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AN EMPIRICAL EXAMINATION OF MICHIGAN'S  
FELONY FIREARM STATUTE

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David M. Grant

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AN EMPIRICAL EXAMINATION OF MICHIGAN'S  
FELONY FIREARM STATUTE

By

David M. Grant

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## ABSTRACT

### AN EMPIRICAL EXAMINATION OF MICHIGAN'S FELONY FIREARM STATUTE

By

David M. Grant

To evaluate the application of Michigan's felony firearm statute (Gun Law) mandating a two-year consecutive term of imprisonment for the commission of a felony with a firearm, a sample of 456 offenders who were convicted and sentenced during 1977 for offenses involving a theft from a person and found to have been eligible for prosecution under the Gun Law was drawn from a larger existing statewide disproportionate stratified random sample. Employing Multiple Classification Analysis under a correlational design eight case attributes (the offender's race, criminal history, employment status, his relationship with the victim, as well as, victim injury, the geographic location and caseload of the court, the number of other charges filed, and the plea entered to the initiating offense) were found to have been influential ( $R^2=0.224$ ) in the decision to prosecute under the Gun Law. Using a static-group comparison design to examine sentencing patterns, it was found that judges had not compensated for the additional Gun Law penalty when imposing the penalty for the offender's initiating offense. Finally, while a descriptive analysis of the sentences imposed for conviction under the Gun Law revealed that the judiciary had not universally complied with the mandates of the statute, the overall findings suggested that due to inconsistency in the prosecution of technically eligible offenders the Gun Law has not increased the certainty and severity by which offenders employing firearms have been punished.

## TABLE OF CONTENTS

LIST OF TABLES . . . . .	iv
Chapter	
I. THE PROBLEM . . . . .	1
A Definition of the Problem and the Need for Research . . . . .	1
The Rationale Supporting Mandatory Firearm Legislation . . . . .	5
Purpose and Scope of the Present Study . . . . .	12
General Research Questions . . . . .	12
Overview of the Study . . . . .	15
II. REVIEW OF LITERATURE . . . . .	19
The Use of Mandatory Firearm Statutes . . . . .	20
The Massachusetts statute . . . . .	20
The Michigan Gun Law . . . . .	26
Potential Gun Law Predictors . . . . .	35
Factors affecting prosecutorial discretion . . . . .	36
Factors affecting judicial discretion . . . . .	47
Additionally proposed Gun Law predictors . . . . .	57
Conclusion . . . . .	63
Chapter Summary . . . . .	64
III. RESEARCH METHODOLOGY . . . . .	70
The Sample . . . . .	71
Data Analysis . . . . .	81
Data Analysis: phase 1 . . . . .	82
Data Analysis: phase 2 . . . . .	84
Factors associated with the prosecution of Gun Law offenders . . . . .	84
Factors associated with the conviction of Gun Law offenders . . . . .	93
Data Analysis: phase 3 . . . . .	94
Analysis of primary offense sentence types . . . . .	95
Analysis of primary offense sentence length . . . . .	96
Analysis of sentences imposed for the Gun Law conviction . . . . .	100
Data Analysis: phase 4 . . . . .	102
Chapter Summary . . . . .	103

## Chapter

IV. RESULTS . . . . .	109
Results: Phase 1 . . . . .	109
Results: Phase 2 . . . . .	110
The decision to prosecute . . . . .	111
Descriptive statistics . . . . .	111
Results of the bivariate analysis . . . . .	117
Results of the multivariate analysis . . . . .	130
Results: Phase 3 . . . . .	142
The analysis of primary offense sentence types according to Gun Law conviction . . . . .	143
The effect of a Gun Law conviction upon the length of the primary sentence . . . . .	147
The sentences imposed for Gun Law convictions . . . . .	150
Results: Phase 4 . . . . .	153
Chapter Summary . . . . .	156
V. CONCLUSION . . . . .	162
Summary and Conclusions . . . . .	162
Discussion . . . . .	176
Implications for Future Research . . . . .	189
APPENDIX . . . . .	193
SELECTED BIBLIOGRAPHY . . . . .	198

## LIST OF TABLES

1. The Frequency and Types of Offenses Included in the Overall Sample . . . . .	74
2. The Distribution of the Selected Overall Sample within each Weight Stratum . . . . .	76
3. The Frequency and Types of Offenses Included in the "Eligible Offender" Subsample . . . . .	79
4. The Distribution of Cases in the "Eligible Offender" Subsample within each Weight Stratum . . . . .	80
5. Phase Two Independent Variables: Classification, Name and Values . . . . .	88
6. The Research Design, Sample, and Variables Utilized in each Analytical Phase . . . . .	105
7. The Absolute and Relative Frequencies of the Offender Variables for the Cases Included in the Eligible Offender Sample (N=456) . . . . .	113
8. The Absolute and Relative Frequencies of the Offense Variables for the Cases Included in the Eligible Offender Sample (N=456). . . . .	115
9. The Absolute and Relative Frequencies of the Judicial Variables for the Cases Included in the Eligible Offender Sample (N=456) . . . . .	116
10. Gun Law Prosecution by the Offender's Age (N=456) . . . . .	118
11. Gun Law Prosecution by the Offender's Sex (N=456) . . . . .	119
12. Gun Law Prosecution by the Offender's Race (N=452) . . . . .	120
13. Gun Law Prosecution by the Offender's Criminal History (N=456) . . . . .	121
14. Gun Law Prosecution by the Offender's Type of Occupation (N=438) . . . . .	122
15. Gun Law Prosecution by the Offender's Employment Status (N=448) . . . . .	122
16. Gun Law Prosecution by Offense Severity (N=456) . . . . .	123
17. Prosecution by Offender/Victim Relationship (N=412). . . . .	124
18. Gun Law Prosecution by Injury to the Victim (N=424). . . . .	125
19. Gun Law Prosecution by the Number of Dispositions (N=441). . . . .	126
20. Gun Law Prosecution According to the Type of Defense Attorney (N=442) . . . . .	127
21. Gun Law Prosecution by the Primary Offense Conviction Method (N=447) . . . . .	128
22. Gun Law Prosecution by the Location and/or Caseload of the Court (N=456) . . . . .	129
23. The Absolute and Relative Frequencies of the Cases Included in the Multivariate Analysis of the Reduced Eligible Offender Sample Across All Independent Variables (N=336) . . . . .	131

24.	The Percentage of Offenders Prosecuted Under the Gun Law Within Each Variable Category Both Before and After Adjusting for the Effects of the Remaining Variables . . . .	134
25.	The Rank Order of the Examined Variables According to Their Individual Ability to Explain the Variation in the Decision to Prosecute Gun Law Offenders as Expressed by the Multiple Classification Analysis Beta Value Corresponding to Each Variable . . . . .	138
26.	The Adjusted Multiple Classification Category Coefficients and Adjusted Category Means of the Eight Significant Predictors . . . . .	140
27.	The Types of Sentences for High Severity Primary Offenses by Gun Law Conviction (N=392). . . . .	144
28.	The Types of Sentences for Low Severity Primary Offenses by Gun Law Conviction (N=64) . . . . .	144
29.	The Mean Sentencing Proportion of Incarcerated Offenders Deemed Eligible for Prosecution under the Gun Law According to the Presence or Absence of a Gun Law Conviction (N=422) . . . . .	148
30.	The Mean Minimum Term of the Incarcerated Offenders Convicted of Armed Robbery and Deemed Eligible for Prosecution under the Gun Law According to the Presence or Absence of a Gun Law Conviction (N=329) . . . . .	149
31.	The Absolute and Relative Frequencies of the Types of Sentences Applied to Gun Law Convictions (N=232). . . . .	151
32.	The Absolute and Relative Frequencies Describing How the Gun Law Sentence was to be Served for Offenders Sentenced to Terms of Incarceration on both the Primary Offense and the Gun Law . . . . .	153
33.	Weapon Use According to Offense Date (N=2,206) . . . . .	154
34.	Current Variable Categories According to Their Originally Collected Value Categories and Frequencies for Those Cases Included in the Eligible Offender Subsample (N=456) . . . . .	193

## CHAPTER I

### THE PROBLEM

#### A Definition of the Problem and the Need for Research

The United States Department of Justice has reported that between 1968 and 1977 the incident of violent crime (being murder, forcible rape, robbery and aggravated assault) increased at the alarming rate of 51.0%.<sup>1</sup> In the same report, the results of a nationwide public opinion survey were also cited. These results indicated that 83% of the survey's respondents were in favor of requiring a mandatory prison sentence for all persons using a firearm in a crime.<sup>2</sup> Responding to this increase in violent crime and possible to public sentiment, numerous states have enacted criminal sanctions against persons who possess a firearm during the commission of a crime. These states include: Alaska, Florida, Missouri, Nebraska, Kansas, Connecticut, Nevada, California and Michigan. In a similar vein, Massachusetts enacted legislation prohibiting the mere possession of an unlicensed firearm. The common thread in all the statutes is that they prescribe a specific or mandatory term of incarceration for their violation.<sup>3</sup>

The basis for employing such mandatory penalties was founded upon a simplistic concept of deterrence. The concept states that potential violent offenders would elect not to use a firearm (or possess an unlicensed one) when faced with a harsh and certain punishment for such

an act. As presented by their proponents, the statutes appeared to be a panacea for reducing the occurrence of violent crime. Unfortunately, and perhaps prematurely, the statutes have since been publicly deemed failures by both the authors of empirical studies that have analyzed the laws as well as the news media. For example, after the Michigan statute had been in effect about 15 months, a Kalamazoo newspaper reported the following in an April 6, 1978 story entitled: "State Gun Law Proving Ineffective Deterrent."

A highly touted state law slapping an additional two years onto the sentence of persons convicted of committing a felony with a firearm has not been the deterrent its backers hoped it would be.

. . . a recent study by the State Department of Corrections comparing crime figures before and after the law went into effect two years ago indicates that about the same proportion of felons use guns now as they did before. 'These figures indicate simply that the two-year mandatory law has not worked to deter criminals from using guns,' William Kime the department's deputy director said Wednesday.<sup>4</sup>

Of course, this was not the last word on the matter. It was only the beginning of a controversy; for in less than a week, the proponents of the Michigan statute had their view expressed. This is evidenced in the following quotation drawn from an editorial appearing in the April 11, 1978 edition of the State Journal.

Now, a year after the law took effect, both sides have produced studies purporting to show: (1) That the new law is not working. (2) That the law is working.

The State Department of Corrections study cited interviews with about 500 felons convicted before the law was enacted and another 500 convicted after the law went into effect in January of 1977. Department officials said the study showed the new law had little impact on the use of guns in the commission of felonies. In fact, the state survey indicated the percentage of crimes committed with firearms among those convicted and sentenced for felonies was slightly higher than before the law took effect. The before and after interviews were conducted during specific test periods.

Wayne County Prosecutor William Cahalan immediately responded with his own survey claiming the new law has

significantly reduced not only the general crime level in Detroit, but that crimes in which guns were used dropped 24.5 percent since it was enacted.

. . . So how do the experts manage to come up with exactly opposite conclusions? One apparent reason is that they used different measuring sticks. The state survey was statewide, involving convicted felons who had been sentenced. The Cahalan study involved Detroit-Wayne County only and, as the prosecutor acknowledged, did not include comparative statistics from earlier years on gun crimes.

Another clue is that the surveys involved agencies which are on opposite sides of the issue. The state department opposed the two year gun law from the beginning. Cahalan was one of the law's chief proponents when it was being pushed through the legislature.

. . . Before anyone starts a movement to repeal the new law, we suggest that it be given a more thorough test, both of time and of research. Research would best be conducted by an agency with no special axe to grind.<sup>5</sup>

From these newspaper articles, we have seen that the public controversy surrounding legislation does not necessarily end upon its enactment; rather the enactment may sometimes foster it. In the current instance, legislation was passed in hopes of providing a means to counteract an increase in the rate of violent crime. This was followed by evaluations of the law by proponents and opponents alike, resulting in each having found evidence supporting their respective opinions. The article above provides a valuable insight into the issue by stating that additional research is necessary due to flaws in the previous examinations and the contamination of their findings from the biases of their authors.

In following sections of the current study, similar concerns will be addressed; so at the time of this writing, the issues surrounding the statutes remain unclear. These issues do require additional research for their clarification. This clarification would be useful to any legislator currently contemplating the enactment of similar legislation within his or her own state. It is also needed (as hinted to in the second article) by legislators who may someday face the question of repealing their



existing firearm legislation.

The goal of the current study is to provide, through a reexamination of the issues, additional information needed to evaluate the use of this type of legislation. The scope of this reexamination will be limited to an investigation of the Michigan statute discussed above, focusing on the question of how the law has been applied. The statute itself reads as follows:

(1) A person who carries or has in his possession a firearm at the time he commits or attempts to commit a felony, except the violation of section 227 or section 227a, is guilty of a felony, and shall be imprisoned for 2 years. Upon a second conviction under this section, the person shall be imprisoned for 5 years. Upon a third or subsequent conviction under this section, the person shall be imprisoned for 10 years.

(2) The term of imprisonment prescribed by this section shall be in addition to the sentence imposed for the conviction of the felony or the attempt to commit the felony, and shall be served consecutively with and preceding any term of imprisonment imposed for the conviction of the felony or attempt to commit the felony.

(3) The term of imprisonment imposed under this section shall not be suspended. The person subject to the sentence mandated by this section shall not be eligible for parole or probation during the mandatory term imposed pursuant to subsection (1).<sup>6</sup>

As formulated, the statute mandates a fixed term of imprisonment served consecutively, with no possibility of parole, probation or suspended sentence for its violation. Technically it is to be applied to all offenders who commit a felony while possessing a firearm (excluding those cases founded solely upon the carrying of a concealed weapon, sections 227 and 227a). The importance of merely examining the actual application of the statute is most easily clarified by an understanding of the legislative intent or rationale given for its enactment. An exploration of this rationale is the subject of the following section.

The Rationale Supporting Mandatory  
Firearm Legislation

The key factor in determining the statute's rationale is the fact that it mandates a fixed penalty. This aspect makes the statute an anomaly within the Michigan Penal Code, for ordinarily the court operates under an indeterminate sentencing system which does not prescribe a set minimum term of incarceration. The establishment of the minimum term is, instead, left to the discretion of the sentencing judge (within certain statutory restrictions).

What has caused this departure from the sentencing norm otherwise established by Michigan law? It is this author's opinion, as well as others, that it is perhaps a reaction, on one hand to the increasing frequency of violent crime, and on the other, a return to a more traditional viewpoint concerning the deterrence of criminal behavior. This traditional viewpoint of deterrence is clearly articulated by Zimring and Hawkins in their work entitled Deterrence:

The theory of simple deterrence is that threats can reduce crime by causing a change of heart, induced by the unpleasantness of the specific consequences threatened. . . . Many individuals who are tempted by a particular form of threatened behavior will, according to this theory, refrain from committing the offense because the pleasure they might obtain is more than offset by the risk of great unpleasantness communicated by a legal threat.<sup>7</sup>

As expressed, this theory espouses a fundamental principle that behavior will be avoided which results in more pain for the actor than the possible pleasure to be derived.

Although simplistic in nature, this theory has continued to be cited by recent authors in their arguments concerning the failure of our present justice system to deter violent crime. For example, Petersilia and

Greenwood state in their recent work:

. . . there is mounting public distress over not only the high rate of violent crimes, but also over the rise in property crimes. Encouraged by the mass media, the public has begun to blame judicial leniency for the high level of such crime. Many citizens believe that a 'get tough' policy in the courtroom would (1) help protect them against serious criminals by imprisoning such persons for longer periods, and (2) deter other persons from crime because of the harsher sentences they would expect to receive if caught. This notion exists not only in the popular realm but it is also advanced by respected law enforcement personnel. For instance, former U. S. Attorney General Edward H. Levi recently cited the failure of the courts to imprison enough criminals as a primary reason for rising crime rates. . . . Because of the low probability of incarceration after conviction, many experts believe that the growth of crime can be substantially explained by the fact that, given our present use of sanctions, 'crime pays'. Therefore, an object of any new sentencing scheme must be to raise the 'costs' of committing crime. If offenders were certain that they would surely receive a prison sentence if convicted for a serious offense, some might judge the penalty too great to risk. In fact, every empirical study relating the certainty of imprisonment to the crime rate has shown that the higher the probability of imprisonment for a major offense, the lower the rate for that offense.<sup>8</sup>

Aside from reiterating the traditional view of deterrence, Petersilia and Greenwood have also set forth another hoped for result of punishment, reducing actual crime rates by incarcerating a greater number of offenders and thereby eliminating repeated criminal behavior for the period of time the offender is imprisoned. This "incapacitation" theory has also been empirically explored. The results of such studies indicate a range of possible deterrent effects. A study by Shinnar and Shinnar suggested that violent crime could be reduced by 80% if every offender convicted of a violent crime were to be incarcerated for a minimum of five years.<sup>9</sup> On the other end of the spectrum, Van Dine, Dinitz and Conrad's study suggested that only 4% of the violent crime could be deterred under this premise.<sup>10</sup> Furthermore, Petersilia and Greenwood's own research into this question indicated that a 10% reduction in violent crime may be gained if all

offenders who committed such an offense were sentenced to a mandatory minimum term of five years.<sup>11</sup>

It should be noted that in these views of deterrence, the underlying necessary condition for their proper function is that the penalty is both severe and certain. This requirement is evident, for if the would-be offender is to be deterred from the commission of an offense by the penalty associated with it, be it harsh or lenient, the person must have a reasonable expectation of receiving that penalty.

The use of these concepts of deterrence as a foundation for mandatory firearm penalties has frequently been expressed. For example, in presenting the rationale for the introduction of the anti-firearm law in Massachusetts, its drafters argued that:

'Trial courts carry some of the responsibility for fostering the vicious cycle of crime and fear, especially by the way they deal with cases involving illegal possession of firearms . . . the weapon-carrying offender is too often rapidly back on the street - a scenario for disaster. The Massachusetts law is designed to remove the temptation to carry guns and thereby greatly reduce the chance that they will be used.<sup>12</sup>

Substantiating the view that felony firearm statutes are in part a reaction to the increase of violent crime, Senator Carstens of the Nebraska Unicameral made the following statement in support of his introduction of the Nebraska Gun Law to that State's legislative body:

The bill as I have mentioned creates a new crime, one which we haven't had before. I think this is probably important in that it's the only way we are ever going to be able to get at this tremendous increase in the use of weapons, the assault committed with weapons and the constant daytime, night time, any old time and place robberies, assaults, burglaries, rapes and crimes of all kinds where weapons are used for fear and intimidation is the only way to effectively get at this problem. . . . I have had a number of letters from our district court judges who are strongly in favor of this bill. Many prosecuting attorneys feel and all police officials feel that they need a bill of this type to cut down the use of weapons and to make it a crime which is getting to be a problem in scope which is almost beyond

imagination. It is to give them another weapon in their fight against these crimes.<sup>13</sup>

Following their predecessors, the proponents of the mandatory firearm penalty in Michigan have offered the traditional deterrence theory as the supporting rationale for their statute. They were presented in the Detroit Free Press, in a 1978 article reviewing the effectiveness of the Michigan statute, as taking the following stance regarding the law.

Wayne County Prosecutor William Callan and other supporters of the law claimed that criminals would be discouraged from using guns once they knew that they would have to serve at least two years in prison upon conviction.<sup>14</sup>

Once again, these statements present the central theme of deterring offenders by implementing harsh and certain penalties. For the laws are touted by their proponents as means of reducing the occurrence of violent crime through the application of harsh and certain penalties. Furthermore, they offer continued safety by eliminating the threat the offender poses for society by isolating offenders from society.

The inherent weakness of these arguments, as noted earlier, is their assumption concerning the certainty of the offender receiving punishment. According to both authoritative and empirical examinations of sentencing practices, this assumption may not be valid, for this literature is replete with admonitions of the inconsistencies or disparities present in criminal sentencing. Marvin Frankel addresses the causes of sentencing disparity in his book Criminal Sentencing: Law Without Order:

. . . I make the point that our legislators have not done the most rudimentary job of enacting meaningful sentencing 'laws' when they have neglected even to sketch democratically determined statements of basic purpose. Left at large, wandering in deserts of uncharted discretion, the judges suit their own value systems insofar as they think about the problem at all.

It may be supposed by many that the broad discretion of the sentencing judge is actually limited by the discipline of the

profession, including a body of criteria for placing a given case within the statutory range of up to 'not more than' life in prison. The supposition would unfortunately, be without substantial basis. There are, to be sure, some vague species of curbstone notions - gravity of the particular offense, defendant's prior record, age, background, etc. - that are thought to serve as guides in the particular case. But there is no agreement at all among the sentencers as to what the relevant criteria are or what their relative importance may be. Again, the point is made in all its stark horror by the compelling evidence that widely unequal sentences are imposed every day in great numbers for crimes and criminals not essentially distinguishable from each other.<sup>15</sup>

In these statements, Frankel reveals several issues regarding the causes of disparity in sentencing. First, legislators have not provided sufficient information in their construction of penal codes to offer guidance to the judiciary in the determination of appropriate penalties. This lack of guidance has, in effect, given the judiciary broad discretion. Secondly, he notes that once granted this discretion, the judiciary has not been able to guide itself to the extent that disparity in sentencing is reduced to a tolerable level.

Foreseeing these problems, the drafters of the anti-firearm legislation discussed (including Michigan's) have formulated their laws to incorporate specific terms of imprisonment as the prescribed penalty for their violation. This was, indeed an appropriate action on their part considering the requirements of the deterrent rationales used to substantiate their enactment. As previously mentioned, the necessary condition for the proper functioning of both theories is that the punishment must be harsh and certain; by providing exact penalties, the legislators have taken strides toward meeting these criteria through a reduction in the discretion exercised by the judiciary, which as Frankel noted, has fostered sentencing inequalities.

Although the harshness and certainty requirements of the laws may

have been heightened by a reduction in judicial sentencing discretion, the achievement of these requirements is limited only to those offenders who have been convicted under the mandatory statute. As several authors have noted, mandatory sentencing laws may not, in themselves, provide an absolute assurance that all offenders will be appropriately punished; for, while such laws may limit the discretion of judges and parole administrators, they have, at the same time, left the discretion of the prosecutor intact. Realizing that these statutes have left the discretionary power of the prosecutor untouched, these authors have speculated that the responsibility for meeting the deterrent requirements of the laws may have shifted away from the judiciary into the hands of the prosecutor, whose decisions are even less visible and less susceptible to regulation than those of the judiciary. As Albert Alschuler explains:

Although prosecutors' offices, in practice, have probably had a greater influence on sentencing than any of the other agencies (including state legislatures), the call for sentencing reform has largely ignored this extensive prosecutorial power. In my view, fixed and presumptive sentencing schemes of the sort commonly advocated today. . . are unlikely to achieve their objectives so long as they leave the prosecutor's power to formulate charges and to bargain for guilty pleas unchecked. Indeed, this sort of reform is likely to produce its antithesis a system every bit as lawless as the current sentencing regime, in which discretion is concentrated in an inappropriate agency, and in which the benefits of this discretion are made available only to defendants who sacrifice their constitutional rights.<sup>16</sup>

If theorists such as Alschuler are correct in their assessment of the systemic consequences of mandatory sentencing laws, it is conceivable that the burden for maintaining the functional integrity of these laws would fall not only upon the judiciary, but upon the prosecutors as well. It is, therefore, assumed that to properly evaluate the utility of the Michigan firearm statute, one must examine both the level of judicial compliance with its sentencing provisions and the uniformity by which it has

been applied to violators by prosecuting attorneys; for if either actor falters in his fulfillment of the statute's functional requirements, its deterrent quality may be violated. If such a failure were to have existed, it is likely that the potential cause for the publicly reported failure of the Michigan statute to deter violent crime, may be traced to the application of the law, and not to the viability of the deterrent rationale supporting the law, since it was not allowed to function as the legislature had initially intended.

Although such a research strategy and theory might easily explain away any discovered failure of the law by simply showing that its general or traditional deterrent rationale was compromised, such a conclusion should be carefully guarded, as rival conclusions might also prove noteworthy. For example, even though the general deterrent effect of the statute might be compromised by a lack of uniformity in the law's application, a pattern of selective enforcement may still produce a valuable, albeit limited, incapacitation effect. What is suggested here, is that in their effort to individualize or tailor the penalty to the character of the offender and the offense, the courts and the prosecutors may, in effect, filter the eligible cases, so that only those who pose the greatest threat of committing future violent crimes are prosecuted and convicted of violating the statute and removed from society. An examination of the characteristics of those cases in which the law is applied could provide a means of substantiating this concept. The current study will provide an examination which is open to such concerns.



Purpose and Scope of the  
Present Study

The purpose of the present study will be to evaluate the application of the Michigan Felony Firearm Statute (hereinafter referred to as the Gun Law) by prosecutors and courts throughout the State, and its impact upon the sentences received by offenders. Furthermore, the frequency in the use of weapons by convicted offenders both before and after the law was enacted will also be studied. This investigation will attempt to overcome weaknesses present in the designs of preceding studies of the Gun Law. These deficiencies (discussed in Chapter 2) revolve around two central themes, inadequate sampling and inadequate information concerning those offenders who were subject to prosecution under the law, but not prosecuted. The design of the present study will counter these deficiencies by employing an analysis of a broader data base which is representative of the entire state. The study will not, however, directly address the actual deterrent effects of the law due to the problems inherent in attempting to operationalize and measure non-existent behaviors. This issue will instead be addressed on a theoretical level alone. The empirical analysis will be focused on the examination of four general research questions.

General Research Questions

To provide a thorough examination of the Gun Law's use in Michigan, four research questions will be addressed. In this section, the questions are stated in general terms; they are restated in the form of testable hypotheses in Chapter 3. Previous research pertaining to the law has indicated that it has not always been applied to those offenders who have

violated the statute; however, due to deficiencies in their designs, their findings require further investigation. Therefore, the initial research question to be addressed is:

1. How often has the Gun Law been applied to those offenders who have committed or attempted to commit a felony while possessing a firearm?

If the findings of prior research are confirmed and it is found that the Gun Law has not been universally applied to offenders deemed eligible for such prosecution, the next research question will be addressed. This second general research question is:

2. What are the circumstances associated with the prosecution and conviction of offenders under the Gun Law?

In the context of this question, the term circumstances include those characteristics of the offender, the offense, and the adjudication of the criminal case which have been established by either prior research or theoretical considerations, as possibly being influential in the decision making associated with the prosecution and adjudication of offenders. Although the rationale for their inclusion is elaborated in the next chapter, thirteen characteristics are to be included in the analysis of this research question. The offender characteristics include: age, sex, race, prior criminal record, type of occupation, and employment status. The offense characteristics included are: the severity of the offense, the relationship between the victim and the offender, the degree of injury received by the victim, and the total number of dispositions. The characteristics of the judicial processing of the case which are to be analyzed include: the type of defense counsel, the method of conviction, and the geographic location of the court. To provide a comprehensive answer to this question, each of the thirteen characteristics will be individually associated with the use of the Gun Law; afterwhich, their

relative influence will be determined through a multivariate analysis. Following this phase of the examination, the third research question will be considered.

3. What effect does a Gun Law conviction have upon the type and length of sentence an offender receives?

The purpose of this question is to provide an evaluation of the Gun Law's impact upon the specific types and lengths of sentences received by those offenders convicted under the statute and those who were not, and to gauge the level of judicial compliance with the sentencing provisions included in the law. If the results of prior research regarding the Gun Law are substantiated, it is anticipated that adjustments have been made in the sentencing of offenders in order to compensate for a concomitant Gun Law conviction. After this analysis has been performed, the final question concerning the frequency of weapon use will be addressed.

4. Was there a change associated with the enactment of the Gun Law in the type and frequency of weapons possessed during the commission of felony offenses as exhibited by convicted offenders?

The sole purpose of this question is to reexamine a previous conclusion concerning the use of weapons by convicted offenders made in a study performed by the Michigan Department of Corrections. As noted earlier in this chapter, the results of that study indicated that the law had not had an impact upon the use of firearms in the commission of felonies. Although any change in the use of weapons determined solely by convicted offenders would not be generalizable to all offenses committed, the question needs to be addressed as there were deficiencies present in the design of that earlier study which places even this limited conclusion in question.

The derivation of these research questions can be traced to aspects

of the rationales used in enacting the Gun Law. The first and third research questions are both directed toward evaluating the fulfillment of the necessary conditions underlying the effectiveness of the law, the certainty and severity of the law's application. The second question primarily addresses the issues surrounding the selective application of the Gun Law. The fourth question is merely the reexamination of those previous findings concerning the deterrent effect of the law, as exhibited by convicted offenders.

### Overview of the Study

Having presented the problem and purpose of the current study, a review of relevant literature is presented in the next chapter (Chapter 2). This review is divided into two sections. The initial section is restricted to a presentation of prior studies of either the Michigan Gun Law or statutes enacted in other states. The second section is limited to a discussion of those factors postulated as being influential in the decision-making process associated with the prosecution and sentencing of offenders (i.e., the determination of the characteristics included in the analysis of the second research question above).

Chapter 3 is devoted to the presentation of the current study's research design and methodology. It is basically a blueprint for how this study will proceed to answer the four general research questions stated above. Initially a description of the sample and data is provided; after which, the chapter is divided into four phases corresponding to the given research questions. Each phase includes a description of the variables and data employed, as well as the statistical hypotheses and tests used to perform the analysis of that question. The results of

these analysis are presented in Chapter 4. Again the findings are discussed in relation to the specific research question which they address in Chapter 5.

FOOTNOTES: CHAPTER I

<sup>1</sup>Timothy J. Flanagan, Michael J. Hindeland and Michael R. Gottfredson, eds., Sourcebook of Criminal Justice Statistics - 1979, U. S. Law Enforcement Assistance Administration, National Criminal Justice Information and Statistics Service (Washington, D.C.: U.S. Government Printing Office, 1980), p. 458.

<sup>2</sup>Ibid., p. 304

<sup>3</sup>For specific comparisons of these statutes the reader is referred to the respective state statutes; 1) Alaska Stat., sec. 11.15.295; 2) Fla. Stat., sec. 775.087(2); 3) Missouri Stat., sec. 559.225; 4) Nebr. Rev. Stat., sec. 28-1011-21; 5) Kan. Stat. Ann., sec. 21-4618; 6) Conn. P. A., sec. 75-380; 7) Nev. Rev. Stat., sec. 193.165; 8) Cal. Penal Code, sec. 12022.5; 9) Mich. Comp. Laws Ann., sec. 750.227b; 10) Mass. Gen. Laws Ann., Chp. 269, sec. 10(d)..

<sup>4</sup>"State Gun Laws Proving Ineffective Deterrent," Kalamazoo (Mich.) Gazette, 6 April 1978.

<sup>5</sup>"Our Opinion - Gun Law Studies," State Journal (Lansing, Mich.), 11 April 1978.

<sup>6</sup>Mich. Comp. Laws Ann., sec. 750.227(b).

<sup>7</sup>Franklin E. Zimring and Gordon J. Hawkins, Deterrence: The Legal Threat in Crime Control (Chicago: University of Chicago Press, 1973), p. 75.

<sup>8</sup>Joan Petersilia and Peter W. Greenwood, "Mandatory Prison Sentences: Their Projected Effects on Crime and Prison Population," Journal of Criminal Law and Criminology, 69(1978): 604-5.

<sup>9</sup>Shlomo Shinnar and Reuel Shinnar, "The Effects of the Criminal Justice System on the Control of Crime: A Quantitative Approach," Law and Society Review, 9(1975): 601.

<sup>10</sup>Stephan Van Dine, Simon Dinitz and John Conrad, "The Incapacitation of the Dangerous Offender: A Statistical Experiment," Journal of Research in Crime and Delinquency, 14(1977): 31.

<sup>11</sup>Joan Petersilia and Peter W. Greenwood, "Mandatory Prison Sentences," Journal of Criminal Law and Criminology, 69(1978): 609.

<sup>12</sup>Matthew G. Yeager, Do Mandatory Prison Sentences for Handgun Offenders Curb Violent Crime?, 2nd ed. (Washington, D.C.: U. S. Conference of Mayors, 1976), p. 3.

<sup>13</sup>Hearings before the Nebraska State Legislature, 80th sess., 7 March 1969, Legislative Minutes, p. 575.

<sup>14</sup>"2 Year Jail Risk is not Reducing Crimes with Guns," Detroit Free Press, 6 April 1978.

<sup>15</sup>Marvin E. Frankel, Criminal Sentences: Law Without Order (New York: Hill and Wang, 1973), pp. 7-8.

<sup>16</sup>Albert W. Alschuler, "Sentencing Reform and Prosecutorial Power: A Critique of Recent Proposals for 'Fixed' and 'Presumptive' Sentencing," University of Pennsylvania Law Review, 126(January 1978): 550-51.

## CHAPTER II

### REVIEW OF LITERATURE

The purpose of this chapter is to present information from prior studies relevant to the research tasks at hand. As previously mentioned, one objective of the current study is to reexamine the application of the Gun Law in Michigan, while correcting for deficiencies present in past studies that have addressed the same or similar question. To perform this research task, a discussion of the procedures and results of these similar past studies is required, not only for establishing what, if any, deficiencies are present, but also to establish if the results of the current study are consistent or inconsistent with those in the past, once any deficiencies are corrected.

Another previously stated objective of the current study is to determine a set of factors which may be useful in predicting when the Gun Law will be applied to offenders in Michigan. To achieve this goal, a set of test predictors will be needed for analysis. A review of past studies which have investigated factors influential in the prosecution and sentencing of offenders is presented to assist in establishing the test factors to be employed in the current study.

Since each of the studies reviewed supply information necessary to the fulfillment of a specific research objective, the current chapter is divided into two sections corresponding to the aforementioned objectives. The first section is a presentation of empirical examinations relating



to the application of mandatory firearm statutes. The second section is a discussion of those factors previously found to influence prosecutorial and judicial decision making, and their selection as possible predictors for the use of the Gun Law.

### The Use of Mandatory Firearm Statutes

In this section, three studies concerned primarily with the judicial reaction and application of mandatory firearm statutes are reviewed. The first study reviewed is an analysis of the impact of the mandatory statute adopted by the State of Massachusetts upon the prosecution and sentencing of firearm possessors within the City of Boston. Although the Massachusetts statute is not identically analogous to the Michigan Gun Law, as it pertains to the mere possession of an unlicensed firearm and not the commission of a felony with a firearm, the study is one of the few examinations performed thus far in the realm of mandatory prohibitions against firearms. The remaining two studies reviewed specifically examine the Michigan statute currently under study. The review of these two studies will not only present the conclusions of past examinations of the Gun Law, but will also present the deficiencies discovered in their designs.

### The Massachusetts Statute

In 1977 James Beha, II authored an analysis of the Massachusetts statute mandating a one year minimum sentence for carrying a firearm without an authorizing permit.<sup>1</sup> This law took effect on April 1, 1975, replacing a previous statute concerning the same offense, but applying a penalty of either a fine not to exceed fifty dollars, or imprisonment

for not more than two and one half years. Under the new "Bartley-Fox" law, the first-time offender would serve at least a minimum one year term of incarceration without the possibility for parole or probation. The purpose of this comprehensive study was to examine the new law's impact upon the criminal justice system as well as on the actual frequency of the use of firearms in violent crime within the City of Boston. To achieve these goals, the study employed three primary sources of data: police reports for the three years prior to the law's enactment and the two years after, the case histories of 615 offenders processed before the law (between April 1st and October 31st), and 467 cases during the same six month period after the law's enactment, and interviews with attorneys and court personnel.

To analyze the application of the law by the courts, Beha used the prelaw sample as an example of how the justice system functioned with discretionary powers and the postlaw sample to show how it functioned without discretion. An important finding from these data was that in both samples, the prosecution of violent crime did usually not include an additional charge for the illegal possession of a firearm. When the possession charge was filed, it was most often the primary offense. The reason given for this result was that the penalty associated with the commission of a violent crime was sufficiently severe in itself, that the additional possession charge would have added little to the severity of the overall punishment. The exception to the generality was found in the analysis of assault cases, for in these cases the imposition of the weapon charge did affect the sentencing outcome. The significant impact of the use of the "Bartley-Fox" law was that in such cases the rate of dismissal for the assault charge itself was lowered, as it was supposedly more difficult

for victims to drop all charges when a firearm violation was involved, and the penalty imposed more often resulted in incarceration.

Beha also concluded that the mandatory penalty associated with the "Bartley-Fox" law caused a decrease in the number of firearms being carried. This conclusion rests on several factors, first of which was the fact that there had been a 31% reduction in the overall number of firearm violations after the enactment of the law.<sup>2</sup> The second basis was that there had not been a change in the enforcement of the carrying violation. He substantiated this by comparing the characteristics of the offenders charged under both laws. The characteristics considered in this analysis were the offender's sex, marital status, age occupation, race and prior criminal record. The comparison failed to establish any statistically significant differences between the two samples; therefore, selective enforcement of the new statute was ruled out as a possible explanation for the decreased number of firearm violations. He later bolstered this conclusion by noting there had been an increase in the number of permits issued to lawfully carry weapons after the law was enacted. He also noted that there had been a decline in the carrying of firearms by the criminal offender; for example, "in 1975, narcotics arrests declined only slightly, but firearm charges growing out of these arrests showed a 57% drop."<sup>3</sup>

After noting that "Bartley-Fox" violations were rarely reduced to lesser, non-mandatory possession offenses (he found that only four cases had been reduced in such a manner) the study addressed the notion that the judiciary would still exercise a form of discretion by increasing the number of acquittals over previous rates. Beha noted that although the statute demands a mandatory penalty for offenders convicted, there is, of course, no legal demand that those prosecuted must be found guilty.

He reasoned that judges might still circumvent the law by unreasonably acquitting defendants. To examine this decision-making process, a case-by-case evaluation was performed of the legal merits of 39 of the 59 cases in which defendants (charged solely under the "Bartley-Fox" law) were ultimately granted acquittals.<sup>4</sup> The information analyzed consisted of police and court records, plus interviews with the defense attorneys. From this analysis, 69% of the cases were deemed to have been properly acquitted considering the relevant case law. Examples of such acquittals included persons arrested while in their own home or business and others who did not actually possess a firearm (rather a co-defendant had). Another 18% of the acquittals were classified as lacking malicious or criminal intent; for instance, the offender was mentally incompetent. These were also considered appropriate acquittals. The remaining 13% (or 5 cases) of the acquittals were deemed as having been influenced by the judges' perception of the law's harsh penalty. In these cases it was concluded that the judges had given an extraordinary weight to the defendant's defense. From these findings, Beha concluded the acquittals examined did not, on the whole, result from a judicial attempt to circumvent the law. He reasoned that given the greater impending penalty of the "Bartley-Fox" law, defense counsels enhanced their efforts to develop legitimate defenses; and once presented, judges weighed the issues more carefully.

On the other side of the coin, Beha also examined the frequency by which offenders were actually convicted of illegally carrying a firearm, both before and after the "Bartley-Fox" law. Limiting his sample to only those offenders whose most serious charge was the weapon offense, he found that while operating under the old statute, only 9% of the offenders convicted were sentenced to prison terms. Furthermore, only half of these

prison terms were of a year or more in duration. Operating under the new law, the rate of conviction and incarceration increased, for about 50% of these offenders were convicted and sentenced to at least one year in prison.<sup>5</sup> Beha summarized this evaluation of the courts' application of the "Bartley-Fox" law as follows:

This change suggests that courts' perceptions of the law and of the seriousness of the firearm offense have shifted. Although discretion may still be exercised at the margins, the typical defendant facing a carrying charge will not benefit from that discretion and, is now more likely to be convicted- and if convicted, to receive a substantially more severe sentence - than was true under prior practice.<sup>6</sup>

As previously mentioned, another objective of this study was to evaluate the law's impact on the use of firearms in the commission of violent crime, supposedly to determine the deterrent effect of the law. Beha noted that at the time of his study, most of the cases involving the "Bartley-Fox" law had not technically been concluded due to numerous cases still in the process of appeal. He believed that any deterrent effect would, therefore, be based solely on the public expectation of the law's application, and not on the actual application of the law. Moreover, any deterrent effect perceived through this data may later change when the knowledge of its actual application is gained by the public.

The data employed to examine the law's deterrent effect were the pre and postlaw crime statistics and the police reports. Two primary indicators were used to determine firearm use. These were the overall number of offenses with firearm involvement and the proportional use of firearms within specific crime categories. Three specific offense groups were included in the analysis: robbery, homicide, and assault. Beha found that the rates and use of firearms in robbery offenses were unchanged by the introduction of the new law, but the law did have an

impact upon the use of firearms in homicides and assaults. As he stated

. . . an analysis of robbery, assault and homicide trends does not, to date, reveal any clear deterrent to those crimes created by anticipation of additional Bartley-Fox penalties. However, a definite shift away from the use of firearms in assaults has occurred; this seems primarily due to increased attention to permit requirements and reduced casual availability of firearms. The number of total aggravated assaults remains undiminished, but the shift from firearms to other weapons prevented an otherwise likely increase in assault fatalities during 1975. In 1976 and early 1977, moreover, - a clear result of the sharp drop in firearm assaults. Nonetheless, because of the volatility of homicide rates, we must await several years of national and local data on homicide trends to assess with precision the long-term impact of Bartley-Fox upon firearm use in homicide. The drop in firearm availability does not appear to have been of sufficient dimensions to have any long-term effect on the use of firearms in robbery, generally a more premeditated crime than assault or homicide.

In short, our research supports, although in a limited fashion, the argument that a publicized threat of a mandatory sentence for carrying a firearm can reduce the illegal carrying of firearms and thereby decrease the availability of firearms for casual unpremeditated crime.

Overall the study indicated that the courts of Boston did not attempt to circumvent the legislative intent of the "Bartley-Fox" law (i.e., those persons convicted of carrying a firearm without an authorizing permit would be sentenced to a prison term of at least one year). This point is established through various findings, such as: the law was not selectively enforced; charges were rarely reduced, nor were acquittals improperly granted, and that both the certainty and harshness of the penalties imposed were increased. It was also found that citizen compliance with the restrictions governing the carrying of firearms was enhanced, and that there was a concomitant reduction in the use of firearms in assaults and homicides. However, it was discovered that the statute may not affect the use of firearms in the commission of normally premeditated crimes such as robbery. Any extrapolation of these findings to the application of Michigan's Gun Law must be performed with caution, due to differences

in the populations and differences in the two laws. The Massachusetts law is principally for the regulation of firearms and is "not directly linked to the prosecution of violent crime," while the Michigan statute comes into play only when the firearm possession is definitely linked to the commission of a felony offense.<sup>8</sup> These findings may, however, still prove useful as an aid in the interpretation of the findings stemming from the current study, and in establishing their consistency, for both laws do attach a mandatory penalty and are similar in that sense. These concerns are less relevant in the review of the next two studies which directly address the Michigan statute.

#### The Michigan Gun Law

To date there have been two empirical examinations performed concerning the application of Michigan's Felony Firearm statute. Oddly enough, both have discovered that, even when supplied with a precise penalty, defined in statute, the judicial response has still proven to be inconsistent with the mandates of the law.

The first study to analyze the application of the Michigan Gun Law was conducted in 1978 by the Michigan Department of Corrections. The study employed data collected on all 683 felons sentenced during a two-week period in 1976, prior to the law's enactment, and on another group of 539 felons sentenced during the same two-week period after the law was enacted in 1977. It was found that in the postlaw sample 65 (or 12%) of the 539 offenders in the sample had been subject to prosecution under the statute. The researchers established that of these 65 eligible offenders, only 19 (or 29.2%) were actually convicted and sentenced under the Gun Law.<sup>9</sup> It was also noted that there was a slight increase in the possession

of firearms by offenders after the Gun Law was enacted (12% of the postlaw sample versus 10.7% of the prelaw sample), and a decrease in the use of other weapons by the same group of offenders (5.6% in 1977 versus 6.4% in 1976). Since these differences in the frequency of the possession of weapons were found to be statistically insignificant (the test employed was not stated), it was concluded that the Gun Law had "no observable impact on the proportion of felonies in which a weapon is used, or the type of weapon."<sup>10</sup>

Following this examination, Milton Heumann and Colin Loftin in 1978 investigated the use of the statute in the Detroit Recorder's Court.<sup>11</sup> Their sample consisted of all persons prosecuted for committing any one of four different categories of assault or for the commission of an armed robbery; furthermore, only cases in which a firearm was involved, by either the defendant or a co-defendant. The sampling frame allowed for the creation of two comparison groups, one being those 856 offenders meeting the above criteria and having been prosecuted during the six month period immediately preceding the enactment of the Gun Law on January 1, 1977, and a second group of 242 offenders prosecuted during the six-month period following the enactment of the Gun Law. The focus of the study was on the courts' application of the law, for in this instance, the Wayne County Prosecutor's Office (whose jurisdiction includes the Detroit Recorder's Court) had taken the stance that all offenders subject to prosecution under the statute would, indeed, be prosecuted for this offense.<sup>12</sup> Apparently this prosecutorial policy was observed, for their statistics showed that of those cases in which the defendant or co-defendant possessed a firearm, 86.7% of those who had committed a felonious assault were charged with the additional firearm statuted; and for those



who had committed other included types of assaults, this figure increased to 96.4%. Of the remaining eligible offenders included in the sample, those having committed an armed robbery, 95.8% were charged with a violation of the firearm statute.<sup>13</sup> Given these figures, it would appear that any discrepancy between the number of offenders charged and those convicted under the Gun Law, would be primarily a result of the actions of the judiciary and, of course, the merits of the cases themselves.

Unfortunately, the study fails to directly confront this issue statistically. The only evidence offered concerning the actual number of convictions was noted in an author's footnote, which indicated that only 11.1% of those eligible offenders who had committed felonious assault were eventually convicted of the secondary Gun Law violation.<sup>14</sup> This is a substantial decrease from the 86.7% of the offenders included in that specific offense group who had been initially charged with this additional offense.

The authors did make note that during the prosecution of this category of eligible offenders, numerous cases were dealt with by either reducing the primary offense from a felony to a misdemeanor, removing the Gun Law's applicability, or by dismissing the firearm count altogether. Furthermore, of the five offenders (the 11.1%) who were convicted under the Gun Law, "two received a suspended sentence on the felony and two years on the gun charge; one received three months and two years; the other two defendants received two years on each count, for a total consecutive sentence of four years."<sup>15</sup>

Regarding the effect which a conviction under the firearm statute had upon the length of the sentence imposed for the primary felony offense, these researchers performed only a cursory examination of this

concern. In sum, they found that there was "only a slight upward shift in the average sentence;" however, there was no statistical proof given by the authors to substantiate this claim.<sup>16</sup> The majority of the evidence given about the courts' reaction to the law was gleaned from interviews the authors conducted with prosecutors, defense attorneys and judges. Through these interviews they found that judges and defense attorneys devised various ways to compensate for the firearm statute so the penalties given would not depart from those generally applied to similar offenses prior to the enactment of the law. One interesting means of compensation employed by the judges was to adjust their usual penalties for the primary or originating offense downward to take into account the additional two-year term mandated by the Gun Law. As the authors stated:

Essentially, the respondents agreed that the Gun Law would not lead to a substantial increase in the 'going rates.' Most respondents claimed that judges adjusted their prior going rate to take into account the two years added by the new law. These adjustments were made through sentence bargaining: as the Prosecutor's input into the plea bargaining process was eliminated, judges took up the slack and increasingly made explicit sentence bargains with defense attorneys. And even those judges who did not actively enter into these agreements communicated, through their sentences, a willingness to adjust the time for the primary felony, thus implicitly sending out a message about the discount for a plea.<sup>17</sup>

Another method noted for introducing discretion into the prosecution of Gun Law offenders were constitutional challenges made against the use of the law by defense attorneys. As the Gun Law was relatively new, defense attorneys could raise questions regarding the constitutionality of the law itself during the trial stage. For example, it was questioned whether prosecution for both armed robbery and the Gun Law placed the defendant in double jeopardy, since the possession of the firearm was an element of both offenses. In such circumstances the trial judge was

presented with an option to rule on the defense's objection; possibly dismissing the Gun Law charge on constitutional grounds. This form of discretion will soon be curtailed; however, as higher courts in the state review these decisions on appeal. But at the time of this examination, it did offer an avenue for temporary relief.

A final avenue for coping with the loss of the prosecutor's discretion and enhancing the judge's discretion was the use of the waiver or bench trial (i.e., when the defendant waived his right to a jury trial and the case was tried before the judge alone). This was seen as a means by which the judiciary could maintain discretion in applying the law, for unlike their decisions concerning the constitutionality of the law, which are readily open to appeal by the prosecutor, the judge's verdict (e.g., dismissing the charge) is not as susceptible to appeal by the prosecutor. The interviews conducted by the authors suggested that defense attorneys would, at times, receive explicit indications from the judges prior to going to trial stating their anticipated findings. If it appeared the judge deemed the application of the law to be inappropriate to the case, the jury trial would be waived in hopes of receiving a judicial response favorable to the defendant. The use of the waiver trial also came into play when the indicators of the judicial response were less explicit. When the previous sentencing patterns of the judge assigned to hear the case indicated that he would "be strongly disinclined to convict and impose the mandatory minimum sentence when the equities of the case favor the defendant," the defendant again seemed to waive his right to a jury trial.<sup>18</sup> Although lengthy, the following statements clarify the use of the waiver trial as an adaptive response to the Gun Law:

We do not mean to suggest that waiver trials invariably

provide a definite out for defense attorneys and their clients. Not all judges will make explicit prior agreements nor can all judges be counted on to work something out during the waiver trial. Some judges may view the two-year sentence as inappropriate in a particular case but believe that they cannot ignore the statute when a defendant is technically culpable. They are torn between their obligation to the law and their desire to individualize justice. These judges concede that they would consider every possible defense and require strong evidence of every element of the charge such as the presence of an operatable firearm; but when the case is technically there, they feel trapped by the law and left with no option but to apply it. In the following excerpt a judge, who told us that he had not yet sentenced anyone to two years in an equity type case because, during waiver trials, he had managed to find justifiable reasons to lower the felony or dismiss the gun charge, then speculated on the dilemmas if no such reasons had been available.

'It would've put me in a very difficult position . . . one I don't want to be in. I know there are judges who will take waiver trials on felony firearms and find the person not guilty on the felony firearm even though the evidence is present of the felony firearm. . . . my real point is, that like every other prosecutorial policy there should be discretion used and to the extent it's not used, it's bad, it has bad effects throughout the system, and has bad effects on the bench, has bad effects on individual prosecutors because they can't exercise their own discretion. And everybody is involved in a kind of conspiracy to undermine it without getting caught.<sup>19</sup>

This excerpt serves a dual purpose. It serves to clarify that the waiver trial was not found to be an absolute assurance of leniency for the defendant, while at the same time, it clarifies the findings concerning the judicial response to the Gun Law. This response was basically an outcry by the courts against a dilemma which they have perceived as imposed upon them by the loss of their discretion in the sentencing of offenders under the Gun Law. Without this discretion, the judges interviewed have maintained that they are now faced with two opposing goals, the achievement of individualized justice and the fulfillment of their obligation to conform to the requirements of law. From the above statements, it appears that this dilemma has been resolved, at the cost of

compromising their obligation to the law, in favor of their perceived need to tailor justice to the peculiarities found in individual cases. These and similar findings led Heumann and Loftin to generally conclude that when faced with the opposing ideals of mandatory sentencing and restricted plea bargaining versus individualized justice, the courts have been forced "into making adjustments that are unstructured, ad hoc, sometimes contrary to the letter of the law, and sometimes unsuccessful."<sup>20</sup>

These results and the results of the Michigan Department of Correction's study are consistent, in that both have found that the Michigan Felony Firearm statute has not been uniformly applied to those offenders eligible for prosecution. Recalling that at least one ranking member of the judiciary and numerous state legislators, viewed mandatory sentencing as a possible means for both reducing disparity in sentencing and deterring criminal behavior, these studies imply that when such a law does become a reality, it may not be employed as its drafters had intended. As Heumann and Loftin noted, the judiciary (at least in the Detroit area) have circumvented the statute in order to tailor penalties to the nature of the offense and the offender. Unfortunately, due to deficiencies in both studies, this conclusion can only be viewed as being tentative; requiring additional research to lend further credence to it. These deficiencies revolve around two central themes, inadequate sampling and inadequate information concerning the characteristics of those offenders who were eligible for prosecution under the Gun Law but were not prosecuted. The design of the present study will attempt to overcome these weaknesses.

The Department of Correction's study fell short of giving substantial proof in many respects. Initially, the sample employed was quite

inadequate, although it considered all felons sentenced across the state, the sampling time frame was only inclusive of a single two-week period, and may, therefore, not be representative of the entire year because of the possibility of seasonal variations. Furthermore, given a sample size of 65 eligible offenders, it is doubtful that a meaningful statistical analysis could have been performed of questions, such as, the possibility that sentencing variations existed across the 83 individual judicial jurisdictions contained within the state.

Regarding the information processed by the study, there was no analysis performed concerning the question of why some offenders received a conviction under the Gun Law and others did not. As a matter of fact, there were no attempts made to determine the use of the Gun Law in respect to the nature or circumstances of the offense or the characteristics of the offender. Finally, there were no analyses performed regarding the effect which an application of the law had upon either the type or the length of the sentence an offender received. Without such information, it is impossible to determine whether the law was applied as prescribed by statute, or if any patterns in its application existed.

The study performed by Heumman and Loftin presented similar deficiencies. Although their investigation was based on a larger sample, numbering about 1,084 cases, it was still limited to the Detroit Recorder's Court. Having this limitation, it was not, therefore, representative of the entire State of Michigan.

In contrast to the Department of Correction's study, Heumman and Loftin's did present information pertaining to the utilization of the law. The shortcoming of this information was that it was entirely subjective in nature, having been primarily collected from personal

interviews with court personnel. Having based their conclusions solely upon this type of information, the study lacked objective evidence of the law's impact upon sentencing. This weakness could have been overcome if the authors had employed a statistical analysis of these issues using objective data or indicators such as the actual sentence lengths received by the sampled offenders. Without this type of analysis, the conclusions drawn by the authors may have been tainted by biases held by the respondents interviewed or by spurious relationships in the data.

Neither of the studies thus far performed have incorporated an objective or statistical analysis of the law's application into their research design; so both are best classified as being descriptive explorations of the phenomena. Even if they had presented conclusions based on a statistical analysis of objective data, given the restrictive samples employed, such conclusions would be limited to inferences about relatively narrow populations. More importantly for the current study's design is the fact that neither of these past studies have, due to their sample selection, included any form of an examination of those eligible offenders who were not subsequently prosecuted under the Gun Law. By eliminating this offender group, it was impossible to make a comparison between prosecuted and non-prosecuted eligible offenders so that any systematic selective enforcement pattern may have been uncovered and analyzed.

It is the purpose of the current study to reexamine the application of the Gun Law in courts throughout the State of Michigan while correcting for the weakness found in the two previous investigations of the law. The deficiencies will be corrected through the use of objective data and a sample of offenders which is representative of the entire state. As stated in Chapter 1, one of the ways in which the application of the Gun

Law will be examined by the present study is by an investigation of the relationship between the use of the Gun Law and characteristics of the offender, the offense, and the judicial processing of the case. This investigation will also include a comparison, using these factors, of those eligible offenders who were prosecuted under the Gun Law and those who were not. The search for those characteristics which may be relevant to this analysis is the topic of the next section, which presents the findings of prior research pertaining to the prosecution and sentencing of criminal offenders.

#### Potential Gun Law Predictors

The results of the two previous examinations of the Michigan Gun Law have shown that the statute may not have been uniformly applied to all eligible offenders. If these findings are supported after correcting for the deficiencies present in each past study's design, the current study will attempt to determine those circumstances which are associated with the selective enforcement of the statute. The specific research question to be addressed by this investigation is the determination of those attributes of the offender, the offense and the judicial processing of the case which are indicative of when the Gun Law has been imposed. In essence, the goal is to discover a set of factors which may predict when the eligible offender will be prosecuted under the Gun Law, and once prosecuted, when the offender will most likely be convicted.

In the present section, a set of test predictors will be selected in the furtherance of this research goal. The selection of these factors will be based, in part, on their importance or influence, as established by previous research, in the decisions made during both stages of the



adjudication process. In addition, several other potentially influential factors will be proposed by this author which are based primarily upon theoretical considerations. To facilitate the selection process, this section opens with a review of studies which have examined the influence of various factors upon the prosecutor's decision to prefer charges. Afterwhich, a review of studies pertaining to the identification of factors associated with judicial discretion is presented. Having explored the literature concerning the factors associated with prosecutorial and judicial discretion, the current section will close with a summation of the test factors selected from these past studies and the advancement of the additionally proposed test predictors.

#### Factors Affecting Prosecutorial Discretion

One of the earliest studies to include an examination of factors relevant to the charging decision was performed by Dominick Vetri in 1964.<sup>21</sup> In his study, Vetri submitted questionnaires to selected chief prosecutors in the most heavily populated counties of 43 different states. Of the numerous questions included in the survey, one is particularly meaningful to the present discussion; for it requested the respondents to select from a list of eleven factors those which are influential in swaying their staff members to offer a plea bargain to a defendant. From the frequency by which specific factors were selected by the 60 respondents, four appeared to be the most influential, having been selected by at least 70% of these respondents. These factors were: the strength of the prosecutor's case (the most frequently chosen consideration), the court's ability to set an appropriate or adequate punishment upon conviction of the reduced charge, the particular offense originally charged, and the

defendant's prior criminal record. The factors which appeared to be the least influential were: public sentiment, personal sympathy for the defendant, the prosecutor's workload, and the belief that the penalty originally involved was too harsh (these factors were chosen by 37% of the respondents or less).<sup>22</sup> From these results it would appear that the prosecutor's decision to plea bargain is more often influenced by the pragmatic aspects of the case, such as the nature of the offense and defendant's criminality, rather than by personal and public sentiment.

Recognizing the lack of social scientific knowledge about prosecutorial decision making, Cole undertook an exploratory study of the subject within the Office of the Prosecuting Attorney, King County (Seattle), Washington.<sup>23</sup> By placing himself in the role of an observer in the office and by conducting interviews with both law enforcement and court personnel, judges, and former prosecutors, Cole recognized that prosecutors did not, in the initiation of criminal prosecution, insulate themselves (or their decision) from the demands and needs of other subunits of the criminal justice system or from the community at large. Instead, when exercising his discretion, the prosecutor can be most accurately characterized as being an actor engaged in a system of exchange relationships; for the prosecutor's decision was found to have been influenced by not only the demands and constraints of his own organization, but by those of other organizations within his environment as well.

In examining the exchange system in which the prosecutor operates, Cole found that the police, the courts, the opposing legal counsel, and the community all have an influence upon the decision to prosecute criminal offenders. For example, in making his decision, the prosecutor was found to react to both the sentencing history of the judge and the

ability of the defense attorney. Furthermore, the prosecutor must act in accordance to his role as the gatekeeper of the legal system; for in making the prosecutorial decision, he must consider the community norms and reaction concerning the offense which was perpetrated, the backlog of the court, and even the availability of housing for offenders in the jail. It is also informative to note that Cole did suggest that this exchange system is reciprocal in nature; for example, while the prosecutor is dependent upon the police for the evidential quality of the cases brought before him, the police at times require the cooperation of the prosecutor in affecting a reduction of charges in those instances when the offender's aid as an informat is sought.

The search for a greater understanding of the prosecutorial process was continued by Neubauer, who investigated the standards used by prosecutors in Prairie City, Illinois to evaluate cases for prosecution and the impact which that decision had in shaping the policy of the prosecutor's office.<sup>24</sup> He performed this investigation by gathering information from three sources: 1) interviews with police, judges, prosecutors and defense attorneys; 2) observation of the prosecutorial process, and 3) data describing the disposition of all arrests made within the city during January 1970. Working from this information, he established that the prosecutor was the dominate figure in the filing of criminal charges.

Unlike the results of other studies, Neubauer found that the prosecutors in Prairie City were not influenced to any great degree by the desires of either the community, the victim, or the police. He discovered that the prosecutors, although elected by the community, placed little value on community opinion; for, the office considered their opinion as being uniformed or uneducated in legal matter, and therefore, not

pertinent to the decision to prosecute offenders. The prosecutors also insulated their decision from the demands of the victim; for charges were only filed when the police had made an arrest and the case presented evidence warranting prosecution, and not simply because the victim demanded such prosecution. The only time which the victim was found to have had a voice was in those instances in which the victim declined prosecution, since in these cases the prosecutor did heed the victim's request. Finally, the prosecutors' view of the police as being a distinct organization with differing tasks also curbed their potential influence. Since the prosecutors perceived the role of the police as being limited to investigating offenses and making necessary arrests and not in evaluating the cases for prosecution (this being the prosecutor's role), input from the police which was beyond the facts of the case was not solicited nor accepted.

Turning to the factors which Neubauer did identify as being influential in the prosecutorial decision, it was found that the key criteria which the prosecutor used in determining whether prosecution should be initiated was the evidentiary or legal strength of the case at hand. Once that decision was made, the use of discretion by the prosecutor was found to revolve around the decision to charge the suspect with a misdemeanor or a felony. The factors which were found to have influenced the prosecutor at this point in his decision making were the characteristics of the defendant and the circumstances or the nature of the incident. For example, Neubauer found that first time offenders were more likely to be charged with a misdemeanor rather than a felony, and that charges were frequently downgraded in cases in which the arrest had been made for the purpose of order maintenance. Although all these factors

were construed by Neubauer as being important considerations for the prosecutor, he concluded, that in Prairie City, the charging process actually involved relatively little use of discretion on the prosecutor's part, rather the process was shaped by the legal sufficiency of the evidence, as this single factor determined the prosecutor's chances of winning the case at trial.

Noting that most of the empirical studies performed to investigate the types of information used in decision making within the criminal justice system have focused on only the stages of arrest, adjudication and postadjudication, Legoy, Senna and Siegel undertook a study of the prosecutorial decision making process associated with plea bargaining.<sup>25</sup> These authors described the plea bargaining process as being a crucial step in determining the manner by which criminal offenders are processed by our judicial system; a step which is characterized as having low visibility and relying "heavily on the discretion of the prosecutor to determine whether or not a defendant is to receive charging or sentencing concessions."<sup>26</sup> To examine the way in which prosecutors decide to accept or reject a proposed plea negotiation and the information relied upon in making that decision, the study employed a decision game in which twenty participating prosecutors were asked to select labeled individual topics of information describing the aspects of a criminal case in which a previously proposed charging concession had been offered in exchange for the defendant's plea of guilty. The participants were to select and analyze the provided case information in an order reflecting its perceived importance and to continue the selection process until they had obtained sufficient information about the case to enable them to decide to accept or reject the proposed bargain.

Using this decision game the twenty prosecutors, who were randomly selected from both rural and urban prosecutorial districts in the Northeastern United States, were asked to respond to two hypothetical felony cases. One was a heroin possession case and the second was a rape. From the overall frequency by which individual topics were chosen in both cases, the researchers concluded that certain factors or topics of information stood out as being most influential in the prosecutor's decision, without regard to the nature of the offense involved. These factors were: the defendant's prior criminal record, the defendant's age, the type and admissibility of the evidence (which was considered suggestive of the strength of the case), the statutory sentencing provisions involved (which was linked to the appropriateness of the penalty), the police or victim's account of the incident, and the police or victim's attitude toward the proposed bargain. Aside from viewing the commonality by which topics were chosen in both cases, by studying the discrepancies present in the information chosen between the two cases, the authors further concluded that the nature of the offense was also an important consideration in the selection process. For example, it was found that while the victim's description and prior relationship with the defendant, and the defendant's version of the incident were both very important factors of consideration in the rape case (being a victim-present offense), these same factors were quite unimportant in the heroin possession case (which is a victimless crime).

In addition to analyzing the influence which particular information had in the decision making of the prosecutor, the study also examined how personal attributes of the prosecutors might have affected the outcome of the plea negotiations. No significant correlation was found to have

existed between the outcome of the decision and the examined prosecutor attributes of age, experience, career objectives, or their caseloads per year. It was found, however, that the population density of the prosecutor's jurisdiction was related to the outcome, for rural prosecutors not only selected more topics of information before arriving at their decision than did their urban counterparts, but they also accepted the proposed bargain significantly more often (80% of the time compared to 50% for urban prosecutors). They concluded, therefore, that plea bargaining "is not solely the product of crowded metropolitan courts."<sup>27</sup> In summarizing their observations, these authors stated that their "major impression" was one of unequal treatment for equal defendants.<sup>28</sup>

The search for those factors which provide the prosecutor a basis upon which to make his charging decision was continued by Greenwood, Wildhorn, Poggio, Strumwasser and DeLeon in their study of the dispositions of about 70,000 arrests made within Los Angeles County during 1970 and 1971.<sup>29</sup> By tracking the outcomes of this large sample of arrests, these researchers discovered that the overall rate of prosecution across the county was 47%. Narrowing the scope of their study to the inquiry into the screening process which resulted in the remaining 53% of the arrests having been either reduced to misdemeanors or excluded from prosecution altogether, several key factors were established as having been of utmost importance to the prosecutor in deciding to decline filing felony charges. Initially it was found that the rate of prosecution varied significantly across differing types of offenses. The authors concluded that this was due, in part, to the seriousness or nature of the offense itself, and in part, to the charging policy set forth by the District Attorney, for example, the District Attorney had established

through policy directives that a felony charge for the possession of marijuana would not be filed in any cases involving the possession of five cigarettes or less.

Turning to the factors which were considered to affect the individual prosecutor in the execution of his own discretion, it was found that two reasons were given most frequently by the prosecutors studied as a basis for their rejection of a case from felony prosecution, regardless of the crime involved. These reasons were first, the sufficiency and quality of the available evidence to prove that a crime was committed and that the defendant had committed that offense, and second, the personal history of the defendant (which typically denoted the defendant's lack of a prior criminal record). It appeared from the data that the failure to file felony charges could most often be attributed to either the District Attorney's governing policies, a lack of sufficient legal evidence, or the absence of previous criminal behavior on the defendant's part. From such findings these researchers aptly noted, ". . . that the screening is not strictly mechanical, factual process, but involves a subjective assessment both of the seriousness of the case and of the probability that it would result in a conviction."<sup>30</sup>

Theorizing that recent mandatory sentencing laws are, in part, a response to the sentiment that offenders have been treated too leniently by our criminal justice system, Richard Frase recognized the fact that such legislation does not provide an absolute solution; for mandatory sentencing laws still allow both the police and the prosecutor to use, and possibly abuse, their discretion in the arrest and charging of criminal offenders.<sup>31</sup> He notes that these points of, as yet, unbridled discretion are not easily subjected to legal controls and raise numerous



policy issues, such as: "Who should be arrested or prosecuted, and on what charges? When is it appropriate to treat 'similar' offenders differently? Are improper motives playing any part in the selection process?"<sup>32</sup> To examine these questions, Frase studied the disposition of 800 randomly selected cases presented to the U. S. Attorney for the Northern District of Illinois between October 1, 1973 and March 31, 1974 in hopes of identifying the factors which determine the outcome of the prosecutorial decision of federal prosecutors.

Viewing these cases, Frase discovered that only about 17% of the 800 were ultimately prosecuted by the U.S. Attorney. Through his examination of the frequency by which particular reasons were given for the declination of prosecution, two single reasons surfaced which accounted for the majority of the declinations, the lack of sufficient legal evidence (given in 45% of the declinations) and the availability and appropriateness of alternative prosecution on the state level (given in 37% of the declinations). The remainder of the declinations (18%) were most frequently accounted for by the following reasons: the small amount of loss suffered by the victim; the defendant's lack of a prior record; the small amount of contraband involved in the case, and the isolated nature of the defendant's act.

After the prosecutors had eliminated the majority of the cases presented to them on the basis of the above reasons, Frase noted that they had effectively screened out the weaker cases; for the conviction rate of those prosecuted was found to have been 91%. He speculated that this careful screening was due partially to the prosecutors desire to maintain the highest possible conviction rate, as this factor is usually employed to determine their job effectiveness, and also to conserve the

office's limited resources by preserving only those cases strong enough to encourage defendants to plead guilty.

In summarizing his observations of this prosecutors' office, Frase commented that the charging process ". . . appeared to produce fairly consistent results."<sup>33</sup> He attributed this consistency to the fact that these prosecutors were required to submit the reasons for any declination in writing to their supervisor who reviewed their decision. This system of informal review was seen as being quite efficient, while being far less complex or far reaching as other suggested means of overseeing prosecutorial discretion, such as: written guidelines, judicial review, or the redefinition of criminal statutes reflecting existing prosecutorial policies. Frase cautioned, however, that without such controls, the removal of discretion from judges and parole boards by mandatory sentencing reforms would merely result in the shifting of that discretion into the hands of the prosecutor.

In Frase's and the preceding studies of prosecutorial discretion, a recurrent theme has arisen, one which attests to the integral position and tremendous influence which the prosecutor holds within our justice system. This theme is that the prosecutor may most appropriately be characterized as being the gatekeeper of our legal system; for it is the prosecutor who determines which offenders shall be prosecuted and for what offense(s). Moreover, this literature has reminded us that this crucial decision point in our legal system is one which is marked by low visibility to those scrutinizing the administration of justice, and by virtue of this low visibility, the decisions made by prosecutors are not readily susceptible to effective regulations or controls, such as mandatory sentencing legislation.

In view of the prosecutor's key role in the legal system and the unfettered discretionary powers attributed to him, these studies have sought to determine those factors which are influential to the prosecutor in making his prosecutorial decisions, so that this critical stage in the adjudication of offenders may be more readily understood. From their findings, we have seen that in making his decision, the prosecutor most often relies upon information concerning the pragmatic aspects of the case at hand, namely the legal sufficiency and quality of the available evidence. As these factors determine the probabilities for a successful prosecution, the prosecutors were shown to have placed a great deal of weight on the evidentiary quality of their case. Furthermore, it would appear that an equally important consideration for the prosecutor, which is somewhat more subjective in nature, was the apparent need for the case to be pursued. This was expressed in the frequency by which prosecutors were noted to have been influenced by the nature or the type of offense involved (for example, Neubauer found that arrests made for the sole purpose of maintaining order were often downgraded by the prosecutor), and the offender's criminal history. Other less frequently cited factors, such as the backlog of the court, community norms and office policy, also serve to point out the powerful influence which systemic constraints may have upon the prosecutor in exercising his discretion. While most of the studies examined have depicted the prosecutor as being vested with wide discretionary powers, they have at the same time shown, that due to his central position in the legal system, he must exercise this discretion in a manner reflecting, not only the merits of the case, but the demands and constraints placed upon him by other organizations within the criminal justice system and those of his constituency within the community as well.

To expand the scope of our present inquiry into the factors which affect the adjudication of offenders, the following discussion moves on to address the issue of sentencing disparity and the factors which have been shown to influence judicial discretion.

#### Factors Affecting Judicial Discretion

One of the earliest empirical studies of judicial sentencing practices was conducted by Sellin in 1928.<sup>34</sup> Working from commitment statistics in North Carolina, an attorney-general's report on the circuit courts of Alabama (for the years 1920-22 and 1924-26) and a 1926 survey of Detroit courts, he compared the dispositions received by black and white offenders. The dispositions which he considered were fines, jail terms, probation, suspended sentences and pardons. He also compared the frequencies of arrests versus convictions. The statistical measures he employed were limited to comparisons of frequencies and percentages. There were no statistical tests used for determining if any differences which occurred were statistically significant. He found that the criminal justice system did, in fact, treat black offenders differently, resulting in the increase of the blacks' apparent criminality. Sellin inferred this from various trends in the treatment of blacks which his sample yielded. He found that blacks were not only convicted more frequently than whites; but when convicted they were more often imprisoned, and less likely to be given probation or suspended sentences than white offenders. Moreover, once convicted and sentenced to prison, the black offenders received far fewer pardons than did white offenders.

Johnson collected a sample of 645 murder cases from three southern states to test the hypothesis that black offenders, victimizing other

blacks are treated with undue leniency, while blacks committing offenses against whites are treated with undue severity.<sup>35</sup> Using this hypothesis, he categorized the data into four possible offender-victim racial relationships. His dependent measure was whether or not there was a conviction, and for those convicted the sentence they received. He used no control variables nor statistical tests for determining if any differences found were significant, rather he simply compared the percentages of the various offender categories receiving particular sentences. The results indicated that his hypothesis was valid: a black murdering a white received the harshest penalty, while the white who murdered a black received the least severe sentence. He, therefore concluded that sentencing practices were highly biased against black offenders.

Bullock focused his study on the possibility of racial prejudice in the sentencing of offenders.<sup>36</sup> His sample consisted of 3,644 offenders who were serving terms in the Texas State Prison at Huntsville during 1958. These offenders had been convicted of either burglary, rape or murder. The six variables considered by the study were race, type of offense, number of previous felonies, mode of disposition, county from which the offender was committed, and the sentence. He employed a measure of association (termed "Q") and the Chi-square test for independence. He found that there was a direct positive correlation between the type of offense and the length of the sentence imposed. He found that offenders who plead guilty received shorter sentences than those who plead not-guilty. It was also found that the geographic area from which the offender was committed affected the sentence; for offenders who came from urban areas received longer sentences than those from rural areas.

Regarding possible racial biases, Bullock concluded that the overall sentencing pattern indicated that the black offenders received longer sentences than white offenders. However, this difference was tenuous, for the severity of the offenses they committed and the geographic area in which they were sentenced were also influential in sentencing and may have confounded this relationship. Finally, he determined that when blacks crossed racial lines in committing an offense, they were given harsher penalties than white offenders under similar circumstances.

Using a sample of 1,437 convictions from non-jury trials in Philadelphia during 1957-58, Green examined the effects of three distinct sets of factors upon sentencing.<sup>37</sup> These sets consisted of legal factors, legally irrelevant factors, and factors in the criminal prosecution. The legal factors consisted of: the severity of the offense, the number of charges, the offender's criminal history, and the recommendations of auxiliary agencies of the court (e.g., probation/parole officers). Legally irrelevant factors were composed of demographic characteristics, such as sex, age, race, and place of birth. The third set concerned the personnel participating in the trial (i.e., the judge and the prosecuting attorney) and the type of plea entered by the defendant. The statistical analyses he used to determine if dispositions had differed significantly across these factors were the Chi-square test and the Krushal-Wallis One-way analysis of variance by ranks.

He discovered that both the nature and the type of offense committed as well as the offender's prior record had significant effects upon the sentence imposed. He found that there was a direct relationship between the severity of the penalty and the severity of the crime. The nature of the offense also had such an effect. As the number of charges

increased, so did the severity of the sentence. Similarly, as the seriousness of the offender's prior record increased so did the sentence length. When the effects of these legal variables were compared, Green found that the prior record of the offender was the single most influential factor upon the case's disposition. In the non-legal category of variables he concluded that when controlling for the severity of the offense and the offender's prior record, there were no significant effects of any of these variables. Finally, neither the court official nor the disposition mode (i.e., type of plea) was found to have had any significant effect.

Wolfgang, Kelly and Nolde collected a sample of 439 offenders sentenced to death in Pennsylvania for murder between 1914 and 1958 to detect if the commutation of death sentences during this period were performed in an equitable or inequitable manner.<sup>38</sup> Given this purpose, the final disposition of the imposed penalty acted as the dependent variable (expressed as either the execution of the offender, or the receipt of a commutation to a life term). To assess the equality of the 71 commutations granted, these researchers (employing the Chi-square test) compared "major" attributes of the offender and case with the final disposition. The offender attributes analyzed were as follows: race, age, (either white or negro), nativity (native or foreign born), marital status, and occupation (expressed in general classes, such as: professional, farming, clerical and laborer). The case attributes were the type of defense counsel at the trial (either court appointed or privately retained), and the type or severity of the murder committed (whether it was the result of committing another felony or the murder was the sole offense).

The results of the bivariate analysis of these attributes indicated

that only the offender's race, the type of legal counsel, and the type of murder were significantly associated with the final sentence disposition. The impact of the defense counsel was determined to be that those who had retained their own attorney more often received commutations, than those who had been appointed counsel by the court. When the type of murder was considered, these researchers concluded that those offenders who had committed an additional felony were more often executed than those who did not. It was found that blacks were more often executed than white offenders. From the results of their multivariate analysis, the authors concluded that race is the one factor which linked the two other significant factors together.

The results of previous studies cited which indicated that the offender's race has an effect upon the sentence he receives are inconsistent with the results of a second study performed by Green.<sup>39</sup> Selecting 118 robbery and 291 burglary cases, Green found that the discrepancies established in the types and lengths of sentences between black and white offenders disappear when relevant factors are controlled. The factors he introduced as controls were as follows: the type and seriousness of the offense, the number and seriousness of the offender's prior record, and the number of current charges. It should be noted that in this study, the only form of analysis Green performed was to compare frequencies; he did not employ any statistical testing to validate his intuitive findings.

Another study of the factors affecting the disposition of offenders was conducted by Bedau.<sup>40</sup> The expressed purpose of his study was to "establish a full historical, legal, and sociological analysis of capital punishment in New Jersey."<sup>41</sup> To achieve this goal, he collected information on all 232 offenders sentenced to death (for the offense of murder)



in the state from 1907 to 1960. Using the Chi-square test as the mode of statistical analysis, he compared the final or actual dispositions of the given death penalties against numerous characteristics of the offender and the offense. He included as possible influential factors the nature of the murder (convicted under the "felony murder rule" or otherwise); the county of sentencing; the offenders' sex, race, age, occupation, nativity and prior criminal record. The dependent variable, final disposition, was categorized according to whether the offender was executed, or the death penalty was commuted to life. The offender's race was collapsed into either white or non-white. Nativity was defined as either native or foreign birth. Prior record was a dichotomy expressing whether the offender did or did not have any previous felony convictions. Occupation consisted of numerous categories of job classifications, such as clerical, professional, and laborer. Of these numerous characteristics, Bedau found that only three were significantly associated with the final disposition. He found that the offender's sex (there were no females executed) and prior record (those with no priors were more often granted commutations) were the only offender specific variables associated with the penalty's ultimate disposition. The remaining significant variable was the type of murder committed. In this relationship, Bedau discovered that those offenders sentenced under the felony murder rule were more often executed than those who were not. This association may also be indicative of the effect of the seriousness of the offense upon its disposition. All three significant associations were based on their bivariate relationship to the case's final disposition. The study did not investigate the above relationship while controlling for the possible confounding effects of the remaining factors.

Chiricos and Waldo collected data on 10,488 offenders who had been admitted into the state prisons systems of three southern states, North Carolina, South Carolina and Florida.<sup>42</sup> This sample included seventeen different felony offenses. The severity of these offenses was controlled for by only performing the analysis within each individual offense category and not across all of them. The purpose of the study was to determine the effect of an offender's socioeconomic status (SES) upon the length of imposed prison terms. Aside from SES the examination also included other variables, the rural/urban character of the sentencing county, and the offender's age, race, and prior record. The mode of statistical analysis employed was multiple regression. Their findings indicated that SES did not significantly affect the length of the sentence an offender received. Across the seventeen individual offenses, they found that SES explained a significant amount of the variance in sentences on only one occasion, those offenders who were convicted of burglary. In this instance, the research hypothesis stating that lower socioeconomic status offenders receive longer sentences was not substantiated; in fact, the discovered relationship was that the higher socioeconomic status offenders received the longer sentences.

Although the researchers were not primarily concerned with the effects of the other included variables, they did find that both the number of prior convictions and the degree of urbanization of the sentencing county did make significant contributions towards explaining the received lengths of incarceration. The length of the sentence was found to increase along with increases in the number of prior offenses. This positive relationship help true in seven of the crime categories. The urbanization factor also had a positive relationship to the length of

the imposed prison term in three crime categories (unarmed robbery, auto theft and drug offenses; however, the relationship was negative in the remaining three significant crime categories (2nd degree murder, manslaughter and larceny). These results indicate that not only will the urban/rural character of the sentencing county affect the term imposed, but the type of offense has an influence as well.

One of the latest studies undertaken to examine differential sentencing practices has been performed by Pope.<sup>43</sup> From a sample of 32,692 felony cases from twelve California counties, Pope analyzed the effects of the offender's personal characteristics, certain legal variables, and geographic location upon sentencing. The offender characteristics were sex, race and age. The legal variables considered were the current charge, criminal status (whether the offender was under court supervision at the time of arrest) and the offender's prior record. Furthermore, the cases were divided according to geographic location, being either urban or rural. The disposition was broken down into the type of sentence and the length of the given term. He noted that because of inadequacies in his data source, he was unable to include bail determinations, type of attorney, and pretrial detention status as variables although he thought these factors to be important variables. He felt this was a definite shortcoming of the study. The statistical analysis used compared the percentages of offenders sentenced to a particular type and length of sentence according to specific legal and non-legal variables with the percentages obtained through weighing (controlling) the legal variables by the method of test factor standardization. When a ten percent difference occurred it was deemed to be a significant difference.

Pope found that when considering the type of sentence imposed,

females were more likely to receive less severe sentences, and that this trend was stronger in urban than in rural areas. In rural courts blacks tended to be sentenced more severely than whites, even while controlling for legal variables. However, in urban courts this difference disappeared. When the actual length of the sentence was considered, Pope once again found that female offenders were sentenced to less time than males. When examining the impact of race upon the length of sentence, he established that there was no difference across racial groups. Finally, he found that there were no differences in the length of probation given to offenders with respect to either their sex or race, or the geographic location of the offense and court.

Thus far nine empirical studies of sentencing have been reviewed. Across these studies, sixteen different factors were examined in regard to their possible impact upon the disposition of criminal offenders. Eight of these sixteen surfaced as having a possible influence in the determination of the verdict or the penalty imposed. These influential factors are as follows:

1. the offender's race,
2. the type or severity of the offense,
3. the geographic location of the court,
4. the offender's prior criminal record,
5. the offender's sex,
6. the number of charges,
7. the type of plea entered, and
8. the type of defense attorney.

The offender's race was the factor most frequently established as having had an influence upon sentencing. It was discovered to have been influential in five of the nine studies cited. Following race in frequency of established associations was the type or severity of the offense committed. It was employed as a variable in seven of the nine studies

reviewed and was found to have been associated with the final disposition on four occasions. The geographic location of the sentencing court (or its urban/rural character) and the number of past offenses committed by the offender (prior record) were both shown to have influenced sentencing by three of the research studies. Location was incorporated in four studies, while prior record was included in five. The offender's sex was a factor employed by three of the nine studies and was found related to the sentencing outcome by two of these three. The last three factors found associated with sentencing were the number of charges filed against the offender, the type of plea entered by the offender, and the type of defense attorney (appointed or retained). These factors were found to have been influential on one separate occasion each. The number of charges and the type of plea were each used in two of the studies reviewed, and the type of defense attorney was examined only once. All eight of these factors, having been established in prior research as possibly influencing the disposition of criminal offenders, will be employed in this study's exploration of the conditions under which the Gun Law has been applied.

It should also be noted that at least some of these same factors were, in the preceding segment, suggested as being influential to the prosecutor in making his decision to initiate criminal proceedings against an offender. In that literature pertaining to prosecutorial discretion, all but one study mentioned that the defendant's prior criminal history was a crucial determinant in the charging process. Likewise, the majority (i.e., four) of those studies found that the specific type or nature of the original offense was a critical element in the decision to prosecute offenders. Another factor which was mentioned in both literature reviews

as affecting both points of discretion was the geographic location or urban/rural character of the court. By recalling that Lagoy, Senna and Siegel found that rural prosecutors both demanded more information in making their plea negotiation decision and were more likely to accept a plea bargain, and that Cole in his examination suggested that prosecutors must consider the backlog of the court in making their prosecutorial decisions, the potential importance of the court's geographic location (and its caseload) can be bolstered. The last factor which finds further substantiation in the fact that it was also found to have influenced the prosecutor's decision is the type of defense attorney representing the offender. Not only was this factor acknowledged by Wolfgang, Kelly and Nolde to have been associated with the final disposition of convicted murders, but it was also credited by Cole as having had an impact upon the decision to prosecute. The fact that these four factors were suggested as affecting both prosecutorial and judicial discretion lends further credence to their inclusion in the present study as potential Gun Law predictors. In the following discussion, additional factors will be proposed as potential predictors as well.

#### Additionally Proposed Gun Law Predictors

In addition to the eight aforementioned factors which have been suggested by prior research to be influential in the adjudication of offenders, five other factors not having this specific advantage will be proposed herein as having the same potential. These additional factors are the offender's age, occupation and employment status, as well as the injuries sustained by the victim, and the relationship between the victim and the offender. As potential Gun Law predictors, these factors find

their basis for inclusion in the present study on theoretical grounds. Furthermore, several of these same factors are to be employed due to their potential importance in controlling for the possible confounding effects of other included factors.

Recalling that one of the reasons for the existence of the Gun Law is its possible deterrent effect upon the commission of violent crime, the age of the offender may, in this instance, be an influential or related factor in the use of the law. The U.S. Department of Justice reported that for the year of 1977, youths under the age of 18 were arrested for 21.0% of the violent crimes committed nationwide (violent crime was defined as murder, rape, robbery and aggravated assault), while persons 18 to 29 years of age were arrested for 52.1%. The remaining 26.9% of the violent offenders arrested were 30 or older.<sup>44</sup> If the Gun Law's deterrent effect is to be maximized, the youthful offender under 30 years of age would seem to be a likely target population for the law since they are committing the vast majority of violent crimes.

Since the offender's prior record is to be included in the analysis, the offender's age may also serve as an important control. If the offender's prior record is established as having a significant influence in the law's use, a possible rival explanation would be that this finding is actually due to the offender's age, as the older offender has had a lengthier opportunity to commit more offenses. Including the offender's age would at least control for the effect of this rival explanation.

Like age, the offender's occupation was another factor investigated but not found to be significantly related to the sentencing process. A lack of a direct association with the disposition of offenders does not preclude it as a factor which is related or influential to the

relationship established between other factors and sentencing. For example, it may be argued that the significant relationship found between the type of attorney (i.e., retained or appointed) and the disposition may be more closely associated with the defendant's ability to pay for a private attorney, than differences implied in the quality of the defense counsel. Controlling for the offender's occupation (and hopefully his ability to pay) may provide an answer for such an argument.

The offender's occupation may also be directly influential to the sentencing decision. It is plausible that the offender's occupation may be considered by the judge at the time of sentencing insofar as an offender may be deemed a better candidate for lesser penalties, such as probation when viably employed. The stability and income level of the offender's employment may be perceived as decreasing the chances of repeated criminal behavior, especially in those offenses generally committed for an economic gain, such as robbery, as the person capable of future earnings may be seen as less likely to be forced into criminal behavior out of economic need. Of course, it is entirely possible that the reverse may be true; that offenses committed out of economic need might also be treated differently since the judge or jury may perceive these offenses as having some form of justification.

Aside from speculating about the importance of occupation, its influence in sentencing has also been noted in at least one empirical examination. Carter and Wilkins (1867) performed a study aimed at determining the relationship of the recommendations given in presentence reports with the actual case dispositions.<sup>45</sup> They concluded that the recommended disposition in the presentence report matched the actual disposition in 87.2% of the 500 cases examined. In conjunction with



this finding, an analysis of the relative importance of specific offender and offense characteristics used by probation officers (who write the presentence report) and judges in their determination of the disposition was also conducted. The results of this analysis indicated that probation officers and judges were in close agreement about the importance of these characteristics. In fact, when both parties rank ordered the factors, the two resulting rating scales were found to be highly correlated (a correlation coefficient of .90 was found). Of the 28 offender and offense characteristics considered, the length of the offender's longest period of employment was ranked fifth by both probation officers and judges. The probation officers ranked the offender's type of occupation sixth, the number of months employed seventh, and the average monthly income as eighth in importance, while judges ranked the same factors as eighth, sixth, and tenth respectively. The only factors ranked higher were the offender's prior record, pretrial status, number of arrests and the current offense. Given the relative importance placed on the offender's current and past occupational factors by both probation officers and judges, these results lend support for the inclusion of the offenders' type of occupation in the present study.

In addition to the offender's occupation, the employment status of the offender at the time of the offense will also be included in this phase of the analysis. This factor was not included in any of the prior studies reviewed, but it is seen as a necessary factor in analyzing the influence of the offender's type of occupation. It will serve primarily as a control variable in examining the influence of the offender's occupation upon sentencing, as it is unlikely that occupation

would have a substantial impact if the offender was unemployed at the time.

The degree of injury which the victim suffered as a result of the offense was also not included as a relevant factor in the aforementioned studies; however, it will be included in the current analysis. There are two reasons for its inclusion. First, it is anticipated that this factor will serve to aid in the determination of the severity of the offense. The premise for this function is that the courts may view an offense which resulted in an injury as more serious than a similar offense committed without an injury resulting. Used in this capacity, the degree of injury will act principally as a control for the specified severity factor already included. The second reason for its inclusion is founded in the rationale behind the law.

As the Gun Law's proponents have labeled it as a means to decrease violent crime, it seems plausible that the ultimate goal of the law is to reduce the possibility that injuries will be suffered by those victimized. If this assumption holds true, one would expect that the offender who uses a firearm to inflict an injury to his victim would be more likely to receive the additional penalty of the Gun Law. This reaction to the offender who has proven his propensity towards violence by actually injuring his victim fits neatly into the deterrent theories supporting the Gun Law. It would not only follow the general deterrent theory by setting an example to the potential violent offender, but it would also support the incapacitation theory by assuring that the threat posed by the proven violent offender is temporarily removed through his incarceration.

The final factor to be included in the current analysis is the consideration of the relationship which existed between the offender

and the victim at the time the offense occurred. The possibility that this factor would be influential in the application of the Gun Law is based, in part, on empirical grounds. Using a sample of 5,042 cases of violent crime presented for prosecution in the District of Columbia during 1973, Williams analyzed the effect which the relation between the victim and the offender had upon the final disposition of the offender. It was generally found that the closer the relationship was between victim and offender, the more likely the case was dismissed prior to trial; and when not dismissed, it was less likely that a conviction resulted. Williams states the following reasons for this conclusion:

One of the explanations for the dismissal of cases in which the victim and defendant have a close relationship is that the victim reconciles with the defendant or perhaps is fearful of testifying due to a continuing relationship.... Later in the case, intimate acquaintances and spouses are more likely to cause a case to be dismissed, due to a victim testimony problem. It appears that the effect of the social relationship between the victim and the defendant explains, in large part, the victim's decision to refuse to cooperate.... This study indicates that the victim is considered in determining the final dispositions in cases of violent crime. Most of the victim's impact occurs before trial. It is the prosecutor who appears to be taking the victim into consideration in his decision not to prosecute or to later dismiss, perhaps in anticipation of how the judge and jury will perceive the victim.<sup>46</sup>

Given these findings, it would appear that the Gun Law would be less likely to be used in cases involving offenders known to the victim. However, when considering the law's purpose of preventing violence, it is similarly likely that the relationship might increase the probability that the law will be used, for other evidence indicates that the closeness of the relationship may enhance the potential for violence. The results of a nationwide victimization survey conducted during 1973 to 1976 by the U.S. Department of Justice provides such evidence.

Limiting the results to violent crimes, such as rape, robbery and

assault, firearms were found to be involved in 9% of those offenses in which the victim knew the perpetrator (termed "intimate" offenses) while in offenses involving strangers (or "nonintimate" offense) firearms were involved 12% of the time, presenting merely a 3% difference in the frequency of firearm involvement.<sup>47</sup> Examining the incident of actual attacks directed against the victim, the survey showed that "intimate" victims were more often attacked (60% of the "intimate" victims were attacked while 53% of the "nonintimate" offenses involved an attack).<sup>48</sup> In those incidents involving an attack, "intimate" offenders were also more likely to be injured (66.9% of "intimate" victims reported injuries, whereas 54.3% of the "nonintimate" respondents were injured).<sup>49</sup> These results indicate that the victim who is known to the offender may actually be more likely to sustain an injury during the commission of a violent crime against them. Coupling these findings with the notion that the known victim is more readily available to the offender, due to the offender's knowledge of the victim's habits and whereabouts, it would appear that the potential for violence is indeed enhanced by the closeness of the relationship between the victim and the offender. It may be appropriate, therefore, to also postulate that the known offender might actually be more likely target for the intended deterrent values of the Gun Law. The only way in which to evaluate the influence which either concept may have on the use of the Gun Law is to include this factor in the analysis of when the law has been employed.

### Conclusion

With the addition of the five predictors proposed above to those eight selected from prior research, a total of thirteen factors have

been postulated as being potentially influential in the analysis of the application of the Gun Law. Grouping them together according to their point of origin, being either offender, offense, or judicial processing characteristics, they are as follows:

- Offender Characteristics: Age  
Sex  
Race  
Prior Criminal Record  
Type of Occupation  
Employment Status
- Offense Characteristics: Severity of Offense  
Victim/Offender Relationship  
Extent of Injury to Victim  
Number of Charges Pending
- Judicial Characteristics: Type of Defense Attorney  
Type of Plea  
Geographic Location/Caseload of the Court

All of these factors will be included in the analysis of the circumstances in which the Gun Law has been applied. During this analysis each will be tested for its individual and relative association with the application of the Gun Law. The goal of the analysis is to establish the relative usefulness of each in predicting when the law will be used in future cases. Each factor will be operationally defined in Chapter 3.

### Chapter Summary

In this chapter two major concerns were addressed, the results of previous examinations of the impact and application of mandatory firearm statutes, and the selection of factors which may influence the application of such laws. Regarding the findings of past studies, three empirical examinations were reviewed. One of these concerned the Massachusetts statute prohibiting the unauthorized carrying of a firearm. The results

of this study indicated that the mandatory penalty associated with the law may have increased citizen compliance with the law, and for those who were convicted under the statute, they received harsher penalties than those imposed under the previous non-mandatory statute. It was also established that the law appeared to have decreased the use of firearms in the commission of non-premeditated crimes, such as assault. However, the same law was found to have little or no effect on the use of firearms in robbery (usually being a premeditated offense). Of more importance to the present study, this investigation revealed that the courts had not attempted to circumvent the intent and mandates of the law in the imposition of penalties, and that they did not selectively enforce this statute.

This finding was not discovered by the two studies performed on the Michigan mandatory firearm statute. The results of both indicated an opposite situation. The law in Michigan prohibiting the use of a firearm in the commission of a felony was not found to be uniformly applied. It appeared as if the courts had in this instance selectively applied the statute to eligible offenders. One study showed that only 29.2% of the offenders violating the statute were convicted of this violation. The second study suggested that even when offenders were charged with violating the statute, the courts circumvented the law by such methods as reducing the originating felony to a misdemeanor, and reducing the penalty for the originating felony to compensate for the penalty mandated by the Gun Law. It was determined, however, that these conclusions regarding the Michigan Gun Law must not be taken for granted, as deficiencies were discovered in the research designs of both studies. These deficiencies stemmed from the inadequate sample used in both, and the limited

information processed by each.

After reviewing these studies, the selection of 13 factors which may influence the application of the Gun Law was presented. Eight of these factors were established through a review of past studies which examined prosecutorial and judicial discretion, and had found them to be associated with either the decision to prosecute or the outcome of criminal sentencing, or both. The remaining five factors were postulated as being influential according to theoretical considerations. Six of the factors relate to the offender, these include: age, sex, race, prior criminal record, occupation, and employment status. Four of the thirteen were considered being related to the commission of the offense. They are as follows: the severity of the offense, the relationship between the victim and the offender, the injury to the victim, and the number of charges pending. The last three factors are the type of defense attorney, type of plea, and the geographic location and caseload of the court. These were considered to be relevant to the judicial processing of the case. These factors are to be used in determining the circumstances surrounding the application of the Gun Law. The importance of these factors in regard to their use in the current examination is clarified in the next chapter which presents the research design of the present study.

## FOOTNOTES: CHAPTER II

<sup>1</sup>James A. Beha, "And Nobody Can Get You Out: The Impact of a Mandatory Prison Sentence for the Illegal Carrying of a Firearm on the Use of Firearms and on the Administration of Criminal Justice in Boston," Boston Law Review 57 (1977): 96-146, 290-333.

<sup>2</sup>Ibid., p. 128.

<sup>3</sup>Ibid., p. 299.

<sup>4</sup>Ibid., pp. 140-41.

<sup>5</sup>Ibid., p. 146.

<sup>6</sup>Ibid., p. 143.

<sup>7</sup>Ibid., p. 311.

<sup>8</sup>Ibid., p. 315.

<sup>9</sup>Throughout this paper, the term: Eligible Offender, refers to those offenders who were subject to prosecution for violating the Gun Law statute. In essence, all those offenders who, according to the examined survey data, had in their possession a firearm during the commission of the felony offense which they had perpetrated.

<sup>10</sup>William Kime, "Preliminary Results: Impact of Gun Law on Felony Convictions," Michigan Department of Corrections Memorandum, March 23, 1978.

<sup>11</sup>Milton Heumann and Colin Loftin, "Mandatory Sentencing and the Abolition of Plea Bargaining: The Michigan Felony Firearm Statute," Law and Society 13 (Winter 1979): 393-430.

<sup>12</sup>It should be noted, that although the Gun Law provides a mandatory penalty, the statute itself does not mandate that all offenders subject to prosecution under the statute shall be prosecuted. As the prosecuting attorney still retains the discretion to determine when the law is to be charged, Heumann and Loftin had a unique opportunity to examine the courts' reactions when the prosecutor's discretion was severely limited through this office policy of charging all eligible offenders.

<sup>13</sup>Heumann and Loftin, "Mandatory Sentencing and the Abolition of Plea Bargaining," p. 407.

<sup>14</sup>Ibid., n. 36, p. 415.



- <sup>15</sup> Ibid.
- <sup>16</sup> Ibid., p. 416.
- <sup>17</sup> Ibid., p. 422.
- <sup>18</sup> Ibid., p. 426.
- <sup>19</sup> Ibid., pp. 419-20.
- <sup>20</sup> Ibid., p. 427.
- <sup>21</sup> Dominick R. Vetri, "Guilty Plea Bargaining: Compromises by Prosecutors to Secure Guilty Pleas," University of Pennsylvania Law Review 112 (1964): 865-908.
- <sup>22</sup> Ibid., p. 901.
- <sup>23</sup> George F. Cole, "The Decision to Prosecute," Law and Society Review 4 (February 1970): 331-43.
- <sup>24</sup> David W. Neubauer, "After the Arrest: The Charging Decision in Prairie City," Law and Society Review 18 (Spring 1974): 495-517.
- <sup>25</sup> Stephen P. Lagoy, Joseph J. Senna and Larry J. Siegel, "An Empirical Study on Information Usage for Prosecutorial Decision Making in Plea Negotiations," The American Criminal Law Review 13 (Winter 1976): 383-463.
- <sup>26</sup> Ibid., p. 437.
- <sup>27</sup> Ibid., p. 458.
- <sup>28</sup> Ibid., p. 462.
- <sup>29</sup> Peter W. Greenwood, Sorrel Wildhorn, Eugene C. Poggio, Michael J. Strumwasser and Peter DeLeon, Prosecution of Adult Felony Defendants: A Policy Perspective (Toronto: Lexington Books, 1976).
- <sup>30</sup> Ibid., p. 138
- <sup>31</sup> Richard S. Frase, "The Decision to File Federal Criminal Charges: A Quantitative Study of Prosecutorial Discretion," The University of Chicago Law Review 47 (Winter 1980): 246-331.
- <sup>32</sup> Ibid., p. 247.
- <sup>33</sup> Ibid., p. 292.
- <sup>34</sup> Thorsten Sellin, "The Negro Criminal," The Annals of the American Academy of Political and Social Sciences 140 (November 1928): 52-64.
- <sup>35</sup> Guy B. Johnson, "The Negro and Crime," The Annals of the American Academy of Political and Social Sciences 217 (September 1941): 93-104.

<sup>36</sup>Henry A. Bullock, "Significance of the Racial Factor in the Length of Prison Sentences," Journal of Criminal Law, Criminology, and Police Science 52 (1961): 411-417.

<sup>37</sup>Edward Green, Judicial Attitudes in Sentencing (New York: McMillan and Co., Ltd., 1961).

<sup>38</sup>Marvin E. Wolfgang, A. Kelly and H. Nolde, "Comparison of the Executed and the Commuted Among Admissions to Death Row," Journal of Criminal Law, Criminology and Police Science 53 (1962): 301-312.

<sup>39</sup>Edward Green, "Inter and Intra-racial Crime Relative to Sentencing," Journal of Criminal Law, Criminology and Police Science 55 (1964): 348-385.

<sup>40</sup>Hugo A. Bedau, "Death Sentences in New Jersey," Rutgers Law Review 1 (Fall 1964): 1-56.

<sup>41</sup>*Ibid.*, p. 2.

<sup>42</sup>Theodore G. Chiricos and Gordon P. Waldo, "Socioeconomic Status and Criminal Sentencing: An Empirical Assessment of a Conflict Proposition," American Sociological Review 40 (1975): 753-772.

<sup>43</sup>Carl E. Pope, "The Influence of Social and Legal Factors on Sentence Dispositions: A Preliminary Analysis of Offender-Based Transaction Statistics," Journal of Criminal Justice 4 (1976): 203-221.

<sup>44</sup>Timothy Flanagan, Michael Hindelany and Michael Gottfredson, eds., Sourcebook of Criminal Statistics - 1979 (U.S. Law Enforcement Assistance Administration, National Criminal Justice Information and Statistics Service, Washington D.C.: U.S. Government Printing Office, 1980), p. 462.

<sup>45</sup>Robert M. Carter and Leslie T. Wilkins, "Some Factors in Sentencing Policy," Journal of Criminal Law, Criminology and Police Science 58 (1967): 503-514.

<sup>46</sup>Kristen M. Williams, "The Effects of Victim Characteristics on the Disposition of Violent Crime," in Criminal Justice and the Victim, ed. William F. Mc Donald, (Beverly Hills, CA: Sage Publications, 1976), p. 207.

<sup>47</sup>Harold R. Lentzner and Marshsoo M. De Berry, Intimate Victims: A Study of Violence Among Friends and Relatives (U.S. Department of Justice, Bureau of Justice Statistics, Washington, D.C.: U.S. Government Printing Office, 1980), p. 9.

<sup>48</sup>*Ibid.*, p. 10.

<sup>49</sup>*Ibid.*, p. 33.

## CHAPTER III

### RESEARCH METHODOLOGY

In the previous chapter various factors were postulated as being associated with decision making in the adjudication of criminal offenders. These factors have been incorporated into the current research design which is directed towards providing an evaluation of the use and impact of the Gun Law. As mentioned in Chapter 1, this evaluation will be fulfilled through the examination of four general research questions. The procedures used to accomplish these examinations are given in the present chapter.

The chapter opens with a description of the sampling scheme and the samples to be used. Following this section, the analytical and statistical techniques, as well as the variables employed to meet the evaluative goals of the study are discussed. This section of the chapter is divided into four segments relating to specific research phases, each of which corresponds to one of the four general research questions addressed. The first phase examines the uniformity of the application of the Gun Law. The second probes the impact which specific case characteristics have in the prosecution and conviction of Gun Law offenders. The third phase investigates how the imposition of the law has affected the types and lengths of sentences that offenders have received. The fourth reexamines the use of weapons exhibited by convicted felony offenders.

The Sample

The current study is a secondary analysis of data collected by the Michigan Felony Sentencing Project.<sup>1</sup> This project was undertaken in 1978 by the Michigan State Court Administrative Office to investigate the factors relevant to decision making in sentencing for the purpose of establishing sentencing guidelines. Using a disproportionate stratified random sample, the Project gathered data on 5,909 of the 27,331 felony cases sentenced during the calendar year of 1977. This original sample included information on 432 factors or variables describing attributes of each case. This information was gathered from those reports available to the sentencing judge for his or her use in determining the sentence to be given to each offender (the individual offender sentenced in one court for a specific crime or a group of crimes was held as the unit of analysis). The relevant sources of such information were found to be the presentence report, the offender's criminal history and any diagnostic evaluations. As an offender can appeal a sentence which was based upon erroneous information supplied to the judge in these forms, it is assumed that it was gathered as accurately as possible by the probation or parole officer who originally collected and disseminated it. Furthermore, to insure the reliability of the collection of the survey data, the Project randomly selected ten percent of the collected cases and subjected these to recoding by a second data coder in order that the inter-coder reliability of the data collection could be measured. Comparing the transcription of the data by both coders, the Project determined that an agreement or accuracy rate of 88.2% had been obtained across all the variables included within the survey.<sup>2</sup>

The sampling scheme itself was developed by the Survey Research

Center of the University of Michigan. Due to variances in the distribution of cases across geographic areas and the types of offenses represented (i.e., less severe offenses being more prevalent than more severe offenses), a disproportionate stratified random sample was chosen to insure an adequate sample of the universe.

First, the universe of 27,331 Felony cases was broken down into three regional strata, being classified as either metropolitan, urban or rural areas. The basis for the classification was the number of cases processed by the particular courts in the sample. The metropolitan strata consisted of those courts which had processed more than 2,000 felony dispositions during 1977. The courts which had processed 200 to 1,999 felony cases made up the urban strata, while the remaining courts, processing fewer than 200 cases, fell into the rural strata. As all fifty Circuit Courts (representing 83 counties) and the Detroit Recorder's Court (representing the City of Detroit) were included in these strata, the sample is representative of the entire state court system.<sup>3</sup>

Following this initial stratification, the dispositions themselves were then categorized into one of five offense specific strata. These offense strata were constructed to reflect the variance in the frequency of different types of offenses. The statutory severity of the offense was chosen as the selection criterion. It was measured in terms of the offense's maximum penalty. If the maximum penalty was life, or a term of years ranging from 20 to life, the cases were grouped into one strata. The remaining four strata represented offenses having maximum terms within the following ranges: 14 and 15 years; 7 to 10 years; 2½ to 5 years, and finally, 2 years or less. In those cases where the offender was convicted of more than one offense, the most severe offense was used

in assigning the case to a particular severity strata.

Having devised this basis for stratification, the Project gathered a simple random sample approximating 25% of the sampling universe. This being distributed across the 15 strata (i.e., five offense strata within each of the three regional strata), or approximately 440 cases within each strata, totaling 6,600 cases. This original sample did, however, decrease to 5,909 cases due to the exclusion of cases in which some of the aforementioned reports were unavailable for coding, or the disposition was the result of an appeal or a revocation of probation. Next, as a result of the variances in the distribution of cases across the 15 strata, sampling weights were calculated for each strata. These weights were based on the sampling rates obtained within the strata. The weights insure a proportionally correct number of cases within each strata in respect to the original sampling universe. After weighting the selected sample (based on sampling ratios ranging from 1:1 to 1:10), a weighted sample of approximately 26,133 cases was achieved. This weighted sample closely paralleled the distribution of the cases found in the sampling universe.<sup>4</sup>

It is from this weighted sample gathered by the Project, that the dataset to be used in the present study was drawn. As such, it is merely a subsample of the larger one described above. The inclusion parameter used in selecting cases for the present analysis is the type of offense. All cases in which the offender's primary offense could broadly be defined as theft from a person or persons was selected for use (this included all attempt offenses as well). The primary offense was defined as the offender's most serious offense; this definition was based on the same statutory severity scale used in determining the five severity

strata above.

The decision to use this group of theft offenses was founded on pragmatic considerations. First, these cases presented a single sample which, while being both statutorily and behaviorally related, also provided the largest proportion of offenders who were eligible for prosecution under the Gun Law. Secondly, the larger sample aids in insuring a sufficient number of cases to allow for the numerous subgroup comparisons required by the present research design.

Using this criteria (i.e., offense type) a sample of 2,206 cases was selected for examination in the current study. This sample represents 8.5% of the overall weighted sample of 26,133 cases collected by the Project. It includes cases distributed across eleven primary offense types. These offenses and their respective frequencies within the sample selected are presented in Table 1.

Table 1. The Frequency and Types of Offenses Included in the Overall Sample

Type of Offense (Maximum Penalty in Years)	Absolute Frequency	Relative Frequency(%)
Armed Robbery (Life) . . . . .	1,070	48.5
Attempted Armed Robbery (5) . . . . .	61	2.8
Unarmed Robbery (15) . . . . .	281	12.7
Attempted Unarmed Robbery (5) . . . . .	122	5.5
Robbery of Bank Safe or Vault (Life) . . . . .	23	1.0
Assault with Intent to Rob while Armed (Life) . . . . .	220	10.0
Attempted Assault with Intent to Rob while Armed(5) . . . . .	5	0.2
Unarmed Assault with Intent to Rob (15) . . . . .	40	1.8
Attempted Unarmed Assault with Intent to Rob (5) . . . . .	21	1.0
Larceny from Person (10) . . . . .	217	9.8
Attempted Larceny from Person (5) . . . . .	146	6.6
Total	2,206	100.0

Although four of the primary felony offenses included in this overall sample are unarmed offenses and as such are not directly pertinent to the statute under study, they are maintained in the current sample. This is due to a problem inherent in the use of the statute under which the offender was ultimately convicted of violating, rather than the original charge as the inclusion criterion. The problem lies in the fact that a conviction for an unarmed offense does not necessarily negate the possibility that the offense had actually involved the use of a weapon by the offender. It is entirely possible that the offender was armed at the time of the occurrence; but as a result of a plea negotiation, he was convicted of a lesser included unarmed statute. Given this possibility, the unarmed offenses were retained to avoid the loss of incidents in which the offender may have been originally subject to prosecution under the Gun Law, as these cases will later be selected as a subsample in the analysis of the application of the Gun Law. Furthermore, since this sample is to be used in the descriptive analysis of the frequency by which weapons have been employed in the commission of felonies both before and after the Gun Law was enacted, a full sample of armed as well as unarmed offenders is required.

Reviewing the basic demographic characteristics of the cases included in this sample, it was discovered that in respect to the gender of the offenders, the sample is overwhelmingly male. Males comprised 95.5% of the sample. The racial aspects of the sample indicated that white offenders constituted 30.3%, while non-white offenders (being either Blacks, Hispanics or Native Americans) represented 67.9% of the sample. Racial data was unavailable for 1.8% of the sample. The age of the offenders included ranged from 15 to 66 years of age at the time they committed



their respective offense or offenses. The mean age was established as being 22.4 years.<sup>5</sup>

Referring to the stratification scheme devised by the Project, Table 2 presents the distribution of the selected overall sample across the two general strata used in weighting the original Project's sample. As shown in the table, the division of the cases according to their "geographic" stratification (being based on the court's individual case-loads) 69.2% of the selected overall sample fell into the metropolitan strata, 25.6% were classified as being in the urban strata, and the rural strata consisted of the final 5.2% of the sample.

Table 2. The Distribution of the Selected Overall Sample within each Weight Stratum.

Stratum	Category	Absolute Frequency	Relative Frequency(%)
Geographic or Court Strata			
	Metropolitan	1,527	69.2
	Urban	564	25.6
	Rural	115	5.2
	Total	2,206	100.0
Offense Severity Strata			
	20 years to Life	1,313	59.5
	14 and 15 years	321	14.6
	7 to 10 years	217	9.8
	2½ to 5 years	355	16.1
	2 years or less	0	0.0
	Total	2,206	100.0

When focusing on the severity of the offense, Table 2 shows that the majority of the offenses have a maximum penalty ranging from 20 years

to life. This category is followed by 14.6% of the cases having a maximum penalty of 14 or 15 years, 9.8% having a penalty of 7 to 10 years, and 16.1% with a penalty of 2½ to 5 years. The least severe offense category is unfortunately not represented by the current overall sample. This is due to the fact that the offense inclusion parameter of theft from a person has preselected those offenses which are serious enough that their lowest maximum penalty is 2½ years. In this sense, the sample is not representative of those least severe cases incorporated into the Project's originally collected sample.

As stated earlier, the time frame which the Project worked under in gathering this dataset was the calendar year of 1977. Operating within this time frame the Project collected data on those cases which were sentenced between January 1, 1977 and December 31, 1977. As the date of sentencing was the determining factor for inclusion in the original sample and not the date of the offense, the present sample actually represents an enlarged time frame, if the date on which the offense occurred is considered instead. Since the current study is directed at examining the use of the Gun Law, and that law was not invoked retroactively, the sample actually presents cases which reflect the courts' disposition of offenses which were committed before and after the Gun Law took effect. Numerically, out of the present sample of 2,206 cases, there were about 1,224 cases (or 56.4%) which took place prior to the enactment of the Gun Law on January 1, 1977 and about 946 cases (or 43.6%) which occurred after the enactment of the law (36 cases in the sample did not have this information available).<sup>6</sup> Having this attribute, the overall sample will be used in that phase of the current study which reexamines the use of weapons by convicted offenders before and after the

implementation of the Gun Law.

Using both the date of the offense and the possession of a firearm during the commission of the felony as a selection criterion, the overall sample will also be broken down into a second subsample. This subsample will be the subject or focus of the three remaining analytical phases of the present study. Although the specific analyses to be performed with this group are discussed in the following sections, it is important to describe the group in relation to the sample from which it has been drawn.

This group of offenders not only possessed a firearm during the offense but also they had committed their offenses after the effective date of the Gun Law. Having both attributes, these offenders are the only ones who were actually subject to prosecution under the Gun Law, and as such this second group will be termed "Eligible Offenders."<sup>7</sup> Through preliminary analysis, it was found that 456 (or 20.7%) of the 2,206 originally selected cases met both of these selection criterion necessary for inclusion in this subsample. This group will primarily be used in those phases of the analysis which investigate the application of the Gun Law and its effect on the types and lengths of sentences received by offenders.

Table 3 and 4 present information which facilitate the comparison of this subsample with the originally selected sample from which it was drawn. Table 3 indicates what primary felony offenses are represented in the subsample and their frequency of occurrence in it. When this distribution is compared to the originally selected sample, see Table 1, it appears that the selection criteria has resulted in an alteration in the types and frequencies of the offenses represented. It appears that the

subsample has become more skewed toward the more serious offenses; for example, the proportion of armed robbery cases increased in the subsample, while unarmed robbery decreased. As Table 1 indicated, the originally selected sample of 2,206 cases consisted of 48.5% armed robbery offenses and 12.7% unarmed robbery offenses; Table 3 on the other hand shows that armed robbery offenses increased to 76.5% of the cases represented in the Eligible Offender subsample, while at the same time there was a decrease in the representation of unarmed robbery cases, which dropped from 12.7% to 5.7%. This shift in the types of offenses represented is clearly the result of excluding from the subsample those offenders who did not possess a firearm.

Table 3. The Frequency and Types of Offenses Included in the "Eligible Offender" Subsample.

Type of Offense (Maximum Penalty in Years)	Absolute Frequency	Relative Frequency(%)
Armed Robbery (Life) . . . . .	349	76.5
Attempted Armed Robbery (5) . . . . .	5	1.1
Unarmed Robbery (15) . . . . .	26	5.7
Attempted Unarmed Robbery (5) . . . . .	6	1.3
Assault with Intent to Rob while Armed (Life) . . . . .	43	9.5
Attempted Assault with Intent to Rob while Armed (5) . . . . .	2	0.4
Larceny from Person (10) . . . . .	25	5.5
Total	456	100.0

This increase in the statutory seriousness of the primary offenses between the original sample and the Eligible Offender subsample is also substantiated by Table 4, for it indicates that 85.9% of the Eligible Offender subsample represents offenses that carry the most severe penalty of 20 years to life. This is an increase from the proportion of cases in

the originally selected sample which were included in the same offense severity strata, for as shown in Table 2, only 59.5% of the cases in that sample carried the same maximum penalty range. Another valuable comparison to be made between Tables 2 and 4, is in the number of cases found in each of the three geographic or court sampling strata. Considering this attribute of the two samples, there is little or no appreciable difference to be noted. It would appear that the subdivision of the original sample has not resulted in a loss of representativeness in the geographic description of the subsample.

Table 4. The Distribution of Cases in the "Eligible Offender" Subsample within each Weight Stratum.

Stratum	Category	Absolute Frequency	Relative Frequency (%)
Geographic or Court Strata			
	Metropolitan	347	76.1
	Urban	90	19.7
	Rural	19	4.2
	Total	456	100.0
Offense Severity Strata			
	20 years to Life	392	85.9
	14 and 15 years	26	5.7
	7 to 10 years	25	5.5
	2½ to 5 years	13	2.8
	2 years or less	0	0.0
	Total	456	100.0

There is, however, a loss in the subsample's representation of specific types of offenses from the originally selected overall sample. As previously mentioned, the inclusion criteria established for the

subsample caused numerous cases to be excluded from the sample; and as a result, several specific offenses were lost entirely. Table 3 presents the offenses which fell victim to this sampling criteria. The loss of specific offenses is quite pronounced in the subsample, as four of the eleven originally selected offenses are not represented in the Eligible Offender sample. The specific offenses not represented are as follows: robbery of a bank safe or vault; unarmed assault with intent to rob; attempted unarmed assault with intent to rob, and attempted larceny from a person. The fact that particular offenses are not included in the subsample may have a direct effect upon the offender populations which the sample describes. The results of any analysis of the Eligible Offender subsample may now be generalizable only to the seven offense categories remaining in the sample. Furthermore, as the subsample does not include offenses in which the offender was either unarmed or armed with a weapon other than a firearm, any inference would also be limited to only those offenses in which the offender did, in fact, possess a firearm. These restrictions in the data would have to be considered in applying the results of the following analytical phases using this subsample to other offender populations.

#### Data Analysis

Employing these samples, the data analysis will proceed in four phases. The first phase is purely descriptive and addresses the question of the uniformity by which the Gun Law has been applied to offenders within the Eligible Offender subsample. The second phase uses a correlational design to explore the data presented by the Eligible Offender with the objective of ascertaining a set of case characteristics

associated with the use of the Gun Law. The third phase employs a static-group comparison design to assess the impact of the Gun Law upon sentence length, as exhibited by the Eligible Offender subsample. This phase will also incorporate a descriptive analysis of the types of sentences received by those offenders convicted of violating the Gun Law using a subgroup of the Eligible Offender subsample. The fourth and final phase provides a purely descriptive analysis of the use of weapons exhibited by the convicted offenders included in the originally selected sample.

#### Data Analysis: Phase 1

In Chapter 1 the rationale supporting the Gun Law was discussed. Through this discussion it was determined that the Gun Law was enacted to provide a means of deterring violent crime. It was then determined that in order for the law to function as an effective deterrent, the punishment for its violation must not only be relatively severe, but also certain. To insure the certainty of the punishment, the law states that "a person who carries or has in his possession a firearm at the time he commits or attempts to commit a felony, except the violation of [carrying a concealed weapon] is guilty of a felony, and shall be imprisoned for 2 years."<sup>8</sup> The construction of this portion of the law suggests that the legislature had intended that when one commits a felony while possessing a firearm, he should ultimately be found guilty of violating the statute. Unfortunately the results of previous studies of the Gun Law have indicated that only 11.1% to 29.2% of the offenders subject to prosecution under the law have been convicted of this violation. These relatively low conviction rates definitely suggest that the law's deterrent effect may have been compromised by the lack of certainty

in convicting those offenders who violate the Gun Law. However, before this conclusion can be accepted, deficiencies in the design of those studies need to be overcome, and a reexamination of the issue performed. This phase of the current analysis provides this needed reexamination.

To achieve this objective, the conviction rate of the offenders included in the present study who have technically violated the Gun Law will be compared to the highest previously determined conviction rate. This analysis will be based solely on the Eligible Offender subsample, as these 456 cases represent only those offenders who have been convicted of committing or attempting to commit a felony while possessing a firearm after the enactment of the Gun Law. Using the results of the only previous statewide survey as a basis or referent, it is expected that at least 29.2% of the offenders represented in the sample will be found to have been convicted of violating the Gun Law.<sup>9</sup>

To determine if the proportion of offenders actually convicted in this sample differs significantly from the previously established rate, this single dichotomous measure (i.e., convicted or not convicted) will be subjected to the Goodness of Fit Test. The statistical null hypothesis advanced for testing is symbolically stated as,  $H_0: P=.29$ , where  $P$  is the proportion of eligible offenders convicted. The results of this statistical test will be evaluated at the .05 level of significance to determine if any observed departure from the given 29% conviction rate is statistically significant or merely due to chance alone. This level of significance will be employed throughout the analytical phases of the current study.



## Data Analysis: Phase 2

As previously stated, the objective of this second phase of the analysis is to determine if specific attributes of the case are associated with first, whether an eligible offender is or is not prosecuted for violating the Gun Law; and secondly, once prosecuted, whether the offender is convicted. As this phase of the study seeks to establish the relationship which exists between potential Gun Law predictors and two distinct dependent measures (one being the prosecution of offenders and the other conviction) while using the same research design for both, the present analytical phase will be divided into two stages. First, the search for those factors associated with the decision to prosecute Gun Law offenders will be addressed. Following that stage and utilizing the same fundamental research design, the investigation will continue by seeking out those factors associated with the conviction of prosecuted Gun Law offenders.

### Factors Associated with the Prosecution of Gun Law Offenders

The offender sample to be considered in this initial stage of the analysis is that subgroup of offenders who were deemed subject to prosecution under the Gun Law, this being the Eligible Offender subsample. Employing this group of offenders has controlled for three relevant legal factors, the offenders have all committed a felony (as evidenced by their conviction of the primary offense), they did possess a firearm during the offense, and the offense did occur after the Gun Law was enacted and in force. The initial step in this analysis will be to describe the cases considered in respect to their distribution within the variables under consideration. This step will be followed by a tabular analysis of the

possible bivariate relationships between the thirteen individual independent variables and the presence or absence of prosecution under the Gun Law. After this step a multivariate analysis will be performed, using Multiple Classification Analysis, to investigate the cumulative effects which the examined factors have upon the prosecution of Gun Law offenders. This multivariate analysis will also serve to determine the relative strength of the relationships examined. All three of these analytical steps will later be repeated in the search for factors associated with the conviction of prosecuted offenders. The last two steps utilize a correlational design. They are to be performed merely to establish the presence or absence of an association between the prosecution of an offender (and later the conviction) and specific attributes of the case. The benefits and deficits of this research design are described by Campbell and Stanley in the following:

Insofar as the natural instances of  $X$  vary among each other in their other attributes, these other attributes become less plausible as rival hypotheses. Correlations of a fairly impressive nature may thus be established, such as that between heavy smoking and lung cancer. What is the status of such data as evidence of causation analogous to that provided by experiment?

A positive point may first be made. Such data are relevant to causal hypotheses inasmuch as they expose them to disconfirmation. If a zero correlation is obtained, the credibility of the hypothesis is lessened. If a high correlation occurs, the credibility of the hypothesis is strengthened in that it has survived a chance of disconfirmation. To put the matter another way, correlation does not necessarily indicate causation, but a causal law of the type producing mean differences in experiments does imply correlation. In any experiment where  $X$  [an experimental variable or an event] has increased  $O$  [an observation or measurement] a positive biserial correlation between presence-absence of  $X$  and either posttest scores or gain scores will be found. The absence of such a correlation can rule out many simple, general, causal hypotheses, hypotheses as to main effects of  $X$ . In this sense, the relatively inexpensive correlational approach can provide a preliminary survey of hypotheses, and those which survive this can be checked through the more expensive experimental manipulation.

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The factor used in this design as the dependent variable is the application of the Gun Law to individual cases. This is a dichotomous variable expressing whether or not the eligible offender was prosecuted (as a second or third offense) for violating the Gun Law. The dichotomy consists of two values, either yes or no.

The more numerous factors to be considered in both stages as independent variables have been grouped into three major classifications. These classifications relate the variables to their respective sources of origin or point of influence in the sentencing process. The first classification presents those variables which describe characteristics of the offender. It includes the offender's age (at the time of the offense), sex, race, number of prior convictions (both juvenile and adult), type of occupation, and employment status (at the time of the offense). The second classification consists of those variables pertaining to the commission of the offense. This classification incorporates the relationship between the offender and the victim, the presence or absence of any type of injury to the victim, the statutory severity of the primary offense, and the number of felony dispositions (excluding the Gun Law) included within the individual case. The remaining classification assembles those variables concerning the judicial processing of the case, which consists of the type of legal representation, the conviction method (applicable to the primary offense), and the location and caseload of the particular court. These variables were selected in Chapter 2 due to their potential influence upon the processing and decision-making in the disposition of criminal cases.

Although the primary function of the variables in these classifications is that of independent variables, they will serve a dual purpose. When acting individually in the bivariate analysis, they may

be considered as being solely independent variables. However, during the multivariate step of the analysis, when used in conjunction with one another, they also act as intervening or relevant third variables in the relationships examined.

As shown in Table 5, which describes the variables, all of these independent variables have been measured on a nominal level. This level of measurement was dictated by the form of tabular analysis employed and the fact that nine of the variables are by their nature measured at this level. With the exception of the offender's sex, which is a naturally occurring dichotomy, the expressed categories or values of the remaining variables have been collapsed or combined from the values originally defined and used by the Project in their data collection. Although this redefinition of the variables measurement results in a loss of information and precision it was deemed necessary, for a preliminary examination of the distribution of the cases across the variables' original values indicated that there was little variance present, and the distributions were very skewed. This problem is evident in the number of cases represented in each of the five severity strata (presented in Table 4) as one category held 85.9% of the cases, a second none, and the remaining three categories contained the final 14.1% of the cases. To ameliorate this situation and enhance the variance, the categories of the originally existing nominal level variables were collapsed into fewer categories, so that no one category contained fewer than 10% of the sampled cases. This was performed only where two or more existing categories were logically or substantively compatible. The same 10% criterion was also used in reducing the originally collected ratio level variables recording the number of prior convictions

Table 5. Phase Two Independent Variables: Classification, Name and Values.

Classification	Variable	Values
I. Offender	Age	Youthful Offender (22 or less) Adult Offender (over 22 years)
	Sex	Male Female
	Race	White Non-white
	Prior Convictions	None One Two Three or more
	Type of Occupation	Skilled (white or blue collar) Unskilled (unskilled or none)
	Employment Status	Yes No
II. Offense:	Statutory Severity of Primary Offense	High Severity (20 years to life) Low Severity (less than 20 yrs.)
	Offender/Victim Relationship	Known Unknown
	Physical Injury to Victim	Yes No
	Number of Felony Dispositions	One Two Three or more
III. Judicial:	Type of Attorney	Appointed Privately Retained
	Conviction Method	Plea Trial
	Location/Caseload of Court	Metropolitan (2,000 or more cases during 1977) Non-metropolitan (less than 2,000 cases during 1977)

and the total number of dispositions to their present nominal scale. The offender's age, however, was dichotomized at the median age, creating two descriptive categories being the youthful and adult offenders. Specific data manipulations are reviewed in Appendix A which reports the distribution of the cases included in this current sample in regard to their originally determined values and their currently defined values.

Employing these variables, the analysis will open with a presentation of descriptive statistics summarizing the attributes of the present data set. The presentation primarily revolves around a discussion of the frequency distributions established for each variable. No hypotheses are advanced nor are any inferential tests performed, as the objective of presenting these statistics is merely to describe the sample currently under study.

Having described the sample, the analysis will continue with the examination of the data for possible bivariate relationships between each of the 13 independent variables and the presence or absence of prosecution under the Gun Law (the dependent variable). A common hypothesis is advanced throughout this tabular analysis which is, that the conviction of the individual offender under the Gun Law is independent of that offender's classification on any value of the independent variable examined in the test. Stated symbollically, the null hypothesis is:  $P_{ij} = P_i P_j$ , where  $P_{ij}$  is the probability of a case falling into any cell of row  $i$  and any cell of column  $j$ ;  $P_i$  is the probability of the case being in any  $i$  row, and  $P_j$  is the probability of the case being in any  $j$  column. The initial inferential test statistic applied to this hypothesis is the Chi-Square Test. Unfortunately the Chi-Square Test is easily influenced by the size of the sample used, and the Chi-Square

value itself does not accurately reflect the strength of any relationship discovered by the test. These concerns are noted by Blalock in his following statements:

We must remember, however, that the significance level attained depends on the sizes of the sample used. As indicated previously, if the samples are very large, it is generally easy to establish significance for even a very slight relationship. This means, in effect, that when samples are large, we are saying very little when we have established a 'significant' relationship. . . . By examining the formula for chi square it is very easy to prove that if proportions in the cells remain unchanged, chi square varies directly with the number of cases. If we double the number of cases, we double chi square; if we triple them, we triple chi square. . . . The significance level depends on two factors: the strength or degree of relationship and the size of the samples. Significance can be obtained with a very weak relationship and large samples. In most social research our primary interest is not so much in finding variables that are interrelated but in locating the important relationships. . . . Having first established the existence of a relationship, the researcher should always ask himself, 'How strong is it?'<sup>11</sup>

To counter the influence of sample size and safeguard against postulating erroneous associations, a second test will be applied in this bivariate tabular analysis when the results of the Chi-Square Test suggest that a relationship does exist. For the 2 x 2 tables, this additional measure will be Phi, and for larger tables, Crammer's V will be employed. These measures are both based on the obtained Chi-Square value, but they adjust for the size of the sample and supply the needed measure indicating the relative strength of any association found between two variables.

Although the bivariate analysis has been strengthened through these additional measures, it still does not give a total view of these variables' relationship with the prosecution of Gun Law offenders, for the analysis only examines the data for the possibility of individual relationships without regard to the concomitant values of the other 12 independent variables. To establish both the relative usefulness of each variable and their cumulative value in predicting when the eligible



offender will be prosecuted for violating the Gun Law, and simultaneously control for the effects of the other variables, a multivariate technique is required. Given these objectives and the level upon which the variables have been measured, Multiple Classification Analysis was selected. The attributes of this multivariate technique are described in the following:

Multiple Classification Analysis (MCA) is a technique for examining the interrelationships between several predictor variables and a dependent variable within the context of an additive model. Unlike simpler forms of other multivariate methods, the technique can handle predictors with no better than nominal measurement and interrelationships of any form among predictors or between a predictor and the dependent variable. The dependent variable, however, should be an interval scale (or a numerical variable) without extreme skewness, or a dichotomy. The statistics show how each predictor relates to the dependent variable, both before and after adjusting for the effects of other predictors. In addition, a multiple correlation coefficient is computed which indicates the magnitude of relationship between the dependent variable and all predictors considered together.<sup>12</sup>

The technique is essentially a multiple regression procedure which uses dummy variables, allowing for the analysis of correlated predictors and non-linear relationships.<sup>13</sup> The basic statistical model employed in Multiple Classification Analysis has been described by Andrews, Morgan and Sonquist as follows:

The model specifies that a coefficient be assigned to each category of each predictor, and that each person's (or other unit's) score on the dependent variable be treated as a sum of: the coefficients assigned to categories characterizing him, plus the average for all cases, plus an error term:

$$Y_{ijk...} = \bar{Y} + a_i + b_j + \dots + e_{ijk...}$$

WHERE

$Y_{ijk...}$  = The score (on the dependent variable) of individual k who falls in category i predictor A, category j of predictor B, etc.

$\bar{Y}$  = grand mean on the dependent variable.

$a_i$  = the 'effect' of membership in the  $i^{\text{th}}$  category of predictor A.

$b_j$  = the 'effect' of membership in the  $j^{\text{th}}$  category of predictor B.

$e_{ijk}...$  = error term for this individual.

The adjusted coefficients can be thought of as having been estimated in such a way that they provide the best possible fit to the observed data, i.e., so as to minimize the sum of the (squared) errors. That set of coefficients can be obtained by solving a set of equations known as the Least Squares Equations).<sup>14</sup>

As this analytic procedure is used herein as a tool in exploring both the individual and cumulative importance of the current set of predictor (independent) variables, two principal research questions are to be addressed. First, do all the predictors, when considered together, explain a portion of the variance in the dependent variable which is significantly greater than by chance alone, and secondly, while holding constant the values of the remaining predictors, does a specific predictor by itself explain a significant proportion of the variance in the dependent variable.<sup>15</sup> The statistical null hypothesis to be examined in regard to the first research question is that the resulting multiple correlation coefficient (which describes that proportion of the variance in the dependent variable explained by the total set of predictors) equals zero in the population sampled. The null hypothesis to be tested concerning the second question is that the resulting multiple classification analysis Beta coefficient for a given predictor (which describes the ability of a predictor to explain variation in the dependent variable after the effects of the remaining predictors have been controlled) equals zero in the population from which the sample was drawn. An F-test will be performed to evaluate the probability of the occurrence

of the outcomes suggested by these hypotheses at the .05 level of significance.<sup>16</sup>

Factors Associated with the Conviction  
of Gun Law Offenders

Having concluded the search for those factors related to the decision to prosecute Gun Law offenders, this phase of the study will progress on to the second stage: the search for those factors associated with the convictions of prosecuted Gun Law offenders. As previously stated, this second stage of the current analysis will be carried out in fundamentally the same manner as the first. The exceptions are that the sample will be restricted to only those offenders represented in the Eligible Offender sample who were, in fact, prosecuted under the Gun Law, and that the dependent variable will now, of course, be the presence or absence of an ensuing Gun Law conviction. Employing the same thirteen independent variables utilized during the preceding stage and delineated in Table 5, the analysis will proceed by first describing this select group of prosecuted Gun Law offenders according to their distribution across the potential predictors.

Following this descriptive analysis, the examination will focus on the quest for factors related to the final judicial disposition of the Gun Law charge. As in the previous stage, this quest will begin by examining the simple bivariate relationships between each of the independent variables considered and the current dependent variable expressing the presence or absence of a Gun Law conviction. Due to the change in the dependent variable, the common null hypothesis to be advanced throughout these tabular analyses is that the conviction of the individual offender

under the Gun Law is independent of that offender's classification on the particular independent variable examined. Again, two measures of association, the Chi-Square Test and either Phi or Crammer's V, will be used to determine whether this hypothesis would be tenable.

Once the bivariate analysis has been performed, the current analytical stage will be concluded through the reexamination of these same relationships under a multivariate model. As before, the multivariate technique to be employed is Multiple Classification Analysis. It will be employed in accordance to the procedures and hypotheses outlined for its use during the preceding stage; however, the dependent variable will now be measuring the presence or absence of a Gun Law conviction; and thus, the research objectives are turned towards determining a set of factors which might serve to predict the judicial disposition of Gun Law offenders.

#### Data Analysis: Phase 3

The purpose of this phase of the analysis is to examine and describe the effects, if any, which a Gun Law conviction has had upon the types and lengths of sentences offenders have received. The first objective will be to determine whether or not the type of sentence given to an offender for his or her primary offense is associated with the presence or absence of a secondary Gun Law conviction. Following that investigation, the analysis will shift to the fulfillment of a second research objective: the evaluation of the impact which a Gun Law conviction has had upon the length of the sentence imposed for the offender's primary offense. This evaluation is in response to those previous findings which have suggested that the length of the penalty applied to the primary offense was sometimes adjusted downward to compensate for the additional

mandatory term imposed for a concomitant Gun Law conviction. The last research objective to be addressed within this phase is the description of the sentences actually imposed upon the offenders sampled for the Gun Law conviction itself. Since three research objectives are sought by the current analytical phase, the following discussion is divided into three sections, each corresponding to a specific objective.

#### Analysis of Primary Offense Sentence Types

A possible point of impact which the Gun Law's application might have is on the types of sentences offenders receive on their primary offenses. To investigate this area of concern, the sample of the 456 offenders deemed eligible for the application of the Gun Law will be selected as the subsample for analysis. Using this offender group, the specific types of sentences they received for their primary offense will be considered as the dependent variable. This nominal level variable will consist of three values: incarceration (either in jail or prison); probation (which includes both suspended sentences and intermittent incarceration), and other remaining types (such as fines or mental health institutional placement).

The independent variable to be used is the application of the Gun Law, expressed by the dichotomy of whether the offender was convicted or not convicted of violating the Gun Law. To examine the relationship between these variables tabular analysis will be employed. As in Phase 2 of the data analysis, the statistical tests of Chi-Square and Crammer's V will be performed to evaluate their relationship. The hypothesis studied is that the type of sentence an offender receives is independent of (i.e., not associated with) the application of the Law. The null hypothesis is

symbollically stated as:  $P_{ij} = P_i P_j$ , where  $P_{ij}$  is the probability of a case falling into any cell of the row  $i$ , and any cell of column  $j$ ;  $P_i$  is the probability of the case being in any cell of row  $i$ , and  $P_j$  is the probability of the case being in any cell of column  $j$ .

To test for this general association between the application of the Gun Law and sentence type, the analysis will be performed with the introduction of the statutory severity of the primary offense as a control. As in Phase 2, the statutory severity of the primary offense will be collapsed from its original five categories to a high severity and low severity dichotomy using the 10% decision rule. Using the severity of the primary offense as a control will reduce the influence that the specific type of primary offense might have in the sense of confounding the simple bivariate analysis. The impact which the introduction of this statistical control will have upon the present research design is that the analysis will be repeated twice, once within each of the two severity categories utilized.

#### Analysis of Primary Offense Sentence Length

Before discussing the design to be employed in evaluating the impact that a Gun Law conviction has had upon the length of the penalty received for the commission of the primary offense, a cursory explanation of the sentencing process used in Michigan is in order. The state operates under an indeterminate sentencing model in which the maximum term of incarceration is set by statute while the minimum term is open to judicial discretion. The sole exception to this model are those offenses in which the statutory maximum penalty is expressed as life or any term of years, in these cases, the judge may set both the maximum and the minimum terms.

The sentenced offender will then, theoretically, serve a term falling anywhere within the specified minimum and maximum range. The actual length of the offender's term is, however, ultimately determined by the State Parole Board. This board may place an offender on parole (and effectively end the period of incarceration) at any time after the offender has served a given proportion of his minimum term (this proportion is set by statute). Operating under this indeterminate model, it appears that the critical factor in determining the length of an offender's actual period of incarceration is the minimum term imposed. This minimum term is also the focal point for the current phase of the analysis, as it is in the determination of this term that the judiciary is vested with its greatest discretionary power. This concept has not been presented to decrease the importance of the maximum penalty, for it too is significant in determining the relative severity of a particular offense (as is evident from its preceding use in the research design). The concept has been presented instead to clarify the utility of both in analyzing the lengths of the sentences imposed.

In response to the usefulness of both the minimum and maximum terms of incarceration, both measures will be employed in creating the dependent variable used in this segment of the analysis. It will not only reflect the length of the minimum term, but it will simultaneously control for the severity of the offense. This devised dependent variable is that proportion of the maximum term given as the minimum term of incarceration. Being so devised it will be referred to as the "sentencing proportion." Mathematically it is derived by merely dividing the minimum term by the maximum term of incarceration. Having the property of a proportion, the dependent variable is measured on a ratio level. The manner

in which the variable controls for the severity of the offense while also reflecting the impact of the minimum term can best be explained by an example.

Compare the case of two offenders, one having been convicted of an offense having a maximum penalty of 20 years, and a second offender convicted of an offense with a maximum of 10 years; however, both receive the same minimum term of 5 years. Intuitively one can observe that although both received the same penalty, the offender who committed the less serious offense (as measured by the maximum penalty) received the relatively harsher sentence. This is more easily seen when one compares the ratio of the minimum term to the maximum term, expressed as a proportion. The proportion expressing the sentence received by the offender who committed the more serious offense is 0.25, while the offender who committed the less serious offense received a proportional sentence of 0.50. Comparing the two values we can conclude that our intuitive interpretation was correct. When considering the relative seriousness of the offense, the actual term (as expressed by the minimum penalty) received by the less serious offenders was twice as harsh as the one received by the offender who committed the more serious offense.

Employing "sentencing proportion" as the dependent variable, the analysis will consist of comparing its mean value for each of the two offender groups to determine whether the length of the prison sentence applied to the primary offense has been adjusted downward for the convicted Gun Law offenders. The two groups will be drawn from the Eligible Offender subsample. As previously mentioned, this subsample represents only those offenders who have committed a felony while possessing a firearm, after the enactment of the Gun Law. These 456 cases will be



subdivided into the two groups on the basis of two criteria, initially by whether or not the offender was convicted of violating the Gun Law, and secondly on whether the term of punishment was imprisonment or probation. The second criteria controls for the type of sentence given on the primary offense. This is necessary since the scope of this analysis is limited to only those offenders who received jail or prison sentences, and not those granted any form of probation (as probationers are only given one specified length of probation and not a minimum and maximum time span). The first group of offenders are those who were both eligible for and convicted of violating the Gun Law (and received a term of incarceration for their primary offense). The second group consists of those offenders who were eligible for prosecution under the Gun Law but were not convicted of that violation (and again receiving a term of incarceration for their primary offense conviction). As these offenders represented in the two groups were originally selected by a random sampling technique, it is assumed that they represent independent and distinct random samples. This assumption has been based on the following rationale supplied by Blalock:

If the overall sample is strictly random, and if one is comparing two subsamples selected from a single larger sample, this assumption of independence between samples will automatically be met since all cases in the total sample will have been selected independently of each other. For example, if one compares males and females, then he will also have a random sample of all males, and an independently selected sample of all females. That is, the selection of Bob Jones has no bearing whatsoever on the probability of Susie Smith's being selected. Usually in social research we draw a single larger sample, although for purposes of analysis we may conceptualize the data as having come from several distinct and independent samples.<sup>17</sup>

As the dependent variable is measured on an interval scale and the two



groups are assumed to be independent random samples, the means of both groups will be compared by a Difference-of-means Test (or "T" Test). The statistical null hypothesis which is to be advanced is that there will be no difference between the means of the two groups; stated symbolically:  $H_0: \bar{X}_1 = \bar{X}_2$ , where  $\bar{X}_1$  is the mean sentencing proportion of the convicted Gun Law offender group, and  $\bar{X}_2$  is the mean sentencing proportion of the offender group not convicted of violating the Gun Law. Since prior research concerning this matter has indicated that the length of the primary term has been adjusted downward in order to compensate for Gun Law convictions, the alternative hypothesis in this instance will be directional, it is that the mean sentencing proportion of the convicted Gun Law offender group will be less than that of the group not convicted under the Gun Law. Using the same notation as before, the alternative hypothesis is symbolically stated as:  $H_1: \bar{X}_1 < \bar{X}_2$ .

This research design has been termed the "Static-Group Comparison" by Campbell and Stanley.<sup>18</sup> They noted that the design is relatively weak due to the fact that any perceived differences between the two groups may not only be attributed to the experimental event (i.e., the Gun Law conviction), but also to pre-existing differences between the groups which may have affected the outcome without the occurrence of the experimental event. Since this design is open to other rival explanations, the analysis will be performed on simply an exploratory level.

#### Analysis of Sentences Imposed for the Gun Law Conviction

While examining the types of sentences received by offenders, this phase of the analysis will also question whether the penalties regarding

the types of sentences imposed for violating the Gun Law itself have met the stringent requirements set forth by the statute. These requirements are twofold. First, that the offender shall be imprisoned for at least two years (for the first offense) and this term of imprisonment shall not be suspended or replaced by probation. Secondly, the term of imprisonment must be served consecutively to any term of imprisonment imposed for the initiating felony offense. To evaluate the compliance to these requirements, only descriptive statistics are needed.

To determine if the convicted offenders are given prison terms, the analysis will proceed by selecting from the Eligible Offender sample only those convicted of violating the Gun Law; these offenders will be used as the subgroup for description. The dependent variable to be measured is a dichotomy expressing the receipt of a prison term or a non-prison term (including jail) for the violation of the Gun Law (See Appendix A for a comparison of these categories to the originally collected data). If the statute has been applied as written, it is anticipated that all of the offenders considered will be found to have received a term of incarceration in prison.

Following that analysis, the question of the prison term being a consecutive sentence will be addressed. For this descriptive examination, the subgroup of offenders from the above analysis who were given prison terms will serve as the sample. The dependent variable for this analysis will be the specific mode in which the term of incarceration was to be served by the offender, being either concurrent (i.e., served at or during the same time period as the primary offense's penalty) or consecutive (i.e., served as a separate or additional period of years). Again, it is anticipated that if the mandates of the Gun Law have been adhered to, all

of the prison terms should be found to have been applied as consecutive terms, not concurrent. As the scope of both the present inquiries are purely descriptive or exploratory in nature, there are no inferential tests performed, nor testable hypotheses advanced.

#### Data Analysis: Phase 4

The final question addressed by the present study is the reexamination of the types and frequency of weapon use exhibited by convicted offenders who have committed their offense(s) either prior to the enactment of the Gun Law or after its enactment. As discussed earlier, this analysis is not conducted to determine the general deterrent effect of the Gun Law inasmuch as only convicted offenders are studied; it is performed merely to reexamine the conclusion reached by the Michigan Department of Corrections, but this time employing a sample more representative of the entire state. Recalling from Chapters 1 and 2, the Michigan Department of Corrections concluded from their study that the use of firearms in the offenses committed by convicted offenders did not differ significantly from its pre-existing level after the Gun Law was enacted.

In the current study this question will be readdressed using the entire originally selected sample of 2,206 cases. Using the date of the offense as the temporal frame of reference, this overall sample will be divided into two subsamples, one being the 1,224 cases that were committed prior to the Law's enactment and the second being the 946 cases committed after the enactment of the Gun Law. The creation of the two distinct subsamples may be considered the experimental manipulation of the data (or the independent variable), and it affords the analysis the

quality of being a simulated before and after design.<sup>19</sup> The dependent variable will be the type of weapon used, or the lack of a weapon. This variable is to be measured on a nominal level having three values: the possession of a firearm (this would include counterfeit firearms); the the possession of another non-firearm weapon (such as knives and clubs), and no weapon (i.e., the offender did not, according to the reports, possess a weapon of any sort). The originally collected values of this variable are presented for comparison to these current values in Appendix A.

To analyze the use of weapons in both offender subsamples, tabular analysis will be employed. As in the previous phases employing tabular analysis, the statistical tests to be utilized in assessing the relationship between the factors will be the Chi-Square test and Crammer's V. The null hypothesis to be advanced is that the use of weapons, as exhibited by convicted offenders, is not associated with the enactment of the Gun Law. Stated symbollically it is:  $P_{ij} = P_i P_j$ , where  $P_{ij}$  is the probability of a case falling into any cell of row  $i$  and any cell of column  $j$ ;  $P_i$  is the probability of the case being in any cell of row  $i$ , and  $P_j$  is the probability of the case being in any cell of column  $j$ .

### Chapter Summary

In this chapter a description of the samples and research designs of the current study was presented. The study was defined as a secondary analysis of data collected by the Michigan Felony Sentencing Project on the sentencing of felony offenders in Michigan during the calendar year of 1977. From this collected data set two primary subsamples were selected. The first being those 2,206 cases in which the offender was convicted of offenses, broadly classified as theft from a person (labeled the

Overall Sample). From this selected sample, the second subsample was drawn, consisting of 456 cases selected on the basis that they represented those offenders who were deemed subject to prosecution under the Gun Law (labeled the Eligible Offender sample). Using these data sets, the analysis proceeds in four phases each corresponding to a specific research question, which are as follows: the frequency by which eligible offenders are convicted under the Gun Law; the search for case characteristics associated with the application of the Law to eligible offenders; the effect which a Gun Law conviction has upon the types and lengths of sentences applied to the offenders' primary offense and the firearm violation itself, and finally, the use of weapons exhibited by convicted offenders before and after the enactment of the Law. The specific research designs, samples and variables employed to perform these analytic phases are presented in Table 6.

Table 6. The Research Design, Sample, and Variables Utilized in each Analytical Phase.

Research Question	Design	Sample	Variables	
			Dependent	Independent
I. Frequency of Gun Law Convictions:				
Descriptive Design	Eligible Offender	Gun Law Conviction	None	
II. Case Characteristics Associated with the Application of the Gun Law:				
A. In the Prosecution of Offenders:				
Correlational Design	Eligible Offender	Gun Law Prosecution	Sex	Prior Convictions
			Age	Occupation
			Race	Employment Status
				Severity of Primary Offense
				Injury to Victim
				Offender/Victim Relationship
				Number of Felony Dispositions
				Type of Attorney
				Conviction Method
				Location/Caseload of Court

Note: Continued on Next Page.



Table 6. The Research Design, Sample, and Variables Utilized in each Analytical Phase (Con't.).

Research Question	Design	Sample	Variables	
			Dependent	Independent
II. B. In the Conviction of Offenders:				
	Correlational Design	Eligible Offender (Prosecuted Only)	Gun Law Conviction	Same as in II., A. Above
III. Effect of Gun Law Conviction on Sentence Type and Length:				
A. For the Primary Felony Offense:				
	1. Static-Group Comparison Design	Eligible Offender	Type of Sentence	Gun Law Conviction
	2. Static-Group Comparison Design	Eligible Offender (Incarcerated Only)	Ratio of Minimum to Maximum Term	Gun Law Conviction
B. For the Gun Law Conviction:				
	1. Descriptive Design	Eligible Offender (Convicted Only)	Type of Sentence	None
	2. Descriptive Design	Eligible Offender (Convicted and Incarcerated Only)	Consecutive or Concurrent Term	None
IV. Weapon Use:				
	Simulated Before and After Design	Overall Sample	Type of Weapon	Date of Offense

### FOOTNOTES: CHAPTER III

<sup>1</sup>Marvin Zalman, Charles W. Ostrom, Jr., Phillip Guilliams and Garret Peaslee, Sentencing in Michigan: Report of the Michigan Felony Sentencing Project (Lansing, Michigan: State Court Administrative Office, 1979).

<sup>2</sup>Ibid., p. 61.

<sup>3</sup>To be specific, the metropolitan courts consisted of the Oakland and Wayne County Circuit Courts and the Detroit Recorder's Court. The urban court strata included the following counties' Circuit Courts: Bay, Berrien, Calhoun, Genesee, Ingham, Jackson, Kalamazoo, Kent, Macomb, Monroe, Muskegon, Ottawa, Saginaw, St. Clair, and Washtenaw. The rural court strata was comprised of the remaining county Circuit Courts, with the exception of Keweenaw County which had no felonies during 1977.

<sup>4</sup>For additional information regarding the sampling and weighting techniques employed by the Project see: Zalman, Sentencing in Michigan, pp. 59-62.

<sup>5</sup>Unlike many other states which define adult offenders as being 18 years of age and older, Michigan defines an adult offender as 17 years of age and older. Of course, Michigan, like other states, allows a juvenile offender to be remanded to adult court for prosecution when the court would deem it appropriate. These factors contribute to the inclusion of the typically defined juvenile offenders, aged 17, in the current sample.

<sup>6</sup>Using the date of the offense as a basis, this enlarged time frame ranged from September, 1971 as the earliest offense data, to November, 1977 as the last offense date.

<sup>7</sup>The possession of a firearm was determined by the Project in their collection of the original data, as indicated in court records, such as the presentence report. Both operative and inoperative firearms are considered as firearms in the sample selection.

<sup>8</sup>Mich. Comp. Laws Ann., sec. 750.227(b).

<sup>9</sup>William Kime, "Preliminary Results: Impact of Gun Law on Felony Convictions," Michigan Department of Corrections Memorandum, March 23, 1978.

<sup>10</sup>Donald T. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally College Publishing Co., 1963), p. 64.

<sup>11</sup>Hubert M. Blalock, Jr., Social Statistics (New York: McGraw-Hill Book Co., 1972), pp. 292-94.

<sup>12</sup>Frank M. Andrews, James N. Morgan and John A. Sonquist, Multiple Classification Analysis: A Report on a Computer Program for Multiple Regression Using Categorical Predictors (Ann Arbor, Michigan: Survey Research Center Institute for Social Research, University of Michigan, 1967), p. 8.

<sup>13</sup>Ibid., pp. 9-10.

<sup>14</sup>Ibid., pp. 102-3.

<sup>15</sup>Ibid., p. 99.

<sup>16</sup>The equations used in the computation of "F" as the test statistic for each of the two hypothesis is presented by Andrews, Morgan and Sonquist in Multiple Classification Analysis (pp. 59-100). For the evaluation of the significance of the explained variation by the total set of predictors the equation is as follows:

$$F = \frac{E/(C-P)}{Z/(N-C+P-1)}$$

The approximate "F-test" equation used in the evaluation of the individual predictor's ability to explain the variation in the dependent variable is given as follows:

$$F = \frac{D_i/(c_i - 1)}{Z/(N-C+P-1)}$$

Where: E = Explained sum of squares  
 C = Total number of categories across all predictors  
 P = Number of Predictors  
 Z = Residual sum of squares  
 N = Number of cases  
 D<sub>i</sub> = Sum of squares based on the adjusted deviations  
       for predictor i  
 c<sub>i</sub> = Total number of categories in predictor i.

<sup>17</sup>Blalock, Social Statistics, p. 220.

<sup>18</sup>Campbell and Stanley, Designs for Research, p. 12.

<sup>19</sup>Ibid., p. 53.

## CHAPTER IV

### RESULTS

In the previous chapters, four general research questions and the means for investigating them were posited. In this chapter the findings stemming from the analytical phases of these investigations are presented. The order of their presentation coincides with the development of the four analytical phases discussed in Chapter III.

#### Results: Phase 1

The initial research question addressed by the present study is the frequency by which offenders who have technically violated the Gun Law are ultimately convicted of this offense. Recalling that the only previous statewide analysis which raised this question found that only 29.2% of such eligible offenders (i.e., those subject to prosecution) were convicted, the hypothesis was advanced that the current statewide dataset would present a similar overall conviction rate. Using that overall conviction rate as a frame of reference, it was expected that approximately 133 of the 456 cases deemed subject to prosecution would be ultimately convicted of violating the statute. Employing the Goodness of Fit test, it was determined that the present sample did exhibit a significantly higher overall conviction rate: for the observed rate was found to have been 50.9% or 232 of the total 456 cases comprising the Eligible Offender sample. Due to this 21.7% observed difference in the

overall conviction rates, the statistical null hypothesis previously advanced (being  $H_0: P=.29$ , where  $P$  represents the proportion of eligible offenders convicted) was rejected at the established .05 level of significance.

### Results: Phase 2

Having reexamined the overall conviction rate of all offenders considered subject to prosecution under the Gun Law, this phase of the study was originally designed to identify and define the relative importance of offense, offender and judicial characteristics associated with first, the decision to prosecute the offender for violating the statute; secondly, once charged, the outcome of the adjudication itself. Quite unexpectedly, and in contrast to the findings of Huemann and Loftin, it was found that in viewing only those offenders who were actually prosecuted for violating the Gun Law, the resulting conviction rate was sufficiently high - being 80.6% or 232 of the 288 cases prosecuted - that little variance was present.

While little variation existed in the conviction of those offenders prosecuted, a noteworthy variation was found to have existed in the determination of which offenders were actually prosecuted under the statute. Numerically, this variation in the exercising of prosecutorial discretion was such that 288 offenders (or 63.2%) of the 456 offenders deemed eligible were found to have been prosecuted, while the remaining 168 (or 36.8%) were not. Given these findings, it is suggested that the major source of the unexplained variation in the overall conviction rate determined in Phase 1 of the analysis lies primarily in the hands of the prosecutor. As a result of this discovery, the second prong of the

current phase of the analysis (the determination of factors associated with conviction while controlling for prosecution) has been deemed superfluous and will, therefore, not be presented. Instead this second phase of the analysis will focus solely upon the determination of those attributes associated with the prosecutor's decision to initiate formal charges against those offenders who have been described by court records as having been in violation of the statute in question.

### The Decision to Prosecute

In this section only the results of the search for those attributes associated with the decision to prosecute violators of the Gun Law are presented. These statistical findings are subdivided into three component stages of investigation. Initially those statistics which describe the distribution of the sampled cases (i.e., the Eligible Offender sample) across the variables under consideration are given. Following that discussion, the results of the bivariate analysis employing these variables are reported. The section then closes with the presentation of those findings obtained from the multivariate analysis of the current question.

### Descriptive Statistics

A total of thirteen attributes relating the offender, the offense, and the judicial processing have been proposed as possibly being influential in the disposition of Gun Law cases. In this part of the study, a descriptive analysis of the cases found to have been technically subject to prosecution was undertaken. The results of that analysis is presented in order to summarize the characteristics of this sample in view of those attributes.

Contained in Table 7 are the frequency distributions of the 456 cases comprising the Eligible Offender sample across each of the six offender related variables. As can be observed, the decision to dichotomize the age of the offenders at the medium age has resulted in 48.0% of the sampled cases being considered as youthful offenders who were 22 years of age or less at the time of their offense, and 52.0% who were over 22 years of age. In contrast, the distribution of the sampled cases across the naturally occurring dichotomy expressing the offender's sex is extremely skewed, for 96.5% of the offenders are male. Returning to a more balanced distribution, it was found that when the offenders were categorized according to their race, 31.6% were classified as white, and 68.4% were considered nonwhites.

Viewing the sample in regard to the offender's aggregate number of prior juvenile and adult felony convictions, it was found that most often they had had at least one previous conviction; for when these three groups of convicted offenders are combined, they represent 58.8% of the overall sample. Within that combined group of convicted felons, those who have committed three or more past offenses are most frequently represented, being 25.0% of the sample, followed by those having two previous convictions, being 18.0% of the sample, and finally those with only one, being 15.8% of the sample. The remaining 41.2% of the offenders sampled were reported to have had no prior felony convictions; and in relation to the four expressed values, it is this category which is most frequently represented as an individual offender group.

Table 7. The Absolute and Relative Frequencies of the Offender Variables for the Cases Included in the Eligible Offender Sample (N=456)\*

Variable	Values	Absolute Frequency	Relative Frequency
Age	Youthful Offender	219	48.0
	Adult Offender	237	52.0
	Total	456	100.0
Sex	Male	440	96.5
	Female	16	3.5
	Total	456	100.0
Race	White	143	31.6
	Nonwhite	309	68.4
	Total	452	100.0
Prior Convictions	None	188	41.2
	One	72	15.8
	Two	82	18.0
	Three or more	114	25.0
	Total	456	100.0
Type of Occupation	Skilled	105	24.0
	Unskilled	333	76.0
	Total	438	100.0
Employment Status	Employed	147	32.8
	Unemployed	301	67.2
	Total	448	100.0

\*Departures from the overall sample size are due to missing data.

Both of the final two offender attributes relate to the offender's employment, one being descriptive of the offender's level or type of occupational skills, and the other describing the offender's employment status at the time the offenses(s) had been committed. According to the table, the majority (76.0%) of the offenders sampled were found to have



been either unskilled workers or to have had no specific occupational skills. It is also evident that at the time the offense was committed, the offenders were most likely to have been unemployed. In sum, of the offenders represented by the present sample, one would typically find them to be nonwhite, unemployed, male adults, who had had at least one previous felony conviction, and no specific occupational skills.

Turning now to the four variables employed to describe attributes of the offense, it can be seen by the sample distributions in Table 8 that, in general, the offender was convicted of one felony which held a relatively lengthy penalty involving an unknown victim who was not injured during the commission of that offense. This description of the typical offense stems in part from the discovery that, excluding any Gun Law conviction, the offenders sampled were most frequently found to have been ultimately convicted of only one felony offense. This occurred across 48.8% of the sample, while 32.6% were convicted of two felonies and 18.6% were ultimately convicted of three or more felony counts.

More striking and skewed distributions were found for each of the remaining attributes that contribute to this general description. The vast majority (86.0%) of the sampled offenders committed, as their most serious offense, a primary offense which carried a maximum penalty of at least 20 years. This is a reasonable finding, due to the fact (as noted in Chapter 3) that 76.5% of the sampled offenders had committed an armed robbery as their primary offense which carries a maximum penalty of life imprisonment. The table also shows that 79.1% of the offenses involved victims who were unknown to the offender, and that in 84.2% of the incidents sampled, the offender did not physically harm the victim of the offense.

Table 8. The Absolute and Relative Frequencies of the Offense Variables for the Cases Included in the Eligible Offender Sample (N=456)\*

Variable	Values	Absolute Frequency	Relative Frequency
Statutory Severity of Primary Offense	High (20 yrs. to Life)	392	86.0
	Low (Less than 20 yrs.)	64	14.0
	Total	456	100.0
Offender/Victim Relationship	Known	86	20.9
	Unknown	326	79.1
	Total	412	100.0
Physical Injury to Victim	Injured	67	15.8
	Not Injured	357	84.2
	Total	424	100.0
Number of Felony Dispositions	One	215	48.8
	Two	144	32.6
	Three or more	82	18.6
	Total	441	100.0

\*Departures from the overall sample size are the result of missing data.

Concluding the description of the current sample, Table 9 presents the sample distributions for the remaining three variables which address attributes of the judicial processing of the offender's case. Once again all three distributions are quite skewed. For example, 77.8% of the offenders had their defense attorneys appointed to represent them by the court, while only 22.2% were able to retain their legal counsel themselves. A similar sample distribution is present for the manner in which the offenders were convicted for the commission of their primary or initial offense, for 79.0% of the offenders were found to have entered a plea of guilty, and only 21.0% were found guilty by either a jury or a bench trial.

Table 9. The Absolute and Relative Frequencies of the Judicial Variables for the Cases Included in the Eligible Offender Sample (N=456)\*

Variable	Value	Absolute Frequency	Relative Frequency
Type of Attorney	Appointed	344	77.8
	Privately Retained	98	22.2
	Total	442	100.0
Conviction Method	Plea	353	79.0
	Trial	94	21.0
	Total	447	100.0
Location/Caseload of Court	Metropolitan	347	76.1
	Non-metropolitan	109	23.9
	Total	456	100.0

\*Departures from the overall sample size are the result of missing data.

The final attribute considered is the location and/or caseload of the court in which the offender was adjudicated. In this instance, it was again found that, by far, most of the offenders (76.1%) were processed in those courts described as being metropolitan in nature (those processing over 2,000 cases annually) and the minority (23.9%) were adjudicated in non-metropolitan courts (those handling less than 2,000 cases per year). In short, the typical offender in the current sample has been brought to trial in a busy metropolitan court, in which he or she entered a plea of guilty to the primary offense and was, at the time, defended by a court appointed attorney. In the following section, these and the preceding attributes will be scrutinized for their possible association with the prosecutor's decision to charge the offender with a violation of the Gun Law.

### Results of the Bivariate Analysis

In this portion of the study, each of the offender, offense and judicial variables are examined in relation to whether the offender was or was not prosecuted for violating the Gun Law. The objective of this bivariate analysis is to determine, on an individual basis, without regard to the possible confounding effects of the other attributes, which, if any, of these thirteen attributes can be associated with the decision to prosecute Gun Law violators for that offense. Employing the Chi-Square test as the initial indicator for the presence or absence of an association, a common hypothesis was advanced. The hypothesis is that the prosecution of the individual offender under the Gun Law is independent of that offender's classification on any particular value of the attribute in question. Restated in the form of a statistically testable null hypothesis, it reads as follows:  $P_{ij} = P_i P_j$ , where  $P_{ij}$  is the probability of a case falling into any cell of row  $i$  and any cell of column  $j$ ;  $P_i$  is the probability of the case being in any  $i$  row, and  $P_j$  is the probability of the case being in any  $j$  column. Because of the previously mentioned weaknesses in the Chi-Square test (see Chapter 3), it was determined that in those instances in which a rejection of this hypothesis is warranted and an association is uncovered, the resulting value of either Phi or Cramer's V will be employed to describe the relative strength of this association. Both of these measures of the strength of an association take on a value of unity (1.0) when there exists a perfect relationship between the two variables under consideration and zero (0) when the two variables are independent. In this limited sense, these measures are similar in interpretation to the

product-moment correlation coefficient, except that they do not reflect the direction of the relationship.

Proceeding with the presentation of the variables in an order similar to that in the previous section, the first relationship examined was that of the offender's age and the decision to prosecute. Table 10 presents the distribution of the sampled offenders across these two factors. As there was only a 5.5% difference in the frequency of prosecution between the youthful and the adult offender groups, the resulting Chi-Square value was sufficiently low ( $\chi^2 = 1.28$ ) that no significant difference was found, and the null hypothesis was not rejected. This finding is suggestive of the fact that the offender's age, when considered by itself, has not in the current sample been associated with the prosecutor's decision to employ the Gun Law.

Table 10. Gun Law Prosecution by the Offender's Age (N=456)

Prosecuted	Age			
	Youthful		Adult	
	%	(N)	%	(N)
No	39.7	(87)	34.2	(81)
Yes	60.3	(132)	65.8	(156)
Total	100.0	(219)	100.0	(237)
Chi-Square = 1.28		Significance = 0.258		

The first attribute found to have had a statistically significant association with the decision to prosecute was the offender's sex, Table 11 exhibits this relationship. In this crosstabulation of the two factors, an inverse relationship was present, for while 64.3% of the male

Prosecuted	Sex			
	Male		Female	
	%	(N)	%	(N)
No	35.7	(157)	68.7	(11)
Yes	64.3	(283)	31.3	(5)
Total	100.0	(440)	100.0	(16)

Chi-Square = 5.903                      Significance = 0.015

Phi = 0.126

The next attribute considered, the offender's race, was also found to have had a significant association with the initiation of prosecution. As Table 12 indicates, it was determined that in the current sample, nonwhite offenders were most likely to be prosecuted, while white offenders were more likely not to be prosecuted. This relationship was more pronounced in the prosecution of nonwhite offenders; as in this racial group, the vast majority (72.5%) of the offenders were prosecuted under the Gun Law; and in comparison, a smaller proportion (42.0%) of the white offenders had to face the additional Gun Law charge. The strength of this relationship was also evident in the expressed value of Phi (0.293).

Table 12. Gun Law Prosecution by the Offender's Race (N=452)

Prosecuted	Race			
	White		Nonwhite	
	%	(N)	%	(N)
No	58.0	(83)	27.5	(85)
Yes	42.0	(60)	72.5	(224)
Total	100.0	(143)	100.0	(309)

Chi-Square = 37.73                      Significance = 0.000

Phi = 0.293

Continuing with the examination of offender attributes, Table 13 depicts the relationship of the offender's criminal history with the prosecutor's decision to apply the Gun Law. The data suggest that those offenders who had either one or three or more previous felony convictions were more often prosecuted under the Gun Law than those who had no previous convictions or had two prior convictions. Those having had one prior felony conviction were prosecuted at a rate of 68.1% and those with three or more at a rate of 74.6%. In comparison, the offenders with none or two prior convictions were prosecuted at the lesser rates of 56.9% and 57.3% respectively. The results of the Chi-Square test have indicated that the levels of prosecution are significantly different, and the null hypothesis was, therefore, rejected. The value of Cramer's V supports this decision by its indication that a slight relationship did exist. It is suggested that the relative weakness of this relationship may be due to the lower level of prosecution found for those offenders having had only two prior convictions, as this lower level of prosecution interrupts the trend towards higher rates of prosecution as the number of priors

increases. It is a possibility that the main effect of the offender's prior criminal record might be more readily understood in terms of the presence or absence of any previous criminal convictions and not in the absolute number of prior convictions.

Table 13. Gun Law Prosecution by the Offender's Criminal History (N=456)

Prosecuted	Number of Prior Convictions					
	None		One		Two	
	%	(N)	%	(N)	%	(N)
No	43.1	(81)	31.9	(23)	42.7	(35)
Yes	56.9	(107)	68.1	(49)	57.3	(47)
Total	100.0	(188)	100.0	(72)	100.0	(82)

Chi-Square = 11.46

Significance = 0.009

Cramer's V = 0.159

Based on the results of Table 14, it appears that the decision to prosecute Gun Law offenders was not influenced by a knowledge of the offender's type of occupation. This is evident in that the frequency of prosecution was approximately equal for both occupational groups. Additionally, the resulting Chi-Square value was extremely low and statistically non-significant at the 0.05 level; as a consequence, the null hypothesis was not rejected.





Having completed the examination of the six offender characteristics, the investigation moves to the four offense particular characteristics, the first of which is the statutory severity of the offender's primary or most severe felony offense. When this severity attribute was related to the decision to prosecute under the Gun Law, it was found that offenders who had committed high severity offenses were significantly more often prosecuted for the Gun Law violation than those having committed the less serious offenses. This finding is addressed in Table 16 which shows that proportionally, 65.5% of the high severity offenders were prosecuted (i.e., those whose most serious offense had a maximum penalty of at least 20 years), while in contrast, only 46.9% of the low severity offenders (i.e., those whose most lengthy sentence was less than 20 years) were prosecuted for the Gun Law violation. In this instance, the resulting Chi-Square value indicates that the null hypothesis warrants rejection. Although there was a significant difference found between the two groups in their rates of prosecution, the strength of this perceived relationship is again relatively slight, as shown by the low 0.136 value of Phi.

Table 16. Gun Law Prosecution by Offense Severity (N=456)

Prosecuted	Severity of Offense			
	Low		High	
	%	(N)	%	(N)
No	53.1	(34)	34.2	(134)
Yes	46.9	(30)	65.8	(258)
Total	100.0	(64)	100.0	(392)

Chi-Square = 7.69

Significance = 0.006

Phi = 0.136

The next offense specific variable considered is the relationship which existed between the offender and the victim at the time the offense was committed. This variable has been defined as a dichotomy expressing whether or not the victim was known to the offender. The known category incorporates such relationships as family members, fellow employees and employers, as well as casual acquaintances. Table 17 reveals that when related to the decision to prosecute under the Gun Law, offenders who were acquainted with their victims were, by a difference of 25.2%, more often prosecuted than their counterparts who had perpetrated their offense against a stranger. The results of the Chi-Square test indicate that this observed difference in the rates of prosecution between the two groups was statistically significant, and thus, the null hypothesis has been rejected. From the expressed value of Phi the strength of this uncovered relationship would, however, have to be considered as being only slight.

Table 17. Prosecution by Offender/Victim Relationship (N=412)

Prosecuted	Offender/Victim Relationship			
	Known		Unknown	
	%	(N)	%	(N)
No	17.4	(15)	42.6	(139)
Yes	82.6	(71)	57.4	(187)
Total	100.0	(86)	100.0	(326)
Chi-Square = 17.39		Significance = 0.000		
Phi = 0.21165				

Another variable concerning the victim of the offense is the presence or absence of any injury sustained by the victim as a result

of the commission of the primary offense. The category which represents the presence of an injury includes all physical injuries ranging from a minor non-incapacitating injury to the victim's death. Table 18 presents the incidence of Gun Law prosecution according to this attribute of the offense. It can be seen that the presence or absence of an injury did not have a statistically significant association with the decision to prosecute, for proportionally, there was merely a 3.3% difference in the rates of prosecution between the two groups, with those offenders who did not inflict an injury being the group slightly more often prosecuted. The result of this finding is that the null hypothesis was not rejected.

Table 18. Gun Law Prosecution by Injury to the Victim (N=424)

Prosecuted	Injury to Victim			
	Not Injured		Injured	
	%	(N)	%	(N)
No	37.0	(132)	40.3	(27)
Yes	63.0	(225)	59.7	(40)
Total	100.0	(357)	100.0	(67)
Chi-Square = 0.143		Significance = 0.71		

The final offense descriptor is the total number of felony dispositions incorporated into the offender's single indictment or case. This number is exclusive of any Gun Law disposition. From the distribution of the sampled cases shown in Table 19, it would appear, that as a group, those offenders who were ultimately convicted of two felony offenses were most often prosecuted under the Gun Law since 74.3% of these offenders received such a charge, while only 54.0% of those offenders convicted of

one felony and 61.0% of those convicted of three or more felonies were charged with the Gun Law violation. As the results of the Chi-Square test suggest that this difference is statistically significant, the null hypothesis has been rejected and the two factors may be considered related. The derived value of Cramer's V would again indicate that these factors are only slightly related.

Table 19. Gun Law Prosecution by the Number of Dispositions (N=441)

Prosecuted	Number of Dispositions					
	One		Two		Three or more	
	%	(N)	%	(N)	%	(N)
No	46.0	(99)	25.7	(37)	39.0	(32)
Yes	54.0	(116)	74.3	(107)	61.0	(50)
Total	100.0	(215)	100.0	(144)	100.0	(82)
Chi-Square = 15.18			Significance = 0.0005			
Cramer's V = 0.186						

The last three bivariate relationships to be considered are all concerned with the judicial processing of the offender's case. These judicially related variables describe the type of attorney representing the offender, whether the offender's conviction on the primary offense was the result of a plea of guilty or a trial, and the location or case-load of the court hearing the case. Table 20 presents the relationship between the type of legal counsel representing the offender and whether that offender was charged with a Gun Law violation. In this instance, there was not a statistically significant association found between the two factors, and the null hypothesis was, therefore, not rejected. There

was approximately an equal proportion of offenders charged with the Gun Law violation who had retained their own private attorney as those who had their legal counsel appointed to them by the court.

Table 20. Gun Law Prosecution According to the Type of Defense Attorney (N=442)

Prosecuted	Type of Defense Attorney			
	Appointed		Retained	
	%	(N)	%	(N)
No	37.2	(128)	36.7	(36)
Yes	62.8	(216)	63.3	(62)
Total	100.0	(344)	100.0	(98)
Chi-Square = 0.00		Significance = 1.00		

The same conclusion was reached in viewing the relationship between the prosecution of Gun Law offenders and the manner in which they were convicted of their primary or most serious felony offense, for again, there was not a significant difference discovered. The rate of prosecution of offenders who had entered a guilty plea to their primary offense was essentially the same as that of offenders who had been found guilty through a bench or jury trial. As Table 21 indicates, approximately the same proportion of offenders who had pled guilty to their primary offense (64.6%) were prosecuted under the Gun Law as those who were convicted via a trial (61.7%). This lack of an association between the factors is apparant in the resulting non-significant value of the Chi-Square test, which denotes a failure to reject the present null hypothesis.

Table 21. Gun Law Prosecution by the Primary Offense Conviction Method (N=447)

Prosecuted	Conviction Method			
	Plea		Trial	
	%	(N)	%	(N)
No	35.4	(125)	38.3	(36)
Yes	64.6	(228)	61.7	(58)
Total	100.0	(353)	100.0	(94)
Chi-Square = 0.157		Significance = 0.69		

The final judicial variable considered in the bivariate analysis is the geographic location and/or caseload of the court in which the defendant's case was heard. Table 22 depicts the relationship of this factor with the decision to prosecute Gun Law violators. It was found that while those offenders whose cases were heard in metropolitan courts were more likely to receive a concomitant Gun Law charge; in contrast, those adjudicated in non-metropolitan courts were most likely not prosecuted. Specifically, 68.9% of the eligible offenders processed through the metropolitan courts which handle over 2,000 cases per year (consisting of the Detroit Recorder's Court and Circuit Courts in Wayne and Oakland counties) were prosecuted under the Gun Law, whereas, 55% of the offenders processed by the non-metropolitan courts, which heard fewer than 2,000 cases annually (comprising the remaining courts within the State), were not prosecuted for this offense. As the table shows, this relationship was found to be significant at the 0.05 level; and, as a consequence, the null hypothesis was rejected. Again, as shown by the small value of Phi, this factor was only slightly related to the decision to prosecute under the Gun Law.

Table 22. Gun Law Prosecution by the Location and/or Caseload of the Court (N=456)

Prosecuted	Court's Location and/or Caseload			
	Metropolitan		Non-metropolitan	
	%	(N)	%	(N)
No	31.1	(108)	55.0	(60)
Yes	68.9	(239)	45.0	(49)
Total	100.0	(347)	100.0	(109)

Chi-Square = 19.38                      Significance = 0.000

Phi = 0.21151

As the presentation of the results stemming from the bivariate analysis has now been completed, it can be concluded that of the thirteen individual relationships examined, eight have been found to have posed a statistically significant association with the decision to prosecute Gun Law offenders. The attributes individually associated with this decision are, in a descending order based on the strength of that association, as follows:

1. the offender's race (Phi = .293)
2. the relationship between the offender and the victim (Phi = .21165)
3. the geographic location and/or caseload of the court (Phi = .21151)
4. the number of felony dispositions against the offender (Cramer's V = .186)
5. the offender's prior criminal record (Cramer's V = .159)
6. the severity of the primary offense (Phi = .136)
7. the offender's sex (Phi = .126), and
8. the offender's employment status (Phi = .110).

Based on the strength of these factors individual relationships with the decision to prosecute under the Gun Law, all of these relationships would be best classified as being only slightly correlated. To summarize the



impact of these discovered associations upon our ability to predict when an eligible offender will be prosecuted, the data would suggest that this offender might best be characterized as: a nonwhite, employed, male who has a prior criminal record, having more than one felony charge filed against him in a metropolitan court, the first of which is a relatively serious offense that was perpetrated against a victim who was known to him.

### Results of the Multivariate Analysis

The preceding portion of the data analysis was focused on the presentation of those characteristics which were correlated on an individual basis with the decision to prosecute Gun Law offenders. In this stage, that focus has been enlarged by using Multiple Classification Analysis to reexamine these relationships while simultaneously controlling for the possible confounding effects of the other characteristics included as independent variables. Before the results of this multivariate analysis are presented, it should be noted that due to missing data within the cases originally sampled, the size of the Eligible Offender sample has decreased from 456 cases to only 336 cases. This decrease in the size of the sample has resulted in several changes in the composition of the sample itself, which may provide a rival explanation for any discrepancies discovered between the findings of the bivariate analysis and those stemming from the current analysis. Table 23 presents descriptive statistics enabling the reader to compare the attributes of the current reduced sample with those attributes of the original sample described earlier.

Table 23. The Absolute and Relative Frequencies of the Cases Included in the Multivariate Analysis of the Reduced Eligible Offender Sample Across All Independent Variables (N= 336)

Variable	Value	Absolute Frequency	Relative Frequency
Age	Youthful Offender	182	54.2
	Adult Offender	154	45.8
Race	White	128	38.1
	Nonwhite	208	61.9
Prior Convictions	None	158	47.0
	One	59	17.6
	Two	61	18.2
	Three or more	58	17.2
Type of Occupation	Skilled	65	19.3
	Unskilled	271	80.3
Employment Status	Employed	117	34.8
	Unemployed	219	65.2
Statutory Severity of Primary Offense	High	281	83.6
	Low	55	16.4
Offender/Victim Relationship	Known	56	16.7
	Unknown	280	83.3
Physical Injury to Victim	Yes	52	15.5
	None	284	84.5
Number of Felony Dispositions	One	172	51.2
	Two	109	32.4
	Three or more	55	16.4
Type of Attorney	Court Appointed	259	77.1
	Privately Retained	77	22.9
Conviction Method	Plea	270	80.4
	Trial	66	19.6
Location/Caseload of Court	Metropolitan	257	76.5
	Non-metropolitan	79	23.5

Comparing these distributions to those presented in Tables 7, 8 and 9, the major departure from the original sample is that due to a total lack of female offenders in the present sample, the sex of the offender has been deleted from consideration as a variable in this multivariate analysis. This was a direct consequence of the reduction in the size of the sample; for as a result, there was no variance (all the cases were male offenders) present within the variable itself. Although less dramatic in their possible impact, other departures are also worthy of note. The distribution of the sampled cases across the two categories describing the age of the offender has changed so that where most of the offenders had originally been classified as being adult offenders (consisting of 52% of the Eligible Offender sample), this group now comprises the minority of the offenders considered in the current sample (consisting of 45.8%). In addition, there has been a change in the categories of the variable describing the prior criminal history of the offender, for while in the Eligible Offender sample, those offenders who had three or more prior felony convictions were the second most frequently encountered group, this category now contains the smallest proportion of the sampled offenders (a change from 25% of the Eligible Offender sample to 17.2% of the current reduced sample). Alterations such as these must be taken into consideration before any comparison between the results of the bivariate analysis and the multivariate analysis can be made.

Prior to discussing the results of the testing of the hypotheses advanced in this stage of the analysis, it is informative to view the effects which the introduction of statistical controls has had upon the relationships between each of the twelve independent variables and the initiation of prosecution under the Gun Law. Table 24 presents the rates

of prosecution within each value category of each variable both before (the unadjusted percent of prosecution) and after (the adjusted percentage of offenders prosecuted) the introduction of statistical controls. The unadjusted rate of prosecution reflects the variable's simple, bivariate relationship with the act of prosecution, and the adjusted percentage presents the same relationship after the values of the other eleven variables have been statistically "held constant" during their multivariate analysis. By comparing the unadjusted and adjusted prosecution rates, one can observe the impact or influence which this analytical technique has had in refining the relationships examined.

Although the current multivariate technique does not explicitly identify a variable or a set of variables to which an observed difference may be attributed, several of these differences are noteworthy, as they point out which variables are most susceptible to the confounding effects of other variables. The first examples of such adjustments may be found within the categories of two variables: the offender's type of occupation and the severity of the primary offense. In both cases the adjustments for the effects of the controlled variables has resulted in a decrease in the difference of the prosecutorial rates between the categories of each variable. This convergence in the rates of prosecution has, in effect, reduced the variation found within each variable and thereby decreases the usefulness of the variables in explaining the overall variance in the application of the Gun Law.

A similar reduction in variation is also found in the adjustments affected in the categories of the variable describing the offender's race. In this instance, the percentage of white offenders prosecuted was adjusted slightly upward, while the rate for nonwhites was adjusted

Table 24. The Percentage of Offenders Prosecuted Under the Gun Law Within Each Variable Category Both Before and After Adjusting for the Effects of the Remaining Variables.\*

Variable	Category	Percentage of Offenders Prosecuted Under the Gun Law	
		Unadjusted for Other Variables	Adjusted for Other Variables
Age	Youthful Offender	62.6	63.0
	Adult Offender	65.6	65.2
Race	White	46.1	48.7
	Nonwhite	75.0	73.4
Prior Convictions	None	54.4	52.1
	One	72.3	73.6
	Two	67.2	65.9
	Three or more	77.6	84.6
Type of Occupation	Skilled	69.2	62.8
	Unskilled	62.7	64.3
Employment Status	Unemployed	59.8	57.1
	Employed	71.8	76.8
Statutory Severity of Primary Offense	Low	54.5	61.0
	High	65.8	64.6
Offender/Victim Relationship	Known	85.7	85.8
	Unknown	59.6	59.6
Physical Injury to Victim	No	65.1	66.7
	Yes	57.7	49.0
Number of Felony Dispositions	One	62.8	68.1
	Two	70.6	66.6
	Three or more	54.5	45.8
Type of Attorney	Court Appointed	63.7	64.1
	Privately Retained	64.9	63.7
Conviction Method	Plea	66.7	66.8
	Trial	53.0	52.4
Location/Caseload of Court	Metropolitan	69.3	68.5
	Non-metropolitan	46.8	49.4

\*The overall unadjusted percentage of the sampled offenders prosecuted under the Gun Law was 63.98%

slightly downward. This suggests that the strength of the association between race and prosecution may have been lessened by controlling for the confounding or intervening effects of the other variables, however, due to the widely disparate prosecutorial rates between the two racial categories present even after the adjustments were performed, it is unlikely that the strength of this relationship has actually been diminished.

In several other instances, the percentage of prosecution has changed in one or more of the categories describing a variable so that its variation was heightened. This occurred within those variables describing: the offender's criminal history, the offender's employment status, the presence or absence of an injury to the victim, and the number of felony dispositions consolidated into the single case. The most pronounced difference to be observed in regard to the number of prior convictions is that the effect of the offender having had three or more prior convictions has been enhanced due to the upward adjustment in the percentage prosecuted within this category. The effect of the offender's employment status was also heightened by not only an adjustment increasing the prosecutorial rate of employed offenders, but by a concomitant downward adjustment in the rate for unemployed offenders as well. The difference in the rates of prosecution was also increased between the two categories expressing the presence or absence of an injury to the victim, with the main effect of the adjustments being a decrease in the prosecution of those offenders who had inflicted an injury upon their victim. Finally, the adjustments which occurred in the categories describing the number of dispositions incorporated into the single case not only increased the differences across these



categories, but also revised the variable's relationship with the prosecution of Gun Law offenders, so that as the number of dispositions are increased, the likelihood of prosecution is reduced. For the balance of the variables included in the analysis, the adjustments made in the dependent variable have had little or no apparent effects.

Now that the attributes of the present, diminished sample and the effects of the multivariate technique have been discussed, it is appropriate to present the results of the testing of the hypotheses currently advanced concerning the usefulness of the variables as predictors. The first statistical hypothesis advanced was that the resulting multiple correlation coefficient equals zero in the population sampled. This hypothesis addresses the research question of whether the total set of variables used as predictors will serve to explain a significant cumulative proportion of the variance present in the application of the Gun Law by prosecutors. The value of the multiple correlation coefficient ( $R$ ) determined by the Multiple Classification Analysis was found to be 0.474.<sup>1</sup> This value was found, from the results of the F-test, to explain a significant portion of the variance in the prosecutorial application of the Gun Law. When this value is squared ( $R^2$ ), the resulting value denotes the proportion of the variance present in the dependent variable which is explained by all the predictors considered together.<sup>2</sup> In this instance, the current set of twelve predictors or independent variables explain a 0.224 ( $R^2$ ) proportion of the variance present in the application of the Gun Law, or as expressed as a percentage, they explain 22.4% of that variance.

Having determined the cumulative, explanatory power of the total set of independent variables, the analysis shifts to the determination



of the ability which a single independent variable might have in explaining the variation present in the use of the Gun Law while the effects of the other variables have been controlled. The null hypothesis previously advanced for this question is that the "Beta" coefficient for a given predictor would be equal to zero in the population sampled.<sup>3</sup> As this hypothesis addresses the explanatory power of a particular independent variable, it has actually been subjected to testing on twelve separate occasions, once for each individual predictor. In Table 25 the results of this analysis are presented. Each variable is listed along with its respective Multiple Classification Analysis "Beta" coefficient in a descending rank order based on the relative strength of that coefficient. Also noted in the table is the outcome of the hypothesis testing regarding each variable's ability to act as a useful or meaningful predictor.

As shown in the table, eight of the twelve variables have been found to explain a significant portion of the variance in the application of the Gun Law; and hence, as applied to these independent variables, the null hypothesis has been rejected. In regard to these variables' relative explanatory power, it is interesting to note that those variables describing characteristics of the offender appear to be relatively more informative or important as predictors than those describing attributes of the offense or the judicial processing of the case. This is true in the limited sense that out of these eight, the three offender characteristics which were found to be significantly associated with the use of the Law ranked first, second and fourth. The offender's number of prior convictions ranked first, his race second, and his employment status fourth. These rankings can be compared to the relative usefulness of

those offense specific variables which were found to be significant predictors, for the offender/victim relationship ranked third, the number of felony counts or dispositions ranked sixth, and the presence or absence of an injury to the victim ranked seventh. The two remaining significant predictors are the location or caseload of the court and the method of conviction; these are both judicial characteristics and were ranked fifth and eighth respectively.

Table 25. The Rank Order of the Examined Variables According to Their Individual Ability to Explain the Variation in the Decision to Prosecute Gun Law Offenders as Expressed by the Multiple Classification Analysis Beta Value Corresponding to Each Variable

Rank Order Variable (Descriptive Classification)		"Beta"
1	Number of Prior Convictions (Offender)	0.261 *
2	Race (Offender)	0.250 *
3	Offender/Victim Relationship (Offense)	0.204 *
4	Employment Status (Offender)	0.195 *
5	Location/Caseload of Court (Judicial)	0.169 *
6	Number of Felony Counts (Offense)	0.167 *
7	Physical Injury to Victim (Offense)	0.133 *
8	Conviction Method (Judicial)	0.119 *
9	Severity of Primary Offense (Offense)	0.027
10	Age (Offender)	0.023
11	Type of Occupation (Offender)	0.013
12	Type of Attorney (Judicial)	0.004

\* Denotes that the results of the F-test indicate that the variable did explain a significant portion of the variance in the dependent variable while holding the values of the other variables constant.

Also indicated by the table is the fact that the four variables ranked ninth through twelfth were found not to have had the ability to explain a significant proportion of the variance in the prosecutorial application of the Gun Law. As a result, there was a failure to reject the current null hypothesis as it was applied to each of these variables. The variables so identified are the severity of the primary offense, the offender's age, the offender's type of occupation, and the type of legal representation (attorney).

To determine how the specific values of the eight variables that were found to be useful as predictors could be applied in forecasting when the Gun Law will be used, it is informative to view the coefficients presented in Table 26. Mathematically, the coefficients are simply the deviation of the category mean from the grand mean of the overall sample, after the category mean has been adjusted for the effects of the other variables included as predictors. Essentially, the category means are the proportion of the sampled offenders within that category who were actually prosecuted under the Gun Law. Similarly, the grand mean, which is 0.639, represents the proportion of the offenders in the total sample who were prosecuted. For ease of interpretation, the adjusted category means are presented along with their respective coefficients; these adjusted means were also presented in Table 24; however, in that table, they were presented as a percentage rate of prosecution rather than as a proportional rate of prosecution.

Table 26. The Adjusted Multiple Classification Category Coefficients and Adjusted Category Means of the Eight Significant Predictors

Variable	Value Category	Adjusted Coefficient	Adjusted Mean *
Prior Conviction	None	-0.119	.521
	One	0.097	.736
	Two	0.019	.659
	Three or more	0.206	.846
Race	White	-0.153	.487
	Nonwhite	0.094	.734
Offender/Victim Relationship	Known	0.218	.858
	Unknown	-0.044	.596
Employment Status	Employed	0.128	.768
	Unemployed	-0.068	.571
Location/Caseload of Court	Metropolitan	0.045	.685
	Non-metropolitan	-0.146	.494
Number of Felony Dispositions	One	0.041	.681
	Two	0.026	.666
	Three or more	-0.181	.458
Physical Injury to Victim	Yes	-0.149	.490
	No	0.027	.667
Conviction Method	Plea	0.028	.668
	Trial	-0.116	.524

\*The grand mean for the entire sample was 0.639.

An excellent initial strategy for interpreting the table is merely to consider the sign of the adjusted coefficient for each variable category, as the sign itself will, at a glance, indicate whether the offenders represented by that category were prosecuted more or less frequently than the sample's grand mean. Using this strategy, the results would, for the purposes of prediction, suggest that the offender who is least

likely to be prosecuted under the Gun Law would best be described as having the following specific offender, offense and judicial characteristics: no prior convictions; white; unknown to the victim; unemployed; adjudicated in a non-metropolitan court; prosecuted for three or more offenses; having caused an injury to the victim; and requesting a jury or bench trial. On the opposite side of the coin, the offenders who possess the counterparts of these characteristics would, of course, be more likely to face prosecution under the Gun Law.

Beyond this initial strategy, more precise information pertaining to the prediction of Gun Law prosecution can be obtained by also considering the actual values of the coefficients; this is particularly true regarding the two non-dichotomous variables which describe the number of prior convictions and the number of incorporated felony counts. Looking at the coefficients representing the number of dispositions, it is obvious that as the number of counts incorporated into the case increases, the likelihood of prosecution decreases. Unfortunately, the effect of membership in the categories expressing the number of prior convictions is not as clearly defined. While it is true that having prior convictions did heighten the offender's chance of being prosecuted, there was not a clear-cut progression; for in this instance, the offenders with three or more priors were prosecuted most often, followed by those who had one prior offense, and then those with two priors. From this finding, it is suggested that the main effect of the variable lies in either having had a prior conviction or not having had such a conviction.

Combining these interpretative strategies, the findings from this multivariate analysis concerning the significant predictors, could best

be summarized as follows:

1. Those offenders with prior criminal convictions are more likely to be prosecuted under the Gun Law than those who have none.
2. Nonwhite offenders are most likely to be prosecuted, while white offenders are more likely not to be prosecuted under the Gun Law.
3. Those offenders who perpetrated their offense against a victim who was known to them are more likely to be prosecuted for the Gun Law than those victimizing a stranger.
4. Employed offenders are more likely to be prosecuted than those who were unemployed at the time of their offense(s).
5. Offenders who are adjudicated in metropolitan courts will most likely be prosecuted under the Gun Law, while those adjudicated in non-metropolitan will most likely escape such prosecution.
6. As the number of felony dispositions or counts held against the offender are increased, the likelihood of a concomitant Gun Law prosecution is decreased.
7. Those offenders who have caused an injury to their victim(s) are less likely to be prosecuted under the Gun Law than those who did not injure their victim(s).
8. Those offenders who elect to enter a plea of guilty to their primary offense are more likely to also be charged with the Gun Law than those pleading not guilty and requesting a trial.

These summary statements are, of course, only applicable to those offenders who did commit or attempt to commit a felony while armed with a firearm and can, therefore, be considered as being subject to prosecution under the Gun Law.

#### Results: Phase 3

In this section the results of the third analytical phase are presented. This phase of the study is concerned with the examination of the types and lengths of sentences received by the offenders con-

victed under the Gun Law. In the performance of this examination, the achievement of three objectives was sought. The first objective was to determine what difference, if any, existed in the types of penalties imposed for the commission of the primary offense upon those offenders who were also convicted under the Gun Law and those who did not have this additional conviction. The second objective was to determine the effect, if any, which a concomitant Gun Law conviction might have had upon the length of any prison term received by the offender for his or her primary offense. The third was to describe the types of sentences imposed for the Gun Law offense itself, and to determine whether the prison terms which were imposed for a Gun Law conviction were applied as consecutive or concurrent terms of incarceration.

#### The Analysis of Primary Offense

##### Sentence Types According to Gun Law Convictions

With the objective in mind of determining whether a Gun Law conviction might be associated with the type of sentence imposed upon the offender for his primary offense, it was hypothesized that the type of primary sentence which an offender receives is independent of (or not associated with) any additional Gun Law conviction. To test this null hypothesis, the 456 offenders deemed eligible for prosecution under the Gun Law were chosen as the sample offender group. Using tabular analysis the type of sentence given for the primary offense (being either incarceration, probation or other) was related to whether or not the offender had also been convicted under the Gun Law. To control for the possible confounding effect that the specific type of primary offense might have in regard to this relationship, the analysis was performed once for only

Table 27. The Types of Sentences for High Severity Primary Offenses by Gun Law Conviction (N=392)

[illegible]

Type of Sentence	Gun Law Conviction			
	No		Yes	
	%	(N)	%	(N)
Incarceration	86.0	(49)	100.0	(7)
Probation	14.0	(8)	0.0	(0)
Other	0.0	(0)	0.0	(0)
Totals	100.0	(57)	100.0	(7)

Significance = 0.65



Viewing only Table 27, the results of the Chi-Square test indicates that the type of primary sentence is associated with the presence or absence of a secondary Gun Law conviction for those offenders who have committed a high severity primary offense, and that a rejection of the null hypothesis is warranted in this instance. This is due to the slightly higher rates of incarceration and probation, as well as the lack of other forms of punishment applied to the primary sentence of those offenders who were convicted of both a highly severe primary offense and the Gun Law. When this relationship was scrutinized to determine its strength, the resulting value of Cramer's V was found to be 0.155, indicating that the presence or absence of a Gun Law conviction was only slightly related to the variation present in types of primary sentence imposed.

By turning to Table 28, the findings concerning the low primary offense severity group can be examined. This table shows that all of the convicted Gun Law offenders in this subsample have received terms of incarceration as the penalty for their primary offense, while in comparison, 86.0% of the offenders without this additional conviction were incarcerated, and the remaining 14.0% received probation. Although these distributions might suggest that the two groups have differed in the types of sentences they have received, the results of the Chi-Square test indicate that this observed difference was not statistically significant at the 0.05 level. Thus, in this instance, there was a failure to reject the current null hypothesis.

Since the results of this analysis have proven to be inconsistent between the two offense severity levels, the first observation that can be made is that the statutory severity of the primary offense did appear to serve as an influential intervening variable. Those offenders who

were convicted of both a highly severe primary offense and the Gun Law were found to have had harsher forms of punishment imposed upon them for their primary offense, whereas no such relationship existed for those offenders convicted of the least severe types of primary offenses. This inconsistency in the findings suggests that a secondary Gun Law conviction may act as an influential or additional aggravating circumstance in the sentencing of offenders who have committed relatively serious primary offenses, holding lengthy maximum penalties, but this factor may not act in such a manner in the sentencing of offenders who have committed primary offenses which command relatively short maximum penalties. A possible explanation for this conclusion may rest in the notion that in the sentencing of offenders to long periods of punishment the judge might consider and weigh the aggravating and mitigating circumstances of the case more carefully than when he or she is sentencing an offender to relatively shorter terms of punishment.

This explanation is not lacking in foundation, for similar conclusions have been advanced by the authors of previous research. Both Beha, in his research concerning the Massachusetts firearm statute, and Heumann and Loftin, in their study of the Michigan Gun Law, have noted that during the adjudication of violators charged under mandatory firearm laws, the judiciary tended to weigh the facts and issues of the case more carefully because of the harshness of the impending penalties imposed by these statutes. Given this enhanced scrutiny by the judiciary during the stage of adjudication (due to the severity of the penalty involved), it seems more plausible that a similar enhanced concern for the aggravating and mitigating circumstances of the case, such as a secondary Gun Law conviction, might be carried over into the sentencing of those

offenders convicted of more serious types of offenses.

The Effect of a Gun Law Conviction  
Upon the Length of the Primary Sentence

In a past study of the Gun Law by Heumann and Loftin (see Chapter 2), it was suggested that when sentencing convicted Gun Law offenders judges may have compensated for the additional two year mandatory penalty by making a respective downward adjustment in the penalty attached to the offender's primary offense. In response to this finding, this stage of the current study was designed to determine whether or not such adjustments have been made by the judiciary in sentencing offenders to terms of incarceration. To control for the possible confounding effects which the statutory severity of the particular primary offense might have, the dependent variable selected to measure the length of the primary term was a constructed measure, being that proportion which the minimum term of incarceration imposed by the judge was to the maximum penalty allowed by statute. Using this dependent measure, termed the sentencing proportion, two offender groups were selected from the Eligible Offender sample for analysis. One group consisted of 218 offenders who not only received a term of incarceration as a penalty for their primary offense but were also convicted under the Gun Law. The second group consisted of those 204 offenders who, like the first group, received terms of incarceration for their primary offense; but unlike that group, they were not convicted under the Gun Law. To determine if there was a difference between the two groups in the length of the sentences they received, each group was treated as an independent random sample, and the mean sentencing proportion of each was compared

by a Difference-of-the-means Test.

In accordance to this test, the statistical null hypothesis advanced for testing was that there was no difference between the groups in their average sentencing proportion. Stated in a symbolic fashion, this hypothesis is:  $H_0: \bar{X}_1 = \bar{X}_2$ , where  $\bar{X}_1$  is the mean sentencing proportion of the convicted Gun Law offender group, and  $\bar{X}_2$  is the mean sentencing proportion of the group not convicted of violating the Gun Law. Using the same notation, the alternative hypothesis is:  $H_1: \bar{X}_1 < \bar{X}_2$ , which denotes that the mean sentencing proportion of the convicted Gun Law offender group is significantly less than that of the group not convicted of the Gun Law. Since the alternative hypothesis is directional, a one-tailed "T-test" was performed, the results of which are presented in Table 29.

Table 29. The Mean Sentencing Proportion of Incarcerated Offenders Deemed Eligible for Prosecution under the Gun Law According to the Presence or Absence of a Gun Law Conviction (N=422)

Offender Group	Number of Cases	Mean Sentencing Proportion
Convicted of Gun Law	218	0.364
Not Convicted of Gun Law	204	0.388
T = -1.20	Degrees of Freedom = 420	Significance = 0.116

As expected, the mean sentencing proportion of the offender group convicted under the Gun Law was slightly less than that of the group not having had such a conviction (being 0.364 and 0.388 respectively). This finding is supported by the negative value of the test statistic. Although this may suggest that the convicted Gun Law offenders have

received less lengthy terms of incarceration on their primary offenses, when the probability of this difference occurring in the populations sampled was calculated, it was found to be greater than the established 0.05 level of significance; therefore, the null hypothesis was not rejected. Since that hypothesis remains tenable, it is concluded that within the current samples, the mean sentencing proportion of the offenders who were convicted under the Gun Law does not differ significantly from that of the offenders who were not.

Table 30. The Mean Minimum Term of the Incarcerated Offenders Convicted of Armed Robbery and Deemed Eligible for Prosecution under the Gun Law According to the Presence or Absence of a Gun Law Conviction (N=329)

Offender Group	Number of Cases	Mean Minimum Term (in Months)
Convicted of Gun Law	189	118.07
Not Convicted of Gun Law	140	104.63
T = 0.81                  Degrees of Freedom = 327                  Significance = 0.209		

To offer a concrete example of a comparison of sentence lengths, the above analysis was replicated for a single primary offense group using the actual minimum term of incarceration as the dependent variable instead of the sentencing proportion. As the primary offense which was most frequently represented in the current samples was armed robbery, only those 329 offenders convicted of this primary offense were selected for study. Using the same set of statistical hypotheses and analytical technique, the results which are depicted in Table 30 were found.

In the table it can be observed that there was a numeric difference present between the mean lengths of the minimum terms of incarceration imposed on the two groups. The group of offenders who were convicted of both armed robbery and the Gun Law had a mean minimum term of incarceration of 118.07 months as their penalty for the armed robbery, and the comparable group who were not convicted under the Gun Law had a mean minimum term of 104.63 months incarceration as the penalty for their armed robbery. After conducting the statistical analysis, this numeric difference was, however, found not to be statistically significant; and, therefore, the null hypothesis remains tenable as it was not rejected. As the results of both analyses examining the length of the primary term have failed to discover a significant difference, it would appear, contrary to Huemann and Loftin's suggestion, that judges have not made downward adjustments in the offender's primary term in order to compensate for the two-year penalty mandated by the Gun Law.

#### The Sentences Imposed for Gun Law Convictions

Having concluded the analysis of how Gun Law convictions were related to the sentences which offenders received as the penalty for the commission of their primary offenses, the investigation now shifts to the examination of the types of sentences imposed for the violation of the Gun Law itself. As this investigation was undertaken on a purely exploratory or descriptive level, testable hypotheses were not advanced. Instead, it was established that only descriptive statistics were needed to gauge the level of compliance to the provisions of the Gun Law exhibited by the sentencing judges. The two provisions examined herein

are: first, that the convicted offender's sentence shall be one of imprisonment which shall not be suspended or replaced by a term of probation, and secondly, that the term of incarceration shall be served consecutively to the term imposed for the initiating felony conviction.

Table 31. The Absolute and Relative Frequencies of the Types of Sentences Applied to Gun Law Convictions (N=232)

Type of Sentence	Absolute Frequency	Relative Frequency
Prison Term	218	94.0
Non-prison Term*	14	6.0
Totals	232	100.0

\* This category actually consisted of sentences of probation, suspended sentences or delayed sentences.

Addressing the first requirement, Table 31 presents the distribution of the 232 convicted Gun Law offenders according to the particular type of sentence they received for their Gun Law conviction. It was found that 96.0% of the current sample received sentences of imprisonment as mandated by the statute, and the remaining 6.0% received non-prison sentences which are at odds with the requirements of the Gun Law. Although not explicitly stated in the table, the original data collected by the Felony Sentencing Project indicated that these 14 cases were given sentences consisting of either a suspended sentence, a delayed sentence or a term of probation. While clearly the vast majority of the cases involved a sentence which was in accordance with the dictates of the Gun Law, it is important to note that there have been judicial abuses of the statute. Perhaps since the Gun Law did not specify that

delayed sentences were inappropriate, the sentencing judges may have found this type of sentence as being an avenue for circumventing the statute. Unfortunately the data originally collected by the Project does not discriminate between these three types of sentences (considering them all as a form of probation), so the use of the delayed sentence by the judiciary is still open to question. It was also interesting to note that in reviewing the data, the 14 cases which received a non-prison term as a penalty for the Gun Law conviction were also the only cases in the present offender group which received similar non-prison terms as a penalty for the primary offense (which also in all cases was an armed robbery conviction).

Selecting only those 218 cases in which the convicted Gun Law offender was sentenced to a term of imprisonment on both the primary offense and the Gun Law, the examination of the judicial compliance to the second requirement of the statute can be conducted. Table 32 presents the distribution of these cases according to whether the prison term imposed for the Gun Law conviction was applied as a consecutive or a concurrent term of imprisonment to that penalty imposed for the primary offense. It was found that in 164 of the cases (or 75.2% of the current sample), the penalty imposed for the Gun Law conviction was applied as a consecutive sentence while in the remaining 54 cases (or 24.8% of the sample) that penalty had been applied as a concurrent term of incarceration. Given the fact that the statute specifically states that the term of imprisonment shall be served consecutively to any term of imprisonment applied to the initiating (or in this case the primary) felony offense, the 24.8% incidence of concurrent sentences applied to the Gun Law would indicate that the sentencing judges have not in all



cases abided by the letter of the law.

Table 32. The Absolute and Relative Frequencies Describing How the Gun Law Sentence was to be Served for Offenders Sentenced to Terms of Incarceration on both the Primary Offense and the Gun Law

Form of Sentence	Absolute Frequency	Relative Frequency
Consecutive Term	164	75.2
Concurrent Term	54	24.8
Totals	218	100.0

#### Results: Phase 4

In this section the results of the fourth and final analytical phase of the study are presented. This analysis was carried out to determine if there had been a change in the frequency by which firearms and other weapons were used in the commission of felony offenses after the Gun Law was enacted. This research question was included in the present study in order to provide a reexamination of the issue due to the fact that the results of an earlier study addressing the same question, but using an inappropriate sample, had captured the public eye.

To study this question, the entire original sample of 2,206 cases was employed to create two offender groups for the purposes of comparison. One subsample consisted of those 1,224 cases which were determined to have been committed prior to the enactment of the Gun Law (labeled the Prelaw Sample) and the other including only those 946 cases involving a primary offense which was perpetrated after the Law's enactment (termed the Postlaw Sample). Employing both the Chi-Square test and Cramer's V

as the statistical measures used to determine if an association was present, the two groups were compared on the basis of their use of weapons (expressed as either having possessed a firearm, another weapon such as a knife, or no weapon at all). The null hypothesis advanced for evaluation was that the use of weapons, as exhibited by convicted felony offenders, is not associated with the enactment of the Gun Law. The results of this analysis are presented in Table 33.

Table 33. Weapon Use According to Offense Date (N=2,206)

Type of Weapon	Date of Offense			
	Prelaw Sample		Postlaw Sample	
	%	(N)	%	(N)
Firearm	60.5	(706)	49.0	(456)
Other Weapon	15.7	(183)	21.0	(195)
No Weapon	23.8	(278)	30.0	(279)
Total	100.0	(1,167)	100.0	(930)
Chi-Square = 27.74		Significance = 0.000		
Cramer's V = 0.115		Number of Missing Cases = 109		

The data indicate that as a group the Postlaw Sample did exhibit a slightly lower incident of firearm use than that exhibited by the Prelaw Sample; this difference being an 11.5% decrease. As one would expect, along with the decrease in firearm use, there was also an increase in both the use of other types of weapons and the absence of weapon involvement, for these categories showed increases of 5.3% and 6.2% respectively. The results of the Chi-Square test indicate that this change in the use of weapons by offenders within the Postlaw Sample is statistically

significant and that the null hypothesis again warrants rejection.

Turning to Cramer's V, one can observe, however, that the date of the offense was found to have been only slightly correlated to the type of weapon used by the offender.

Having found that a slight relationship did exist between these factors, this analysis has, at least, shed some doubt upon those earlier findings of the Michigan Department of Correction's which addressed the same question, but contradictorily proposed that no such relationship existed. While this analysis has fulfilled its goal of reexamining this issue, it is cautioned that a bold extrapolation of these findings, to the point of concluding that the Gun Law has acted as an effective deterrent against the use of firearms in the commission of crimes, should not be made due to the numerous pitfalls or plausible rival explanations which one might encounter. For instance, while the enactment of the Gun Law was found to have been associated with a decline in the use of firearms, this fact alone does not establish that its enactment has actually produced a cognitive change in the offender's choice of including a weapon (and what type) into the commission of his or her offense; only a direct attitude survey of offenders might produce such needed information. Furthermore, since the present samples have been limited to only convicted offenders and did not include information pertaining to those offenses in which a conviction had not resulted, these findings can not be generalized to all offenses committed during these time spans. Due to such limitations, the current findings may instead be most appropriately considered as a starting point for future research endeavors into the question of deterrence, for they do, at least, suggest that some deterrent quality might be produced by the Gun Law.

Chapter Summary

In this chapter the results of the data analysis have been presented. Since the study addressed four general research questions, the findings were divided into four segments, each corresponding to a single analytical phase. The first phase dealt with the simple task of determining the overall rate of Gun Law convictions across all offenders who were found to have been subject to prosecution under the Law, which was found to have been 50.9% in the current sample. When this conviction rate was compared to the 29.2% rate found in an earlier statewide study of the same question, the current conviction rate was determined to have been significantly higher.

After the presentation of those findings, the results of the second phase were discussed. This phase of the study was originally designed to discover a set of factors relating to either the offender, the offense, or the judicial processing of the case which might act as predictors in forecasting when an eligible offender may be prosecuted under the Gun Law and also when a conviction might arise from that prosecution. Early in this analysis it was found that 80.6% of the offenders who had been prosecuted under the Gun Law were subsequently convicted of that violation. Since this single factor was found to have been so closely associated with the outcome of the adjudication, a search for other factors related to conviction was deemed superfluous and was not performed.

In examining only the decision to prosecute Gun Law offenders, it was found on a bivariate level of analysis that eight of the thirteen characteristics examined were significantly related to this decision:

1. the offender's race,
2. the relationship between the offender and the victim,

3. the geographic location and/or caseload of the court,
4. the number of felony dispositions pending against the offender,
5. the offender's prior criminal record,
6. the severity of the primary offense,
7. the offender's sex, and
8. the offender's employment status.

Specifically, it was determined that employed, nonwhite, male offenders who have a criminal record, and have more than one charge filed against them, the most serious of which was perpetrated against a victim who was known to the offender and carries a maximum penalty of at least 20 years, and whose case will be adjudicated by a metropolitan court are those who are most likely to be prosecuted under the Gun Law.

This bivariate analysis was, however, not the final statement concerning factors associated with the prosecutorial decision, for this search was undertaken a second time employing a multivariate technique. Using Multiple Classification Analysis, it was possible to reexamine the relationship of each factor with the decision to prosecute while controlling for the effects of the other included independent variables. Unfortunately, due to missing observations in the data, the sample of offenders who had technically violated the Gun Law was reduced in size so that some of the characteristics of the sample were changed from those of the initial sample used during the bivariate analysis. The principle example was that all the female offenders included in the bivariate analysis were lost due to missing data; and thus, the offender's sex was not included as a possible predictor, and only the remaining twelve factors were employed in the multivariate analysis. From this multivariate analysis, a total of eight factors were found to have been significantly associated with the decision to prosecute. These are as follows:

1. number of prior convictions,
2. race,
3. offender/victim relationship,
4. employment status,
5. location and/or caseload of the court,
6. number of pending felony counts,
7. physical injury to the victim, and
8. conviction method (i.e., plea or trial).

By way of describing the actual relationship which these factors had with the decision to prosecute, it was found that those offenders who were nonwhite, having had prior felony convictions, known to their victim(s), who had not injured their victim, and were employed at the time they committed their offense(s) were most likely to have been prosecuted. Furthermore, it was found that when the offender was prosecuted for less than three total charges, and when he had pled not guilty and was to be tried in one of the busier metropolitan courts, he was also more likely to have been prosecuted under the Gun Law.

The next or third phase of the analysis considered several research questions. First, selecting as a sample the 456 cases which were deemed eligible for prosecution under the Gun Law, the types and lengths of the sentences applied to the offenders primary offenses were compared on the basis of whether or not the case had also involved a Gun Law conviction. While controlling for the statutory severity of the primary offense, it was found that the presence or absence of a Gun Law conviction was associated with the type of sentence received in only those instances in which the offender had been convicted of committing the most serious types of primary offenses; and there was no such relationship found for those who had committed the lesser severe primary offenses. When the length of the sentences imposed upon the primary offenses were examined, it was found that convicted Gun Law offenders had not received different lengths of punishment from those who were not additionally convicted

under the Gun Law.

Following that analysis, the examination turned to determining the level of judicial compliance to the sentencing provisions of the Gun Law. Employing as a sample the 232 cases in which a Gun Law conviction was present, it was found that in 14 of these cases, or 6.0% of the sample, the sentence applied to the Gun Law violation was a non-prison term being in direct contradiction to the sentencing requirements of the Law. In the furtherance of the same objective, this third phase of the analysis closed with an examination of the 218 cases in which the convicted Gun Law offender had been sentenced to a term of imprisonment for both the primary offense and the Gun Law in order to determine if the Gun Law penalty was to have been served consecutively or concurrently to the term imposed for the primary offense. In this examination even a lower level of judicial compliance was discovered, for it was found that in 54 cases, or 24.8% of the 218 cases considered, the imposed sentence was applied as a concurrent term of incarceration rather than as the consecutive term mandated by the Gun Law.

The final phase of the study was concerned with determining the possibility, as exhibited by convicted offenders, that a relationship existed between the enactment of the Gun Law and the frequency by which weaponry had been used in the commission of felony offenses. It was in this phase that the entire originally selected sample of 2,206 cases was employed to create two comparison groups based on the date which the offense was committed. One group represented a sampling frame of offenses committed prior to the enactment of the Gun Law, and the second represented those offenses committed after the Law took affect. When the weapon usage of each group was compared, it was found that the postlaw

group had exhibited a significantly lower proportion of offenses involving the possession of a firearm. It was cautioned, however, that due to the limitations of the current research design, such as the sample having been limited to only convicted offenders, this finding could not legitimately be generalized to all the offenses committed within the State during these time spans, and that this discovered relationship merely points to a need for additional research into the question of the Law's deterrent value.



#### FOOTNOTES: CHAPTER IV

<sup>1</sup>This is the adjusted multiple correlation coefficient which reflects the number of degrees of freedom present.

<sup>2</sup>Frank M. Andrews, James N. Morgan and John A. Sonquist, Multiple Classification Analysis: A Report on a Computer Program for Multiple Regression Using Categorical Predictors (Ann Arbor, Michigan: Survey Research Center Institute for Social Research, University of Michigan, 1967), p. 22.

<sup>3</sup>The term "Beta" coefficient should not be confused with the standardized regression coefficient. It is used by the developers of Multiple Classification Analysis because it is analogous to the standardized regression coefficient. As stated by Andrews, Morgan and Sonquist in Multiple Classification Analysis (p.22), "Beta and Beta<sup>2</sup>: these are directly analogous to the Eta statistics, but are based on the adjusted means rather than the raw means. Beta provides a measure of the ability of the predictor to explain variation in the dependent variable after adjusting for the effects of all other predictors. This is not in terms of percent of variance explained."

## CHAPTER V

### CONCLUSION

#### Summary and Conclusions

In hopes of curbing an increase in the rate of violent crimes, legislators in numerous states drafted and enacted additional criminal sanctions against those persons using firearms during the commission of a crime. In one instance, the State of Massachusetts enacted a law which expressly prohibited the mere possession of a firearm by anyone who had not obtained prior legal authorization. A common thread in all these anti-firearm statutes is that they mandate a specific term of imprisonment for their violation. Such mandatory penalties were invoked by these legislators in order to insure that violators received harsh and certain punishment, thereby maintaining the functional integrity of the general and incapacitation deterrent theories which had been employed in support of the laws during their enactment.

When the past studies which had been performed to evaluate the implementation and impact of these mandatory laws were reviewed, it was found that their conclusions have proven to be somewhat inconsistent. An exploration of the Massachusetts statute discovered that a high level of prosecutorial and judicial compliance with this state's firearm law had resulted in a decrease in the use of firearms in the commission of non-premeditated crimes (such as assault); moreover, that there had been a heightening in both the severity and the certainty by which penalties had been imposed for carrying unlicensed firearms over and above those

levels previously obtained under a past non-mandatory law. On the other hand, studies of the Michigan mandatory firearm law have pointed to a lack of compliance to the provisions of that law by the judiciary, and that it has had no noticeable effect upon the use of firearms by criminals.

To aid in resolving such issues surrounding the usefulness of mandatory firearm laws, the current study was undertaken in order to provide an evaluation of the application and impact of the Michigan Felony Firearm Statute, or the Gun Law, across the state. Operating under this broad goal, numerous research objectives were sought: the determination of the overall (i.e., statewide) rate by which offenders who were subject to prosecution under the Gun Law had ultimately been convicted of that violation; the identification of factors associated with the prosecution, and later, the conviction of Gun Law offenders; the investigation of the impact which a Gun Law conviction had upon the penalties received by offenders, and the level of the judicial compliance with the sentencing provisions of the Law in the imposition of these penalties; and finally, the examination of the frequency by which firearms were used by convicted offenders both before and after the passage of the Gun Law.

With these objectives in mind, a subsample of 2,206 cases, representing all those offenders who had been convicted (as their most serious offense) of offenses involving a theft from a person(s), was drawn from a larger disproportionate stratified random sample of 26,133 weighted cases which had previously been collected by the Michigan Felony Sentencing Project to represent all felony offenders who had been convicted and sentenced during the calendar year of 1977 throughout the state of Michigan. Employing this dataset (which had previously been collected and utilized by another research group) gives the current study

the standing of a secondary analysis.

When the date of the offense was considered as the temporal frame of reference instead of the date of sentencing, a preliminary analysis revealed that these 2,206 cases actually contained 1,224 offenses which had been perpetrated before the Gun Law took effect of January 1, 1977, and another group of 946 cases which had taken place after the Law's enactment. Having this before and after quality and containing both armed and unarmed offenders, this sample was employed exclusively during the current study to examine the frequency by which firearms had been used. From the group of offenses which had been committed after the enactment of the Gun Law, a second and smaller subsample was drawn of those 456 cases in which the offender possessed a firearm during the commission of his or her offense(s). This second subsample was deemed eligible for prosecution and conviction under the Gun Law and was used, therefore, as the basic dataset in the remaining portions of the study addressing the application and impact of the Gun Law.

Although a previous statewide examination of the application of the Gun Law found that 29.2% of the eligible offenders have been convicted and sentenced under the Gun Law, deficiencies were noted in its sample selection. Due to these deficiencies, a reexamination of this issue was deemed appropriate, and thus, the present study commenced by addressing the following research question:

Research Question 1: How often has the Gun Law been applied to those offenders who have committed or attempted to commit a felony while possessing a firearm?

Employing a descriptive research design and the subsample of 456 offenders who were considered eligible for prosecution and conviction under the Gun Law, the overall conviction rate of these currently sample offenders was

compared to the previously established rate of 29.2%. By utilizing a Goodness-of-Fit test, the following conclusion was advanced.

Conclusion to Research Question 1: The rate by which eligible offenders have been convicted of violating the Gun Law in the present study was 50.9%. When that rate was compared to the previously established rate of 29.2% it was found to be significantly higher; thus indicating that the actual overall conviction rate may well be higher than previously established.

Even though the ultimate conviction rate of 50.9% for violators of the Gun Law was found to have been higher than that level suggested by prior research, it is obvious that not all offenders who had possessed a firearm during the commission of their felony offense have been convicted of this separate offense. In order to determine what factors may have influenced the application of the Gun Law to eligible offenders and might function as meaningful predictors in assessing its future applications, the present study proceeded to the investigation of a second general research question.

Research Question 2: What are the circumstances associated with the prosecution and conviction of offenders under the Gun Law?

Since this research question confronted two distinct decision points in the disposition of criminal offenders, the analysis was designed to proceed in two stages. As logic would dictate, the first stage was the identification of those circumstances surrounding the decision to prosecute eligible offenders under the Gun Law; after which, the identification of circumstances associated with the conviction of those offenders who had been prosecuted was sought. To complete these quests, a set of test factors was required. By reviewing past studies pertaining to these issues (primarily those concerned with prosecutorial and judicial discretion), thirteen factors were selected for testing. This set of

factors was comprised of characteristics which were descriptive of either the offender, the offense or the judicial processing of the case and consisted of:

Offender Characteristics:	Age Sex Race Prior Criminal Record Type of Occupation Employment Status
Offense Characteristics:	Severity of Initial Offense Victim/Offender Relationship Extent of Injury to Victim Number of Charges Pending
Judicial Characteristics:	Type of Defense Attorney Type of Plea on Initial Offense Geographic Location/Caseload of the Court.

Working with the sample of 456 offenders who had technically violated the Gun Law, a preliminary analysis showed that only 288 or 63.2% of these offenders had been prosecuted under that statute. Observing that this constituted a noteworthy variation, the examination continued by seeking out the relationship which each of the above mentioned factors had with the prosecutor's decision on an individual or bivariate level of analysis. Using the Chi-Square test, each factor was, in turn, related to the prosecutorial decision to determine whether or not a significant association existed. Where such a relationship was found to exist, either Phi or Cramer's V was employed to measure the strength of that relationship. From this initial bivariate analysis, eight factors were found to have been significantly associated with the prosecutorial decision; the following conclusions were reached:

Conclusions Concerning the Decision to Prosecute  
(Bivariate Level of Analysis):

1. Blacks, Hispanics and other nonwhite offenders were found to have been prosecuted more often than white offenders.
2. Those offenders who had perpetrated their crime against a victim who was known to them were more often prosecuted under the Gun Law than those who had victimized a stranger.
3. Offenders who were adjudicated in a court which processed over 2,000 felony cases per year and was located in the Detroit metropolitan area were prosecuted more frequently than those who were adjudicated in courts handling less than 2,000 felony cases annually and located in the remaining portion of the state.
4. Excluding any Gun Law charge itself, those offenders who had only one felony charge pending against them were more often also prosecuted under the Gun Law than the offenders who had more than one other pending felony charge.
5. Those offenders who did have a prior criminal record were, as a group, more often prosecuted than those who had no prior record.
6. Offenders whose most serious offense was punishable by a maximum penalty of 20 years to life imprisonment were more often additionally prosecuted under the Gun Law than those who had committed less serious offense having maximum penalties under 20 years of imprisonment.
7. Male offenders were more frequently prosecuted under the Gun Law than female offenders.
8. Offenders who were employed at the time they committed their offense(s) were found to have been more frequently prosecuted than those who were unemployed.

The order in which these conclusions have been presented reflects the relative strength of each factor's individual relationship with the decision to prosecute; the factor most strongly associated with that decision was the offender's race, the coefficient of Phi having been .293, and the weakest was the offender's employment status, which had a Phi

coefficient of .110. Due to the relatively low values obtained in measuring the strengths of these discovered relationships, it was further noted that, on an individual basis, all of the aforementioned relationships could best be described as having been only slightly correlated.

As this bivariate analysis did not account for the total or combined contribution which these factors might have had in explaining the variation present in the prosecutorial decision or counteract the possibility that the other factors not included might have confounded these simple bivariate relationships, the current investigation was not concluded at this point. Instead, the investigation was continued on a multivariate level of analysis employing Multiple Classification Analysis to assess both the factors' individual and cumulative potential for predicting when the Gun Law would be applied, while at the same time controlling for the possible confounding effects of the other included factors. Again selecting that sample of 456 offenders deemed eligible for prosecution, it was found that because Multiple Classification Analysis rejects any case with missing data the sample had been reduced in size from 456 cases to 336 cases for inclusion in this analysis. The only noteworthy effect which this alteration in sample size caused, was that all of the female offenders represented in the initial sample had been deleted from the reduced sample. Thus, the variable describing the offender's sex was, out of necessity, omitted from consideration and only the twelve remaining independent variables were included.

The results of this multivariate analysis indicated that eight factors were significantly associated with the decision to prosecute Gun Law offenders. The nature of these relationships is delineated in



the following set of conclusions.

Conclusions Concerning the Decision to Prosecute  
(Multivariate Level of Analysis):

1. Those offenders with prior criminal convictions are more likely to be prosecuted under the Gun Law than those who have none.
2. Nonwhite offenders are most likely to be prosecuted, while white offenders are more likely not to be prosecuted under the Gun Law.
3. Those offenders who perpetrated their offense(s) against a victim who was known to them are more likely to be prosecuted than those victimizing a stranger.
4. Employed offenders are more likely to be prosecuted than those who were unemployed at the time of their offense(s).
5. Offenders who are adjudicated in metropolitan courts will most likely be prosecuted under the Gun Law, while those adjudicated in non-metropolitan courts will most likely escape such prosecution
6. As the number of felony dispositions or counts held against the offender are increased, the likelihood of a concomitant Gun Law prosecution is decreased.
7. Those offenders who have caused an injury to their victim(s) are less likely to be prosecuted under the Gun Law than those who did not injure their victim(s).
8. Those offenders who elect to enter a plea of guilty to their primary offense are more likely to also be charged with the Gun Law than those pleading not guilty and requesting a trial.

When the usefulness of these factors in explaining or predicting the outcome of the prosecutor's decision was questioned, it was found that, when the explanatory quality contributed by each of the above-mentioned significant factors was combined with that contributed by each of the four remaining factors examined, this set of twelve factors had cumulatively explained only 22.4% of the variance found in the

prosecution of Gun Law offenders. Given this relatively small contribution towards explaining the prosecutors' decision, it is suggested that in making their decision, prosecutors have relied most heavily upon other factors or attributes of each case which were not incorporated into the current study.

Having completed the examination of the prosecutorial decision, the investigation of the second research question continued to the search for those factors associated with the conviction of prosecuted offenders. Selecting those 288 offenders (or 63.2% of the sample of 456 eligible offenders) who were prosecuted, a preliminary analysis revealed that 80.6% (or 232) of these prosecuted offenders had also been convicted under the Gun Law. Since the overwhelming majority of those offenders who had been prosecuted were also convicted of this violation, there was very little variance found in the outcome of the adjudication; therefore, the second prong of this analysis was deemed superfluous and was not performed. Instead, it was concluded that the major source of the unexplained variation in the conviction of Gun Law offenders, found during the investigation of the first research question, lies primarily in the decision to prosecute.

Continuing, the study next addressed those issues surrounding the sentencing of convicted Gun Law offenders. This was accomplished through the investigation of a third general research question.

Research Question 3: What effect does a Gun Law conviction have upon the type and length of sentence an offender receives?

As advanced, this question was designed to assess both the level of judicial compliance with the sentencing provisions of the statute, and the impact, if any, which a Gun Law conviction had upon the type and

the length of the penalty which the offender received for his or her initial offense. Given the numerous research facets presented by this single question, the analysis pertaining to it proceeded in a step-by-step progression.

The initial step taken was the investigation of the possibility that a Gun Law conviction might have affected the type of sentence which an offender received as punishment for his or her primary offense. Employing the sample of 456 offenders found eligible for prosecution, the various types of sentences (being either incarceration, probation or other forms of punishment) imposed upon those offenders convicted under the Gun Law for their primary offense was compared to those sentences imposed upon the offenders who had not been convicted under the statute. To control for the likelihood that the specific type of primary offense might confound the analysis, it was repeated twice, once for those having committed the most serious types of primary offenses (carrying maximum penalties of at least 20 years imprisonment) and a second time for those convicted of the least statutorily severe offenses (those having had penalties below 20 years imprisonment). Operating within the framework of this static-group comparison design, the Chi-Square test and Cramer's V were employed to assess the significance and strength of any relationship discovered. The results of this analysis indicated that in viewing only those offenders who had committed the most serious types of primary offenses, the presence of a Gun Law conviction was significantly associated with the type of sentence imposed for the initial offense, for this offender group was found to have more often received terms of incarceration instead of lesser penalties than those who had not been convicted under the statute. However, when

the sentences were compared within the group of offenders convicted of less severe primary offenses, this relationship was not found to have existed.

Following that analysis, the issue of the Gun Law's effect upon the length of the offender's primary sentence was considered. As previous research had suggested that judges may have compensated in the sentencing of those convicted under the Gun Law by reducing the length of their primary penalty by two years, it was hypothesized that convicted Gun Law offenders would receive shorter penalties for their primary offenses than those who had not been convicted of this violation. Selecting only those 422 offenders who had received prison terms for their primary offenses and who were also considered as having been eligible for conviction under the Gun Law, two comparison groups were formed. One consisted of those 218 offenders having been convicted under the Gun Law and a second group was comprised of those 204 offenders who had not received such a secondary conviction.

Using a T-test, the mean lengths of the primary terms of imprisonment calculated for each group were compared to determine if any significant departure had occurred. Since each group consisted of offenders who had committed different types of primary offenses, the measure of the offender's primary term was devised to control for these differences in offense type. This control was accomplished by expressing the length of the offender's term as that proportion which the minimum term was of the maximum term imposed. The results of this hypothesis testing indicated that no difference had existed in the lengths of the penalties imposed for the primary offenses committed by the offenders in both groups. To provide a more concrete example, this analysis was repeated for only

those offenders convicted of the performance of an armed robbery, except this time the actual length of the offender's minimum term was used as the dependent measure. Once again, there was no difference observed in the lengths of the sentence imposed.

Having explored the effects of a Gun Law conviction upon the penalty imposed for the offender's primary offense, the investigation of this third research question then turned towards assessing the appropriateness of the penalties imposed for the Gun Law convictions themselves, and therefore, the level of judicial compliance to the sentencing provisions of the statute. Functioning under a purely descriptive research design, those 232 offenders who were convicted of violating the Gun Law were chosen as a sample to determine whether their penalty had been prescribed as a period of imprisonment which is mandated by the statute. This analysis revealed that while 94% of these offenders had received the required two year term of imprisonment for their Gun Law conviction, the remaining 6% had, in direct conflict to the sentencing provisions of the statute, received a penalty consisting of either a suspended sentence, a delayed sentence or probation.

Recalling that the second mandatory provision for the sentencing of offenders contained in the statute required that the period of incarceration imposed upon the offender shall be served as a consecutive term to any imposed for the initiating felony offense, the investigation of the third research question was concluded by the examination of the judicial compliance to this issue. Selecting those 218 cases in which the Gun Law offender had been sentenced to a term of incarceration, a descriptive analysis was performed of the manner in which that term was to have been served by the offender. In 164 of these cases (or 75.2% of

the sample) it was found that the judge had, in accordance with the mandates of the statute, applied the offender's penalty as a consecutive sentence; however, in the remaining 54 cases (or 24.8% of the sample) it was found that the judge had applied the penalty as a concurrent term of incarceration in contradiction to the mandate of the statute.

In response to these findings the following conclusions were advanced in answer to the third research question.

Conclusions to Research Question 3:

1. In those instances in which an offender has committed a relatively serious primary offense the application of the Gun Law has resulted in the imposition of harsher forms of punishment for that primary offense (e.g., incarceration rather than probation). This relationship did not, however, exist for offenders convicted of relatively minor felony offenses.
2. The application of the Gun Law did not affect the length of the term of incarceration applied to the offender's primary offense, thus indicating that the judiciary had not compensated for the additional Gun Law penalty by a reduction in the offender's primary sentence.
3. In the imposition of penalties for Gun Law convictions, judges have not universally conformed to the mandatory sentencing provisions of the statute, for only 94% of the convicted Gun Law offenders received a two-year term of imprisonment, and only 75.2% of those prison terms were applied as a consecutive sentence.

With the investigation of the third research question completed, the study closed with the exploration of a fourth and final research question:

Research Question 4: Was there a change associated with the enactment of the Gun Law in the type and frequency of weapons possessed during the commission of felony offenses as exhibited by convicted offenders?

To explore this question a simulated before and after design was chosen. Utilizing the original sample of 2,206 convicted offenders, two

comparison groups were created on the basis of the date the offender had committed his or her offense(s), one being those 1,167 offenders who had committed their offense(s) prior to the Law's enactment and the second comprised of 930 offenders who had committed their offense(s) after the passage of the Gun Law (the numeric discrepancy between the original and latter samples was due to missing data). Comparing the use of weapons exhibited by these convicted offenders (expressed as either having had a firearm, another weapon or no weapon), it was found that there had been an 11.5% decrease in the use of firearms displayed by those offenders who had committed their offense(s) after the enactment of the Gun Law. This decrease in the use of firearms was accompanied by increases in both the use of other forms of weaponry and the omission of weapons by the offenders. As the results of the Chi-Square test and Cramer's V indicated that a slight relationship had existed, the following conclusion was drawn:

Conclusion to Research Question 4: Viewing only convicted felons, a significant decline in the possession of firearms during the commission of felony offenses was noted to have occurred after the enactment of the Gun Law. This decline in firearm use was accompanied by an increase in the use of other forms of weaponry, as well as the omission of weapons by those offenders who committed offenses after the Law's enactment.

In examining this final conclusion's impact upon clarifying the issue of the Gun Law's deterrent quality, it was cautioned that this finding should not be interpreted as being final proof that the statute has indeed deterred offenders from the use of firearms. Instead, due to noted limitations of the analysis, its usefulness is restricted to implying that such a deterrent quality might exist and that the

opposing conclusion advanced by the Michigan Department of Corrections may not be tenable. Further implications of this conclusion and the ones preceding it will be discussed in the next section.

### Discussion

Throughout this study numerous research questions have been posed to facilitate an assessment of the use and impact of the Gun Law. This assessment has revolved primarily around such issues as the fulfillment of the Law's deterrent rationales and legislative intent through its application by prosecutors and judges, as well as, its possible effects upon disparity in sentencing and on the use of firearms. Although the conclusions drawn from the examination of such questions have been presented, the linking of these conclusions to the assessment issues has not been made. This crucial linkage of conclusion to theory is the objective of the present section.

In Chapter 1, two theories regarding the deterrence of criminal behavior were advanced as having been used as the rational bases supporting the enactment of the Gun Law. The foremost of these theories was termed the "traditional" viewpoint for the deterrence of potential criminal behavior. This theory espouses the concept that "many individuals who are tempted by a particular form of threatened behavior will ... refrain from committing the offense because the pleasure they might obtain is more than offset by the risk of great unpleasantness communicated by a legal threat."<sup>1</sup> As noted earlier, in order to function effectively, this concept of deterrence demands that the enforcement of the legal sanctions against the offender be performed in a manner which would, in the offender's eyes, communicate a legal threat that is both



harsh and likely to be invoked upon his transgression. To achieve these requirements, the Gun Law was so devised that it mandated a precise and certain penalty for its violation.

In this study's effort to evaluate the utility of the Gun Law, the examination commenced by establishing the rate by which offenders who had violated the Gun Law were convicted. This question was advanced, in essence, to aid in assessing how well the legal system had performed in striving to fulfill the legislative intent of the Gun Law; in this case, whether the certainty requirement of the Law's traditional deterrence basis had been met. While the results showed that the conviction rate might well be higher than previously indicated, the discovered 50.9% conviction rate for eligible offenders definitely places the achievement of this deterrent requirement in doubt, since an offender's odds of having this legal threat imposed would approximate the same probability exemplified in the simple toss of a coin. Considering the fact that this conviction rate applies to only those offenders who have been apprehended and convicted of committing an armed felony offense, and not across all such offenses committed, the probability for conviction would surely decrease even more so, if one were to include those offenders who have gone unapprehended in their calculation of the overall probability for conviction.

While the overall conviction rate may indicate that the Gun Law has not been applied with absolute certainty (thereby undermining the statute's traditional or general deterrence quality) its application may still serve to fulfill the requirements of a second theory supporting its enactment. This second theory has been termed the "incapacitation effect," as it proposes that even through a pattern of selective

enforcement, if those offenders who have proven their propensity towards violent crime by the commission of such offenses were incarcerated, they, at least, would be unable to perpetrate additional offenses during that period of incarceration and thus, be effectively deterred. To evaluate the potential for this form of deterrence, a second research question was advanced that was aimed at determining the circumstances under which the Gun Law has been applied.

In the performance of this examination, two decision points in the adjudication of offenders were considered: first, the decision to prosecute offenders, and secondly, that of the offender's conviction. During this two-pronged investigation, the first discovery made was that the decision to prosecute offenders had been the crucial turning point towards the offender's ultimate conviction (while only 63.2% of the eligible offenders had been prosecuted, 80.6% of those offenders prosecuted were found to have later been convicted). This finding is sensible when one considers that the prior research regarding prosecutorial discretion has suggested that only those cases which offer the greatest chances for a successful prosecution (i.e., conviction) are those that are usually pursued. As explained in that literature, this has been done for a variety of reasons, including the prosecutor's need for maintaining the highest possible conviction rate, as his performance is often evaluated on that basis. More important, however, is that this finding also seems to bolster Alschuler's claim that mandatory sentencing laws might only serve to shift the discretionary options once held by the judiciary away from them and into the hands of the prosecuting attorney, whose discretionary decisions are far less visible and whose discretionary options are "made available only to defendants who

sacrifice their constitutional rights."<sup>2</sup>

As the principal factor in the offender's conviction was the prosecutor's decision, the investigation for those factors associated with the judicial decision was not performed and only those factors associated with prosecutorial decision were sought. Through this examination, numerous factors were found to have been influential in the prosecutor's decision, several of which might suggest that they had, indeed, striven towards fulfilling the incapacitation effect. These factors consisted of the offender's prior criminal history, the offender's relationship with his victim and the statutory severity of the initiating felony offense. As would be expected in a pattern of selective enforcement (and from prior research), the offenders who had exhibited prior criminal behavior and were proving their continued propensity towards criminality by having performed yet another crime were found to have been more often prosecuted under the Gun Law. Likewise, as prior research has indicated that victims who are known to the offender face a greater threat of an armed attack resulting in injury than those who are strangers, it again seems appropriate that the offenders who were acquainted with their victims were found to have been more often prosecuted. Finally, the finding from the bivariate analysis indicating that those offenders committing the most serious initiating offenses were more likely to be prosecuted also points to a pattern of prosecuting only the most dangerous offenders, as this group has shown that they were willing to commit quite serious offenses.

Unfortunately this trend towards the fulfillment of an "incapacitation effect" was short-lived, for in continuing the search for factors associated with this prosecutorial decision, other information was found

which reverses that trend. First, it was established through the multivariate analysis that the initial bivariate relationship between the severity of the primary offense and prosecution may have been inaccurate; for when controlling for the other factors included in the study, that initial relationship was found to have been statistically insignificant and had, instead, been most likely due to the confounding effects of one or more of the other examined factors. Additionally, several other relationships were found which directly conflict with the incapacitation theory. The factors defining these relationships were the number of charges filed against the offender and the presence or absence of an injury to the victim. While one might anticipate that a prosecutor who was attempting to remove dangerous offenders from society would tend to file a Gun Law charge against those offenders having committed numerous offenses or having injured their victim, the results of the current study indicate that when faced with these same circumstances, the prosecutors studied have done just the opposite. Although one might explain away these contradictions by speculating that an additional Gun Law penalty might have been unnecessary in these instances, since the penalties on the initial offenses would naturally be increased when an injury or additional counts were present, because of these inconsistencies, it is doubtful that a strong trend towards the adoption of the incapacitation theory has existed.

While this limited examination of the factors associated with the prosecution of Gun Law offenders has served to explore the circumvention of the statute's deterrent qualities, valuable insights into other issues may also be gained by an exploration of the remaining influential relationships. For instance, one factor which was found to have been

influential during both phases (i.e., the bivariate and multivariate analytical phases) was the employment status of the offender. Although this factor was included in this study in order to act as a control for the examination of the influence of the offender's type of occupation, it was found that only this employment attribute had been related to the prosecutor's decision. Due to this discovery, it is suggested that the main effect of the offender's employment lies solely in whether or not he was employed and not in the occupational or skill level of that employment. It is also curious to note that the manner in which employment status influenced the prosecutor's decision was not as anticipated; for, while it was suspected that employed offenders would be able to retain higher quality attorneys and project an image of themselves as viable members of society and thus be less likely candidates for the Gun Law, the opposite was found. Employed offenders were more often prosecuted under the Gun Law. This unexpected finding would, therefore, lend credence to the alternative explanation that was advanced. This explanation suggested, in essence, that unemployed offenders might receive lenient treatment as prosecutors might perceive that offenses perpetrated out of economic need would, at least, offer some form of justification, and these offenders may be successfully rehabilitated through employment.

Another influential factor, which was found to have been related to the prosecutor's decision in the projected manner, was that attribute describing the geographic location and caseload of the court. It was discovered that those offenders who were to be adjudicated in the courts of the metropolitan Detroit area, which handle over 2,00 felony cases annually, were most likely to be prosecuted under the Gun Law. This finding was, indeed sensible given the time period under which the

current dataset had been collected, for the temporal frame of reference encompassed the same six-month time span used by Heumann and Loftin in their study. From their study, it was determined that the Wayne County Prosecutor had issued a policy that all offenders eligible for a Gun Law charge would be similarly prosecuted. These researchers found that the rate of prosecution in Wayne County had ranged, according to the type of primary offense, from 86.7% to 96.4%. Not only does that finding show that a high level of prosecution can be obtained because of a strict interoffice policy, but it also serves to explain the current findings, since the present sampling frame overlapped that of Huemann and Loftin's. Moreover, since the rate of Gun Law prosecution was significantly lower in the out-state courts of Michigan, it would appear that this prosecutorial policy was not adopted by the prosecutors in the remainder of the state. Unfortunately, this finding suggests that it is likely that due to the varying degrees by which Gun Law prosecution is sought by prosecuting attorneys, inequities in treatment of Gun Law offenders may exist which are merely the result of the prosecutor's policy and not the appropriateness of the statute's application.

A second relationship which may suggest improprieties in the application of the Gun Law is that relationship which was found to have existed between the type of plea entered by the offender to his initiating felony offense and the decision to prosecute. In examining this relationship, it was found (during the multivariate analysis) that those offenders who had offered a plea of guilty to their primary offense were more often charged under the Gun Law, while those who plead not guilty and requested a trial were less often prosecuted. This conclusion seems to fall back on the argument suggesting that prosecutors tend to screen out their

weaker cases from prosecution, for it would appear that in those cases which present the prosecutor with a challenge in obtaining a conviction on the primary offense (i.e., those which must be obtained through a trial), the desire to attempt to obtain a secondary conviction under the Gun Law has lessened. This may have been due not only to the increased complexities facing the prosecutor in establishing the elements of multiple offenses, but it might also suggest that prosecutors were under the impression that Gun Law convictions were difficult to obtain. One potential reason for this apprehension on the prosecutor's part was suggested in the findings of Huemann and Loftin, namely, that many judges were opposed to the use of the Gun Law, which may have made it difficult to obtain a conviction under this statute.

The finding regarding the offender's plea also impacts upon the concept advanced by authors, such as Aschuler and Frase, that mandatory sentencing laws will only serve to enhance the prosecutor's power in obtaining guilty pleas through plea bargaining. Operating under this concept, one would expect to find that prosecutors have used the secondary Gun Law charge as a tool in plea bargaining in order to obtain guilty pleas from offenders on their primary offenses. To be more precise, if the Gun Law had been used to this end, it would be expected that when the offender had entered a plea of guilty to his primary offense, the likelihood of a secondary Gun Law prosecution should have decreased; as this was not the case in the current study, it is possible that such abuses have not occurred.

The last two influential factors found in the application of the Gun Law which require additional discussion are the offender's sex and race. The relationship that each of these offender attributes had with the prosecutor's decision suggest that the enforcement of the Gun

Law may have been swayed by the offender's race and sex. During the bivariate analysis, it was determined that female offenders were far less likely to have been prosecuted than male offenders. While a reexamination of this relationship during the multivariate analysis was unavailable due to missing data, the uncovering of this relationship under the bivariate mode of analysis still serves to indicate that sexual disparities may have existed in the application of the Gun Law. When viewing the influence of the offender's race in the use of the statute, even stronger evidence is present, for in both the bivariate and the multivariate modes of analysis, the same conclusion was drawn: nonwhite offenders were more likely to have been prosecuted under the Gun Law than white offenders. Since this relationship held true even when the other included factors were held constant, the assertion that racial disparities had existed in the prosecution of Gun Law offenders may indeed be quite credible.

In making such assertions regarding these and the preceding relationships, it must be cautioned, however, that due to the relatively weak strength of these relationships, the conclusions which were drawn actually contribute very little toward explaining the overall variance that was noted to have existed in the prosecutor's use of the statute. This point can be clarified quite easily by recalling that the results of the multivariate analysis indicated that only 22.4% of the total variance present in the prosecutorial decision had been accounted for by the twelve factors combined. While these relationships were found to have explained a significant proportion of the variance noted, the fact remains that 77.6% of that variance had not been accounted for by these factors. This finding suggests that while the above mentioned factors were influential and may serve as viable predictors in forecasting the use



of the Gun Law, there are other factors which are more strongly related and would be better suited for predicting the prosecutor's decision. Relying upon the findings of past research pertaining to prosecutorial discretion, it is suggested that other factors, such as the nature and legal sufficiency of the evidence or the policies governing the prosecutor's office might serve better in explaining the prosecutor's decision.

Turning the discussion to those issues concerned with the sentencing of Gun Law offenders, several more conclusions which relate to the deterrent quality of the statute were drawn. First, it was discovered that for those offenders who had committed the most serious types of crimes, a secondary Gun Law conviction did increase the likelihood that the offender would be incarcerated for his initial offense. While this relationship would appear to support the assertion that an enhanced incapacitation effect had been achieved, this relationship was not found to have existed for those offenders sentenced on the less serious types of primary offenses. Because of this lack of uniformity, it would be doubtful that such a heightening of the incapacitation effect would have been achieved on a widespread basis. However, these findings do, at least, suggest that judges have not compensated convicted Gun Law offenders for their additional mandatory penalty by imposing lesser forms of punishment for the offender's primary offense.

Continuing with the subject of judicial compensation, the current study also included an examination of the lengths of the penalties imposed for the offender's primary offense. This examination had been performed to determine if, as Huemann and Loftin asserted, the judiciary had compensated convicted Gun Law offenders by reducing the period of incarceration applied to their primary offense. From this investigation,

it was found that there had been no difference in the lengths of penalties imposed on the primary offense between those offenders who were and those who were not convicted under the Gun Law. It was, therefore, concluded that Gun Law convictions had not been associated with reductions in the length of the penalties imposed for the initiating felony offense. Not only does this finding indicate that Huemann and Loftin's assertion may be inaccurate, but it also shows that the judiciary has not, in their sentencing of offenders for their primary offenses, attempted to circumvent the legislative intent of the Gun Law. This inference is even more credible in light of the lack of judicial compensation in the types of sentences as well.

To conclude the examination of the sentencing of Gun Law offenders, the present study also investigated the level of judicial compliance to the sentencing provisions of the statute mandating that the convicted offender shall receive a two-year term of imprisonment which shall be served consecutively to any other period of incarceration applied to the offender's initiating felony offense (see page 4). The results of this analysis revealed that the judiciary has not uniformly imposed a penalty which complies with the mandates of the Gun Law. To be precise, 94% of the convicted offenders received a term of imprisonment (the remainder were given penalties consisting of probation, suspended or delayed sentences) of which, only 75.2% were imposed as consecutive terms even though the penalty for their primary offense has also been imprisonment. These findings clearly show that the judiciary has not complied with the provisions of the Gun Law in their imposition of the offender's penalty for that violation, and have, therefore, clearly circumvented the legislative intent and deterrent requirements of the

statute.

Before such a denouncement of the judiciary's actions can be taken to heart, it should be noted that this judicial circumvention may be short-lived; for during the period of time in which the current sample had been collected, there were numerous questions regarding the statute's constitutionality. These questions had been raised by offenders who had been convicted under the Gun Law and took the form of constitutional challenges against the validity of the statute. These challenges were based on claims that a Gun Law would, for instance, violate constitutional prohibitions against double jeopardy or would result in cruel and unusual punishment.<sup>3</sup> Since these constitutional challenges were unresolved at the time of the present study, it is plausible that the improprieties which were found in the sentencing of Gun Law offenders may have simply been a result of the complexities facing the judges at that time in applying the statute's penalties, rather than an intentional circumvention of the statute's legislative intent.

The final issue addressed by the current study concerned the impact which the Gun Law may have had on the use of firearms. By investigating the use of weaponry in the commission of crimes both before and after the statute was enacted, it was found, contrary to the previous conclusion asserted by the Michigan Department of Corrections, that there had been a decline in use of firearms associated with the enactment of the Gun Law. It is suggested that this conflict between the presently advanced conclusion and that of the Michigan Department of Corrections is most likely due to those deficiencies that were noted in the sample employed by the Department of Corrections, and that the current finding would, therefore, more accurately reflect the possibility that the Gun

Law might function as a viable deterrent. However, due to the numerous limitations which have been noted in the design of the analysis of this question (such as the sample having been restricted to convicted offenders only), it should be emphasized that while this finding might suggest that the Gun Law has acted as a deterrent, it should in no respect be construed as offering final proof for this claim.

In overview, the results of the present study have indicated that the Michigan Felony Firearm Statute has not enhanced the certainty by which offenders armed with firearms have been more severely punished than those who were not armed with firearms. If anything, this study has shown that the statute has had an opposite effect, for amongst gun bearing offenders it has merely acted to create further disparity in the punishments which they receive. These findings have indicated that once the sentencing discretion of the judiciary has been effectively removed from their hands, that discretion has, as Alschuler and Frase both posited, shifted into the hands of the prosecutor. This shift is initially evidenced in the fact that while 80.6% of the offenders prosecuted under the Gun Law were convicted, only 63.2% of the offenders eligible for such prosecution were actually prosecuted. Given the high conviction rate of the offenders prosecuted and the fact that the judiciary has typically imposed the mandatory penalty, this relatively low rate of prosecution shows that the prosecutorial decision has, in effect, determined which eligible offender received the additional punishment prescribed by the statute. This disparity effect is further emphasized by the fact that once an offender is convicted under the statute, the judiciary has not adjusted the penalty applied to the offender's initiating felony offense in order to compensate for the additional Gun Law conviction, thus assuring

the convicted offender of a longer sentence. In essence, the Gun Law appears to have only focused the responsibility for assuring the certainty and the equality by which offenders are punished into the hands of the prosecutor, while removing that responsibility from the hands of the other components of the criminal justice system, such as the courts and parole authorities, which were traditionally viewed as also sharing in that responsibility.

#### Implications for Future Research

During the current study several concerns were advanced regarding the limitations inherent in the study's research design. These limitations have fostered further questions which have remained unanswered. In this concluding section, these concerns will be addressed in hopes that future research endeavors might be undertaken which would include the investigation of such unanswered questions.

One of the principle concerns in evaluating the usefulness of the Gun Law would be to determine if it has acted as an effective deterrent. While the present study did incorporate a cursory examination of this issue, that examination was, as previously noted, quite limited in its exploration of this question and a more refined and comprehensive approach it still needed. Since one of the short-comings of the present study's examination was the limitation of the sample to only convicted offenders, much more could be learned by performing a similar analysis but including information pertaining to all offenses committed and not merely those which have been followed by a conviction of the perpetrator. An example of this type of expanded study would be a time series analysis of police reports in order to determine the frequency by which firearms have been

used in reported offenses both before and after the enactment of the Gun Law. Furthermore, as the deterrent quality of the Gun Law would depend on the potential offender's cognitive recognition of the statute and its penalties, a second avenue for investigating the question of deterrence might be directed toward assessing the offender's perception of the Gun Law. Such investigation might take the form of a survey of the attitudes which convicted offenders may hold regarding the statute and their forethoughts concerning the incorporation of firearms into the commission of their offense(s).

Another facet of the present study which has stimulated additional research questions was the search for those factors that have been associated with the decision to prosecute Gun Law offenders. Although numerous factors were found to have been related to that decision, it was also discovered that these factors were very limited in their ability to explain or account for the variance which was present in the prosecutors' application of the statute to eligible offenders. This latter finding suggests that additional research examining different factors or case attributes (such as evidentiary strength of the individual case) is needed in order to gain a better understanding of the prosecutor's decision.

A final suggestion for the continuation of the current evaluation would be the performance of a reassessment of the issues surrounding the level of judicial compliance in the sentencing of convicted Gun Law offenders. This type of follow-up investigation seems appropriate inasmuch as the current findings have indicated that, possibly due to legal questions concerning the constitutionality of the statute, the judiciary has not universally complied with the sentencing provisions mandated by the statute.

Given the opportunity for these constitutional challenges against the Gun Law to be resolved, a second look at the sentencing of Gun Law offenders may serve to provide a more accurate, as well as long-term, reflection of the judiciary's compliance with those sentencing provisions.

FOOTNOTES: CHAPTER V

<sup>1</sup>Franklin E. Zimring and Gordon J. Hawkins, Deterrence: The Legal Threat in Crime Control (Chicago: University of Chicago Press, 1973), p. 75.

<sup>2</sup>Albert W. Alschuler, "Sentencing Reform and Prosecutorial Power: A Critique of Recent Proposals for 'Fixed' and 'Presumptive' Sentencing," University of Pennsylvania Law Review, 126 (January 1978): 551.

<sup>3</sup>Richard L. Caretti, "One With Gun Gets You Two: Deterrent or Double Jeopardy?," Detroit College of Law Review 1 (Spring 1979): 123-42.



## APPENDIX

Table 34. Current Variable Categories According to Their Originally Collected Value Categories and Frequencies for Those Cases Included in the Eligible Offender Subsample (N=456).\*

Variable	Current Values	Original Values	Absolute Frequency	Relative Frequency
Age	Youthful Offender Adult Offender	No Categorical Equivalent (computed from date of birth and date of offense)	-	-
Sex	Male Female	Male Female	440 16	96.5 3.5
			Total	100.0
Race	White Nonwhite	Caucasian Black Hispanic Oriental American Indian Other	143 299 7 0 3 0	31.6 66.2 1.5 0 0.7 0
			Total	100.0
Prior Convictions	None One Two Three or more	No Categorical Equivalent (computed from absolute number of Adult and Juvenile felony convictions)	-	-

Table 34: Continued.

Variable	Current Values	Original Values	Absolute Frequency	Relative Frequency	
Type of Occupation	Skilled	Professional/Managerial	0	0	
		White-collar (ofc. worker/sales)	19	4.3	
		Police or Firearm	0	0	
		Blue-collar, Skilled (a trade)	84	19.2	
	Unskilled	Military	2	0.5	
		Blue-collar, Unskilled (part time/sporadic)	319	72.8	
		Other	0	0	
		Never Employed or Disabled	14	3.2	
		Total		438	100.0
		Employment Status	Employed	Yes, full time	99
Yes, part time	46			10.3	
In Military	2			0.4	
No	301			67.2	
Unemployed	Total		448	100.0	
	Statutory Severity of Primary Offense		20 years to Life	392	85.9
			14 and 15 years	26	5.7
			7 to 10 years	25	5.5
			2½ to 5 years	13	2.8
			2 years or less	0	0
Total		456	100.0		

Table 34: Continued.

Variable	Current Values	Original Values	Absolute Frequency	Relative Frequency
Offender/Victim Relationship	Known	Family	5	1.2
		Paramour	5	1.2
		Roommate	0	0
		Friend	13	3.2
		Employer	0	0
		Employee	0	0
		Co-employee	0	0
		Casual Acquaintance	63	15.3
Physical Injury to Victim	Unknown	Stranger	321	77.9
		Bystander	5	1.2
			Total	412
				100.0
	Injured	Injured, not treated	24	5.7
		Treated and released	14	3.3
		Hospitalized	13	3.1
		Critical Condition or Intensive Care	7	1.7
		Killed	9	2.1
	Not Injured	Untouched	342	80.7
		Contact made but no apparent injury	15	3.5
			Total	424
				100.0

Table 34: Continued.

Variable	Current Values	Original Values	Absolute Frequency	Relative Frequency
Number of Felony Dispositions	One	One	215	48.8
	Two	Two	144	32.6
	Three or more	Three	45	10.2
		Four	9	2.0
		Five	28	6.4
		Total	441	100.0
Type of Attorney	Appointed	Court Appointed Public Defender	344	77.8
			0	0
	Privately Retained	Privately Retained Pro Se	98	22.2
			0	0
		Total	442	100.0
Conviction Method	Plea	Guilty Plea	349	78.1
		Nolo Contendere	4	0.9
	Trial	Jury Trial Bench Trial	84 10	18.8 2.2
		Total	447	100.0

Table 34: Continued.

Variable	Current Values	Original Values	Absolute Frequency	Relative Frequency
Location/Caseload of Court	Metropolitan	Metropolitan	347	76.1
	Non-metropolitan	Urban	90	19.7
		Rural	19	4.2
	Total		456	100.0

\*Departures from the overall sample size are due to missing data.

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