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Homicides, Capital Prosecutions, and Death Sentences in St. Louis County, Missouri, 1991-2018

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Introduction

I was asked by counsel for Kevin Johnson, a death row inmate, to explore the determinants of death sentencing in St. Louis County for the years 1991 through 2018, years which correspond largely to the tenure of a single prosecutor. The study examines 408 death-eligible cases,[1] and permits controls for statutory and non-statutory aggravating and mitigating factors, as well as illegitimate factors such as the race and gender of the defendants and victims. I examined the cases at each major procedural stage of the prosecution, in particular the decision to charge the crime as first-degree murder, the decision to give notice of intention to seek a death sentence, and the ultimate sentencing outcome. I conclude that defendants in White-victim cases faced a significantly heightened risk of progressing to the next stage, including ultimately receiving a death sentence. Further, these effects are principally driven by prosecutorial decisions that advance the case toward a first-degree murder conviction and penalty hearing. The effects persist after controlling for relevant aggravating and mitigating circumstances.

Qualifications

I am a political science professor with years of experience in the statistical study of public policy and criminal justice outcomes, including the death penalty in particular. I received my BA, MA, and PhD degrees from the University of Michigan (1980, 1983, and 1986). I have

[1] A case was included if the facts could have supported a conviction for first degree murder, whether or not charged as such, and at least one statutory aggravating circumstance.

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been a faculty member since 1986 and have taught at the University of Iowa, Texas A&M University, Penn State University, and UNC-Chapel Hill, where I have held the Richard J. Richardson Distinguished Professorship in Political Science since my arrival in 2009. My research generally involves statistical analyses often based on originally collected databases. I have been fortunate to have received a number of awards for my work, including six book awards, awards for database construction, and so on. In 2017, I was inducted in the American Academy of Arts and Sciences.

In 2008, I published a book about the transformation in United States public attitudes and use of the death penalty based on the rise of the "innocence" argument about the possibility of errors in the system.[2] Since then, I have integrated the death penalty into my teaching and research. I regularly teach a course about the death penalty here at UNC-Chapel Hill; it enrolls over 300 students. In 2018, I published a book, *Deadly Justice: A Statistical Portrait of the Death Penalty*,[3] which presents a variety of statistical analyses of such things as the geographical concentration of the death penalty, its cost, the share of death sentences reversed or carried out, the time from death sentence to execution, public opinion, and other matters. This book draws from a database I constructed over many years, consisting of information about every execution in the United States since *Gregg v. Georgia* (1976). Since completing that book, I have also compiled a similar database of all US death sentences since *Furman v. Georgia* (1972), more than 8,000 observations. I have several published articles in scholarly journals and law reviews

[2] Baumgartner, Frank R., Suzanna L. De Boef and Amber E. Boydstun. 2008. *The Decline of the Death Penalty and the Discovery of Innocence*. New York: Cambridge University Press.

[3] Baumgartner, Frank R., Marty Davidson, Kaneesha R. Johnson, Arvind Krishnamurthy, and Colin P. Wilson. 2018. *Deadly Justice: A Statistical Portrait of the Death Penalty*. New York: Oxford University Press.

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using this database and analyzing the same questions as I address in my report: why do some death-eligible homicides result in a death sentence while most do not? My work in this area generally is statistical in nature. In a statistical analysis the question is to determine which factors correlate with death sentencing outcomes in bivariate as well as in multivariate analyses. That is what I have done here.

Overview of Data Collection Efforts

Data collection and coding was undertaken by staff attorneys at the Federal Community Defender Office for the Eastern District of Pennsylvania, Capital Habeas Unit, under my supervision. One of the attorneys, David Zuckerman, had experience in a comparable study conducted in Philadelphia. The data collection and coding procedures are more fully described in Appendix 2. By a review of police and court records described in Appendix 2, this team identified 408 crimes that met the statutory requirements for possible capital prosecution. From these 408 cases, 29 eventually resulted in a death sentence.[4] My analysis focuses on what distinguishes the vast bulk of death-eligible cases that did not lead to a death sentence and the seven percent that did.

Description of dataset

During the period of study, 408 death-eligible crimes were committed in St. Louis County. The dates of the crimes range from January 5, 1977[5] to April 25, 2018 and the dates of death sentencing range from January 15, 1991 to January 3, 2020. These dates were selected to ensure that some aspect of the capital prosecution, or decision not to prosecute capitally, was

[4] This figure includes retrials where the initial conviction or sentence was reversed on appeal.

[5] In a few cases the defendants were not arrested until several years after the commission of the offense, thus falling within the period studied.

during the period from January, 1991 through December, 2018, the tenure of a single prosecuting attorney.

Of the 408 cases identified for study, 329 offenders were Black and 79 were White[6]; female offenders numbered 15, and males were 393. There were 461 victims in these crimes; 310 were Black and 145 were White;[7] 315 were male and 141 were female; by race and gender the numbers were: 226 Black males; 84 White males; 82 Black females, and 59 White females.[8] So, almost 80 percent of the offenders were Black, as were two-thirds of the victims. Black males constituted almost half of all the victims. Similarly, two-thirds of the victims were male. White female victims were just 13 percent of the total. Males represent 96 percent of the offenders.

Most offenders had just a single victim; 89 percent. There were 39 cases with two victims, four with three, and two cases with four victims. Two-thirds of all the cases had at least one Black victim (277 cases); one-third had at least one White victim (128 cases); a similar percentage had at least one female victim (131 cases); and 14 percent had at least one White female victim (57 cases).

Analysis

My analysis proceeds in several sections. First, I show the most important and simplest result: of the 408 eligible cases, 29 resulted in death, and these 29 cases were much more likely to involve White victims rather than Black victims. In fact, 14 percent of White-victim cases resulted in a death sentence compared to four percent of the Black-victim cases. Second, I look at

[6] Hispanic heritage is listed separately in the database, but only three offenders were clearly identified as Hispanic. Because of these low numbers, I have excluded the Hispanic heritage variable and concentrate only on race.

[7] Four victims were Asian.

[8] The race-gender counts exclude victims with races other than White or Black.

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seven different stages of the capital punishment process, several of which are under the unilateral control of the prosecuting attorney's office. I document the number of cases that proceeded to each stage of the process, and the share of these cases involving Black v. White victims. This shows a consistent pattern, especially in those stages where many cases are filtered out. These results show that much of the filtering occurs at stages that are under the complete control of the prosecutor. Third, I assess the importance of various statutory aggravating and mitigating factors. The result demonstrates that certain aggravators are in fact connected with *reduced* odds of death, and some mitigators are in fact associated with *increased* odds of death, though others show powerful trends in the ways in which one would expect (e.g., aggravators adding to the odds of death, and mitigators reducing it). Thus, this section shows mixed and confusing results about how statutorily defined mitigating and aggravating factors work in practice. Fourth, I present the results of a multivariate statistical analysis in which I consider the weight of the statutory factors as well as race-of-offender and race-of-victim effects. These results show that the bivariate analyses are highly robust. Racial factors, particularly the presence of White victims, have an important influence on death sentence outcomes even in a model simultaneously considering relevant statutory factors as controls. Further, it shows that statutory mitigators and aggravators often do not work as the law suggests they might. Finally, I conclude with my overall assessment and interpretation of what this analysis shows.

White-victim Cases are 3.5 Times as Likely to Lead to a Death Sentence as Black-victim Cases

Table 1 displays the numbers and percentages of White- and Black-victim cases resulting in a sentence of death. The Table excludes four observations with no Black or White victims, and shows that 29 of the 405 remaining cases, or 7.2 percent, led to death. Among the 277 cases with

Black victims, this percentage was 4.0; among the 128 cases with White victims, it was 14.1 percent.

Table 1. Death-Eligible Crimes Leading to a Sentence of Death or Execution, by Victim Race

	Victims Black		Victims White		Total	
Death Sentence?	N	%	N	%	N	%
No	266	96.0	110	85.9	376	92.8
Yes	11	4.0	18	14.1	29	7.2
Total	277	100.0	128	100.0	405	100.0

Note: Chi-sq. (1) = 13.41, prob. < 0.000. The N here is 405 rather than 408 because three cases involved victims of other races and are excluded. White-victim cases are those where at least one victim is White. There were 145 White victims overall, but these came from 128 homicide incidents. Similarly, Black-victim cases are defined as those where no victims were White but there were any Black victims; there were 277 such cases, though there were 310 Black victims overall. There was only one case with both White and Black victims; this was coded as a White-victim case. (It did not lead to a death sentence.)

The cleanest comparison is simply this: Black victim cases have a 4.0 percent chance of leading to a death sentence; White-victim cases see a 14.1 percent chance. The ratio of these two rates is 3.5. White-victim cases are 3.5 times as likely to lead to a death sentence than Black victim cases.

Table 1 clearly shows the most important finding of this report. In the next section, I assess which stages of the capital punishment process may be contributing to these trends more than others, and in later sections I assess whether these findings can be "explained away" by other factors such as the facts of the crime that might simply happen to correlate with race of victims, rendering the relationship in Table 1 a spurious one. To foreshadow my conclusions, I do not find spuriousness. Table 1 is an accurate summary of a serious problem.

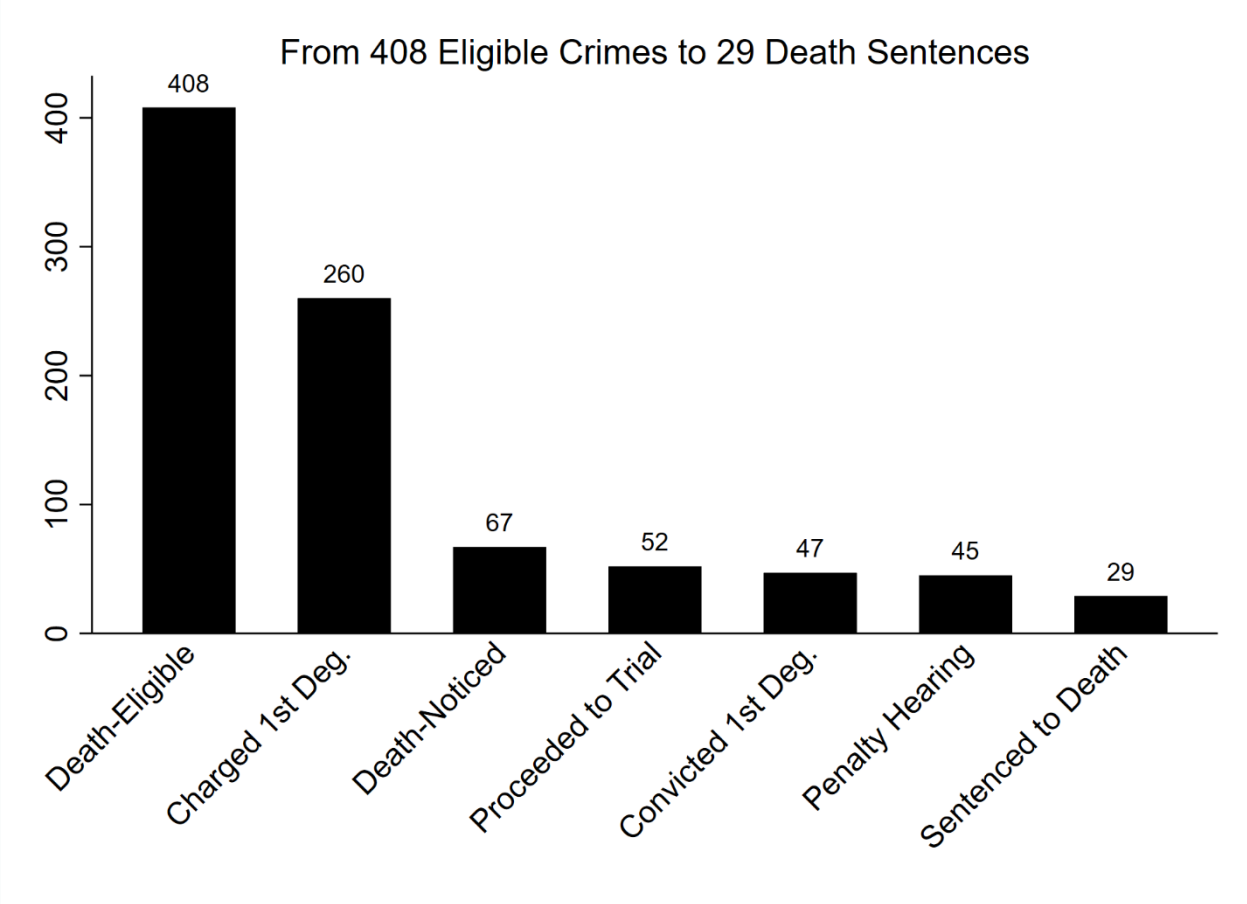
Stages of the Capital Punishment Process

Figure 1 shows how many cases proceeded down the capital prosecution path and how far.

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Figure 1. The Stages of the Capital Punishment Process.



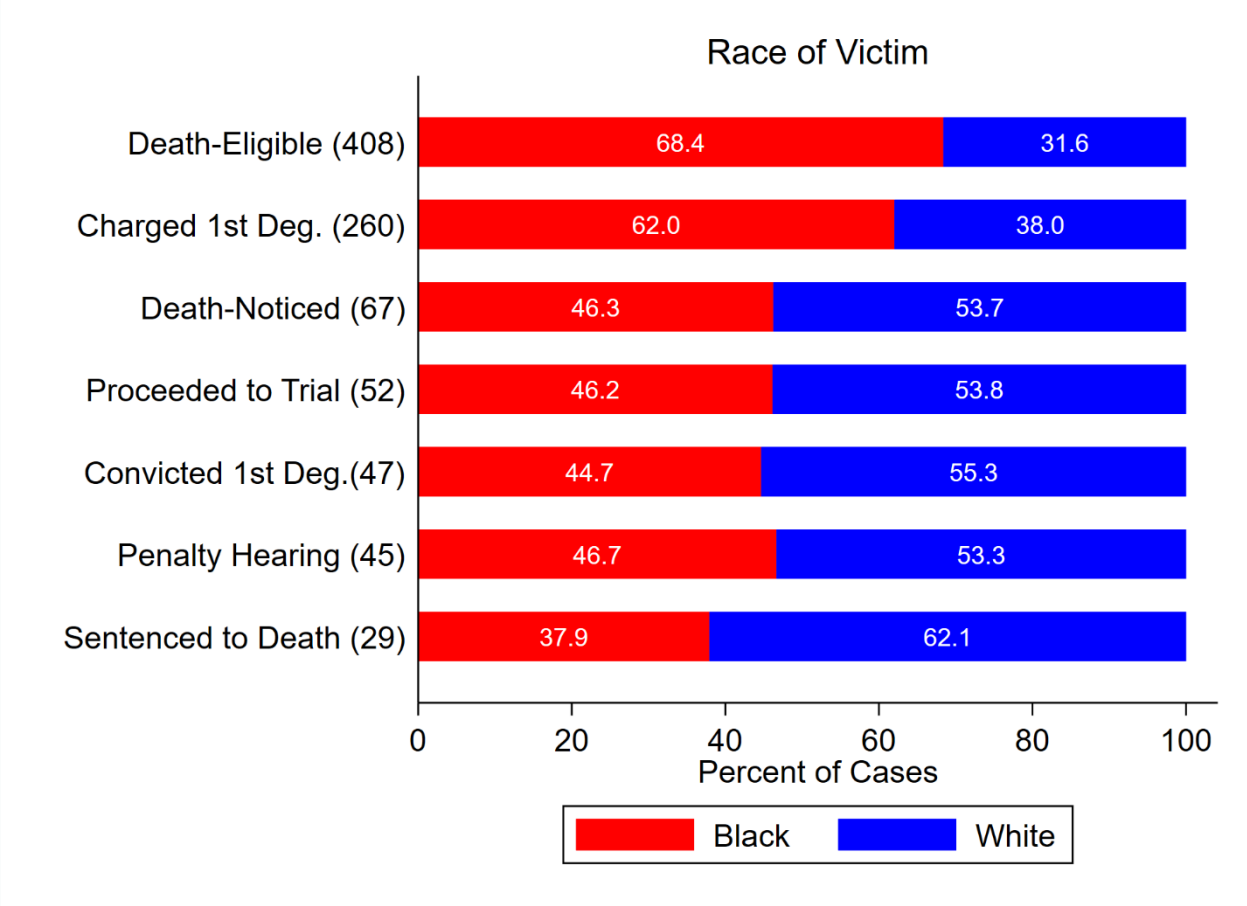
Beginning with 408 death-eligible crimes, we see 260 that were charged as first-degree murder; 67 that were the subject of a death notice, and so on until there were 29 cases that resulted in a sentence of death. The baseline rate of death sentencing is therefore 29 / 408, or 7.1 percent. (Many additional homicides occurred that were not death-eligible.)[9]

Figure 2 shows a powerful pattern. It compares, for each of the 7 stages identified in Figure 1, the shares of Black and White victims. As discussed in the previous section, just three individuals had unknown or other races, and these are excluded from Figure 2. Therefore, each stage sums to 100 percent of the cases and the colored bars clearly indicate the percentages of cases involving victims who were White and Black.

[9] Involuntary and vehicular manslaughter cases were excluded at the outset. Of the remaining non-negligent homicides, approximately 75% were coded as death-eligible.

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Figure 2. Increasing Share of White-victim Cases across the Stages of Capital Prosecution.



The further we go down the path to a death sentence, the greater the share of cases with White victims. Figure 1 shows that the most dramatic reductions in the numbers remaining on the path toward capital punishment come in the first two stages: charging the case as a first-degree crime, and issuing a death-notice. Figure 2 shows that these two stages correspond as well with the greatest proportionate increase in the share of White-victim cases. Starting at the top, among all 408 death-eligible crimes in the database, White-victim cases constitute 31.6 percent of the total. At almost every stage of the process, however, their share increases until, at the end of the process, we see 62 percent White-victim cases. By the time we are at stage three, among the 67 death-noticed cases, this number is 53.7 percent. White-victim cases are a minority of the cases overall, and among those charged first-degree. However, they are a majority of those receiving a death-notice and at each following stage. In fact, the first two stages of the process,

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charging first-degree and issuing a notice of intent to seek death, which are under the unilateral control of the prosecuting attorney, show the greatest movement toward White-victim cases; these grow in share from 31.6 to 38 percent at the first stage, then again to 54 percent at the stage of death-noticing. (This is a 70 percent increase: 53.7 / 31.6 = 1.70.) These trends are then further accentuated in the last stage, but the vast majority of the filtering, from 408 cases down to just 67, has been done by the prosecuting attorney's office and has resulted in a pool of death-noticed cases that are distinct from the original pool because the White-victim cases are differentially selected for capital prosecution.

In the middle stages, from the 67 death-noticed cases to the 45 cases proceeding to a penalty hearing, there is little filtering, and the percentage of cases with White victims therefore remains relatively constant (around 55). However, in the final stage, there is much more filtering, and the White-victim effect becomes much more pronounced again. The 29 individuals sentenced to death differ from the 45 with a penalty hearing in that they have a higher share of White victims. The last stage moves us from 53.3 percent White victims to 62.1 percent, almost completely reversing the racial characteristics of the system in the first stage. From a racial split that starts out as approximately 68 percent Black / 32 percent White, the system produces a final result that is 38 percent Black and 62 percent White.

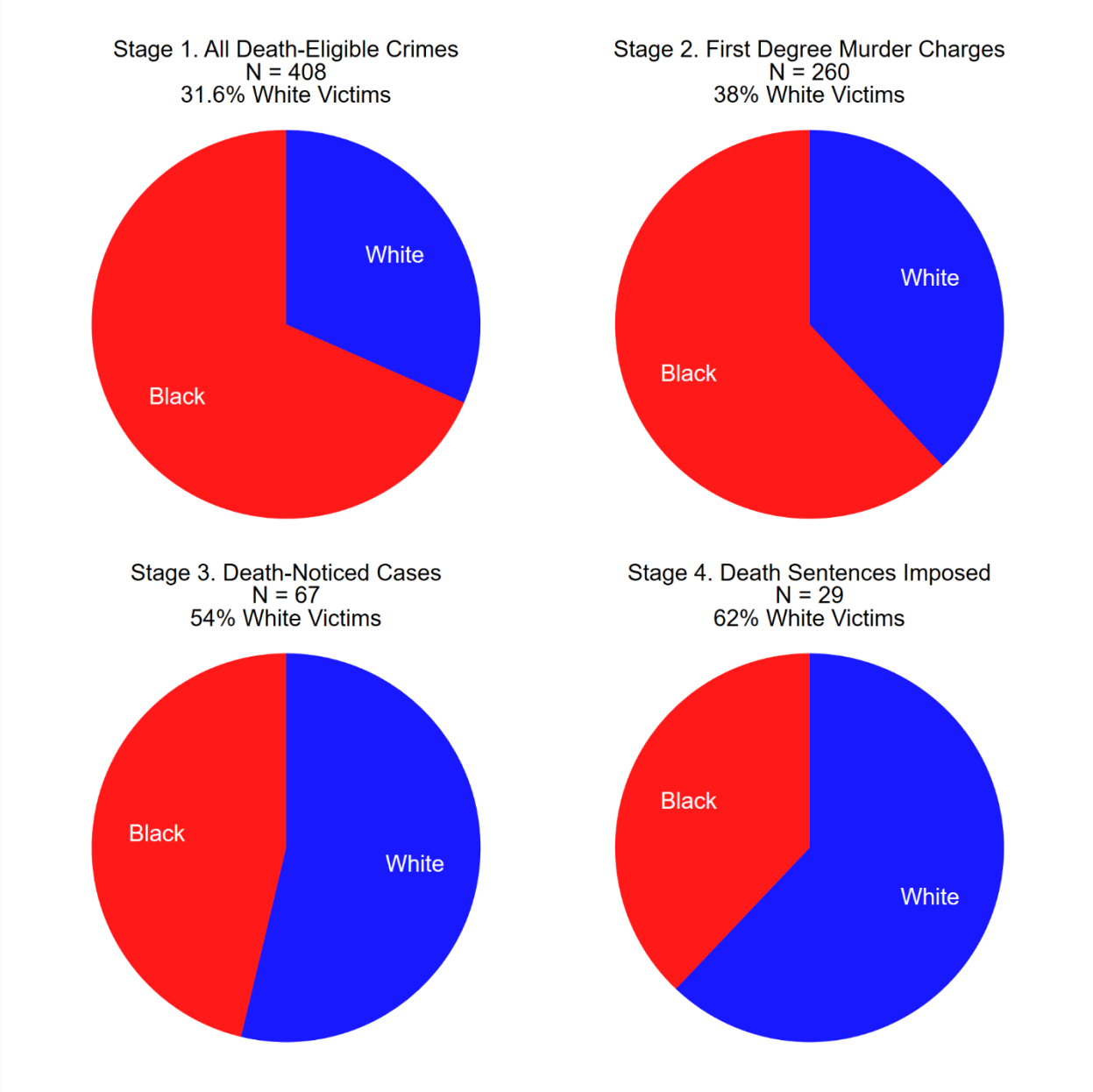
The steady progression of the White-victim percentages across all the stages of the process, and the more rapid increases in this share when the numeric filtering is at its greatest suggest that race-of-victim effects are constant throughout the capital punishment process from beginning to end. Wherever there is significant numeric filtering, the White-victim effect becomes stronger.

Figure 3 illustrates this filtering very clearly. It presents a series of pie-charts where the blue slice of the pie represents White-victim cases and the red slice represents cases with Black victims. The blue slices grow while the red slices diminishes as we move through the process. For simplicity, the Figure shows only four of the stages illustrated in Figure 2, those where the biggest changes occur both in numbers and in percentage White.

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Figure 3. A Simplified Illustration of Race-of-Victim Effects across the Stages of Capital Prosecution.



In the first pie-chart, we see that the blue slice is 31.6 percent of the cases; it then grows to 38 percent, to 54 percent, to 62 percent at the sentencing outcome stage. If we look back at Table 1, which showed such powerful race-of-victim effects, then Figures 2 and 3 allow us to see that these biases are reflected in each of the most important stages of the capital prosecution system, with each successive stage adding to a system that, in its entirety, ends up with the

results so clearly summarized in Table 1, more than 3.5 times the odds of death for those who have White victims compared to those with Black victims.

Possible Confounding Factors

It is possible, of course, that the crimes involving White victims differ in legally relevant ways from crimes associated with Black victims. Therefore, it is important to look at these issues in some detail.

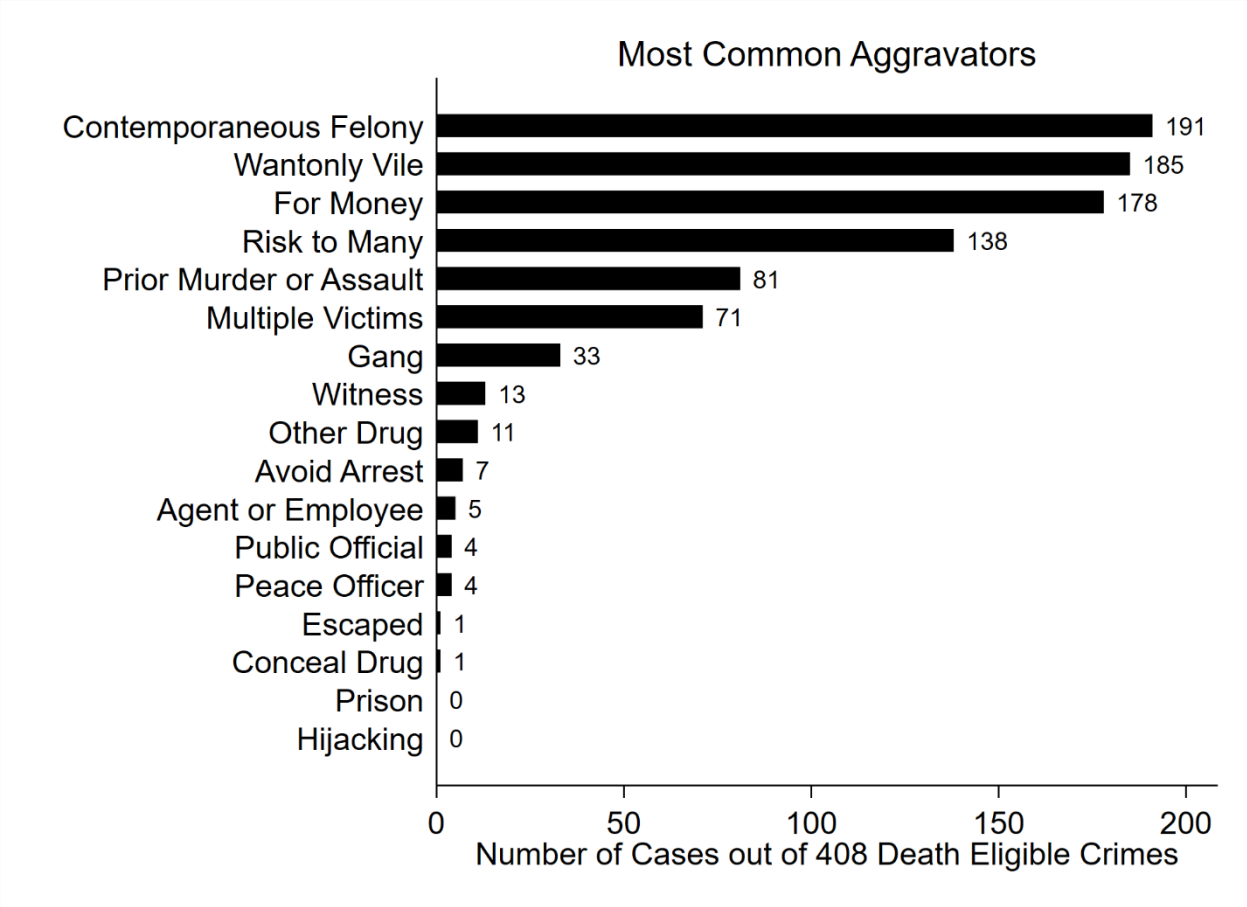
One initial factor to consider is the number of victims. Table 1 showed that of the 29 death sentences imposed, 18 had White victims and 11 had Black victims. In the 11 cases with Black victims, 4 (36 percent) had multiple victims. In the 18 cases with White victims, just 2 (11 percent) had multiple victims. Having multiple rather than only a single victim is a significant predictor of a death sentence in Black-victim cases (just 3 percent of offenders with a single Black victim got death, whereas 17 percent of those with multiple Black victims did; chi-sq. = 11.9; prob. =.001). Among cases with White victims, on the other hand, 14 percent with a single victim got death and 18 percent of those with multiple White victims got death (chi-sq. = 0.17; prob. = .681, n.s.). This analysis suggests that the bar is higher in Black-victim cases. Black-victim cases rise to above the average death sentencing rate only if there are multiple victims whereas White-victim cases are higher than the 7 percent overall average even with only a single victim. In White-victim cases, there is no statistically significant pattern of increased odds of a death sentence for multiple-victim cases as compared to single-victim cases. A single White victim suffices. For Black-victim cases, there is a powerful pattern; multiple victims move the odds up substantially.

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Missouri enumerates a number of statutory aggravating and mitigating factors, and we can look at each of these in turn.[10] Figure 4 shows the frequency of occurrence of each of the statutory aggravators.

Figure 4. Relative Frequency of Different Aggravating Circumstances.



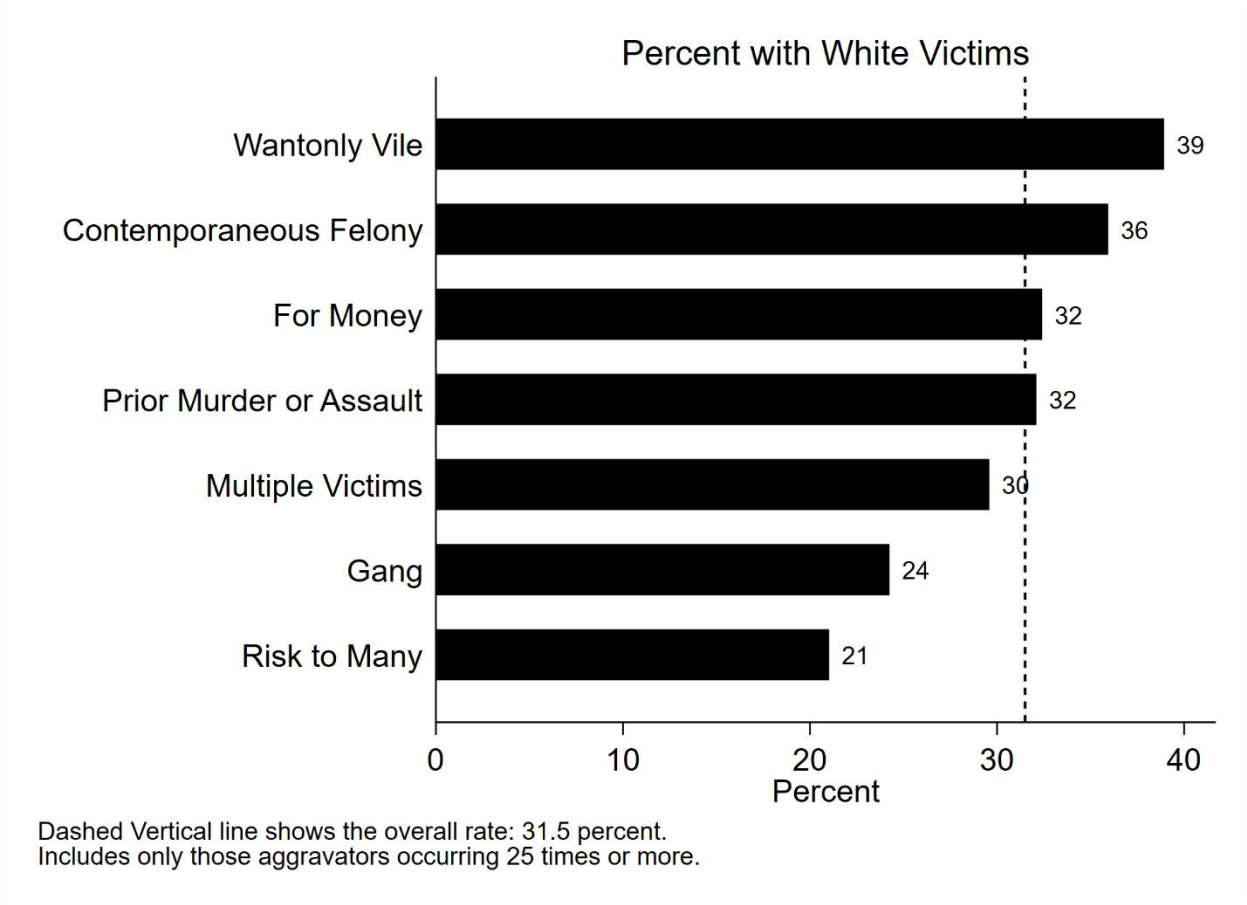
Of the 408 death-eligible cases, 191 had a contemporaneous enumerated felony; 185 had the "wantonly vile" aggravator; 178 had an aggravator associated with a monetary incentive for the crime, and so on. Note that several aggravators appeared not at all or only very rarely in the database. In the multivariate analysis section below, I focus my attention on those aggravators occurring more than 25 times, in order to ensure robust statistical results.

[10] See Appendix 1 for the full set of aggravating and mitigating factors.

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Some aggravators are associated with White victims, and therefore could potentially affect the bivariate race-of-victim relationship shown above. Figure 5 shows, for each aggravating circumstance present in the database more than 25 times, the percent of those with that circumstance who had White victims. The Figure includes a dashed vertical at 31 percent, which represents the overall share of White victims. Bars that extend beyond that line show aggravating circumstances that are more likely than average to involve White-victim cases.

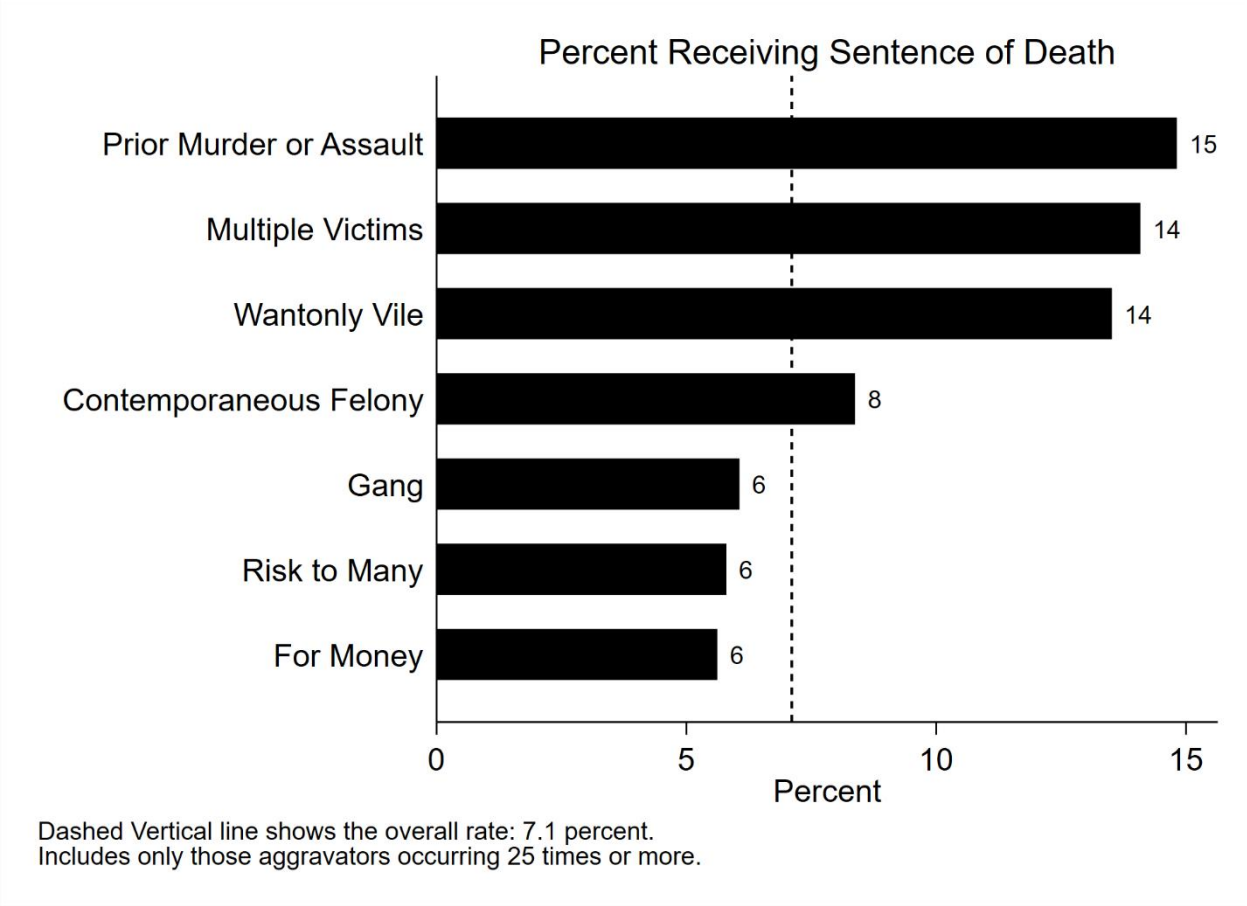
Figure 5. Percent of Cases with White Victims, by Aggravating Circumstance.



The wantonly vile and underlying felony aggravators are slightly more likely than average to include White victims. Gang-related and "risk-to-many" aggravators are more common in cases with no White victims.

Figure 6 shows the percent of cases receiving death in a similar format to Figure 5. The dashed vertical line at 7 percent represents the overall rate of death-sentencing.

Figure 6. Percent of Cases Leading to a Death Sentence, by Aggravating Circumstance.



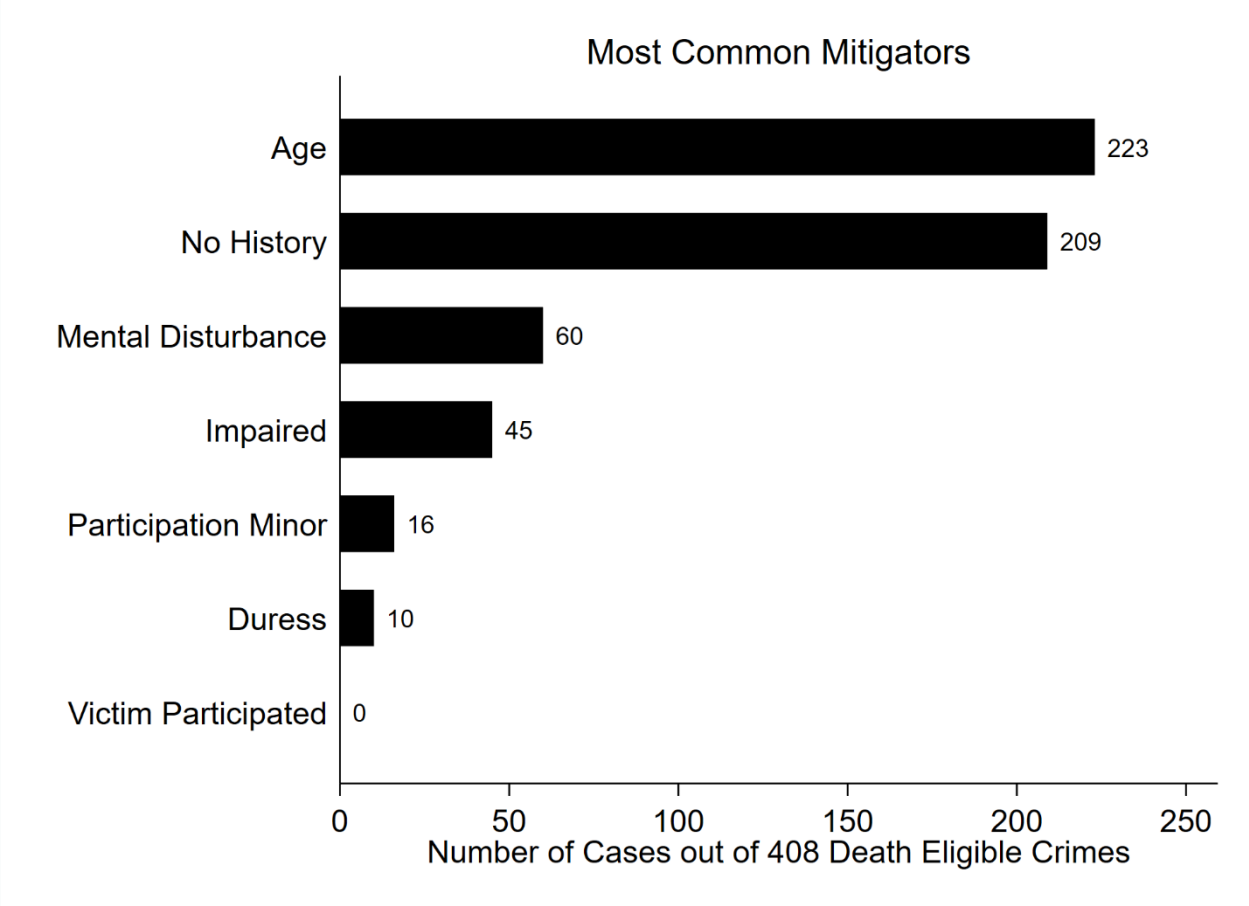
Cases with a prior conviction for murder or felony assault, multiple victims, and the wantonly vile aggravator are approximately twice as likely to lead to a death sentence as the average case. Recall from Figure 4 that these are also relatively common aggravators: 71 cases had multiple victims; 81 had a prior murder or serious assault; and 185 had the wantonly vile aggravator.

Figure 7 shows the frequency of different mitigators, and Figure 8 shows the percent of cases with each mitigator leading to a death sentence.

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Figure 7. Relative Frequency of Different Mitigating Circumstances.

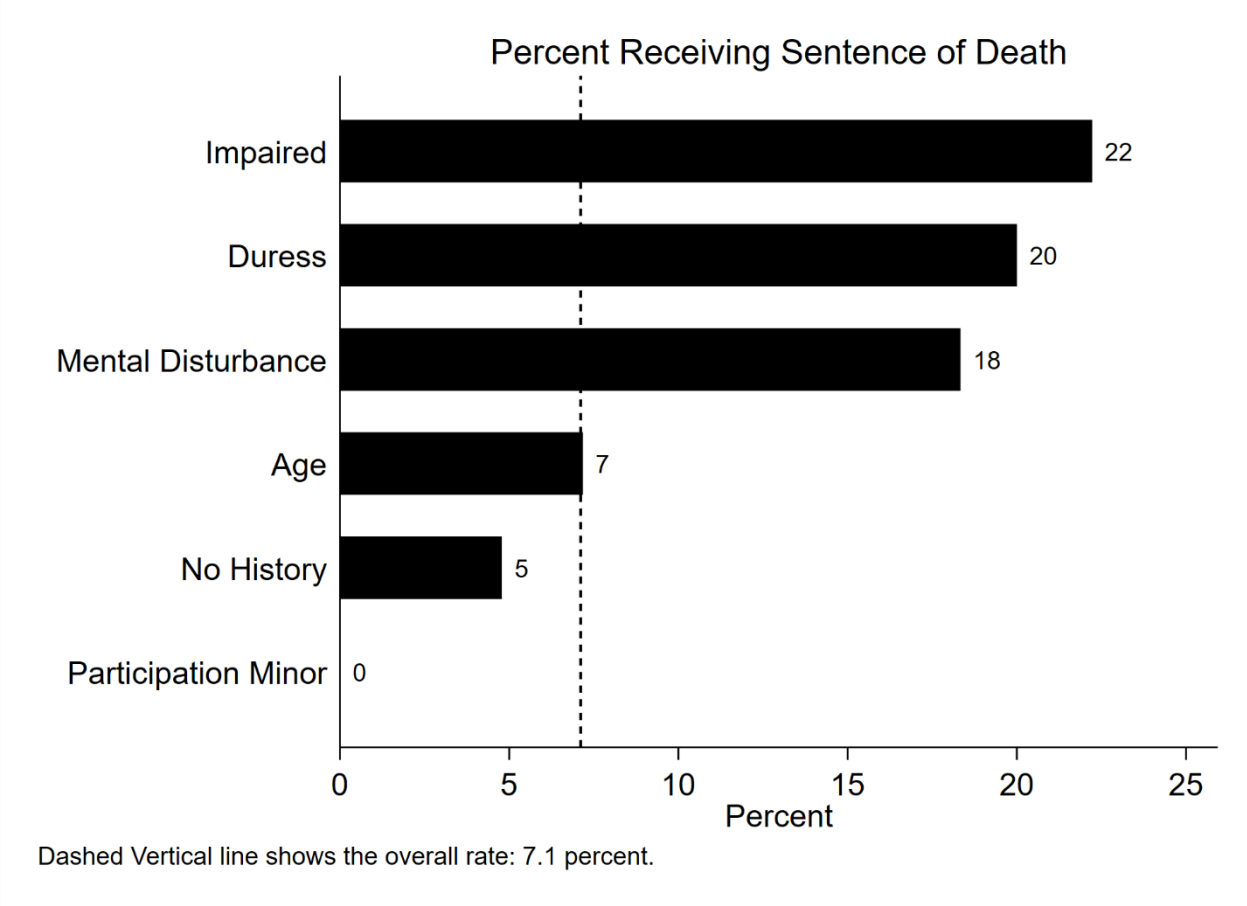


The youthful age mitigator is present in more than half the cases, as is "no significant criminal history."[11] Mental disturbance and impaired capacity are present in smaller numbers (60 and 45 cases, respectively), but note that evidence of such factors may not be developed until and unless the prosecution goes down the path toward a death sentence. For example, if a crime is not charged as first-degree murder, or if it is not death-noticed, funding for experts to establish these mitigating factors is typically less forthcoming. Therefore, we do not know the actual rate that these factors may be objectively present. Rather, we focus on factors *known* to the decision-makers.

[11] We exclude from Figure 7 the "catchall" mitigator, which is present in virtually every case.

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Figure 8. Percent of Cases Leading to a Death Sentence, by Mitigating Circumstance.



Three mitigators, including two of those just discussed, are highly associated with death, but in the wrong direction. That is, even though they are legally identified as mitigating factors, they increase, rather than decrease, the odds of death in this empirical analysis. Impaired capacity, emotional duress, and mental disturbance are statutory mitigators, but they statistically correlate with up to three times increased likelihood of a death sentence compared to the typical case. Again, this is likely a consequence of these factors being over-represented in the late stages because they were previously undiagnosed, and thus do not appear in the record unless the case is death-noticed and funds for the full development of mental health mitigation becomes available. Nonetheless, they represent anomalous findings. Youthful age, a statutory mitigator, has no effect in a mitigating direction, though no significant criminal history has a slight mitigating effect. There were no cases sentenced to death where the "minor participation" in the

crime was evident in the case record. This would be an example of a mitigator working as the law intends.

Multivariate analyses

As described above, the unadjusted data shows a strong race-of-victim effect at virtually every decision-point in the process. The result is an ever-increasing pool of White-victim cases as they progress toward a potential death sentence. Some of these trends could potentially be explained by the legally relevant aggravating and mitigating factors described in the previous section, however. So, I turn to a multivariate logistic regression analysis to assess whether the White-victim effect remains powerful and statistically significant in a model that simultaneously considers the aggravators and mitigators just described. I first focus on death-sentence outcomes and second present models predicting which cases are charged first-degree and which receive a notice of intent to seek death. These are the three main filters in the process.

Table 2 presents four models assessing which cases lead to a death penalty. Coefficients in the model are odds-ratios, meaning that the number shows the degree to which the factor in question (e.g., White Victim, in the first row of the table) increases or decreases the odds of death compared to a baseline (e.g., no White victim). Odds-ratios of 1.00 indicate no effect (e.g., identical odds); a value of 2.0 would indicate that the variable in question doubles the likelihood of the outcome compared to the baseline, and a value of 0.5 would mean that it cuts the odds in half.

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Table 2. Predicting Death Sentences.

	Model 1 All Aggs and Mits Occurring 20 Times or More	Model 2 Restricted Model	Model 3 White and Black Victims Counted Separately	Model 4 Simplified: Number of Aggs and Mits Only
White Victim	3.344**	3.717**		3.547**
	(1.489)	(1.577)		(1.469)
Prior Murder / Assault	3.539*	3.641**	3.021**	
	(1.887)	(1.580)	(1.254)	
Multiple Victims	25.84***	12.57***		
	(21.07)	(8.682)		
Great Risk	0.354			
	(0.214)			
Money	0.616			
	(0.336)			
Vile	9.394**	8.120**	3.377**	
	(6.419)	(5.291)	(1.455)	
Felony	1.690			
	(0.885)			
Gang	1.648			
	(1.418)			
No History	0.769			
	(0.413)			
Offender Age	2.093			
	(0.967)			
Number of White Victims			3.459**	
			(1.340)	
Number of Black Victims			1.848	
			(0.769)	
Number of Aggravators				1.682***
				(0.243)
Number of Mitigators				1.169
				(0.214)
N	408	408	408	408
pseudo R^2	0.231	0.198	0.117	0.128
Predicted Probabilities				
No White Victim	.044	.042	NA	.042
White Victim	.117	.125	NA	.127

Note: Predicted probabilities not calculated for Model 3. Exponentiated coefficients; Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. NA: Not Applicable.

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The first model in Table 2 presents the White-victim variable as well as every aggravator that appears in the database more than 25 times and the two most common mitigators.[12] This can be considered a baseline model. The second model eliminates those aggravators and mitigators that appear to have little effect; this allows us to focus on the most important explanatory factors. The third model drops the "multiple victims" aggravator and adds instead separate counts for the numbers of White and Black victims. This allows an assessment of any racial differences in that crucial control variable, multiple victims. Finally, the fourth model presents a very simplified model, one including only the White-victim variable and simple numeric counts of how many aggravators and mitigators were present. Finally, at the bottom of the Table, I present a set of predicted probabilities. These illustrate the bottom-line results: Holding constant all the other factors in the model, what proportion of cases with and without a White victim would be expected to receive a penalty of death?

The key element to see in Table 2 is that the odds ratios in the top row of the Table, for White Victim, are both consistent and high, ranging between 3.3 and 3.7. Similarly, the predicted probabilities in the bottom row show consistent movement from approximately a four percent chance of death for cases without a White victim, to 11 or 12 percent for those with such a victim. This movement, from 4 to 12 percent, represents almost the same ratio that we saw in Table 1. Thus, the multivariate analysis results are highly consistent and confirm the simple comparisons laid out in Table 1. The most important result from this analysis is the very powerful White-victim effect, consistently leading to results suggesting 3 to 4 times the rate of use of the death penalty in such cases compared to those with Black victims. In effect, the

[12] Figure 7 shows a large drop-off in observations with the different mitigators, and inclusion of mitigators with few observations produces no substantive changes in the results but renders the analysis less stable. Note that most coefficients in Model 1 are insignificant. This pattern is even stronger in a version including additional mitigators.

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presence of a White victim in a particular case acts as non-statutory and impermissible aggravating factor, with an influence on capital sentencing comparable to the defendant's status of having a prior conviction of first-degree murder or felonious assault.

Models 1 and 2 show the great impact of the multiple victim aggravator, and the wantonly vile aggravator is also an important predictor. Model 3 breaks out the victims by race, and it shows an important finding: The number of White victims has a higher odds-ratio than the number of Black victims (3.459 v. 1.848) and the White-victim coefficient is statistically significant whereas the Black-victim coefficient is not. The number of Black victims has less of an impact than the number of White victims, and indeed its coefficient is insignificant. This suggests that the results from the main model for the multiple victims aggravator are driven by the number of White victims, not Black ones. Finally, Model 3 is the simplest, including no particular aggravators or mitigators, but rather a simple count of how many such factors are present. This shows a consistent finding for the White-victim variable and reinforces the idea from the previous analysis that aggravators matter quite significantly, but mitigators do not. The coefficient for the number of aggravators is large (1.682) and highly significant; by contrast the coefficient for mitigators is wrongly signed, but not statistically significant. Note that if mitigators worked as one might expect (reducing the odds of a death sentence), then this coefficient would be less than 1.0. Similar to what was presented in Figure 8 above, some mitigators actually appear to drive up the odds of death, not reduce it. Overall, however, mitigators have little effect. Aggravators matter, but mitigators do not.

Table 3 presents two models each for the decision to charge with first-degree murder and to issue a death notice. In each case, I present a simple predictive model and then substitute

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separate variables for the Number of White Victims and Number of Black Victims, rather than the Multiple Victims aggravator in the main model.

Table 3. Predicting Capital Charges and Death Notices.

	Model 1 Charged Capitally	Model 2 Charged Capitally, White and Black Victims Separate	Model 3 Death Noticed	Model 4 Death Noticed, White and Black Victims Separate
White Victim	2.176**		2.926***	
	(0.548)		(0.861)	
Multiple Victims	3.080***		8.892***	
	(1.002)		(3.788)	
Money	0.730	0.661		
	(0.164)	(0.146)		
Vile	2.669***	2.290**	6.800***	4.032***
	(0.692)	(0.579)	(2.624)	(1.234)
Offender Age	0.644	0.630*		
	(0.145)	(0.142)		
Number of White Victims		4.863***		5.802***
		(2.009)		(2.110)
Number of Black Victims		2.253*		3.118***
		(0.791)		(1.059)
Prior Murder/Assault			1.955*	1.643
			(0.660)	(0.544)
N	408	408	408	408
pseudo R^2	0.091	0.087	0.170	0.130
Predicted Probabilities				
Black Victim	.588		.117	
White Victim	.746		.254	

Exponentiated coefficients; Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Models 1 and 2 relate to the decision to charge the case as first-degree murder. Recall from Figure 1 that 260 cases out of the 408 were so charged. Results here show consistently significant White-victim effects. There are also consistently significant effects for the wantonly vile aggravator. Multiple victims matter as well, but Model 2 shows that this may be driven largely by the number White victims, not Black ones. Models 3 and 4 present similar models with similar results for the decision by the prosecuting attorney to issue a death notice in the case. (Figure 1 showed that there were 67 such cases.)

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White victims again consistently drive the decisions, even controlling for legally relevant factors. When looking at White and Black victims separately, in Models 2 and 4, odds increase by 4.9 to 5.8 for each White victim, but only by about half that (2.3 to 3.1) for each Black victim. Predicted probabilities show a similar story: These go from 58.8 percent seeing first-degree murder charges with non-White victims to 74.6 percent in cases with White victims, and from 11.7 percent to 25.4 percent for the question of issuing a death notice. Thus, the results from Table 3 are largely consistent with those from Table 1 and suggest powerful and consistent White-victim effects at three important stages of the process: the decision to charge the case as a first-degree murder, the decision to give notice of intention to seek death, and the ultimate sentence.

Conclusions from data analyses

Table 1 shows that 4.0 percent of cases with Black victims and 14.1 percent of cases with White victims led to a sentence of death; White-victim cases are therefore 3.5 times as likely to be associated with a death sentence. After considering a range of legally relevant factors in a multivariate analysis, this disparity is confirmed. Depending on the precise specification of the model, results are consistently in the range of 3.3 to 3.7, almost exactly what they were in the simple presentation of Table 1.

I conclude:

- In the prosecution of death-eligible homicides in St. Louis County for the years studied there are strong race-of-victim effects at multiple key stages of the prosecution.

- The effects are particularly pronounced at two decision-points attributable solely to the prosecutor, the decision to charge the case as a first-degree murder and the decision to give notice of intention to seek death.

- The ultimate likelihood of receiving a death sentence if the victim is White is approximately 3.5 times the likelihood of a death sentence in cases where the victim is Black.

- These effects persist after the introduction of controls for aggravating and mitigating factors, meaning that these disparities cannot be explained by legitimate case characteristics.



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Appendices

Appendix 1. List of Aggravating and Mitigating Factors

Aggravating Factors

Mo. Rev. Stat. § 565.032.2(1) ("The offense was committed by a person with a prior record of conviction for murder in the first degree, or the offense was committed by a person who has one or more serious assaultive criminal convictions.") (prior felony assault).

Mo. Rev. Stat. § 565.032.2(2) ("The murder in the first degree was committed while the offender was engaged in the commission or attempted commission of another unlawful homicide[.]") (multiple homicides)

Mo. Rev. Stat. § 565.032.2(3) ("The offender by his act of murder in the first degree knowingly created a great risk of death to more than one person by means of a weapon or device which would normally be hazardous to the lives of more than one person[.]") (great risk).

Mo. Rev. Stat. § 565.032.2(4) ("The offender committed the offense of murder in the first degree for himself or another, for the purpose of receiving money or any other thing of monetary value from the victim of the murder or another[.]") (for money).

Mo. Rev. Stat. § 565.032.2(5) ("The murder in the first degree was committed against a judicial officer, former judicial officer, prosecuting attorney or former prosecuting attorney, circuit attorney or former circuit attorney, assistant prosecuting attorney or former assistant prosecuting attorney, assistant circuit attorney or former assistant circuit attorney, peace officer or former peace officer, elected official or former elected official during or because of the exercise of his official duty[.]") (public official).

Mo. Rev. Stat. § 565.032.2(6) ("The offender caused or directed another to commit murder in the first degree or committed murder in the first degree as an agent or employee of another person[.]") (agent or employee).

Mo. Rev. Stat. § 565.032.2(7) ("The murder in the first degree was outrageously or wantonly vile, horrible or inhuman in that it involved torture, or depravity of mind[.]") (wantonly vile).

Mo. Rev. Stat. § 565.032.2(8) ("The murder in the first degree was committed against any peace officer, or fireman while engaged in the performance of his official duty[.]") (peace officer).

Mo. Rev. Stat. § 565.032.2(9) ("The murder in the first degree was committed by a person in, or who has escaped from, the lawful custody of a peace officer or place of lawful confinement[.]") (escaped custody).

Mo. Rev. Stat. § 565.032.2(10) ("The murder in the first degree was committed for the purpose of avoiding, interfering with, or preventing a lawful arrest or custody in a place of lawful confinement, of himself or another[.]") (avoiding arrest).

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Mo. Rev. Stat. § 565.032.2(11) ("The murder in the first degree was committed while the defendant was engaged in the perpetration or was aiding or encouraging another person to perpetrate or attempt to perpetrate a felony of any degree of rape, sodomy, burglary, robbery, kidnapping, or any felony offense in chapter 195, RSMo[.]") (contemporaneous enumerated felony).

Mo. Rev. Stat. § 565.032.2(12) ("The murdered individual was a witness or potential witness in any past or pending investigation or past or pending prosecution, and was killed as a result of his status as a witness or potential witness[.]") (witness killing).

Mo. Rev. Stat. § 565.032.2(13) ("The murdered individual was an employee of an institution or facility of the department of corrections of this state or local correction agency and was killed in the course of performing his official duties, or the murdered individual was an inmate of such institution or facility[.]") (corrections officer or inmate).

Mo. Rev. Stat. § 565.032.2(14) ("The murdered individual was killed as a result of the hijacking of an airplane, train, ship, bus or other public conveyance[.]") (hijacking).

Mo. Rev. Stat. § 565.032.2(15) ("The murder was committed for the purpose of concealing or attempting to conceal any felony offense defined in chapter 195, RSMo[.]") (concealing drug crime).

Mo. Rev. Stat. § 565.032.2(16) ("The murder was committed for the purpose of causing or attempting to cause a person to refrain from initiating or aiding in the prosecution of a felony offense defined in chapter 195, RSMo[.]") (other drug crime).

Mo. Rev. Stat. § 565.032.2(17) ("The murder was committed during the commission of a crime which is part of a pattern of criminal street gang activity as defined in section 578.421[.]") (gang activity).

Mitigating Factors

Mo. Rev. Stat. § 565.032.3 ("(1) The defendant has no significant history of prior criminal activity") (no significant history).

Mo. Rev. Stat. § 565.032.3 ("(2) The murder in the first degree was committed while the defendant was under the influence of extreme mental or emotional disturbance") (extreme mental or emotional disturbance).

Mo. Rev. Stat. § 565.032.3 ("(3) The victim was a participant in the defendant's conduct or consented to the act") (victim participated or consented).

Mo. Rev. Stat. § 565.032.3 ("(4) The defendant was an accomplice in the murder in the first degree committed by another person and his or her participation was relatively minor") (participation minor).

Mo. Rev. Stat. § 565.032.3 (“(5) The defendant acted under extreme duress or under the substantial domination of another person”) (extreme duress).

Mo. Rev. Stat. § 565.032.3 (“(6) The capacity of the defendant to appreciate the criminality of his or her conduct or to conform his or her conduct to the requirements of law was substantially impaired”) (capacity impaired).

Mo. Rev. Stat. § 565.032.3 (“(7) The age of the defendant at the time of the offense”) (age)

General mitigating circumstance instruction MAI CR 313.44B.8 (catchall)

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Appendix 2. Data Collection Procedures

DATA SOURCES

There were two stages to the research / data collection stage. In a first stage, cases were reviewed to determine if the crime included facts that could have supported a capital prosecution. Cases that did not meet this criterion were eliminated from further review. In the cases that did have facts supporting a possible capital prosecution, the following sources were used to compile a full case record for statistical analysis. These are the same sources that were used to make the determination of whether a particular crime was death-eligible. Note that our review of court records and other sources included hundreds of cases not included in the final database. The final database included only those 408 cases where the crime was deemed to be death-eligible based on our review of the facts and record.

Trial Court reports

Trial judges are required to complete and submit reports on all cases resulting in a first degree conviction. We obtained a number of these by canvassing homicide practitioners. The balance we obtained from the Missouri Supreme Court. Although compliance was not 100% the reports were an important source for demographic information, such as age, race and gender, and presence of aggravating and mitigating circumstance. They also contained summaries of the defendant's family background, employment history, education attainment, prior criminal record, and mental health history, if any. Often, a presentence investigation report is attached which typically provides a detailed life history. It also reports aggravating circumstance instructed and found, and summarizes non-statutory aggravation. It similarly reports statutory and non-statutory mitigating factors. A number of questions about the victim are included as well.

Case.net

Missouri case.net provided a host of key procedural variables. For more recent cases, registered users have access to most of the pleadings, orders, and opinions. These included: the initial homicide charges and any contemporaneous offenses; whether notice of aggravating circumstances was filed; whether counsel was the public defender or court appointed, or privately retained, whether the case proceeded to trial (before a judge or jury), or by plea (negotiated or "blind"); charges convicted of; whether the case proceeded to a penalty hearing, and the ultimate sentence. The docket, and associated pleadings if available, often provided other important information such as motions to suppress confessions and identification, challenges to aggravating circumstances, and possible competency considerations. Case.net was also a principal source of prior record of the defendant for cases where no trial court report was prepared.

PACER

A number of defendants who opted for a trial sought habeas corpus relief in the federal district court if their state court appeals were unavailing. These filings and responses were available online through PACER (Public Access to Court Electronic Records)

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Court files

For a subset of the cases we obtained the full court files, either hard copy including transcripts of the proceedings, or for the more recent cases, the pleadings as available through case.net (which did not include transcripts). These often augmented the procedural information otherwise reflected in the dockets, or helped clear up any ambiguities. Court filings were particularly useful for coding strength-of-evidence variables as they would expose vulnerabilities in the state's case. Some contained police reports and presentence investigations. They also often contained copies of exhibits. Transcripts of the penalty phase were consulted for the defendant's life history variables.

Hard-copy of appellate records were available through the Missouri State Archives. These files also included key portions of the trial record, filed by the appealing party. For a significant number of the trial cases, including those where the briefing was unavailable on Westlaw, we obtained copies of key documents from the Archive.

Police reports

The police reports were obtained through the Missouri open records provisions. St. Louis County has approximately sixty independent police forces, each with their own application procedures. Compliance was generally good. Some were unavailable because they could not be located, were subject to a statutory exemption. Certain of the smaller forces failed to comply in a timely manner.

The reports provided a host of useful data. The reports, while generated in individual police forces, were largely uniform in design. They provided the key demographic variables of race and gender of the defendants and victims. The reports allow for reporting of occupation and marital status, although reporting on these variables were inconsistent. They were a rich source of information for the strength-of-evidence variables. They contained summaries of witness statements, results of any identification procedures, statements by defendant to others or the police, results of forensic investigations such as fingerprints, DNA and ballistics. They also included a summary of the medical examiner's reports, which allowed a fine level of detail of the brutality of the homicide. The reports were particularly useful in cases which were resolved by plea as these cases rarely generate transcripts or appeals.

Westlaw

Virtually all the trial cases generated a record on appeal. The death cases resulted in reported opinions of the Supreme Court of Missouri, which usually summarized key facts. For the non-death cases; the majority were heard by the Missouri Court of Appeals, which has jurisdiction in non-death appeals. A large number were were resolved by summary denials, with opinions generated for distribution solely to the parties. However, in a significant number of cases, the briefs on appeal were available through Westlaw. These were a rich source of details as they typically include exhaustive procedural and factual histories.

Uniform Crime Reports

A useful secondary source was Uniform Crime Reporting Program Data: Supplementary Homicide Reports (SHR) data maintained by Joseph Kaplan. Although not reported in a case-specific manner, it was a relatively easy task to match the SHR observation to the study case. The SHR included the month and year of the incident (and a chronological counter of the homicides in that reporting month), the reporting police force, weapon used, and the ages and races of the defendants and victims. It also supplied, in broad categories, information on the nature of the dispute and the relationship between the suspect and victim. The UCR was particularly useful for race of victim in cases where we unable to obtain the police report.

Press releases

The St. Louis County Police maintains an archive of press releases for recent years. These were obtained through an open records request. These usually contained charging information and good summaries of the cases, and provided useful additional information such as the ages and socio-economic information on the defendants and victims.

St. Louis Dispatch

Almost every case in the study was covered in the *St. Louis Dispatch*. Usually these were summaries generated from press releases but often reflected independent reporting.

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