Does the Death Penalty Deter Crime?

Benjamin S. Tyree
University of Richmond

ABSTRACT

The death penalty has been one of the most controversial and divisive issues facing the American public for many years. This study focuses on the merits of the theory of deterrence as applied to capital punishment, which holds that the threat of death will prevent people from committing capital crimes. Two hypotheses govern this study: 1) States with a death penalty statute will have lower rates of crimes punishable by death than states without death penalty statutes, and 2) States that have the most executions will have fewer crimes punishable by death than states that do not use their death penalty often and those without a statute at all. To analyze each of these hypotheses, two case studies were performed with two states fulfilling requirements for each realm of having or frequently using the death penalty and comparing crime rates of these states over certain periods of time. Also for hypothesis 1, the crime rate means were calculated and compared for states with and without the death penalty in 1970 and 2000. To satisfy hypothesis 2, the mean 2004 crime rates were calculated for the nine states frequently using their death penalty statutes and the 41 who either do not use the penalty often or do not have a death penalty.

KEYWORDS: Death Penalty, Deterrence, Capital Punishment, Crime Rate
INTRODUCTION

Capital punishment is an increasingly hotly contested issue in today’s society. The principal aims of the criminal justice system are to rehabilitate criminals and to protect society from those who are not rehabilitated. Ernest Van Den Haag argues that, therefore, “‘doing justice’ or ‘deterring others’” (Van Den Haag 102) are the ends of the system’s endeavors. Use of the death penalty is therefore one means to reach these ends. It follows, then, that opponents of capital punishment must show convincingly that it does not fulfill either of these aspirations, while proponents are able to rely on either argument for justification.¹ This study will focus on the deterrence factor rather than question whether the death penalty adequately serves as “justice”. Raymond T. Bye describes the basis for the theory of deterrence as applied to the death penalty:

“This theory rests upon the belief that nothing is so sacred to an individual as his life. The prospect of impending death is a threat too ominous to be ignored. While one might be willing to run the risk of a lesser penalty for the sake of achieving his objective, he would not be willing to risk anything so highly cherished as life itself. The death penalty, therefore, is upheld as the most powerful of all deterrents and a potent aid in the repression of crime”² (Bye 31).

Testing this theory of deterrence is important to analyze the past practices of utilizing the death penalty, its place in present society, and the possibilities for its continuance or discontinuance in the future. The merits of the deterrence theory can only be accurately assessed by comparing states with and without the death penalty and their

² Raymond T. Bye, Capital Punishment in the United States. (Menasha, WI: George Banta Co., 1919) 31-40
rates of crime over time. In this study, to equalize the rates of crime for all states, only the murder rate was considered. Although some states maintain the right to impose the penalty of death for other crimes such as treason, train wrecking, perjury causing execution, capital drug trafficking, capital sexual battery, kidnapping with bodily injury or ransom when the victim dies, hijacking an aircraft, and aggravated rape, all states with the death penalty uniformly hold first-degree murder as punishable by death.

In order to answer the question of whether or not the death penalty deters crime, two hypotheses were developed. These were: 1) States with a death penalty statute will have lower rates of crimes punishable by death than states without death penalty statutes, and 2) States that have the most executions will have fewer crimes punishable by death than states that do not use their death penalty and those without a statute. For each of these hypotheses, two case studies were performed. For example, to test the first hypothesis, the crime rates of Texas, which executes convicts more than any other state, were compared with Michigan’s, which has no death penalty statute. According to the first hypothesis, Texas should have a lower crime rate as a result of the deterrence of usage of the death penalty. Findings in this study, as well as the other three studies, however, refute this assertion, rejecting the null hypotheses.

LITERATURE REVIEW

With this topic being so controversial, much research both supporting and opposing the theory of deterrence has been published. The large variation in implementation and usage of the death penalty around the nation is an intriguing area of study. Keith Harries and Derral Cheatwood, in *The Geography of Execution*, explore the
trends in the United States governing the likelihood that one will be executed. The authors compare rates of execution for the neighboring states of Virginia and Maryland. Maryland’s last execution was in 1995, but the last before that was in 1961. Virginia, however, is one of the leading states for carrying out death sentences, second only to Texas. The quick review process and low rate of reversal of sentences gives Virginia a very efficient system of capital punishment. Washington, D.C., comparatively, has no capital punishment statute at all.

Carsten Anckar, likewise, examines the determinants of the death penalty in the global setting. Building on prior research, Anckar states that the independent variables determining the death penalty follow from: “physical explanations, cultural explanations, development, security, and dependency, political institutions, political actors, and historical explanations” (Anckar 23). He investigates several jurisdictions with various characteristics, including size, type of government, etc. and how those factors influence the implementation and use of capital punishment.

David C. Nice explores several factors that may affect whether or not a state will implement the death penalty. These include political ideology, racial composition, socioeconomic factors, level of urbanization, and the preexisting level of crime. Nice also explores the political implications involved with the implementation of a capital punishment statute such as the willingness of politicians to support or oppose the matter regarding their constituencies.

Ernest Van Den Haag focuses on capital punishment’s general deterrent effect on crime and the merits of the theory. He argues that, if the rehabilitation of criminals and protecting society from those who are not rehabilitated were not the aims of the criminal
justice system, the death penalty would be useless. Therefore, any sanction from the judicial system must fall under at least one of two categories: “‘doing justice’ or ‘deterring others.’” (Van Den Haag 102) are aims of the criminal justice system. It follows, then, that opponents of the death penalty must prove that capital punishment fulfills neither of these aims. Supporters, though, can rely on either argument to justify their arguments.

Similarly, Raymond T. Bye discusses the use of the death penalty as a means of deterrence. The theory of deterrence, he says, states that the threat of death will prevent a prospective criminal from committing the crime. As quoted above, Bye maintains that a man may be willing to sacrifice in order to achieve his ends, but not life itself. Hence, the death penalty is a strong deterrent to crime.

David P. Phillips took a somewhat different approach in an attempt to contradict the naysayers when he investigated the deterrent effect of capital punishment on the number of homicides in England. Although most prior statistical research found that the death penalty has no deterrent effect, Phillips suggests that basing their research on yearly figures discredits prior researchers’ work. In turn, he suggests that capital punishment does indeed have a deterrent effect, but only for the short term. In order to correct this deficiency in research, Phillips studied a period in English history, 1858-1921, in which weekly homicide rates were published. Although this research is only applied to one geographical location and only at one point in time, one can surmise that the results would hold true for most periods and localities. Phillips found that, considering the week of the execution, and the weeks immediately preceding and following that week, capital punishment causes a short-term deterrent effect on crime. The week before a publicized
execution experiences an average number of homicides, the week of the execution saw a
drastic decline, and the weeks thereafter saw an increase and a surpassing of the weekly
average. Conducting a similar study using a more geographically diverse sample and
more recent data might provide contrasting evidence to the generally accepted status quo
of other research.

HYPOTHESES

This study considers two hypotheses. The first asserts that states with a death
penalty statute will have lower rates of crimes punishable by death than states without
death penalty statutes. In this case, the independent variable is whether or not a given
state has a death penalty statute and the dependent variable is the crime rate of that state.
Any state that reserves the right to sentence a person to death is considered to have a
death penalty statute, regardless of the frequency or infrequency of usage of that statute.
The second hypothesis is similar, but maintains that states that have the most executions
will have fewer crimes punishable by death than states that do not use their death penalty
and those without a statute. The dependent variable is again the crime rate, but the
independent variable is whether or not a state actually executes at least one person per
year. For the purposes of this study, frequent use of the death penalty was defined as an
average of at least one execution per year since the moratorium was lifted in 1976, or
having at least 29 executions.
DATA AND METHOD

Data regarding crime rates of the United States and each state analyzed were taken from The Disaster Center’s website, whose source was the Federal Bureau of Investigation’s (FBI) Uniform Crime Reports. This database breaks down types of violent crime, but for the sake of equality among states only murders were used to calculate the crime rates. This is due to the uniformity among all of those states having the death penalty for first-degree murders. While other crimes are held liable under penalty of death in certain states, the realistic likelihood of this occurring is practically nil. In addition, these crimes were not uniformly considered punishable by death under all states. Background and historical data also came from The Death Penalty Information Center, a non-profit group based in Washington, DC. This organization “prepares in-depth reports, issues press releases, conducts briefings for journalists, and serves as a resource to those working on this issue. The Center is widely quoted and consulted by all those concerned with the death penalty.” Data regarding the number of executions in each state was provided by Infoplease, a subsidiary of Pearson Education.

To analyze the accuracy of each hypothesis, two longitudinal case studies were performed examining the differences between two states in each category of the hypothesis. For example, to test the first hypothesis, the crime rates of Texas, the most frequent user of the death penalty, and Michigan, which does not have a death penalty statute, were compared. The crime rates for these two states, measuring every five years from 1970-2000, are shown below in Graph 1 on the following page. A bivariate correlation table is provided following the graph to depict the statistical significance of
This graph depicts the number of murders per 100,000 inhabitants of Texas and Michigan starting in 1970, six years before the moratorium was lifted, and measuring the rate in five-year increments until 2000.

Table 1

<table>
<thead>
<tr>
<th>Death Penalty?</th>
<th>Pearson Correlation</th>
<th>Crime Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.391</td>
<td>.166</td>
</tr>
</tbody>
</table>

The .166 significance level is much higher than the required <.05 to be significant.
the comparison. A significance level of .166 was found, well above the .05 level for the findings to be statistically significant. The murder rates began relatively close, sharply diverting around 1980 only to eventually become closer and the Texas level even fell below the Michigan level between 1995 and 2000. This closeness caused the results to not be significant. To ensure that this case study was not simply an exception to the general occurrence, a second study was performed along the same guidelines. The second test was performed using Virginia, who follows Texas in number of convicts executed since 1976, and Massachusetts, with no death penalty. The graphical analysis of this case study is shown in Graph 2 below. Likewise to the previous study, a bivariate correlation test was performed on the data comprising this case. Table 2 is on the following page and shows a significance level of .000, illustrating that the relationship is statistically significant. However, the nature of this relationship is not as hypothesized. If hypothesis 1 held true, Massachusetts, without the deterrent of the death penalty, would have a higher rate of crime. As evidenced in the graph, however, this is surely not the case.

Graph 2

This graph depicts the number of murders per 100,000 inhabitants of Texas and Michigan starting in 1970, six years before the moratorium was lifted, and measuring the rate in five-year increments until 2000.
Table 2

<table>
<thead>
<tr>
<th>Death Penalty?</th>
<th>Pearson Correlation</th>
<th>Crime Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.874**</td>
</tr>
<tr>
<td></td>
<td>.000</td>
<td>STATISTICALLY SIGNIFICANT!</td>
</tr>
<tr>
<td>N</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).

The relationship between the Death Penalty and Crime Rate was statistically significant in this case study. However, the nature of the relationship was opposite to that hypothesized.

As an overall analysis of the first hypothesis, a study was performed comparing the 1970 mean murder rate of all states currently with the death penalty. This mean was calculated to be 7.8395 murders per 100,000 inhabitants. This figure was nearly twice the murder rate of states who did not subsequently instate the death penalty after the moratorium was lifted. This figure was 3.9417 per 100,000 inhabitants. These same tests were performed for the same groups of states using data from 2000, 24 years after the death penalty moratorium had been lifted. Both figures had decreased, with the mean murder rate among states with the death penalty being 5.3789 and the mean murder rate among states without the death penalty being 2.8250. States that did not implement the penalty experienced a drop in murder rates of 28.3%. States that did instate the death penalty, however, experienced a drop of 31.6%, a difference of 3.3% in favor of reinstating the death penalty. The significance level of this relationship, though, was .192, so the difference was not statistically significant.
Testing hypothesis 2 was very similar to the first. Two longitudinal case studies were performed. These two studies, however, compared murder rates among states that often use their death penalty statutes and those who have a statute, but do not often utilize it. Nine states fit into the frequent-use category, executing at least 29 prisoners since 1976, averaging at least one per year. Missouri executed 61 convicted individuals between 1976 and 2004, whereas Montana executed 2. According to hypothesis 2, then, Missouri should have a lower crime rate because the threat of the death penalty is more real, and therefore should have a greater effect of deterrence. The graph below (Graph 3) traces the pattern of the murder rates of both states in every year from 1976 to 2000. As one can see, the murder rate for Montana maintains a safe distance below that of Missouri, contrary to thy hypothesized result. Following, the bivariate correlation table (Table 3) shows a significance level of .000, so the relationship is statistically significant. Like the second case study of the first hypothesis, though, the relationship is opposite to that hypothesized.

Graph 3
Although the relationship between the death penalty and crime rates for these two states is statistically significant, it is not in the manner hypothesized. Rather, Montana maintained a significantly lower crime rate than Missouri.

The second case study for hypothesis 2 compared the crime rates of Oklahoma, which executed 75 candidates between 1976 and 2004, and Pennsylvania, which executed three. Following hypothesis, one would conjecture that Oklahoma’s use of the death penalty would be a stronger deterrent to crime, thus giving that state a lower crime rate than Pennsylvania. The graph (Graph 4) on page 13, though, shows that this is not the case. Oklahoma has maintained a higher murder rate than Pennsylvania in each year since 1976. (The spike in Oklahoma’s murder rate in 1995 is due to the bombings of the Alfred P. Murrah Federal Building in Oklahoma City). The bivariate correlation table that follows the graph (Table 4) shows that, once again, the relationship between the death penalty and the crime rate in this case study is statistically significant. Like the two preceding case studies, though, the relationship was in the opposite nature of the one hypothesized.
Graph 4 shows the relationship between the crime rates of Oklahoma and Pennsylvania each year from 1976-2000. Contrary to hypothesis 2, Oklahoma’s more frequent use of the death penalty has not had a strong deterrent effect in lowering the state’s murder rate.

Table 4

<table>
<thead>
<tr>
<th>Death Penalty?</th>
<th>Pearson Correlation</th>
<th>Crime Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>-0.667</strong></td>
<td><strong>-</strong></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>STATISTICALLY SIGNIFICANT!</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

Like the two previous case studies, this relationship was statistically significant, but not in the direction hypothesized. Hypothesis 2 suggested that Oklahoma would have a lower crime rate than Pennsylvania, but this was clearly not the case.
The basic testing for hypothesis 2 compared the mean 2004 crime rates of the nine states that frequently use their death penalty statutes and the 41 states that either use their death penalty statute infrequently or do not have a statute. The mean 2004 crime rates for states that frequently use the death penalty was 6.32 murders per 100,000 inhabitants. The mean 2004 crime rates for states that do not frequently use the death penalty, however, was 4.08 murders per 100,000 inhabitants. This finding also is contrary to the hypothesis and to the deterrence theory. The significance of this relationship was .135, though, showing that it is not statistically significant.

DISCUSSION

Neither hypothesis held up under testing. Both the Texas/Michigan test and the Virginia/Massachusetts test rejected hypothesis 1 because the relationship between the crime rates was either statistically insignificant or significant in the opposite direction of that hypothesized. Comparing the crime rate means of all states currently with and without the death penalty in 1970 (under moratorium) and 2000 confirmed the results of the first two tests. Both the Missouri/Michigan test and the Oklahoma/Pennsylvania test rejected hypothesis 2. These two tests produced results that were indeed statistically significant, but in both cases the state that was hypothesized to have a lower crime rate actually experienced rates higher than the other state. States that use the death penalty, on average, once per year, do not have lower murder rates than those who do not use the death penalty often or not at all. These six tests all confirm that the theory of deterrence does not hold up under testing. In each case, the state or group of states that, under the theory of deterrence, would have a lower crime rate, actually had one higher than the
state or group they were being compared to. One interesting finding was that, in 1970, the mean crime rate of those states who would subsequently implement a death penalty statute in 1976 or after was nearly twice that of those states that chose not to implement a statute. This suggests a justification for those states to implement the penalty as a means of deterrence.

CONCLUSION

Ernest Van Den Haag states that any judicial sanction must either be for the purpose of doing justice or deterring others. This study suggests that capital punishment does not fulfill the requirement of deterring others. Indeed, those states which implemented the death penalty following the lifting of the moratorium still experienced higher murder rates in 2000. However, the gap between the two groups had closed somewhat, an interesting point of argument. Statistical analysis, though, showed that the difference was not significant. Further, those states that actually carried out executions frequently experienced higher rates of murder than both those states with a death penalty statute but infrequent use and those states with no death penalty at all. Further research will need to be conducted, however, to determine whether or not capital punishment fulfills the requirement of “doing justice”.

A possibility for future research would be to follow David P. Phillips’s example of studying crime rates on a weekly basis to determine the short-term deterrent effect of an execution. A study such as this would require a much longer time period that this study allowed and would require in-depth analysis of the data. Until a more recent and
geographically diverse study like Phillips’s is performed, though, most contemporary research will continue to refute the argument that the death penalty deters crime.

REFERENCES
   <http://links.jstor.org/sici?sici=00434078%28199212%2945%3A4%3C1037%3ATSATDP%3E2.0.CO%3B2-R>.


I pledge that I have neither given nor received unauthorized assistance during the completion of this work.