Cruel and Unusual:

Exploring the Role of Context in County-level Disparities in Death Penalty Usage

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Abstract

This study attempts to account for the disparities in the application of the death penalty at the county-level. An increasing number of scholars have noted that a minority of counties in the U.S. are responsible for the majority of death penalty usage since 1976. This highly concentrated application of capital punishment raises concerns about the unequal and arbitrary application of the law. The existing literature does little to systematically explore the potential influence of context on death penalty usage. Hence, this study aims to fill in gaps in the research by investigating the potential impact of contextual factors on death penalty usage from 2012 to 2014 in counties across all death penalty states as well as within nine selected states. Bivariate correlation and two forms of multivariate regression analysis were used to examine the potential impact of factors such as a county's racial composition, level of political conservatism, education, religiosity as well as economic disadvantage. The results of this study contribute to the growing knowledge as to what and how contextual factors drive the disparate application of the death penalty in a minority of counties.

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Introduction

In 1972, the Supreme Court in *Furman v. Georgia* ruled that the arbitrary and inconsistent application of the death penalty constituted cruel and unusual punishment in violation of the Eighth and Fourteenth Amendments. Post-*Furman,* new legal procedures were enacted to reduce the perceived arbitrariness and irregularity in death sentencing rates among states. More than three decades have passed since *Furman* and yet, evaluations examining the application of capital punishment across the nation conclude that significant disparities prevail at the county-level (Baumgartner, Gram, Johnson, Krishnamurthy & Wilson, 2016; Ditchfield, 2006; Gershowitz 2010; Liebman & Clark, 2011; Lofquist, 2001; Shatz & Dalton 2013; Smith 2012). Specifically, a 2013 study conducted by the Death Penalty Information Center found that only 2% of counties in the US were responsible for the majority of today's death row population and death (Dieter, 2013).

The finding that a minority of counties are responsible for the majority of death penalty usage since 1976 raises concerns about the unequal and arbitrary application of the law. That some states use the death penalty much more frequently than others does not raise constitutional concerns as differences between states are a result of a system of government that grants states the right and freedom to develop their own legal systems (Ditchfield, 2006). However, this explanation fails to justify the stark inconsistencies in death penalty usage between counties within the same state. Although counties differ greatly with regards to their practices in determining whether or not to seek the death penalty, these county-level variations are constitutionally problematic because counties, unlike states, counties are not independent sovereign entities, but instead derive their

power to punish, from the State and are therefore, mandated to apply the law as consistently as possible (Ditchfield, 2006; Gershowitz, 2010).

In an effort to investigate what factors, or combination of factors, are driving the persistent disparities in county-level death penalty usage, studies have explored legal factors like prosecutorial discretion (Gershowitz, 2010), defense funding, systems of judicial selection and federal circuit court membership (Lofquist, 2001). However, beyond legal variables, there has been a dearth of research devoted to understanding the disparities in county-level death penalty usage and the factors associated with these disparities (Lofquist, 2001). Specifically, the influence of extralegal or contextual factors in the administration of death penalty has been relatively unexplored. Jacobs and Carmichael (2004) note that given the intense scholarly attention to capital punishment, it is surprising that we know so little about the local, contextual conditions that make some counties far more likely than others to seek and impose the death penalty.

Hence, this study aims to fill in gaps in research by addressing the potential impact of extralegal, contextual factors – like a county's political affiliation, religious affiliation, racial composition, education level, median income, level of economic disadvantage - on its usage of the death penalty. The county-level criminal justice and legal systems that seek, impose and administer the death penalty are products of specific political cultures and social contexts, and so the arbitrary application of the death penalty can be attributed to the political, cultural, and socio-economic contexts of certain geographical areas (Poveda 2006; Lofquist, 2001). Since public opinion is highly influential in populist democracies like the United States, prosecutors are motivated to seek the death penalty at a rate that is calibrated to the local political, social and cultural

values (Owens, 2013). That is to say, counties that are more opposed to the death penalty would elect officials such as prosecutors, who process criminal cases in a manner that represents or expresses local county-level values (Eisenberg, 2004). It follows, then, that rates of death penalty usage are commensurate to the level of support for the death penalty in a particular county, and county-level variations in the application of the death penalty are influenced by differences in contextual factors vis-à-vis the decisions made by a county's criminal justice officials like prosecutors and judges, for instance, a prosecutor's decision to pursue the death sentence or a judge's handing of the death sentence.

There are two reasons why these county-level disparities are troubling and merit further examination. Firstly, arbitrary death penalty usage is unconstitutional; if it is routinely used in particular counties and not others for reasons unrelated to case-level or legally relevant factors, then it indicates a level of capriciousness in the system that cannot be allowed to persist. Secondly, in terms of literal costs, the financial burden of death penalty usage is borne by the entire state when just a few counties elect to use the death penalty so frequently. Since death sentencing is pursued at the local or county level, and given that the most important decision-making in capital cases occurs at the local level, it is necessary to assess whether and to what extent the social context or social conditions of a county influences death penalty sentencing and executions. Additional research is needed to advance knowledge in this area. Hence, this study will document the presence of geographic disparities and explore the underlying mechanisms that contribute to these variations, by examining extent to which contextual factors affect death penalty usage at the county level.

Research Questions

- Do contextual factors explain or account for the geographic disparities or concentration in death penalty usage across all the states that have the death penalty?
- To what extent do various contextual factors influence the use of death penalty within specific states?
- How does the relationship between contextual factors and death penalty usage vary across all death penalty states and among the 9 selected states?

Plan of Analysis

In the following section, the county-level disparities in death penalty usage will be detailed extensively by examining usage from 2012 to 2014 across all death penalty states and within nine selected states. Both bivariate and multivariate analysis will be performed for two sets of comparisons: a comparison between death penalty counties to non-death penalty counties, at both the interstate and intrastate level. For the interstate analysis, counties in the 31 death penalty states that used the death penalty in some way (n=105) will be compared to the rest of the counties in these states that did not use the death penalty at all (n=2255). For the intrastate analysis, death penalty counties within each of the 9 selected states will similarly be compared to the non-death penalty in each state. These 9 states were selected because they have especially prominent disparities that warrant further examination. The Literature Review lists and discusses the selected contextual factors that were be included in the statistical analysis conducted, and the Statistical Analysis section tries to answer the research questions presented by using two types of regression analysis to investigate the statistical correlations between the extralegal variables and death penalty usage (the dependent variable).

Literature Review

General Overview of County-level Disparities in Death Penalty Usage Rates

Post-*Furman*, new legal procedures and trial mechanisms were enacted to reduce the perceived arbitrariness and irregularity in death sentencing rates among states. However, death-eligible cases are prosecuted at the level of the county and not the state (Gershowitz, 2010). In each county, prosecutors have the discretion to seek a death sentence and jurors, who are "selected at the local, usually county, level, are tasked with deciding whether to impose it" (Eisenberg, 2004, p. 347). As Adger and Weiss (2011) similarly note, an analysis examining counties as the source of variation of death penalty usage is preferred because all decisions leading to the use of capital punishment occur at the local level. Smith (2012) as well as Liebman and Clarke (2011) note that previous research has tended to typically examine death penalty usage at the level of the state, which is not helpful in light of their finding that a handful of counties account for the majority of death penalty usage, thereby creating the need for a local-level analysis and explanation for the significant county-level disparities that have been noted by other scholars over the years (Baumgartner et al., 2016; Ditchfield, 2006; Gershowitz, 2010; Liebman & Clark, 2011; Lofquist, 2001; Poveda, 2006; Smith, 2012; Dieter, 2013; Shatz & Dalton, 2013).

Using information from Bureau of Justice Statistics' database, Dieter (2013) documented which counties in the U.S. had the highest death penalty usage, and his findings revealed grave disparities in death penalty usage among counties within the same state. Dieter (2013) compiled and tabulated county-level data on death penalty sentencing rates, death row population and number of executions nationwide, from 1976

to 2013. In his study, he surveyed death penalty data of several states in the US, and found that more than half of the executions since 1976 originate in just 2% of counties in the U.S. From 2004 to 2009, specifically, only 10% of counties in death penalty states accounted for all the death sentences imposed (Dieter, 2013). Some counties have such prolific death penalty usage that they account for greater death penalty sentencing rates than entire states. Notably, a single county in California, Los Angeles County, sentenced to death in 2009 the same number of people as the entire State of Texas did, while in Arizona, Maricopa County imposed more death sentences than the entire state of Alabama did in 2009 (Dieter, 2013, p. 11). In Florida, nearly a third of recent death sentences originated from just one of the state's 20 judicial districts - the 4th Judicial District, which includes Duval, Clay, and Nassau Counties (Dieter, 2013, p. 14). Even within the Texas, a state infamous for using capital punishment most frequently, only a handful of counties account for the majority of death penalty usage. These disparities are evident not just in death sentencing but in the death row population as well. Dieter (2013) notes that only 2% of the counties in the U.S. contribute more than half, or 56%, of the death row population.

The grave importance of these findings were emphasized by the fact that these high-use counties unfairly shift the financial burden to every taxpayer in the state, who is unaware of the exorbitant costs (Dieter, 2013). Two other studies echo these findings: Liebman, Fagan and West (2000) found that although 31 states permit the use of capital punishment, more than half of the death sentences imposed nationwide over the 23-year study period examined, originated from just 66 out of 3143, or 2%, of all the counties in the nation. Likewise, Smith (2012) examined a more recent group of death sentences

from the time period 2004 and 2009, and found that similar geographical disparities existed: from 2004 to 2009, approximately 1% of counties in the United States handed out death sentences at a rate higher than the national average.

The geographical clustering of death penalty usage within the several states that Dieter (2013) reported on, has also been noted by several other studies, which document county-level variations across different time frames. In Ohio, about one-quarter of state's death row inmates come from Hamilton County, even though just 9% of the state's murders occur there (Dieter, 2013), and even though Hamilton County has significantly fewer residents than Franklin County, it has three times as many inmates on death row, as of December 2008 (Gershowitz, 2010).

In Tennessee, there are three times as many death row inmates from Shelby County than there are from Davidson County, despite the fact that the former has only a 44 percent greater general population than the latter (Gershowitz, 2010, p. 318). Meanwhile, a study by the Texas Defender Service (2005) examined the practices of the 3 most populous counties of the State and concluded Houston County to be the source of much disproportionate death penalty usage that could not simply be accounted by its population size or density. For instance, Houston county had just slightly more murders than Dallas and San Antonio counties but an exponentially larger death row inmate population. Within the state of Texas, the number of death-eligible cases in Houston county was not proportional to its death row population, compared to the other counties in Texas. This statistic necessitates investigation into what factors contributed to these disparities, given that counties within a state are legally mandated to apply the law as consistently as possible. In the same Texas study, population size could not explain the

disparities either. Harris County's death row population was almost twice that of Dallas and Bexar Counties' combined even though Harris County has a smaller population than the other 2 counties combined (Dieter, 2013, p. 39).

In Alabama, an overwhelming majority of death sentences were handed out by a small number of counties in the state. Specifically, nearly half of all death sentences since 1976 originate from only 4 counties: Jefferson, Mobile, Montgomery, and Houston. Of the 67 counties within the state, the vast majority have imposed fewer than 5 death sentences in the past 3 decades, and 8 counties have never sentenced anyone to death (Adger and Weiss, 2011, p. 669). Similarly, Minsker, Zamora and Silverstein (2010), reporting on death penalty usage in the state of California, found that just 6 out of 58 California counties handed out almost all (96.6%) death sentences in 2009. Like the study by the Texas Defender Service (2005), population differences could not explain the disparities: only 3 counties (Los Angeles, Orange and Riverside) were responsible for a majority of death sentences in 2009 even though only less than half of California's population lives in these counties (p. i). The report's major conclusion was that these 3 counties together used capital punishment more in 2009 than in the preceding 6 years.

In Maryland too, similar trends persist. Examining intra-state death penalty usage in Maryland, Paternoster et al. (2003) found wide disparities among neighboring counties after controlling for numerous case-level characteristics. His study concluded that in Baltimore County it was 13 times more likely for the death sentence to be sought than in Baltimore City. Likewise, another study on Connecticut's death penalty by Donohue (2011) echoes the findings of studies outlined above. Waterbury county, specifically, sentences capital-eligible defendants at a rate that is a disproportionately higher rate

compared to other counties in the state (Donohue, 2011). In Illinois, Pierce and Radelet (2002) found that significant geographic disparities in the usage of the death penalty persist in Illinois as well. After controlling for legally relevant variables like case-level characteristics, the study found that the chances of receiving a death sentence for a capital-eligible offence in Cook County was 83.6% lower than for the rural county region in Illinois (Pierce and Radelet, 2002, p. 14). In Pennsylvania, the vast majority of death sentences originate from Philadelphia County, which accounts for about 10% of Pennsylvania's population but is responsible for nearly half of the inmates on death row whereas Pittsburgh gives out considerably fewer death sentences even though it is approximately the same size as Philadelphia county (Gershowitz, 2010, p. 315). Additionally, Allegheny County, which includes Pittsburgh and has a nearly identical population, accounts for only 4% of inmates (Gershowitz, 2010, p. 315).

Explaining County-level Disparities in Death Penalty Usage

The stark geographic disparities in death penalty usage noted by these studies outlined above merits closer examination. That some states use the death penalty much more frequently than others does not raise constitutional concerns as the federalist system bestows upon states, the right to form their own systems of law and governance (Ditchfield, 2006). However, this explanation cannot justify the stark inconsistencies in death penalty usage between counties within the same state (Gershowitz, 2010). County-level variations are constitutionally problematic because counties, unlike states, are not independent sovereigns. Instead, the state allocates to its counties the power to punish and counties are mandated to apply the law as consistently as possible (Ditchfield, 2006; Gershowitz, 2010).

The Supreme Court in *Furman v. Georgia* (1972) explicitly denounced sentencing disparities as evidence that capital punishment is arbitrarily administered, which constitutes cruel and unusual punishment. *Furman* stipulated that differences in death penalty usage that result from legally relevant factors are constitutionally permissible. Justice White noted that examples of legally relevant factors include a lack of sufficiently strong proof or the lack of severity of an offense which did not warrant a sentence of death, 428 U.S. at 225 (White, J., concurring). However, evaluations on the use of death penalty have not shown Justice White's statement to ring true (Dieter, 2013).

Gershowitz (2010) notes that counties within a single state often differ greatly in terms of the practices and procedures they have to determine whether or not to hand out a capital sentence in a given case. In an effort to investigate what factors, or combination of factors, are driving the persistent disparities in county-level death penalty usage, studies have explored legal factors like funding allocated to prosecution and defense, systems of judicial selection and membership in the federal circuit court (Lofquist, 2001). Adger and Weiss (2011) note that previous studies have identified several legally relevant factors that might explain a state's use and application of the death penalty, such as rates of death-eligible crime, the breadth or expansiveness of the state's capital punishment laws, the presence of prosecutors who aggressively pursue the death sentence, the political pressure judges face, the quality of defense counsel and the presence of alternatives to the death sentence such as life without parole (p. 661). Gershowitz (2010) and Dieter (2013) cite inferior quality of lawyering and a lack of funding for indigent defense as factors that affect the application of the death penalty at the county-level. Gershowitz (2010) also raises as an explanatory factor, the disparity in the quality of judges. Moreover, previous

research has tended to examine only case-level variables such as the race and gender of the defendant and victim, aggravating circumstances of the case, the role of prosecutorial discretion, and the racial make up of juries (Donohue, 2014; Gershowitz, 2010; Poveda, 2006). However, beyond these variables, there has not been much attention devoted to understanding other factors that contribute to or influence death penalty usage. These factors are called extralegal factors and their influence on variance in death penalty usage has been sparsely explored. Hence, this study aims to fill in gaps in research by addressing the potential impact of several extralegal factors like a county's racial composition, level of economic disadvantage, political affiliation, and religious adherence, on death penalty usage.

It is possible to undertake such a research agenda because criminal justice actors and officials like judges, juries and prosecutors are a representation or expression of above-listed contextual factors. The county-level legal systems that administer the death penalty are themselves influenced by the social, political and cultural contexts of the county they are located in (Lofquist, 2001). Eisenberg (2004) notes that counties which are generally against or more resistant toward the death penalty would express these values by voting for or electing criminal justice officials who embody these values and preferences. This means that death sentencing rates are rather commensurate to the level of support for the death penalty in a particular county. Moreover, public opinion plays a highly important role in democracies like the U.S. where citizens have the freedom and ability to express their preferences or opinions via voting, which in turn influences the choice of criminal justice officials who occupy high-level decision making positions (Crow and Gertz, 2008). As such, prosecutors tend to seek the death penalty at a rate that

is commensurate or consistent with the political and religious values of the county population. Poveda (2006) highlights the role and influence of contextual factors when he states that disparities in county-level death penalty usage can attributed to variations in the socio-political contexts in different counties. Examining death penalty usage in Virginia, Poveda (2006) found that geographic disparities could be attributed to characteristics of the location or jurisdiction where the capital offense occurred. Similarly, Liebman and Clarke (2011) affirm the fact that the use of death penalty is more influenced by location and the "practices, policies, habits, and political ideologies of local prosecutors, judges and jurors" (p. 262) rather than a legally relevant factor like the severity of the crime. Moreover, Liebman and Clarke (2011) hypothesize that the handful of counties which account for the majority of death sentences share "traits, tendencies, and traditions" leads to an increase in death penalty usage (p. 266).

Hence the theoretical idea underpinning this study is that application of the death penalty is determined or influenced by contextual factors that are expressed vis-à-vis the decisions undertaken by criminal justice officials like prosecutors and judges. A corollary of this idea is that the differences in contextual factors account for the variations in death penalty application. Or as expressed by Shatz and Dalton (2013), intrastate or county-level disparities are a consequence of each county's unique combination or interaction of contextual factors that influences its stance on the death penalty, which is expressed via its judges, juries and prosecutors.

Relationship between County-level Death Penalty Usage and Contextual Factors

Factors such as geography and racial composition appear to play a larger role in choosing to seek the death penalty than the relative severity of the crime or the certainty of outcome (Lofquist, 2001). Locally elected officials reflect a county's attitudes about the death penalty. Prosecutors tend to reflect these attitudes in their behavior by seeking the death penalty at rates commensurate to what the beliefs and punitiveness of the community, assuming that other factors are held constant. Dieter (2013) explains that since each decision to seek the death penalty (which we can consider an active attempt to mete out capital punishment) is made by a single county district attorney, who is answerable only to the voters of that county, the frequency or extent of death penalty usage is an accurate reflection or measurement of the community's attitudes.

In accounting for geographical disparities, the studies discussed above list several different factors. Dieter (2013) identifies and explains several factors responsible for the staggering disparities in death penalty usage like prosecutorial misconduct, race-of-victim, county-level funding and number of reversals on the basis of appeals, but did not attempt to systematically examine the potential influence of extra-legal factors like the socio-demographic and attitudinal profiles of the counties, on death penalty usage. Like much of the existing research, Dieter's study strictly focused on legal factors, which might paint an incomplete picture when accounting for why county-level differences persist. Several studies have indicated that extra-legal factors strongly correlate with high death penalty usage, so it is worth examining what factors might be associated with rates of death penalty usage.

Focusing on extralegal factors like racial composition of the county, Pierce and Radelet (2005) found an association between two variables, race and population density, and death sentencing rates in that counties with the highest rates of death penalty usage also happened to have the largest populations of non-Hispanic whites and the lowest population density. The study also found the reverse to hold true as well: counties with the lowest death-sentencing rates had the highest non-White populations. Another study, by Lofquist (2001) attempted to account for the geographic disparities in death penalty usage by examining whether there was an association with the legacy of slavery. He hypothesized that rates of death sentencing would tend to mirror geographic regions with a strong history of plantation systems where the racial and social legacies of slavery have remained and persisted over time. His findings appear to support his hypothesis in Georgia and Texas where death sentencing happened to be highest in regions with the strongest legacy of slavery and the plantation system. In another study, Eisenberg (2005) suggests another reason for how racial composition might affect death penalty usage. He states that since black communities are considerably less supportive of the death penalty, regions with high percentage of blacks are associated with lower death penalty usage. These communities express their attitudes towards the death penalty via their election of legal representatives i.e. prosecutors.

These three studies however, did not consider nor address county-level disparities in death penalty usage. Pierce and Radelet (2005) focused only on death sentencing rates for California homicides whereas Lofquist (2001) attempted to qualitatively account for state-level variation. Eisenberg (2005) looks at racial composition of different counties and race-related characteristics of cases that received the death sentence.

A few other studies, in explaining the geographical disparities with regards to death penalty usage, identify extra-legal factors. Paternoster et al. (2003) cites racial composition as a factor. He notes that some Maryland counties have more punitive prosecutors and juries who are more prone to returning a verdict of death for the same crime than other counties are, and that these attitudes are strongly correlated with race. Lambert, Camp, Clarke and Jiang (2011) identify the following variables as being strongly associated with individual-level of support for capital punishment: political affiliation, race, level of education, frequency of religious attendance, and religious opposition to the death penalty. According to Jacobs and Carmichael (2004) violent crime rate is another factor that would affect the frequency with which the death penalty is applied. The following sections explain how this study builds on these individual-level findings by looking at their association at the aggregate level.

Political Affiliation

Payne, Gainey, Triplett and Danner (2004) note that political ideology is associated with punitive attitudes with those who self-report as being more liberal are less punitive than those who are more conservative, while other studies find that conservative political climates produce higher rates of punitiveness. In the context of the death penalty, public values like political conservatism are translated into criminal justice practice (Baumer, Messner & Rosenfeld, 2003; Jacobs & Carmichael 2004). Jacobs and Carmichael (2004) explain that because those who hold conservative political beliefs tend to support “deterrence, incapacitation, and retribution”, the death sentences is more likely to be successfully sought after and applied in areas where these conservative beliefs are

the strongest (p. 251). It is further noted by Jacobs and Carmichael (2004) that these beliefs have greater influence in populist democracies like the US.

Type and Frequency of Religious Adherence

Lambert et al. (2011) note that frequency of religious attendance has been inversely linked with support for capital punishment. However this does not account for the variety of religious thought which emphasize vastly distinct principles that influence attitudes towards the death penalty. For instance, those who belong to a religious faith that is opposed to capital punishment tend to support capital punishment less than those who belong to a faith that advocates for the death penalty (Grasmick et al., 1993). Members of Protestant denominations (Grasmick et al.,1993; Young, 1992) are more supportive of the death penalty, while Soss, Langbein and Metelko (2003) and Wozniak (2009) found that Catholics were less likely to support capital punishment. Young (1992) also found that being a member of a fundamentalist church and believing in Biblical literalism was positively associated with support for the death penalty while the inverse relationship was observed with evangelism.

Racial Composition

Eisenberg (2004) hypothesized in his study that the percent population that is black is negatively associated with death sentencing rates. He accounts for this relationship in two ways: first, county prosecutors would “reflect the minority communities' reservations about the death penalty” and seek it less frequently; and second, juries comprised largely of members from the minority communities are expected to impose death sentences less frequently compared to other juries (p. 348). Lambert et

al. (2011) report that Whites are more likely than nonwhite persons to support capital punishment (p. 578), while Pierce and Radelet (2005) find that counties that have a lower population density and a higher proportion of non-Hispanic whites in their populations to have the highest rates of death sentences. Owens (2013) draws upon the racial threat theory to explain this relationship by noting that larger black populations will be associated with higher levels of death sentencing because Whites, as the dominant social group, would feel socially threatened by the growing minority Black population, leading them to express resistance in the form of support for social control mechanisms such as harsh criminal justice policy and practices, the extent of which can be measured by the frequency of death penalty usage. Owens (2013), however, adds an important caveat to this relationship by noting that beyond a certain point in growth of the black population, the minority group gains political power to counteract especially high levels of punitiveness. Baumer et al. (2003), likewise, notes that residents of areas with a larger proportion of blacks are significantly more likely to support the death penalty.

Education Level

Studies have documented a nonlinear relationship between level of educational attainment and death penalty support, with low levels of support observed among those with educational attainment lower than high school diploma and among those who graduated from college. Higher levels of support were associated with level of educational attainment between high school and college (Baumer et al., 2003). In other words, relatively high or low levels of education is correlated with less support for the death penalty (Baumer et al., 2003). Soss et al. (2003) hypothesizes that education levels are inversely related to support for the death penalty.

Economic Disadvantage

In the face of budget shortfalls, economically disadvantaged counties may avoid trying capital cases to reserve funds for essential services. The sizable funds necessary to try a capital murder case can easily overrun some counties' budgets. Higher income counties would naturally have a larger tax base to fund the prosecution of death penalty cases. Also, because death penalty cases are extremely expensive and complicated, counties with large budgets able to seek the death penalty more often (Gershowitz, 2010). By contrast, smaller counties with limited budgets frequently lack the funds and institutional knowledge to seek the death penalty in even the most truly heinous or severe of cases, resulting in geographic arbitrariness within a state. Eisenberg (2005), however, notes that the rate of death sentences decreases as a county's per capita income increases.

Criminal Justice Variables

Geographical areas with higher rates of violent crime are more likely to sentence offenders to death (Jacobs & Carmichael 2004). Violent crimes indicates the prevalence of death-eligible crimes that take place in the county, while incarceration rate is a rough indicator of the punitiveness of a county. Both Baumer et al. (2003) and Eisenberg (2005) note that the rate of death sentences decreases as a county's homicide rate increases, finding that residents living in areas with higher homicide rates are significantly more likely to support the death penalty.

One of the major gaps in literature on county-level disparities in death penalty usage is the lack of a comprehensive study of the contextual (demographic, sociological, ideological, and penological) factors in counties with high death penalty usage, compared to counties that don't use the death penalty. Hence, this study will take a look at extra-

legal factors to account for the disparities in county-level death penalty usage. Certainly, case-level characteristics (like race and gender of defendant and victim) play a significant role but apart from that, might differences in the socio/demographic and attitudinal profiles between the counties that often apply the death penalty and other counties, be significant enough to account for the disparities?

Data and Methodology

This study employs county-level data drawn from a variety of sources. County was chosen as the unit of analysis because judges, jurors and prosecutors are selected at the county-level to decide on a case, whether or not to hand out a death penalty sentence (Owens, 2013). The data for this study was derived and compiled from publicly accessible databases. Using official data sets provides useful and accessible bases of information for examining the distribution of death penalty support and trends. The socio-economic and demographic statistics provide rich contextual portraits of the different counties. The current section will describe the data sets used as well as the time frames they encompass, and where they were retrieved from. Following that will be a description of the statistical tests that were run and the conclusions that were generated, as well as a discussion of the results. Table 1 summarizes the variables used in the current study as well as their hypothesized relationships to the dependent variable, death penalty usage.

Independent and Control Variables

County-level information on racial composition, level of educational attainment and economic disadvantage were gathered from the 2008-2012 5-Year American Community Survey. The 5-year estimates are thought to be the best estimate of the

conditions present in each of the counties across the country during this period (2008-2012). Racial composition was measured using percentage of a county's population that comprised non-Latino blacks. Level of educational attainment was measured by looking at the percentage of a county's population 25 and above with a high school degree (HSD) or GED. Percentage of households on public assistance or food stamps was employed as an indicator of a county's level of economic disadvantage. Data on religious adherence was obtained from the Association of Religious Data Archives (ARDA). To measure religious adherence, 2010 data on rates of adherence to Catholicism, per 1000, was measured. Since county-level data for political affiliation was not available, this study measured a county's level of conservatism by examining the percentage of people who voted for Republican candidate Mitt Romney during the 2012 Obama-Romney election. This county-level data set was assembled by two data editors at The Guardian and was accessible on The Guardian newspaper's website. County-level crime rates per 100,000 were taken from the Uniform Crime Report. Specifically 2012 data on violent crime, murder and robbery were collected and summed up to calculate a violent crime rate per 100,000 residents in a given county. To measure level of punitiveness in a given locale, 2012 data on rate of incarcerated people per 100,000 at the state level was obtained from the online database of the Bureau of Justice Statistics.

Dependent Variable

Data on the county-level death penalty use (death sentences and executions) was retrieved from the Death Penalty Information Center "Execution Database" found online. Specifically, the following data files were used: Death Penalty Sentences 2012, Death

Penalty Sentences 2013, Death Penalty Sentences 2014 and Executions from the years of 2012 to 2014. The dependent variable, death penalty usage, will be operationalized differently depending on the various statistical procedures used, as described in the subsequent sections.

Table 1. *Summary of variables included.*

Variable	**Measure**	**Variable Type**	**Hypothesized Relationship to Dependent Variable**
Death penalty usage (Dependent variable)	Capital • Either death sentence or execution = 1 • Neither death sentence or execution = 0 Sum death penalty usage = Number of death sentences (2012-2014) + number executions (2012 - 2014)	Dichotomous (capital) Continuous (sum death penalty usage)	N/A
Political affiliation	Percent (%) of population who voted for Republican candidate Romney in 2012	Continuous	+
Racial composition	Percent (%) of population comprised of non-Latino blacks	Continuous	+
Education level	Percent (%) of population 25 and above with high school degree (HSD) or GED	Continuous	-
Level of punitiveness	Rate of prison incarceration, per 100,000 (2012)	Continuous	+
Violent crime rate	Rate of violent crimes, per 100,000 (2012) = Homicide + Rape + Robbery + Aggravated Assault	Continuous	+
Religious adherence	Rates of adherence to Catholicism, per 1000 (2010)	Continuous	-
Level of economic disadvantage	Percent (%) population on public assistance or food stamps	Continuous	-

Statistical Analyses

Descriptive statistics are provided for all independent variables (see Table 2) as well as for the dependent variable (see Table 3).

In Table 2, two sets of descriptive statistics are presented, one set for all counties that used the death penalty (n=105) and another for counties that did not (n=2255). Subsequently, for each of the 9 selected states, two sets of descriptive statistics are presented– one set describing counties within the specific state that used the death penalty and another for counties that did not. Death penalty counties refer to counties that have either sentenced at least 1 person to death or executed at least 1 person in the years 2012 to 2014. The specific numbers of counties are presented in Table 2, with the number of death penalty counties being consistently smaller than the number of non-death penalty counties in each state.

Descriptive Statistics on Independent Variables

In this portion of the descriptive analysis, the means of several variables were compared among 2 sets of counties: death penalty counties and non-death penalty counties in both the 31 death penalty states as well as within the 9 selected states. The results are presented in Table 2.

Across Death Penalty States

Compared to non-death penalty counties (n=2255), death penalty counties (n=105) had: higher mean percentage of Republican voter; higher mean percentage of non-Latino blacks; higher mean incarceration rate as well as violent crime rate; higher mean rate of Catholic adherence; lower mean percentage of population 25 and above with

high school degree/ GED; and lower percentage of households on public assistance/ food stamps.

Within Selected States

Compared to non-death penalty counties, death penalty counties had a higher mean percentage of Republican voters in Alabama, Florida, and Georgia and a lower mean percentage of Republican voters in California, Pennsylvania, Ohio, Oklahoma, Tennessee and Texas. Death penalty counties had a higher mean percentage of non-Latino blacks than non-death penalty counties in California, Pennsylvania, Florida, Georgia, Ohio, Oklahoma, Tennessee and Texas. Only in Alabama did death penalty counties have a lower mean percentage of non-Latino blacks, than non-death penalty counties. Compared to non-death penalty counties, death penalty counties had consistently lower mean percentages of population 25 and above with high school degree or GED in all the 9 states.

Death penalty counties had a higher mean violent crime rate than non-death penalty counties in Alabama, Georgia, Ohio, Oklahoma, and Tennessee, whereas in California, Pennsylvania, and Texas, death penalty counties had a lower average violent crime rate than non-death penalty counties in these states. In all the nine selected states, death penalty counties consistently had a higher mean rate of Catholic adherence. The mean percentage of households on public assistance/ food stamps are all lower in death penalty counties in all states except Florida and Texas. That is, death penalty counties in all states except Florida and Texas are presumptively richer or that they have a lower mean percentage of households on public assistance/ food stamps.

Descriptives Statistics on Death Penalty Usage

Table 3 presents descriptive statistics on the dependent variable – death penalty usage – including a closer look at both death sentence and execution data in the selected states.

Across Death Penalty States

Across all 2360 counties in the 31 death penalty states, 105 counties (4.5%) were death penalty counties, in that these counties either used the death sentence or executed someone from the year 2012 to 2014. In these 105 counties, the most number of death sentences a single county has handed out is 17 and the most number of executions is 9. In this group of 105 death penalty counties, the largest sum death penalty usage is 17 (that is one county had a max sum total of 17 death sentences and executions) from 2012 to 2014.

Within Selected States

In Alabama (n=67), there are 12 death penalty counties (17.9%). The most number of death sentences a single county has handed out is 6 and the most number of executions is 4, while the largest sum death penalty usage is 9 (that is, one county had a sum total of 9 death sentences and executions). In California (n=58), among the 13 death penalty counties (22.4%), 17 was the largest number of death sentences a single county handed out while the most number of executions by a single county was 9. In Pennsylvania (n=67), 3% of counties are death penalty counties (n=2). Among these two counties there were no executions for the years 2012 to 2014. The largest number of death sentences was 3. In Florida (n=67), 18 counties (27%) were death penalty counties, with the largest number of death sentences among those counties being 5 and the most

number of executions being 3. In Georgia (n=159), there are 6 death penalty counties (4%). 2 was the maximum number of both death sentences and executions for a single county. 8% of counties in Ohio (n=88) have used the death penalty (n=7). No more than 2 death sentences and 2 executions were handed or carried out in any of the death penalty counties in this state. In Oklahoma (n=77), 4 counties (5%) have used the death penalty, and among these counties, no more than 2 death sentences were handed out and no more than 5 executions were carried out. The largest sum death penalty usage for an Oklahoma county is 7 (that is no other county in Oklahoma had more than a sum total of 7 death sentences and executions). In Tennessee (n=95), 2 counties (2%) used the death penalty. Among these two counties there were no executions for the years 2012 to 2014, and the largest number of death sentences was 2. Finally in Texas (n=254), 21 counties (8%) had used the death penalty. The greatest number of death sentences a Texas county handed out was 5 and the most executions carried out by a single county was 7.

Table 2. *Descriptive Statistics for Independent Variables*[1]

	All Death Penalty States		**Alabama**		**California**		**Pennsylvania**		**Florida**	
	N=105	**N= 2255**	**N=12**	**N=55**	**N=13**	**N=45**	**N=2**	**N=65**	**N=18**	**N=49**
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
% Republican	55.33 (16.55)	60.32 (20.24)	70.31 (12.38)	59.34 (19.5)	44.68 (14.05)	48.38 (13.89)	52.38 (13.62)	58.83 (10.96)	43.34 (14.36)	38.57 (11.57)
% non-Latino blacks	13.04 (13.98)	10.56 (15.97)	16.95 (13.48)	30.88 (23.42)	5.06 (3.74)	2.53 (2.64)	5.36 (4.38)	4.13 (6.22)	15.86 (11.5)	13.41 (8.58)
% population 25 and above with HSD/GED	30.03 (6.60)	35.10 (7.06)	33.07 (3.46)	35.71 (4.88)	22.01 (4.88)	23.8 (4.31)	32.78 (10.32)	43.89 (6.57)	32.37 (4.24)	34.29 (5.89)
Incarceration rate	534.91 (104.75)	478.16 (132.76)	650 (0)	650 (0)	351 (0)	351 (0)	398 (0)	398 (0)	524 (0)	524 (0)
Rate of violent crime	112.03 (108.92)	111.76 (101.42)	12.19 (4.66)	11.87 (4.52)	292.07 (89.41)	344.97 (125.98)	103.76 (3.72)	128.67 (84.06)	0[2] (0)	0 (0)
Rate of Catholic adherence	127.68 (110.04)	99.92 (126.14)	44.32 (33.07)	14.98 (18.34)	257.92 (84.46)	227.34 (169.08)	354.91 (30.64)	200.25 (135.90)	83.71 (56.95)	82.2 (70.07)
% households on public assistance/ food stamps	13.61 (5.29)	14.14 (6.67)	15.32 (3.71)	18.33 (6.168)	8.81 (3.38)	9.89 (4.44)	8.22 (4.51)	11.99 (3.43)	13.9 (4.98)	13.69 (4.74)

[1] County-level data on incarceration rate was not available so intra-state comparisons could not be made.
[2] Florida data on rate of violent crime was not available.

Table 2. (cont'd) *Descriptive Statistics for Independent Variables*

	Georgia		**Ohio**		**Oklahoma**		**Tennessee**		**Texas**	
	N=6	**N= 153**	**N=7**	**N=81**	**N=4**	**N=73**	**N=2**	**N=93**	**N=21**	**N=233**
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
% Republican	46.06 (17.91)	37.17 (15.24)	54.09 (12.47)	57.41 (9.59)	67.57 (8.40)	72.90 (7.65)	53.44 (23.45)	67.94 (7.97)	62.35 (15.86)	72.59 (15.82)
% non-Latino blacks	35.89 (12.79)	27.80 (17.71)	5.97 (4.67)	3.86 (5.76)	7.01 (6.72)	3.20 (3.22)	34.93 (23.70)	6.60 (7.97)	7.80 (5.54)	6.12 (6.87)
% population 25 and above with HSD/GED	31.73 (7.62)	36.67 (6.22)	37.99 (6.85)	45.75 (6.73)	31.24 (6.13)	36.82 (4.62)	32.35 (7.32)	39.82 (5.53)	27.26 (5.15)	32.39 (5.91)
Incarceration rate	542 (0)	542 (0)	440 (0)	440 (0)	648 (0)	648 (0)	438 (0)	438 (0)	601 (0)	601 (0)
Rate of violent crime	183.12 (106.27)	135.59 (87.71)	118.15 (131.24)	37.89 (34.65)	130.17 (91.95)	76.62 (58.27)	262.11 (71.80)	211.88 (108.68)	119.83 (50.58)	127.57 (107.26)
Rate of Catholic adherence	37.56 (42.17)	25.78 (34.14)	152.71 (110.06)	124.93 (114.65)	49.55 (39.89)	24.68 (26.29)	36.68 (41.44)	15.62 (16.40)	171.58 (120.6)	166.25 (153.20)
% households on public assistance/ food stamps	14.71 (3.06)	17.56 (5.94)	11.64 (3.67)	14.29 (4.41)	14.16 (4.10)	14.30 (5.07)	18.1 (2.60)	19.54 (5.46)	14.08 (5.781)	13.42 (6.72)

Table 3. *Descriptive Statistics for Dependent Variable(s) in Death Penalty Counties Across All States with the Death Penalty and in 9 Selected States*

Variable		**All states with death penalty (n=105)**	**AL (n=12)**	**CA (n=13)**	**PA (n= 2)**	**FL (n=18)**	**GA (n=3)**	**OH (n=5)**	**OK (n=3)**	**TN (n=2)**	**TX (n=12)**
Death Sentences (2012 - 2014)	*Min*	0	1	1	1	1	0	0	0	1	0
	Max	17	6	17	3	5	2	2	2	2	5
	Mean	2.12381	2.917	5.923	2	2.11	0.833	1	1.25	1.5	0.952
	Std. Dev.	2.533	1.730	4.462	1.414	1.278	0.983	0.816	0.957	0.707	1.284
Executions (2012-2014)	*Min*	0	0	0	0	0	0	0	0	0	0
	Max	9	4	9	0	3	2	2	5	0	7
	Mean	1.219	1.5	1.615	0	0.889	0.833	0.857	2.5	0	1.143
	Std. Dev.	1.587	1.243	2.725	0	1.023	0.753	0.690	2.380	0	1.526
Sum Death Penalty Usage (2012-2014)	*Min*	1	2	1	1	1	1	1	1	1	1
	Max	17	9	17	3	6	4	3	7	2	12
	Mean	3.343	4.417	7.539	2	3	1.667	1.857	3.750	1.5	2.095
	Std. Dev.	3.177	2.353	5.317	1.414	1.572	1.211	0.90	2.50	0.707	2.548

Correlations

Next, Pearson's correlations were performed between the independent/predictor variables and the dependent variable - sum death penalty usage. Correlations were performed between continuous variables - the independent variables as well as the sum death penalty usage, which was expressed as a count variable (see Table 1). The Pearson correlation coefficients provide some initial insight into the size and direction of the statistical association between death penalty usage and the other extra legal/ contextual county-level variables. Correlations analysis was performed on all counties in death penalty states and then within each of the 9 selected states.

The results are presented below in Tables 4 to 5.9. Table 4 presents only the correlation results between sum death penalty and the independent variables, while Tables 5.0 to 5.9 present the correlation results between all the variables included (dependent and independent), both across all the counties in death penalty states (Table 5.0) and within each of the nine selected states (Tables 5.1 to 5.9). Tables 5.1 to 5.9 were included in the following pages to present an assessment of the multi-collinearity of the variables within each state.

Table 4. *Correlations between Sum Death Penalty Usage and Independent Variables in All States with the Death Penalty (n=2360) and within 9 states*

	ALL	**AL**	**CA**	**PA**	**FL**	**GA**	**OH**	**OK**	**TN**	**TX**
% Republican	-0.0466**	0.2123*	-0.1190	-0.0207	0.3021**	0.1641**	-0.1538	-0.2395**	-0.3239**	-0.1340**
% non-Latino Black	0.0136	-0.2369*	0.3282**	-0.0089	0.1476	0.1256	0.1362	0.3901**	0.4453**	0.1571**
% population 25 and above with HSD/ GED	-0.1524**	-0.2072*	-0.1381	-0.1639	-0.1504	-0.1242	-0.1684	-0.3263**	-0.2243**	-0.1926**
Incarceration rate	0.0374*	--	--	--	--	--	--	--	--	--
Violent crime rate	0.0436**	0.0466	-0.1339	-0.0484	-0.1339	0.0150	0.4436**	0.3085**	0.0855	-0.0057
Rate of Catholic adherence	0.0724**	0.6112**	0.1211	0.1608	0.1037	0.1111	0.0947	0.2849**	0.2849**	-0.0087
% households on pub. asst. / food stamps	-0.0353*	-0.2085*	-0.0193	-0.0933	0.0118	-0.0426	-0.1183	0.0169	-0.0201	-0.0184

Table 5.0 *Correlations for counties in all death penalty states (n=2360)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Incarceration rate*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	-							
% non-Latino black	-0.4278**	-						
% population 25 and above with HSD/ GED	0.1123**	0.0015	-					
Incarceration rate	0.0240	0.3951**	0.1130**	-				
Violent crime rate	-0.1753**	0.2416**	-0.1384**	0.0767**	-			
Rate of Catholic adherence	0.0723**	-0.2373**	-0.1575**	-0.0910**	0.0618**	-		
% households on pub. asst./ food stamps	-0.2545**	0.4312**	0.2500**	0.3135**	0.1891**	-0.1854**	-	
Sum death penalty usage	-0.0466**	0.0136	-0.1524**	0.0374*	0.0436**	0.0724**	-0.0353*	-

*p < 0.10
**p < 0.05

Table 5.1 *Correlations for counties in Alabama (n=67)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	-0.9708**	--					
% population 25 and above with HSD/ GED	-0.1448	0.2027	--				
Violent crime rate	-0.0076	0.0058	-0.1872	--			
Rate of Catholic adherence	0.2580**	-0.3232**	-0.5029**	0.1133	--		
% households on pub. asst./ food stamps	-0.7112**	0.7362**	0.4301**	-0.0144	-0.4314**	--	
Sum death penalty usage	0.2123*	-0.2369*	-0.2072*	0.0466	0.6112**	-0.2085*	--

*p < 0.10 **p < 0.05

Table 5.2 *Correlations for counties in California (n=58)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	-0.2885**	--					
% population 25 and above with HSD/ GED	0.6475**	-0.1575	--				
Violent crime rate	0.3825**	-0.0675	0.5767**	--			
Rate of Catholic adherence	-0.1291	-0.0085	-0.2048	-0.3261**	--		
% households on pub. asst./ food stamps	0.3751**	0.0938	0.4068**	0.5424**	-0.0909	--	
Sum death penalty usage	-0.1190	0.3282**	-0.1381	-0.1339	0.1211	-0.0193	--

*p < 0.10 **p < 0.05

Table 5.3 *Correlations for counties in Pennsylvania (n=67)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	-0.7020**	--					
% population 25 and above with HSD/ GED	0.6807**	-0.4337**	--				
Violent crime rate	-0.5621**	0.7859**	-0.2383*	--			
Rate of Catholic adherence	-0.5189**	0.1607	-0.3953**	0.1560	--		
% households on pub. asst./ food stamps	-0.1101	0.2711**	0.4498**	0.3369**	-0.0230	--	
Sum death penalty usage	-0.0207	-0.0089	-0.1639	-0.0484	0.1608	-0.0933	--

*p < 0.10 **p < 0.05

Table 5.4 *Correlations for counties in Florida (n=67)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	0.4174**	--					
% population 25 and above with HSD/ GED	-0.4284**	0.0772	--				
Violent crime rate	--	--	--	--			
Rate of Catholic adherence	0.4892**	-0.3365**	-0.5812**	--	--		
% households on pub. asst./ food stamps	-0.0764	0.4483**	0.5468**	--	-0.5501**	--	
Sum death penalty usage	0.3021**	0.1476	-0.1504	--	0.1037	0.0118	--

*p < 0.10 **p < 0.05

Table 5.5 *Correlations for counties in Georgia (n=159)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	0.9138**	--					
% population 25 and above with HSD/ GED	-0.0578	0.1883**	--				
Violent crime rate	0.2173**	0.2200**	-0.1073	--			
Rate of Catholic adherence	-0.0172	-0.1945**	-0.5526**	0.1135	--		
% households on pub. asst./ food stamps	0.3550**	0.5440**	0.5143**	0.1903**	-0.3432**	--	
Sum death penalty usage	0.1641**	0.1256	-0.1242	0.0150	0.1111	-0.0426	--

*p < 0.10 **p < 0.05

Table 5.6 *Correlations for counties in Ohio (n=88)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	-0.5832**	--					
% population 25 and above with HSD/ GED	0.2846**	-0.5490**	--				
Violent crime rate	-0.2905**	0.4627**	-0.3613**	--			
Rate of Catholic adherence	-0.0327	0.2272**	-0.1825*	0.2473**	--		
% households on pub. asst./ food stamps	-0.4250**	0.1393	0.2711**	-0.0249	-0.4539**	--	
Sum death penalty usage	-0.1538	0.1362	-0.1684	0.4436**	0.0947	-0.1183	--

*p < 0.10 **p < 0.05

Table 5.7 *Correlations for counties in Oklahoma (n=77)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	-0.5401**	--					
% population 25 and above with HSD/ GED	0.1446	-0.2452**	--				
Violent crime rate	-0.2775**	0.3171**	-0.3215**	--			
Rate of Catholic adherence	0.1504	0.1188	-0.4226**	0.1344	--		
% households on pub. asst./ food stamps	-0.5627**	0.3426**	0.0590	0.0940	-0.3091**	--	
Sum death penalty usage	-0.2395**	0.3901**	-0.3263**	0.3085**	0.2849**	0.0169	--

*p < 0.10 **p < 0.05

Table 5.8 *Correlations for counties in Tennessee (n=95)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	-0.7105**	--					
% population 25 and above with HSD/ GED	0.1624	-0.2996**	--				
Violent crime rate	-0.4959**	0.5175**	-0.1929	--			
Rate of Catholic adherence	-0.2151**	0.2343**	-0.6912**	0.1959*	--		
% households on pub. asst./ food stamps	-0.0114	0.0571	0.5117**	0.1056	-0.5018**	--	
Sum death penalty usage	-0.3239**	0.4453**	-0.2243**	0.0855	0.2849**	-0.0201	--

*p < 0.10 **p < 0.05

Table 5.9 *Correlations for counties in Texas (n=254)*

	% vote Republican	*% non-Latino black*	*% population 25 and above with HSD/ GED*	*Violent crime rate*	*Rate of Catholic adherence*	*% households on pub. asst./ food stamps*	*Sum death penalty usage*
% vote Republican	--						
% non-Latino black	-0.0861	--					
% population 25 and above with HSD/ GED	0.3445**	0.1868**	--				
Violent crime rate	-0.1856**	0.1071*	-0.0035	--			
Rate of Catholic adherence	0.6311**	-0.2317**	-0.2141**	0.1087*	--		
% households on pub. asst./ food stamps	-0.7323**	0.0539	-0.0198	0.1646**	0.4675**	--	
Sum death penalty usage	-0.1340**	0.1571**	-0.1926**	-0.0057	-0.0087	-0.0184	--

*p < 0.10 **p < 0.05

Correlations across all Death Penalty States

Across all counties in states with the death penalty (n=2360): percent Republican showed a negative and weak but statistically significant correlation with sum death penalty usage (r= -0.047, p<.05); percent non-Latino black did not achieve a statistically significant correlation to sum death penalty usage; percent population 25 and above with a high school degree/ GED correlated negatively and weakly, but significantly with sum death penalty usage (r= -0.152, p<0.05); rate of violent crime correlated positively and significantly, but weakly with sum death penalty usage (r=0.0436, p<0.05); rate of Catholic adherence yielded a positive and significant, albeit weak correlation with sum death penalty usage (r=0.0724, p<0.05); and percent households on public assistance/ food stamps showed a negative and weak but significant correlation with sum death penalty usage (r= -0.035, p<.10).

Correlation within Selected Death Penalty States

A negative, weak and statistically significant correlation between percent Republican and sum death penalty usage was observed in Oklahoma, Tennessee and Texas, whereas in Alabama, Florida and Georgia percent Republican was positively and weak to moderately correlated with sum death penalty usage at the level of statistical significance p<0.10. In California and Pennsylvania, percent Republican failed to demonstrate any statistically significant correlation with the dependent variable.

In California, Oklahoma, Tennessee and Texas, percent non-Latino black correlated positively and moderately to the dependent variable at a statistically significant level. In Alabama, percent non-Latino black correlated negatively and weakly with sum death penalty usage (r= -0.2369, p<.10).

A negative and weak correlation between percent population 25 and above with a high school degree/ GED and sum death penalty usage was seen in Alabama, Oklahoma, Tennessee and Texas at the statistically significant level, and not at the statistically significant level in California, Pennsylvania, Florida, Georgia and Ohio.

Among the selected states, a positive and statistically significantly correlation between violent crime rate and sum death penalty usage was observed in Ohio and Oklahoma whereby the association was moderately sized.

Rate of Catholic adherence was statistically significantly and positively correlated with the dependent variable in Alabama, Oklahoma, and Tennessee. That is, in these three states, an increase in rate of Catholic adherence was significantly correlated with an increase in the use of the death penalty.

In the individual analysis of the selected states, percent households on public assistance/ food stamps did not produce a statistically significant correlation with the dependent variable, with the exception of Alabama.

Multivariate Analyses

The first type of multivariate analysis carried out was an inter-state comparison using rare events logistic regression, and the second one is an intra-state comparison using negative binomial regression to assess the statistical relationships between extralegal variables on death penalty usage within a particular state in the U.S.

Analysis 1: Interstate Comparison using Rare Events Logistic Regression (Relogit)

Considering that the incidence of using the death penalty is not normally distributed among the counties, rare events logistic regression (relogit) was applied for robustness and to correct for potential rare events bias. Rare events logistic regression is designed to assess the effect of extra-legal or legally inappropriate factors (independent variables) on death penalty usage (dependent variable) across all counties by comparing counties that used the death penalty (n=105) to all counties that did not (n=2255). This type of analysis will find the average effect of each independent variable on the use of the death penalty across all 31 states that currently allow for the death penalty. The results from each of the rare events logistic regression model (n=2342) are available in Table 6.

Although a logistic regression model is typically used with a dichotomous response variable, because the number of counties which have used the death penalty (either sentence or execution) is far less than the number of counties that have not used the death penalty (neither sentence or execution), the standard logistic regression model would underestimate the probability of death penalty usage (King and Zeng, 2001). In this case, the proportion of occurrences of the dependent variable is roughly 0.04 (105 counties out of 2342). With such a low proportion, using the rare-events logistic

regression model developed by King, Tomz, and Wittenberg (1998) will produce more accurate coefficient estimates. Relogit was developed specifically for analyzing highly skewed rare event data. Logistic regression mitigates the measurement error caused by a dichotomous dependent variable in linear regression.

A categorical outcome or dichotomous variable is suitable for rare events logistic regression models to formally estimate the predictive value of the independent variables on use of the death penalty. The dependent or outcome variable – capital – was coded as a categorical variable, with 0 indicating no death sentence or execution, and 1 indicating death sentence or execution used. In other words, 0= no death penalty used and 1=death penalty used. In the end, 105 counties – or 4.5% of all counties in states that have the death penalty – were found to have either handed out a death sentence or executed someone, so 105 counties were coded as 1 for their dependent variable. These 105 counties formed one group that will be compared with the other 2255 counties (whose dependent variable was 0).

It is hypothesized that counties which have utilized the death penalty (n=105) will: be more conservative or Republican-voting ; have a lower rate of religious adherence to Catholicism ; have a larger percentage of non-Latino blacks ; have a lower level of educational attainment ; have a greater percentage of households receiving public assistance/ food stamps ; and a higher rate of incarceration and violent crime.

Table 6. *Rare Events Logistic Regression Model for Counties in States with the Death Penalty (n=2342)*

Variables	**Coefficients**	**z-statistic**
% Republican	-0.01189**	-2.57
% non-Latino black	-0.00514	-0.66
% population 25 and above with high school degree or GED	-0.10146**	-7.54
Incarceration rate	0.00448**	5.68
Violent crime rate	-0.00144	-1.14
Rate of Catholic adherence	0.00083	1.42
% of households on public assistance/ food stamps	-0.00672	-0.49
Constant	-1.07483**	-2.51
Observations	2342	

*p < 0.10 **p < 0.05

Results

In this relogit model (Table 6), the coefficients of percent Republican voter (b= -0.01189), percent of a county's population 25 years old and above with a high school degree or a GED (b= -0.01015) and incarceration rate (b= 0.00448) are statistically significant ($p<0.05$). These results suggest that a decrease in the percentage of Republican voters and decrease in the percent of high school degree/ GED holders in a county would increase the likelihood of death penalty usage. Correspondingly, an increase in the incarceration rate is associated with an increase in death penalty usage.

In this relogit model, percentage of non-Latino blacks (b= -0.00514), violent crime rate (b= -0.00144), rate of Catholic adherence (b= 0.00083) and percent households on public assistance/ food stamps (b= -0.00672) failed to achieve statistical significance, and therefore cannot be considered as predictors of death penalty usage.

The results obtained from this relogit model suggest that counties that have a higher percent of Republican voters are less likely to use the death penalty, and counties with a lower percent of population with high school degree/GED are more likely to use the death penalty. The latter is consistent with existing findings by Soss et al. (2003) who notes the inverse relationship between education level and death penalty usage, while the former finding runs contrary to existing literature - by Jacobs and Carmichael (2004), for instance - that consistently indicates a positive association between the level of conservatism or Republican support and use of death penalty. The positive coefficient for incarceration rate suggests that counties with higher incarceration rates are more likely to use the death penalty, which was as hypothesized, based on existing literature.

Analysis 2: Intrastate Comparison using Negative Binomial Regression Models

Next, negative binomial regression was performed to examine intrastate disparities to investigate and explore the influence of extralegal variables/ contextual factors on sum death penalty usage. The results from each of the models run for the 9 selected states are available in Table 7.

The decision to conduct this type of analysis proceeds from the understanding that the independent variables would have different statistical correlations with the dependent variable, county-level death penalty usage, within different states. Hence, this analysis seeks to explore the how the effect of independent variables on death penalty usage would vary across states. The purpose here is to uncover "variation" in the effect of extra-legal factors on death penalty usage. Thus, analyzing each state individually would allow for an assessment of whether the relationship between these factors and death penalty usage varies from one state to another. For instance, the effect of median income or rate of religious adherence on death penalty usage in Texas may be very different from the effect of these independent variables on death penalty usage within another state.

Negative binomial regression was used because it has been considered appropriate for modeling count data characterized by excess zeros (Long & Freese, 2001). A significant number of counties included in this study have zero death penalty usage. Negative binomial regression is employed to assess the effects of extralegal factors on death penalty usage, controlling for the criminal justice variables outlined in the previous sub-section. For the negative binomial model, the dependent variable used was a simple count of the number of death sentences and executions undertaken in the state during the 3 year study period (2012 – 2014). Death penalty usage for counties that used the death

penalty will be a summation of the number of sentences and executions. That is, the data on sentencing and executions were combined to form a composite variable that measured death penalty usage for a particular county in terms of the number of death sentences handed out and the number of executions performed from the years of 2012 to 2014. For Stata analysis, this dependent variable was coded as sum_dp. If a county did not use the death penalty, its dependent variable was coded as a 0, and if a county did use the death penalty, its dependent variable reflected the exact number of death sentences and executions, as a simple count (i.e. 0, 1, 5, 7…).

For this intrastate analysis, 9 states were chosen out of the 31 eligible states that have no moratorium on the death penalty. An important criteria or statistical consideration when selecting the states for comparison was that only states with more than 50 counties could be chosen to ensure sufficient degrees of freedom for the analysis. Hence the following states were chosen: Alabama, California, Pennsylvania, Florida, Georgia, Louisiana, Ohio, Oklahoma, Tennessee, and Texas. While the results of these analyses may not be generalizable to all states across the U.S., it is worth mentioning these states account for a majority of death penalty usage for the time period studied (Dieter, 2013). It is hypothesized that binomial regression analysis will demonstrate that the effect of extralegal factors on county-level death penalty usage vary from one state to another. The results of the binomial regression analysis are presented below in Table 7.

Table 7. *Negative Binomial Regression Models of Sum Death Penalty Usage for 9 States*

	AL	**CA**	**PA**	**FL**	**GA**	**OH**	**OK**	**TN**	**TX**
% Republican voters	0.023 (0.101)	0.0483 (0.049)	0.520 (0.483)	0.0625 (0.042)	-0.1011 (0.138)	-0.151* (0.090)	-0.0391 (0.185)	0.301 (0.414)	-0.018 (0.034)
% non-Latino blacks	-0.053 (0.888)	0.412* (0.223)	0.173 (0.943)	-0.0332 (0.049)	0.194 (0.157)	0.194 (0.183)	-0.0069 (0.308)	0.3699 (0.299)	0.0925** (0.042)
% population more than 25 with HSD/GED	-0.182 (0.173)	-0.145 (0.170)	-1.133 (1.170)	-0.0964 (0.101)	-0.111 (0.144)	0.112 (0.115)	-0.247 (0.280)	-0.611 (0.727)	-0.207** (0.072)
Violent crime rate	0.022 (0.09)	-0.0048 (0.008)	-0.0409 (0.051)	N/A[3]	-0.001 (0.006)	0.0236* (0.0137)	-0.0019 (0.018)	-0.004 (0.009)	-0.001 (0.003)
Rate of Catholic adherence	0.0397** (0.016)	0.0014 (0.005)	0.024 (0.023)	-0.0118 (0.010)	0.0023 (0.021)	-0.0264 (0.018)	0.0025 (0.039)	-0.099 (0.148)	-0.003 (0.003)
% households on pub. assistance/ food stamps	0.167 (0.147)	-0.0507 (0.205)	1.451 (1.71)	0.0160 (0.080)	-0.228 (0.186)	-0.588 (0.318)	0.1166 (0.212)	0.0688 (0.508)	0.0054 (0.069)
Constant	-1.374 (8.045)	-1.144 (2.42)	-10.427 (24.37)	-0.912 (3.625)	0.215 (6.107)	7.626* (7.94)	5.090 (18.3)	-9.248 (30.63)	2.648 (2.67)
Observations	67	58	67	67	159	88	77	95	254

Dependent Variable = Sum death penalty usage
Standard error is presented in parenthesis beneath the corresponding coefficient
*p < 0.10 ** p < 0.05

[3] Florida data for violent crime rate was not available

Results

The coefficient of percent Republican achieved statistical significance only in Ohio, and consistent with the results from the rare events logistic regression analysis (see Table 6), this association was a negative one ($b= -0.151$, $p<0.10$). According to the results, since percent Republican voter was negatively correlated to sum death penalty usage in Ohio, for every increase of one percent Republican voter in the county-level population, there was a decrease in sum death penalty usage by 0.151. This fails to affirm the hypothesized relationship between level of conservatism and death penalty usage, based on previous literature.

The coefficients on percent non-Latino black were positively and significantly associated with sum death penalty usage in California ($b= 0.412$, $p<0.10$) and Texas ($b= 0.0925$, $p<0.05$). Based on the size of the respective coefficients, this variable seemed to have had a much larger impact on the sum death penalty usage in California than on sum death penalty usage in Texas.

According to the results achieved from Texas' model, one other predictor variable was significantly correlated to the dependent variable: the percent of a county's population 25 years old and above with a high school degree or a GED. This variable achieved statistical significance only in Texas, and not in the other 8 selected states.

The coefficient of violent crime rate was positively and significantly associated with sum death penalty usage only in Ohio ($b= 0.0236$, $p<0.10$).

In Alabama, the coefficient of rate of Catholic adherence was positively and significantly associated with the dependent variable ($b= 0.0397$, $p<0.05$) in that for every increase of one Catholic adherent, per 1000 in the county-level population, there was an

associated increase in sum death penalty usage of 0.0397. Rate of Catholic adherence failed to achieve statistical significance in any other the other 8 states examined.

As in the relogit model, percent households on public assistance/ food stamps failed to achieve statistical significance in any of the state models that were run.

In the binomial regression models for Pennsylvania, Florida, Georgia, Oklahoma and Tennessee, none of the predictor/ independent variables included achieved statistical significance at either the 10 or 5 percent levels. Among all the states, the model run for Ohio had the most number of variables -3 - significantly correlated with sum death penalty usage.

Overall Discussion of Findings and Directions for Future Research

One issue is the general lack of statistically significant results in the multivariate analysis for this study. In the negative binomial models run for more than half, or 5, of the 9 selected states, none of the predictor/ independent variables included the model achieved statistical significance and therefore could not explain the disparities in death penalty usage within these states. This is because of namely two reasons: the small number of incidents or counties, for each of the binomial regression models, as well as some observed collinearity between the variables included in the model. As Baldus, Pulaski and Woodworth (1990) note, the small count of incidents when state-level death penalty data is disaggregated to the level of the county makes it difficult to assess statistically the effects of various extralegal predictors on death penalty usage. Hence, future research could incorporate multilevel models to simultaneously model the effect of these variables within every state in the country. Future research could also incorporate more death penalty data from a wider range of years than the present study does.

Another issue is that the results obtained from the intra-state analysis are sensitive to the predictors included in each model. For example, correlations for the selected states indicate that percentage non-Latino black is very highly correlated with percentage Republican, which potentially means that the effects of these 2 variables would cancel each other out in the negative binomial regression model. Hence a follow-up analysis was conducted whereby the model for each state was re-estimated without the percentage non-Latino black variable. In the new analysis, percent Republican gained statistical significance in 2 states - Alabama and Texas - the former in the hypothesized direction and the latter not in the hypothesized direction. However, since both these variables are

important predictors of the death penalty more generally, they should both be included, but future research should strive to better clarify the statistical relationship between these two variables.

Findings on Extralegal Variables

Political Affiliation

Based on existing literature, percent Republican is positively correlated with death penalty usage in that counties that were more politically conservative or Republican would be more likely to use the death penalty (Baumer et al., 2003; Jacobs & Carmichael, 2004; Payne et al., 2004). Results from the multivariate analyses, however, fail to support the hypothesized direction of the association between level of conservatism and death penalty usage. Even though percent Republican voter was a statistically significant predictor of death penalty use across all counties in death penalty states (based on results from the relogit model presented in Table 6) and specifically in Ohio, the sign of the coefficient for this variable was not in the hypothesized direction. Level of conservatism was perhaps not best captured by the percentage of people who voted for Mitt Romney in the 2012 elections, as preference for a political candidate does not necessarily capture extent of affiliation to a certain political ideology. A better measure for level of conservatism is needed instead of voting outcomes from one election, and a more local measure may be necessary.

Racial Composition

Based on results from the relogit model (Table 6), percent non-Latino black was not found to be a significant predictor of death penalty use across all death penalty

counties (n=105). Percent non-Latino black however was found to be a positive and significant predictor of death penalty use in California and Texas, based on the negative binomial regression models (Table 7). The direction of the relationship between percent non-Latino black and death penalty usage are consistent with the hypothesis and the existing literature (Eisenberg, 2004). However, in this study, percent non-Latino black did correlate negatively and significantly in Alabama, and a negative relationship was observed in the relogit model, even though that was not statistically significant. Owens (2013) explains how it is possible that racial composition can yield both positive and negative relationships with death penalty usage; specifically, "counties with larger African American populations sentence more offenders to death, but that this positive relationship diminishes once the black population reaches a particularly high threshold" which is consistent with the racial threat perspective (p. 69). Future research can potentially include racial composition as a continuous variable and also as a squared measure because it is expected that "percent black will be positively related to death sentences while percent black squared will be inversely related to death sentences" (Owens, 2013, p. 46).

Economic Disadvantage

In this study, percent households on public assistance/ food stamps was employed as a measure for a county's level of economic disadvantage. Even though a statistically significant correlation between percent households on public assistance/ food stamps and sum death penalty usage was observed across all counties in death penalty states (n=2360) and within 1 out of the 9 states, Alabama, none of the coefficients for this variable achieved statistical significance in the multivariate models, and hence cannot be

regarded as a predictor of death penalty usage. In the relogit model, though not statistically significant, the sign of the coefficient for percent households on public assistance/ food stamps confirmed the hypothesized direction in that the less economically disadvantaged a county is, the more likely it is to use the death penalty. This is consistent with the literature which generally states that economically disadvantaged counties tend to avoid prosecuting death penalty cases. In the intrastate analyses, however, results revealed that percent of households on public assistance/ food stamps was positively associated with sum death penalty usage in 6 out of the 9 states, which means that the less economically disadvantaged a county was in these 6 states, the more likely it was to use the death penalty. This finding is inconsistent with the literature as explained in the first half of this paragraph, Future research should investigate the relationship between economic disadvantage and death penalty use more thoroughly by incorporating other measures of economic disadvantage like income inequality or creating a composite variable (see Owens, 2013).

Education Level

Percent population with a high school degree/ GED was a significant predictor across all counties in death penalty states based on the interstate analysis (see Table 6), and was a significant predictor of death penalty use in Texas (see Table 7) in that the lower the percentage population of high school degree/ GED holders, the greater the likelihood of that county to use the death penalty. Hence, the direction of the relationship observed between this variable and the dependent variable is consistent with existing literature, for instance, Soss et al. (2003) who notes the inverse relationship between education level and death penalty usage.

Violent crime rate

The rate of violent crime was shown to correlate positively and significantly with death penalty usage, both across all counties in all states with the death penalty (see Table 4) within Ohio and Oklahoma. Violent crime rate was not a significant predictor of death penalty use across counties in death penalty state (see Table 6) but in Ohio, it was positively and significantly predicted sum death penalty usage (see Table 7). This finding is consistent with Jacobs and Carmichael (2004) who state that jurisdictions with higher rates of violent crime use the death penalty more.

Incarceration Rate

For where data was available, the positive coefficient for incarceration rate suggests that counties with higher incarceration rates are more likely to use the death penalty, which was as hypothesized, based on existing literature. Future research should strive to incorporate county-level data on jail or prison incarceration rates[4].

Type and Frequency of Religious Adherence

Rate of Catholic adherence was found to be positively and significantly correlated with sum death penalty use across all counties in all death penalty states, and specifically in Alabama, Oklahoma, Tennessee, and Texas. In both multivariate analysis, the coefficient for rate of Catholic adherence was positive, however the result was statistically significant only in the negative binomial regression model for Alabama (see Table 7). The direction of the coefficient for this variable is not consistent with Soss et al. (2003) and Wozniak (2009). Future research might explore other measures of religiosity,

[4] The Vera Institute of Justice maintains this data set, available here: http://trends.vera.org/incarceration-rates

and how other religious denominations might predict support for and the use of the death penalty.

Variables for Future Research

Pierce and Radelet (2005) advise that a comprehensive study for this specific research inquiry would gather and include data on all stages of the capital punishment sentencing process, starting with the arrest and ending with the imposition of a capital sentence. This is because extra-legal or contextual factors may influence decisions undertaken in the course of the capital sentencing process like the decision to pursue the death sentence or jury selection. A limitation of this study is that it does not incorporate into its analysis, the specific micro-level processes that lead the different components of the judicial system to pursue and impose a capital sentence. More research is needed to be able to definitively conclude that extralegal factors produce these geographic disparities in death penalty usage. Future studies need to also account for the distribution of different types of cases across different counties and the possibility that some counties might experience a higher than average occurrence of death eligible homicides, which then affects the frequency at which the death penalty is sought. Moreover, to conclusively isolate the effects of extra-legal factors, future research should strive to include individual and case-level characteristics like race of victim and defendant, as well as other variables such as percentage of capital-eligible crimes, county-level spending on indigent defense, and the amount of funding each county receives.

Another possible measure to include in future analyses is a lynching measure. Lofquist (2001), Adger and Weiss (2011), and Owens (2013) all find in their analyses significant links between death penalty usage and the geographic concentration of the

practices of lynching. Owens (2013) notes that Southern states accounted for approximately 90 percent of lynching, and that the practice was more prevalent in counties with large African American populations. Given that many of the states with notable disparities in death penalty usage are Southern, it is especially important to include this variable in future research.

Future research can also refine how the dependent variable is constructed. For example, in his study Lofquist (2001) creates a construct called "death penalty intensity" which combines several dimensions of death penalty activity such as “passage of death penalty statutes, the imposition of death sentences, the retention or reversal of these sentences through the appellate process, and the ultimate execution of death sentenced inmates” to produce a variable that more accurately depicts death penalty usage (p. 1509). Using data on death penalty usage from the post-Furman period through to 1998, Lofquist (2001) categorized states as symbolic (California, Ohio, Pennsylvania, Tennessee), inefficient (Alabama, Georgia, Florida and Oklahoma), and aggressive (Texas). Future research can revisit this construct and update the categorizations of the states based on more recent death penalty usage data.

Conclusion

In sum, this study first documents the presence of geographic disparities in the application of the death penalty across states in general and within 9 states specifically, and then attempts to account for these disparities. The results obtained from the bivariate and multivariate analysis conducted provides support for the claim that some contextual or extra-legal factors influence or predict county-level death penalty use. Because some of the statistically significant results were inconsistent with the hypotheses generated,

further research is needed to explore and ascertain the influence of extralegal variables on death penalty use.

The findings also provides impetus to expand upon and refine the scope of this study by adding additional explanatory variables, and using better statistical techniques like multilevel modeling to include more states in the analysis. Taken together, the results obtained support the idea raised in other studies that death penalty usage might be influenced as much or more by place (i.e. contextual county-level characteristics) than legally relevant case-level factors. Such findings raise an important constitutional issue since it is constitutionally problematic for the death penalty to be arbitrarily applied at the level of the county. They suggest that the application of the death penalty in any case is more dependent on where the offender is tried rather than the death-worthiness of the crime committed. If the use of the death penalty is conclusively shown to be influenced by factors beyond the case-level (like economic disadvantage, racial composition, education level etc.) then the death penalty has been administered in a cruel and unusual manner inconsistent with the Eighth Amendment. Although the findings of this study do not conclusively prove that extra-legal, contextual factors account for why two offenders with similar cases might not both end up with a death sentence, they indicate there is a risk of arbitrary application of the death penalty.[5]

[5] Although discussion of policy responses to the issue of disparities in death penalty usage are beyond the scope of this study, note that Gershowitz (2010) argues for the creation of statewide capital defense and prosecution offices, staffed with "an elite group" of professionals, because evidence of disparities between counties justifies the need to remove county input into the administration of the death penalty.

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