eligible cases). In sum, it would seem our central finding—that from 1978 to 1993 race/ethnicity was a substantial factor in the decision of prosecutors to charge special circumstances and in the District Attorney’s decision to seek the death penalty—is sufficient to make out the purposeful discrimination necessary to make an Equal Protection claim.

There may be a temptation to minimize the significance of our findings by hypothesizing that San Diego County simply had a rogue District Attorney at the time and/or that the data are more than twenty-five years old and no longer reflect current realities. However, any suggestion that the San Diego findings are an aberration is belied by the several California studies finding racial discrimination elsewhere. More importantly, this suggestion ignores the central problem that the majority Justices in Furman were attempting to address: the “untrammeled discretion” to impose the death penalty. It is California’s exceedingly broad (arguably unconstitutionally overbroad) death penalty statute and the unconstrained discretion it affords to prosecutors to charge (or not charge) special circumstances and to seek (or not seek) death that invites discrimination, and the proof of discrimination in this and prior studies is, in turn, evidence that the statute is overbroad. That statute has not been narrowed and prosecutors’ discretion has not been limited in any way in the last twenty-five years—in fact, the statute has been broadened—so there is no reason whatsoever to presume that discrimination is less of a problem today than it was at the time of the study.

The issue of capital case biases by California prosecutors can be addressed county by county with research such as that in the present study, or it can be addressed through the systemic reform of a genuine narrowing of the death-eligible class. This was a remedy

102. McCleskey, 481 U.S. at 295 n.15.
proposed by Professor Baldus and his colleagues twenty-five years ago in their response to *McCleskey*. However, this remedy was never implemented in California or anywhere else until 2019, when Oregon revised its death penalty scheme by significantly limiting death eligibility. Whether such a remedy would be sufficient is unclear, but what is clear is that California’s present scheme is, in Justice Douglas’s words, “pregnant with discrimination.”

EXHIBIT P
Assessing the Capriciousness of Death Penalty Charging

Robert E. Weiss  Richard A. Berk  Cathrine Y. Lee

We discuss capriciousness in decisions to charge homicide defendants with capital crimes. We propose using Shannon Information to assess capriciousness in a charging system and apply Shannon Information to analyze new data from San Francisco County, California. We show that about two-thirds of the potential systemic capriciousness is removed by the explanatory variables available. The one-third remaining is dependent on inherently unstable features of charging practices that necessarily produce capriciousness.

In Furman v. Georgia (1972:293), Justice Stewart noted that the existing system of charging and sentencing in death penalty cases was "cruel and unusual in the same way that being struck by lightning is cruel and unusual." Justice Brennan concurred that the existing procedures were "little more than a lottery system." In a recent article building on these concerns, published in Law & Society Review, Berk, Weiss, and Boger (1993a) develop the concept of an as if lottery for the role of chance in death penalty charging decisions (see also Paternoster 1993; Berk et al. 1993b). The authors argued that the decision to charge an offender with a capital crime takes on many of the characteristics of a lottery, although legal precedent and administrative practice seek deterministic outcomes. The issues must be addressed at the system level; the question is not whether a particular charging decision is capricious but, overall, how capricious charging practices are within a particular jurisdiction. The authors' focus was on the structure of charging practices.

We here extend the work of Berk, Weiss, and Boger (hereafter "BWB"). BWB argued that the statistical distribution of predicted probabilities from a model of the charging decision could be used to characterize systemic capriciousness. To take a simple illustration of a system with little capriciousness, imagine a charg-
ing process described as grouping offenders into a set of "good guys" and a set of "bad guys." The good guys have a predicted probability of 0.02 of being charged with a capital crime. The bad guys have a predicted probability of 0.97 of being charged with a capital crime. In contrast, imagine a charging system described as making few distinctions between offenders, so that all have a predicted probability of about 0.5 of receiving a capital charge. This system would be characterized as being very capricious.

BWB present a number of far more interesting distributions, but do not offer any way to summarize numerically the capriciousness in a distribution of predicted probabilities. Here, we add some precision to assessments of capriciousness. We suggest that Shannon Information can be used to productively characterize capriciousness in a charging system. We then illustrate its applicability with recent data on 427 death penalty charging decisions from the County of San Francisco.

I. Conceptions of Capriciousness

The outcome we consider is whether the defendant is charged with a crime for which capital punishment may be applied. Once the charge is determined, there is no uncertainty; the outcome is known with perfect accuracy by all individuals involved. However, before the charge is determined, there is prospective uncertainty insofar as the charging decision cannot be forecast with perfect accuracy.

Following BWB, we model this charging process as assigning defendants to as if/lotteries, where the chance of a capital charge is a probability that depends on the nature of the crime committed and the biography of the offender. For example, a defendant who executes potential witnesses after committing a robbery might be, in effect, assigned to a lottery in which the chance of a capital charge is 0.9. It is as if a coin will later be flipped for which the probability of coming up heads is 0.9. If it comes up heads, a capital homicide will be charged.

To motivate this, consider a set of 100 defendants who execute potential witnesses after committing robberies; even if all backgrounds are identical and the crimes are identical, it is unlikely in our hypothetical that all 100 will be charged with a capital offense. In fact, only about 90 of them might be expected to receive a capital charge.

In contrast, a defendant who kills a clerk of a liquor store while committing a robbery might be, in effect, assigned to a lottery in which the chance of a capital charge is 0.3. It is as if a coin will later be flipped for which the probability of coming up heads is 0.3. If it comes up heads, a capital homicide will be charged.
Now, about 30 out of every 100 defendants will be charged with a capital offense.

The *as if* lottery is a way to formalize how prosecutors and defense attorneys may think about charging before charges are officially announced (Maynard 1984). It also readily translates into standard statistical procedures.

The same logic works retrospectively if the charging outcome, which has occurred, cannot be *backcast* or *retrodicted* from other information available. That is, if a new observer, who does not know the charges, cannot determine with perfect accuracy who was charged and who was not from the information available, there is *retrospective* uncertainty.

Capriciousness, as we use the term, refers to the degree of unpredictability or randomness in the output of any social system, *even if the same “inputs” are consistently applied*. We study here the social system producing prosecutors' charging decisions, where the “inputs” are characteristics of particular homicide defendants and their crimes. If there is any capriciousness, the charges made against each defendant cannot be predicted with perfect accuracy. One key implication is that if one could rerun history—if the particular set of defendants could be sentenced again “from scratch”—the outcome would almost certainly change. Not all defendants would receive the same charge in the second time around.

Two types of capriciousness in the charging system can be identified. One type of capriciousness occurs when differently situated offenders are treated identically for no apparent reason. Consider two hypothetical offenders. One commits a homicide with no aggravators specified by statute and the other commits a homicide with several aggravators specified by statute. Moreover, the first offender has no prior record, and the second has two prior homicide convictions. It would be surprising if neither, or if both, were charged with a capital crime. Alternatively, it would be surprising if both were assigned to lotteries with the same probability of being charged with a capital crime. We call this type of capriciousness, in which effectively different offenders are treated similarly, *chance homogeneity*.

The other type of capriciousness occurs when similarly situated offenders are treated differently for no apparent reason. This is the kind of capriciousness that perhaps most immediately comes to mind. Imagine two offenders with effectively identical prior records and who have committed effectively identical crimes. A failure to charge both with the same offense would be surprising. We call this *chance heterogeneity*.

Now, consider the implication of chance homogeneity at the systemic level. The BWB model of the charging system assigns offenders to lotteries, and lotteries then determine which offenders are charged with a capital crime. If charging practices are
inconsistently applied, a charging system will tend to allocate differently situated offenders to similar lotteries. In effect, meaningful differences between defendants and between crimes wash out. In the extreme, the probabilities of all lotteries will cluster closely around some single value. In assigning offenders to lotteries, it makes intuitive sense that the more lotteries there are, and the more variable the probabilities associated with these lotteries, the more discriminating the charging system is. The charging system makes many nontrivial distinctions between offenders, which means that differently situated defendants will tend to face rather different probabilities of a capital charge. This, in turn, implies that it may be relatively rare for two offenders with very different crimes and backgrounds to be charged in exactly the same manner. Consequently, there is little chance homogeneity and capriciousness is low.

Chance heterogeneity is introduced into the system by the lottery stage. If all probabilities for all lotteries are very near 0 or 1, then chance heterogeneity is small and the charging system is not capricious. Offenders assigned to the same lottery will indeed see the same charging outcome. In contrast, if many probabilities are near 0.5, then there is a set of offenders for whom chance heterogeneity is large—many offenders assigned to the same lottery with probability near 0.5 will be assigned a capital charge and many will not get a capital charge, yet the system has identified them as having similar enough backgrounds and crimes to assign them to the same or similar lotteries.

To summarize the systemic implications of chance homogeneity and chance heterogeneity, imagine a very simple charging system in which all of the offenders fall into four classes with known probabilities of a capital charge of 0.96, 0.38, 0.42, and 0.46. Note that there are only four different probabilities and they all have similar values. Consequently, capriciousness is high. In contrast, consider a charging system with eight known probabilities of 0.001, 0.02, 0.07, 0.15, 0.90, 0.91, 0.98, and 0.996. Since offenders are sorted into twice as many categories, since there are some rather dramatic distinctions between the probabilities of a capital charge, and since the probabilities are near 0 or 1, this charging system is much less capricious than the first.

II. Capriciousness in Capital Charging

What causes capriciousness specifically in capital charging systems? First, a substantial number of cases are judgment calls that could go either way. One implication is that unique, peripheral, and even formally irrelevant features of a case can determine the outcome. Prediction is then impossible for these cases.
Second, even when official charging guidelines exist, their application is always subject to interpretation. In California, for example, a homicide that is heinous may qualify for a capital charge. But where exactly is the line between heinous and nonheinous?

Third, charging practices necessarily evolve in response to changing circumstances. Recent “three-strikes” legislation in California, for instance, means that many more felony cases are going to trial; there is no reason to plead guilty on a third-strike offense when a life sentence automatically follows. As a result, prosecutors are increasingly hard pressed to pursue their usual mix of felony cases all the way to trial. And since capital cases will almost certainly mean a trial, prosecutors have to be more selective in which defendants they charge with capital crimes.

Finally, prosecutors are not immune to the volatile politics of capital punishment. The decision by the Los Angeles District Attorney not to charge O. J. Simpson with capital homicide is just one highly visible illustration. Our reading of the facts is that at least two statutory aggravators apply.

Many have argued that legally inadmissible variables often play a role in the charging process (Bowers, Pierce, & McDevitt 1984; Baldus, Woodworth, & Pulaski 1985, 1990; Paternoster & Kazyaka 1988; Gross & Mauro 1989; U.S. General Accounting Office 1990). This might be called unfairness in a charging system, a rather different issue. Our goal here is primarily to assess the capriciousness of charging systems.

To summarize, the capriciousness of a charging system depends on how effectively differences between offenders and their crimes translate consistently into the charges leveled. Differences have to be acted upon, and in a manner that does not vary from offender to offender. We now turn to a more formal representation of capriciousness.

### III. Formalizing Capriciousness

We begin with some definitions and notation. Let $A$ and $B$ be discrete random variables taking on a finite number of outcomes $A^i$ and $B^j$. There are $K$ mutually exclusive possible events for random variable $A$, and $J$ mutually exclusive $B$ events, and $K \times J$ total possible outcomes between the two random variables. Our notation and assumptions directly follow Khinchin (1957); the language surrounding the death penalty and capriciousness and the examples are ours.

Each outcome has probability $\pi_{i,j}$ or $\pi_{i,j}$. In general, the random variables $A$ and $B$ do not need to have the same outcomes, probabilities, or possible number of outcomes. However, for death penalty charging decisions, we will consider random variables with only two outcomes; either the offender is charged with...
a capital crime or the offender is not charged with a capital crime. The argument $AB$ denotes the joint outcomes $A^iB^j$ with corresponding probabilities $\pi_{k}^{A^iB^j}$ which in general are not necessarily equal to $\pi_{k}^{A} * \pi_{j}^{B}$. If $A$ and $B$ are independent, then $\pi_{k}^{A^iB^j} = \pi_{k}^{A} * \pi_{j}^{B}$.

**A. Khinchin’s Theorem**

We now develop our capriciousness measure $H(A) = H(\pi_{1}^{A}, \pi_{2}^{A}, \ldots, \pi_{K}^{A})$. The function $H(\cdot)$ will assess capriciousness of the random variable $A$ or equivalently the associated set of probabilities $(\pi_{1}^{A}, \ldots, \pi_{K}^{A})$. Suppose that given the event $A^k$ occurs and the probabilities of the possible outcomes of random variable $B$ change. We denote this situation by $H_A(B)$, the capriciousness of $B$ given that the outcome of $A$ has been observed. The capriciousness in $B$ changes depending on the outcome of $A$. Let the function $H(\pi_{1}, \pi_{2}, \ldots, \pi_{K})$ be continuous and satisfy the following three assumptions.

**Assumption 1.** For a given set of $K$ mutually exclusive and exhaustive events with probabilities $\pi_k$ so that $\sum_{k=1}^{K} \pi_k = 1$, we assume the function $H(\pi_{1}, \pi_{2}, \ldots, \pi_{K})$ takes its largest value at $\pi_k = 1/K$, $k = 1, \ldots, K$, where $K$ is the number of outcomes.

**Assumption 2.** For two discrete random variables $A$ and $B$ (such as two homicide defendants), $H(AB) = H(A) + H_A(B)$.

**Assumption 3.** The possibility of events of zero probability does not change the capriciousness function. That is, $H(\pi_{1}, \pi_{2}, \ldots, \pi_{K}) = H(\pi_{1}, \pi_{2}, \ldots, \pi_{K}, 0)$.

Assumption 1 requires that $K$ equally likely events is the most capricious situation possible. Compare a fair coin toss with getting hit by a car when crossing the street. The outcome of the coin toss (random variable $A$) is much harder to predict than the outcome of crossing the street (random variable $B$), and $H(A) > H(B)$. If a head (or a tail) is predicted, that prediction will be correct about half the time. But since people are rarely struck by cars when crossing the street, a prediction of safe crossing will be correct most of the time.

Analogously, if offenders are assigned to lotteries with probability 0.5 of a capital charge, that lottery maximizes capriciousness, while a lottery with probabilities near 0 or 1 have minimal capriciousness. In general, the easier it is to predict the outcome of the random variable $A$, the less capricious $A$ is.

Assumption 2 demands that the capriciousness of multiple random variables adds in a certain way. In particular, if $A$ and $B$ are independent, then $H(AB) = H(A) + H(B)$, and the capriciousness adds directly. For our homicide defendants, this means that the capriciousness of a situation with two independent defendants with the same probability of a capital charge (CC) is twice as
capricious as the same situation with but a single defendant. With one defendant, there are two outcomes \( A^1 = \text{CC} \) and \( A^2 \neq \text{CC} \) with probabilities \( \pi \) and \( 1 - \pi \). For two defendants, one can reformulate the problem using a single random variable with four possible outcomes; both \( \text{CC} \); \( A \) only \( \text{CC} \); \( B \) only \( \text{CC} \); and neither \( \text{CC} \) with respective probabilities \( \pi^2 \), \( \pi(1 - \pi) \), \( (1 - \pi) \pi \) and \( (1 - \pi)^2 \). Assumption 2 forces this second random variable to have exactly twice the total capriciousness of the single-defendant random variable. Both situations have the same average, as opposed to total, capriciousness, which we might use for comparing different systems.

Assumption 3 states that including events of zero probability, which we avoid in practice, such as the prosecution calling a homicide victim to testify, do not affect the capriciousness of a system. In effect, events that are known with certainty cannot add capriciousness to the system.

Given assumptions 1, 2, and 3, we have

\[
K \sum_{k=1}^{K} -\lambda_k \log \pi_k
\]

for some constant \( \lambda \).

A proof for equation (1) can be found in Khinchin (1957). The \( H \) function is called alternately the entropy of a system, the uncertainty, the information, or the Shannon Information. The use of this function for summarizing uncertainty, unpredictability and information has a long history. See, for example, Shannon (1948) or Kullback (1958).

As a practical matter, the choice of \( \lambda \) does not matter. Choices for the base of the log also do not matter and are perfectly confounded with the choice of \( \lambda \). For convenience, one can choose log base 2 or \( e \) or 10. We use base \( e \) and \( \lambda = 1 \).

B. Calculating Capital Charging Capriciousness

Now we narrow the discussion to a system of \( n \) binary and independent random variables \( A_1, A_2, \ldots, A_n \) corresponding to \( n \) homicide defendants, with probabilities of a capital charge \( P = \{\pi_1, \pi_2, \ldots, \pi_n\} \). For binary independent events, we define the function

\[
C = C(P) = C(\pi_1, \ldots, \pi_n) = \sum_{i=1}^{n} H(\pi_i, 1 - \pi_i)
\]

as the capriciousness of the system of probabilities \( P \). In general, the \( \pi_i \)'s, the probabilities of a capital charge for each defendant, are unknown and must be estimated using data and a statistical model. Given some method of estimating the \( \pi_i \)'s, the capriciousness \( C(\pi_1, \ldots, \pi_n) \) of the system can be estimated. The next section discusses the interpretation of \( C \).
IV. Understanding the Capriciousness Measure

First, we present two instructive inequalities that follow from the definitions (1) and (2) of capriciousness. They show that our measure of capriciousness performs in a fashion that is consistent with our earlier conceptual discussion of capriciousness.

Consider two sets of probabilities that have the same average. Capriciousness is greater for the set in which all the \( \pi_i \)'s are the same rather than the set in which the \( \pi_i \)'s differ. In particular, for any two probabilities \( \pi_1 \) and \( \pi_2 \), define
\[
\bar{\pi} = (\pi_1 + \pi_2)/2.
\]
Then
\[
C(\pi_1, \pi_2) \leq C(\bar{\pi}, \bar{\pi}). \tag{3}
\]
In other words, a charging system with equal probabilities for a set of offenders is more capricious than another charging system whose average probability across defendants is the same, but whose individual probabilities are different.

To take a very simple example, consider a system in which the probability of a capital charge for each defendant is 0.20. Now consider another system in which the probability of a capital charge for half the defendants is 0.10 and 0.30 for the other half. The first system is more capricious, although both have the same average probability of a capital charge (i.e., 0.20).

Furthermore, for \( 0 < \alpha < 1 \),
\[
C(\pi_1, \pi_2) \leq C(\bar{\pi}_\alpha, \bar{\pi}_\alpha - \alpha), \tag{4}
\]
where \( \bar{\pi}_\alpha = \alpha \pi_1 + (1 - \alpha) \pi_2 \). Inequality (4) says that if charging system 1 produces a set of probabilities that are more similar to one another than a set of probabilities produced by charging system 2, then charging system 1 will have higher capriciousness than charging system 2. We illustrated this point with a simple example earlier.

We are still left, however, with the need to interpret quantitatively our capriciousness measure. As is, the units do not have any simple meaning that would allow investigators to know how big is big, or when estimated differences in capriciousness between two charging system are large enough to be important.

We propose to anchor the capriciousness measure \( C \) at a high end and a low end. Essentially, this produces a ruler with which to measure capriciousness. A mathematical upper bound for the capriciousness \( C \) of any system \( P \) of \( n \) probabilities is \( C \) associated with a vector of \( n \) probabilities equal to 0.5. This would lead to a \( C_{\text{max}} \) of 0.693\( n \), where 0.693 = 0.5 * \( \log 0.5 \) + 0.5 * \( \log 0.5 \) is the mean capriciousness. However, 0.693\( n \) is a misleadingly high upper bound for systems where the fraction of defendants receiving a capital charge is low; the 0.5 probability of a capital charge per se overstates maximum capriciousness. The fraction of defendants who are charged with a capital crime is certainly an important issue, but one that needs to be distinguished from whether
important distinctions are being made between defendants based on their crime, prior record, and other factors.

We propose, therefore, that the upper bound take the observed fraction of defendants charged with a capital crime as given. In particular, we propose fixing all the predicted probabilities at the value of the overall sample proportion of defendants charged with a capital crime. Thus, no distinctions are made between defendants, and all face the same probability of a capital charge equal to what is empirically observed.

Zero is always available as a lower bound for C; it occurs when the probabilities are all 0 or 1, as in a deterministic system. This suggests a goal of perfection, which seems unreasonable for social systems. A slightly larger and convenient, if ad hoc, minimum amount of capriciousness can be defined when the predicted probabilities are fixed at 1/n and at 1 − (1/n). The 1/n and 1 − (1/n) are smallest and largest noncertain sample frequencies empirically possible from a sample of size n. This lower bound we propose is more demanding when more defendants are processed because n is larger. Actually, since \( H(\pi, 1 - \pi) = H(1 - \pi, \pi) \), there is no need to be concerned about setting up the proportion of 1/n’s and the 1 − (1/n)’s so that the mean predicted probability is maintained.

To help fix these ideas consider the following example. There are 50 defendants and 5, or 10%, are charged with a capital crime. It follows that the upper bound to capriciousness is 50 * (0.1 log 0.1 + 0.9 log 0.9) = 16.25. Our proposed lower bound for capriciousness is 4.9 = 50 * (0.02 log 0.02 + 0.98 log 0.98).

Suppose now that the estimated distribution of predicted probabilities has a mean of 0.10 but is highly skewed with a long right tail. Half of the 50 defendants have a predicted probability of a capital charge of 0.01, 20 have predicted probabilities of 0.1, 4 have probabilities of 0.4, and 1 of the 50 defendants has a probability of a capital charge of 0.90. The capriciousness of this distribution is 10.9.

On a ruler marked at the low end by 4.9 and at the high end by 16.25, a score of 10.9 is a little less than half of the distance from the upper bound of maximum capriciousness (given the mean) to our lower bound of minimum capriciousness. More usefully, 47% of the system’s total possible capriciousness has been removed by how the charging is done. Alternatively, 53% of the total possible capriciousness remains. Note that this 53% is just as real as the systematic 47%. It is a characteristic of the charging system and the mix of cases that can and should be estimated. Capriciousness occurs when differences between defendants and their crimes are not consistently translated into charges.
V. Comparing Two Sets of Offenders

As a computational matter, it is relatively easy to compare the capriciousness of two charging systems. However, one cannot directly compare the estimated $C_1$ and $C_2$, since the sizes $n_1$ and $n_2$ of the two sets of defendants probably differ; relative assessments of capriciousness can vary solely because the sample sizes differ. Therefore, we propose to compare the average capriciousness measures $\bar{C}_1 = C_1/n_1$ and $\bar{C}_2$ as estimates of the average capriciousness that each set of defendants faces.

More difficult is the decision about how to estimate average capriciousness for the two charging systems. One option is to fit a single model to the pooled data. Another option is to fit the two sets of data separately, but with the same model. Still another option is to fit two different models to the two sets of data.

While the strategy of fitting two different models to the two different datasets may be preferable, there is always the worry that estimated differences in capriciousness are in part a function of differences in the quality of the models applied. We recommend, therefore, fitting the same model separately to both datasets. That is, the set of explanatory variables used in both models should be the same. If, in fact, different sets of explanatory variables are important in the different models, we suggest pooling the explanatory variables. For example, if the first model has $A$ and $B$ as explanatory variables, and the second model has $X$ and $Y$ as explanatory variables, we recommend using $A$, $B$, $X$, and $Y$ as explanatory variables for both analyses. When the same explanatory variables are not available in both datasets, we suggest building separately the best models possible for each dataset and then qualifying any capriciousness measures accordingly, especially if one model is arguably worse than the other because of, for example, obvious omitted variables.

VI. Some Caveats

Capriciousness depends on the data and the model. Thus, estimated capriciousness is no different from other parameter estimates in that poor data or model misspecification can undermine the entire enterprise. However, we suspect that estimated capriciousness is somewhat less vulnerable to these problems than, say, estimated regression coefficients. The capriciousness $C$ depends on the distribution of the model's predicted probabilities, and many different plausible combinations of the explanatory variables can produce the same distribution of predicted probabilities. Thus, if two rather different models generate approximately the same distribution of predicted probabilities, estimated capriciousness will be approximately the same.
Moreover, the important predictors of a death penalty charge are generally known (e.g., U.S. General Accounting Office 1990). We argue later that the likelihood of finding new and powerful predictors is very small. Such predictors could not be among the hundreds that have been tested and discarded, and would have to substantially alter estimated capriciousness beyond that explained by the other predictors routinely employed.

Another specification concern is that the standard models do not properly represent the distribution of \( y \) given the selected \( x \)'s. We will later use standard statistical tools for modeling, and do not offer any statistical innovations guaranteeing the appropriateness of our models. We note, however, that no substantive research has suggested methods other than those we apply. While some have considered Classification and Regression Tree (CART) models (Breiman et al. 1984), this approach also implies a substantial amount of capriciousness.

A deeper concern is that, in effect, each case is unique; that there is a specific covariate uniquely attached to each case determining the charge. Were these known, there would be no capriciousness. While we acknowledge that this could be true in some sense, this position necessarily and completely rejects the possibility of statistical or other kind of modeling. Furthermore, this implies a total inability for anyone to predict the outcome of the charging process given any amount of historical information—which is exactly our thesis here. If each case is unique, it is impossible to predict the future from the past. Readers interested in a detailed dissection of the uniqueness argument should consult BWB.

VII. An Application

BWB used data from the County of San Francisco including all nonvehicular homicides (363) from 1978 through 1988. The data were coded from official records and forms filled out by police and prosecutors. The outcome of interest was the decision by prosecutors to charge defendants with special circumstances. In California, a charge of special circumstances means that associated with the case are certain aggravating factors specified by statute, which, if found by plea or trial, make the defendant eligible for the death penalty.

For this illustration, we return to San Francisco County with new data on all nonvehicular homicides from 1986 to 1993. We report parameter and capriciousness estimates from several logistic regression models fit to the data. We display traditional output, although interpretation of, for example, the standard errors is debatable since this is a population. Following Berk, Western, and Weiss (1995), one might treat the inference from a Bayesian perspective.
There are 427 cases coded using the same sorts of primary sources as the earlier study and effectively the same coding sheets. Changes in the coding sheets reflect primarily clearer definitions and technical refinements. For example, explicit instructions were given to distinguish between no mention of any weapon and a clear indication that a gun was not the murder weapon. As before, the unit of analysis is the defendant. Multiple murders were treated as a single case unless the defendant(s) was (were) tried in separate cases. There were nine multiple murder cases in the dataset.

As in the earlier study, the response variable is the decision by prosecutors to charge special circumstances. Of the 427 homicide cases, 29 (6.8%) were so charged. In the earlier study, 27 homicide defendants out of 363 (7.4%) were charged with special circumstances. Once again, prosecutors seek the death penalty in only a small fraction of homicide cases.

As before, there are well over 100 possible explanatory variables describing the biography and background of the defendant (e.g., age, ethnicity, race, gender, prior record), biography and background of the victim (e.g., age, ethnicity, race, gender, relationship with offender), and nature of the crime (e.g., weapon used, aggravating or mitigating circumstances, location of crime). We use logistic regression to model the probability of a capital charge as a function of the covariates.

We began with a model that was identical to the final model used in BWB and then tried a number of other models in an effort to increase the number of useful explanatory variables. We were anxious to include as many explanatory variables as could be sensibly justified; we were anxious to avoid the charge that later findings of substantial capriciousness were the result of omitted explanatory variables. Table 1 probably pushes the data too hard, and we will present a simpler model later.

We lose about 100 cases in Table 1 because of missing data. No one variable is at fault. Rather, deletion of all cases missing any covariate add up. Simple methods of recovering the missing cases are to code "missing" as just another dummy variable or by treating missing as "0" (the absence of the attribute in question) along with the nonmissing 0s. Neither of these strategies changed the substantive story in Table 1.

Table 1 shows the results; standard errors, odds multipliers and one-sided p-values are based on the usual output of a logistic regression. Our analysis is nominally Bayesian with flat priors, and inference is based on the standard maximum likelihood approximation to the posterior.

The findings are much like those reported by BWB. The features of defendants and cases that prosecutors claim to affect charging decisions surface strongly. The odds of a death-eligible charge increase dramatically when there is more than one victim,
when the defendant has been previously convicted of a prior homicide, and when there is a contemporaneous felony or some other aggravator.

The earlier study did not find clear race effects and did not replicate the common finding that the odds of a capital charge increase if the victim is white rather than a member of a minority group. But there is some evidence in Table 1 that if the victim is white or Asian (compared to African American or Latino), the odds of a capital charge are about four times larger. Finally, some other biographical variables such as the defendant’s education and occupation may play some role, but the precise effects are difficult to pin down because of large amounts of missing data on those variables. Missing data for education and occupation was here coded as a separate dummy variable.

More important for us is the question of capriciousness. Figure 1 shows for model 1 a histogram of the predicted probabilities of a capital charge. It is clear that the vast majority of defendants have predicted probabilities of less than 0.1, but there is a small group of defendants with predicted probabilities of over 0.9. In addition, there are a number of defendants with predicted probabilities between 0.2 and 0.8. These are cases that are most likely, roughly speaking, to go either way, and it is also these cases that make the largest contributions to the overall capri-

### Table 1. Logistic Regression Results of Model 1 (N= 312)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>p-value</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-11.305</td>
<td>2.345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim white or Asian</td>
<td>1.203</td>
<td>0.738</td>
<td>0.0521</td>
<td>3.332</td>
</tr>
<tr>
<td>Multiple victims</td>
<td>10.072</td>
<td>2.804</td>
<td>0.0002</td>
<td>23,678.280</td>
</tr>
<tr>
<td>Gender: victim female</td>
<td>0.929</td>
<td>0.858</td>
<td>0.1401</td>
<td>2.581</td>
</tr>
<tr>
<td>Defendant committed prior homicides</td>
<td>3.844</td>
<td>1.305</td>
<td>0.0017</td>
<td>46.735</td>
</tr>
<tr>
<td>Relationship: victim familial, acquaintance, or other known to defendant</td>
<td>1.692</td>
<td>0.810</td>
<td>0.0188</td>
<td>5.428</td>
</tr>
<tr>
<td>Manner of killing was by shot (firearms) or stabbed</td>
<td>2.020</td>
<td>0.968</td>
<td>0.0189</td>
<td>7.538</td>
</tr>
<tr>
<td>Contemporaneous felony involved (robbery, burglary, sexual assault)</td>
<td>2.570</td>
<td>0.990</td>
<td>0.0050</td>
<td>13.063</td>
</tr>
<tr>
<td>Other contemporaneous crime involved</td>
<td>3.177</td>
<td>0.997</td>
<td>0.0008</td>
<td>23.971</td>
</tr>
<tr>
<td>Victim raped and/or bound/gagged</td>
<td>3.426</td>
<td>1.326</td>
<td>0.0051</td>
<td>30.765</td>
</tr>
<tr>
<td>Robbery, robbery-narcotics, sex/prostitution, burglary, sex-rape, child abuse, attack on police, assassination</td>
<td>2.509</td>
<td>0.974</td>
<td>0.0055</td>
<td>12.290</td>
</tr>
<tr>
<td>Defendant had accomplice(s)</td>
<td>1.004</td>
<td>0.814</td>
<td>0.1091</td>
<td>2.730</td>
</tr>
<tr>
<td>Victim under influence of drugs</td>
<td>-2.179</td>
<td>1.841</td>
<td>0.1188</td>
<td>0.113</td>
</tr>
<tr>
<td>Victim was gay</td>
<td>-3.427</td>
<td>1.326</td>
<td>0.0324</td>
<td>0.032</td>
</tr>
<tr>
<td>Defendant has less than high school diploma or equivalent education</td>
<td>-2.442</td>
<td>1.268</td>
<td>0.0062</td>
<td>30.765</td>
</tr>
<tr>
<td>Defendant has no occupation or unskilled</td>
<td>1.636</td>
<td>1.051</td>
<td>0.0603</td>
<td>5.135</td>
</tr>
<tr>
<td>Defendant’s education or occupation unknown</td>
<td>3.187</td>
<td>1.268</td>
<td>0.0062</td>
<td>24.219</td>
</tr>
</tbody>
</table>

Null deviance 193.203 on 312 degrees of freedom.
Residual deviance 68.981 on 296 degrees of freedom.
capriciousness of the charging system. In short, the histogram has the long right tail researchers have come to expect, and the charging system contains substantial capriciousness.

The maximum amount of capriciousness occurs for this sample when all of the predicted probabilities are fixed at the overall proportion of cases charged with a capital crime. Since for the analysis shown in Table 1 there are 313 cases with complete data, the overall proportion is $29/313 = 0.093$. The maximum capriciousness is estimated at 96.85. Our suggested minimum amount of capriciousness occurs when there are two values for the predicted probability of a capital charge: $1/n$ and $1 - (1/n)$. For

Fig. 1. Histograms of fitted probabilities $f_1$'s for models 1–4
these data, the minimum capriciousness is 6.75. Finally, the estimated capriciousness from model 1 is 34.49.

From these figures, the capriciousness possibilities range from 6.75 to 96.85, or about 90 units. The procedures used by the local prosecutors manage to remove 64.36 (96.85 – 34.49) of those units, or about 69%. In other words, of the total capriciousness possible for these data, our model suggests that the charging system is able to remove about two-thirds of the capriciousness and leave one-third intact. Thus, about two-thirds of the pattern in charging outcomes is signal, depending on characteristics of the defendant, victim, and crime. And about one-third of the pattern in charging outcomes is noise.

One might object that our model grossly overestimates the amount of capriciousness because important variables that affect capital charging have been overlooked. One way to better appreciate the merits of those argument is to show the consequences for our measure of capriciousness when we knowingly omit one or more important predictors.

From Table 1 it is apparent that killing more than one person substantially increases the odds of a capital charge. A cross-tabulation of a capital charge by whether there was more than one victim shows that nearly a quarter (7 out of 29) of the defendants who were charged with a capital crime had multiple victims, and every defendant but one with multiple victims (7 out of 8) was so charged. Clearly, killing more than one person makes it a very good bet that a capital charge will be filed, but capital charges can be filed for other reasons too.

When the model shown in Table 1 is reestimated with multiple victims no longer included as an explanatory variable, capriciousness increases to 60.67. This is model 2. Given the ruler established earlier, the charging system now removes about two-fifths, or 40%, of the capriciousness from the system rather than two-thirds; now 60% of the charging system appears to be noise. One can see from the figure that the right tail of the distribution has been shifted to the left; there are few defendants with very high predicted probabilities and more with middling predicted probabilities. It follows that capriciousness should be higher since there are now more defendants clustered around the gray area of 0.5.

More specifically, there are two ways in which dropping explanatory variables can inflate estimated capriciousness. First, the number of different values for the predicted probabilities may decline. Where there were once 30 “bins,” for example, there are now 25. Second, some extreme values for predicted probabilities become less extreme. For instance, 0.9s may become 0.7s, and 0.05s may become 0.3s. Explanatory variables with large regression coefficients and/or large variances are more able to powerfully affect how far the predicted probabilities move. Since
the variable multiple victims has relatively little variance, it is having its impact because of a very large regression coefficient. A few very high predicted probabilities are shifted dramatically downward and many low predicted probabilities shift upwards slightly when multiple victims is deleted from the model.

Clearly, if there is an omitted variable or set of omitted variables with effects similar to that of multiple victims, we are grossly overestimating capriciousness using the results reported in Table 1. But how plausible is this?

In California, aggravating factors that may lead to a capital charge are specified by statute, and we have in the dataset measures of each. So, whatever it is that has been overlooked is not an aggravator specified by law. Second, one must keep in mind that the omitted variable(s) would have to exert their effect after adjusting for the effect of the other variables shown in Table 1 and not be one of the about 90 other variables that had little demonstrable impact for these data. Finally, this variable would have to account for a substantial fraction of the 29 capital charges filed after multiple victims has had its effect and not occur in cases where no capital charge occurred. We have reviewed the literature on capital charging and sentencing and have found no such variable mentioned.

Consider now a less powerful explanatory variable: whether the victim knew the defendant. From Table 1, the regression coefficient of 1.69 translates into an odds multiplier of 5.4. When the victim is a friend or acquaintance of the defendant or a member of the defendant’s family, the odds of a capital charge are more than five times greater. While this is a nontrivial effect, dropping the relationship variable from model 1, giving model 3, changes the histogram of predicted probabilities vary little; compare the histogram for model 3 to the histogram from model 1. In fact, estimated capriciousness increases from 34.5 to only 42.2. It would take about a half-dozen such variables with odds multipliers of about 5 to have the same impact on estimated capriciousness as the variable multiple victims. Keep in mind that such variables would have to not be already included in our list of about 90 and would have to prove important after partialing for all the explanatory variables shown in Table 1. Again, there is nothing we have found in the relevant literature suggesting what those variables might be.

The model shown in Table 1 probably has too many explanatory variables for the number of defendants charged with a capital crime. Thus, capriciousness is probably underestimated by model 1. One result of too many predictors is that some of the estimated coefficients may be unstable and small changes in the model or modest amounts of measurement error could affect the story told. To explore these concerns, we examined several smaller models more like those reported by BWB. Table 2 shows
one set of results, called model 4, in which we include the race variable and other explanatory variables with the largest odds multipliers.

**Table 2. Logistic Regression Results of Model 4 (N = 329)**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>One-sided p-value</th>
<th>Odds Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-4.297</td>
<td>0.519</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim white or Asian</td>
<td>0.577</td>
<td>0.502</td>
<td>0.13</td>
<td>1.782</td>
</tr>
<tr>
<td>Multiple victims</td>
<td>5.949</td>
<td>1.182</td>
<td>0.000003</td>
<td>383.208</td>
</tr>
<tr>
<td>Defendant committed prior homicides</td>
<td>1.902</td>
<td>0.788</td>
<td>0.0082</td>
<td>6.670</td>
</tr>
<tr>
<td>Contemporaneous felony involved</td>
<td>2.417</td>
<td>0.525</td>
<td>0.000003</td>
<td>11.211</td>
</tr>
<tr>
<td>(burglary, sexual assault)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other contemporaneous crime involved</td>
<td>1.796</td>
<td>0.650</td>
<td>0.003</td>
<td>6.028</td>
</tr>
</tbody>
</table>

Null deviance 201.1 on 329 degrees of freedom.  
Residual deviance 121.8 on 324 degrees of freedom.

The story from Table 2 is straightforward. The odds of being charged with a capital crime increase dramatically if there is more than one victim, if the defendant has a prior homicide conviction, and if there was either a contemporaneous felony or another associated felony. Compared with the figures in Table 1, the race of victim effect is dramatically reduced. Finally, the estimated capriciousness is now 60.1, roughly double the estimated capriciousness for the first model.

The main point is that if in fact a number of useful predictors are excluded, estimated capriciousness can increase substantially. Compared with the histogram from model 1, the histogram for model 4 shows that the long right tail is shortened and that there are many more cases with predicted probabilities from 0.1 to 0.3.

Whether one prefers model 1 or model 4 depends on the substantive questions being asked. Since model 1 probably has too many predictors for this particular dataset, the coefficient estimates may be unstable because of collinearity not fully represented by inflated standard errors. If interest lies in estimating capriciousness, the larger model at least provides a plausible lower bound. Of course, it may turn out in practice that a single model will suffice whether the interest is in the regression coefficients or in capriciousness.

**VIII. Discussion and Conclusions**

We have here extended the earlier work of Berk, Weiss, & Boger (1993a), in which the concept of an *as if* lottery was applied to death penalty charging decisions. Our contributions are both methodological and substantive. We have suggested that Shannon Information (definition (1)), when considered in the context of plausible minima and maxima can be used to quantitatively characterize the systemic capriciousness of decisions to
charge homicide defendants with a capital crime. Our measure of capriciousness responds to chance homogeneity and heterogeneity in outcomes; estimated capriciousness is increased when observed differences between homicide defendants and their crimes do not consistently translate into differences in the probability of a capital charge.

Our most optimistic estimate is that compared with a charging system with maximum possible capriciousness where no distinctions are made between defendants, the current procedures in San Francisco wring out about two-thirds of the potential capriciousness. We doubt that it can be shown that the systematic component is substantially larger. First of all, the relevant literature is silent on variables we have overlooked that would dramatically alter the model's predicted probabilities, especially after adjustment for the other variables already included. In addition, model 1 already contains 16 explanatory variables when there are only 29 capital charges in the data. With added explanatory variables, one would begin to closely approximate one explanatory variable for each death penalty charge. At that point, the model would be pushing against the uniqueness problem discussed briefly above, and at great length in BWB. Finally, it seems inevitable that there will always be a substantial number of close calls for which the charging decision could go either way. In fact, homicide cases vary on a variety of dimensions, and many cases will fall in a gray area in which it is unclear whether a capital charge is appropriate.

Several conclusions follow. First, we have suggested a way to quantify capriciousness that may be usefully applied not just to death penalty charging decisions but to any people-processing institution with dichotomous outcomes. The measure seems to map well onto common-sense notions of capriciousness and is easy to compute.

Second, estimated capriciousness is model and data dependent. Like any summary statistic, it can be challenged with a showing of significant model misspecification or substantial measurement error. In our view, this raises the issue of where the scientific burden of proof lies. Following a good faith and credible showing that substantial capriciousness exists, sweeping claims of errors should not carry any weight unless solid empirical evidence can be brought to bear.

Third, death penalty charging decisions in San Francisco, and almost certainly elsewhere, would seem to be marked by substantial capriciousness. In effect, large numbers of defendants are assigned to lotteries in which the probabilities are some distance from 0.0 and 1.0. This means that even at the empirical extremes, there will be defendants who are charged with capital crimes by no manifest rationale. There will also be defendants who are not charged with a capital crime by no manifest ration-
ale. Insofar as there are significant numbers of defendants who are not easily assigned to the extremes, unpredictable and inexplicable charging decisions will be relatively common. Without clearly articulated and exhaustive rules for assigning capital charges, systemic capriciousness is inevitable, and the real question is how much capriciousness the courts and legislatures of the land are prepared to accept in capital cases. We have provided some tools to help quantify the question of how much capriciousness.

Finally, there are additional issues we are pursuing that are not considered here. On the technical side, capriciousness is a summary statistic and when applied to a sample, needs an estimated posterior density. We have employed several different procedures to this end, but have yet to settle on the best approach. In the special case of flat priors, logistic regression, and estimation based on posterior modal estimates, our capriciousness measure is numerically equal to one half of the deviance (McCullagh & Nelder 1989). We are providing, therefore, a useful generalization that can be easily used to characterize capriciousness in situations where the deviance does not apply.

Our technical contributions are, therefore, fivefold. First, we provide an interpretation of the deviance as Shannon Information for the models we employ. Second, we show how Shannon Information can be made more useful by providing ways to compute minimum and maximum capriciousness. This is not the same grounding used for the deviance. Third, we give an interpretation to the deviance that can be employed by Bayesians. Fourth, we advocate the calculation of Shannon Information in models besides linear logistic regression with flat priors and estimation techniques beyond maximum likelihood. In particular, we suggest that the Shannon Information is an interesting quantity to estimate in its own right. Finally, we apply capriciousness to a real world problem.

Our implicit loss function is also an issue. Capriciousness, as we have defined it, is unbiased in the sense that each predicted probability is weighted the same in the calculations. Alternatively, one might choose to weight the predicted probabilities differently. For example, one might want to weight more heavily the small predicted probabilities because they represent the lightning strikes that so concerned Justice Stewart. The high predicted probabilities, in contrast, may represent random mercy, which is presumably less problematic.

On the substantive side, we argue capriciousness as an inherent quality of social systems. A sensible initial goal, therefore, measure the amount of capriciousness. Having established the amount of capriciousness, one may consider whether the amount is intolerable and whether an effort should be made to reduce it.
These issues are especially pressing when, as in capital cases, the stakes are very high.

We hope to accumulate more experience with estimated capriciousness using data from a number of different jurisdictions. Given consistent findings of substantial capriciousness in many jurisdictions, we will then be faced with the problem of developing social systems that eliminate or substantially decrease the capriciousness.

References


Case

Furman v. Georgia, 408 U.S. 238 (1972)
EXHIBIT Q
Hispanics and the death penalty: Discriminatory charging practices in San Joaquin County, California

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Abstract

Following reinstatement of the death penalty after the Supreme Court’s decision in Gregg v. Georgia (1976), social scientists carefully documented evidence of racial and gender bias against defendants and victims at all stages of the death penalty system, from charging to conviction and sentencing. Despite these consistent findings, questions remained. One crucial unknown was whether or not racial bias uncovered in investigations of African Americans and Whites also negatively impacted members of other minority groups, in particular the largest minority group in the U.S.—Hispanics. Are Hispanics, as both victims and defendants, treated more like non-Hispanic Whites or African Americans? This research examined all death-eligible homicides in San Joaquin County, California from 1977 through 1986. Using logistic regression analysis, the investigation uncovered patterns of racial and gender bias, finding defendants in Hispanic victim cases were less likely to face a death-eligible charge than defendants in White victim cases. Evidence of discrimination may have implications for how Hispanic integration and race and ethnicity are understood and for evaluating the success of statutory reforms designed to insure fairness and constitutionality of the death penalty.

Introduction

Debates over fairness and constitutionality of the death penalty recently reentered the political and media limelight. Governor George Ryan of Illinois, for example, generated a political firestorm when he commuted the death sentences of all of the state’s death row inmates before leaving office in January 2003, citing concerns over error in determining guilt and sentencing in death penalty cases. Stories about innocence and claims of wrongful convictions may grab the headlines, yet what social scientists have carefully and quietly documented over the last three decades was evidence of racial and gender bias against defendants and victims at all stages of the death penalty system, from charging to conviction and sentencing. Despite these consistent findings, questions remained. One crucial unknown was whether or not racial bias uncovered in investigations of African Americans and Whites also negatively impacted members of other minority groups, in particular the largest minority group in the U.S.—Hispanics. Are Hispanics, as both victims and defendants, treated more like non-Hispanic Whites or African Americans? This study was the first to answer this question.

How Hispanics fare in the criminal justice system with respect to the death penalty may have broad implications for understanding race and ethnicity in the United States. The death penalty system’s treatment of Hispanics may indicate how the color line in the U.S. is being drawn as their numbers rise. Historians of race and ethnicity showed that throughout the nineteenth and first half of the twentieth centuries, the color line in the U.S. was
drawn between White/non-White (Jacobson, 1998; Roediger, 1991). What mattered and was privileged was whiteness. Following the rise of post–1965 immigration from Asia and Latin America, some immigration scholars suggested that the color line is now between Black/non-Black (Foner, 2005; Lee, Bean, & Stevens, 2003). Lee et al. (2003) found that Hispanics and Asian Americans were more likely than African Americans to marry Whites. Their children were also discovered to identify more often as “multicultural,” while children of Black/White unions were more likely to identify as Black or African American. Foner (2005) and Lee et al. (2003) argued that what mattered now was the distinction between Black and non-Black. An understanding of how Hispanic victims and defendants were treated by the criminal justice system will not provide a definitive explanation of the process of racialization nor how racialized groups interact. An empirical investigation, nevertheless, of how Hispanics fared in the criminal justice system may help social scientists to consider potentially broader changes taking afoot with respect to race and ethnicity in the United States.

Finally, as patterns of prosecutorial or jury discretion have led to capricious outcomes, legal scholars and social scientists must question whether the comparative–proportionality review process, instituted by states that sought to address concerns raised in the Supreme Court’s overturning of existing death penalty statutes in Furman v. Georgia (1972), were adequately resolved by the Court’s decision in Gregg v. Georgia (1976).

This article considers these questions by examining death-eligible cases that arose in the period immediately following the reinstatement of the death penalty in California. Specfically, the study investigated homicide cases from August 1977 through 1986 in San Joaquin County, California. An exploration of this place and time are interesting for two important reasons. The study enabled an examination of the death penalty system in the post–Gregg era. This research also demonstrated the role of race and ethnicity in death penalty cases, involving Hispanics and not just Black and White defendants and victims. This permitted an analysis of whether or not discriminatory practices that affected African American victims and defendants, which had been documented by prior research, similarly impacted other minority groups. In previous death penalty studies, researchers mainly made Black/White racial comparisons since many of the studies were conducted for litigation in which the defendants were African American and/or there were insufficient numbers of other minorities in the data utilized. A large Hispanic population in San Joaquin County provided the opportunity to focus on Hispanics.

Post–Furman reforms and prior death penalty studies

Following the Furman decision, state legislatures responded by first limiting the category of crimes that were death-eligible. Second, states statutorily designated a list of aggravating circumstances, specifying which murders were death-eligible. Finally, a bifurcated trial system and state review process were instituted. California adopted all of these reform measures.

By defining standards, state legislatures hoped to identify meaningful differences between death-eligible and non-death-eligible homicide cases. In California’s bifurcated trial process, the first phase determines guilt or innocence. If the defendant is found guilty of a death-eligible murder charge, a penalty trial ensues. The jury that finds the defendant guilty must decide if the defendant should receive the death penalty. By pushing for a death-eligible murder charge at the early stage of the process, the prosecutor demonstrates his or her belief in the seriousness and/or importance of the case, highlighting the value they attach to particular homicide cases as well as how much “law” is given to a victim. Donald Black (1976) argued that law was a form of “governmental social control,” which included activities such as reporting of the crime and the police’s investigational efforts. Black claimed that victims and sites of victimization that occupy lesser positions in social life received a lesser response from law than victims and victimization areas of higher status. Arguing that law was quantifiable, he wrote that some victims and cases received more law (Black, 1976, p. 3).

In the study period, both the prosecutor and jury could consider a list of special circumstances, whose attachment to a murder charge made it death-eligible and a list of mitigating circumstances that lessened the charge or sentence. Death penalty advocates hoped that the concerns over arbitrariness and excessiveness were resolved while preserving prosecutorial and jury discretion. Most states, including California, adopted a state review process in which each death penalty case could be reviewed to assess whether the sentence was disproportionate. If patterns of prosecutorial and jury discretion existed, however, the review process could fail to recognize and catch arbitrary outcomes. A comparative–proportionality review by the state Supreme Court could not recognize that a death sentence was excessive if the pool of possible cases was tainted by prosecutorial discretion, which led to death-eligible charges against some defendants but not others, based on nonlegal factors such as race or sex of the victim.

This study considered what resulted following death penalty reforms in California, considering how the
comparative–proportionality review process and perhaps the entire death penalty system were affected. This article, therefore, addresses important legal concerns raised by Justice White in his concurring opinion in *Gregg v. Georgia* (1976). Justice White worried that in the comparative–proportionality review, the Georgia Supreme Court could not look at cases that avoided death sentencing by being charged with a lesser offense based upon prosecutorial discretion. The system of appeal and review of the death penalty in Georgia could be muddied by prosecutorial discretion. In the end, Justice White argued that because the legislated statute outlined standards for death-eligible cases, prosecutors would press for death-eligible charges only against defendants in cases in which juries themselves would find the defendants guilty of the same standard (*Gregg v. Georgia*, 1976). Following *Gregg*, however, studies proved otherwise.

Research established that there were discriminatory patterns at all levels of the death penalty system, including the charging stage (Berk, Weiss, & Boger, 1993; Paternoster, 1983; Radelet & Pierce, 1985; Weiss, Berk, & Lee, 1996), sentencing phase (Bowers & Pierce, 1980; Gross & Mauro, 1989), or both (Baldus, Woodworth, & Pulaski, 1990; Berk & Lowery, 1985). The most consistent and significant findings were race-of–victim effects. The victim’s race was an important factor in determining which defendants were charged or sentenced to death. Researchers uncovered that in cases involving White victims, defendants faced much greater odds of receiving a death-eligible charge or a death sentence. While important to varying extent, controlling for case characteristics such as the commission of a contemporaneous felony, victim’s gender, relationship between defendant and victim, weapon(s) used, and the number of victims could not explain away the race-of–victim effects (Baldus et al., 1990; Berk & Lowery, 1985; Bowers & Pierce, 1980; Gross & Mauro 1989; Paternoster, 1983; Paternoster et al., 2003; Radelet & Pierce, 1985).

In a recent study of the death penalty system in Maryland, Paternoster et al. (2003) discovered that prosecutors were more likely to pursue a death-eligible charge against defendants in cases involving White victims. They found that the probability of facing a death-eligible charge for defendants in White victim cases was 1.6 times higher than for defendants in cases involving African American victims, holding other crucial case characteristics constant. The researchers also reported that a death-eligible charge was more likely to “stick” (charge not withdrawn prior to trial) in cases involving White victims than in cases involving African American victims. The probability of death-eligible charges being pursued to the trial phase was 1.5 times higher for defendants in White victim cases than for defendants in African American victim cases (Paternoster et al., 2003, p. 34). The study suggested that extralegal factors affected charging practices. Race was an important predictor of which cases received “more law” in the death penalty system.

In building upon these previous works, this study analyzed death-eligible charging in homicides involving Hispanic victims and defendants. Previous social science research suggested two different, possible outcomes. On one hand, given studies that argued that Hispanics were a racialized minority group, which faced similar disadvantages that African Americans did (Barrera, 1979; DeGenova & Ramos-Zayas, 2003), one could have expected that Hispanic victims, like African American victims, got “less law” than White victims in death-eligible cases. On the other hand, given research that stressed the social mobility and greater integration of Hispanics, particularly through intermarriage with Whites (Lee et al., 2003), one could have predicted that cases involving Hispanic victims were treated similarly to those with White victims. This article examines this sociological question and the legal concerns raised in *Gregg*.

**Data and methods**

This research examined death-eligible charging in Superior Court or at the guilt/innocence stage. Other stages preceded the one investigated, and a study of death penalty charging practices can look at discretion and possible bias at these earlier levels. There may have been patterns of racial discrimination in who was apprehended for murder and who finally got charged with capital homicide.10 There are also important steps that follow, including sentencing. While a research study with a longitudinal design is ideal for understanding the various levels and processes in the death penalty system, this study nevertheless provided useful information regarding possible bias in the death penalty system.11

Data on death-eligible homicide cases from San Joaquin County from August 1977, when California’s current death penalty statute became effective, through 1986 were gathered. There were 250 non-vehicular homicides between August 1977 and 1986. Of these 250 cases, seventy case reports could not be examined further. Reports for these seventy cases were missing key pages, in poor condition, or simply lost. There did not appear to be a pattern, however, to the seventy cases. They were not all cases, for example, from one time period or one city in the county. Of the 180 homicides,
128 cases were serious enough to warrant the possibility of a special circumstance attachment to the murder charge, which would have made it death-eligible. This means that a special circumstance such as multiple victims, killing of a police officer, or commission of a contemporaneous felony like kidnapping or robbery could have been added to the murder charge.12 Information about the victim, defendant, and crime was coded for each of the 128 cases.13 The data came from two sources—defendants’ probation or sentencing reports and the Bureau of Criminal Justice Statistics (BCJS). Probation or sentencing reports were compiled on each defendant after a final disposition but before sentencing. These reports provided characteristics of the crime as well as biographical information on the defendant. The BCJS data offered details on the victim, including his/her race, age, and relationship to the defendant. From both sources, data regarding weapon(s) used, method and location of killing, and court proceedings were also obtained. Significantly important features of the cases, identified in part by previous studies, were captured.

The unit of analysis for the study was the “homicidal act,” defined as the involvement of an individual’s action, which resulted in the death of another person or persons. A homicidal act resulted in a death-eligible charge if the defendant had to answer to a murder charge with one or more special circumstance attached in Superior Court. Multiple victim murders were treated as a single case, except when they were tried as separate cases. Each criminal case, with however many victims, was considered a unique case. The killing of one individual by two defendants was treated as two cases whereas the murder of two victims by one defendant was counted as one case since each defendant faced a criminal charge. Multiple victim cases were rare; there were four such cases in this study. Each of the four cases involved victims of the same race. Of the four, three cases had victims who were both of the same sex. One case had a male and a female victim. For this case, the victim’s sex was coded female. Of these 128 cases, 122 defendants were men, whereas just six defendants were women. None of the women in the six cases were charged with a capital homicide. There were too few women defendants to provide sufficient variability and, therefore, were dropped, which reduced the total number of cases in the study to 122.

A multiple logistic regression analysis was conducted to determine what best explained which homicide cases resulted in a death-eligible charge, the dependant variable. In a multiple regression analysis, the effect of extralegal variables such as race or ethnicity of the defendant or victim can be evaluated while holding constant other potentially important factors such as evidence or heinousness of the crime.

Analysis and discussion

Sample characteristics are presented in Table 1. Most victims in San Joaquin County were White. Forty-five percent of the victims were White. Hispanics constituted the second largest group of victims with 28 percent of all cases. African American victims made up 23 percent of the total. The smallest group was Asian, accounting for just 6 percent of the sample. Victims were more likely to have been male in the study. Seventy-three percent of victims were men, whereas 27 percent were women.

Two-thirds of all defendants were White or Hispanic. Thirty-four percent of defendants were White, and 33 percent were Hispanic. Twenty-five percent of defendants were African American, while just 7 percent were Asian American. These defendants were accused of committing a contemporaneous felony in 26 percent of the cases.

Table 2 shows that twenty percent of all cases resulted in a death-eligible charge. It was expected that murders committed during the commission of a contemporaneous felony such as burglary or robbery led to a death-eligible charge since this is one of the aggravating factors that warrant a death-eligible charge. In cases where there was a contemporaneous felony committed, defendants in 59 percent of the cases received a death-eligible charge. In 94 percent of the cases in which there were no additional felonies committed, no death-eligible charges were filed.

<table>
<thead>
<tr>
<th>Victim’s race</th>
<th>White</th>
<th>Hispanic</th>
<th>African American</th>
<th>Asian American</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>45%</td>
<td>28%</td>
<td>23%</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>(54)</td>
<td>(34)</td>
<td>(27)</td>
<td>(7)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Victim’s sex</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27%</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>(33)</td>
<td>(89)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Defendant’s race</th>
<th>White</th>
<th>Hispanic</th>
<th>African American</th>
<th>Asian American</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34%</td>
<td>33%</td>
<td>25%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>(42)</td>
<td>(41)</td>
<td>(31)</td>
<td>(7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contemporaneous felony</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>26%</td>
<td>74%</td>
</tr>
<tr>
<td></td>
<td>(32)</td>
<td>(90)</td>
</tr>
</tbody>
</table>
Table 2 also shows that White victim cases netted the most death-eligible charges. While 30 percent of White victim cases yielded a death-eligible charge, only 6 percent of Hispanic victim cases and 9 percent of African American victim cases led to a death-eligible charge. Defendants in 17 percent of Asian American victim cases faced a death-eligible charge, however, this was just a single murder case. Defendants were also more likely to face a death-eligible charge if the victim was female. In 48 percent of such cases, defendants were held to answer to a death-eligible charge, while defendants in just 9 percent of male-victim cases did.

Previous research suggested that the race of the defendant sometimes played a role in the charging outcome. A death-eligible charge was never levied against Asian American defendants. Death-eligible charges were brought up against 10 percent of Hispanic defendants. Black defendant cases had the highest rate of death-eligible charges with 29 percent, while White defendant cases had the second highest rate with 26 percent.

The bivariate relations presented in Table 2 indicated that there was a link between victim and defendant characteristics and the likelihood of being charged with capital homicide. Female and White victim cases and cases involving the commission of a contemporaneous felony, in particular, appeared to have greater proportions of death-eligible charges. Of particular legal concern was if there were consistent and significant racial or gender differences in death-eligible charging. Did the commission of a contemporaneous felony or some other legal factor explain the observed association between race or gender and death-eligible charging? The only way to determine the relationship systematically and fully was with multivariate logistic modeling. Using a generalized linear model, logistic regression equations with the odds of being charged with capital homicide were estimated. Table 3 presents the results of a logistic regression model.

Table 3 illustrates the race–of–victim effects. In a case where the victim was Hispanic or African American, the defendant was less likely to be charged with a capital homicide than if the victim was White or Asian, the reference group in this regression model. The odds of being charged with capital homicide for defendants in African American victim cases were one-fifth the likelihood for defendants in White or Asian victim cases, holding constant the other variables in the model. Defendants in Hispanic victim cases had an even smaller likelihood of being charged with capital homicide. The odds for those defendants were one-twentieth the odds that defendants in White or Asian American victim cases faced.

The coefficients for variables “victim African American,” “victim Hispanic” were marginally statistically significant at a p-value of 0.1. The coefficient for the variable “victim Hispanic” barely missed the cut-off for statistical significance at the 0.05 level (t-value of 1.943). Given the small sample size, the failure to meet statistical significance at the 0.05 level was not surprising. Despite the marginal statistical significance, the overall story told by this model was that death-eligible charging varied given the race of the victim. Hispanic victims were treated more like African American victims than White victims receiving “less law.”

Aside from race–of–victim effects, another victim effect was found. Strong gender effects were noted.

Table 3
Defendant’s odds of receiving death-eligible charge (N = 120)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>Odds multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>–1.633**</td>
<td>0.804</td>
<td>–</td>
</tr>
<tr>
<td>Victim Hispanic</td>
<td>–2.930*</td>
<td>1.508</td>
<td>0.053</td>
</tr>
<tr>
<td>Victim African American</td>
<td>–1.622*</td>
<td>1.294</td>
<td>0.197</td>
</tr>
<tr>
<td>Victim male</td>
<td>–3.787**</td>
<td>1.207</td>
<td>0.023</td>
</tr>
<tr>
<td>Contemporaneous felony committed</td>
<td>4.603**</td>
<td>1.277</td>
<td>99.748</td>
</tr>
<tr>
<td>Fingerprint found on weapon</td>
<td>3.532**</td>
<td>1.550</td>
<td>34.192</td>
</tr>
<tr>
<td>Murder planned</td>
<td>2.189**</td>
<td>0.980</td>
<td>8.926</td>
</tr>
</tbody>
</table>

* p-value = .1
** p-value = .05
 Defendants in male victim cases were forty-three times less likely to face a death-eligible charge than those accused of killing a woman.

Consistent with previous research, no significant race–of–defendant effect remained once the race of the victim and commission of a contemporaneous felony were controlled. Other studies found important victim/defendant racial interaction effects. Paternoster et al. (2003), for example, found that African American defendants who killed White victims faced a higher probability of receiving a death-eligible charge than White defendants accused of killing White victims. This study examined these racial interaction terms, as well as the gender make-up of the victim/defendant dyads. Analysis was conducted to determine whether male defendants who killed female victims faced a higher likelihood of a death-eligible charge. Models with interaction terms were evaluated, yet given the relatively small sample size, the results were unstable and insignificant. These interaction terms were, therefore, dropped.

One possible explanation for the racial and gender effects was whether or not the murder involved a contemporaneous felony, such as rape, kidnapping, burglary, or robbery. Perhaps most of the White or female victim cases included another felony. Murder in the commission of a contemporaneous felony significantly raised defendants’ chances of being charged with capital murder. The odds were nearly one hundred times larger for defendants who committed a contemporaneous felony during the murder than for defendants who did not. This, again, was predicted since the commission of a contemporaneous felony was a possible special circumstance that could justify a death-eligible charge, although not all cases involving a contemporaneous felony resulted in a death-eligible charge. The racial and gender findings, nevertheless, could not be explained away by this variable.

Other possible legal factors included the strength or gravity of the case, which could have been indicated by whether the defendant’s fingerprint was found on the murder weapon or whether the murder was planned. The defendant’s fingerprints discovered on the murder weapon could have suggested strong weight of evidence, thereby boosting the prosecution’s side. A planned murder was an aggravating factor. Both case characteristics could have provided plausible, legal justifications for the racial and gender outcomes if indeed most of the White or female victim cases involved premeditation or had greater or stronger evidence. Defendants had over thirty-four times larger odd of receiving a capital homicide charge in cases where their fingerprints were found on the murder weapon. If the murder was premeditated, the defendant faced nearly nine times greater chance of receiving a death-eligible charge. These variables were statistically significant and including them into the model improved the fit of the data, but they could not erase the racial and gender effects.

Other logistic regression models were run with various configurations of variables noted above and countless others. They included the defendant’s prior record, various indicators of heinousness or severity of the crime such as the number of victims, the nature of the relationship between the defendant and victim, and method of killing, and other variables measuring the weight of evidence, including incriminating statements. The goal was to see if, after controlling for alternative legal explanations, evidence of racial or gender bias remained in the charging practices of the San Joaquin County’s District Attorney’s Office. Many of the variables did not substantially improve the fit, nor were their coefficients statistically significant. Most importantly, they could not erase the racial or gender outcomes.

An asymptotic log-likelihood ratio test was performed, comparing the residual deviance of the model in Table 3 to the residual deviance of the model minus the race–of–victim variables. The residual deviance of the model was subtracted from the residual deviance of the same model without the variables victim Hispanic and victim African American. Looking at a chi-square distribution, the difference of the two residual deviances corresponded to a p-value of 0.05, suggesting that the model with victim racial variables provided a better fit of the data and accounted for the variability more fully than the model minus the racial variables.

**Conclusion**

The findings from this study showed that a pattern of racial and gender discrimination existed in death-eligible charging practices in San Joaquin County, California, from 1977 through 1986, immediately following reforms instituted by the state. The results replicated previous findings, discovering that defendants in White victim cases (and perhaps to some extent Asian American victim cases) faced much greater odds of being charged with a death-eligible offense than did defendants in Black victim cases. This investigation also permitted Hispanic/White comparisons. Defendants in White victim cases faced greater odds of being charged with capital homicide than defendants in Hispanic victim cases.

Aside from these race–of–victim effects, this research also found that killing a woman versus a man
increased a defendant’s odds of facing a capital homicide charge. Every attempt was made to find any plausible legal explanation that could “explain away” these racial and gender results. The commission of a contemporaneous felony, having planned the murder, or having left fingerprint(s) on the murder weapon raised a defendant’s chances of facing a death-eligible charge. These and additional variables such as the relationship between the defendant and victim, weapon(s) used, and whether the defendant had a prior serious record, however, could not eliminate the racial and gender outcomes.

Critics may still argue that more information or other possible explanatory variables may have explained the findings. They may suggest that missing data and/or omitted variables could have explained away the racial and gender effects. The depth of the data (from two sources which provided for cross-references) and very low missing values, however, illustrate the strengths of the inquiry. The findings of this investigation also were consistent with previous research. There were limitations to this study nevertheless. Most significantly, the examination was not longitudinal and did not follow the cases through the various steps of the death penalty system. There were critically important steps that proceeded the charging phase at the Superior Court level and others that followed. How and which defendants were charged in the early phases and which death-eligible charges “stuck” are crucial factors that ought to be analyzed when evaluating a death penalty system. Despite these shortcomings, this study offered new and important findings related to how Hispanics fared in the death penalty system. The results lend support to the claim that Hispanics are a racialized minority group in this country and face discrimination like African Americans do. Current immigration and demographic trends may indicate greater social integration, including intermarriage with Whites, but Hispanics suffered from racial bias in the criminal justice system in San Joaquin County from 1977 through 1986. Hispanic victim cases received “less law” than White victim cases. This article demonstrates that future studies of Hispanic social mobility and integration ought to consider their treatment in the criminal justice system.

In addition to these sociological insights, evidence of racial variation in death-eligible charging raised two substantial legal concerns. First, the procedural reforms that the Supreme Court advocated in Furman may not have provided enough safeguards against discrimination. In the 1976 Supreme Court death penalty decisions, the Court believed that states’ statutory reforms would prevent wide discretionary practices by the prosecutor that could undermine the death penalty system. In the Gregg decision, the Court emphasized that the prosecutor’s discretion to charge defendants of lesser charges would not run the risk of creating an unconstitutionally arbitrary death penalty system. As this study suggested, however, prosecutorial discretion produced a biased system as nonlegal, impermissible factors such as race influenced the charging practices of the death penalty process.

There was a second, related legal concern raised by this study. As discussed earlier, in Gregg, Justice White questioned whether the Georgia Supreme Court could fairly consider death penalty appeals on claims of comparative excessiveness if there were cases that escaped a death sentence by being charged lesser offenses. He believed that it was unlikely that the comparative–proportionality review process could be tainted in such a manner. This study, however, highlighted how the system of review and the death penalty system as a whole in California were affected by discretionary charging practices. Racially biased charging practices contaminated the pool to which the review referred for evaluation. The review itself, therefore, might have failed to prevent comparative excessiveness and therefore unconstitutionally arbitrary outcomes.

This study drew attention to the constitutionality as well as fairness of the death penalty system. These legal, and some may argue moral, concerns have been raised before. The difference here was that these issues did not simply involve African Americans and Whites, but Hispanics as well. The large number of Hispanics from a county such as San Joaquin County, California where the important racial and ethnic distinction is Hispanic/non-Hispanic White, not only Black/White, provided an opportunity to examine racial and ethnic discrimination in charging practices beyond the usual Black/White investigations. Very critically, the patterns of discrimination in charging practices in this and other studies illustrated the value and worth attributed to some victims but not to others. The findings of this research highlighted the criticisms that the death penalty system is biased. Whether it is in or out of the political and media spotlight, this article demonstrates the need for continued research and discussions over the role of the death penalty in the criminal justice system.

Acknowledgements

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Appendix A. List of aggravating factors or “special circumstances


(a) The penalty for a defendant who is found guilty of murder in the first degree is death or imprisonment in the state prison for life without the possibility of parole if one or more of the following special circumstances has been found under Section 190.4 to be true:

(1) The murder was intentional and carried out for financial gain.
(2) The defendant was convicted previously of murder in the first or second degree. For the purpose of this paragraph, an offense committed in another jurisdiction, which if committed in California would be punishable as first or second degree murder, shall be deemed murder in the first or second degree.
(3) The defendant, in this proceeding, has been convicted of more than one offense of murder in the first or second degree.
(4) The murder was committed by means of a destructive device, bomb, or explosive planted, hidden, or concealed in any place, area, dwelling, building, or structure, and the defendant knew, or reasonably should have known, that his or her act or acts would create a great risk of death to one or more human beings.
(5) The murder was committed for the purpose of avoiding or preventing a lawful arrest, or perfecting or attempting to perfect, an escape from lawful custody.
(6) The murder was committed by means of a destructive device, bomb, or explosive that the defendant mailed or delivered, attempted to mail or deliver, or caused to be mailed or delivered, and the defendant knew, or reasonably should have known, that his or her act or acts would create a great risk of death to one or more human beings.
(7) The victim was a peace officer, as defined in Section 830.1, 830.2, 830.3, 830.31, 830.32, 830.33, 830.34, 830.35, 830.36, 830.37, 830.4, 830.5, 830.6, 830.10, 830.11, or 830.12, who, while engaged in the course of the performance of his or her duties, was intentionally killed, and the defendant knew, or reasonably should have known, that the victim was a peace officer engaged in the performance of his or her duties; or the victim was a peace officer, as defined in the above enumerated sections, or a former peace officer under any of those sections, and was intentionally killed in retaliation for the performance of his or her official duties.
(8) The victim was a federal law enforcement officer or agent who, while engaged in the course of the performance of his or her duties, was intentionally killed, and the defendant knew, or reasonably should have known, that the victim was a federal law enforcement officer or agent engaged in the performance of his or her duties; or the victim was a federal law enforcement officer or agent, and was intentionally killed in retaliation for the performance of his or her official duties.
(9) The victim was a firefighter, as defined in Section 245.1, who, while engaged in the course of the performance of his or her duties, was intentionally killed, and the defendant knew, or reasonably should have known, that the victim was a firefighter engaged in the performance of his or her duties.
(10) The victim was a witness to a crime who was intentionally killed for the purpose of preventing his or her testimony in any criminal or juvenile proceeding, and the killing was not committed during the commission or attempted commission, of the crime to which he or she was a witness; or the victim was a witness to a crime and was intentionally killed in retaliation for his or her testimony in any criminal or juvenile proceeding. As used in this paragraph, “juvenile proceeding” means a proceeding brought pursuant to Section 602 or 707 of the Welfare and Institutions Code.
(11) The victim was a prosecutor or assistant prosecutor, or a former prosecutor or assistant prosecutor of any local or state prosecutor’s office in this or any other state, or of a federal prosecutor’s office, and the murder was intentionally carried out in retaliation for, or to prevent the performance of, the victim’s official duties.
(12) The victim was a judge or former judge of any court of record in the local, state, or federal system in this or any other state, and the murder was intentionally carried out in retaliation for, or to prevent the performance of, the victim’s official duties.
(13) The victim was an elected or appointed official of the federal government, or of any local or state government of this or any other state, and the killing was intentionally carried out in retaliation for, or to prevent the performance of, the official duties.
(14) The murder was especially heinous, atrocious, or cruel, manifesting exceptional depravity. As used in this section, the phrase “especially heinous, atrocious, or cruel, manifesting exceptional
depravity” means a conscienceless or pitiless crime that is unnecessarily torturous to the victim.

(15) The defendant intentionally killed the victim by means of lying in wait.

(16) The victim was intentionally killed because of his or her race, color, religion, nationality, or country of origin.

(17) The murder was committed while the defendant was engaged in, or was an accomplice in, the commission of, attempted commission of, or the immediate flight after committing, or attempting to commit, the following felonies:

(A) Robbery in violation of Section 211 or 212.5.

(B) Kidnapping in violation of Section 207, 209, or 209.5.

(C) Rape in violation of Section 261.

(D) Sodomy in violation of Section 286.

(E) The performance of a lewd or lascivious act upon the person of a child under the age of 14 years in violation of Section 288.

(F) Oral copulation in violation of Section 288a.

(G) Burglary in the first or second degree in violation of Section 460.

(H) Arson in violation of subdivision (b) of Section 451.

(I) Train wrecking in violation of Section 219.

(J) Mayhem in violation of Section 203.

(K) Rape by instrument in violation of Section 289.

(L) Carjacking, as defined in Section 215.

(M) To prove the special circumstances of kidnaping in subparagraph (B), or arson in subparagraph (H), if there is specific intent to kill, it is only required that there be proof of the elements of those felonies. If so established, those two special circumstances are proven even if the felony of kidnapping or arson is committed primarily or solely for the purpose of facilitating the murder.

(18) The murder was intentional and involved the infliction of torture.

(19) The defendant intentionally killed the victim by the administration of poison.

(20) The victim was a juror in any court of record in the local, state, or federal system in this or any other state, and the murder was intentionally carried out in retaliation for, or to prevent the performance of, the victim’s official duties.

(21) The murder was intentional and perpetrated by means of discharging a firearm from a motor vehicle, intentionally at another person or persons outside the vehicle with the intent to inflict death. For purposes of this paragraph, “motor vehicle” means any vehicle as defined in Section 415 of the Vehicle Code.

(22) The defendant intentionally killed the victim while the defendant was an active participant in a criminal street gang, as defined in subdivision (f) of Section 186.22, and the murder was carried out to further the activities of the criminal street gang.

(b) Unless an intent to kill is specifically required under subdivision (a) for a special circumstance enumerated therein, an actual killer, as to whom the special circumstance has been found to be true under Section 190.4, need not have had any intent to kill at the time of the commission of the offense which is the basis of the special circumstance in order to suffer death or confinement in the state prison for life without the possibility of parole.

(c) Every person, not the actual killer, who, with the intent to kill, aids, abets, counsels, commands, induces, solicits, requests, or assists any actor in the commission of murder in the first degree shall be punished by death or imprisonment in the state prison for life without the possibility of parole if one or more of the special circumstances enumerated in subdivision (a) has been found to be true under Section 190.4.

(d) Notwithstanding subdivision (c), every person, not the actual killer, who, with reckless indifference to human life and as a major participant, aids, abets, counsels, commands, induces, solicits, requests, or assists in the commission of a felony enumerated in paragraph (17) of subdivision (a) which results in the death of some person or persons, and who is found guilty of murder in the first degree therefore, shall be punished by death or imprisonment in the state prison for life without the possibility of parole if a special circumstance enumerated in paragraph (17) of subdivision (a) has been found to be true under Section 190.4.

Notes

1. The term “Hispanic” is used over “Latino.” The latter term usually refers to individuals who claim a Central or South American origin, while the former includes all individuals who claim a Spanish or Spanish-speaking origin. Which term is utilized can generate dissatisfaction for some who prefer one or the other (or even another term like “Chicano”). For sake of clarity and consistency, “Hispanic” was chosen in part, because this was the official government term and category for the period studied. See note 3.

2. When not specified, “White” refers to non-Hispanic Whites. Terms “Black” and “African American” are used interchangeably as are “Asian” and “Asian American.”

3. Census and other government statistics treat “Hispanic” as an ethnicity. An individual who identifies as a Hispanic can claim a White or Black racial identity. Despite the official counting of the Hispanic identity as an ethnicity, some people who claim to be...
Hispanics and social scientists argue that the category has become racialized, which goes hand in hand with the argument that Hispanics face racial discrimination (Barrera, 1979; Cornell & Hartmann, 1998; DeGenova & Ramos-Zayas, 2003).

4. In 1976, the Supreme Court approved the death penalty systems of Georgia, Florida, and Texas respectively in its decisions in *Gregg v. Georgia* (1976), *Jurek v. Texas* (1976), and *Proffitt v. Florida* (1976). These decisions are collectively called the Gregg decision.

5. The terms “death-eligible charge” and “charged with capital homicide” are used interchangeably.

6. The study was conducted for an actual death penalty appeal case. The end date for the study was determined by the case details.

7. The 1980 U.S. Census counted 347,342 residents in San Joaquin County. Seventy-six percent (264,038) of the population was White. African Americans made up 5 percent (19,176) of the population. Nineteen percent (66,565) claimed Spanish origin. Eighty-nine percent (57,225) of those claiming Spanish origins were of Mexican descent. Thus, 16 percent of the total population was of Mexican descent. Much smaller numbers of Puerto Ricans, Cubans, and other Spanish made up the remaining total.

8. For greater theoretical development and application of Black's theory of law, see Borg and Parker (2001) and Litwin (2004).

9. See Appendix A for the list of aggravating factors or “special circumstances.”

10. Homicides that were charged as manslaughter cases by the time they reached Superior Court may have resulted from earlier bias. Some studies examined the charging process from the initial stage up through the trial and sentencing levels (Paternoster et al., 2003; Radelet & Pierce, 1985). Data and other limitations precluded such investigations in this study. There were only four cases, for example, that resulted in a death penalty in the sample, which precluded the investigation of the sentencing phase.

11. The National Research Council Panel on Sentencing in 1983 recommended a longitudinal study, which explored the various stages of the death penalty system (Baldus et al., 1990, p. 45). The panel argued that a longitudinal design would avoid the risk associated with overlooking discrimination and arbitrariness at earlier stages in the death penalty process.

12. Contemporaneous felonies include kidnapping, rape, robbery, and burglary. See Appendix A, number 17.

13. Variables were coded as binary outcomes. Four coders independently coded the data and had a match rate of 95 percent.

14. With “victim Hispanic” and “victim African American” variables in the model, the reference category included Whites and Asian Americans. A model with victims of the three minority groups (African American, Asian American, and Hispanic) and with the reference group “victim White” was run but not presented. There were very few Asian American victim cases; they numbered seven. To include all three minority groups in the model made the estimates very unstable. Definitive conclusions about Asian American victim cases could not be made given their small number in the sample. Despite lasting claims about Asian Americans’ “forever foreign” characteristic, as a racial group, they occupy a more favorable, if still somewhat ambiguous, position versus other minority groups such as African Americans and Hispanics in the U.S. (Schuman, Steeh, & Bobo, 1985; Takaki, 1998; Tuan, 1998).

15. A t-value of 1.96 was necessary for a coefficient to reach statistical significance at the 0.05 level.

16. Robbery, and to a lesser extent, burglary, were the most common felonies in cases involving a contemporaneous felony.

17. A careful study of Hispanics must also consider diversity within the categorical group. A very wide range of educational attainment, occupational status, and immigrant status exists amongst individuals who claim to be Hispanic. This study did not have such detailed information.

18. Unfortunately, the Supreme Court attacked statistical findings such as those found in this study. In *McCleskey v. Kemp* (1987), the Supreme Court argued that statistical evidence does not necessarily challenge the constitutionality of the death penalty with regards to the Eighth Amendment. The Court argued that such evidence can only demonstrate risk and does not establish proof.

References


Cases cited


Statutes cited

EXHIBIT R
JOHN J. DONOHUE III

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E-mail: jjd@stanford.edu
Web pages:
http://works.bepress.com/john_donohue/
https://law.stanford.edu/directory/john-j-donohue-iii/

EMPLOYMENT

Full-time Positions

- Stanford Law School, C. Wendell and Edith M. Carlsmith Professor of Law, September 2010 to the present.
- Yale Law School, Leighton Homer Surbeck Professor of Law, July 2004 to August 2010.
- Stanford Law School, Professor of Law, September 1995 to June 2004.
- Northwestern University School of Law:
  - Class of 1967 James B. Haddad Professor of Law, September 1994-August 1995
  - Harry B. Reese Teaching Professor, 1994-1995
  - Professor of Law, May 1991-September 1994
  - Associate Professor, May 1989-May 1991
  - Assistant Professor, September 1986-May 1989.
- Associate Attorney, Covington & Burling, Washington, D.C., October 1978-July 1981 (including last six months as Attorney, Neighborhood Legal Services)

Temporary Appointments

- Visiting Professor, Tel Aviv University School of Law, May 2022.
- Lecturer on the Economics of Crime, Bogota Summer School in Economics, Universidad del Rosario, Bogota, Colombia, June 2020.
- Visiting Professor, Bocconi University, Milan, Italy, October- November 2012, April 2014, and June 2015.
- 2011 Faculty Scholar in Residence, University of Denver Sturm College of Law, April 21-22, 2011.
• Visiting Fellow, The Milton Friedman Institute for Research in Economics, University of Chicago, October 2009.
• Schmidheiny Visiting Professor of Law and Economics, St. Gallen University, November – December, 2007.
• Visiting Lecturer in Law and Economics, Gerzensee Study Center, Switzerland, June 2007.
• Visiting Professor, Tel Aviv University School of Law, May 2007.
• Herbert Smith Visitor to the Law Faculty, University of Cambridge, England, February 2006.
• Visiting Professor, Harvard Law School, January 2003.
• Fellow, Center for Advanced Studies in the Behavioral Sciences, Stanford, California, Academic year 2000-01.
• Visiting Professor, Yale Law School, Fall, 1999.
• Professor, Center for the Study of American Law in China, Renmin University Law School, Beijing, July 1998.
• Visiting Professor of Law and Economics, University of Virginia, January 1997.
• Lecturer, Toin University School of Law, Yokohama, Japan, May-June 1996.
• Cornell Law School, Distinguished Visiting Fellow in Law and Economics, April 8-12, 1996 and September 25-29, 2000
• Visiting Professor of Law and Economics, University of Virginia Law School, January 1990-May 1990.
• Summer Associate, Donovan Leisure Newton & Irvine, New York, Summer 1982.
• Summer Associate, Perkins, Coie, Stone, Olsen & Williams, Seattle, Washington, Summer 1976.
• Research Assistant, Prof. Laurence Lynn, Kennedy School of Government, Harvard University, Summer 1975.
• LSAT Tutor, Stanley Kaplan Education Center, Boston, Massachusetts; Research Assistant, Prof. Philip Heymann, Harvard Law School; Research Assistant, Prof. Gordon Chase, Harvard School of Public Health. (During Law School).

EDUCATION

Yale University, 1981-1986

• University Fellow in Economics; M.A. 1982, M. Phil. 1984, Ph.D. 1986.
  - Winner of the Michael E. Borus Award for best social science dissertation in the last three years making substantial use of the National Longitudinal Surveys–awarded by the Center for Human Research at Ohio State University on October 24, 1988.
• National Research Service Award, National Institute of Health.
• Member, Graduate Executive Committee; Graduate Affiliate, Jonathan Edwards College.

Harvard Law School, 1974-1977 (J.D.)

• Graduated Cum Laude.
Activities: Law Clerk (Volunteer) for Judge John Forte, Appellate Division of the District Court of Central Middlesex; Civil Rights, Civil Liberties Law Review; Intra-mural Athletics; Clinical Placement (Third Year): (a) First Semester: Massachusetts Advocacy Center; (b) Second Semester: Massachusetts Attorney General’s Office--Civil Rights and Consumer Protection Divisions. Drafted comments for the Massachusetts Attorney General on the proposed U.S. Department of Justice settlement of its case against Bechtel Corporation's adherence to the Arab Boycott of Israeli companies.

Hamilton College, 1970-1974 (B.A.)
- Departmental Honors in both Economics and Mathematics
  - Phi Beta Kappa (Junior Year)
- Graduated fourth in class with the following academic awards:
  - Brockway Prize (Highest GPA Freshman Year)
  - Edwin Huntington Memorial Mathematical Scholarship
  - Fayerweather Prize Scholarship
  - Oren Root Prize Scholarship in Mathematics
- President, Root-Jessup Public Affairs Council.

PUBLICATIONS

Books and Edited Volumes:

Book Chapters:


Major Podcasts:

• San Francisco Chronicle's Fifth & Mission Podcast in "We are at the worst place ever,' says gun law expert." https://www.sfchronicle.com/podcasts/article/assault-weapons-bans-tennessee-17878622.php.

Articles:


  o Featured in August 2022 Issue of NBER Digest.
  o Featured in August 11, 2022 issue of The Economist: “A Supreme Court ruling could spell even more gun crime: Right-to-carry laws are associated with increases in violence.”


- "We Must Confront the Threats to America’s Democracy" 56 *Idaho Law Review* 119 (2020)."


• "What's in a denial? Bayesian Analysis shows that Kavanaugh lied about denials under oath and Trump was foolish to believe MBS," November 2, 2018 (with Aaron Edlin). https://works.bepress.com/john_donohue/176/


• "Did Jeff Sessions forget wanting to execute pot dealers?" The Conversation, January 23, 2017 (with Max Schoening), https://theconversation.com/did-jeff-sessions-forget-wanting-to-execute-pot-dealers-71694


• "There's no evidence that death penalty is a deterrent against crime," The Conversation, August 8, 2015. http://theconversation.com/theres-no-evidence-that-death-penalty-is-a-deterrent-against-crime-43227


• “The 10 day period is reasonable,” San Francisco Daily Journal, September 3, 2014.


• Outlier Nation: Homicides, Incarceration, Guns and Gun Culture, TAR 9 (Verona, Italy: 2013).
• “Gun lunacy rides high in America,” Special to CNN, September 13, 2013.  


• “When Will America Wake Up to Gun Violence?” CNN opinion, July 21, 2012. Posted to:  


• “Rethink the War on Drugs,” Yale Law Reports, Summer 2007, pp. 46-47.


• “The Employment Consequences of Wrongful-Discharge Laws: Large, Small, or None at All?” American Economic Review: Papers and Proceedings May, 2004 (with David Autor and Stewart Schwab).


  - Excerpted in Sanford Kadish & Stephen Schulhofer, Criminal Law and Its Processes (8th ed. 2007),


• “Section I Cases,” Sherman’s Summations, Vol.3, No.2, Sherman Act Committee of the A.B.A. Antitrust Section, Fall, 1982, at 49.


• “Criminal Code Revision—Contempt of Court and Related Offenses,” Hearings before the Subcommittee on Criminal Justice of the House Judiciary Committee, July 18, 1979, at 1087.

Blog Posts:


**WORKSHOPS AND ADDRESSES:**


• Panelist, “Inside the Brain of the Mass Shooter and the Impact of Their Criminal Behavior,” Symposium on "The Law and Neuroscience of Mass Shootings," held virtually by the Neuroscience and Law Center, Fordham University School of Law, November 1, 2022.


• “Effectiveness of Permissive Gun Laws: Carry Laws, Stand Your Ground,” Annals Authors’ Conference, University of Connecticut, Hartford, April 7, 2022.

• “Permissive Gun Carrying Laws and Violent Crime,” ETH, Zurich, April 6, 2022; Law and Economics Workshop, Tel Aviv University School of Law, May 11, 2022.

• “Guns and Crime in American Life and Law,” University of Zurich, April 5, 2022.


• “Mass Shootings, Gun Laws and the Evolution of the Second Amendment – Where Do We Go from Here?” Minnesota Continuing Legal Education Webcast, November 2, 2021.


• “We Must Confront the Threats to America’s Democracy,” Idaho Law Review Election Law Symposium, University of Idaho College of Law, October 20, 2020.


• Panelist, “Guns, Schools, and Adolescents: A Disaster Waiting to Happen,” Psychiatry Grand Rounds, Sapp Center for Science Teaching and Learning, Stanford University School of Medicine, February 20, 2020.


• “Evidence to Guide Gun-related Public Policy,” Conference on Gun Violence Epidemic, Stanford Medical School, September 16, 2019; Lecturer, Physicians and Social Responsibility Course, Stanford Medical School, October 7, 2019; Lecturer, Data Science Course, Department of Statistics, Stanford University, November 1, 2019.

• “The Legal and Political Battle over Gun Policy in America,” Hamilton College, June 7, 2019.


• “Gun Policy in America at a Critical Juncture,” SAFE, Stanford Medical School, September 17, 2018.


• “Discussing America’s Second Amendment,” San Jose Museum of Quilts & Textiles, July 15, 2018.

• “The Legal Battle to End the Death Penalty in Connecticut,” Law School of the University of Reggio Calabria, Italy, June 15, 2018.

• Panelist, “Newtown and Gun Violence in the US, Humanity is Indivisible Series, Stanford University, May 31, 2018.

• "Gun Policy in the Wake of Parkland," Sigma Alpha Epsilon Leadership Speaker Series, Stanford Law School, March 13, 2018; Stanford in Government event, Haas Center, Stanford University, April 20, 2018.

• Panelist, Town Hall Meeting on Gun Violence with Congresswoman Jackie Speier, Burlingame High School, April 14, 2018.


• “Comey, Trump, and the Puzzling Pattern of Crime in 2015 and Beyond,” University of Texas School of Law and Economics Seminar, April 24, 2017, Faculty Workshop, UC Davis School of Law, April 10, 2017; Law and Social Science Seminar, Texas A&M University School of Law, March 6, 2017; Quantlaw, University of Arizona Law School, February 17, 2017.

• Debate with Kent Scheiddegger on Capital Punishment, Philosophy of Punishment Seminar, JFK University School of Law, March 18, 2017.


• “Guns, Crime and Race in America,” Stanford’s Center for Population Health Sciences, Stanford Medical School, October 17, 2016.


• “Empirical Analysis and the Fate of Capital Punishment,” Colloquium, Presley Center for Crime and Justice Studies; University of California, Riverside, October 24, 2016.


• “The Battle Over Gun Policy In America,” Physicians and Social Responsibility" seminar; Stanford Medical School, October 3, 2016; Bioethics Committee of the San Mateo County Medical Association, April 27, 2016; The League of Women Voters of Palo Alto, April 19, 2016; Human Rights and Health Seminar, Stanford University, April 12, 2016; Bechtel International Center, Stanford University, February 23, 2016; Stanford in Government Seminar, Haas Center, Stanford University, February 2, 2016.


• “Race and Arbitrariness in the Connecticut Death Penalty,” University of Connecticut School of Law, Nov. 20, 2015.


• “U.S. Criminal Justice Under Siege: Will Becker or Beccaria Prevail?” Faculty Seminar, Bocconi University School of Law, Milan, Italy, June 18, 2015.

• “Can You Believe Econometric Evaluations of Law, Policy, and Medicine?” Stanford Law School, Legal Theory Workshop, March 1, 2007; Faculty Workshop, Tel Aviv University School of Law, May 14, 2007; Faculty Workshop, University of Haifa Law School, May 16, 2007; Law and Economics Workshop, St. Gallen Law School, Switzerland, November 29, 2007; and Yale Law School, February 25, 2008; Law and Economics Workshop, Swiss Institute of Technology, Zurich, Switzerland, May 21, 2008; Faculty Workshop, University of Virginia Law School, October 24, 2008; Plenary Session, Latin American and Caribbean Law and Economics Association, Universitat Pompeu Fabra (Barcelona), June 15, 2009; Google, Milan, Italy, June 8, 2015.

• Commentator: “‘Throw Away the Jail or Throw Away The Key? The Effect of Punishment on Recidivism and Social Cost,’” by Miguel F. P. de Figueiredo, American Law and Economics Association Meetings, Columbia Law School, May 15, 2015.


• “An Empirical Evaluation of the Connecticut Death Penalty Since 1973: Are There Unconstitutional Race, Gender and Geographic Disparities?” Faculty Workshop, Economics Department, Rice University, Houston, TX, Feb. 18, 2014; Law and Economics Workshop, University of Virginia Law School, September 11, 2014; Faculty Colloquium, University of San Diego School of Law, October 3, 2014.


• “Trial and Decision in the Connecticut Death Penalty Litigation,” Faculty Workshop, Stanford Law School, November 20, 2013.


• “The Challenge to the Connecticut Death Penalty,” Yale Law School, Death Penalty Clinic, November 5, 2007; Graduate Student Seminar, November 11, 2009; Stanford Program in International Legal Studies Seminar, Stanford Law School, Nov. 11, 2010; Faculty Workshop, Stanford Law School, June 8, 2011; Faculty workshop, Duke Law School, April 13, 2012; Program on Public Policy, Stanford University, May 2, 2012; Annual Meeting of the American Law and Economics Association, Vanderbilt Law School, Nashville, TN, May 18, 2013; Faculty Workshop, University of Arizona Law School, October 17, 2013; 8th Annual Conference on Empirical Legal Studies, University of Pennsylvania Law School, October 26, 2013.


• “An Empirical Look at Gun Violence in the U.S.” University of Arizona Law School, October 17, 2013


• “Incapacitating Addictions: Drug Policy and American Criminal Justice,” in Rethinking the War on Drugs through the US-Mexico Prism, Yale Center for the Study of Globalization, May 12, 2011.


• “The (Lack of a) Deterrent Effect of Capital Punishment,” Faculty Workshop, University of Chicago Economics Department, October 21, 2009.


• “Impact of the Death Penalty on Murder in the US,” Faculty Workshop, Law School, Universitat Pompeu Fabra (Barcelona), June 18, 2009.


• “Measuring Culpability in Death Penalty Cases,” Conference on Applications of Economic Analysis in Law, 
  Fuqua School of Business, Duke University, April 18, 2009.
• “Autopsy of a Financial Crisis,” Workshop on New International Rules and Bodies for Regulating Financial 
• “Yet Another Refutation of the More Guns, Less Crime Hypothesis – With Some Help From Moody and 
• “The D.C. Handgun Controls: Did the Supreme Court’s Decision Make the City Safer?” Debate, The 
  Contemporary Club of Albemarle, Charlottesville, VA, October 23, 2008.
• “Evaluating the Empirical Claims of the Woman-Protective Anti-Abortion Movement,” Panel on The Facts of 
  the Matter: Science, Public Health, and Counseling, Yale Conference on the Future of Sexual and Reproductive 
  Rights, Yale Law School, October 11, 2008.
• “Assessing the Relative Benefits of Incarceration: The Overall Change Over the Previous Decades and the 
  Benefits on the Margin,” Russell Sage Foundation, New York, May 3, 2007; Law and Economics Workshop, Tel 
  Aviv University School of Law, May 28, 2008.
• Death Penalty Debate with Orin Kerr, Bloggingheads, April 11, 2008.
• “Evaluating Connecticut’s Death Penalty Regime,” Faculty Public Interest Conversation, Yale Law School, April 
  9, 2008.
• “The Death Penalty in Connecticut and the United States,” The Whitney Center, Hamden, CT, November 5, 
  2007; Seminar on Advanced Criminal Law: Criminal Sentencing and the Death Penalty, Fordham Law School, 
  April 8, 2008; Law and Economics Workshop, Swiss Institute of Technology, Zurich, Switzerland, May 20, 
  2008.
• Radio Interview, “The Death of Capital Punishment?” Morning Edition: Where We Live. WNPR. Connecticut, 
  March 10, 2008.
• Comment on Thomas Dee’s “Born to Be Mild: Motorcycle Helmets and Traffic Safety,” American Economics 
• “The Empirical Revolution in Law and Policy: Jubilation and Tribulation,” Keynote Address, Conference on 
• ”Empirical Evaluation of Law: The Impact on U.S Crime Rates of Incarceration, the Death Penalty, Guns, and 
• Comment on Eric Baumer’s “A Comprehensive Assessment of the Contemporary Crime Trends Puzzle,” 
  Committee on Law and Justice Workshop on Understanding Crime Trends, National Academy of Sciences, 
• Comment on Bernard Harcourt, Third Annual Criminal Justice Roundtable Conference, Yale Law School, 
  “Rethinking the Incarceration Revolution Part II: State Level Analysis,” April 14, 2006.
• “Corporate Governance in America: The Disney Case,” Catholic University Law School, Milan, Italy, March 19, 
  2007.
• Panel Member, “Guns and Violence in the U.S.,” Yale University, International Center, January 24, 2007.
• “Landmines and Goldmines: Why It’s Hard to Find Truth and Easy To Peddle Falsehood in Empirical Evaluation of Law and Policy,” Rosenthal Lectures, Northwestern University School of Law, April 4-6, 2006.
• “Powerful Evidence the Death Penalty Deters?” Leighton Homer Surbeck Chair Lecture, Yale Law School, March 7, 2006.
• “Understanding the Surprising Fall in Crime in the 1990s,” Rotary Club, Orange, CT, August 5, 2005; Faculty Workshop, Yale School of Management, September 21, 2005.
• Panel Member, “The Board’s Role in Corporate Strategy,” The Yale Global Governance Forum, Yale School of Management, September 8, 2005.
• “Crime and Abortion,” Museo de la Cuidad de Mexico, Mexico City, October 20, 2003.


• “The History and Current Status of Employment Discrimination Law in the United States,” Unicapital School of Law, (Centro Universitario Capital), Sao Paulo, Brazil, March 10, 2000.

• “Corporate Governance in Developing Countries: Opportunities and Dangers,” Conference on Neoliberal Policies for Development: Analysis and Criticism,” University of Sao Paulo Law School, March 13, 2000

• “Legalized Abortion and Crime,” Law and Economics Workshop, University of Pennsylvania Law School, September 21, 1999; Faculty Workshop, Yale Law School, September 27, 1999; John Jay College of Criminal Justice, October 7, 1999; Faculty Workshop, Quinnipiac Law School, October 13, 1999; Faculty Workshop, University of Connecticut Law School, October 19, 1999; University of Virginia Law School, October 25, 1999; Faculty Workshop, Baruch College, November 9, 1999; MacArthur Foundation Social Interactions and Economic Inequality Network Meeting, Brookings Institution, December 4, 1999; Faculty Workshop, NYU Law School, January 21, 2000; Faculty Workshop, University of San Diego Law School, February 18, 2000; Public Economics Workshop, Department of Economics, Stanford University, April 28, 2000; Law and Economics Workshop, University of California at Berkeley Law School, September 18, 2000; Faculty Workshop, Cornell Law School, September 26, 2000; OB-GYN Grand Rouds, Stanford Medical School, October 2, 2000; Center for Advanced Studies in the Behavioral Sciences, October 11, 2000; Faculty Workshop, Graduate School of Business, February 5, 2002.

• Panel member, Session on Executive Compensation, Director’s College, Stanford Law School, March 23, 1999.


Commentator on Orlando Patterson’s presentation on “The Ordeal of Integration,” Stanford Economics Department, May 20, 1998.


Commentator on Chris Jencks’ Presentation on Welfare Policy, Stanford Economics Department, October 8, 1997.


Panel Chair, Criminal Law (Theory), Criminal Law (Empirical), and Labor/Discrimination/Family Law, American Law and Economics Association, University of Toronto Law School, May 9-10, 1997.


Panel member, Session on Executive Compensation, Director’s College, Stanford Law School, March 28-29, 1996.


• Commentator, Symposium on Labor Law, University of Texas Law School, November 10-11, 1995.

• Panel Member, Symposium on Criminal Justice, Stanford Law School, October 6-7, 1995.

• Commentator, ”The Litigious Plaintiff Hypothesis,” Industrial and Labor Relations Conference, Cornell University, May 19, 1995.

• Commentator on Keith Hylton's, ”Fee Shifting and Predictability of Law,” Faculty Workshop, Northwestern University School of Law, February 27, 1995.


• “The Broad Path of Law and Economics,” Chair Ceremony, Northwestern University School of Law, September 30, 1994.


• Panel Member, ”The Law and Economics of Employment at Will,” The Institute For Humane Studies, Fairfax, Virginia, March 27, 1992.


• “Opting for the British Rule,” Faculty Seminar, Northwestern Law School, September 11, 1990; Faculty Seminar, University of Virginia Law School, September 14, 1990; Law and Economics Seminar, University of Michigan Law School, October 18, 1990; Faculty Workshop, NYU Law School, November 14, 1990; Faculty Workshop, University of Florida Law School, March 18, 1991.


• Panel Discussion on Tort Reform, University of Pennsylvania Law School, April 27, 1990.


• “Law & Economics: The Third Phase,” The Association of General Counsel, Northwestern University School of Law, October 14, 1988.


• “Models of Deregulation of International Capital Markets.” A presentation with David Van Zandt, Faculty Seminar, Northwestern University School of Law, April 1, 1988; Visiting Committee, May 5, 1988.


• “The Senate’s Role in Confirming Supreme Court Nominees: The Historical Record,” Northwestern University School of Law, September 22, 1987.

• “Diverting the Coasean River: Incentive Schemes to Reduce Unemployment Spells,” Yale Law School Civil Liability Workshop, March 30, 1987; Faculty Seminar, Northwestern University School of Law, March 18, 1987; University of Southern California Law Center, May 1, 1987; and Seminar in Law and Politics, Department of Political Science, Northwestern University, May 8, 1987; Labor Workshop, Department of Economics, Northwestern University, October 27, 1987; AALS Annual Meeting, New Orleans, January 7, 1989.


AWARDS

• 47th Tikkun Olam Award, The Haiti Jewish Refugee Legacy Project, February 2014, “Awarded for incredibly significant work that explores and inspires the search for justice and taking serious, correct and timely action.” Tikkun Olam is a Hebrew phrase that means ‘repairing the world.’
PROFESSIONAL ACTIVITIES

- Member, Stanford Law School academic reading group evaluating the criminal law opinions of U.S. Supreme Court nominee Judge Ketanji Brown Jackson for the ABA Standing Committee on the Federal Judiciary, March 2022.
- Member, USF Institute for Nonviolence and Social Justice Leadership Council, University of San Francisco, June 2021 – present.
- Member, Criminal Justice Expert Panel, @CJExpertPanel, providing information on the relevance of criminal justice research to current events, beginning April 2021.
- Statistical Consultant to the Fairness Committee of the 9th Circuit Court of Appeals investigating issues of sentencing disparities by race, ethnicity, and gender in federal criminal sentencing, March 2018 – March 2020.
- Legal Scholarship Network Advisory Board Member, SSRN.
- Member, Committee on Law and Justice, National Research Council, October 2011 – December 2018.
- Fellow of the Society for Empirical Legal Studies, 2015 - present.
- Member, International Advisory Council, Economic Order Study Center, Federal University of San Paolo, Brazil.
- Testified before the Connecticut Legislature in Support of Senate Bill 1035 and House Bill 6425 (A Bill to Eliminate the Death Penalty), March 7, 2011; Testified again before the Connecticut Judiciary Committee on March 14, 2012.
- Member of the Special Committee on ALI Young Scholars Medal, October 2009 – February 2011.
- Vice-President/President Elect, American Law and Economics Association, June 2010 – May 2011.
- Board of Advisors, Yale Law School Center for the Study of Corporate Law, July 2004 – August 2010.
- Member, National Science Foundation Review Panel, Law and Social Sciences, September, 1999 – April 2001.
• Board of Editors, American Law and Economics Review, August 1998 – April 2013.
• Statistical Consultant, 7th Circuit Court of Appeals Settlement Conference Project (December, 1994).
• Testified before U.S. Senate Labor Committee on evaluating the Job Corps, October 4, 1994.
• Assisted the American Bar Association Standing Committee on the Federal Judiciary in evaluating the qualifications of Ruth Bader Ginsburg (June 1993) and David Souter (June, 1990).
• Chair, AALS Section on Law and Economics, January 1990-January 1991.
• Member, 1990 AALS Scholarly Papers Committee.
• Member, Advisory Board, Corporate Counsel Center, Northwestern University School of Law. Since December 1987.
• Associate Editor, Law and Social Inquiry. Summer 1987-December 1989.
• Member, Congressman Bruce Morrison’s Military Academy Selection Committee. Fall 1983.
• 1982 Candidate for Democratic Nomination, Connecticut State Senate, 14th District (Milford, Orange, West Haven).

PRO BONO LEGAL WORK

• Co-wrote amicus brief for the United States Supreme Court for “Social Scientists and Public Health Researchers in Support of Respondents” in New York State Rifle & Pistol Association v. Bruen, which discusses the evidence that right-to-carry laws increase violent crime in the brief, September 21, 2021.
• Co-wrote amicus brief for the United States Supreme Court for “Public Health Researchers and Social Scientists in Support of Respondents” in New York State Rifle & Pistol Association v. City of New York, which quotes my article Right-to-Carry Laws and Violent Crime in the brief, August 12, 2019.
• Co-wrote amicus brief for the 9th Circuit Court of Appeals for “Empirical Scholars Concerning Deterrence and the Death Penalty In Support of Petitioner/Appellee,” Jones v. Davis, No. 09 Cv. 2158 CJC, which discusses the lack of deterrence of the death penalty, March 6, 2015.
• Staff Attorney, Neighborhood Legal Services, January-July 1981.
• Court-appointed representation of indigent criminal defendant in District of Columbia Superior Court, February-July 1980.

RESEARCH GRANTS
• The National Science Foundation (project with James Heckman), December 1992; (project with Steve Levitt), July 1997.

BAR ADMISSIONS

PROFESSIONAL and HONORARY ASSOCIATIONS
• American Academy of Arts and Sciences (since April 2009).
• Stanford Center for Racial Justice – August 2020 to present.
• American Law Institute (since September 29, 2010).
• Member, Fellows of the Society for Empirical Legal Studies (since October 2015).
• American Bar Association
• American Economic Association
• American Law and Economics Association

PERSONAL
• Born: January 30, 1953.
EXHIBIT S
Evaluating the Research on the Impact of Race in the California Death Penalty Regime

John J. Donohue

C. Wendell and Edith M. Carlsmit Professor, Stanford Law School

and

Research Associate, National Bureau of Economic Research

May 25, 2023
Evaluating the Research on the Impact of Race in the California Death Penalty Regime

When the Connecticut Supreme Court struck down the Connecticut death penalty as unconstitutional under the state constitution in the 2015 case State v. Santiago, Justices Norcott and McDonald endorsed the view that “When a capital defendant marshals a compelling argument that the death penalty as it is administered in our state is incurably racist ... we should stop dead in our tracks until we have given the argument our most serious attention.”

This compelling evidence was established for capital regimes across the nation two decade ago in a sophisticated national-level study, Explaining Death Row’s Population and Racial Composition. In that study, researchers Blume, Eisenberg, and Wells analyzed data on murders and the composition of death row from 1977 through 1999 in the 31 states that sent ten or more defendants to death row during this time period.1 This comprehensive study included 5,953 of the 5,988 (99.4 per cent) persons admitted to death row in the U.S. between 1977 and 1999. The researchers obtained data on the characteristics of murders, the racial composition of death row, and several other legal and political dimensions. 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. The researchers found strong evidence that the race of the perpetrator and victim had a powerful impact on the likelihood of a death sentence being imposed. Specifically, black representation on death rows in states across the country was heavily influenced by the proportion of all murders that involve a Black offender and a White victim. This finding that Black offender/White victim murders were treated more harshly than other types of murders was statistically significant at the .01 level.

Racial bias in the administration of the death penalty has been documented in death penalty regimes across the country.2 This memorandum explores the research specifically examining racial bias in California’s capital punishment regime.

In Section I, I begin my evaluation by focusing on three studies finding statewide evidence of racial bias in capital sentencing in California:


While the three studies use somewhat different datasets and examine different time periods, they collectively examine data from homicide cases throughout the state over the period from 1979-2018 and reach similar conclusions about the pernicious racial influences on the California capital regime. A fourth paper shows that the combination of the very broad level of death-eligibility for California homicides coupled with the small number of death sentences suffers from the same problem of standardless discretion that the Court in *Furman* deemed unconstitutional in part because it provides greater opportunity for impermissible factors such as race to influence capital outcomes.


Section II then turns to six studies that look within counties and generate the same conclusions of racial bias. One study examines the capital regime in San Diego County, three probe the operation of capital punishment in Los Angeles County, and the final two studies examine Riverside and Santa Clara counties.

5. Petersen, Racial Disparities in Riverside County’s Death Penalty System (Sept. 21, 2021).

Section III summarizes my broad conclusions concerning the influence of race on the California death penalty regime. In total, the ten studies I discuss collectively provide powerful and compelling evidence that racial factors have marred capital sentencing outcomes in the state.
I. Four Studies Focused on the Statewide Operation of the California Death Penalty Regime


This important new study examines the California death penalty regime with the high quality of empirical sophistication and care that the subject requires. This scientifically valid study sets forth clear factual findings that establish racial discrimination and overbreadth in California’s capital regime.

The Grosso, Fagan, and Laurence report (“GFL”) analyzes racial and ethnic disparities in decisions by California prosecutors to charge aggravating factors in capital-eligible cases and decisions by juries to impose a sentence of death over the period from 1978 to 2002. GFL find that, even after controlling for relevant circumstances of the crime, significant racial and ethnic disparities in California’s capital punishment system result in a greater likelihood of a death sentence for cases involving White victims, for cases involving minority defendants, and for cases involving both White victims and minority defendants.

GFL use data from the California Department of Corrections and Rehabilitation (CDCR) covering all 27,453 cases where a defendant was convicted of first-degree murder, second-degree murder, or voluntary manslaughter with an offense date between January 1, 1978, and June 30, 2002. The authors then drew a stratified sample of 1900 cases. From this universe, each case was coded using a data collection instrument by law students and law graduates for the presence of special circumstances and race/ethnicity of defendant and victim.

GFL initially report unadjusted tables comparing each racial/ethnic group’s representation in the sample to various outcomes and then confirm their results with a series of logistic regressions analyzing each phase of the capital punishment decision process. Since this study is so extensive and empirically strong, I provide an extended discussion that summarizes the results from their various tables in some detail.

Tables 1 and 2 reports simple cross-tabulations that document the gross racial disparities in the California capital regime. While minority defendants comprise only 70 per cent of death-eligible cases, they are sentenced to death at a somewhat higher rate of 79 percent. White-victim cases

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4 Cases with at least one White victim are considered White-victim cases. Black, Latino, or Native American individuals are considered minorities for the purpose of the study.
are only 34 per cent of death-eligible cases, but a substantially higher 52 per cent of cases in which a death sentence was imposed. While cases with both a minority defendant and White victim are only 14 per cent of death-eligible cases, they are a dramatically larger 34 per cent of cases in which a death sentence was imposed. Table 2 notes that 10.4 per cent of minority-defendant/White-victim cases result in a death sentence, which is 3.2 times higher than the rate for all other cases of 3.3 per cent. This substantial difference in proportions is significant at the .01 level. In other words, the raw, unadjusted data shows a highly statistically significant racial disparity in death sentencing for minority-defendant/White-victim cases – confirming the pattern for the nation found by the Blume, Eisenberg, and Wells, discussed above (see text at fn 1).

Tables 3 – 6 then confirm that the raw results show in the earlier tables persist when controlling for factors that influence death sentencing using regression analysis. Table 3 shows the results from a regression of final case outcome on defendant race, victim race, and three indicators for the presence of the most predictive special circumstances (multiple victims, robbery felony, or sex crime felony). Minority defendants are shown to be 4.8 times as likely to receive a death sentence (p=0.002) and White victim cases are 2.5 times as likely (p=0.066).

Table 4 reports a similar specification, except it includes a “defendant culpability scale” in lieu of the set of predictive special circumstances. In this model, the minority-defendant coefficient is 4.3 (p=0.002) and the White-victim coefficient is 4.0 and gains statistical significance (p=0.005).

Tables 5 and 6 repeat the same specifications as Tables 3 and 4, except that instead of including separate variables for minority defendants and for White victims, minority-defendant/White-victim cases are compared to all other cases. These two models show, respectively, that such cases are 3.2 (p=0.025) and 4.5 (p=0.003) times as likely to end in a death sentence. In other words, the large gross racial disparities documented in Table 2 for minority-defendant/White-victim cases were not diminished by controlling for various elements of the cases – and if anything were exacerbated by these controls.

Next, GFL examine prosecutorial decision making in these capital cases using similar regression models to those just discussed to analyze the death sentencing outcome. Tables 7 and 8 use the decision to charge one or more special circumstances as the outcome variable. For Table 7, the explanatory variables are an indicator for whether the victim was White, four indicators for the factual presence of special circumstances most predictive of the decision by prosecutors to charge any special circumstance (multiple victims, robbery and burglary, felony kidnapping, or felony sex crimes), and a control for the California Supreme Court decision in Carlos. In this model, White-victim cases are 1.6 times as likely to result in a charge of one or more special

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5 GFL also control for the time period in which the California Supreme Court’s ruling in Carlos v. Superior Court temporarily narrowed the application of capital punishment. 672 P.2d 862 (Cal. 1983) until it was over-ruled by a subsequent California Supreme Court decision in People v. Anderson, 742 P.2d 1306 (Cal. 1987).
6 See fn 5, supra.
circumstances, holding the other factors constant. Substituting out for the, Table 8 repeats the Table 7 regression while using the culpability scale (instead of the special-circumstance controls), which elevates the odds ratio that the prosecutor will charge one or more special circumstances to 2.3 (p=0.000).

In the next four tables, GFL examine racial disparities in jury decisions, holding either predictive special circumstances (multiple victims or felony sex crimes) or culpability constant. Table 9 shows juries are 5.4 times as likely to sentence a minority defendant to death after controlling for special circumstances found or present (p=0.002) and Table 10 yields an estimate of 3.9 times as likely when controlling for the culpability scale (p=0.006). When looking at minority defendant/White victim cases, these ratios are 3.1 (p=0.058) and 3.5 (p=0.026), respectively, according to Tables 11 and 12. The magnitude of the racial bias in jury decisionmaking against minority defendants documented in these four regressions is impressively (and highly troublingly) large.

The overall methodology of this report is statistically sound, and the comprehensive analysis goes straight to the heart of the important empirical question of whether racial disparities mar California’s capital regime. The quality of the data collection and analysis is at the top of the empirical literature probing racial bias in death penalty regimes, and the report provides abundant support for GFL’s overall finding of large racial disparities in death sentencing in California as well as in the decisions of prosecutors and juries in this capital process. This study standing alone would be sufficient to indict the California death penalty regime as seriously marred by racial bias, but I now proceed to discuss nine additional studies that further solidify this conclusion.


This second important recent study of the California death penalty regime examines death sentencing trends in California during the post-Gregg period to determine whether there are racial disparities in sentencing during this period. While the just-discussed GFL study examined the period from 1978 – 2002, this 2022 Petersen study includes more recent data in analyzing the period from 1979-2018. The Petersen study strongly corroborates the GFL findings that (1) homicides with White victims or Black defendants are more likely to result in a death sentence, and 2) victim and defendant race interact to influence death sentencing patterns, with cases involving Black/Hispanic defendant and White victims being the most likely to generate a death sentence.

The 2022 Petersen study examines death sentencing in a population of 55,922 homicides that occurred in California from 1979 through 2018. The Supplemental Homicide Report (SHR) was used to gather data on all homicides known to the police in California between 1979 and 2018. Death sentencing data was obtained from the Habeas Corpus Resource Center. Petersen then used probabilistic matching to link homicides in the SHR with the death-sentencing data.
Petersen excluded all homicides committed by those under age eighteen and eliminated from consideration any homicide lacking suspect race information.\(^7\)

Petersen controlled for an array of explanatory variables, including binary variables indicating whether the homicide incident involved multiple victims or a co-occurring felony, as well as time period controls for specific ten-year intervals. Petersen also controlled for the county in which the homicide occurred for the 10 most populous counties (with a single county indicator for all other counties because of their small size). Additional controls include the percentage of residents that are Black or Hispanic, percent urban, and annual homicide rate per 1000 residents.

According to the logistic regression models, victim and suspect race affect death sentencing even after controlling for the above set of explanatory variables. As we saw in the GFL study, homicides with a Black suspect are 2.17 times more likely to result in a death sentence than similar homicides with a White suspect, and those with a Hispanic suspect are 1.52 more likely to result in a death sentence. In addition, homicides with Black/Hispanic victims are less likely to result in a death sentence: Compared to homicides with a White victim, those with a Black or Hispanic victim are 66 per cent less likely to result in a death sentence. All of these results are highly statistically significant.

Petersen shows that the predicted probabilities of a death sentence are powerfully and consistently influenced by victim and suspect race. Specifically, no matter the victim, Black suspects are substantially more likely to be sentenced to death than Hispanic subjects, who in turn are more likely to be sentenced to death than White suspects. This pattern is clearly seen in Petersen’s Figure 4, which is reproduced below.

\(^7\) The sample was limited to homicides involving victims and suspects who are White, Black, and Hispanic.
This article examines racial, ethnic, and geographic variations in the imposition of the death penalty in California using data on all homicides committed in California during the 1990s. The authors find that death sentencing is strongly correlated with the race of the homicide victim, the proportion of a county’s non-Hispanic White residents, and a county’s population density.

The authors began their analysis by documenting the 302 California homicides committed in the 1990s that resulted in a sentence of death before March 15, 2003. They compiled a dataset on these cases using data from California’s Department of Corrections and the nonprofit organization the California Appellate Project, supplemented with newspaper searches, phone interviews, or death certificates.

The authors then collected data on all California homicides from the California Department of Health Vital Statistics and the FBI’s Supplementary Homicide Reports (SHR). The authors present some analyses using data solely from the California Department of Health Vital Statistics, and they also present data that uses SHR data restricted to observations for which the race/ethnicity of both the suspect and suspect’s victims are known.8

They use 25,648 observations in the SHR homicide dataset, excluding the observations where offenders who were given the death sentence had multiple victims with different races/ethnicities. The outcome variable is a binary outcome of whether the individual was sentenced to death, and the explanatory variables are dummy variables regarding county population density and proportion non-Hispanic White, victim race, and aggravating circumstances.

The authors find that the ratio between defendants sentenced to death and total homicide victims is substantially higher for White non-Hispanic victims than it is for either Hispanic or Black non-Hispanic victims. This is true in both the Vital Statistics data and the weighted SHR data. These racial/ethnic disparities continue to hold when the data is sub-divided by either zero, one, or two aggravating circumstances. They also find that the ratio of death sentences to total homicide victims is substantially higher in counties with a higher proportion of non-Hispanic White residents (over 40 per cent White non-Hispanic) than those with a lower proportion of non-

8 The authors adjust for missing SHR victim race/ethnicity data by reweighting the SHR data using data from Vital Statistics data. Specifically, they weight each SHR observation with known victim race/ethnicity information by the ratio of total homicide victims of that race/ethnicity in the SHR data to the total homicide victims of that race/ethnicity in the vital statistics data. For example, there were 7,357 SHR homicides with White non-Hispanic victims and 8,136 Vital Statistics homicides with White non-Hispanic victims. Thus, each SHR observation with a White non-Hispanic victim is assigned a weight of 8,136/7,357 = 1.1059.
Hispanic White residents. In their logistic regression analysis, they show a strong and statistically significant negative correlation in imposition death sentence for each racial/ethnic victim group relative to White non-Hispanic victims.

While this study has a more limited set of control variables than we saw in the two previous studies, this limitation may not be a serious concern in that in both of these previously discussed studies – and in other death penalty studies -- that did have more complete information about the details of the homicide, the additional information confirmed the presence of racial disparities in capital outcomes seen in the less fully adjusted data. In any event, the two previous studies discussed above had more years of data and more complete information and found statistically significant racial disparities, so the Pierce & Radelet study can be taken as further support for their findings of the presence of racial and ethnic disparities in the operation of the California capital regime.


The deeply troubling racial disparities in California’s capital regime that we have seen in the three previous studies are illuminated by this fourth study, which shows that racial bias has been facilitated by the state’s failure to adopt a system that narrowly tailored the application of the death penalty. As *Furman* instructed, a system that is not narrowly tailored permits the operation of racial bias to flourish more readily. California has mimicked the precise infirmities that led to *Furman*’s invalidation of existing death sentences because the state has established that a very high proportion of homicides are death eligible while operating a system in which death sentences are only imposed in a small fraction of these eligible cases. Baldus, et al. demonstrate that California’s death penalty regime is the worst offender in failing to narrowly tailor its capital punishment system compared to that of other post-*Furman* death penalty states.

The authors use a 1900-observation weighted stratified sample of the 27,453 cases of first- or second-degree murder or voluntary manslaughter with a date of offense between January 1,

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9 Donohue, “An Empirical Evaluation of the Connecticut Death Penalty System Since 1973: Are There Unlawful Racial, Gender, and Geographic Disparities?” 11 Journal of Empirical Legal Studies 637 (2014). For example, looking at the raw data from all death-eligible cases, Table 2 of the Donohue study shows that Connecticut prosecutors capitally charged defendants in minority on White homicides 85.3 percent of the time but only charged defendants in minority on minority homicides 62.0 percent of the time – a difference of 23.3 percentage points based on the race of the perpetrator. When richer data is available to control for differences in the elements of the homicide, however, the racial disparity in capital charging grew from 25 to 27.7 percent depending on the model (see Table 3 of the Donohue study). In other words, the more information available, the greater the racial disparity in capital charging. In the same study, the resort to greater controls did not necessarily increase the racial disparity in capital sentencing but neither did it ever eliminate the finding of racially disparate capital sentencing.
1978, and June 30, 2002 in a database maintained by the California Department of Corrections and Rehabilitation. The sample is stratified based on crime of conviction (first- or second-degree murder or voluntary manslaughter), groupings of counties by population density, and by time periods. The primary information source for each case was the probation report prepared by a county probation officer. If the probation report did not have sufficient information, the authors sought assistance from the California Habeas Corpus Resource Center to obtain trial records. In the 11 percent of cases for which neither source of information was available, the case was removed from the sample.

For each case, University of Iowa law students and graduates filled out a data collection instrument. The instrument assessed whether the case would be considered death eligible under (1) pre-\textit{Furman} Georgia law, (2) California law from December 12, 1983 and October 13, 1987 (referred to as the “Carlos Window” when the state implemented stricter death-eligibility criteria than California law before and after the window), and (3) 2008 California law.

The authors also draw on other empirical studies to benchmark their findings. Specifically, they draw on studies that look at New Jersey (1982-1999),\textsuperscript{10} Maryland (1978–1999),\textsuperscript{11} Nebraska (1973–1999),\textsuperscript{12} and all 38 states (1978-2003) that had a death penalty statute as of 2003.\textsuperscript{13} They also relied on a study that sought to determine death sentencing rates across all states (1973-1995).\textsuperscript{14}

This study concluded that the death-eligibility rate among California homicide cases was the highest in the nation in that fully 95 per cent of all first-degree murder convictions and 43 per cent of all second-degree murder and voluntary manslaughter convictions were death eligible under California’s 2008 capital punishment statute (see Table 3, Part II).\textsuperscript{15} Moreover, from this vast number of death-eligible homicides only 4.3 percent of the defendants who committed a factually eligible capital murder were sentenced to death. This is the pattern most likely to maximize the influence of improper racial bias, which has been such a pernicious and damaging influence in capital sentencing across the nation.

\begin{footnotes}
\item[15] Baldus et al, at 713 (Table 2) and at 722 (Figure 1), comparing California’s death-eligibility rate to the rest of the country.
\end{footnotes}
II. Six Studies Examining County-Level Disparities Based on Defendant and Victim Race.


Location: San Diego County

Using potential first-degree murder cases from San Diego County between November 8, 1978 (the start of California’s current death penalty regime) and May 1993, the authors document the substantial prosecutorial discretion in seeking the death penalty, and find statistically significant disparities in the application of the death penalty based on defendant and victim race.

The authors use data on all murder or manslaughter prosecutions in San Diego County obtained by attorneys for the defendant in People v. La Twon Weaver. They then removed a case if the facts could not have supported a first-degree murder conviction, if the defendant was a juvenile or was not convicted of a homicide, or if there was insufficient information about a case. This left 1,081 cases. The authors primarily relied on charging documents from the DA’s office and pre-sentence reports and from the Superior Court to construct their data, supplemented by The California Department of Justice’s Willful Homicide Charts, FBI Supplementary Homicide Reports, appellate court opinions, and newspaper articles. Each case was coded by attorneys and students trained by one of the authors (Professor Shatz) to determine if there were any special circumstances in the case that would have made the defendant death eligible. The cases were also coded for other mitigating or aggravating factors, the race/ethnicity and gender of the defendant and victims, and whether the defendant was on parole or probation at the time of the crime and whether the defendant was a gang member.

The authors used logistic regression to determine what factors – including the race/ethnicity/sex of the defendant and victims -- lead to the charging of special circumstances as well as the prosecutor’s decision to seek the death penalty. Special circumstances were present in 493 cases of the 1,081 cases they studied, but were only charged in 136 of these cases. Among the total 269 first degree murder convictions, 218 cases had special circumstances present and ultimately 23 were sentenced to death. The authors note that “These findings—a high death-eligibility rate and a low death-sentence rate—are consistent with the findings of prior studies concluding that the California death penalty scheme fails to “genuinely narrow” the death-eligible class.”

The authors found some striking racial disparities in death sentencing among 447 death-eligible cases with Black, Latinx, and White defendants and victims:

16 Id. at 1086.
Cases with a Black or Latinx defendant and a White victim resulted in a death sentence almost five times as often (10/76 = 13.2 per cent) as all other death-eligible cases (10/371 = 2.7 per cent). Strikingly, none of the 36 cases with White defendants and black or Latinx victims resulted in a death sentence. These racial disparities were highly statistically significant.17

The authors then used logistic regression models, which included an extensive array of control variables describing elements of the crime as well as the defendant and victim, to examine prosecutor decisions to charge special circumstances and seek the death penalty. The major finding was that there was a substantial and statistically significant higher rate in both charging a special circumstance (Table 6) and seeking the death penalty (Table 7) for cases with Black defendants killing a White victim than in cases with a Black or Latino victim.

This paper establishes for San Diego County (which had one DA for the entire time period) that prosecutors have “untrammeled discretion” to pursue the death penalty, which ultimately results in substantial racial disparities in capital sentencing.

2. Petersen, *Examining the Sources of Racial Bias in Potentially Capital Cases: A Case Study of Police and Prosecutorial Discretion* (2017) 7 Race & Justice 7-34 largely race of victim although it does say bl on wh

Location: LA County

While most death penalty studies focus on charging and capital sentencing, this study of LA County prosecutions of willful homicides in the early 1990s begins and ends the analysis somewhat earlier by examining only the factors influencing arrest and charging. It seeks to answer two primary questions: Do racial characteristics influence arrest decisions and prosecutors' filing of death penalty-eligible charges? And does victim race have an indirect effect on prosecutors' death penalty charging practices, operating through homicide arrests? Petersen finds that cases involving minority victims are less likely to result in arrest and less likely to lead to a death-eligible charge conditional on arrest. Thus, both factors operate to diminish the likelihood that the killing of minority victims will generate a death-eligible charge.

The analysis focuses on willful homicides that occurred in LA County during the five-year period from 1990 - 1994 (accidental, vehicular, and justifiable homicides were excluded). Although this is a relatively short window, these years were some of the most violent in LA County and across the country, thereby allowing for a larger sample size.

The author uses demographic controls including race, gender, marital status, citizenship, education, age, as well as number of victims, crime-scene location, precipitating circumstance, 17 Id. at 1091.
weapon, incident day, and victim-offender relationship. Finally, the author includes the racial composition of the crime-scene community, measured as the percentage of Black and Latino residents per census tract.

The analysis proceeds in two parts. Part 1 focuses on whether the case is cleared (by arrest or “exceptional” means) using a binary dependent variable and all the controls described above. Part 2 examines death-penalty charging among the sample of cleared homicides.

The second analysis uses binary and ordinal measure of “special circumstance” filings. In addition to the previously mentioned control variables, Part 2 includes defendant demographics and characteristics associated with the court case. These factors are used in Part 2, but not Part 1, because defendant demographics and court case characteristics are (by definition) only available when a homicide is cleared. Characteristics associated with court case include log number of criminal counts, multiple victims, and contemporaneous felony.

The authors find that as the proportion of Black or Latino individuals in a neighborhood increases, the likelihood that a murder will be solved drops substantially, most sharply for higher levels of Black residents in the neighborhood (see Table 2). Specifically, a 1-unit change in the percentage of Black residents corresponds to a 35 per cent reduction in the odds of clearance, while the odds of clearance decrease by 21 per cent as the Latino population increases by 1 percentage point. On top of this effect, if the victim is Latino rather than White, the odds of clearance are an additional 26 per cent lower.

In terms of prosecutorial decision making, the odds of a death penalty charge are 62-65 per cent lower for cases with Black victims and 47-49 per cent lower for cases with Latino victims. Cases involving minority victims are less likely to be cleared (Model 1), which directly lowers the likelihood of death penalty charge because of the lower arrest rate, and there is an additional decrease via prosecutorial behavior in the odds of a death penalty charge (Models 2 and 3) for minority victim cases. In addition, Latino defendants are 36-39 per cent less likely to be charged with a death-eligible crime than White defendants, and while Blacks who kill Whites get an added penalty in terms of greater likelihood of a death penalty charge, this effect is not statistically significant after all the other factors have been considered on this relatively small data period.


   **Location:** LA County (same data set as prior study, also by Petersen)

In this paper, Petersen seeks to answer the following questions: (1) does victim/defendant race/ethnicity influence prosecutorial decision-making? and (2) if so, do these racial/ethnic disparities accumulate across multiple stages of the criminal justice system? Results indicate that cases with minority victims are less likely to involve a death-eligible charge or death notice.
The previous Peter study just discussed focused on the universe of willful homicides (i.e., murder and voluntary manslaughter) occurring in Los Angeles (LA) County in the five-year period between 1990 and 1994, and began its analysis by examining the factors that explained which homicides would lead to arrest. This study begins by looking only at those arrested for willful homicide and examines first who is charged with special circumstances and then among those cases, which ones will result in a prosecutorial decision to seek the death penalty. Since this data is longitudinal, it enables an examination of the various stages in which race may be playing a role in outcomes as the case moves through the criminal justice system. This data set includes several variables absent from publicly available homicide data sets, such as newspaper coverage and educational attainment.

Petersen controls for a variety of explanatory variables including gender, age of victim and defendant, victim marital status and education, defendant’s (logged) prior felony convictions, location of homicide, weapon, incident time, victim–offender relationship, incident time (weekday or weekend), quick arrest (same day), and murder weapon (firearm or non-firearm). Additionally, controls for offense characteristics such as multiple victims and contemporaneous felony are included.

Petersen employs a two-stage modeling approach to estimate racial/ethnic disparities in prosecutors’ decisions to seek the death penalty, conditional upon the hazard rate of death-eligible charges. That is, the first model estimates the probability of a death-eligible charge and the second model estimates death notice conditional upon the hazard rate of the death-eligible charge. Models are run with and without defendant race and by various victim-defendant racial combinations.18

Petersen finds that victim race is statistically significant at both prosecutorial decision nodes, and the disparities between cases with minority and White victims increase at each successive stage, with the largest differences between Latino and White victims. Compared to White victim cases, those with Latino victims are 42 per cent less likely to involve a special circumstance (Model 1) and 69 per cent less likely to contain a death notice (Model 4). Similarly, cases with Black victims are 67 per cent less likely to involve a special circumstance (Model 1) and 64 per cent less likely to contain a death notice than White victim cases are (Model 4).

Among Black defendants, in Model 7, those who kill Black victims are 74 per cent less likely to have a special circumstance than those with White victims and in Model 9, those who kill Black victims are 58 per cent less likely to have a death notice than those with White victims. For Latino defendants, in Model 8, those who kill Latino victims are less 50 per cent less likely to

18 Victims and defendants divided into three groups, Latinos, Blacks, and White. Asians and “Other” races are excluded.
have a special circumstance than White victim cases and in Model 10, those who kill Latino victims are 78 per cent less likely to have a death notice than White victim. These findings indicate that minority defendants who kill White victims receive harsher punishments than those who kill minority victims.

Petersen explains his results through the cumulative disadvantage framework, which argues that initial advantages in group positionality increase over time, producing large disparities at the final stages. Victim-based racial/ethnic disparities accumulate as cases traverse through the court system, producing a Whiter pool of victims at each phase.


Location: Los Angeles County

This paper uses Bayesian methods to analyze death penalty charging in Los Angeles County homicide cases in the five-year period from 1990 to 1994. The cases are coded for race/ethnicity of victim and defendant and a variety of circumstances surrounding the murder, such as age and sex of the victim, whether the defendant and victim knew each other, and other factors. In total, more than 600 variables were coded for more than 5,000 defendants who were arrested for willful homicide.

The authors perform a Bayesian logistic regression using skeptical priors rather than priors derived from expert judgment, meaning that the findings are conservative (with respect to finding racial bias). This means that the prior distributions start from the assumption that there is no effect of race on charging or sentencing outcomes, and the empirical evidence must “overwhelm” the prior distribution in order to come to a finding of statistical significance.

The authors present the posterior coefficients and odds ratios for a Bayesian logistic regression model that includes separate indicators for defendant race, victim race, defendant-victim race interaction, and several circumstances of the murder (Table 13). They then convert this output into a more easily interpretable set of results (Table 14), showing the probability of a death penalty-eligible charge for each combination of victim and defendant race. The race of victim effect is striking: A Black defendant who kills a Black victim has only a 10.0 percent probability of receiving a death sentence (standard deviation of 2.8), but a Black defendant who kills a non-Black, non-Hispanic victim has a 41.1 percent probability (standard deviation of 8.2).

Table 15 assesses how the race of the defendant affects the probability of being charged with a death-eligible crime holding constant the victim race. The most striking finding occurs when the victim is non-Black, non-Hispanic: in this case, a hypothetical Black defendant is 3.17 times as likely to be charged with a death-eligible special circumstance as a non-Black, non-Hispanic defendant, and the probability this ratio is greater than one approaches 1.00. If the victim is Hispanic, a hypothetical Black defendant is 1.71 times as likely to be charged than a non-Black,
non-Hispanic defendant and the probability this ratio is greater than one is 0.95. Assuming the victim is Black, then a hypothetical Black defendant is only 0.39 times as likely as a non-Black, non-Hispanic defendant to be charged with a death-eligible special circumstance.

In summary, papers 2-4 in Section II of this memorandum examine the same 1990-1994 time period in LA County and reach similar conclusions about the substantial impact of race at various stages of the capital regime in that County at that time.

5. Petersen, Racial Disparities in Riverside County’s Death Penalty System (Sept. 21, 2021).

Location: Riverside County

This paper presents the results of two sets of logistic regression analyses for somewhat different outcomes and time periods for Riverside County, California. The first study analyzed death-penalty prosecutorial charging practices and jury decision-making for all 800 defendants arrested for willful homicide from 2006 through 2019 in Riverside County based on information from court documents and other official sources (the “charging study”). The second study examines broader death-sentencing trends in nearly 3,000 homicide incidents that occurred in Riverside County from 1976 through 2018 using information gathered from the Supplemental Homicide Report (the “SHR study”).

The charging study examined three areas of death-penalty decision making: 1) special circumstance allegation filing, 2) death notice filing, and 3) death verdict. The SHR study was limited to analyzing death verdicts due to the lack of publicly available state-wide data on special circumstance allegations and death notice filings.

In the charging study, victim and defendant race is coded as White, Hispanic, or Black. The author controls for co-defendants, log number of other criminal charges, felony or multiple-murder, and another indicator for a pattern of criminal history. In addition to variables drawn from the court files and DA records, information on victim demographics and case characteristics were derived from the California Department of Justice (DOJ) homicide database. This included victims’ age, gender, murder weapon, location type, and victim-offender relationship.

The main findings of the charging study are as follows:

a. Compared to White defendants, Black defendants are 1.71 times more likely to be charged with a special circumstance, are 9.06 times more likely to receive a death notice, and are 14.09 times more likely to be sentenced to death. All these White-Black disparities are statistically significant at the 10 per cent level.

b. Compared to White defendants, Hispanic defendants are 1.08 times more likely to be charged with a special circumstance, are 3.73 times more likely to receive a death notice and are 10.85 times more likely to be sentenced to death.
Peterson summarizes these findings as follows:

Even after controlling for important legally relevant factors like the presence of multiple victims or a felony, logistic regression results indicate that murders with Black and Hispanic defendants are more likely to involve a special circumstance, a death notice, and a death verdict. Moreover, cases with Black victims are less likely to result in a special circumstance, death notice, and death sentence compared to cases with White victims. Finally, these findings are especially pronounced in cases involving White victims and minority defendants, where they are more likely to result in a special circumstance, death notice, and death sentence.\(^\text{19}\)

The results of the SHR part of the Riverside County study mimic the results of the overall California capital regime. Peterson summarizes the findings from this part of his Riverside County study as follows:

the SHR study finds that homicides with Black and Hispanic suspects are more likely to result in a death sentence even when controlling for other non-racial factors when compared to homicides with White suspects. Conversely, homicides with Black or Hispanic victims are less likely to result in a death sentence than those with White victims. Similar to the charging study, results also indicate that homicides involving White victims and minority defendants are more likely to result in a death sentence.

In other words, the Riverside study mimics the findings of the studies in Part I that examined homicide cases for the entire state of California.


Location: Santa Clara County

This report uses logistic regression to examine whether victim and suspect racial/ethnic disparities exist in Santa Clara County death sentencing trends from 1976 to 2018, and Petersen follows the same basic approach he employed in his SHR study in the previous paper. Specifically, Peterson gathers SHR data on all homicides reported to the police in Santa Clara County between 1976-2018. The SHR provides information on victim and incident characteristics. The author also uses death sentencing data from the Habeas Corpus Resource Center. The sample is restricted in several ways, only focusing on cases charged and tried in Santa Clara County, with offenders 18 years and older, and excluding homicides where an arrest did not occur. The author then uses probabilistic matching to link the two datasets. The final dataset includes 24 homicides that resulted in a death sentence and 1654 that did not.

The author also includes important homicide characteristics such as felony and multiple murder as controls. Race is coded as White vs. non-White.

\(^{19}\) Id. at 30.
A logistic regression model controlling for the presence of multiple murder victims and a concurrent felony (i.e., felony murder) indicates that homicides involving White victims are 2.07 times more likely to result in a death sentence than those with a non-White victim. In contrast, homicides involving White suspects are 14 per cent less likely to result in a death sentence than those with non-White suspects.

III. Conclusion

The collective strength of the evidence of racial bias in the implementation of the California death penalty that emerges from my evaluation of these ten studies is powerful. Race has played a substantial and statistically significant role in determining who lives and dies for crimes that are otherwise similar. This is true for the state as a whole as well as for a number of studies focused on individual counties. Race has been found to affect the likelihood of murder arrests, the charging of special circumstances, the prosecutorial decision to seek the death penalty, and jury decisions to impose the death penalty. These outcomes cannot be reconciled with the requirement of equal justice under law in California’s capital punishment regime.
EXHIBIT T
May 8, 2023

To Whom it May Concern:

When the Connecticut Supreme Court struck down the Connecticut death penalty as unconstitutional under the state constitution in the 2015 case State v. Santiago, Justices Norcott and McDonald endorsed the view that “When a capital defendant marshals a compelling argument that the death penalty as it is administered in our state is incurably racist … we should stop dead in our tracks until we have given the argument our most serious attention.” A study that furthers this important inquiry with respect to the California death penalty regime with the high quality of empirical sophistication and care that the subject requires is Grosso, Fagan & Laurence, Report on the Influence of the Race of Defendant and the Race of Victim on Capital Charging and Sentencing in California Between January 1, 1978, and June 30, 2002 (Jan. 30, 2023).¹ My review of this report leads me to conclude that it is a scientifically valid study whose factual findings establish racial discrimination and overbreadth in California’s capital regime.

The Grosso, Fagan, and Laurence report (“GFL”) analyzes racial and ethnic disparities in decisions by California prosecutors to charge aggravating factors in capital-eligible cases and decisions by juries to impose a sentence of death over the period from 1978 to 2002. GFL find that, even after controlling for relevant circumstances of the crime, significant racial and ethnic disparities in California’s capital punishment system result in a greater likelihood of a death sentence for cases involving white victims, for cases involving minority defendants, and for cases involving both white victims and minority defendants.

GFL use data from the California Department of Corrections and Rehabilitation (CDCR) covering all 27,453 cases where a defendant was convicted of first-degree murder, second-degree murder, or voluntary manslaughter with an offense date between January 1, 1978, and June 30, 2002. The authors then drew a stratified sample of 1900 cases. From this universe, each case was coded using a data collection instrument by law students and law graduates for the presence of special circumstances and race/ethnicity of defendant and victim.

GFL initially report unadjusted tables comparing each racial/ethnic group’s representation in the sample to various outcomes and then confirm their results with a series of logistic

regressions analyzing each phase of the capital punishment decision process.\textsuperscript{2} I summarize the results from their 15 tables below.

Table 1 reports simple cross-tabulations that document the gross racial disparities in the California capital regime. While minority defendants comprise only 70\% of death-eligible cases, they are sentenced to death at a somewhat higher rate of 79\% percent. White-victim cases are only 34\% of death-eligible cases, but a substantially higher 52\% of cases in which a death sentence was imposed. While cases with both a minority defendant and white victim are only 14\% of death-eligible cases, they are a dramatically larger 34\% of cases in which a death sentence was imposed.

Table 2 presents chi-squared tests of differences in proportions among the categories from Table 1. Notably, 10.4\% of minority-defendant/white-victim cases result in a death sentence, which is 3.2 times higher than the rate for all other cases of 3.3\%. This substantial difference in proportions is significant at the one-percent level.

Table 3 shows the results from a regression of final case outcome on defendant race, victim race, and three indicators for the presence of the most predictive special circumstances (multiple victims, robbery felony, or sex crime felony).\textsuperscript{3} Minority defendants are shown to be 4.8 times as likely to receive a death sentence ($p=0.002$) and white victim cases are 2.5 times as likely ($p=0.066$).

Table 4 reports a similar specification, except it includes a “defendant culpability scale” in lieu of the set of predictive special circumstances. In this model, the minority-defendant coefficient is 4.3 ($p=0.002$) and the white-victim coefficient is 4.0 and gains statistical significance ($p=0.005$).

Tables 5 and 6 repeat the same specification as Tables 3 and 4, except that instead of including separate variables for minority defendants and for white victims, minority-defendant/white-victim cases are compared to all other cases. These two models show, respectively, that such cases are 3.2 ($p=0.025$) and 4.5 ($p=0.003$) times as likely to end in a death sentence. In other words, the large gross racial disparities documented in Table 2 for minority-defendant/white-victim cases were not diminished by controlling for various elements of the cases – and if anything were exacerbated by these controls.

\textsuperscript{2}Cases with at least one white victim are considered white-victim cases. Black, Latino, or Native American individuals are considered minorities for the purpose of the study.

\textsuperscript{3}GFL also control for the time period in which the California Supreme Court’s ruling in Carlos v. Superior Court temporarily narrowed the application of capital punishment. 672 P.2d 862 (Cal. 1983) until it was over-ruled by a subsequent California Supreme Court decision in People v. Anderson, 742 P.2d 1306 (Cal. 1987).
Next, GFL examine prosecutorial decision making in these capital cases. **Table 7** uses the decision to charge one or more special circumstances as the outcome variable. The right-hand-side variables are an indicator for whether the victim was white, four indicators for the factual presence of special circumstances most predictive of the decision by prosecutors to charge any special circumstance (multiple victims, robbery and burglary, felony kidnapping, or felony sex crimes), and a control for the California Supreme Court decision in *Carlos*. In this model, white-victim cases are 1.6 times as likely to result in a charge of one or more special circumstances, ceteris paribus. Substituting out the special-circumstance controls for the culpability scale, **Table 8** finds that this odds ratio rises to 2.3 (p=0.000).

In the next three tables, GFL examine racial disparities in jury decisions, holding predictive special circumstances (multiple victims or felony sex crimes) or culpability constant. **Table 9** shows juries are 5.4 times as likely to sentence a minority defendant to death after controlling for special circumstances found or present (p=0.002) and **Table 10** yields an estimate of 3.9 times as likely when controlling for the culpability scale (p=0.006). When looking at minority defendant/white victim cases, these ratios are 3.1 (p=0.058) and 3.5 (p=0.026), respectively, according to **Tables 11 and 12**.

**Table 13** examines the stage at which a death-eligible case is resolved using an ordered probit analysis. It finds that minority defendants’ cases are resolved earlier in the process, and white victim and minority defendant/white victim cases are resolved later. This overall pattern holds in **Table 14** (controlling for special circumstances) and **Table 15** (controlling for culpability).

The overall methodology of this report is statistically sound, and the comprehensive analysis goes straight to the heart of the important empirical question of whether racial disparities mar California’s capital regime. The quality of the data collection and analysis is at the top of the empirical literature probing racial bias in death penalty regimes, and the report provides abundant support for GFL’s overall finding of large racial disparities in death sentencing in California as well as in the decisions of prosecutors and juries in this capital process.

Sincerely,

John J. Donohue III
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4 See fn 3, *supra*. 