THE DYNAMICS OF VIOLENCE BETWEEN STRANGERS:

VICTIM RESISTANCE AND OUTCOMES IN RAPE, ROBBERY AND ASSAULT

by

Richard Block

and

Wesley G. Skogan

Center for Urban Affairs and Policy Research
Northwestern University
Evanston, IL 60201
(312) 491-3395

Preparation of this report was supported in part by Grant No. 81-IJ-CX-0069 awarded to the Center for Urban Affairs and Policy Research, Northwestern University, by the National Institute of Justice, US Department of Justice, under the Omnibus Crime Control and Safe Streets Act, as amended. Points of view or opinions stated in this report are those of the authors and do not necessarily represent the official position or policies of the US Department of Justice.

January 1985

ACKNOWLEDGEMENTS

The data utilized in this report were made available by the Inter-University Consortium for Political and Social Research. The data were originally collected by the U.S. Bureau of the Census for the Bureau of Justice Statistics. Neither the collectors of the original data nor the Consortium bear any respnisibility for the analyses or interpretations presented here.

The authors would like to thank Lois Mock, Philip Cook, and Stephanie Riger for their helpful comments on earlier versions of this report, and Bonnie Fisher for her last minute technical assistance.

ABSTRACT

THE DYNAMICS OF VIOLENCE BETWEEN STRANGERS

A rapist or mugger confronts a target. The potential victim may react by giving in to the offender's demands, running away, or fighting back. Such potentially violent confrontations between strangers are the focus of this report. For this research, all completed or attempted rapes, robberies, and assaults recorded in the National Crime Survey (NCS) from 1973 to 1979 are used to describe the relationship between victim resistance, offender attack, and two outcomes of personal crimes: physical injury to the victim and completion of the crime.

The research divided resistance into four types: forceful, nonforceful, a combination of the two, and offering no resistance at all. The likelihood of various forms of resistance, and their relationship to physical injury and crime completion, varied with characteristics of the victim and offender, the setting of the crime, and the offender's use of a weapon.

In general, nonforceful resistance was related to more favorable outcomes for the victim. Targets of stranger crimes who resisted by screaming, running away, attempting to reason with their attackers, or other nonforceful means were less likely to be injured and were more likely to avoid the completion of the crime.

These favorable conclusions must be tempered by several limitations to the research. The two most important are:

> Crimes in which the victim dies are excluded from the NCS. While these probably represent less than 0.5 percent of all incidents of stranger violence, they are probably the most important.
>
> The NCS does not gather information on the sequencing of victim and offender actions. Thus we cannot know if resistance preceded or followed attack.

This research strongly suggests that nonforceful resistance in the face of potential victimization by a stranger is a good tactic, but before we can conclude that it is effective at warding off injury and crime completion and does not stimulate violence on the part of offenders, more detailed information on the time sequencing of victim and offender actions must be gathered.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

When a robber confronts a potential victim his target may submit or resist, and the crime may be completed or not. Someone threatened with an assault may try to reason with their attacker, or even brandish a weapon of their own in defense. A potential rapist who approaches a woman may find she fights back aggressively or trys to flee the scene. Victims' actions, as well as the tactics of offenders, can affect the outcomes in each of these cases. This report employs data on a national sample of violent crimes (rape, robbery, and assault) to analyze the relation betwen offender actions, victim resistance, and the consequences of crime. It examines how effective various forms of victim resistance may be in averting physical injury and preventing the completion of the crime in potentially violent confrontations between strangers.

There has been surprisingly little research on what victims and offenders actually do during the course of confrontational crimes. Ironically, more has been done on the provocative, precipitative and negligent role of victims in "causing" their own fate than upon the capacity of citizens to ward off potential predators (Fattah, 1984). Crime targets face on-the-spot dilemmas--to flee or fight or surrender, sometimes in the face of a weapon or in response to a surprise attack. The decisions they make can have consequences for their very lives. This report examines these consequences, and the contexts and courses of action which lead up to them.

The data on crimes were drawn from the National Crime Survey (NCS), a continuing project of the of the Department of Justice which gathers information about criminal incidents directly from a random sample of the US population. It therefore includes crimes which were not reported to the police, or were not recorded by them, as well as those which were. The NCS data have significant advantages over those available from police files since they are not limited by selective citizen reporting and police recording practices. In particular, citizens interviewed in the NCS described more attempted crimes than typically are recorded by the police (Block and Block, 1980).

Because there are so many thwarted crimes described in this report, we use special language to talk about them. The report differentiates between "attempted" crimes and those which were "completed," and it refers to the "targets" of crime and a subset of them --"victims." These are not legal distinctions --in many circumstances the criminal law treats attempted and completed offenses similarly-- but they are useful analytic ones. A crime target is someone confronted by a potential offender. To be classed a victim a target must actually be raped, injured, or robbed. A completed robbery is defined here as one in which cash or property of value was stolen; it can be successful with neither an attack upon nor injury to the victim. A completed rape is one in which the offender carries through on his threat of sexual assault. Theft of money or property may take place in both completed and attempted rapes, but we will assume theft to be a secondary motive. An assault will be considered completed rather than attempted if an injury was inflicted. This research also differentiates between physical attack -- including beatings, being hit by thrown objects, and knifing attempts -- and actual injury. A crime target may be physically attacked but not injured. In every case, anyone who is injured is classed as a victim.

There is so much attempted crime--accounting for as much as three quarters of the total in some crime categories-- that some success at preventing injury or crime completion must be attributable to the action of targets as well as to the strength or plans of their assailants. Some people may have a greater capacity to ward off attack, or they may be more likely for situational or strategic reasons to resist in order to fend off attack or limit the extent of their injury. These countermeasures may be more or less successful. This research examines those reactions by violent crime targets under a variety of circumstances, and evaluates their consequences.

In Chapter 2 the report describes the data and methodology which were employed. Then in Chapter 3 it profiles offenders and their targets in three types of stranger violence --rape, assault, and robbery. Chapter 4 examines the settings in which incidents occurred, and Chapter 5 the relationship between offender and victim actions. Finally, Chapter 6 relates all of these to the outcomes of incidents, as measured by physical injury and financial loss. The final chapter summarizes the findings and their implications for policy and future research.

The analysis follows the general model outlined in Figure 1. Because it is problematic whether or not the parties involved in a personal confrontation actually come to blows, we describe in detail social characteristics of targets and offenders (including their age, race, sex, and number) and where, and under what circumstances, the incident took place (the left-hand side of

Figure 1

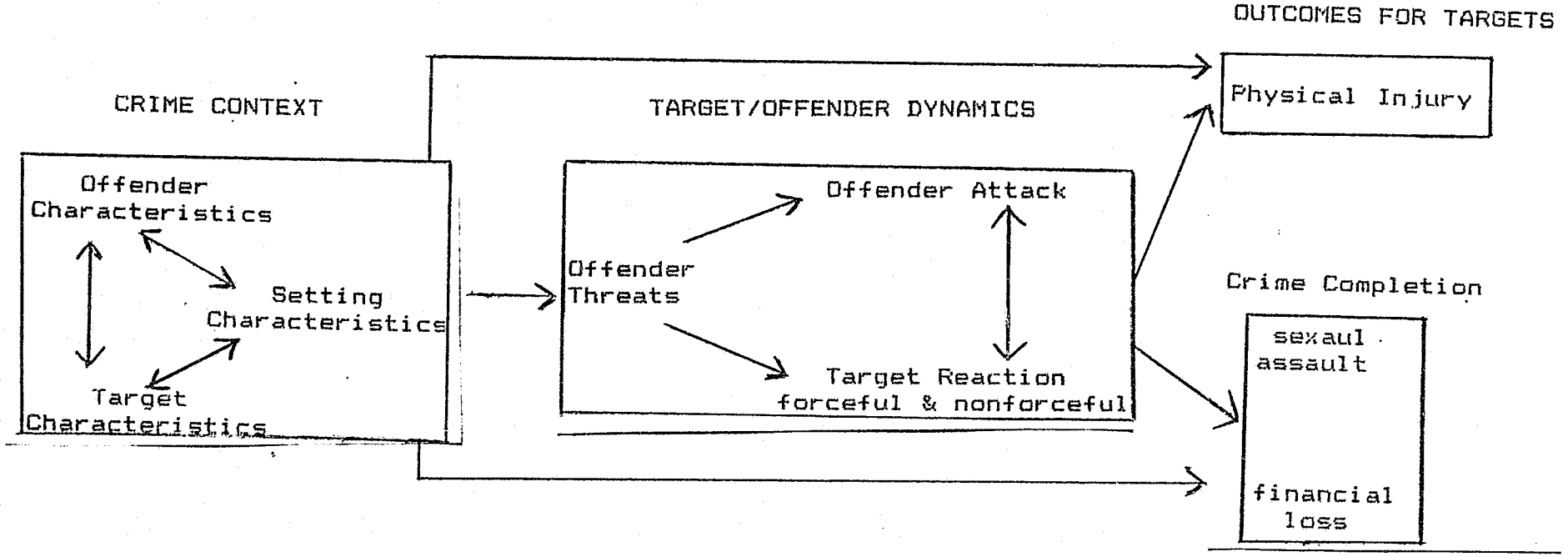

OUTCOMES FOR TARGETS
CRIME CONTEXT
TARGET/OFFENDER DYNAMICS
Physical Injury
Offender Characteristics
Setting Characteristics
Target Characteristics
Offender Attack
Offender Threats
Target Reaction
forceful & nonforceful
Crime Completion
sexaul assault
financial loss

Figure 1). These factors appear to influence the probability of an attack actually occuring. Then the dynamics of target-offender interaction are examined with respect to each other (the center of Figure 1), and their influence on two outcomes of controntations (the right side). The relationship between resistance and attack is hypothesized to be the primary determinants of the crimes's completion and the risk of physical injury to the target.

In summary, the data suggest that non-forceful resistance (which includes yelling, trying to run away, reasoning with potential assailants, and attracting passers-by) may serve to avoid an actual physical attack, and may reduce the likelihood of injury and other losses even for those who are attacked. Forceful resistance (fighting back, either armed or unarmed) is related to physical attack and is consistently linked to higher risk of injury. However, targets who combine nonforceful and forceful resistance are more likely to suffer the consequences. Nonresistance seems to put targets at a high risk of crime completion,, but at an average or lower level of risk of physical injury. These relationships are strong, and this reports' conclusions are tentative only because of the ambiguous causal ordering of the actions and reactions described in the data. In the NCS, targets are asked what they did to protect themselves and how they were attacked or threatened by their assailant. It is not possible to determine if resistance came before, after, or during an attack or threat or even an injury. A target may be attacked because he or she seems to threaten the offender, or may fight back only in response to attack. Injury may be forestalled by nonviolent resistance, or resistance may be impossible because of a preemptive attack. One cannot choose among those alternatives using NCS data alone. However, these and other studies present hopeful evidence that evasive tactics by targets of personal crime may limit violence and injury, and the findings are substantial enough to recommend much greater attention to the time-sequencing of target and offender actions in future victimization studies.

The model and definitions reflect a somewhat simplified view of the nature of these events. Criminologists have attempted to categorize criminal violence on a continuum ranging from "instrumental" to "expressive" in character. Instrumental violence is goal-oriented, while expressive violence arises out of anger and frustration, mental illness, or drug and alcohol use. Analysts have assumed that most violence in robbery is instrumental, used by offenders to gain control of the situation and maximize their gains. However, there is evidence that some violent attack in the course of robbery may be an expressive act, reflecting the offender's anger or need to exert dominance, rather than simply being a goal-oriented tactic. (Cook, 1980; Conklin, 1972). When this is true, inflicting injury as well as stealing something could be viewed as goals of robbery. Likewise, some who have studied rape argue offenders often are more interested in

exercising power or control over women than they are in the sexual aspects of the crime (Brownmiller, 1975). To the extent this is true, the incidence of "other" violence and injury in rape or attempted rape cases is difficult to interpret on a "rational" basis. Even targets who offer no resistance might not avoid an injury other than sexual assault under such circumstances. Assault is predominately an expressive crime, and thus assumptions about "rational" patterns of action and reaction in such cases may not fit much of the data very well. In addition, it is likely that making a threat rather than actually carrying through on it frequently was the intent of offenders in incidents classified as "attempted assault." Questions of offender motivation must be glossed over in this analysis, however. The NCS gathers data on criminal incidents only from the target's point of view, and they are particularly unsuited for discerning the motives of offenders in incidents like those examined here involving strangers. It is probably safer to make assumptions about the rationality of target decisions in these cases, especially for rape and robbery, and because of the nature of the data the analyses presented below begin with straightforward action-reaction views of the behavior of both parties. With the NCS one can only draw simplified sketches of who did what and with what consequences, and this report will focus upon that overtly descriptive data.

CHAPTER 2

THE DATA AND METHODOLOGY

The data for this report are drawn from incident reports gathered via the National Crime Survey (NCS). The NCS questions a national sample of respondents each month, asking about the experiences they have had with crime. Those who report being targeted for victimization during the past six months complete a report on the incident. (For a detailed description of the NCS, see Garofalo and Hindelang, 1977.) Here we examine those reports for the period 1973-79. Because so few NCS respondents recall being a target of violent personal crime during the six months prior to the interview, it was necessary to aggregate together several years of data in order to explore those incidents in any detail.

While there were few significant trends in the data over that time period, the NCS questionnaire itself has changed over time, and some of these changes affect the data analyzed here. For example, the definition of "injury needing medical care" was expanded in mid-1978 by changing the questionnaire to include extremely minor cases (eg, needing a Bandaid). (For a detailed discussion of these changes, see Martin, 1982). This substantially increased the number of injury victims identified by the survey: in interviews conducted in 1978, 2.6 percent of robbery victims recalled injuries in this category, while in 1979 the comparable figure was 8.4 percent. In assault cases the 1978-79 shift was from 2 to 6 percent, again probably due to changes in the questionnaire. However, the level of injuries with more serious medical implications was unaffected. The multivariate analyses presented later will control for this change in the questionnaire wording.

The least frequently occurring crime analyzed here is rape. Whether or not other types of predation take place as well (such as robbery or further physical harm), incidents are classed as rapes if an apparent motive of the offender was sexual assault. Rape and attempted rape were identified in the NCS by responses to general questions about threats and attacks. Women who indicate they experienced such incidents are then asked if they were victims of rape or attempted rape. In the early years of the NCS males were technically qualified to be asked those rape followup questions, and in a few cases they indicated they had been involved in such incidents. Males are no longer asked these additional questions, and we consider here only sexual assaults directed against women. Of course, not all rape incidents are

(from the point of view of the offender) successful; in the NCS only about one half of them result in actual sexual assault. On other hand, about 16 percent of rape incidents also included an attempted or completed robbery and 18 percent lead to some other injury.

The most common crime examined here is assault. It often involves weapons and gang violence, and can result in serious injury. The incidents analyzed in this report include actual physical violence, attempted assault, and threats of harm which were not aimed at either the theft of property (robbery) or sexual assault (rape). They could include barroom brawls, threats on the street, attempts at mayhem in the bleachers at sports arenas, and gang fights. If reported to the police, they should all fall into their "aggravated assault" or "simple assault" classifications. Less than one half of the targets of assaults are physically attacked, and even fewer --about one quarter-- suffer any physical injury at all. There are many threatened assaults and other forms of intimidation which may promise injury or death but do not deliver.

The final type of crime considered here is robbery. The prime object of robbery is property or money. Thus a completed robbery need not include a physical attack or injury. A target might hope to avoid injury by giving in to a robber's demands. In rape, on the other hand, women who comply with a rapists' demands were by definition attacked and can only hope to avoid additional injury or death. In the NCS about 60 percent of robbery incidents result in property loss. The victim was injured in about 30 percent of all robbery cases, and in about 20 percent victims are both injured and have something of value stolen from them.

A major disadvantage of the NCS as a source of data on violent criminal incidents is that it does not include incidents resulting in death. Certainly, this is the most serious injury outcome of personal crime, and we probably underestimate the importance of more lethal weapons like guns and knives in the discussion that follows because the probabilty of a gun or knife attack resulting in death (and therefore being excluded from the NCS sample) is much higher than for other forms of physical attack (c.f., Block, 1977). However, based on the National Crime Survey, the approximately 6.2 million rapes, robberies and assaults which occur in the US each year (Bureau of Justice Statistics, 1982) far outnumber homicides. Between 1977 and 1979 there were about 20,044 homicides per year (Federal Bureau of Investigation, yearly). Homicides thus total about 0.3 percent of the violent crimes considered here. In 1979 homicides known to have occurred during a rape were 0.2 percent of NCS rapes (329 compared to 192,000), and murders arising out of robberies also totaled 0.2 percent of the NCS count (2162 compared to 1,116,000). The ratio of homicides to NCS cases in which there was an actual attack or an injury would be somewhat higher, of course, but the statistical

findings of this report would not change dramatically if homicides were measured by the NCS and included in the analysis.

This analysis includes only cases which involve strangers. Many domestic, school-yard, and acquaintance and related-party cases were thus excluded because crimes among acquaintances (1) have different origins, contexts, and outcomes than stranger crimes (Lentzner and DeBerry, 1980), and (2) they are incompletely measured in the NCS (c.f., Skogan, 1981; Sparks, 1981). The subset of incidents involving strangers --about 48 percent of the total for these three types of crime-- is a more reliably measured group of criminal offenses. Table 1 in the Appendix summarizes target-offender relationships in rape, assault, and robbery incidents uncovered by the NCS for 1973-79. The most extreme example of the exclusion of incidents is found among assault cases. Fifty nine percent of all incidents were excluded from this analysis because targets and offenders were not strangers. Most robberies, on the other hand, involved strangers, and only 28 percent of those incidents were excluded from the analysis. While fewer rapes than robberies involved strangers, these still represented a majority of cases. About 40 percent of rapes were excluded from the data because of relationships between the parties. Appendix Table 1 also describes the comparative frequency of stranger as opposed to nonstranger incidents among key population subgroups. In general, the targets of stranger violence were more likely to be males, whites, older persons, and the better-off. The exclusion of non-stranger incidents thus reduced the representation of blacks, the poor, youths, and women.

In addition, this analysis excludes incidents --almost exclusively assaults-- in which the targets were police officers and security guards. While some of these crimes may have involved them "off duty," it seems most were related to their line of work. For example, a detailed analysis of crimes against law enforcement personnel indicates many of them occurred so often that they could not be differentiated, probably reflecting their target's continuous involvement in on-duty violent encounters. Both the causes and the consequences of these incidents differ substantially from assaults upon "civilians," who ordinarily can expect to be free from this threat. "Series" victimizations of civilians were included here, but are counted only as one incident (see Skogan, 1981).

Finally, robberies of commercial establishments were excluded from the data by the Census Bureau, which counts commercial robberies separately. However, if employees were assaulted while on the job or robbed of their own possessions, the counting rule used by the Census Bureau includes them, and so does this report.

Excluding nonstranger and commercial robbery incidents, and those involving the police or security guards as targets, NCS interviews conducted between 1973 and 1979 identified a total of 13,866 actual or threatened personal crime. The data describe 9434 assaults, 3932 robberies, and 500 rapes. When weighted to reflect sampling and other issues, the total available for analysis changed somewhat; for assault the "effective" total of cases is 8871, for robbery it is 4087, and for rape 503.

None of the bivariate tabular analyses presented here report tests of significance, for the number of cases for robbery and assault (but not rape) is still quite large. Multivariate analyses of rape were guided by such tests, and they will be reported in appropriate sections of the report. The number of incidents examined here seem much smaller than incident totals which appear in official reports of the findings of the NCS. Those reports present population estimates of the total volume of crimes of various types. They indicate, for example, that there are about 192,000 rape victimizations in the US in 1979 (Bureau of Justice Statistics, 1982). These estimates are made by weighting upward the relatively small number of crime incidents actually uncovered each year by the survey. In addition, the survey data are weighted to reflect a variety of sampling factors and low response rates for certain population groups (such as young, black males). Incidents with more than one target are downweighted somewhat because they are more likely to be uncovered by the survey --there are more potential respondents available to tell those tales. In this report we have retained the components of the data case weights which correct them for sampling, nonresponse, and other considerations, but we have removed the component of the weight which balloons the count upward toward national totals. These are not required for examining relationships between factors of interest in the survey. Thus our survey "N's" approximate the actual number of cases reported to Census Bureau.

The empirical findings which make up the bulk of this report are documented in tables in an Appendix. The text may be read without extensive reference to those tables. Tables reporting the findings of multivariate analyses are presented in the body of the report. Occasional graphic displays are based upon some of the detailed information to be found in the appended materials.

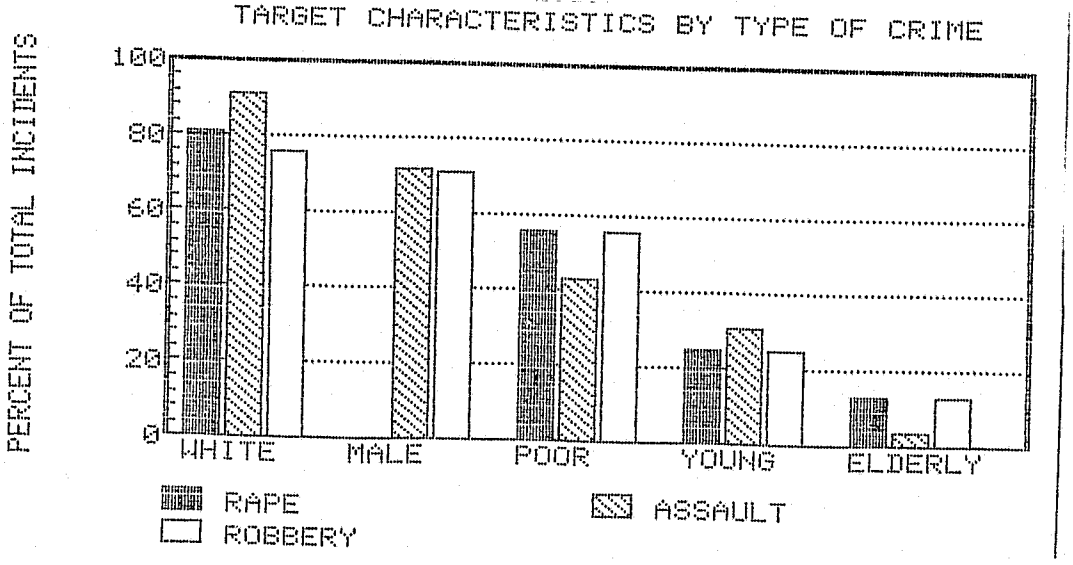
CHAPTER 3

PROFILES OF TARGETS AND OFFENDERS

While the pool of potential targets of stranger violence is very large, actual targets share a number of common attributes. They probably are selected on the basis of their availability, attractiveness, and some assessment of their defensive capacity vis-a-vis the potential offender's strengths and weaknesses (Van Dijk and Steinmetz, 1982).

Figure 2 (and Appendix Table 2) describes the characteristics of personal crime targets. At least three-quarters of the targets of these stranger crimes were white. In the years under study about 86 percent of the population of the US was white, and thus they were slightly underrepresented as targets of robbery (at 76 percent) and rape (81 percent), but overrepresented as targets of assault (91 percent). For assault, this discrepancy is related in part to differences between stranger and nonstranger incidents among blacks and whites. While rates of assault victimization for whites and blacks are virtually they differ in the proportion involving strangers. Among whites 43 percent of assaults are by strangers, but only 27 percent of assaults against blacks are by strangers. Thus, many more assaults against blacks are excluded from this analysis.

Figure 2



Twenty-five percent of the targets of robbery were young, between 12 and 19 years of age. For assault that figure was 31 percent, and for rape 35 percent. These proportions were considerably higher than in the population as a whole. The percentage of elderly persons (over 65) who were targets of robbery approximates their proportion in the population, but they were less frequently targets of rape and assault than their numbers would suggest.

Compared to the general population, targets of violent crimes also were from lower-income families. Again, these figures are affected by the omission of nonstranger crimes from the analysis. The proportion of assaults and rapes which were described as involving strangers increased with income.

In sum, the typical target of robbery or assault by a stranger was a low-income white male under 26 years of age; the typical target of stranger rape was white, and even younger.

Figure 3

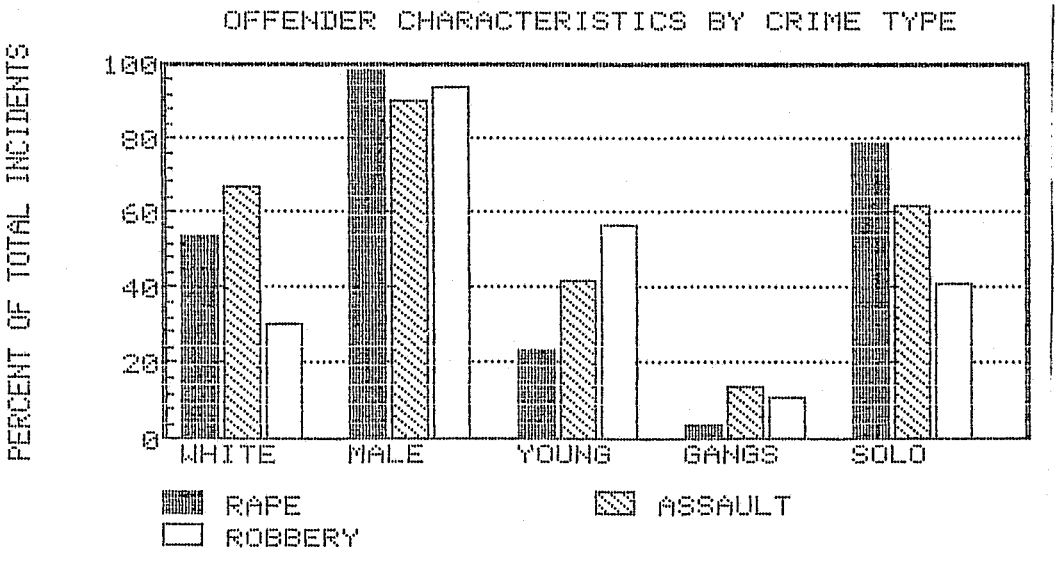


Figure 3 and Appendix Table 3 describe the race, sex, and age distribution of offenders, as recalled by their targets some months later. (When multiple offenders were involved, the "age of offenders" measure was based upon the youngest of them. Thus, members of "21 or older" gangs all were perceived to be at least that age.) A majority of assault (67 percent) and rape offenders (54 percent) were white. A majority of robbery offenders were black (70 percent). Rapists appeared older than other offenders; less than one-quarter were thought to be under 21 years of age, while close to half of assault and robbery offenders looked younger than that cut-off. Almost no rape offenders were believed

to be less than 15, while 5 percent of robbers were described as being that young. Note, however, that there were numerous "don't know" responses to this question, including 16 percent for assault. There is little to be said about female offenders in stranger violence, for the NCS reinforces what we already knew --they are not often involved. The few female offenders described in these incidents generally were participants in a group crime in which males also were at fault. In sum, robbery offenders were typically described as teenage black males, asssault offenders as teenage white males, and rape offenders were typically older white males.

Fully 51 percent of all robberies crossed racial lines, but only 35 percent of rape incidents and only 30 percent of assaults did so. Details on the distribution of these incidents by race are presented in Appendix Table 4. One effect of focusing upon stranger crime was to increase the apparent frequency of inter-racial crime. Targets and offenders who know one another were more likely to be of the same race. In 61 percent of all stranger rape incidents and 70 percent of all stranger assaults with white targets the offender also was white. However, 54 percent of white targets of robbery were accosted by blacks. Eighty-one percent of black rape targets were threatened by blacks, as were 86 percent of black robbery targets and 66 percent of black assault targets. Most stranger violent crimes were intraracial, but for white targets, robbery was predominately crossracial.

Perhaps the most dramatic change over time in NCS data during its first decade involves the race of assault offenders as described by their targets. Since 1973 there has been a decline in the proportion of assaults by strangers attributed to blacks; over this period the decrease has been a full 10 percentage points. This trend is much less apparent in UCR data on the characteristics of suspects for both stranger and nonstranger assaults. However, a similar trend can be seen in the racial distribution of suspects for homicide, which is not measured by the NCS. The proportion of black offenders in NCS stranger robberies is more fluctuating, but it also generally down. Both in the UCR and the NCS, the racial distribution of offenders in rape cases has not changed much over this period.

The number of offenders involved in these incidents differed among these three types of crime. While targets were generally alone when they were threatened, most robberies involved multiple offenders (59 percent), while rapes (79 percent) and assaults (62 percent) were more likely to be committed by a lone offender (see Appendix Table 3). Eleven percent of robberies, 14 percent of assaults, and 4 percent of rape incidents involved four or more offenders, the figure used here to define a "gang." Not surprisingly, the number of offenders in an incident is related to the number of targets --the two numbers rise together. Only 11

percent of assault cases with lone victims were perpetrated by gangs, but when three or more victims were involved that percentage rose to 27 percent. There are also typically more offenders involved in assaults when the targets were male. The large proportion of robberies with more than one offender was linked to the youthfulness of most robbers. Generally, as the age of offenders rose the proportion of gang incidents dropped.

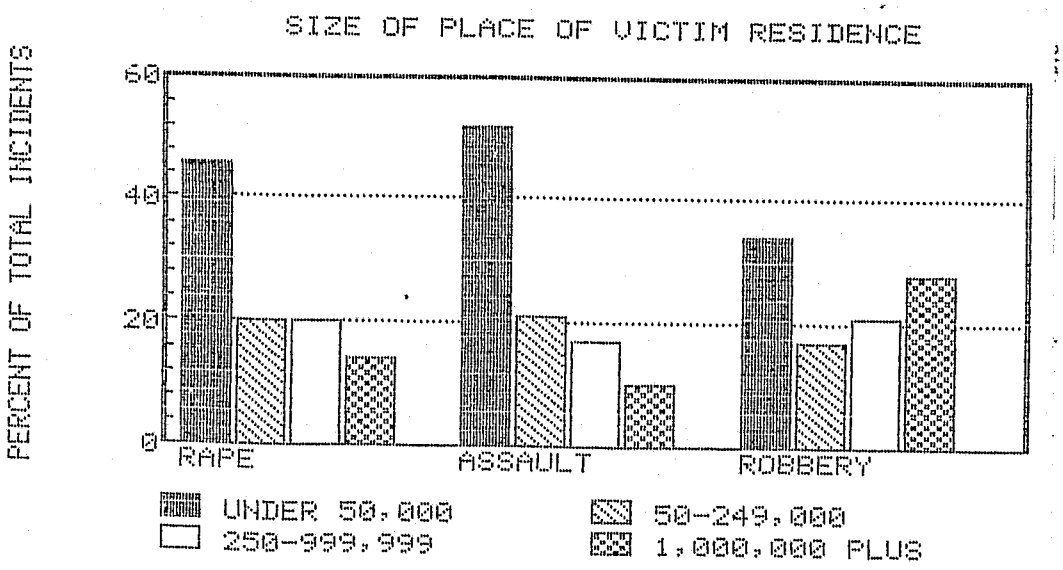
CHAPTER 4

SETTINGS OF INCIDENTS

4.1 CITY SIZE

The NCS gathers only a limited amount of data describing the location and conditions under which criminal incidents took place. Even information on the relationship between size of place and rates of victimization --long a staple of criminological research-- is limited by NCS procedures. The NCS gathers information only on the place of residence of victims, not on the place of occurrence of crimes. Especially in personal crimes (unlike most burglary), they may well have occurred elsewhere. In 1975, about 27 percent of the US population lived in big cities, those with populations above one-half million. But about 40 percent of NCS stranger robberies were reported by persons living in such places, a decided urban "tilt." Rape, on the other hand, was distributed in about the same fashion as the population, and assault was more distinctively a smaller-town affair. Fully 64 percent of the targets of stranger assault lived in places under 100,000 in size, and more than one-half in places under 50,000. Data on the distribution of personal incidents by size of place are presented in Figure 4.

Figure 4



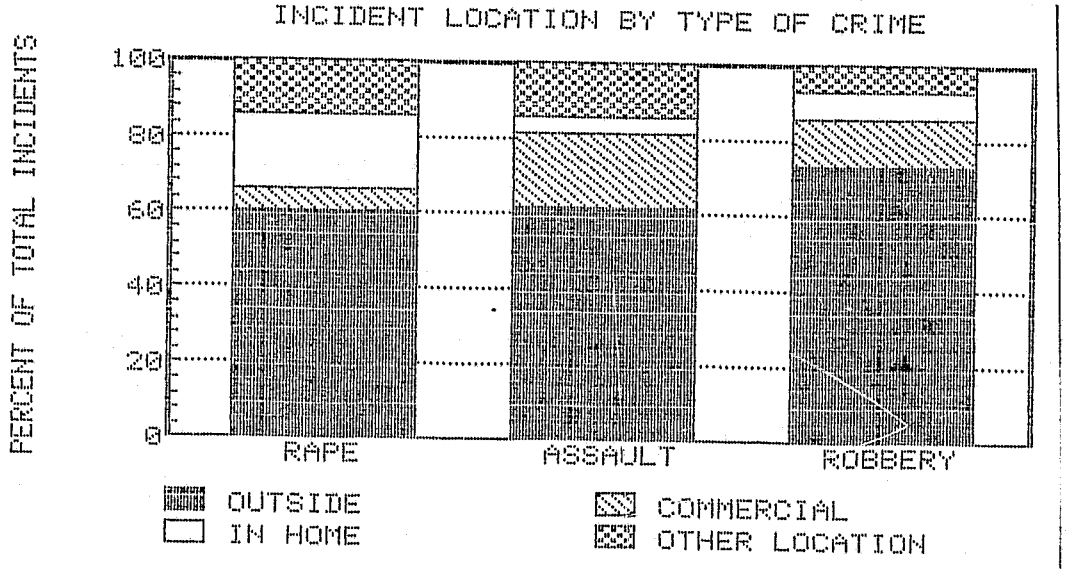
Size-of-place (of targets' residences) was not directly related to whether or not they were actually attacked, what they did in

response, or the consequences of victimization. However, personal crimes striking residents of larger cities were somewhat more likely to involve gangs, younger offenders, and the use of weapons --especially knives. Some of these relationships are detailed in Appendix Table 6. Targets who lived in big cities were a bit more likely to be elderly, and the proportion of assault victims who were female rose with city size. All these features of crimes were in turn related to interaction factors --resistance and attack-- and injury or loss This suggests an indirect rather than direct effect of size of place upon patterns of assaultive violence.

4.2 SPECIFIC LOCATIONS

Other specific contextual elements of crime measured by the NCS included the time of day and type of location in which they occurred. These are described in Figure 5. Most rape, assault, and robbery involving strangers took place at night (57-66 percent), and most (52-65 percent) were street crimes. (The focus on stranger incidents increases the latter proportion, for more nonstranger crimes take place in private locations.) As we shall see, time of occurrence was strongly related to the outcomes of rapes. A large proportion of stranger crimes were at least potentially visible to bystanders. A majority of them occurred in public, outdoor locations. The next most frequent location for assault and robbery was in commercial establishments. Few NCS stranger crimes take place in schools, only 3 percent. More rapes (20 percent) than robberies or assaults are described as taking place at home.

Figure 5



The personal characteristics of targets were consistently related to the time and location of incidents as well (Appendix Table 6), and may reflect behavior patterns which determine exposure to risk. For example, women were more likely to be targeted during the day (when 31 percent of assault victims were female) than at night (when 19 percent were women). Two-thirds of all male assault targets were accosted after dark. Female targets were overconcentrated among incidents which took place at home. These incidents also had the highest rate of weapon presence for rape and assault. A weapon was not likely to be present at incidents which occurred in schools or offices. Lone offenders most frequently were attacked in inside locations, especially commercial establishments, while gangs more often worked the streets.

CHAPTER 5

DYNAMIC ASPECTS OF ATTACK AND RESISTANCE

5.1 INTRODUCTION

This chapter examines the tactics of offenders and the actions of targets in potentially violent criminal incidents. The next chapter describes the outcomes of those encounters. First we describe the role of weapons and the frequency and distribution of physical attacks. Then we profile various forms of target resistance, and relate them to the presence of weapons and the likelihood of attack during the incident. As we shall see, it seems to be the interaction between target and offender during this very brief encounter which primarily shapes the outcome of crimes. However, the study of this interaction is limited both by the questions which are asked in the NCS and by their arrangement in the questionnaire. The most important limitation of the data is that respondents are not asked about the sequencing of actions during criminal incidents. We cannot tell if resistance followed attack or attack followed resistance. Thus, we cannot know if resistance inspired attack or thwarted it.

One scenario has been adopted by Wolfgang (1982) and many others who have analyzed victim resistance in police or victimization survey data. It presumes that actual violence on the part of offenders in robbery is a response to resistance on the part of victims. In this view, victims precipitate the attack. This scenario may be supported by our finding that nonviolent resistance is related to less frequent attack and less injury, while forcible resistance co-occurs more frequently with actual attacks and more serious injury. A "victim precipitation" scenario is hard to test using police incident reports, for they typically contain few reports of attempted or unsuccessful crimes which involved no physical injury. Those are less frequently reported to the police, and appear to be further discounted and discarded during their investigations (Block and Block, 1980).

Another scenario assumes resistance is a response to the offender's initial attack. If this is the case, then violent resistance may be the refuge of victims experiencing a serious physical attack, while nonforceful resistance --or no resistance at all-- may be the privilege of those not being pummelled about. In rapes described in the NCS, reports of forceful resistance and mixtures of forceful and nonforceful countermeasures by women were most common in completed rapes which also resulted in other injuries to the victim. However, targets who did not resist were

no less likely to be injured than those who nonforcefully resisted. This may indicate that forceful resistance is a measure of the potential rapist's intent to physical or sexually injure the victim.

Many violent crimes may commence with an attack. Feeney and Weir's (1973) study of robbery reports from police files in Oakland found that in about one-half of all cases the victim was first attacked "without forewarning," before he or she knew what was going on and could take any stance at all. Not surprisingly, this was most frequent when offenders were unarmed. "... [T]he unarmed robbers apparently felt the need to strike first and to use the element of surprise in carrying out their robberies" (p. 70). In their study, fully 56 percent of all unarmed robberies began with a forceful attack; the comparable figure for armed robbery was 8.5 percent. While this survey data cannot describe such temporal ordering, it is consistent with this finding. Fully 70 percent of all unarmed robberies in the NCS involved an actual attack, as compared to 26 percent of those with a firearm (see Appendix Table 9).

A third scenario describing victim-offender interaction is that under some circumstances offender actions may not be related at all to what victims do. Cook (1980) reports that two-thirds of robbery murders in Miami and Atlanta police files seemed unprovoked by victim resistance. Some homicides could be attributed to attempts to control victim resistance, and others to keep crimes from being reported to the police. However, the bulk of robbery killings in those two cities seemed attributable to "viciousness." Block and Block (1980), on the other hand, could not assess such factors in their study of Chicago's police files because little was recorded about resistance in one-half of the reports on deaths occurring during robberies in that city. This may be a more common situation.

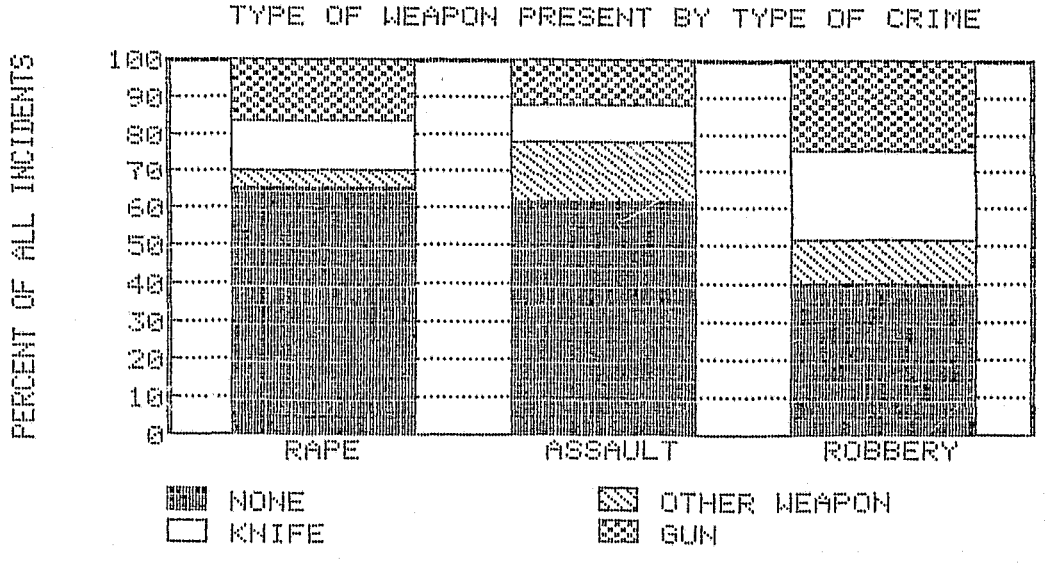
The research reported here assumes that all of these scenarios describe at least some criminal incidents, and that many incidents are even more complex. A recent detailed study of victim-offender interactions in homicide and serious assault cases found they begin with verbal conflict, escalate to threats and evasive actions, and end with physical attacks which often were retaliatory or even defensive in character. At least some "resistance" by victims was in defense of their honor rather than their well-being. In that study, the aggressiveness of the eventual victim played an important role in explaining the seriousness of the final outcome (Felson and Steadman, 1983). This finding reflects the concerns of early students of victimization. Both Von Hentig (1948) and Mendelsohn (1963) were interested in the role of victims in precipitating their own plight. Mendelsohn's typology of victim types ranged from those who were guiltless to those who were more culpable than the offender (Schafer, 1977). This raises the issue of who is a

"target" and who is classed as the "offender" in NCS assault cases. Assault targets in our data were aggrieved parties to a conflict of some sort, but interviews with their "assailants" might find that they identified themselves as aggrieved parties (or victims) as well.

5.2 WEAPONS AND CRIME

All respondents in the NCS were asked whether or not their assailant displayed a weapon. The NCS asks about the presence of weapons rather than their use, respecting the important role of guns and knives as a means of threatening and intimidating targets. Whether someone is shot or knifed during an incident is determined during a later sequence of questions regarding injury. In most assaults and rapes no weapon was present. For example, twelve percent of assaults involved guns, 10 percent knives, and 16 percent "other" weapons, including clubs, rocks, and other items of convenience. About 40 percent of all robbery incidents were without a weapon, as were 65 percent of all rapes. Guns are most frequently present in robbery (25 percent). Details on the distribution of weapons are presented in Figure 6. Gun threats are far more likely in robbery than in other stranger violence. Robbers accounted for 28 percent of all stranger violence, but represented 44 percent of all incidents in which a gun was present.

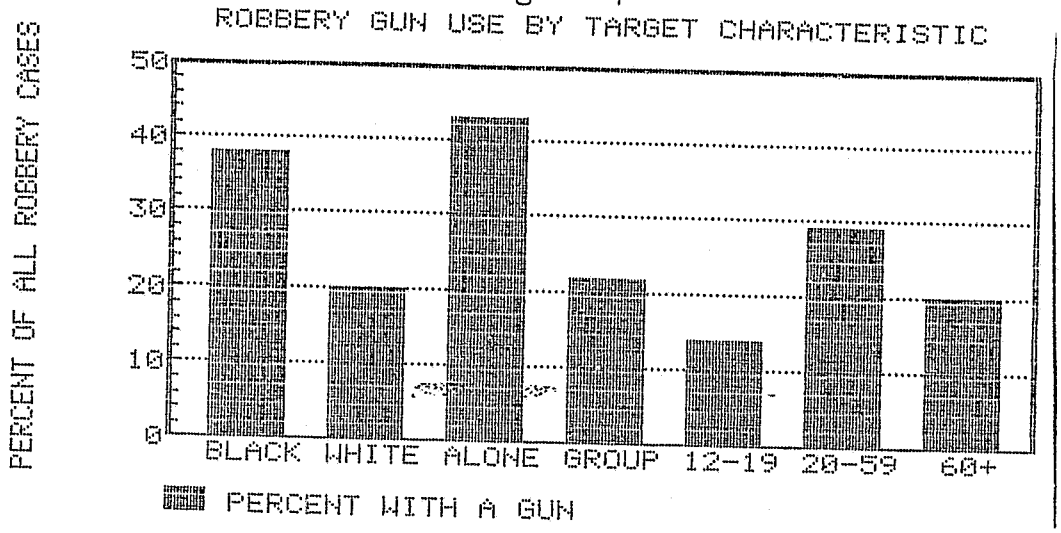
Figure 6



The use of weapons in robbery may be related to the apparent defensive capacity of potential targets. Targets who might be perceived as threatening to offenders (for example young men are probably more dangerous than older women) are more likely to be threatened with a gun. As Appendix Table 7 indicates, it is

women, the elderly, and the very young who were least likely to be threatened by a gun. The presence of a weapon --and especially a gun-- was also much more common when there were multiple targets. Many of these differences are illustrated in Figure 7.

Figure 7



The data presented in Appendix Table 7 also suggests more "difficult to manage" targets --groups, vigorous adults, and males--are likely to be confronted by more dangerous threats (indicated by the number of offenders or their firepower) (see Skogan, 1978; Cook, 1976). The "hardness" of the potential target seems linked to the effort which was expended to threaten it. Whites were much less likely than blacks (20 percent, as compared to 38 percent) to be confronted with a gun during a robbery, and differences of the same magnitude are to be found in rape and assault cases. This racial difference in weapon threat reflects the attributes of targets rather than offenders. Black robbers confronting black targets were more likely to threaten their targets with a gun (33 percent) than black robbers confronting whites (19 percent), and this percentage was only slightly larger than that for white offenders and targets (16 percent). Older robbers also were more likely to threaten their targets with guns.

The rapist's choice of a threat was less strongly related to characteristics of his target, probably because there was less variation in age --most rape victims are young, all are women, and most are alone when they are confronted. However, potential rapists confronting black women were much more likely to display a gun than were those approaching white women (36 percent and 10 percent, respectively). Black offenders in rape cases were more likely than whites to employ a gun, while white offenders were usually (73 percent) unarmed.

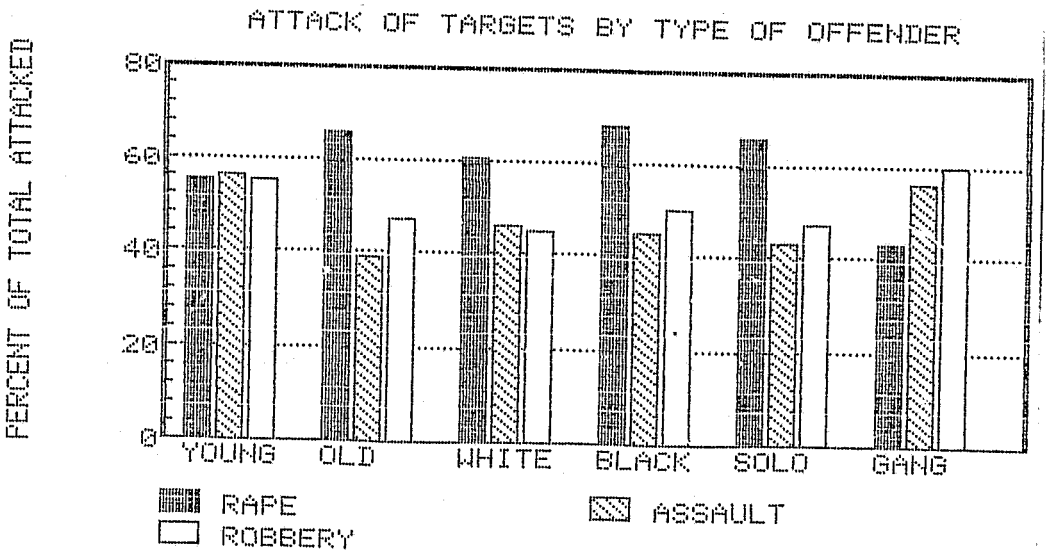
Fortunately, even when weapons were present they were not often (nonfatally) used. Due in part to the small percentage of crimes in which a gun or knife was present, the likelihood of injury from these weapons was fairly low. Someone was (nonfatally) shot in about 3 percent of these personal crimes. A knife was used injuriously in 4 percent of robberies and in 1 percent of rapes. Not one of our sample of 500 women was shot during a rape incident.

5.3 ATTACK BY AN OFFENDER

While relatively few targets of personal crimes were shot or knifed, many more were physically attacked. About 52 percent of robbery targets, 64 percent of rape targets, and 46 percent of those involved in assault incidents are attacked in some way. Attack was in turn related to both target action and the eventual outcome of personal crimes. As there cannot be an injury in these cases without a physical attack, the question of who was or was not attacked was very critical, and has a number of analytic implications. Physical attack is an important intermediate step to injury.

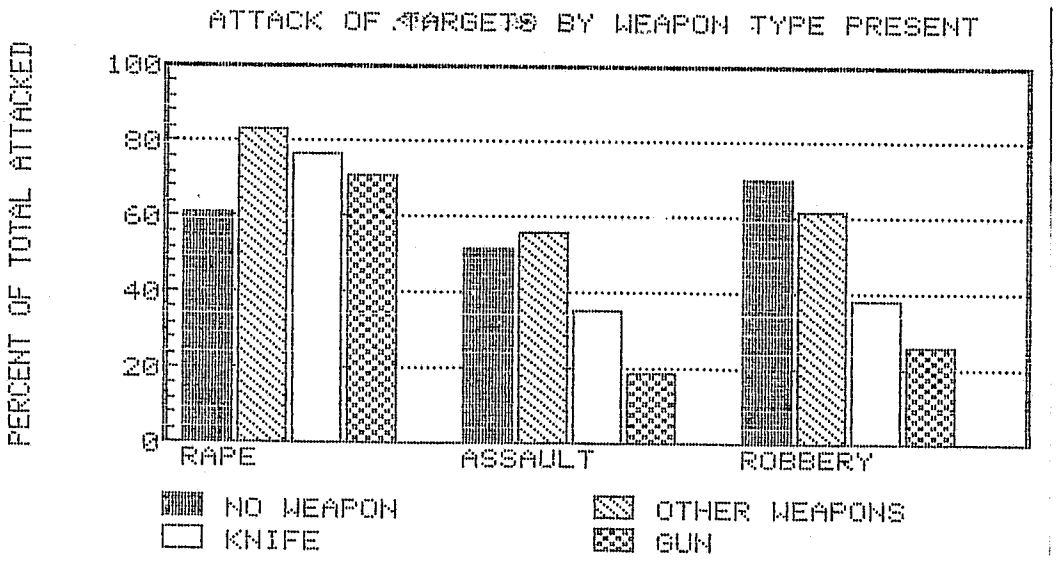
Appendix Table 8 describes patterns of attack in detail. Most of those who were physically attacked report they were hit, slapped, knocked down, grabbed, held, or tripped. Fewer indicate they were struck with an object, shot at, or attacked with a knife. These serious attacks happened most frequently in robberies (13 percent).

Figure 8



Offender characteristics, how they were armed and their number, and the potential visibility of incidents to bystanders, all were related to the likelihood the targets of personal crimes being attacked. Figure 8 (and Appendix Table 9) analyzes some of these factors in detail. Attacks by strangers in assault cases generally were more prevalent when the assailants were younger (perceived to be under 21) rather than older, and either unarmed or armed with such weapons of convenience as clubs, bottles, and rocks. As the number of robbery and assault offenders present increased, so did the probability of attack. Interestingly, the opposite relationships generally were true in rape --see below. Gangs were less likely to use knives or guns, and when three or four offenders were involved together in an assault they were usually described as young.

Figure 9



The likelihood of physical attack was lower when deadly weapons were present. This is illustrated in Figure 9 and Appendix Table 9. Only 19 percent of the assault cases in which a gun was present involved an actual attack, as compared to 52 percent of incidents with no weapon present and 56 percent of those with "other" weapons on the scene. Thirty-eight percent of knife assaults included an actual attack. Targets of robbery were actually attacked in 26 percent of the cases in which a gun was present and in 38 percent of those in which offenders had a knife. However, targets were physically attacked in 70 percent of robberies without a weapon. Consistent with Feeney and Weir's Oakland study, physical assaults were typical in weaponless robberies. However, this cannot be taken as clear evidence of unprovoked offender aggressiveness, for as demonstrated below there was a strong relationship between the presence of a weapon

and target resistance. A gun is such an efficient and potentially deadly threat that few resisted it. Therefore, robbers with guns may be less frequently required to attack their targets to gain compliance with their demands.

The relationship between these offender, target, and incident characteristics was different in rape incidents. Actual attack is definitionally an element of completed rape. Attack was more frequent by older offenders, lone predators, and when the attackers were armed. These all are factors which are related to a completed rather than attempted sexual assault. Actual attack is more common in rape (64 percent) than in robbery (about 52 percent). The probability of attack by a rapist brandishing a gun (71 percent), knife (77 percent), or other weapon (83 percent) was higher than for rapists without a weapon at all (61 percent), as shown in Figure 9. And with a weapon they were much more likely to be successful.

In addition, several factors which reflect the visibility of incidents to potential witnesses also were related to attack. The relationships are sometimes counterintuitive, however. For assault and robbery, more visible offenses were those which most frequently involve actual attack. Assaults which occurred "outside" and those in which people other than targets and offenders were reported to be nearby were those which more frequently included an attack. (Some of the latter may be barroom brawls.) Rapes which occurred inside more often involved an attack, for targets there were least likely to resist and rape incidents there were most likely to be completed. Nighttime assaults and rape incidents were also more often involved an attack, and those were presumably less visible to nonparticipants.

Two remaining features of stranger crimes which were related to the likelihood of actual attack were the age and the number of targets of the incident. In assault (but not rape or robbery) younger people were more frequently attacked; in robbery, it was targets who were alone. (There were too few rape victims accompanied by others to tell.) Two other important target attributes, sex and race, were not strongly related to the likelihood of physical violence. And, although a substantial, proportion of these assaults were interracial, the inter-racial as opposed to intra-racial character of the incidents played virtually no role in determining the likelihood of actual attack. It was bands of young, lightly armed males roving in fairly public places, and confronting other young males --often not alone-- who were similar to themselves, who were most likely to actually attack their targets in assault cases.

5.4 TARGET RESISTANCE

One important characteristic of these confrontations was the actions which the targets took (or did not take) to protect themselves. Although the temporal ordering of actions by targets and offenders is ambiguous in the NCS questionnaire, there were clear patterns of target and offender actions, and these were related to the incidents' eventual outcomes.

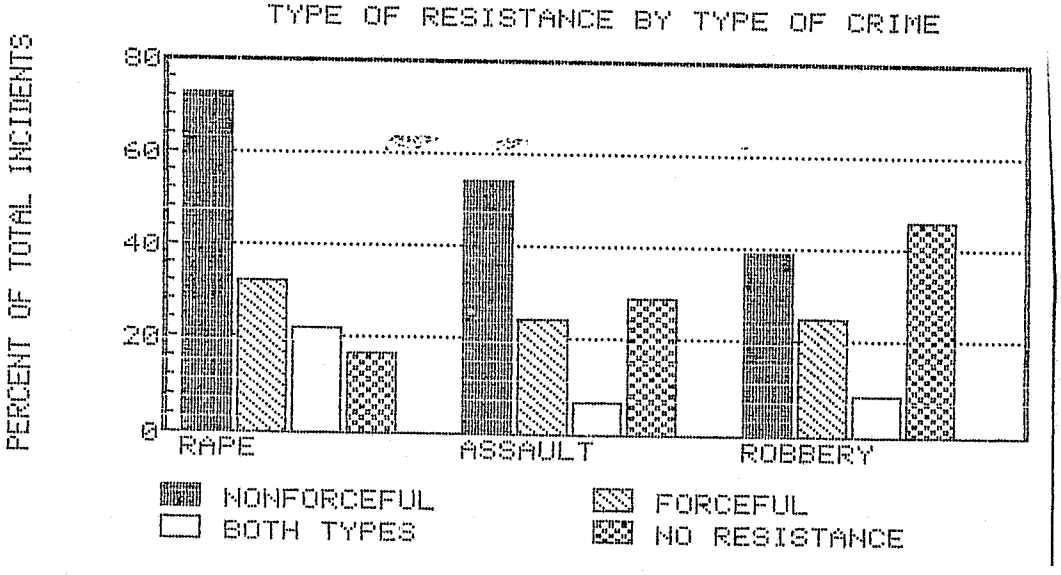
Self-reports by targets of crime interviewed between 1973 and 1979 indicate about 67 percent did something in their own defense. The NCS questionnaire allowed them to describe adopting any of five different tactics. About 16 percent of all targets (25 percent of those doing anything at all) took two or more actions. One group of targets, about 25 percent of the total, took one or two forceful tactics. Twenty-four percent report they hit, scratched, or otherwise physically resisted, and 2 percent indicated they used or brandished a weapon of their own. Another (slightly overlapping) group of targets recalled nonforcefully resisting. Fifty percent of all incidents fell into this category. Overall, 24 percent reported they "ran away" or "left the scene," 14 percent "reasoned" or "argued" with the offender or even threatened him, 12 percent screamed, yelled, or otherwise tried to attract the attention of others or scare the attacker away, and 10 percent did "other" things. This totals more than the number of resisters because a fair number of them reported taking more than one nonforceful action.

Of course, people can take both forceful and nonforceful measures, and 9 percent said they did. This combination usually coincides with bad consequences for targets, as we shall see below.

This forceful-nonforceful distinction parallels Block's earlier (1977) typology of protective behavior: (a) resistance which physically threatens the offender, (b) resistance which poses no threat to the offender, and (c) nonresistance. It is similar to distinctions made in earlier studies of both victimization data and police records. Hindelang, et al. (1978) report that for selected cities forceful resistance was strongly related to injury. In Felson and Steadman's (1983) study of official records, victims who were reported to have acted forcefully were more likely to be killed, especially if they also displayed a weapon of their own. This may be because such vigorous resistance provokes further or more concerted attacks, or it may be a defensive reaction on the part of seriously threatened victims. Whatever its dynamic, however, victim action and reaction seems to be closely linked to the likelihood of actual attack and the outcomes of personal crimes.

The proportion of crime targets in the NCS falling into each of these categories of resistance, by type of crime, is illustrated in Figure 10 and detailed in Appendix Table 10. About one-quarter of all assault and robbery targets reported taking only forceful measures in their own defense. More rape victims resisted only forcefully (32 percent), and an additional 22 percent (also the highest) offered both nonforceful and forceful countermeasures. Rape victims also offered the most purely nonforceful resistance (73 percent), while the figures were lower for assault (54 percent) and robbery (39 percent).

Figure 10



5.4.1 Resistance in Rape

A woman's decision to resist a rapist was also related to the location of the incident. As Table 12 indicates, women who were confronted at home --or in inside locations generally-- were less likely to resist than were other women. Both the likelihood of flight and of third-party intervention were probably lower during incidents in the home than in other places (Table 12).

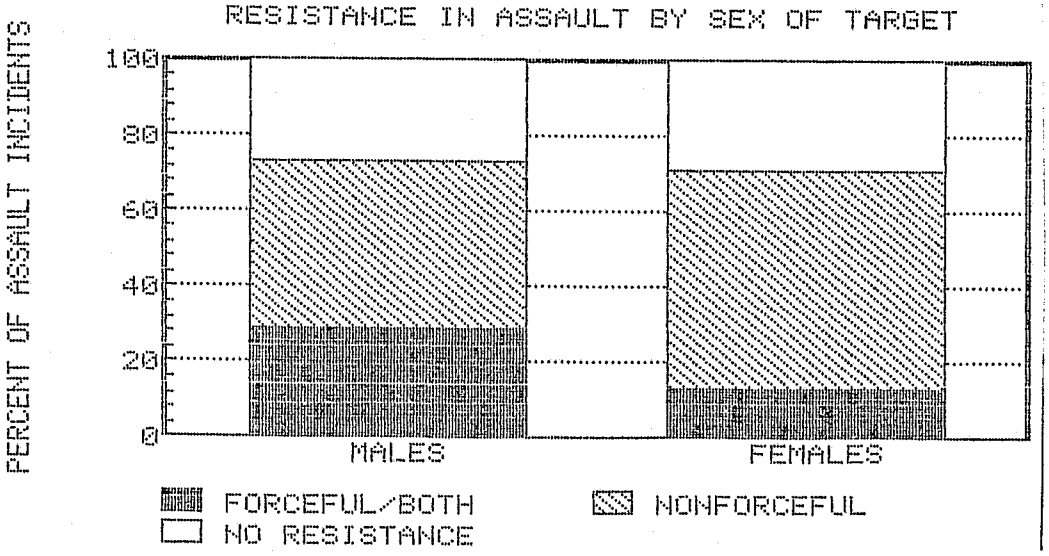
In cases with multiple offenders, there was typically little forceful resistance, and even nonforceful resistance was not frequent. But these cases were most often described as attempted rather than completed sexual assaults, despite the apparent advantage in numbers enjoyed by the perpetrators. We can only speculate that intimidation, rather than actual assault, was the primary motive in many of these cases.

Black women were less likely to resist a rapist (71 percent report doing so) than were white women (85 percent). Part, but not all, of this difference was related to the far greater likelihood that a black woman will be confronted with a gun. In rape, the presence of a gun on the scene seemed to reduce resistance from 81 percent to 63 percent. However, regardless of the offender's choice of a weapon, black women were less likely to resist, but those who did were more likely to resist forcefully.

5.4.2 Resistance in Assault

In assaults, forceful resisters were more likely to be young males, accosted at night while others were nearby. (Detailed breakdowns are presented in Appendix Table 12.) Older victims, and particularly the elderly (who were defined here as persons 60 years of age and older), offered fewer forcible countermeasures. (The same was true for central cities: see Hochstedler, 1981). Men and women were equally likely to resist, but as Figure 11 illustrates, the mix of forms of resistance was different. Males were twice as likely (29 to 13 percent) to resist forcibly.

Figure 11



The presence of a gun in assault cases seemed to discourage forceful resistance, but knives or other less lethal weapons were linked to greater resistance. In assault cases 32 percent of those confronted with a knife or less lethal weapon reported "hitting or kicking" their attacker, but if a gun was present forceful resistance was reported by only 11 percent. The most frequent form of resistance by those confronted with a gun was to try to run away. Forceful resistance was more common when lone offenders were involved, when the incident took place in inside

rather than outside locations, and among residents of smaller towns.

Nonforceful resistance from assault, on the other hand, was most typical of white, adult females. As Figure 11 illustrates, women offered this form of resistance in 58 percent of assault cases, while the comparable figure for males was 44 percent. Nonforceful resistance in assault cases was more frequent in outside locations, during the day, and when other targets also were involved --in short, when the potential for intervention by others should have been highest. Assaults which took place at home (which would be the least visible to nonparticipants) involved the least resistance of any form. Interestingly, efforts at nonforceful self protection were more likely than average when deadly weapons, and particularly guns, are involved. In the face of a gun threat, targets of assault reasoned with, yelled at, or attempted to evade their attacker, but they did not try to fight back.

5.4.3 Resistance in Robbery

The probability that targets of robbery would resist was linked to their age and sex, and the presence of a firearm. From those in their twenties to old age, the percentage resisting declined steadily, from 63 percent among those in their teens to 32 percent among those 60 and older. Of those who did resist, the percentage who resisted forcefully declined with age from 51 percent among targets in their twenties to 29 percent of those over seventy.

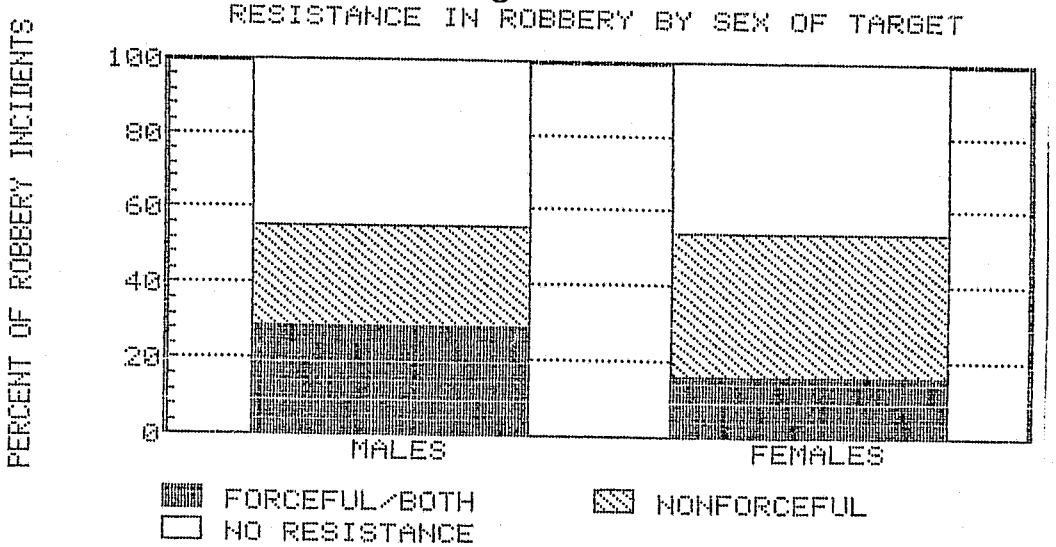
As indicated in Appendix Table 12, blacks were less likely to resist in these personal crimes than were whites. In robberies about 58 percent of blacks offered no resistance, as compared to 42 percent of whites. However, blacks were more likely than whites to be robbed with a gun, which forestalls resistance of all kinds. Only 33 percent of all robbery targets faced with a gun report taking any protective action, and two-thirds of that was nonforceful in character. For those faced with a kinfe, 55 percent resisted, more than one-half forcefully. There was resistance reported by 69 percent of those who spotted some other type of weapon, weapon, and by 65 percent of those involved in strong-armed robberies. Holding constant the offender's weapon, blacks were only slightly less likely to resist than were whites.

These rates of resistance were higher than those reported in Wolfgang's (1982) study of crimes involving members of his 1958 Philadelphia birth cohort, which was based upon police records. He found knives were most effective at forestalling resistance in robbery, while this analysis clearly identifies guns. This probably was attributable to differences between the NCS and official records. The presence of a gun is independently related to the chances an incident will be reported to the police even if

it was unsuccessful (Skogan, 1976). In general, however, few attempted robberies were recorded by the police (Block and Block, 1980). Thus police files probably contain more reports of attempted robberies in which a gun was present than other types of attempted robbery, leading the analyst to conclude that guns do not forestall resistance. It seems more likely that fewer people were likely to resist a gun threat.

While women were no less likely than men to resist a robber's attack, they offer quite a different mix of resistance. This is illustrated in Figure 12. As in assault, about the same proportion of males and females resisted (55 to 54 percent). However, women were more likely than men to report resisting nonforcefully (38 to 26 percent). This relationship was strongest in robberies in which the target is physically attacked. Fifty-one percent of women who resist a physical attack use nonforceful tactics in this situation; 34 percent of men resist nonforcefully when physically attacked, but 38 percent resisted forcefully.

Figure 12
RESISTANCE IN ROBBERY BY SEX OF TARGET

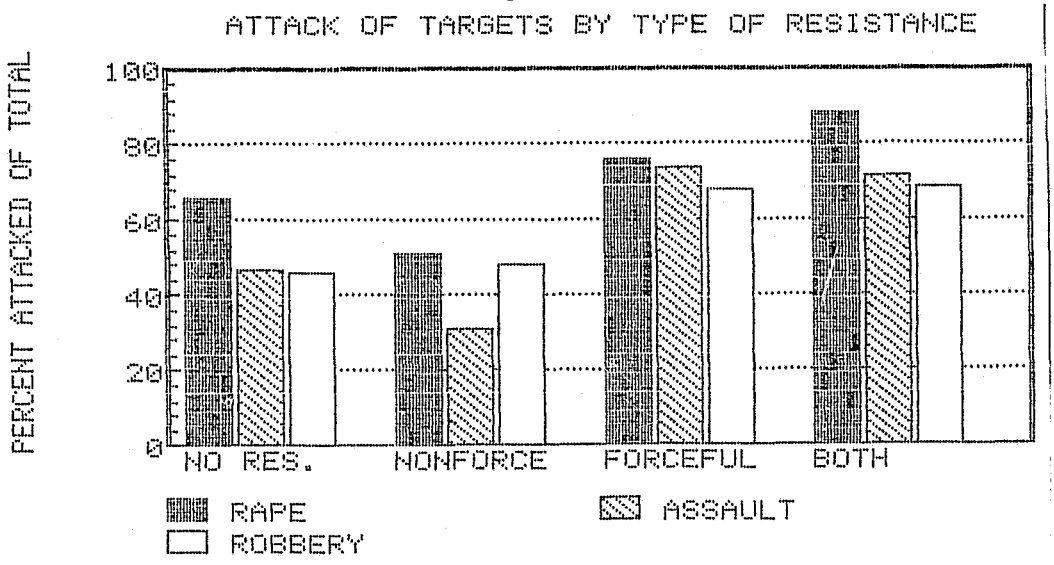


5.5 TARGET RESISTANCE AND OFFENDER ATTACK

The likelihood of actual attack faced by the targets of personal crime is clearly related to the types of resistance they offer: their risk of attack was below average in cases in which nonforceful resistance was offered; actual attacks were more frequent when forceful resistance was encountered; offering both forceful and nonforce ful countermeasures was also linked to somewhat higher risk of attack; doing nothing at all put targets at an average level of risk, within a few percentage points of those who resisted in any way. Again, we do not know the ordering of target or offender actions in time, and some resisters may be

reacting to what offenders did, while others may be anticipating or perhaps stimulating it. For this reason, Appendix Table 11 examines the relationship between those factors in two ways. The first was to present resistance as an antecedent to attack ("the percentage of forcible resisters who were attacked"); the second was to present resistance as a consequence of attack ("the percentage of those who were attacked who resisted forcefully"). Figure 13 takes only the first approach. Overall, nonforceful resistance was linked to an equal or lower probability of attack than no resistance, for all three crimes. Forceful, and especially the use of both forceful and nonforceful resistance in combination, was linked to a higher likelihood of attack. While the NCS does not allow analyses of the sequencing of events during crime incidents, it may be that victims who employed multiple forms of resistance were already injured or had been physically attacked.

Figure 13



In the case of rape, few women forcefully resisted when confronted unless they were actually attacked. The high level of resistance to rape reported above was linked to the fact that potential rape victims were the most likely of those examined here to actually be attacked. As Appendix Table 12 indicates, 15 percent of women forcefully resisted a verbal threat, but the total rises to 43 percent among those who were attacked. Nonforceful resistance was predominant among women who were only threatened; in that instance, 68 percent resisted nonforcefully. Among those who were attacked, 40 percent resisted nonforcefully. Almost exactly the same proportion of women resist who were attacked and not attacked, but the forceful-nonforceful mix of those actions changes dramatically.

As Figure 13 indicates, resisting nonforcefully was linked to a lower likelihood of actually being attacked in assault incidents. As we have seen above, those who did nothing were attacked in 47 percent of incidents, while those who resisted nonforcibly were attacked only 31 percent of the time. As many targets of assault did offer some nonviolent resistance (54 percent), actual attacks were less frequent than threats or attempted assaults.

On the other hand, forceful resistance was strongly related to a higher likelihood of attack in assault cases. Thirty-four percent of assault targets who did not respond violently to their predicament were attacked, but 73 percent of those who did so were actually assaulted.

The relation between forceful attack and forceful resistance was clearest in rape, but it also was present in robbery incidents. Thirty-two percent of robbery targets who were forcefully attacked also forcefully resisted; among robbery targets who were only threatened, 17 percent forcefully resisted. Once attacked, people may feel there was little to lose by forcible resistance.

5.6 DETERMINANTS OF ATTACK AND RESISTANCE

Thus far this report has described the targets and offenders involved in stranger violence, the setting of those crimes, the offender's mode of attack, and resistance on the part of their targets. Generally the report has analyzed the relationship between no more than two factors at a time. This approach is limited, for there are many interrelationships between the independent variables. For example, younger offenders were more likely than older ones to approach their targets in groups; targets and offenders tended to be the same age; offender race and target race, and weapon use were complexly related. These complex interrelationships require that many variables be analyzed at the same time in order to untangle the unique contribution that target-offender interaction --the pattern of attack and resistance documented here-- made in determining the outcomes of these crimes.

In order to analyze the relationship between the outcomes of these incidents (physical injury and crime crime completion) and all of those explanatory factors we employ blocked, hierarchical multiple regression. This section analyzes the precursors to physical attack and resistance; later ones extend the analysis to include the consequences of these crimes.

5.6.1 Methods

Multiple regression is a technique for assessing the extent to which a dependent the variable (here measures of the various outcomes) covaries with several independent variables, here representing incident contexts and dynamics, when all of those explanatory dependent variables are examined together. Multiple regression itself cannot determine what is an outcome; that is a conceptual decision and argument based upon logic, theory, and a body of research, one which in this case cannot be verified by the NCS. This analysis follows the model sketched in Figure 1, using techniques which are described in detail in a methodological appendix to the report. Measures of the various concepts identified in Figure 1 are entered as blocks (the hierarchy) into the analysis. Each is entered taking into account all of the other blocks, to identify the unique contribution it makes to the statistical prediction of the dependent (outcome) variable. This leaves some of the overall explained variation unaccounted for; that is contributed by interrelated components of the independent variables (their "multicollinearity") which one cannot fairly assign to any of the blocks (see Kerlinger and Pedhazur, 1973). The last block in each analysis includes indicators of offender and target actions at the scene of the crime. The coefficients for this block indicate the unique contribution of target-offender interaction in explaining the pattern of injury and loss in these stranger crimes. This can be seen in two ways --by the percentage of the explained variance (R2) accounted for by the block of interaction indicators, and by the coefficients describing the relative impact of each individual indicator upon the dependent variable. These blocks and indicators are:

General Context
- year of incident
- code for 1978-79 injury measure change (see above)
- residence in a city larger than 250,000

Offender Characteristics
- race -black
- multiple offenders
- offender age category

Target Characteristics
- sex -male
- race -black
- teenager
- elderly
- victim with others
- interracial

Crime Setting
- crime at night

crime in home
crime on the street

Type of Weapon
gun
knife
other wepon

Interaction
forcible resistance
nonforceful resistance
attack on target (in later analyses)

Tables 1, 2, and 3 examine rape, robbery, and assault incidents separately, reporting the impact of each of the factors above upon the distribution of attack, forceful resistance, and nonforceful resistance. The tables report three kinds of information: standardized regression coefficients (beta weights which indicate the relative impact of each measure upon the dependent variable), the total explained variance (R2), and the percentage of the explained variance attributable to each block of variables. For example, Table 1 indicates that these independent variables accounted for almost 20 percent of the variance in attack likelihood for rape; the "setting" and "interaction" blocks of variables in Table 1 accounted for the lions share (over 60 percent) of that; in the setting cluster, night-time incidents were more likely (controlling for everything else) to lead to attacks, and in the interaction block offering forcible resistance was positively related to risk of attack. The positive signs for night- time setting and forcible resistance indicate they were both independently related to higher risk of attack. Because tests of significance (reporting the probability that a relationship could occur by chance) are strongly related to sample size, tests of the significance of individual regression cofficients are presented only for rape incidents. The number of cases available for analyzing other types of crimes is so large that even small relationships are statistically significant. A more "substantive" test of significance is most useful for them--in this case, only coefficients larger than about .08 in absolute magnitude or blocks of indicators explaining 10 percent of the variance will be taken seriously.

5.6.2 Determinants of Attack

Table 1 presents all of these analyses of the determinants of attack. Of the variable blocks, general context and almost all target characteristics were unrelated to the likelihood of attack. Setting was a powerful correlate of attack in rape incidents; as indicated above, incidents which took place on the street were less likely than others to involve attack, while those in homes and at night were more likely to. As in the bivariate analyses, robberies and assaults involving a gun were less likely than

others to lead to an actual attack. In rape cases, the presence of any weapon was linked to a higher likelihood of attack, and black offenders were more likely to actually attack their targets.

A few conclusions regarding factors in the interaction block which were based upon the bivariate analyses would be changed on the basis of this tabulation. Being attacked remains positively related to forcible resistance, net of all for other factors included in the multivariate analysis. However, controlling for other factors washed out the apparent advantage of nonforceful resistance for avoiding attack in rape incidents. In the bivariate case this advantage appeared to be about 15 percentage points over offering no resistance at all, but in Table 1 the coefficient for nonforceful resistance is quite small. The same is true for robbery, which in the bivariate case looked slightly worse to nonforcefully resist. In assaults, nonforceful resistance remained clearly tied to a reduced risk of attack, as earlier bivariate analysis suggested. Overall, between 14 and 20 percent of the variance in attack was accounted for by the variables in this model.

5.6.3 Forceful and Nonforceful Resistance

The distribution of both forceful and nonforceful resistance is strongly related to that for the outcomes of these stranger crimes. Tables 2 and 3 examine the correlates of forceful and nonforceful resistance, and in keeping with our uncertainly about their causal ordering include an indicator of attack as an independent variable.

As documented in Table 2, targets of all three types of crime who were threatened with a gun were less likely to forcefully resist. In rape cases, the presence of weapons of all types seemed to forestall forceful resistance. Other consistent determinants of forceful resistance were sex (males used force), targets of black offenders, and incidents which took place at night. In robbery incidents, the elderly were less likely than others to resist forcefully, while rape incidents involving multiple offenders and interacial crimes involved more forceful resistance.

Net of all other factors, those in the interaction block were the strongest correlates of resistance. Forceful resistance co-occurs with actual attack, while those who offer nonforceful resistance were less likely to resist forcefully as well--the strong negative coefficient means that those who did one were not likely to do not do the other.

Table 1

Regression Analysis of Attack on Targets in Stranger Violence

	Rape		Robbery		Assault	
	BETA	R2%	BETA	R2%	BETA	R2%
Occurred in 1978-79	.05		.04		-.01	
Resident of city 250,000+	.00		.02		.02	
Year of crime	.02	1.6%	.01	0.9%	-.01	0.3%
Offender's age	.01		.00		-.11	
Offender black	.16**		.00		.00	
Multiple offenders	-.08	10.3%	.05	1.7%	.07	8.4%
Target elderly	.00		.05		-.03	
Target alone	.06		.02		-.04	
Target male	--		-.06		-.05	
Target teenager	.04		-.02		.03	
Target black	-.16**		.02		-.01	
Crime interracial	-.01	10.2%	-.02	5.2%	-.01	3.2%
Occurred at night	.21**		.05		.09	
Occurred on street	-.10		.03		.07	
Occurred at home	.12*	29.0%	.01	3.6%	.01	6.5%
Other weapons	.11*		.05		.04	
Knife present	.10*		-.13		-.07	
Gun present	.07	12.1%	-.27	57.6%	-.14	14.5%
Forcefully resist	.26**		.16		.28	
Nonforceful resist	-.03	31.4%	-.03	18.0%	-.18	52.7%
Total R2	.199		.140		.185	
(min N)	(435)		(3214)		(6060)	
(max N)	(503)		(4270)		(7331)	

Note: * indicates significant <.05
** indicates significant <.01

Table 2

Regression Analysis of Forceful Resistance by Targets of Stranger Violence

	Rape		Robbery		Assault	
	BETA	R2%	BETA	R2%	BETA	R2%
Occurred in 1978-79	-.04		-.02		.00	
Resident of city 250,000+	-.03		-.04		.00	
Year of crime	-.01	2.2%	.01	1.7%	.06	0.6%
Offender's age	.00		.01		.04	
Offender black	-.07		-.08		-.03	
Multiple offenders	-.08	7.2%	-.02	4.9%	-.02	0.9%
Target elderly	.02		-.10		-.02	
Target alone	.01		.00		-.03	
Target male	--		.13		.12	
Target teenager	.02		-.01		.01	
Target black	.04		.01		.01	
Crime interracial	.10*	8.0%	.04	23.6%	.00	6.2%
Occurred at night	.05		.06		.07	
Occurred on street	-.01		.00		.01	
Occurred at home	-.03	2.5%	.01	3.0%	.02	2.6%
Other weapons	-.04		.07		.06	
Knife present	-.07		.05		.07	
Gun present	-.14*	19.8%	-.13	19.0%	-.05	4.8%
Attacked	.28**		.17		.27	
Nonforceful resist	-.09	59.4%	-.04	24.4%	-.29	67.5%
Total R2	.125		.109		.217	
(min N)	(426)		(3214)		(6164)	
(max N)	(503)		(4270)		(7331)	

Note: * indicates significant <.05
** indicates significant <.01

Turning to Table 3, it can be seen that nonforceful resistance appeared to be discourged by the presence of a gun or (except in assaults) a knife. Rape incidents with black offenders and black targets were less likely to involve nonforceful resistance than were those with white targets and offenders. More nonforceful resistance was offered in rape cases in which targets were alone, and which took place on the street. Table 3 also documents a trend over time in the data--net of other factors more nonforceful resistance is described by rape targets in the NCS. Perhaps widespread discussion of this resistance option has stimulated such a pattern.

Males were more likely to forcibly resist in both robbery and assault cases, but less likely to resist nonforcefully. Controlling for these factors, there was a slight tendency for those who were attacked or resisted forcefully to be less likely to resist nonforcefully.

Men apparently use different tactics when confronted by a potential offender, but are the precursors or the outcomes of these tactics any different? To answer these questions, the analyses of robbery and assault incidents presented in Tables 1-3 were replicated separately for men and women. The results demonstrated that the relationship of these independent variables to attack and the two forms of resistance was very similar among male and female targets taken individually, and the equations were very similar to those for all targets combined. Thus, while males were more likely to choose forceful resistance, and females were more likely to resist nonforcefully, the relationship between either form of resistance, attack, and the explanatory variables were very similar for the two sexes. Among both groups, those who were physically attacked were more likely to resist than others who were only threatened, and those who were threatened with a gun were less likely to forcefully resist than were others.

Table 3

Regression Analysis of Nonforceful Resistance by Targets of Stranger Violence

	Rape		Robbery		Assault	
	BETA	R2%	BETA	R2%	BETA	R2%
Occurred in 1978-79	-.01		.07		.02	
Resident of city 250,000+	-.01		-.02		.00	
Year of crime	.10	4.4%	.04	8.1%	.02	0.4%
Offender's age	-.06		.07		.04	
Offender black	-.13*		-.04		-.04	
Multiple offenders	-.02	12.8%	.02	9.9%	.01	1.8%
Target elderly	.06		-.06		-.02	
Target alone	.09		-.05		.03	
Target male	--		-.12		-.09	
Target teenager	.01		.02		-.02	
Target black	-.10		-.03		-.03	
Crime interracial	.01	19.2%	.04	38.9%	.01	7.6%
Occurred at night	.02		-.01		.02	
Occurred on street	.09		.02		.05	
Occurred at home	.00	9.2%	.00	0.6%	.01	2.4%
Other weapons	-.03		.04		.03	
Knife present	-.03		-.01		.04	
Gun present	-.09	9.7%	-.13	25.4%	-.01	2.2%
Attacked	-.03		-.03		-.11	
Forcefully resist	-.09	9.4%	-.04	4.3%	-.31	77.1%
Total R2	.104		.058		.125	
(min N)	(426)		(3214)		(6164)	
(max N)	(503)		(4270)		(7331)	

Note: * indicates significant <.05
** indicates significant <.01

CHAPTER 6

THE CONSEQUENCES OF CRIME: PERSONAL INJURY AND CRIME COMPLETION

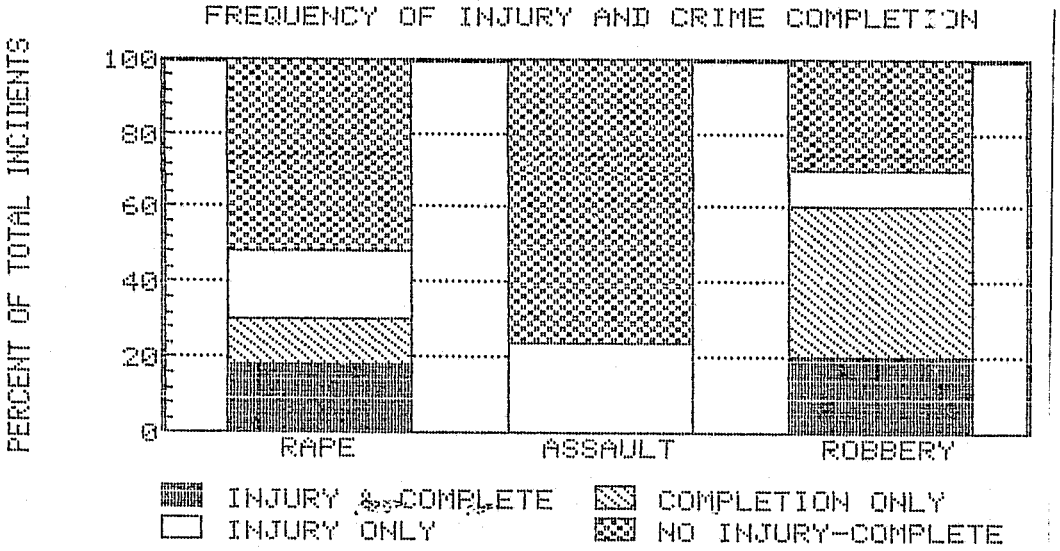
This chapter analyzes two outcomes of stranger violence: physical injury and the completion of the crime. It examines characteristics which differentiate targets of rape incidents who were raped from those who were not, and which robbery incidents result in financial loss and which do not. For all three crimes, we search for factors which are related to injury. Attack and victim resistance, topics considered in the last chapter, turn out to be especially important in this regard.

The feared outcomes of these incidents are physical injury, rape, or death. Studies of the components of crime seriousness indicate people weigh financial loss less heavily than personal injury, even when such losses were appreciable (Wolfgang, 1978). While our reliance on the NCS precludes any systematic analysis of the fatal consequences of assaultive violence, the survey was designed to gather details about physical injuries and the kind and cost of medical care required when victims did survive.

Many effects of victimization are not measured by the NCS. It doubtless has short and long-term psychological consequences which go untapped in the survey (c.f., Bard and Sangrey, 1979). Rape victims may lose trust in men; robbery victims may never again visit the area where they were accosted; assault victims may move or change jobs to prevent future victimization. However, the NCS does gather detailed descriptions of the near-term physical and economic consequences of crime. Was the victim sexually assaulted? Was something stolen? How much was lost? Was the victim injured? Was medical attention required?

Figure 14 illustrates this mix of possible outcomes for each type of crime. The fewest negative consequences were recorded for assaults. Three-forths of the assault targets reported no injury. About one-half of all rape targets were neither injured nor raped, but 18 percent were both raped and injured in some other way. Seventy-one percent of all robbery targets were injured or suffered property loss. Of these 38 percent experienced only property loss, 11 percent were simply injured, and 22 percent were both injured and suffered a financial loss.

Figure 14



These outcomes were not random. They were related to the characteristics of the targets and offenders involved and the setting of criminal incidents. Most importantly, they were linked to the dynamics of target-offender interaction during the event. In this final analytic section we consider the relation between such elements of crime as the presence of a weapon, offender organization, target vulnerability, the likelihood of actual attack, a target's resistance, and the outcome of the incident. These analyses ask, given their background characteristics, what was the risk of property loss or injury of personal crime targets attributable to the dynamic aspects of target and offender action? Remember, the methodology of the NCS does not include death as an outcome of violent crime, and thus the discussion of injury includes all but the most serious crimes. While a statistically small proportion of all assaults, those assaults ending in death cannot be ignored.

6.1 OUTCOMES OF RAPE

While the dynamics of target-offender interaction in rape were often similar to those in robbery, they differ in a significant way. A completed robbery does not require an actual attack; often a threat of force or the display of a weapon will do. By our definition, a woman cannot be raped without being attacked, and an attack is a neccesary precondition for rape. In the NCS, 32 percent of rape incidents were described as completed. However, a women who successfully resisted sexual assault might still be attacked and otherwise injured. About 9 percent of women involved in these incidents were not raped but were injured in some other way.

Targets of rape may be robbed; sixteen percent of these women indicated they were robbed, with a median loss of $30. More older targets of rape were robbed. McDermott (1979: 29) notes in her study of rape in big cities, "... theft may be an important motivational factor in rape attacks against older victims..." In the NCS, women who are raped also are more likely to be robbed than were those who were only threatened. That the two forms of victimization go together probably reflects the degree of control which offenders were able to establish at the scene of the crime.

Overall, about one-half of these women were raped or otherwise physically injured; of that half, 74 percent were physically injured in some other way and 64 percent were raped. A detailed breakdown of combinations of outcomes in rape cases is presented in Appendix Table 21. Twenty-two percent of all targets of rape required some medical attention. However, less than 3 percent (7 percent of those who were injured) were injured to such an extent that they required an overnight hospital stay. It is important to note the NCS questionnaire may confound two types of medical attention in rape cases. One involves the treatment of personal injuries--cuts, scratches, broken bones, and other wounds. The other type of medical attention is evidentiary and a police matter --a physical exam (often conducted in a hospital emergency room) to document that a rape has taken place (McDermott, 1979). It is impossible to tell how much medical attention described in NCS rape incidents fall into each category.

Figure 15

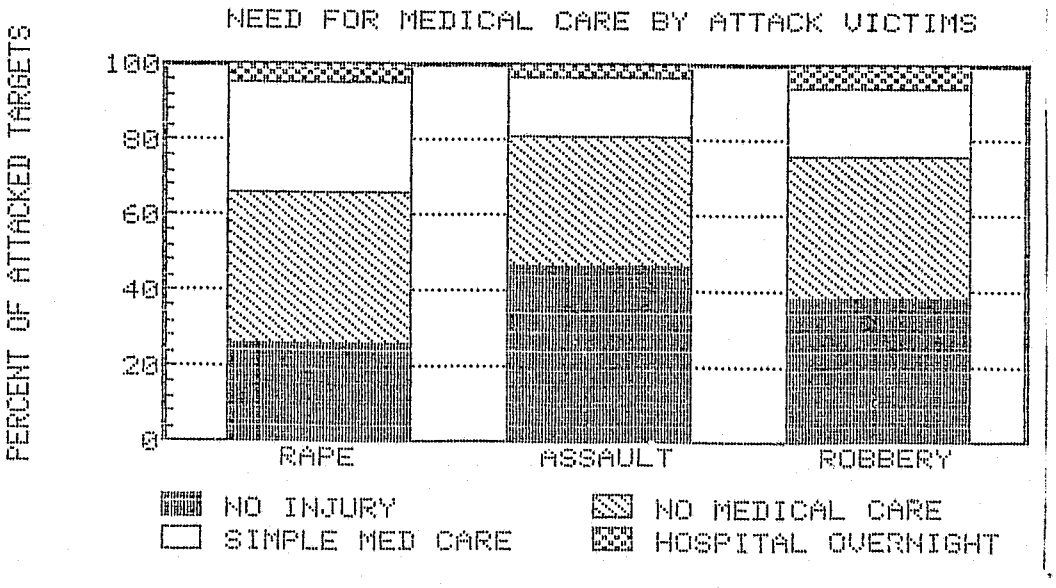


Figure 15 and Appendix Table 21 document the relationship between resistance and these outcomes. Resistance to rape was more frequent than resistance to robbery or assault, while the negative relationship between resistance and the completion of the act is the same. As a result there were more "attempted" incidents described for rape than for other types of personal crime. Women who manage to resist either forcefully or nonforcefully were less likely to be raped (20 percent and 24 percent) than were those who offered no resistance (58 percent). This latter percentage stands in sharp contrast to the 85 percent success rate for robbers who were not resisted. Either because of contingencies of the moment or the NCS questionnaire --which may facilitate targets' describing too many rape incidents as "attempts"-- this not-resisted but unsuccessful total was quite high.

Women who managed to resist nonforcefully were less likely to be raped or injured than those who did not resist. Women who forcefully resisted were 29 percentage points more likely than those who offered no resistance to be otherwise injured. Women who did not resist at all were most likely to report being raped, but were less often otherwise injured. Black women were less likely to resist than white women, and were therefore more likely to be raped but less likely to be otherwise injured. However, the relationship between resistance and outcome was the same for both groups.

Overall, resistance seemed to reduce the likelihood of negative outcomes in rape incidents. Women who resisted nonforcefully were least likely to be raped, attacked, injured, or robbed. Women who resisted forcefully in rape attempts were more likely to report being otherwise attacked and injured, but were also less likely than nonresisters to be raped.

The relationship between the presence of a weapon and resistance was nearly as strong in rape as in robbery. As described in Appendix Table 12, women who were threatened with guns were much less likely to resist than women who were threatened with any other weapon or none at all. However, only 30 percent of all rape incidents involved a threat with any weapon; sixteen percent involved a gun threat. Most women who offered no resistance to a gun or knife are raped, and many were also injured. Half of nonresisting women who were raped at gun point were also injured in some other way.

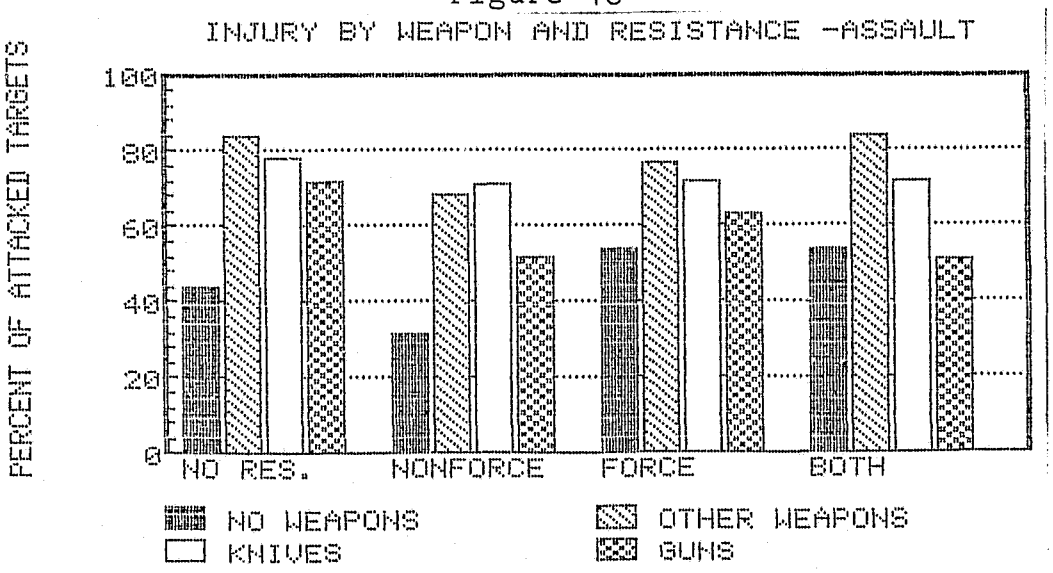
Regardless of weapon (or the absence of one), nonforceful resistance reduced the probability of attack, rape, or injury. The relationship between weapon use and the risk of attack was detailed for every type of resistance in Appendix Table 13. Appendix Table 22 relates weapon use and resistance to the risk of actually being raped. (Note the number of rape incidents

available for detailed analyses like these is very small.) Especially notable were the positive consequences of resistance in the face of gun threats. Unlike robbery, nonforceful resistance during a confrontation with a potential rapist armed with a gun was related to a decrease rather than an increase in the likelihood of attack and injury.

The general relationship between forceful resistance and outcome was less positive for the potential victim. The probability of injury was highest for forceful resisters. However, the sequencing of attack, forceful resistance, injury, and rape is not clear in the NCS. Forceful resistance may have been a woman's desperate attempt to forestall a sexual attack, or it may have been a provocation to further attack and injury. Resisting both forcefully and nonforcefully may be an indicator of desperation, and that mix was most frequent in rape incidents. Targets resisted both forcibly and nonforcibly in 9 percent of robberies and 7 percent of assaults, but in 22 percent of rapes. Also targets of rape were least likely to offer nonresistance (only 17 percent); no resistance was reported in 29 percent of assaults and 46 percent of robberies. Tables 21 and 22 indicate women who took both countermeasures were more likely than other resisters to be raped anyway. However, without fuller knowledge of this sequencing, or any knowledge of resistance in fatal attack, it is not possible to draw unequivocal conclusions with these data.

6.2 OUTCOMES OF ASSAULT

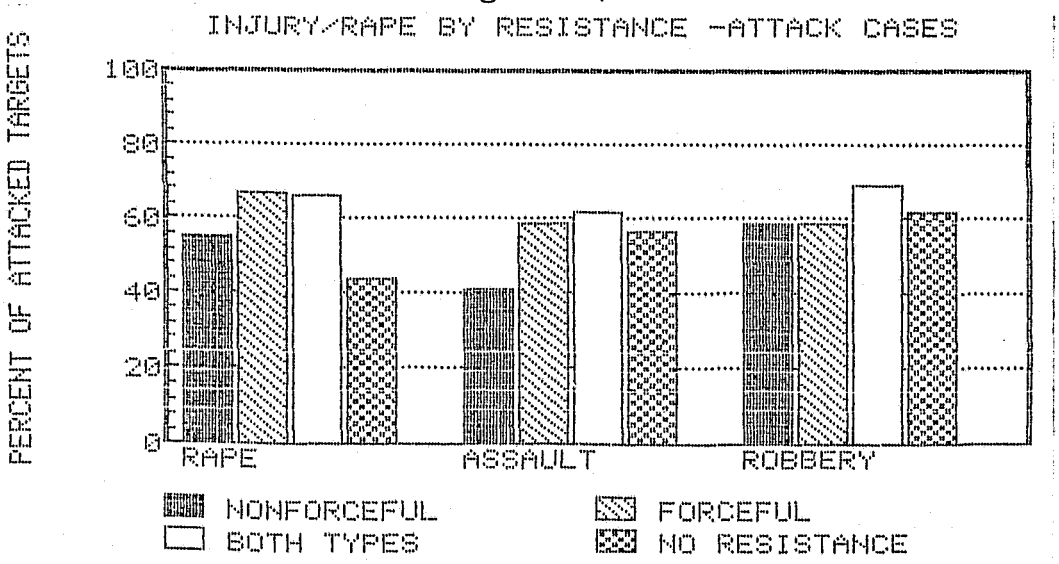
Figure 16



Overall, about 24 percent of those involved in stranger assault cases were injured in some way. This included about 20 percent of all assault targets, but 57 percent of those who were attacked. The injury outcomes reported for assaults and other personal crimes are summarized in Appendix Table 14. The bulk of them were bruises, cuts, black eyes, scratches, and other abrasions. Few victims reported broken bones or teeth, or internal injuries --4 percent of all targets of assault and 12 percent of those attacked. Appendix Table 15 and Figure 16 give similar information on the distribution of the resulting need for medical care. Overall, 92 percent of the targets of assault recalled no injury needing medical care. About one percent of all assault targets (3 percent of those attacked) needed overnight hospital care, and 50 percent of those who were attacked were injured in some more minor way. But a surprising 47 percent of all assault targets who were attacked had no injury at all to report.

Figure 17 describes the relation between target resistance and injury for those who were actually attacked. This may overrepresent ineffective nonforceful resistance or displays of physical resistance which did not succeed in avoiding or warding off attack. Among stranger assault targets who were attacked, those who resist forcefully and those who did not resist at all are about equally likely to be injured. As Appendix Table 16 documents in detail, 60 percent of the former (including those who resisted both forcefully and nonforcefully) were injured, as were 57 percent of nonresisters. However, there were differences in the apparent seriousness of those injuries, as reflected in the resulting need for medical care. Those who did not resist were 1-1/2 times more likely to be injured seriously, suggesting some benefit in being able to resist.

Figure 17

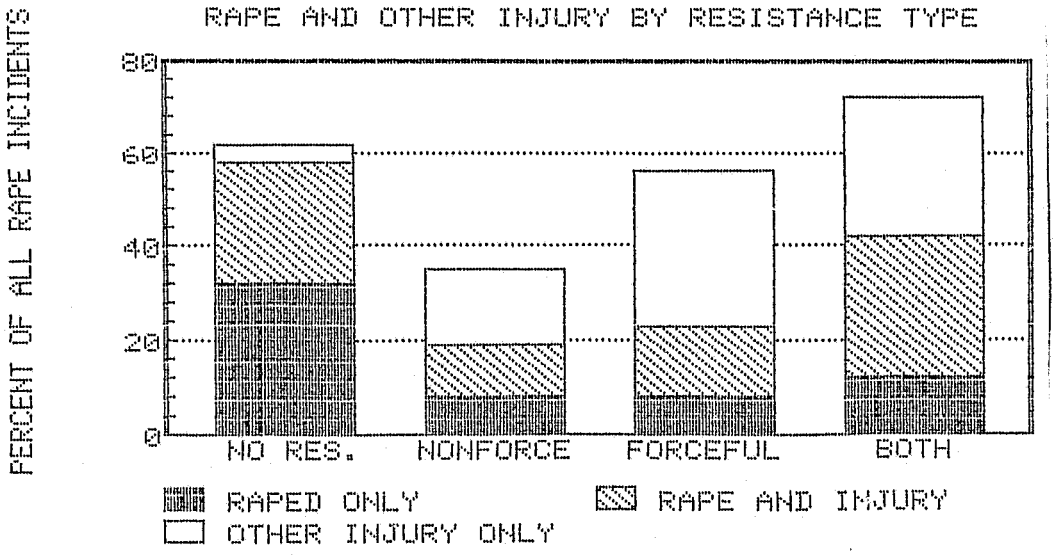


Nonviolent self-protection, on the other hand, was related to lower risk of injury. Forty-one percent of those resisting this way in assaults were injured, in contrast to 58 percent of all others. Among those who recall taking both forceful and nonforceful measures, 62 percent were injured, 24 percent so seriously as to require medical care.

While there were other determinants of injury outcomes in stranger assaults, these three factors --offender action and victim forceful and/or nonforceful resistance-- were the features of the situation which explain most about the consequences.

In addition to those interactional factors, other characteristics of targets and offenders independently affected the outcome of assault incidents. Controlling for attack and forms of resistance, older victims, those attacked by lightly armed gangs, after dark, are all more likely to report an injury. The basic data are presented in detail by type of incident in Appendix Table 17. However, many bivariate correlates of injury changed sign or disappeared when situational factors were controlled for. For example, males and younger victims of stranger assault were more likely to recall an injury, but when resistance and attack were taken into account, sex became insignificant and the relation between age and injury reversed itself. However, even in a multivariate analysis, being attacked after dark remained a significantly more risky circumstance.

Figure 18



When attacked, those who were cut, clubbed, or poked by strangers were most likely to report an injury. Knife cases fall at about the average for weapons cases of all kinds. In these nonfatal incidents guns were not often fired, leading to a low rate of injury when they were present. Figure 18 and Appendix Table 18 present the distribution of injury for cases in each category of weapon presence, controlling for the type of resistance. It is the less lethal weapons --rocks, clubs and bottles which often were actually used, and knives-- which have the greatest nonfatal impact. Knives did not seem to offer enough of a threat to encourage target submission-- there was a great deal of forcible resistance by the largely male targets of knife assaults. However, knives carry with them an enhanced capacity for inflicting serious injury, and a much greater percentage of these cases lead to injury and required medical care than did corresponding unarmed assaults.

6.3 OUTCOMES OF ROBBERY

The primary object of robbery is the target's property. The factor which most affects a robber's chance for success is what his target (for whatever reason) does. As documented in Appendix Table 19, something was stolen from most (85 percent) of the targets of robbery who did not resist, but from less than half (41 percent) of those who resisted nonforcefully, and from 35 percent of those who forcefully resisted. These figures are presented in Appendix Table 19. The percentages are very similar to Wolfgang's (1982) police file study, in which 86 percent (here 85 percent) of nonresistance cases led to a loss, and only 42 percent (here 38 percent) of resistance cases led to a loss. The NCS sheds only a little light on why there were no losses in 15 percent of unresisted robbery attempts, but in Wolfgang's report these were attributed to "fortuitous factors," such as other persons or police cars passing by the scene. In the NCS, compared to unresisted robberies with a loss, these cases had fewer weapons (54 to 71 percent), younger targets (54 percent under 30, as compared to 45 percent), and more white targets (80 to 69 percent). The mean loss for those who did not resist at all was $208; for forcible resisters it was $105, and for nonforceful resisters it was $88 (see Appendix Table 19). Thus either form of resistance was associated with a lower likelihood of loss and a smaller amount of loss.

Once attacked, injury was not strongly related either to resistance or to its particular forms (see Figure 17). However, because forceful resistance is strongly related to attack, those targets who resisted nonforcefully were much less likely to be injured (28 percent) than were those who forcefully resisted (40 percent), and no more likely to be injured than those who did not resist (29 percent). Like assaults, most reported injuries were cuts, bruises, and other abrasions (Appendix Table 14). Only 13

percent (24 percent of those attacked) suffered an injury requiring any degree of medical attention. In both types of crime the level of injury was mostly due to the high rate at which forceful resisters were attacked. Appendix Table 11 documented that 68 percent of forceful resisters in robbery were attacked, a figure which was 20 percentage points higher than for other targets of robbery. Those describing taking nonforceful countermeasures were less likely than others (including nonresisters) to be attacked.

Offenders could affect the probability that their targets would not resist by choosing as victims those who were unlikely to try to protect themselves, or by mounting a threat which would forestall potential resistance or overcome countermeasures which actually were attempted. We have already seen that older people and blacks were less likely to resist, for example. Men and women were equally likely to resist, but their tactics differed. However, in the NCS such demographic factors were less strongly related to the probability of resistance than they were to the nature of the offender's threat.

Whatever its sources, this action and reaction affects the outcome of these cases. Without resistance, something is stolen in 85-90 percent of robbery incidents regardless of the offender's threat. Tables 19 and 20 detail the relation between the presence of a weapon, resistance, and loss rates. With resistance the probability of loss declined sharply within each weapon group, but (a) few faced with guns resist, and (b) faced with a gun fewer countermeasures succeed in reducing loss. Guns were the threat in only 24 percent of the robbery incidents, but they were the threat most likely to be completed.

It is clear that robberies conducted with a gun are more completed than others. Gun threats increase the probability of success and the median "take," and are least likely to involve the offender in fistacuffs or spark resistance of any other kind. Yet guns were threatened in only one-quarter of the NCS robberies (and in only 16 percent of rapes, where their utility is similar). Many other robberies may be opportunistic rather than preplanned. If opportunistic acts constituted a substantial proportion of unarmed robberies --which between 1973 and 1979 constituted 40 percent of the total-- they also did not often pay off.

Resistance to a robber armed with a knife or gun affected the risk of attack or injury differently than did resistance to a unarmed or club-wielding predator. Rates of injury for all combinations of resistance and weapon use are detailed in Appendix Table 18. Forceful and nonforceful resistance in the face of a knife increased somewhat the probability of attack or injury over that for nonresistance. However, regardless of the presence of a weapon, resistance to a robbery attempt reduced the probability that something would be stolen. Sixty-five percent of the

completedf robberies described in the NCS were among the 45 percent of cases in which no resistance was offered. However, resistance also increased the probability that the target would be attacked and injured, especially when that resistance was forceful and the weapon was a knife or gun. Resistance to an unarmed or more lightly armed predator seemed to reduce the risk of attack and injury, and reduced the likelihood of financial loss.

6.4 THE DETERMINANTS OF PHYSICAL INJURY

Thus far this report has considered the relationship between crime outcomes and only one or two other variables simultaneously. However, the relationship of injury or crime completion to other factors is at least as complex as that for resistance and attack. To examine the outcomes of stranger violence we once again use hierarchical multiple regression to enter blocks of variables into a multivariate analysis.

The most feared outcomes of stranger violence are death and serious physical injury. As we have noted, the NCS does not include crimes with fatal outcomes, and serious injury was relatively rare even in these large national samples. However, injuries of lesser seriousness frequently occurred. They were frequent enough for injury of all kinds to be analyzed using multivariate regression.

Table 4 presents the results of an multivariate analysis similar to those presented above. The final "interaction" block includes measures of forcible and nonforceful resistance, weapon attack, and nonweapon attack --the major features of the immediate crime scene. Only incidents in which an attack was involved were considered here. Using all cases and including an "attack" measure as an independent variable reveals little of interest, except that attack was very important. However, excluding incidents without attack was a significant decision, for they constitute a majority of all incidents without an injury. Some important relationships which characterize all incidents are seemingly reversed when only attack cases are analyzed.

This multivariate analysis explains between 11 and 13 percent of the variance in the injury dichotomy (only non-penetration injuries --broken bones, scrapes, wounds, and the like-- are included in the rape column.) For all three crimes, older offenders were more likely to injure their targets than were their younger counterparts. Robberies and assaults occuring at night were somewhat more likely than others to result in an injury, as were rapes occurring at home and robberies and assaults featuring "other" weapons. Net of other factors, there appears to be more injury in gun cases --quite the opposite of our finding and those of others based upon all incidents (Fattah, 1984; Hindelang, 1976). Remember, however, that the presence of a gun was negatively related to attack in robbery and assault, and that

Table 4

Regression Analysis of Physical Injury for Targets Who Are Attacked in Stranger Violence

	Rape		Robbery		Assault	
	BETA	R2%	BETA	R2%	BETA	R2%
Occurred in 1978-79	.05		.05		-.01	
Resident of city 250,000+	-.03		.00		.03	
Year of crime	.12	7.5%	-.03	2.0%	.05	1.7%
Offender's age	.15*		.13		.07	
Offender black	.02		.05		-.03	
Multiple offenders	.05	22.5%	.02	16.6%	-.01	14.8%
Target elderly	-.01		.07		.00	
Target alone	.07		.03		-.04	
Target male	--		-.06		.05	
Target teenager	.10		-.07		.04	
Target black	-.06		-.02		.00	
Crime interracial	-.04	16.2%	.00	13.6%	.01	4.0%
Occurred at night	.01		.10		.08	
Occurred on street	.04		.01		.03	
Occurred at home	.22**	33.6%	-.02	8.5%	.01	5.6%
Other weapons	-.06		.18		.22	
Knife present	.00		.04		.04	
Gun present	.08	10.7%	.05	34.3%	.12	52.6%
Forcefully resist	.14*		.01		.04	
Nonforceful resist	-.02	18.9%	.01	0.1%	-.10	9.8%
Total R2	.092		.098		.117	
(min N)	(263)		(1692)		(2687)	
(max N)	(329)		(2264)		(3189)	

This analysis based on cases with attack only

Note: * indicates significant <.05
** indicates significant <.01

Table 4 includes only attack cases. In assaults nearly half of the explained variance in injury was accounted for by weapons measures in that cluster, and their effect was also substantial in robbery. In the aggregate, weapon cases of all kinds were more likely to produce an injury than incidents in which no weapon was present. Finally, another and ominous trend is apparent here for rape cases -- an increasing incidence of nonrape injuries over time. Note this is independent of the trend for increasing levels of nonforceful resistance in rape noted in Table 3, for that is among the explanatory factors controlled for here.

Earlier analysis of rape cases indicated offering nonforceful resistance apparently reduced the risk of injury, but the multivariate coefficient for such tactics in Table 4 indicates little such effect. However, when attacked the targets of rape who resisted forcefully still appear to have been more likely to suffer from other forms of injury. In assault, on the other hand, the earlier finding that nonforceful resistance was linked to lower risk of injury still holds, and in those cases forcible resistance also was related to higher levels of injury. Robbery cases look quite different; for those incidents, bivariate and multivariate analyses of targets who were attacked indicate that once attack is controlled for targets who do not resist or resist forcefully are equally likely to be injured.

In general, the influence of indicators in the interaction block is smaller for this injury analysis than in previous tables. This may be because we have excluded from consideration one of the most significant components of target-offender interaction for determining risk of injury --whether or not the target was attacked.

In sum, there was some consistency in patterns of injury in all three forms of violence. Of all offender attributes, only age was independently related to the injury of crime targets. Neither race of target or offender, or age of target, were strongly related to risk of injury. Interracial incidents were no more likely than others to result in an injury. Settings that decreased the observability of the crime increased the risk of injury to the victim-- rapes which occurred at home and other violence which took place at night were most likely to result in injury. The risk of injury was greatest for robberies and assaults in which a weapon was used rather than simply present. For rape incidents, the risk of injury was greatest when victims resisted.

6.5 THE DETERMINANTS OF COMPLETED ROBBERY AND RAPE

Thus far we have examined the precursors of resistance, attack, and injury in stranger violence. This section uses the same multivariate techniques to examine the correlates of success or failure of offenders--the likelihood that a rape attempt will be carried out, and the chances that a robbery will result in financial loss. The findings are presented in Table 5.

Together, the factors examined here explain 20 percent of the variance in outcome for rape, and 22 percent for robbery. The explained variance in robbery can chiefly be attributed to the importance of offender's threat and the interaction between target and offender at the scene. As in earlier analyses, the presence of a gun and an actual physical assault were positively related to the crime's completion. Note, in addition, that both forceful and nonforceful resistance were negatively related to suffering a financial loss. Targets who resisted were less likely to lose their property, and --as our previous analyses have shown-- both forceful and nonforceful resistance were unrelated to the risk of injury in robbery if attacked. However, forceful resistance was related to an increased risk of attack.

The presence of a gun, nonforceful resistance, and a non-weapon attack were also related to the completion of rapes. a finding consistent with some studies of police files (Gibson, Linden and Johnson, 1980). Women faced with a gun threat were more likely to be raped than those who were threatened in some other way. Women who resisted nonforcefully were less likely to be raped.

While much of the variation in completion of a rape was explained by target-offender interaction,the crime's setting was also important. Incidents which occurred at night and/or out of view were much more likely to be completed than those which occurred during the day or on the street. Offender age was positively related to injury and race was linked to resistance, with blacks being less likely to report resisting. Finally, Table 5 documents yet another trend in rape incidents during the 1970s, one of increasing levels of completed rape with time. Net of other factors, including weapon use and target resistance, more completed rapes were described by victims over time.

This multivariate analysis confirms both the earlier findings and previous research on the outcome of robbery incidents. Weapon choice and target-offender interaction were strongly related to the loss of property or cash to robbers. In rape cases, on the other hand, the incident's setting and gun threats were the most powerful predictor of both injury and the crime's completion. Most significantly, nonforceful resistance continues to be linked to a reduced risk of crime completion while not increasing the risk of other physical injury.

Table 5

Regression Analysis of Crime Completion in Stranger Rape and Robbery

	Rape[a] (Sexually Assaulted)		Robbery (Property Taken)	
	BETA	R2%	BETA	R2%
Occurred in 1978-79	.07		.00	
Resident of city 250,000+	-.07		.00	
Year of crime	.09	5.9%	.03	0.3%
Offender's age	.10*		.03	
Offender black	.09		.03	
Multiple offenders	-.01	6.4%	.02	0.8%
Target elderly	.04		.00	
Target alone	.11*		.02	
Target male	--		-.04	
Target teenager	.07		.01	
Target black	-.03		.03	
Crime interracial	.02	9.4%	-.01	1.4%
Occurred at night	.23**		.02	
Occurred on street	-.08		-.03	
Occurred at home	.06	29.7%	.05	1.3%
Other weapons	-.03		-.02	
Knife present	.04		.01	
Gun present	.22**	21.4%	.15	7.5%
Forcefully resist	.03		-.25	
Nonforceful resist	-.14**		-.29	
Attacked	--	9.3%	.17	72.6%
Total R2	.197		.220	
(min N)	(435)		(3214)	
(max N)	(503)		(4270)	

Note: * indicates significant <.05
** indicates significant <.01

[a] only rape targets who were attacked are included in this analysis

CHAPTER 7

SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR RESEARCH

This report has examined in sequence factors which have influenced the frequency and distribution of two major outcomes of personal crimes: physical harm and financial loss. The sequence was suggested heuristically in Figure 1, which described the general temporal linkage between setting, target, and offender factors on one hand, and a set of on-scene interactional factors on the other, which were presumed to affect those outcomes. The on-scene factors --attack and forms of target resistance-- were hypothesized to be the major determinants of harm and loss.

Figure 19

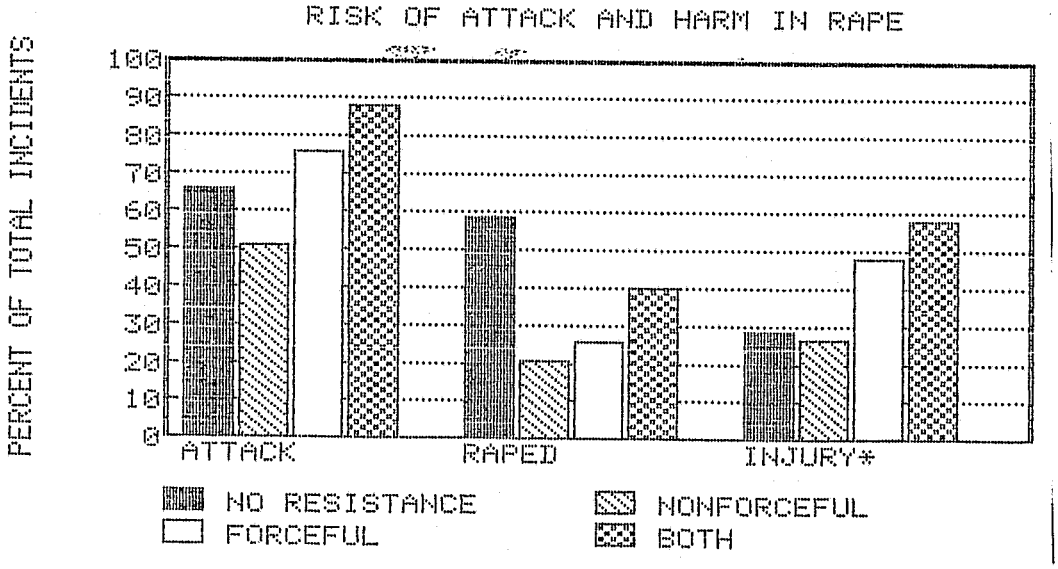


Figure 19 sumarizes the simple, bivariate relationship between the forms of resistance offered by targets of rape incidents, and whether or not those women were attacked, raped, and injured. Initially these findings suggested considerable payoffs for resisting nonforcefully, especially in reducing the risk of physical harm in such cases. However, as noted above, there were other factors at work in shaping these outcomes. When those factors were introduced into the analysis, the apparent advantages of nonforceful resistance for warding of attack and avoiding injuries other than rape were reduced nearly to zero. But, there continues to be an important benefit of such tactics in avoiding rape itself, as noted in the multivariate analysis described in Table 5. The rape-reduction coefficient associated with nonforceful resistance presented there was quite significant. Offering forcible resistance had no similar payoff, and based upon the other outcome measures appears to be a bad idea.

The multivariate analyses presented above identified only three significant trends in this data over time, and all concerned rape cases. Nonforceful resistance, which may yield positive outcomes, appears to be on the rise, but independent of this there were clear trends toward higher completion rates for rape and higher rates of other injuries in rape cases during the 1970s.

Figure 20
RISK OF ATTACK-INJURY-LOSS IN ROBBERY

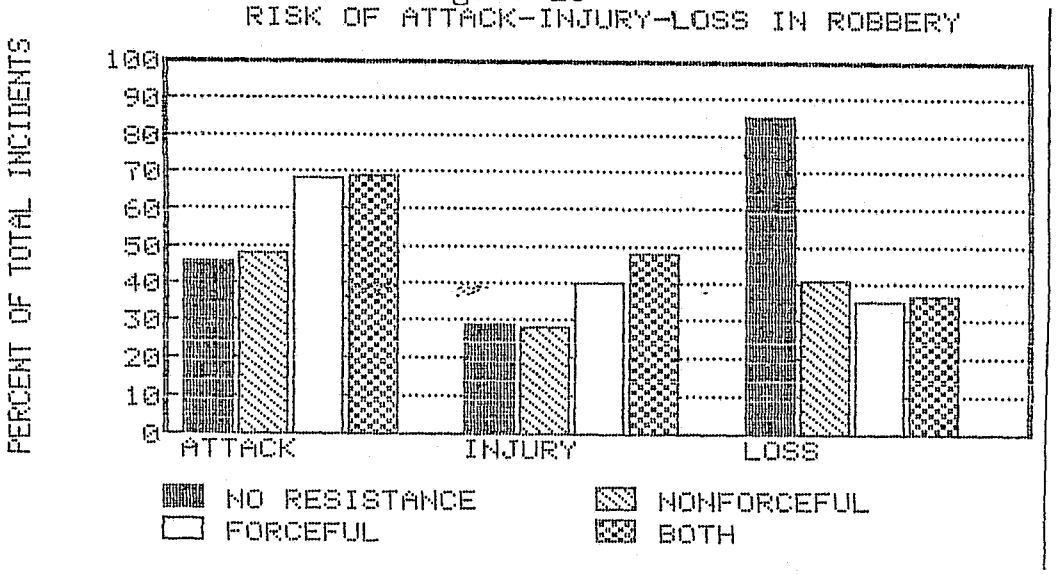


Figure 20 presents a summary illustration of outcome patterns for stranger robbery. Nonforceful resistance had little effect on the *likelihood* of attack or injury in bivariate or multivariate analyses of robbery. Forceful or nonforceful resistance appeared in bivariate analyses to be necessary to avoid near-certain financial loss, and that remained true when other factors were taken into account.

Finally, Figure 21 summarizes patterns of attack and injury in assault cases. For both it appears that forceful resistance was associated with bodily-threatening outcomes, while there was some advantage in trying nonforceful tactics. Controlling for other factors did not alter those conclusions: nonforceful resistance remained linked to lower risk of injury and attack, while forceful resistance was related to a higher risk of attack and injury.

Figure 21

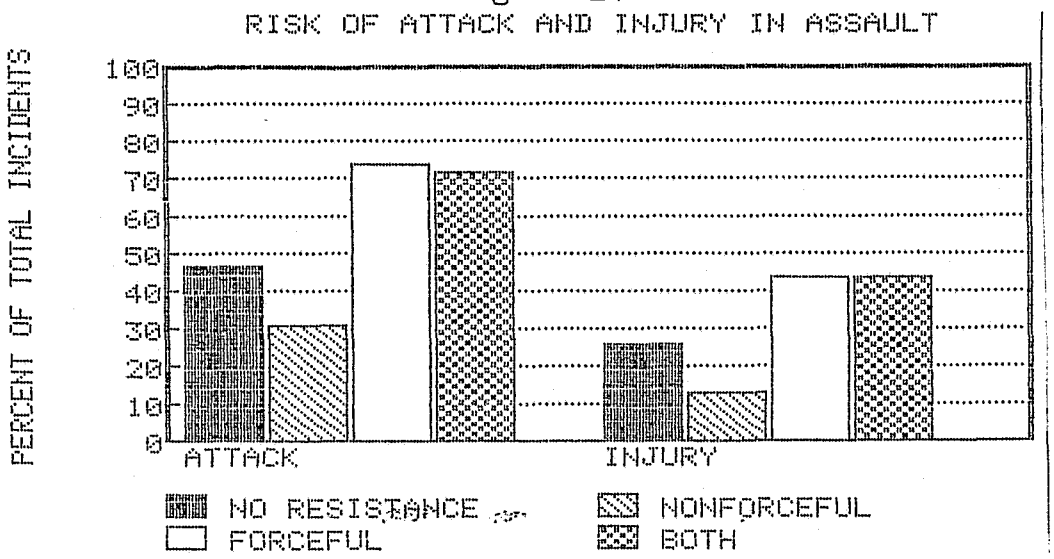


Table 6 provides a quick summary of the multivariate findings described above. For each type of crime, whether each action on the part of targets increases (+) or decreases (-) their risk of attack, injury, and completion is indicated by positive and negative signs. Two signs indicate coefficients greater than +/- .20 in value (a strong relationship), while one sign indicates coefficients between +/1 .10 and +/- .20 (a slight relationship). A zero indicates a small coefficient, between +.10 and -.10 (a negligible relationship).

The conclusions summarized in Table 6 suggest that nonforceful resistance (which includes yelling, trying to run away, reasoning with potential assailants, and attracting passers-by) may serve to avoid an actual physical attack, and may reduce the likelihood of injury and other losses even for those who are attacked. Forceful resistance (fighting back, either armed or unarmed) is related to physical attack and is consistently linked to higher risk of injury. Targets of personal crime who combine nonforceful and forceful resistance are even more likely to suffer the consequences. Nonresistance seems to put targets at a high risk of crime completion,, but at an average or lower level of risk of physical injury. These relationships are strong, and this report's conclusions are tentative only because of the ambiguous causal ordering of the actions and reactions described in the data. It is not possible to determine if resistance came before, after, or during an attack or threat or even an injury. However, these and other studies present hopeful evidence that evasive tactics by targets of personal crime may limit violence and injury, and the findings are substantial enough to recommend much greater attention to the time-sequencing of

Table 6

Summary of Multivariate Findings

Type of Resistance	Attack			Physical Injury			Crime Completion	
	Rape	Robbery	Assault	Rape	Robbery	Assault	Rape	Robbery
Nonforceful	−	0	−	0	0	−	−−	−−
Forceful	+	++	++	+	+	+	−−	−−
Both	++	++	++	++	+	+	−	−−

NOTE: double sign indicates coefficient greater than .20 (strong)
single sign indicates coefficient between .10 and .20 (moderate)
zero indicates coefficient less than .10 (unrelated)

minus sign indicates negative relationship
plus sign indicates positive relationship

target and offender actions in future victimization studies.

The relatively low explanatory power of the multivariate analyses presented above (indicated by their R2) may result from several features of the data and the research task. In part it may be due to the restricted variation of both the independent and dependent variables, many of which have only two categories. Most certainly these simple indicators only partially capture the rich texture of the face-to-face interactions they represent; that is, they are prone to measurement error. Second, there may be a great deal of "randomness" in the actions of both targets and offenders in stranger crimes. As Fattah recently noted:

> "The victim's responses to the unwanted and usually unexpected victimization is, to a large extent, unpremeditated and unplanned. The spontaniety of the reaction is no doubt responsible for the extreme variations in victims' responses to identical situations and to very similar victimization experiences. The same offensive behavior, be it assault, rape, or robbery, does not elicit identical reactions from all those being victimized (1984: 78)."

The absence of homicides from this (and other) survey data must be stressed. Block (1977) found a much greater role for firearms in his study of police files on homicide, robbery, and assault. Their use was strongly related (positively) to the likelihood of death and (negatively) to target resistance. In both robberies and assaults, resistance was positively related to death. On the other hand, Block could not examine the correlates of actual attack or injury in his data because the contingencies of crime reporting and police recording practices virtually eliminated attempted and non-injury assault cases and many attempted robberies from police files. Those incidents were reported at a low rate, and many were apparently ignored by Chicago police (Block and Block, 1980). Block and Block concluded that victimization survey data provides a far superior picture of unsuccessful and non-injury producing crime, and its use on research on resistance is critical. One solution to this problem would be the creation of a public use tape from FBI supplemental reports on homicide. These are individual-level files, and if the data were coded in the same fashion as the NCS when possible, they could be used to supplement analyses of the national crime panel.

There are other specific on-scene factors which past research indicates may be significant determinants of the outcomes of violent encounters, but which are similarly beyond the scope of the NCS. The survey data tell us nothing about the offender's motives, which might indicate how desperate he was or how far he is willing to go. Cook (1980) reports that robbers who injure their victims are more likely than others to have a history of

arrests for assaultive violence, suggesting they may generally be more violence prone. The NCS also tells us nothing about victims' past experiences or fears, but those factors might indicate how willing they were to risk taking positive measures to protect themselves. We do not even know if either the victim or the offender were drinking or under the influence of drugs. The former has been the subject of serious study since the mid-1950's, when it was found that a participant had been drinking in a majority of homicides (Wolfgang, 1958). Recent research indicates drinking plays an important role in the escalation in the level of severity of assaults (Felson and Steadman, 1983). In the British Crime Survey, victims of violent victimization were heavily concentrated among self- confessed heavy drinkers (Hough, 1983), and past self-reported offenders.

It should be apparent that the NCS, for all of its strengths, only scratches the surface of the issue of victim resistance. It is unlikely that any research will clearly establish a causal connection between tactics adopted by victims and the reactions of offenders. That would require an experiment in which nonresistance and types of resistance were offered randomly, a study in which many targets might be unwilling to cooperate. Instead, what is needed is greater in-depth knowledge of the sequencing of events during criminal encounters. Detailed data on "who did what to whom and when" would do a great deal to clarify the consequences of target resistance. Such information is typically not found in police reports of routine robberies and assaults; such reports often are sketchy at best. Rather, the data should be collected in intensive interviews with samples of very recent targets, confining studies of resistance based upon police files to homicide cases. These interviews must be conducted soon after the event because of the difficulty of reconstructing complex sequences of actions from memory after much time has passed. It also is important to conduct these interviews with targets identified initially through surveys, not simply with respondents selected from police files. Victimization surveys turn up much larger numbers of targets of attempted but unsuccessful crimes, and to the extent to which that is a consequence of successful resistance it is critical that they be adequately represented in the data. Garofalo and Clark (1984) are conducting a small-scale research project just of this type. Perhaps this data collection effort could be merged into the ongoing activities of the NCS, as a supplement to be administered to a small random subsample of victims.

Some studies of victim resistance in personal crimes offer advice to the reader, presumably a potential victim. Hindelang, et al. (1975: 85) advise readers not to attack offenders. Block (1977: 87) warns "... the most likely combination of favorable payoffs, if you must resist (in robbery) is against multiple offenders." Often it seems best to give up your goods in armed robbery (Hindelang, et. al, 1978; Block, 1977). However,

Wolfgang (1982: 7) concludes "... robberies remain attempts, are unsuccessful or incomplete..., not because of the presence of a weapon, but mainly because the victim put up a form of resistance to the threatening offender." Police often recommend that women not risk further bodily harm by resisting in rape attempts. In a "bottom line" recommendation not inconsistent with our findings, the Denver Anti Crime Council noted that more women who resist in rape were otherwise injured but fewer were actually raped, and concluded: "Each woman must decide for herself whether she can resist the sexual assault in any way. There was no simple answer to the question..." (Brown and Beyeler, no date, p. 6). A careful consideration of the limits of the NCS questionnaire and its lack of information on the sequencing of target and offender actions described there, precludes giving such advice on the basis of NCS data alone (c.f., Lentzner and DeBerry, 1980). However, the data do describe a close association between the adoption of nonviolent countermeasures and avoidance of both attack and injury.

REFERENCES

Amir, Menachem. 1971. Patterns of Forcible Rape. Chicago, IL: University of Chicago Press.

Bard, Morton, and Dawn Sangrey. 1979. The Crime Victims Book. New York, NY: Basic Books.

Block, Richard. 1981. "Victim-Offender Dynamics in Violent Crime." Journal of Criminal Law and Criminology 72 (No. 2), 743-761.

Block, Richard. 1977. Violent Crime. Lexington, MA: Lexington Books.

Block, Richard, and Carolyn R. Block. 1980. "Decisions and Data: The Transformation of Robbery Incidents into Official Robbery Statistics." Journal of Criminal Law and Criminology 71 (Winter), 622-636.

Brown, Stephen F., and Karin L. Beyeler. no date. Resist If You Can: Prevention of Sexual Assault. Denver, CO: Denver Anti-Crime Council.

Brownmiller, Susan. 1975. Against Our Will: Men, Women and Rape. New York, NY: Simon and Schuster.

Bureau of Justice Statistics. 1982. Criminal Victimization in the US, 1979-1980 Changes and 1973-80 Trends. Washington, DC: Bureau of Justice Statistics, US Department of Justice.

Conklin, John E. 1972. Robbery and the Criminal Justice System. Philadelphia, PA: Lippincott.

Cook, Philip J. 1980. "Reducing Injury and Death Rates in Robbery." Policy Analysis Winter: 21-45.

Cook, Philip J. 1976. "A Strategic Choice Analysis of Robbery." In W.G. Skogan (ed.) Sample Surveys of the Victims of Crime. Cambridge, MA: Ballinger, p. 173-188.

Curtis, Lynn. 1974. "Victim Precipitation and Violent Crime." Social Problems 31, 594-605.

Fattah, Ezzat A. 1984. "Victims' Response to Confrontational Victimization." Crime and Delinquency 30 (January), 75-89.

Federal Bureau of Investigation. yearly. Uniform Crime Report. Washington, DC: US Government Printing Office.

Feeney, Floyd, and Adrianne Weir. 1973. The Prevention and Control of Robbery, Vol. 1: The Robbery Setting, the Actors, and Some Issues. Davis, CA: Center on Administration of Criminal Justice, University of California-Davis, April.

Felson Richard B., and Henry J. Steadman. 1983. "Situational Factors in Disputes Leading to Criminal Violence." Criminology 21 (February), 59-74.

Garofalo, James, and David Clark. 1984. "Victim-Offender Interactions in Personal Robberies." Unpublished paper presented at the American Society of Criminology, Cincinnati, November.

Garofalo, James, and Michael J. Hindelang. 1977. An Introduction to the National Crime Survey. Washington, DC: National Criminal Justice Information and Statistics Service, US Department of Justice.

Hentig, Hans von. 1948. The Criminal and His Victim. New Haven CT: Yale University Press.

Hepburn, John R. 1973. "Violent Behavior in Interpersonal Relationships." Sociological Quarterly 14, 419-429.

Hindelang, Michael J., Michael R. Gottfredson and James Garofalo. 1978. Victims of Personal Crime. Cambridge, MA: Ballinger.

Hochstedler, Ellen. 1981. Crime Against the Elderly in 26 Cities. Washington, DC: Bureau of Justice Statistics, US Department of Justice.

Hough, Mike. 1983. "Victims of Violent Crime: Findings from the British Crime Survey." Paper presented at the 33rd International Course in Criminology, Vancouver, BC (March).

Kerlinger, Fredrick, and Elazar Pedhazur. 1973. Multiple Regression Analysis in Behavioral Research. New York NY: Holt Rinehart and Winston.

Laub, John. 1981. "Ecological Considerations in Victim Reporting to the Police." Journal of Criminal Justice 19 (No. 4), 419-430.

Lentzner, Harold, and Marshall DeBerry. 1980. Intimate Victims. Washington, DC: Bureau of Justice Statistics, US Department of Justice.

Luckenbill, D. F. 1980. "Patterns of Force in Robbery." Deviant Behavior 1, 361-378.

Luckenbill, D. F. 1977. "Criminal Homicide as a Situated Transaction." Social Problems 25 (No. 2), 176-186.

Martin, Elizabeth. 1984. Procedural History of Changes in NCS Instruments, Interviewing Procedures, and Definitions. Washington, DC: Bureau of Social Science Research, Inc.

McDermott, M. Joan. 1979. Rape Victimization in 26 American Cities. Washington, DC: Bureau of Justice Statistics, US Department of Justice.

McDonald, John M. 1971. Rape: Offenders and Their Victims. Springfield, IL: Charles C. Thomas.

McDonald, John M. 1975. Armed Robbery: Offenders and Their Victims. Springfield, IL: Charles C. Thomas.

Mendelsohn, Benjamin. 1963. "The Origin of Doctrine in Victimology," Excerpta Criminologica 3, 239-244.

Pittman, David., and William Handy. 1964. "Patterns in Criminal Aggravated Assault." Journal of Criminal Law, Criminology and Police Science 55, 462-470.

Pokorny Alex. D. 1965. "Human Violence: A Comparison of Homicide, Aggravated Assault, Suicide, and Attempted Suicide." Journal of Criminal Law, Criminology and Police Science 56, 488-497.

Schafer, Stephen. 1977. Victimology: The Victim and His Criminal. Reston, VA: Reston Publishing Co.

Skogan, Wesley G. 1981. Issues in the Measurement of Victimization. Washington, DC: Bureau of Justice Statistics, US Department of Justice.

Skogan, Wesley G. 1978. "Weapon Use in Robbery." In James Inciardi and Anne Pottieger (eds.) Violent Crime: Historical and Contemporary Issues. Beverly Hills, CA: Sage Publications, pp. 61-73.

Skogan, Wesley G. 1976. "Citizen Reporting of Crime: Some National Panel Data." Criminology 13 (February), 535-549.

Sparks, Richard F. 1981. "Surveys of Victimization: An Optimistic Assessment." In Michael Tonry and Norval Morris (eds.) Crime and Justice: An Annual Review. Chicago, IL: University of Chicago press, pp. 1-58.

Van Dijk, Jan J. M., and Carl H. D. Steinmetz. 1982. Victimization Surveys: Beyond Measuring the Volume of Crime. Den Hage: Research and Documentation Center, Ministry of Justice.

Von Hentig, Hans. 1948. The Criminal and His Victim. New Haven, CT: Yale University Press.

Wolfgang, Marvin E. 1982. "Victim Intimidation, Resistance and Injury: A Study of Robbery." Paper presented at the Fourth International Symposium on Victimology, Tokyo, Japan, 25 August.

Wolfgang, Marvin E. 1978. "National Survey of Crime Severity." Philadelphia, PA: University of Pennsylvania (grant report to the National Criminal Justice Information and Statistics Service, US Department of Justice).

Wolfgang, Marvin E. 1958. Patterns in Criminal Homicide. Philadelphia, PA: University of Pennsylvania Press.

Wolfgang, Marvin E. 1957. "Victim-Precipitated Homicide." Journal of Criminal Law, Criminology and Police Science 48, 1-11.

APPENDIX A
STATISTICAL APPENDIX

There are many techniques of multivariate analysis to choose from for examining data from the NCS. Among these are discriminant analysis, logistic regression, path analysis, loglinear analysis, and simple (OLS) multiple regression. Regression was chosen because it allows for the simultaneous entry of many variables in an equation in stepped (but not, in this case, "stepwise") fashion. It allows for the definition of dependent and independent variables, here our "outcomes," and it does not require the specification of a complex (if dubious) causal ordering of the independent variables. The results of multiple regression are easily interpretable, as they are used to examine the independent significance of various independent variables and the unique contribution of blocks of indicators.

SPSS-X was used to estimate the regression equations presented in Tables 1-5. The techniques employed were quite standard with these exceptions:

1. Correlation coefficients were calculated using all observations available for each pair of variables (pairwise deletion) rather than deleting cases if observations were missing on any of the many indicators in each equation (listwise deletion). Pairwise deletion was used because most missing data were for one or two offender characteristics only, and the inability of targets to estimate (for example) offender age was not critical to the enterprise.

2. Most independent variables were categorical, reflecting the "present or absent" nature of many of the phenomena, the simplicity of the collection and coding of some NCS data, and analytic decisions based upon the skewed distribution of some indicators.

All of our major dependent variables --attack, injury, loss-- also were dichotomous. We are interested in understanding the probability of occurrence of those events, and employed as our measure of that probability their presence or absence in each individual case. There are two potential problems with this approach. First, the resulting regression equations displayed in Tables 1-5 may (and doubtless would) generate predicted outcome values for some individuals which lie outside the possible (0,1) interval. This would happen more frequently for outcome measures (such as "injured" among rape victims who are attacked) which are skewed toward the zero or one boundary; it is much less likely to happen often for outcome measures (such as "attacked" among

assault targets) which are more normally distributed.

Second, using a binary (0,1) dependent measure in OLS can produce estimates of parameters which are heteroscedastic; that is, the variance of the estimated error terms for the regression coefficients for the independent variables (and the constant) are not constant for all cases. Errors for cases for which the estimated outcome score is close to zero or one will have relatively low variances, while errors for cases for which the estimated outcome value is close to the midrange will have higher variances. This results in technically "inefficient" parameter estimates.

The first problem is not bothersome because we are uninterested in generating and using estimated probability values; rather, we used multiple regression to "trim" insignificant independent variables from consideration and to discover which appear to be independently related to the outcome measures. The second problem is not bothersome because "close calls" as to significance were not important in this analysis. The heteroscedasticity of errors problem affects judgements about the potential significance of independent variables when their significance levels lie in the .03-.08 range, so we are liberal in accepting as "important" indicators which just approached conventional cutoff values for significance in regression.

3. It is standard practice to include tests of significance for each independent variable in regression. Given the large number of observations (targets) on which these analyses are based, that seemed irrelevant here. Many very small regression coefficients are statistically significant. Only in the case of rape did we examine tests of significance, and those tests are presented in the tables. In the rape columns, as in others, we paid attention to coefficients with a beta value of about +/- .08.

4. It is also standard practice when presenting multiple regression findings to include the correlation matrix and other information in an appendix. In this case that would be a large appendix. Rather, we will send matrices on request, or supply the details necessary to replicate these analyses using NCS data available from the Interuniversity Consortium on Political Research's Criminal Justice data archive.

APPENDIX B
LIST OF APPENDIX TABLES

TABLE 1

Relationship Between Targets and Offenders

	Rape	Assault	Robbery
Percent of NCS Incidents by:			
Strangers	60	41	72
Know by sight	7	12	7
Casual acquaintance	14	18	8
Well known	13	21	10
Related	6	9	4
Percent of Incidents In Analysis	60	41	72
Unweighted number in Analysis	500	9434	3932
Percent of Incidents by strangers for targets who were:			
Male	--	47	74
Female	60	30	65
White	60	43	71
Black	59	27	72
Under $10,000	59	36	71
Over $20,000	72	49	70
Under 20	57	35	56
20-29	62	46	73
30-59	59	40	80
60 and older	59	48	91

Note: This and other tables completely excludes incidents in which victims are police officers or security guard, and males reporting rape victimization.

TABLE 2

Characteristics of Targets

	Rape	Assault	Robbery
Percent White	81	91	76
Percent Black	18	8	23
Percent other Races	1	1	1
Percent Male	--	72	71
Percent under 20	35	31	25
Percent over 60	2	4	13
Percent male and under 26 years of age	--	42	33
Percent family income			
under $10,000	62	43	56
$10,000-20,000	24	37	31
above $20,000	14	20	13
Number of victims in the incident			
one	96	84	91
two	4	11	6
three	1	2	2
four or more	0	2	1

TABLE 3

Characteristics of Offenders

	Rape	Assault	Robbery
Percent White	54	67	30
Percent Black	40	27	61
Percent other Races	4	4	5
Percent Mixed Groups	2	2	4
Percent Male	98	90	94
Percent under 21[a]	23	42	57
Percent Male and under 21	22	37	54
Number of offenders			
one	79	62	41
two	11	15	32
three	6	9	16
four or more	4	14	11

[a] of those indicating an age; there were a substantial number of "don't know" responses to this item.

TABLE 4

Joint Characteristics of Targets and Offenders

	Rape	Assault	Robbery
Targets Black			
Percent offenders Black	81	66	86
Percent offenders White	15	30	8
Targets White			
Percent offenders Black	32	24	54
Percent offenders White	61	70	36
One Target			
Percent one offender	80	65	42
Percent two or three offender	15	23	48
Percent four or more offenders	5	12	10
More than one Target			
Percent one offenders	53	50	30
Percent two or three offenders	37	28	49
Percent four or more offenders	10	22	21

Table 5

Characteristics of Target Residences Incident Settings

	Rape	Assault	Robbery
Size of place of residence			
Under 50,000	46	52	34
50,000 - 249,999	20	21	17
250,000 - 999,999	20	17	21
One Million and larger	14	10	28
Type of Location			
At home	20	4	7
Near home	8	7	8
Commercial establishment	6	20	13
In school	2	4	2
Street-parking lot	52	55	65
Office	1	1	1
Other	12	10	5
Time			
Day	34	43	41
Night	66	57	59

Table 6

Characteristics of Targets and Incidents
by Size of Place of Residence

	Rape	Assault	Robbery
Percent targets female			
under 50,000	--	25	26
50-249,999	--	27	28
250,000-999,999	--	29	32
one million or more	--	34	32
Percent targets elderly[a]			
under 50,000	2	3	8
50-249,999	1	4	14
250,000-999,999	4	5	15
one million or more	4	9	16
Percent by gangs			
under 50,000	5	13	10
50-249,999	3	15	12
250,000-999,999	2	14	10
one million or more	6	16	13
Percent with guns			
under 50,000	7	11	24
50-249,999	14	11	23
250,000-999,999	21	13	24
one million or more	36	13	25
Percent with knives			
under 50,000	11	9	23
50-249,999	15	10	21
250,000-999,999	14	9	22
one million or more	27	13	29
Percent offenders under 21			
under 50,000	20	41	53
50-249,999	30	43	58
250,000-999,999	20	43	54
one million or more	27	43	63

[a] elderly is age 60 and older

Table 7

Weapon Presence by Characteristics of Targets and Offenders

	Rape	Assault	Robbery
Type of weapon[a]			
None	65	62	40
Other	5	16	12
Knife	14	10	24
Gun	16	12	24
	100%	100%	100%
Percent Shot[b]	1	3	3
Percent Knifed[b]	1	2	4
Percent with gun present when targets are:			
Male	--	12	26
Female	16	10	20
Alone	14	10	22
Two or more	26	21	43
Under 20	6	9	14
20-29	19	12	28
30-59	21	13	29
60 and older	()	11	20
White	10	10	20
Black	36	24	38

[a] when multiple weapons are present cases are coded in this order, with gun cases being "highest"

[b] this is the percent describing a gun or knife injury and the presence of a knife or gun on the scene

() less than ten cases

Table 7

Weapon Presence by Characteristics of Targets and Offenders
(Continued)

	Rape	Assault	Robbery
Percent with no weapon when targets are:			
Male	--	60	50
Female	65	71	36
Alone	66	65	41
Two or more	53	51	30
Under 20	74	65	53
20-29	63	60	33
30-59	53	62	34
60 and older	()	67	47
White	71	64	44
Black	39	48	29

Percent with gun when offenders are:	Rape	Assault	Robbery
Under 21	12	7	13
21 and over	14	13	29
White	9	11	18
Black	24	13	28
Alone	14	11	21
Two or three	20	14	27
Four or more	12	11	20

Table 7

Weapon Presence by Characteristics of Targets and Offenders
(Continued)

Percent with no weapon when offenders are:			
Under 21	70	67	52
21 and over	65	63	33
White	73	64	49
Black	55	60	37
Alone	66	65	43
Two or three	60	55	38
Four or more	59	60	38

Table 8

Types of Physical Attack

	Rape	Assault	Robbery
Percent who were:			
Raped or attempted	30	--	--
Shot, knifed or hit with object	3	8	12
Hit by thrown object	0	3	1
Hit, slapped or knocked down	26	23	30
Grabbed, held or tripped	34	16	26
Other attack	9	6	6
Percent who were attacked in any way[a]	64	46	52

[a] does not total detailed categories because of multiple responses

Table 9

Risk of Attack by Target, Offender and Incident Characteristics

	Rape	Assault	Robbery
Percent attacked when targets are:			
Male	--	46	51
Female	65	44	55
Alone	65	46	54
Two or more	()	42	39
Under 20	65	55	51
20-29	64	45	49
30-59	63	36	52
60 and older	64	37	59
White	64	46	53
Black	66	47	52
Males under 26	--	52	52
All others	--	42	52

() Less than ten cases

Table 9

Risk of Attack by Target, Offender and Incident Characteristics
(Continued)

	Rape	Assault	Robbery
Percent attacked when offenders are:			
Under 21	55	56	55
21 and older	66	39	47
White	61	46	45
Black	68	45	50
Lone	66	43	47
Two or three	63	46	55
Four +	43	56	60
No weapon	61	52	70
Other weapon	83	56	62
Knife	77	35	38
Gun	71	19	26
Percent attacked when incident is:			
Daytime	50	42	52
Nighttime	71	49	53
Inside	69	42	46
Outside	60	48	54
Interracial	64	46	51
Intraracial	64	46	54

Table 10

Types of Target Resistance

	Rape	Assault	Robbery
Percent Forceful Resistance			
Physical	31	22	23
Own Weapon	2	2	2
Any of Above	32	24	25
Percent Non-forceful Resistance			
Ran away; left scene	26	27	16
Reasoned, argued, threatened	25	16	10
Screamed and yelled	40	10	13
Other	11	11	9
Any of above	73	54	39
Percent both forceful and non-forceful	22	7	9
Percent no Resistance[a]	17	29	46
(number of cases)	(503)	(8871)	(4087)

[a] does not total 100 percent because several forms of resistance could be mentioned

Table 11

Risk of Attack by Type of Resistance

	Rape	Assault	Robbery
I. Percent who were attacked, of those who were:			
Forceful Resisters	76	74	68
Non-Forceful Resisters	51	31	48
Resist Both Ways	88	72	69
Non-Resisters	66	47	46
II. Of those attacked, percent who were:			
Forceful Resisters	14	27	20
Non-Forceful Resisters	40	32	27
Resist Both Ways	29	11	12
Non-Resisters	18	29	40
TOTAL[a]	101%	99%	99%

[a] may not total 100% due to rounding errors

Table 12

Target Resistance by Target, Offender and Incident Characteristics

	Rape	Assault	Robbery
Resistance by:			
Males			
forceful/both	--	29	29
non-forceful	--	44	26
none	--	28	45
Females			
forceful/both	32	13	16
non-forceful	51	58	38
none	17	30	46
Non-Elderly			
forceful/both	33	25	27
non-forceful	50	47	30
none	17	28	43
Elderly[a]			
forceful/both	31	10	13
non-forceful	51	48	27
none	18	42	60

[a] Elderly respondents are those age 60 and older

Table 12

Target Resistance by Target, Offender and Incident Characteristics (Continued)

	Rape	Assault	Robbery
Whites			
forceful/both	33	24	27
non-forceful	52	48	32
none	15	28	42
Blacks			
forceful/both	29	24	19
non-forceful	41	44	22
none	29	32	58
Gun Present			
forceful/both	19	16	11
non-forceful	45	52	22
none	36	32	67
Knives Present			
forceful/both	28	35	29
non-forceful	51	46	26
none	21	19	45
Other Weapons Present			
forceful/both	33	34	38
non-forceful	56	43	31
none	11	23	31
No Weapon Present			
forceful/both	38	27	30
non-forceful	51	44	35
none	11	29	35

Table 12

Target Resistance by Target, Offender and Incident Characteristics (Continued)

	Rape	Assault	Robbery
Targets Alone			
forceful/both	33	24	25
non-forceful	50	47	30
none	17	29	45
Targets Not Alone			
forceful/both	()	24	17
non-forceful	59	59	30
none	()	26	53
Incident Inside			
forceful/both	33	26	23
non-forceful	42	44	29
none	24	30	49
Incident Outside			
forceful/both	33	23	26
non-forceful	56	49	30
none	12	28	44

() less than ten cases

Table 12

Target Resistance by Target, Offender and Incident Characteristics (Continued)

	Rape	Assault	Robbery
Target not Attacked			
forceful/both	15	12	17
non-forceful	68	60	32
none	16	28	51
Target Attacked			
forceful/both	43	38	32
non-forceful	40	32	27
none	18	29	40
One or two Offenders			
forceful/both	34	24	24
non-forceful	49	48	30
none	17	28	46
Four or more Offenders			
forceful/both	9	23	29
non-forceful	60	46	33
none	30	30	38

Table 13

Risk of Attack by Type of Resistance and Type of Weapon

CELLS ARE PERCENT REPORTING AN ATTACK

RAPE

Type of Weapon	Type of Resistance: None	Non-forceful	Forceful	Both
None	53	46	71	91
Other	()	71	()	()
Knife	83	69	()	92
Gun	78	62	()	()

() less than ten cases

ASSAULT

Type of Weapon	Type of Resistance: None	Non-forceful	Forceful	Both
None	51	38	81	82
Other	69	37	72	66
Knife	24	23	59	60
Gun	23	12	39	49

ROBBERY

Type of Weapon	Type of Resistance: None	Non-forceful	Forceful	Both
None	69	63	79	78
Other	69	46	64	77
Knife	30	31	54	64
Gun	21	27	60	51

Table 14

TYPES OF INJURY REPORTED

	Rape	Assault	Robbery
Injury for All Targets[a]			
Knife or gunshot wound	1	1	2
Broken bones or teeth knocked out	2	2	3
Internal injuries or knocked out	4	1	3
Bruises, black eye, cuts, etc.	30	20	27
Other injury	8	4	5
No injury reported[b]	63	76	68
Of victims Who Were Attacked[a]			
Knife or gunshot wound	1	4	5
Broken bones or teeth knocked out	3	5	6
Internal injuries or knocked out	6	3	6
Bruises, black eye, cuts, etc.	51	57	59
Other injury	13	11	12
No injury reported		57	

[a]Note that multiple injuries could be described

[b]Other than rape

Table 15

Extent of Medical Care Required

	Rape	Assault	Robbery
Medical Care for All Targets			
None	53	76	68
None needing medical care	25	16	20
Simple medical care	18	7	10
Hospital - stay overnight	3	1	3
For Victims Who Were Attacked			
None	26	47	38
None needing medical care	40	34	38
Simple medical care	29	16	18
Hospital - stay overnight	5	3	6

Table 16

Risk of Injury by Type of Resistance

	Rape	Assault	Robbery
Injury for all targets:			
Percent injured[a]			
No resistance	29	26	29
Nonforceful resistance	27	13	28
Forceful resistance	48	44	40
Both types of resistance	58	44	48
Injury for targets who were attacked:			
Percent injured[a]			
No resistance	44	57	62
Nonforceful resistance	55	41	59
Forceful resistance	67	59	59
Both types of resistance	66	62	69
Percent medical injury[b]			
No resistance	52	25	26
Nonforceful resistance	34	14	23
Forceful resistance	13	16	19
Both types of resistance	33	24	31

[a] includes only injury other than rape
[b] Medical injury is that requiring medical care of any type

Table 17
Risk of Injury by Characteristics of Targets and Offenders
(Those Attacked Only)

Percent Injured, of Targets Who Were Attacked	Rape	Assault	Robbery
Percent Injured			
Non elderly	74	53	61
Elderly	()	44	66
Male	--	57	62
Female	76	43	62
White	74	53	62
Black	75	55	62
Target alone	74	53	62
Target not alone	()	54	60
One offender	74	50	56
2-3 offenders	75	59	64
Four or more offenders	()	55	70
No weapon	67	44	51
Other weapon	88	77	85
Knife	66	73	66
Gun	95	62	70
Daytime	61	46	54
Night time	79	58	68
Inside	80	54	60
Outside	69	52	62

() less than ten cases

Table 18

Risk of Injury by Resistance and Type of Weapon (Those Attacked Only)

CELLS ARE PERCENT REPORTING AN INJURY

RAPE

Type of Weapon	Type of Resistance			
	None	Non-forceful	Forceful	Both
None	79	64	70	76
Other	()	()	()	()
Knife	100	73	()	80
Gun	100	87	()	()

() less than ten cases

ASSAULT

Type of Weapon	Type of Resistance			
	None	Non-forceful	Forceful	Both
None	44	32	54	54
Other	84	68	77	84
Knife	78	71	72	72
Gun	72	52	63	51

ROBBERY

Type of Weapon	Type of Resistance			
	None	Non-forceful	Forceful	Both
None	50	50	46	66
Other	86	81	85	87
Knife	62	71	67	65
Gun	68	75	76	61

Table 19

Financial Loss in Robbery Incidents

	Robbery
Percent Reporting Loss	60
Percent Loss by Type of Attack	
not attacked	56
attacked	62
Percent Loss by Type of Resistance	
forceful	35
non-forceful	41
both	37
none	85
Mean (and Median) Dollar Loss[a] by Type of Resistance	
forceful	$105 ($1)
non-forceful	$ 80 ($1)
both	$ 59 ($1)
none	$208 ($30)
Percent Loss by Weapon Type	
none	52
other	51
knife	58
gun	78

[a] Note this includes losses totaling zero, which is the most common value

Table 20

Financial Loss in Robbery by Weapon Type and Type of Resistance

CELLS ARE PERCENT REPORTING FINANCIAL LOSS

	Weapon Type			
Resistance	None	Other	Knife	Gun
None	78	87	86	90
Non-forceful	38	42	40	53
Forceful	40	23	26	62
Both	35	42	37	40

Table 21

Injury and Completion in Rape Incidents

Percent Who Were:	Of All Targets Attacked	Of All Targets
Not injured	26	52
Injury only	27	18
Raped only	19	12
Rape & Injury	28	18
	100%	99%
Extent of injury		
None	27	53
No medical needed	40	25
Simple medical	9	6
Emergency room	20	13
Hospital overnight sta	5	3
	100%	100%

	All Cases Percent Injury - raped	All Cases Percent Injury - other only
No resistance	59	4
Nonforceful resistance	21	16
Forceful resistance	26	33
Both types of resistance	40	29

Table 22

Rape Outcomes in Rape Incidents by Weapon Type and Type of Resistance

CELLS ARE PERCENT RAPED

		Type of Weapon			
		None	Other	Knife	Gun
Type of Resistance	None	46	66	71	81
	Nonforceful	17	13	21	38
	Forceful	16	()	()	()
	Both	34	()	()	()

() Less that ten cases