6

Which Jurisdictions Execute and Which Ones Don’t?

The death penalty in the United States has become an overwhelmingly geographically concentrated punishment.[[1]](#endnote-1) As of 2015, 19 states and Washington, DC have abolished the death penalty, leaving 31 states with active death penalty statutes. Discounting the three federal executions that have taken place, there have been 1,419 executions since its reinstatement in the modern death penalty era, spanning from 1976 to 2015. Sixteen states and the District of Columbia have not executed a single person. When we focus on county-level data, we see that only 474, or 15 percent, of all U.S. counties have carried out an execution. Even among those counties that have carried out an execution, frequency of usage is highly skewed. A report by the Death Penalty Information Center shows that the majority of executions carried out in the United States is accountable to only two percent of counties (Dieter 2013). In previous chapters, we have explored the unequal application in capital punishment that arises from factors such as race and gender. Here, we will move on to look at the geographical disparities in its application.

# The Most Active Jurisdictions

Whether we look at states, counties, or the counties within the most active death-penalty states, we find that small share of the jurisdictions account for the vast bulk of the executions. Here we look at states.[[2]](#endnote-2)

## State Level

Figure 6.1 shows the distribution of executions by state.

[Insert Figure 6.1 here]

As seen in the graph, the distribution of executions is extremely skewed. The Lone Star State dominates U.S. death penalty usage, accounting for over a third of the executions in the modern period, executing a total of 531 inmates, which is greater than the next six states combined. The second highest executing state is Oklahoma, which has carried out around 21 percent of the number of Texas, or 112 executions. Virginia follows closely behind with 111 executions, Florida 91 executions, and Missouri 86. Considering that there is now 40 years of experience with the modern death penalty, the states just listed are the only ones to average over two executions per year. In fact, while Texas shows an average of 13 executions per year, 42 states or jurisdictions have fewer than one per year; just ten states have more than one; 5 more than two per year. Of course, there are thousands of homicides, as we saw in Chapter 3.

Many states, such as California, Florida, Illinois, Georgia, or Pennsylvania, have had tens of thousands of homicides in the 40 years since the modern death penalty began, but their executions are numbered in one or two digits. Even in Texas, the 531 executions we see represent just 1.11 executions per 100 homicides. So executions are very rare compared to homicides, but they are very highly skewed to just a few states (and these are not the states with the highest homicide rates). What we see in comparing the 50 states is also apparent when we look at a lower level of aggregation: Counties.

## County Level

Previous research has established county-level disparities in the use of capital punishment (see Donohue 2014). The skewed distribution of executions becomes even more apparent when analyzed at the county level. Of the 3,143 counties in the United States only 474, or 15 percent, have carried out a single execution in the modern era. Figure 6.2 shows these data, restricting only to those counties that have had one or more executions.

[Insert Figure 6.2 here]

The horizontal (x) axis shows the number of executions, ranging from one to 125. The vertical (y) axis shows the frequency of counties carrying out at least that number of executions. 474 counties have had at least one execution, 223 have had two or more, 6 have had 25 or more, and only one county, Harris County, Texas, has had 125 executions. The shape of the distribution shows that there are only a handful of counties that account for the majority of the execution in the United States. The top executing counties are displayed in Figure 6.3, including those counties that have executed 10 or more individuals in the modern era.

[Insert Figure 6.3 here]

Several points stand out here. First is only 20 counties have executed 10 or more inmates in 40 years. Second is the high concentration in Texas, which is home to 11 of the 20 top executing counties. If Harris County, TX (Houston) were classified as its own state, it would be second only to the rest of Texas in terms of executions. Third is that the use of the death penalty is an overwhelming Southern phenomenon; the only non-southern state that appears on the list is Hamilton, OH (Cincinnati).

Even within states there are drastic differences in the practice. Texas, the top executing state, carries out a large percentage of its executions are concentrated to only a few counties. Of the 246 counties in Texas, only 84 have carried out a single execution, 31 have had as many as five executions over 40 years; 11 have had ten or more, and one county was accountable for 125, or almost 24 percent of all executions in the state of Texas. Similarly, of the 77 counties in Oklahoma, only 31 have carried out a single execution, 16 have executed more than one person, and only two have executed ten or more.

[Insert Figure 6.4 here]

Texas and Oklahoma are the nation’s most active execution states. Even in these states, however, executions are rare. Considering the 40 years that have passed since *Gregg*, no county in Oklahoma has averaged even a single execution per year, and just three have reached that threshold in Texas. Eighteen counties in Texas saw 400 or more homicides from 1984 to 2012, and the number of executions in these counties ranges from zero (in Webb County, despite 459 homicides) to 123 in Harris (with over 12,000 homicides). In the next section, we explore the links between homicides and executions.

# Homicides and Executions

Table 6.1 shows the U.S. states sorted by their cumulative numbers of executions in the modern period, the number of homicides in the 1984 to 2012 period, their 2010 population, and the rates of homicide per population and execution per homicide. For states with no executions, cumulative homicide totals and rates per population are listed in the last row. Non-executing and executing states differ only slightly by homicide rates (1.53 per 1,000 population for the states with no executions, compared to 1.68 overall). The table shows that individual states that have seen executions show great variation in homicide rates per population, however. Similarly, executions per 100 homicides range widely around the national average of 0.27. Delaware, Texas, and Oklahoma are the only states that surpass a rate of 1 execution per 100 homicides, and just four more states (Virginia, Missouri, Alabama, and Montana[[3]](#endnote-3)) have rates above 0.50 executions per 100. Clearly, executions are not a widely used punishment for homicide, as the overall rate of application is on the order of ¼ of one percent, overall. Note that the table lists over 500,000 homicides in the U.S. over the period of study. So, while homicides are extremely common across all the states, there is little difference in the rate of homicide per population across executing and non-executing states, and among executing states the rates of homicides per 1,000 population and the rates of executions per 100 homicides show great variability. Executions are extremely rare compared to homicides, and appear to follow no pattern related to homicides.

[Insert Table 6.1 here]

Figure 6.5 shows the relation between homicides and executions from Table 6.1, including only those states with any executions. The left pane shows the raw numbers, and the right pane shows the rates.

[Insert Figure 6.5 here]

Florida, Texas, and California stand out with the largest cumulative numbers of homicides from 1984 through 2012 (the most recent year available). But they differ dramatically in the number of executions. The right-hand pane of Figure 6.5 shows how the *rate* of homicide (per population) compares to the *rate* of execution (per homicide). Here, we see that Louisiana is by far the most violent state per capita, but it has a relatively low rate of executing. In fact, the correlation between homicide rates and execution rates is zero, even slightly negative. In sum, it is hard to make sense of the linkages between homicides and executions; clearly there is no clear connection, though of course there cannot be an execution without an underlying homicide. This is largely because the rate of execution, even in states that use the death penalty relatively frequently, is extremely low. Even in Houston, the epicenter of America’s death penalty, the number of executions (125) is small compared to the number of homicides (over 12,000). With executions only following on average from one-quarter of one-percent of all homicides, where the two occur is not tightly linked. In fact, homicides and executions follow almost completely distinct patterns across the U.S. We look at this geographical distribution by looking at some maps similar to those we presented in Chapter 3 on homicides. In that chapter, we saw that homicides are centered in Los Angeles, Chicago, Detroit, and the Northeast Corridor (see Figure 3.10), and we saw that the highest homicide rates are in New Orleans, St. Louis, and in the mid-Atlantic (see Figure 3.11). In Figure 6.6, we replicate those same two maps at the top of the figure, then show where the executions occur, in the bottom of the figure.

The lower-left map shows the total number of executions from 1977 to 2015, and the lower-right one shows the rates of execution per homicide. Executions are centered in Texas and Oklahoma, with scattered centers in other states including Arizona, Missouri, and Florida (see Figure 6.3 above for the list of high-execution counties). Execution rates per homicide are high in some of these same regions as well as in the Mid-Atlantic region.

[Insert Figure 6.6 here]

The maps in Figure 6.6 clearly show that there is lack of correlation between high homicide and high execution hubs. The correlations among the four variables shown in the maps are very low: homicides to executions, 0.31; homicide rates to executions, 0.06; homicide rates to execution rates, -0.26. It is quite clear that there is no strong causal or statistical links tying homicides to executions, even in the high use death penalty states.

Table 6.2 provides three paired comparisons to illustrate the low correlation between homicides and executions, and the arbitrary nature of these differences. It shows the same data as in Table 6.1 and in the maps above, for three pairs of adjacent counties.

[Insert Table 6.2 here]

New Orleans, Baltimore, and St. Louis are some of the most violent places in the nation, with extraordinarily high homicide rates as shown in the table. In each case, neighboring counties have much lower homicide rates, but much higher rates of execution. In Orleans Parish, LA, 4 executions have resulted from over 7,000 homicides; in Jefferson Paris (which abuts the city of New Orleans and extends south to the Gulf of Mexico), the same number of executions have followed from only 1,340 homicides. In Baltimore, no executions have followed from over 7,800 homicides, but 4 have come from the surrounding county in spite of it seeing fewer than 900 homicides in the same period. St. Louis displays a similar pattern: just eight executions from over 4,000 homicides in the city, but 25 executions from just 1,008 homicides in the outlying county. These data underline the lack of connection between areas of high homicides and high executions rates.

They also call into question the issue of race. Each of the central cities has a majority non-white population, whereas the suburban counties are largely white. That is, in each case, the suburban area, with the higher execution rate, has a much higher percentage of white residents. In each case, the central city, with more homicide, but few executions, is majority non-white. Before exploring these racial dynamics in greater detail, let us review the concept of prosecutorial discretion. After all, as many have argued, juries and locally elected District Attorneys may reflect not random or arbitrary application of the law, but differences in what people want (for example, see Scheidegger 2011).

## Prosecutorial Discretion

Some variation in the use of the death penalty may be accountable to the discretion of US prosecutors, and possibly to electoral incentives. In the United States, only three states have appointed prosecutors; typically they are elected officials (Wright 2008; Ellis 2012). While the prosecutor is supposed to make sentencing decisions based on heinousness and other relevant factors of a crime, the fact that they must stand for reelection naturally makes them concerned about the state of public opinion, particularly that of likely voters. Recently, a large study showed significant effects on judicial review of death penalty cases, with state appellate judges subject to retention or nonpartisan elections particularly susceptible to public opinion effects, especially in recent years (see Canes-Wrone et al. 2014). That is, judges subject to electoral review were more likely to turn down appeals from inmates facing execution. We will explore the dynamics of public opinion in considerable detail in a later chapter; in fact, given the extreme skew in the geography of the death penalty, we will see that public opinion cannot be a good explanation of this, since it does not vary as much, by orders of magnitude, as executions across the states or localities. In any case, prosecutors typically play a key role in deciding whether to seek death when a death eligible crime occurs, so we look at that process here. Whereas our analysis suggests there is little correlation between local public opinion and the use of the death penalty, we do find huge variation in levels of usage. As prosecutors are the first actor to be involved in the decision of whether to seek death, and typically have considerable discretion not, variation across prosecutorial offices may be the most likely explanation for the extreme geographic disparities that are apparent in the use of the death penalty. Some prosecutors simply “go for death” in great numbers, whereas others do not.

Whereas local District Attorneys are typically elected, we can compare them to federal prosecutors, who are appointed. U.S. Attorneys, in contrast to District Attorneys, not only have no electoral incentives to differ based on local opinion, but they are part of a single bureaucratic structure and report to the U.S. Attorney General. One might therefore expect that U.S. Attorneys would seek death in relatively similar proportions nationally, but in fact they do not. As part of their duties, U.S. Attorneys must submit all death-eligible cases to the U.S. Attorney General for death authorizations. Out of the 94 federal judicial districts, only six account for one-third of death authorizations. More than half of all death-authorizations are requested from only fourteen federal judicial districts; two-thirds of the districts have not sentenced anyone to death. This wide variation could not exist if there were a consistent application of the death penalty of prosecutors nation-wide. There appears to be a wide disparity between county-by-county usage of prosecutorial resources and sentencing decisions that is unexplainable by crime rates, murder rates or the heinousness of crimes prosecuted capitally (Cohen and Smith 2010). Suprisingly, perhaps, variation across the federal system is almost as great as that across the states. What drives this high level of geographical disparity?

# Local Control, Self-Reinforcement, and the Power-Law of Death

The distributions of executions across geographic units shown in Figures 6.1 and 6.2 above are obviously extremely skewed; just a few states or counties account for the vast bulk of the observations. Such distributions belong to a class called “fat tailed” distributions, of which a particular form is a power-law distribution, the significance of which we explain in this section. Intuitively, we understand that many things in life differ randomly, as in the familiar bell-curve. When we observe a bell-curve (or a Normal distribution) in some circumstances, we observe power-law or fat-tailed distributions in others. What is the difference?

A power-law distribution stems from a process of self-reinforcement. If “the rich get richer” then such a process will never generate differences that can be described by a bell-curve. This explains why wealth, in fact, was observed to follow a power-law distribution over 100 years ago by Italian sociologist Vilfredo Pareto (1896). Processes that generate Normal curves have some kind of error-correction or self-cancelling elements: When throwing dice, sometimes they are high, sometimes low. But throwing high one time does not increase the chance of throwing high the next time: Successful throws average out, on average, to something close to a common expected value no matter how many times the process is repeated. In fact, for uncorrelated events (that is, where the outcome of the second event is independent from the outcome of first event), the Central Limit Theorem (CLT) guarantees that the distribution will be a bell-curve (for an explanation of the CLT, see Blalock 1979 or any standard statistics book). The key element is whether the events are uncorrelated, or not. Executions are, in fact, highly correlated at the local level. Having carried out an execution in one case increased the odds of carrying out another one quite dramatically. Thus, the process by which executions are carried out corresponds to a power-law distribution, not a random one. This helps explain the extremely skewed distribution of so many executions in such a small number of jurisdictions. But it also calls into question the equal protection clause of the law U.S. Constitution, since executions are supposed to be reserved for the most heinous murders, not those that happen to occur here rather than there.

Examples of “rich-get-richer” processes (and therefore power-law distributions) include such things as the structure of links in the World Wide Web. Sites with many links generate more and more links, as new site developers want to link to those sites likely to be of interest to more, rather than few, users. Academic and legal citations show a power-law distribution: scholars seeking to link their work to the work that has come before them naturally link to the most prominent works. Therefore, as time goes by those citations that were more prominent than others become progressively ever-more prominent. Popular music follows a power-law: some bands or artists become so popular that radio disc jockeys feel they should play them, making them more commonly known than others, in a cycle of self-perpetuation common to all these processes (see Adler 1985). Personal wealth has already been mentioned: great wealth makes it easier to generate even greater wealth as time goes by. The size of cities follows a power-law; already-large cities become larger because growth in population is in proportion to the previous size (see Bak 1996 for a good discussion of these effects across many settings.

One could understand that across states or counties, executions would not follow perfectly a clear mathematical formula linking them to homicides: One could not expect for example that executions would be 0.25 percent of homicides, exactly. Some homicides are more heinous than others, some jurisdictions might have randomly had a few more egregious ones, some juries may inexplicably have reached a verdict of death in a case that might surprise, or some may have done the opposite. All these are reasons to expect that any relation between homicides and executions should not be a perfect one. But random fluctuation would suggest that a Normal curve would explain the imperfections in any relation between homicides and executions.

If the distribution of executions across jurisdictions follows a power-law, it suggests that there must be some kind of self-reinforcing, rich-get-richer, process generating the distribution. Such a distribution simply cannot occur as a result of a process of uncorrelated decision-making. On the other hand, it could easily be the case if local legal cultures develop separately, each focusing on their own history rather than how they relate to surrounding or other jurisdictions, even within the same state.

Imagine the prosecutor’s decision-making process when faced with a horrific murder in a jurisdiction where 25 executions have already been carried out. A number of factors suggest seeking death again: previous homicides where executions occurred may not have been as horrendous as this one; he knows juries will support it; he knows he has the staff to follow through; he knows judges and appellate courts will condone it; etc. Compare this to the same homicide in a jurisdiction that has yet to carry out a single execution: Was this the single most horrendous murder ever in the history of that jurisdiction? Will a jury return a verdict of death? Will a judge and appellate courts, for the first time in history, allow the verdict to stand? The two jurisdictions self-separate into high and low users of the death penalty. In any case, what we observe in the distribution of executions across jurisdictions is consistent with this “rich-get-richer” phenomenon of self-reinforcement.

Figure 6.1 showed the extremely sharp gap between Texas and every other death penalty state, and the high concentration of executions in just a few states. A power-law distribution fits the equation:

N(*s*) = *s*-*k* (equation 1)

where N(*s*) is the cumulative frequency of an event with size *s*, and *k* is a constant to be estimated (Bak 1996).

Taking the log of each side of that equation leaves:

log N(*s*) = -*k* log(*s*) (equation 2)

If the relationship is a power-law, then the relation between the log of the cumulative frequency of the event will be a linear function of the log of the size of the event. Thus, a simple test of a power-law distribution is to plot the size of the event against the cumulative frequency of events of that size, using a logarithmic scale for both the x and the y-axis in the figure. If the data array on a straight line, then it is a power-law distribution.

Figure 6.7 presents a log-log presentation of the same distribution that was presented in Figure 6.1; executions across the 50 states. Figure 6.8 shows the same across the counties of the U.S. Figure 6.9 shows similar data within the top two death states, Texas and Oklahoma. In every case, the vast majority of jurisdictions abstain completely, but a few generate very high values indeed. And in every case, the logged data array on a straight line. Executions follow a power-law distribution.

[Insert Figure 6.7 here]

[Insert Figure 6.8 here]

[Insert Figure 6.9 here]

The fact that executions are skewed so sharply to a very small set of jurisdictions, and that we can see a similar distribution consistently no matter if we look at counties within a state, counties across states, and states in the U.S. strongly suggests that the process is not driven by factors that might cancel each other out. Rather, they are driven by factors that reinforce each other. Earlier in the chapter, we demonstrated that executions are not correlated with homicide rates, and are only weakly correlated with homicides. We have now shown why this could be the case. Over time, local jurisdictions have separated out into those areas that never execute, in spite of significant numbers of homicides, and those that much more often carry out executions. These differences are more related to the number of executions previously carried out in the same jurisdiction, leading to shared expectations by all the decision-makers involved, than they are related to the egregiousness of the underlying crime. It is not reasonable to think that Houston has had so many more egregious murders than Chicago or New Orleans. So the difference in execution rates per homicide cannot be due to legally relevant factors such as egregiousness. They are self-reinforcing.

# Assessing Geographical Concentration in the Death Penalty

The death penalty is used so rarely in the United States that it cannot be seen as a usual punishment for capital eligible crimes. This chapter has presented evidence showing how concentrated its use is across the country, and that the current system cannot be seen as having fair and equal application of the punishment. Rather it is centered in certain hubs across the country and even within those states that have high usage there are geographical inconsistencies throughout. The geographical concentration of the death penalty has often been thought to be a simple reflection of different local norms and cultures. Citizens in Vermont don’t support the death penalty as much as those in Georgia, or so the traditional understanding has gone. But the evidence we have shown here goes strongly against any such argument. Consider Richmond, Baltimore, Charlotte, Tallahassee, Atlanta, New Orleans, and Houston; none would be considered a hot-bed of criminal justice liberalism. Each sees large numbers of homicides each year. Each is within a state that has executed. But the likelihood of the same crime leading to execution differs dramatically across them. Even within the same state, these differences persist. Our review of the geography of the death penalty creates a number of puzzles. One of those is public opinion, which we will explore in a later chapter. Like other factors, we find that this cannot explain the vast disparities this chapter has uncovered.

Of course, many observers defend “local control” and the variations in criminal justice outcomes, chalking them up to elected prosecutors reflecting the will of the local community, and to juries exercising their judgment. Justice Lewis Powell, for example, defended any disparities that come from juries: “’The inherent lack of predictability of jury decisions does not justify their condemnation”, Powell wrote, adding that ‘discretion in the criminal justice system offers substantial benefits to the criminal defendant.’” (quoted in Mandery 2013, 429). Where juries offer mercy, of course, one can say that there are benefits to the defendant. But the evidence in this Chapter has clearly demonstrated much greater variability in the application of the death penalty than can be attributed only to differences across norms and practices associated with public opinion and local culture. Rather, it comes from practices within the legal profession, in particular the District Attorney’s offices and the courts. In fact, as we will discuss in greater detail in Chapter 13, it cannot be attributed to variability in public opinion. This makes sense, as Americans who do not believe in the death penalty are often struck from capital juries.

# For Further Reading

Baumgartner, Frank R, Woody Gram, Kaneesha R. Johnson, Arvind Krishnamurthy, and Colin P. Wilson. 2016. The Geographic Distribution of US Executions. *Duke Journal of Constitutional Law and Public Policy*. Forthcoming.

Bazelon, Emily. 2016. Where the Death Penalty Still Lives. *New York Times Magazine*. 23 August.

Cohen, G. B., and Robert J. Smith. 2010. The Racial Geography of the Federal Death Penalty. *Washington Law Review* 85, 3: 425–92.

Donohue III, John J. 2014. An Empirical Evaluation of the Connecticut Death Penalty System Since 1973: Are There Unlawful Racial, Gender, and Geographic Disparities?  *Journal of Empirical Legal Studies* 11, 4 (December): 637–96.

Fair Punishment Project. 2016a. America’s Top Five Deadliest Prosecutors: How Overzealous Personalities Drive The Death Penalty. Cambridge MA: Harvard University Law School. (June).

Fair Punishment Project. 2016b. Too Broken to Fix: Part I. An In-depth Look at America’s Outlier Death Penalty Counties. Cambridge MA: Harvard University Law School. August.

Fair Punishment Project. 2016c. Too Broken to Fix: Part II. An In-depth Look at America’s Outlier Death Penalty Counties. Cambridge MA: Harvard University Law School. September.

Smith, Robert. 2011. The Geography of the Death Penalty and its Ramifications. *Boston University Law Review* 92, 1: 227–89.

Dieter, Richard. 2013. The 2% Death Penalty: How a Minority of Counties Produce Most Death Cases At Enormous Costs to All. Washington, DC: Death Penalty Information Center.

1. Baumgartner compiled the county-level database used in this chapter over many years and with the assistance of many UNC students, and the cooperation of DPIC. Woody Gram wrote a senior thesis on this topic in 2015 on this topic, and Gram, Krishnamurthy, Johnson, Wilson, and Baumgartner presented a paper updating the analysis at a Duke University conference in 2016. Baumgartner then finalized. [↑](#endnote-ref-1)
2. Note that we also include the District of Columbia and the US Federal Government in these analysis, though they are of course not states. The U.S. Military also has a death penalty, but it has not carried out any executions in the modern period, and we do not include it here. So, rather than 50 states, we have 52 jurisdictions in the section immediately below. [↑](#endnote-ref-2)
3. Note that for Montana, with just 538 homicides over the period of study, has had only 3 executions and so while its rate of execution per 100 homicides is high, the absolute numbers of each are very low compared to more populous states. [↑](#endnote-ref-3)