Robbery in the United States:
An Analysis of Recent Trends and Patterns

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September 1983

U.S. Department of Justice
National Institute of Justice

This project was supported by Contract Number 1-0229-J-OJARS, awarded to Philip J. Cook, Institute of Policy Sciences and Public Affairs, Duke University, by the National Institute of Justice, U. S. Department of Justice, under the Omnibus Crime Control and Safe Streets Act of 1968, as amended. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the U. S. Department of Justice.

Preface and Acknowledgements

The original purpose of this report was to serve as background to a recommended agenda for federally financed research in robbery. It is of some interest in its own right, however, as a summary of patterns and trends in robbery.

Lois Mock of the National Institute of Justice provided a number of useful suggestions on revising the first draft.

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Abstract

<bbery is defined as theft or attempted theft by force or hreat of violence. Robbery is perhaps the most impor- :omponent of the urban crime problem; James Q. Wilson it "the most costly of all common crimes," due to its high chic and communal costs." This report describes recent ^ s^ant* P*4*61*15 m robbery and presents a framework for yzing the potential effects of a variety of policy •ventions.

few of the principal findings are these:

National Crime Survey (NCS) data and police data reported y the FBI both indicate that robbery rates peaked in 197 5 nd, after a brief decline, were climbing again by 1979. *olice classified a roughly constant 10 percent of all :riminal homicides as robbery murders between 1976 and 1981: it is possible, however, that the actual percentage ncreased during this period since the fraction of homicides :hat could not be classified by the police doubled during this period (to 18 percent).

The robbery problem isJiighly concentrate in urban areas: orie-third of all robberies occurs:*, v the six largest cities in 1981.

- A recent survey of crime in the nation's junior and senior high schools estimated that there were one million robberies per year in these schools. This estimate exceeds the corresponding NCS estimate by a factor of 30.
- Direct economic losses to robbery victims (not including murders) are only about $.33 billion. This number very much underestimates the total social cost of robbery, however.
- The number of bank robberies has been growing with extraordinary rapidity during the last 25 years. The 56 percent increase between 1975 and 1980 represents its *slowest* rate of growth since 1957.
- A recent survey of prison inmates found that among those who reported committing robberies in the three years prior to their incarceration, the median annual commission rate was 4.8 and th<- 90th percentile rate was 86. Most active robbers commit a variety of other crimes as well.

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1. Introduction

Robbery is a particularly important and interesting type of crime. It is important because of the psychological and physical trauma suffered by the million victims each year, and because of the fear engendered by the threat of robbery; this threat causes changes in lifestyle that are destructive to social hie and the sense of community in urban areas. Robbery is particularly interesting to criminologists because ft is the only oncofseventraditkmalFBIIrKiexaTroesthatisbothaproperty crime and a violent crime.* It shares with other crimes of property the priinary_n^vatkMis (money), and the fact that in most cases the perpetrators do not know their victims. It shares with other types of violent crime a fairly high probability of victim injury or even death, the face-to-face encotmter between perpetrator and victim, and the extreme overrepresentation of males and blacks among perpetrators (and, to a lesser extent, among victims).

Most of what we can claim to "know" about robbery is descriptive information on trends and patterns. New sources of data developed during the 1970's, particularly the National Crime Surveys, have greatly enhanced our ability to create detailed descriptions of crime and the system's response to crime. This report uses these and other data as the basis for a fairly complete description of robbery trends and patterns. In those instances where there are two alternative basic sources of data on the same variable, I present both in a manner that facilitates comparison.

Developing an empirical basis for criminal justice system policy with respect to robbery requires more than descriptive information; unfortunately, there is no automatic connection between our ability to describe or diagnose a problem, and our ability to intervene effectively to mitigate the problem. Needless to say, our ability to provide reliable descriptive information on robbery is more advanced than our ability to assess the potential effectiveness of policy interventions. The last chapter of this report suggests a useful framework for understanding the robbery process from a pok«-y perspective, and summarizes research that is germane to several specific policy options.

•The Cranes included in this **Index are munter** and **non-negligent homicide, rape,** robbery, aggravated assault, burglary larceny, and auto theft. An **eighth crime, arson, has recently been added to this Index.**

2. Definitions and Recent Trends in the Robbery Rate

Definitions

* Robbery is defined as theft or attempted theft, in a direct confrontation with the victim, by force or the threat of force or violence. The vernacular expressions for various types of robbery give some notion of the range of events included in this crime category: muggings, yokings,'holdups, stickups, and so forth. A child "rolled" for his school lunch money and a bank teller confronted by a gang of shotgun-toting bandits liare both robbery victims. While victims of burglary often say they have been "robbed," such incidents are not in fact classified as robbery unless the burglar actually encounters someone in the building and uses force or threatens them as a means to completing the theft. Purse snatching and pocket-picking incidents are not classified as robbery unless the victim resists and is overpowered.

Clearly robbery is a heterogeneous category of crime. Subsequent sections discuss several typologies of robbery and present statistical information on the detailed structure of the robbery problem. First, however, it is of interest to consider trends in the overall rate of robbery.

Recent Trends in the Robbery Rate

The National Crime Survey (NCS, 1980)* estimated that there were about 1.2 million noncommercial robberies in the United States in 1980, or 6.5 per thousand residents aged 12 and over. The NCS estimated there were 279,000 commercial robberies in 1976, the last year the commercial survey was conducted (NCS, 1976); this number corresponds to a rate of 38.S per 1000 commercial establishments.

The National Crime Survey has published estimates of na-

Table 1.

Rates of Robbery, Burglary* and Criminal Homicide, 1960-1980 (crimes known to the police)

	1960	1965	1970	1975	1980
			Rate per 100,000		
Robbery	59.9	71.2	171.4	218.2	243.5
Burglary	502.1	635.2	1071.2	1525.9	1668.2
Criminal Homicide	5.0	5.1	7.8	9.6	10.2
			Index (1970 = IOO.O)		
Robbery	35	42	100	127	142
Burglary	47	61	100	142	156
Criminal Homicide	64	65	100	123	131

Source: UCR (1960, 1965,1970, 1975, and 1980)

*In this report, references to specific sources are made in the text using this parenthetical form. In most cases the reference will consist of the author's last name foUowed by the date of publication: the complete reference is given in the bibliography. References to the annual reports of the Uniform Crime Reports (the PBrs *Crime In the United States)* an-i the National Crime Survey are referenced with the abbreviations "UCR" and "NCS" respectively, foUowed by the year to which their data refer; thus, "(NCS, 1980)" indicates the report of the National Crime Survey results for 1980.

tional crime rates since 1973. Longer trends must be investigated by analyzing statistics on crimes known to the jlice, published in the FBI's Uniform Crime Reports (UCR). Data on criminal homicide from this source are quite accurate; for most other crimes, the UCR's data understate the true volume of incidents because a large fraction of these crimes is not reported to the police.* However, proportional intertemporal changes in these crime rates calculated from UCR may be tolerably accurate.

Table 1 presents UCR robbery rates for 1960,1965,1970, 1975, and 1980. Burglary and criminal homicide rates are also presented, for comparison. The second part of this table presents the same statistics "normed" on 1970; that is, each entry shows the robbery, burglary, or homicide rate for a particiular year as a percentage of the corresponding crime rate in 1970.

The trends reflected in this table are familiar to every student of crime. The U.S. suffered massive increases in Hie rates of both property and violent crimes between 1965 and 1975. Between 1975 and 1979, crime rates were roughly constant. Robbery was the fastest growing Index crime in the late 1960s, increasing by 140 percent between 1965 and 1970. Burglary and homicide rates increased by approximately 60 percent during this period. Rates of growth slowed somewhat during the early 1970's; between 1970 and 1975, burglary rates increased 42 percent, while robbery and homicide rates each increased by roughly 25 percent.

Annual data on robbery is available from both the UCR and the National Crime Survey for 1973-1980. Table 2 presents these data. Despite the fact that these two robbery counts are estimated from entirely different sources, and the fact that the NCS excludes commercial robberies, the two series exhibit similar patterns between 1975 and 1979;* both show a 12 percent decline between 1975 and 1978, and an increase in 1979. There is a *mCu::* hrge discrepancy in the two series in the 1973-75 interval, however, and also between 1979 and 1980.

(It should be noted that the two series would not be in exact agreement even if both gave unbiased estimates of year-to-year changes in robbery rate; the standard error of the NCS estimate is 5 percent, so there is a good deal of random "noise" included in the NCS robbery series.)

Summary

Reported robbery rates tripled between 1965 and 1975, and began growing again in 1978 after a brief decline. Year-to-year changes in the UCR and NCS series have usually been in the same direction between 1973 and 1980, but for the period as a whole there is substantial disagreement; the UCR indicates a 24 percent increase in the. obbery rate during these 8 years, whereas the NCS indicates a slight reduction.

Table 2.

Annual Robbery Rates, 1973-1980

	1973	1974	1975	1976	1977	1978	1979	1980	1981
Rat* Par 100,000									
UCR	182.6	208.8	218.2	195.8	187.1	191.3	212.1	243.5	250.6
NCS	528.0	567.2	538.2	517.6	500.6	476.0	507.0	523.2	n.a.
Index (1975 a 100)									
UCR	84	96	100	**90**	86	88	97	112	115
NCS i .	98	105	100	**96**	93	88	94	**97**	n.a.

Note: The Uniform Crime Reports (URC) Include commercial robberies In their total, whereas the National Crime Survey (NCS) does not. NCS also excludes victims aged less than 12 years old. However, the same denominators were used In calculating the 2 rates in each year.

Source: NCR data are taken from the Bureau of Justice Statistics* National Crime Report SD-NCS-N-21, NCJ-80838, issued July, 1982. U.S. population figures used to calculate the NCS rates were taken from various issues of the UCR, to make them as comparable as possible with UCR rates.

•Respondents in the National Crime Survey claimed to have reported 56.6 percent of robberies in 1980. However, the true reporting rate may be a good deal lower comparison of the noncommercial robbery counts from the UCR and NCS indicates that the former is only about 30 percent of the latter. Of course, part of the disparity may be the result of the way robbery reports by citizens are handled by local police departments.

•or an extensive discussion of the National Crime Survey and related victimization surveys, see Penick (1976) and Fienberg (1980). Eck and Rkck> 0979) provide a useful discussion of the relationship between victim survey and reported crime rates.

3. The Consequences of Robbery

Robbery is a property crime, in the sense that most robbers are motivated by economic gain. Judged by the value of property taken in robberies, however, robbery is not a particularly serious crime; the loss in most robberies is less than $100. It is of course the violent nature of robbery that makes it such a serious crime in the eyes of the public and the Iciiminal law. The million plus robbeiie» that occur each year result in psychological and physical trauma for hundreds of thousands of victims, and several thousand deaths. Perhaps even more important, the urban public's fear of robbery causes widespread anxiety and defensive behavior — avoiding public places at night, carrying a weapon, moving to the suburbs — that depreciate the quality of urban life. Race relations are perhaps also harmed by the urban public's fear of robbery — youthful black males commit the majority of robberies, which may cause some people to be suspicious and fearful of all members of this group (Silberman, 1979).

This section presents a statistical description of some of the more readily measured consequences of robbery, with the two objectives of characterizing the aggregate impact of robbery, and the heterogeneity of events included within this category.

Robbery Murder

Criminal homicide rates doubled between 1965 and 1974. A concomitant change occurred in the nature of homicide, with disproportionate increases in felony murders and other killings by strangers (Block and Zimring, 1973; Block, 1977; Zimring, 1977). Increases in robbery killings played an important role in these changes. In one particularly dramatic example, Zimring (1977, p. 318) found that in Detroit the number of police-classified robbery motive killings increased from 15 to 55 per year between 1962 and 1974. This type of killing is particularly frightening to the public, since it usually involves an unprovoked attack by a stranger It u> lyp^-+ly treated as murder by common law and as first degree murder by statute (Zimring, 1977, p. 331). Recent state capital punishment statutes instruct jurors and judges to treat the robbery context for a killing as an "aggravating circumstance'* that helps justify the use of the capital sanction.

Developing an accurate measure of the robbery murder rate is difficult because a large percentage of robbery murders go unsolved. The police department reports to the FBI classify homicides by motive. As shown in Table 3, about 10 percent of criminal homicides have been assigned to the "robbery" category in recent years; other homicides that in fact occurred in a robbery context may have been classified in the "suspected felony" or "unknown motives" categories. Thus at least 2160 robbery murders occurred in 1979, and the true number may have been as much as twice that large.

Table 3

Robbery and Related Murders as a Percentage of All Criminal Homicides, 1976 iind 1981

Police Classification	1976	1981
Robbery	10.3%	**10.4%**
Suspected Felony	7.0	5.5
Motive Unknown	8.5	17.8
Total Criminal Homicides*	16,605	20,053

'These numbers omit some homicides that apparently were not classified by the police agencies in their Supplemental Homicides Reports to the FBI.

Source: UCR, 1980, p. 13, and UCR, 1981, p. 12.

A conservative estimate of the likelihood that the victim will be killed in a robbery can be calculated on the assumption that all robbery murders were classified as such by the police. In 1979, there were about 4.6 police-classified robbery murders per 1000 robberies known to the police. Using the NCS estimate of the number of robberies in 1979 (augmented by the number of commercial robberies reported in the UCR) yields an estimated murder rate of about 1.5 per 1000 robberies. Thus, the probability that any one robbery victim will be killed is quite small.

Finally, it is important to note that about one-fifth of all law enforcement officers killed in the line of duty in the last decade were killed while attempting to stop a robbery or pursue a fleeing robber.

Robbery Injury and Theft Losses

While robbery always involves force or threat of violence as one element, only about one-third of victims of noncommercial robbery were actually injured in 1979 (Table 4). Only 2.6 percent of victims were injured seriously enough to require inpatient care in a hospital.

Table 4

Percent of Noncommercial Robbery Victimizations Involving Victim Injury, 1979

	Percent
Physical Injury	34.1
Hospital Care	9.7
Emergency Room Only	7.1
Inpatient Care	2.6

Source: NCS, 1979, various tables.

Cook (1976) used victimization survey data in 26 cities (collected in the early 1970s) to compute medical costs incurred by robbery victims. For all noncommercial robberies in these cities, 5.2 percent of victims incurred medical costs, which averaged $291. Only 0,5 percent incurred costs which exceeded $1000.

Based on NCS estimates for 1979,65 percent of noncommercial robberies were successful in the sense that something was stolen from the victim (Table 5). The value of the stolen items was less than S50 in 37 percent of successful robberies, and exceeded $250 in only 16.5 percent of such cases. Thus in only about 11 percent of all noncommercial robberies (including unsuccessful ones) did the theft Ins* exceed $250. By way of comparison, about 23 percent of household burglaries resulted in a theft of items valued at more than $250.

Commercial robbery losses were naturally somewhat larger. The NCS for 1976 estimated that 74 percent of commercial robberies were successful. Of these, about 14 percent resulted in a theft of less than $50, and 36 percent in a theft of more than $250. All together, then, about one quarter of all coramercial robbery attempts resulted in a theft of more than $250.

The statistics presented in this section indicate that less than 20 percent of all noncommercial robberies inflict serious economic losses and/or significant physical injury on victims.* We have no measure of the extent to which victims suffer serious psychological trauma, but a good many surely do. It is clear, in any event, that robberies differ widely in terms of the seriousness of their immediate consequences.

Table 6 presents an estimate of the total direct cost of Donlethal robbery to victims in 1978. This total of $333 million excludes any valuation of pain and psychological trauma, and makes no effort to assign an economic value to the lives of the robbery murder victims.* It also omits the cost of self-protection measures taken by individuals and businesses to protect against robbery, and the general anxiety felt by the urban public.

A more complete and theoretically valid method for estimating the social cost of robbery is to survey the population on the question of how much they would be willing to pay to eliminate robbery for one year. For example, if the 2.5 million retail trade concerns were willing to pay an average of 3200, and each of the 80 million households an average of $50, then the total value would be 4.5 billion.

Table 5

Theft Losses In Robbery

	Unsuccessful	Less than $50	$50-249	$250 or more	N.A.
Noncommercial, 1978	35%	24%	23%	11%	7%
Commercial, 1976	26%	11%	30%	26%	7%

Source: NCS, 1976 and 1979.

•Cook (1976) found that noncommercial robberies resulting in large thefts were more likely than others to also result in victim injury, and vice versa. Therefore the fraction that resulted in one or the other (or both) is less than if they were independent events.

•The estimated value of property loss for 1978, $264 million, is higher than the UCR estimate for 1978 (1181 million). Given that fewer than half of all robberies are reported to the police and recorded by the UCR, one might expect a larger difference in these two estimates. However, the likelihood that a robbery will be reported increases with the amount of money stolen; for example, essentially all of the most lucrative robberies — bank robberies — are known to the police,

Criminal Justice System Costs

A complete accounting of the costs that robbery inflicts on society must-include the cost to the criminal justice system of investigating robberies, processing defendants in the courts, and punishing convicts, A dramatic indication of the importance of robbery cases in the felony courts is the fact that 23 percent of all state prisoners (in 1974) were there on a conviction for robbery. (This statistic does not include robbery murderers.) Robbers constituted the largest category of prisoners in that year.

At the other end of the criminal justice system, robbery arrests constituted only 6.4 percent of all arrests for Index crimes (in 1981), and 6.9 percent of adult arrests for Index crimes (UCR, 1981).

There is no easy method for allocating the appropriate share of the total costs of the CJS to robbery cases, but the correct figure is on the order of several billion dollars. Supposing 75-100 thousand robbery convicts currently in prison, at an annual cost of at least SI0,000 per prisoner, yields a total of about one billion dollars just for imprisonment. The total allocatable costs of police, courts, juvenile corrections, probation and parole, etc., no doubt exceed this figure by a wide margin.

Conclusions

The total cost of robbery to society is hard to measure, since the most important dimensions are difficult to quantify. Those costs that are readily measured from victim survey results — property losses, medical costs, days lost from work — do not add up to a very impressive total. The "willingness to pay" approach would yield a more valid estimate, and probably one that would be larger by one or two orders of magnitude. Robbery may well be a $7-10 billion problem, especially when criminal justice system costs are taken into account. James Q. Wilson (1978, p. 183) asserts that robbery is "the most costly of all common crimes," due to its "psychic and communal costs."

Table 6

Direct Economic Costs of Robbery to Victims (Excluding Robbery Murder), 1978

	(millions)
Medical Expenses	**$ 36.8**
Property Loss, Noncommercial	**115.8**
Property Loss, Commercial	**148.3**
Days Lost from Work	**32.5**
	$3333

Notes:

1. **There were 1.317 million robbery victimizations In 1978, Including 1.038 million noncommercial (NCS, 1978) anO .279 million commercial (NCS, 1976). Of the latter, .207 million were successful.**
2. **Average medical expense per victimization was $19 circa 1973 (Cook, 1976), and was assumed to Increase by the rate of inflation between '373 and 1978. Thus this average was Increased oy a factor of 1,468.**
3. **The noncommercial average property loss was $76 circa 1973, (Cook, 1976) and was assumed to increase by the rate of Inflation between 1973 and 1978.**
4. **The average property loss In successful commercial robberies was assumed to be four times the average property loss in successful noncommercial robbery. The latter was $122 circa 1973 (Cook, 1976). This figure was assumed to increase by the rate of Inflation.**
5. **Days lost from work as a result of robbery was .72 million {estimated from NCS, 1978). Wages ware assumed to be $45.52 per day, based on an assumption of an 8 hour day and an average wage of $S.69/hour (Economic Report of the President, 1961).**

4. Weapon Use in Robbery

While it is natural to evaluate the seriousness of robbery by its consequences to the victim — degree of injury and financial loss — the major criminal law distinction is actually based on the robber's choice of technique. In particular, armed robbery is subject to more severe punishment than unarmed (strongarm) robbery, and a number of states have recently adopted a further distinction between gun robbery, and other armed robbery (Jones and Ray, 1981). This chapter summarizes available data on the weapon distribution in robbery, and briefly considers the question of seriousness.

Distribution by Weapon Type

The statistics in Table 7 suggest that about half of all robberies are unarmed, and only one-quarter involve firearms. There is a dramatic difference between commercial and noncommercial robbery in this respect, with half of the former involving firearms, and only one-sixth of the latter. The last column of this table reports the UCR tabulation of the weapons distribution in robbery. It would appear from the considerable differences between the UCR distribution and the survey based distribution that gun robberies are much more likely to be reported to the police than other types of robbery.

Table 8 displays weapon breakdown for every year that is given in the UCR. It appears that the relative frequency of gun use in robbery increased between 1967 and 1975 (from 36 percent to 45 percent) and has declined slightly since then.

Seriousness and Weapon Type

A recent survey of 900 assistant prosecutors found that they perceived gun robbery as substantially more serious than robbery with a blunt object or physical force (Roth, 1978). These judgments receive support from several empirical studies. First, the likelihood that a robbery will result in the victim's death is closely related to the lethality of the robber's weapon; using victimization survey data from eight cities on robbery, Cook (1980) estimated that the fatality rate in robberies ranged from 9.0/1000 from gun robberies, 1.7/1000 for other armed robberies, and .8/1000 for unarmed robberies. Furthermore, a cross section multivariate regression analysis of robbery murder in SO cities (Cook, 1979) found that the fraction of robberies committed with a gun is a major determinant of the

Table 7

Weapons Used by Robbery Offenders

	Noncommercial* NCS, 1979	Commercial NCS, 1976	Total* Victim Survey Est.	Total UCR (1978)
Unarmed	47%	35%	45%	38%
Firearm	15%	52%	23%	41%
Knife	17%	7%	15%	13%
Other	13%	6%	12%	9%

Source: NCS, 1976 and 1979.

Notes:

a. The weapon type was unknown in 5.5 percent of the armed cases. In constructing the table, it was assumed that these cases were distributed among weapon types in proportion to the distribution of otter armed cases,

b. It was assumed that 20 percent of all robberies were against commercial targets; this assumption is based on the assumption of 279,000 commercial robberies (NCS, 1976) and 1,116,000 noncommercial (NCS, 1979). Combining statistics from these two years is reasonable, since the overall robbery rate did not change much during this period.

robbery murder rate. It is quite reasonable, then, to suppose 'hat guns are intrinsically more dangerous than other robbery weapons (Block, 1977; Zimring, 1977).

Gun robberies also tend to be more serious in the sense that they are more likely to be successful, and the 'take" is larger on the average if successful. Unarmed robberies have the lowest chance of success, and the smallest "take" if successful (Cook, 1976, p. 182), when compared with robberies involving other weapons.

One set of results tends to confuse the relationship between weapon lethality and robbery seriousness; a number of studies (Conklin, 1972; Cook, 1976; Skogan, 1978; Cook, 1980) have found that the likelihood of victim injury is related *aversely* to the lethality of the weapon. It is unusual for the victim to be physically attacked in a gun robbery, while most unarmed robberies include such an attack. If there is an attack, however, the likelihood of serious injury or death increases with the lethality of the weapon.

Summary

Gun robberies are more serious than others in the sense that they are more likely to result in the victim's death. The fraction of robberies committed with guns is only about one-quarter (according to NSC data) or as much as 40 percent (UCR data). It would appear that this fraction peaked in 1975 and declined slightly thereafter.

Table 8

Trends In Robbery Weapon Distribution, 1967-1981

	1967"	1974	1975	1976	1977	1978	1979	1980	1981
Unarmed	42.2%	34.1	35.0	36.5	36.7	37.5	37.7	37.8	37.9
Firearm	36.3	**44.7**	**44.8**	42.7	41.6	40.8	39.7	40.3	40.1
Knife	13.8	13.1	12.4	13.0	13.2	12.7	13.2	12.9	13.1
Other	7.5	8.1	**7.8**	7.8	8.5	9.0	**9.4**	9.1	8.9

Source: UCR, 1967 and 1974-1981.

•The 1967 data are based on a speclai survey conducted by the Uniform Crime Reports. UCR (1967) summarized their results by noting that of armed robberies, 63% were committed with firearms, 24% with a knife, and 13% with another weapon. These results are combined with the armed/unarmed breakdown for 1967 to give the percentages displayed In this column.

5. Geographic Distribution of Robberies

Robbery is the quintessential urban crime. Densely populated areas provide anonymity and a high concentration of potential targets for the robber. The statistical patterns with respect *to* city size reveal remarkable differences between the largest cities and the smallest.

CSty Size

UCR robbery rates increase rapidly with city size (Table 9, column 2). The largest cities have a collective robbery rate that is 36 times greater than in rural areas. The correlation between the UCR robbery rate and the logarithm of average city size across the eight size categories (excluding "rural") is .96.*

The 57 cities with populations exceeding 250,000 in 1981 titained only 19 percent of the U.S. population, but reported ol percent of all robberies. The six largest cities (with eight percent of the population) had 33 percent of the robberies, and New York City alone had 18 percent.

Robbery is more highly concentrated in large cities than any of the other index crimes, by a wide margin. For example, the 57 largest cities reported only 46 percent of the criminal homicides and 31 percent of the burglaries.

Among the nation's largest cities, it appears that population size may be a less important correlate of robbery than population density. In a multivariate regression analysis of robbery rates in 50 large cities, Cook (1979) found that the principal explanatory variables were population density and the fraction of the city population that were youthful black males. The log of the population size and regional dummy variables were not statistically significant in this regression.**

Large cities differ from small cities not only with respect to overall robbery rates, but also location patterns. Fifty-nine percent of robberies in the largest cities (250,000 or more) occur on the street; this fraction declines steadily with city size.

Table 9

Robbery Rates by Size of City

Size of City	Number of robberies (000) (UCR, 1981)	Estimated rate per thousand (UCR, 1981)	Estimated rate per thousand aged 16 and *mw* (NCS, 1979)
1 million & over	184.3	11.09	21.3
500,000 -1 million	83.5	6.87	11.2
250,000 - 500,000	75.5	6.41	7.2
100,000 - 250,000	58.4	3.50	
50,000 -100,000	43.2	2.28	5.6
25,000- 50,000	32.1	1.55	
10,000- 25,000	22.1	.93	
10,000	11.6	.55	
Rural	6.2	.22	
Overall	561.2	2.68	6.3

*Thc population statistic for each of the eight groups of cities was the mean population of the cities in that group.

•*For further experiments in explaining city robbery rates see Hoch (1974).

and only 28.6 percent of robberies in the smallest cities are 1 the street (UCR, 1981, p. 18). On the other hand, the relative, importance of commercial robberies is inversely related to city size, increasing from 19 percent for the largest cities, to 41 percent for the smallest cities.

Suburban Robbery

Is robbery moving out to the suburbs? The statistics in Table 10 indicate that suburban cities have somewhat higher robbery rates than nonsuburban cities of similar size, but that there has been essentially no change in these ratios between 19/5 and 1981. Thus it seems reasonable to conclude that there is a modest degree of "spillover" in robbery between central cities and suburbs, but there has been no increase in this effect in recent years.

Patterns Within Cities

//imz-city differences in robbery and other crime rates tend to be quite large. The "ecology" of crime within large cities has been intensively investigated by criminologists since the 1920s (Baldwin, 1979).

The typical distribution of robberies within a large city can be explained by two reasonably well documented observations: (1) Most robbers reside in poverty areas, and typically operate close to home; (2) The most lucrative targets are in the com--nercial areas of the city, and robbers who do travel tend to seek out such targets.

Lynn Curtis* (1974) study of the geography of robbery and other violent crimes deserves particular attention due to its large data base and careful analysis. He studied five cities — Boston, Philadelphia, Atlanta, Chicago, and San Francisco. He found that "High violence and poverty coincided spatially for the most part. Non-poverty areas with significant violence were usually on the fringes of high violence poverty areas or better-off neighborhoods that robbers entered to-victimize residents (p. 148)." Among the four types of violent crime, he found "Homicide and assault consistently showed the highest degree of localization and robbery the least among five cities (p. 147)." Armed robbers tended to travel longer distances than unarmed robbers, with the central business district one important destination in Boston and f hiladciplûa.

A study of robbery in Oakland (Feeney and Weir, 1973) further illustrates the importance of opportunities in determining the geographic distribution of robberies. Robbery in Oakland was heavily concentrated on a few major streets; two thirds of all robberies were committed within a half block of a major traffic or business artery (p. 58). Commercial robberies were even more concentrated along such thoroughfares, but for the most part well away from the central business district "The establishments which have the highest commercial robbery rates are those which tend to locate independently of other businesses'* {p. 59).

Summary

The robbery problem is primarily an affliction of the nation's largest cities. Other types of crime are also concentrated in large cities, but not to the same degree as robbery. The majority of big city robberies occur on the street, whereas commercial robberies are more common (relatively speaking) in small cities. There appears to be some spillover between central cities and their suburbs with respect to robbery, but not much.

The distribution of robberies within cities is concentrated to some degree in poverty districts and the central business district

Table 10

Robbery Rates In Small Cities

Size of City	Robbery Rate in Suburban Cities (per thousand)	Robbery Rate In Other Cities (per thousand)	Ratio (Suburban to nonsuburban)
	1975		
25 - 50,000	1.34	1.22	1.10
10 - 25,000	.89	.66	1.35
10,000	.63	.34	1.85
	1981		
25 - 50,000	1.57	1.50	1.05
10 • 25,000	1.00	.74	1.35
10,000	.69	.37	1.86

Source: UCR, 1975 and 1981.

6. Robbery Sites

The site of a robbery serves as one useful dimension by which to classify robberies; the typical robbery on the street differs in a number of respects from robberies in schools, residences, or commercial buildings. The discussion below highlights some of the unique features of robberies in residences.

Residential Robbery

Residential robberies include some of the most terrifying of all crime types — an armed intruder breaking into a home and holding the residents at gun- or knifepoint Such crimes may originate as burglaries which "convert" to robberies if the intruder finds the residence is occupied and decides to use threats or violence as a means of completing the theft (Repetto, 1974). Alternatively, they may involve a confrontation at the entrance, or a robbery committed by someone who has a right to be in the house (e.g., as an invited guest at a party). One piece of evidence suggests that this last circumstance dominates the residential robbery statistics — 54 percent of all residential robberies are committed by acquaintances (NSC, 1979). This is the only category of robbery for which acquaintances figure importantly. Overall, only 19 percent of noncommercial robberies involved acquaintances in 1979.

Robberies in Schools

The NCS estimates that 3.2 percent of noncommercial robberies occur in schools. A related statistic from the NCS (1978) is that the robbery victimization rate for youth aged 12-19 is about one percent per year. A recent survey of school children and teachers suggests that these estimates may be much too low.

The Safe School Study interviewed a representative sample of junior and senior high school students in 1976. The most useful data on crime victimizations were for the month preceding the interview. For that one-month period, 1.0 percent of junior high students and 0.3 percent of senior high students reported being robbed on school property. Some of them were robbed more than once during this period. Fora nine-month school year, then, these results for junior high students imply victimization rates of over 9.0 percent for

Table 11

Distribution of Robbery Sites, 1979

Noncommercial Robbery (NSC, 1979)		Commercial Robbery (URC, 1979*)	
Location	**Percentage**	**Location**	**Percentage**
Inside Home	**11.4%**	Commercial House	**53.3%**
Near Home	**9.8**	Gas Station	**14.0**
Nonresidential Building	11.6	Convenience Store	**26.5**
School	**1.7**	Bank	**6.2**
Street, park school grounds	53.1	Total	100.0%
Elsewhere	12.4		
Totar	**100.0%**		

'Calculated from data on p. 176, on the assumption that the "Miscellaneous" category is noncommercial.

junior high students, and 2.7 percent for senior high students; -sites that are far in excess of the NCS estimate of about 1.0 . .rcent per year for each of these age groups. The *Violent Schools-Safe Schools* report characterizes the robberies this way:

> They are not stickups or muggings for the most part, but instances of petty extortion — shakedowns — which for some student viuuu-:* become an almost routine part of the school day" (p. 60).

Not surprisingly, few of these robberies involve much property loss; in 76 percent of these incidents, the loss was less than one dollar (p. 60).

Perhaps even more disturbing than these high robbery rates for students is equally high rates for teachers. In a typical month, 0.6 percent of both junior and senior high teachers reported being robbed at least once on school property. The implied annual victimization rate of over five percent exceeds that for other adults by an order of magnitude.

Taken together, these results suggest that there are about one million school-related robberies per year — as many, that is, as were estimated for the entire nation by the NCS. If the *Violent Schools-Safe Schools* survey results are valid, then school-related robberies constitute a large portion of the robbery "problem." While most of these robberies are not serious, it is disturbing that such an important institution, for which attendance is required by law, is in many cases doing such poor job of protecting the more vulnerable students against intimidation and extortion.

Robberies of Banks and Convenience Stores

ki 1957, there were 278 bank robberies in the U.S. In 1980, there were 6S1S. Between 1960 and 1970, the annual number of bank robberies increased by 18 percent per year compounded; between 1970 and 1980, the number increased at a compounded rate of 11 percent per year (see Table 12). These growth rates far outstrip the rates of growth for any Other major category of robbery. Furthermore, the number of bank robberies has continued to increase rapidly even during the last five years, when the overall robbery rate has remained virtually unchanged; between 1975 and 1980, the number of bank robberies increased by 56 percent.

Fairly detailed records on bank robbery are collected by the FBI and have been compiled semiannually since 1973. Table 13 reports recent trends in the number of crimes (including the relatively few larcenies and burglaries), the success rate, average rate, average loot, and number of killings (not including perpetrators or law enforcement officers). Bank robbery tends to be less violent than other forms of robbery and involves much greater property losses on the average.

Table 12

Bank Robberies, Annual Totals, 1935-1980

	Robberies	Total Bank Crimes (Incl. burglaries and larcenies)
1935	229	
1940	102	
1945	51	
1950	100	226
1955	306	526
1960	458	810
1965	1154	1749
1970	2331	3029
1975	4159	4883
1980	6515	7416

Source: FBI, private correstxmdance.
Note: In 1943, there were only 22 bank robberies recorticu tn the U.S. — the lowest rate since hatic.ial records were first compiled in *ii£-\.*

Table 13

Characteristics off Bank Crimes, 1974-1980

Year	Number of Bank Crimes	Number of Bank Robberies	Success Rate	Average Loot, Successful Crimes	Customers and Employees Killed
1974	4253	3517	85.8%	$11041	11
1975	4955	4180	87.3%	7453	**10**
1976	4565	3816	87.7%	6325	7
1977	4786	3988	86.2%	6228	9
1978	5504	4739	88.0%	6107	8
1979	7037	6148	88.6%	7611	7
1930	7416	6515	89.0%	7447	13

Source: FBI, semi-annual compilations entitled "Bank Crime Statistics, Federally Insured Financial Institutions" (mimeo).

The most common method of bank robbery is a threat with a visible firearm; slightly more than half involved visible firearms in 1980, of which over 90 percent were handguns. ost of the remaining robberies were perpetrated by use of a demand note passed to the teller. The vast majority of bank robberies were committed by individuals acting alone; there were a total of only S081 known perpetrators involved in the 3957 bank crimes committed in the second half of 1980. Thus the gang style bank robberies of the Bonnie and Clyde era are not at all typical of modem-day bank robbery.

Why have bank robbery rates increased so rapidly in recent years? Surely part of the answer lies in the increase in the number of small branch banks, which tend to be designed and located in such a way as to be highly vulnerable to robbers. But there are no complete, well-documented explanations available at present.

The other fast-growing category of robbery during recent years is robbery of convenience stores. Between 1970 and 1974, the annual number of such robberies more than doubled, and it has continued to increase (although at a much slower rate) since then. Currently convenience stores are the target for more than one quarter of all commercial robberies. As in the case of bank robbery, the reasons for the vast increase in convenience store robbery are obscure, although it probably does reflect in part an increase in the number of such stores.

Summary

Three robbery sites were singled out for special comment. Residential robberies are unusual in that most of them involve perpetrators who are acquainted with their victims. School robberies are notable for their pettiness, and for their prevalence; if the *Violent Schools-Safe Schools* report is accurate, there are as many robberies in schools as in all other noncommercial sites combined. However, there is a gross discrepancy between this survey and the NCS findings on school robbery. Finally, bank robbery is notable for the large financial losses typical of this crime, and because of its unparalleled rate of growth over the last 25 years.

7. Characteristics of Robbers and Their Victims

The National Crime Surveys and related victimization surveys have proven particularly valuable in quantifying demographic patterns in robbery and other violent crimes; the victim/respondent has actually seen the offender in most every crime of this sort, and is usually able to provide the interviewer with information on the number of offenders in the incident, and their race, sex, and approximate ages. Prior to the victimization survey program, estimates of the distributions of violent crime offenders and victims with respect to demographic characteristics were based on special studies of police report files (e.g., Curtis, 1974). Since police files only include reports of crimes known to police, which are unrepresentative of the universe of all crimes in some respects, this source of data is not entirely satisfactory. An alternative for estimating the age, sex, and race distributions of offenders has been to use demographic data on arrestees; this source of information is even more suspect than police reports, since the process which generates arrests from crime reports seems likely to have substantial biases with respect to the demographic characteristics of offenders. Victimization surveys have provided a new and presumably more reliable basis for estimating the demographic distributions of both offenders and victims. The data also serves as the basis for checking the validity of estimates calculated from other data sources. Hindelang (1978), for example, reported the somewhat surprising result that arrest data and victim survey

Table 14

Distribution of Noncommercial Robbery Incidents by Number of Offenders and Victims

	Number of Offenders	Number of Victims
1	42.4%	91.9%
2	27.4%	5.5%
3	15.1%	1.9%
4	6.1%	
5	3.5%	
6-10	4.3%	
11-14	[illegible]	.7%
15-19	.3%	
20+	.3%	
Overall	100.0%	100.0%
Mean	2.4	1.2

Source: Number of offenders calculated from Table 1 of Reiss (1980). Robbery was defined to include attempted and successful robberies and serious assaults with theft. Reiss' data are pooled NCS results from 7/1/72 to 12/31/75. Number of victims taken from NCS (1979).

Table 15

Age Distribution of Robbery Offenders, 1979.

		NCS (1979)		
Age Ranee	UCR Arrest Data, ie?9	Single Offenders*	Multiple Offender^	Overall
Less than 15	8.1%	4.5%		
Less than 18	31.5%	19.0%		
Less than 21	54.5%	39.7%	**60.5%**	**56.1%**
Less than 25	74.4%	—		

Notes:

* Incidents in which the age of the offender was not available in the NCS were assumed to have the same offender age distribution as other incidents.

*1 Incidents involving multiple offenders of mixed ages (i.e., one or more aged 20 or less, and one or more aged 20 or more) were assumed to ha»« an equal number in each category, and to have the same number of offenders on the average as incidents in which all offenders were in the same age category.

1 79.0% of all offenders were in the multiple offender category. This estimate is derived from two other estimates: (1) NCS estimated that 52.5% of all incidents involved multiple offenders; and (2) there are an average of about 3.4 offenders in a multiple offender incident (estimated from statistics In Table 14, above).

data yield similar estimates of the distribution of offenders "V race. This finding is affirmed by the calculations presented ^elow.

Subsequent sections present and discuss tabulations on robbery victim and offender characteristics. These tabulations are calculated from both NCS data and UCR arrest data.

Number of Offenders and Victims Per Incident

Most robberies involve two or more offenders (58 percent) and a single victim (92 percent). As shown in Table 14, 30 percent of robberies actually involve three or more offenders,

Table 16

Distribution of Robbery Offenders by Race, 1979

Race	UCR Arrest Data, 1979	NCS (1979) Single Offender*	NCS (1979) Multiple Offenders* 1	NCS (1979) Overalli
White	41.0%	49.3%	34.9%	37.9%
Black	56.9%	47.4%	59.7%	57.1%
Other	2.1%	3.4%	5.4%	5.0%

Notes:
* Incidents In which the race of the offender was not available were assumed to have the same race distribution as other incidents.
1 In the 10.0% of all Incidents involving offenders of different races, it was assumed that half were white and half black.
1 See Footnote from Table 15.

Table 17

Comparison of Robbery Arrests with Those Arrested for Property Crimes and Violent Crimes, 1979

	Robbery Arrests	Index Property Crime Arrests*	Index Violent Crime Arrests!
Less than 15	8.1%	16.6%	5.2%
Less than 18	31.5%	43.5%	20.1%
Less than 21	54.5%	62.0%	38.0%
Less than 24	74.4%	75.2%	57.4%
Race			
White	41.0%	68.2%	53.7%
Black	56.9%	29.4%	44.1%
Other	2.1%	2.4%	2.2%
Race (Under age 18)			
White	35.0%	71.2%	48.7%
Black	62.5%	26.3%	49.0%
Other	2.5%	2.5%	2.3%
Sex			
Male	92.6%	78.2%	89.8%
Female	7.4%	21.8%	10.2%

Source: UCR (1979)
* Auto theft, larceny, burglary
1 Robbery, aggravated assault, rape, and criminal homicide.

and about one percent of these incidents involve large gangs of ten or more robbers.

Zimring (1980) reports that the propensity to commit robbery in groups is age-related to a substantial degree; adult robbers are much more likely to work alone than youthful robbers. This finding is confirmed by the NCS statistics reported in Table 15; 44 percent of single offenders were less than 21, but approximately 59 percent of offenders acting in groups were less than 21. (Generating the latter estimate from published NCS statistics requires several assumptions, as explained in the footnotes.)

Age, Race, and Sex

Tables 15 through 18 report UCR arrest statistics on the demographic characteristics of robbery offenders and victims. The principal conclusions from these statistics are as follows;

• Victimization survey data and arrest data are in close agreement. The Victimization survey data exclude commercial robberies and robberies involving victims younger than 12. The UCR arrest data are not subject to either of these exclusions. Furthermore, the major sources of error in the two types of statistics are entirely different: the victim survey estimates are subject to errors in perception and memory; the arrest statistics, while essentially free of those problems, are quite possibly an unrepresentative "sample" of all robbery offenders. Despite these differences, the two types of data give very similar estimates of the demographic distributions of offenders. For example, 56.1 percent of offenders were under age 21 according to the NCS, while 54.5 percent of all arrestees were less than 21 (Table 15). Furthermore, the NCS and the UCR arrest data both indicate that 57 percent of robbery offenders are black (Table 16).

• Most robberies are committed by youthful males. Blacks commit more than half of all robberies. About 75 percent of all offenders are less than 25 years old, and more than 90 percent are males. Blacks are most overrepresented among youthful offenders; 62 percent of youths younger than 18 who are arrested for robbery are black.

Since robbery is both a crime of violence and a property crime, it is interesting to see whether the demographic characteristics of robbers tend to be more similar to property offenders or violent offenders. Judging from the arrest data in Table 17, property offenders tend to be younger, and violent offenders older, than robbers (though the former difference disappears by age 25). Blacks and males are more overrepresented in robbery than in either property or violent crimes, though more similar to violent crimes in this respect.)

• Distribution of demographic characteristics of robbery victims exhibit the same tendencies as robbery offenders, but in less extreme form. Just as for offenders, victims are disproportionately youthful, black, and male (Table 18). None of these tendencies are nearly as pronounced for victims as for offenders.

Table 18

Robbery Victimization Rates and Distribution of Robberies by Victim Age, Race, and Sex 1979

Victim Characteristics	Victimization Rate (per thousand)	Percentage of All Noncommerical Robberies
Age		
12-15	**9.4**	12.5%
16-19	10.4	15.3%
20-24	12.1	21.6%
25-34	**6.0**	18.7%
35-49	5.1	16,5%
50-64	**3.5**	10,2%
65 +	2.5	5.3%
Race (aged 12 and over)		
White	5.5	76.5%
Black	12.5	22.0%
Other	5.6	1.5%
Sex (aged 12 and over)		
Male	**8.8**	66.9%
Female	**4.0**	33.1%

Source: NCS (1979)

Interactions Between Victims and Offenders

When the demographic characteristics of robbers are compared with their victims, a strong "similarity pattern" emerges for each of the dimensions — race, sex, and age (Cook, 1976). That is, there is some tendency for robbers to choose victims who are similar to themselves with respect to demographic characteristics. Nevertheless, there are a substantial number of racial cross-over robberies.

Blacks committed 70 percent of the noncommercial robberies in the 26 cities covered by special National Crime Panel victimization surveys in the early 1970s. Despite the fact that their victims were also blacks to a disproportionate degree (the similarity pattern), it was nevertheless true that a majority of their victims were whites. Whites were three times as likely to be robbed by nonwhites as by whites (Cook, 1976, p. 177). Thus interracial robbery is common — much more so than for other crimes of violence.

Summary

Studies based on police *files* and arrest statistics suggested that youthful black males commit a vastly disproportionate fraction of all robberies; NCS data confirm this conclusion. Youthful black males also are disproportionately represented among victims who are similar to themselves in terms of demographic characteristics. Despite this tendency, there is a good deal of racial crossover in robberies, mostly involving black robbers and white victims.

8. Robbery Careers

From the point of view of robbery prevention, some of the most interesting descriptive information concerns robbery "career" patterns: age of onset and age of retirement, intensity, degree of specialization, modus operandi, and so forth. Answers to these questions would be helpful in quantifying the likely effects of deterrence- or incapacitation-oriented progianis.

Victim surveys provide a wealth of information about the immediate circumstances and events associated with a representative sample of robbery incidents, but such surveys of course provide no information on offenders beyond what is visible to the victim at the time. Career information must be inferred from other sources, such as police and court records and interviews with prisoners and other identified of-'•nders. These sources of information are based on samples

offenders that may be quite unrepresentative of the population of active offenders in some respects, and therefore must be interpreted with some care. In any event, a great deal of information on criminal careers is currently being collected, to good effect.

The Rand Studies

A series of studies by the Rand Corporation (Greenwood, 1980) have gathered considerable information on robbers and other criminals through intensive interviews with prisoners concerning their careers in crime.* The alternative approach in this area has been to construct career information from policy and/or court records.

The three Rand studies referred to in the discussion below are as follows:

Habitual Felons Surrey (Petersilia, Greenwood, and Lavin, 1977):

A random sample of 49 incarcerated male felons who were serving time *br anueJ robbery in a medium-security California prison in 1976 and had served at least one previous prison term. Information included official criminal histories and responses to a self-report questionnaire covering the inmates' entire criminal career.

Inmate Survey I (Peterson and Braiker, 1980).

A random sample of 624 male California prison inmates. Information included responses to an anonymous self-report questionnaire covering the three years prior to the current spell of incarceration.

Inmate Survey II (Greenwood, 1980):

A sample of 2400 prison and jail inmates in California, Michigan, and Texas, taken in 1979 and not yet completely analyzed.

Based on information collected from these surveys and other sources, the discussion below considers activity levels, crime specialization, motivation, sophistication, and involvement with drugs and alcohol.

Activity Levels

The distribution of robberies among active offenders fits the "J-curve" model that also describes the incidence of other deviant activities: in any one year, a few offenders have a very high rate of commission, whereas most active robbers only commit one or two. Figure 1, taken from Rand's Inmate Survey I, illustrates this point vividly. One characteristic of such a distribution is that the mean far exceeds the median: these values are 4.61 and 1.48 (armed robberies per year) respectively, for Inmate Survey I (Peterson and Braiker, 1980, P. 23).

Based on Inmate Survey I, it is possible, given several assumptions, to estimate robbery commission rates for all active street criminals (including burglars, con artists, drug dealers, and violent criminals); the Rand estimates were that 32 percent of all adult, male, active street criminals in California committed at least one armed robbery in a typical year, and those who committed at least one committed an average of about two (Peterson and Braiker, 1980, p. 28).

Preliminary results from Rand's Inmate Survey II suggest

"Conldin (1972) was the first to conduct an interview study of this sort. His work has been superceded by the far larger efforts of the Rand researchere.

that the statistics above may understate the true activity levels by a very wide margin. Greenwood (1980) considers this second survey to be an improvement on Inmate Survey I; he reports (p. 26) that of surveyed inmates who committed armed robberies in the three years before their incarceration, the median annual commission rate was 4.8 armed robberies. The 90th percentile rate for this group is an extraordinary 86 robberies per year.

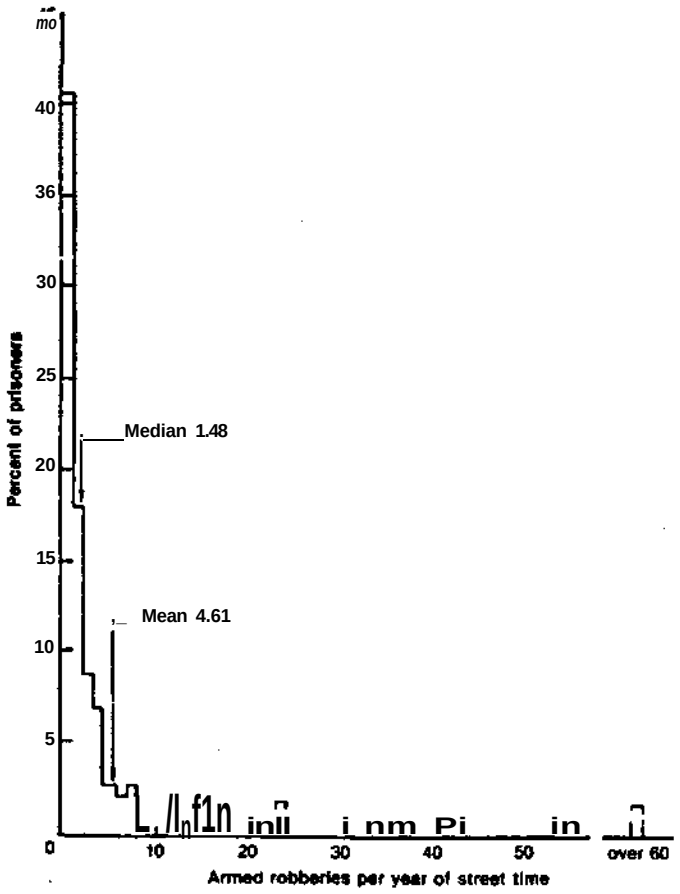
An alternative to the retrospective survey method for measuring activity levels is to use official criminal record data. For example, Cook and Nagin (1979) constructed a panel of violent offenders and burglars arrested in Washington, D.C. and processed in Superior Court in 1973.. We found that 10.1 percent of the 1904 adult roobery arrests in 1974 involved men from the 1302-member cohort arrested for robbery in 1973 (p. 18). Assuming that about 20 percent of adult robberies result in an arrest, these numbers imply a mean activity level of .74 robberies in the year fdllowing the cohort robbery arrest. Omitting the 16 percent who were incarcerated in 1974 yields an estimate of .88 robberies. This estimate is far below Rand's estimated mean robbery rate for robbers in the year *before* incarceration. One possible reason for the discrepancy is that a large fraction of men arrested for robbery "retire" in the subsequent year. Alternatively, it is possible that the robbery arrestees who were convicted and incarcerated in 1973 were much more active on the average than those who were not incarcerated.

The above results can be summarized as fojjows; about one-third of all active adult male street criminals commit at least one armed robbery in a year; of those who do commit at least one, and are incarcerated subsequently, the median person commits about five in that year, the distribution of activity levels among active robbers is very skewed, with the top ten percent committing a large fraction of all robberies; it is quite possible that the average robbery activity level is substantially less the year following an arrest than it was the year before.

It would be of considerable interest to have prevalence and incidence information on robbery commission for an entire population. One potential source of information is the data collected by Marvin Wolfgang and his colleagues on a Philadelphia cohort of males bom in 1945. A ten percent sample of this cohort was selected and interviewed at age 26 (Collins, 1981). Ten percent of those interviewed admitted committing robbery before age 18, and five percent between ages 18 and 26.* Hie median numbers of robberies committed by those who reported at least one was three before age 18 and five between 18 and 26. Unfortunately, a fraction (42 percent) of the sample was not interviewed; those who were not located or refused to be interviewed were not representative of the cohort and in particular had lower SES characteristics and more contacts with the police. An obvious inference is that the prevalence estimates from this sample are biased and that the true prevalence percentages are higher for this Philadelphia cohort.

Flgure 1

Distribution of Armed Robbery Rate (for sampled prisoners who commit this crime)



Source: Peterson and Braiker, 1980, p. 23

Specialization

Rand Inmate Survey I and numerous other longitudinal stuuies {Farrington, 1981) have found that most active offendere dojiqt specialize in any onetype of crime. Peterson and Braiker (1980, p. x) report that a typical group of 100 adult male California prison inmates convicted of robbery will have committed 490 armed robberies, 310 assaults, 720 burglaries, 70 auto thefts, 100 forgeries, and 3400 drug sales in the previous year of street time. Of the almost 200 respondents who reported committing a robbery in Inmate Survey I, only

'These and'subsequent statistics were supplied by James Collins in a personal communication.

about 10 (five percent) were robbery "specialists" — men who committed robbery frequently and to the exclusion of other types of crimes. (The other high rate robbers were also very active in other types of criminal activity.) While one-third of all respondents had committed a robbery, only 11 percent named robbery as their main crime (p. 84).

The basic picture, then, is one of considerable diversification. Nevertheless, men who commit robbery in one year are more likely than other street criminals to commit robbery in subsequent years, as shown in Table 19. Table 19 gives

Table 19

Rearrest Rates for Specified Crime Categories; Adult Males, Washington, D.C., 1974-76

Original Arrest, 1973	Murder, Assault, Rupa	Burglary	Robbery
Assault	.248	.059	.092
Burglary	.187	.328	.216
Robbery	.181	.132	.443

Source: Cook and Nagln (1979), p. 19.

recidivism statistics for adult males arrested in 1973 in Washington, D.C. Robbery arrestees were more likely (both relatively and absolutely) to be arrested for robbery than were burglary or assault arrestees.

Little is known about the degree to which active robbers specialize in particular types and techniques of robbery. It may be possible to extract this information from the Rand surveys.

Motivation

Robbery is similar to other property crimes with respect to its principal motive. Rand's Habitual Offenders Survey of 49 California Prisoners imprisoned for robbery (and having served a prior prison term) found that a majority of respondents' careers had progressed from auto theft and burglary to an increasing proportion of robbery and forgery. "The majority said they had switched to robbery because it required little preparation and few tools, was easy to do, seldom required hurting anyone, and offered unlimited potential targets" (Petersilia, Greenwood, and Lavin, 1977, p. vii).

Respondents in the Habitual Offenders Survey were queried concerning the main reasons for their crimes at different phases of their criminal careers. "Expressive" needs (thrills, peer influence) were the most important during the juvenile period, whereas financial need and desire for "high living" (drugs, alcohol, women) became much more important in later years (pp. 75-79). These characterizations are not specifically for robbery, but rather for all types of crime committed by members of the sample. Rand's Inmate Survey I also found that respondents' motives were characterized by the desire to

Sophistication

The Habitual Offenders Survey collected extensive information on the degree of planning exercised by respondents, enjoy high times or alleviate economic distress (Peterson and Braiker, 1980, p. 94).

One question that has received enormous attention in recent years has been the role of alcohol and drugs in crime. About 70 percent of respondents in the Habitual Offenders Survey were involved in alcohol or drugs at some point in their careers. Thirty percent of all respondents listed obtaining money for alcohol or drugs as their main motivation for crime since reaching adulthood (Petersilia, Greenwood, and Lavin, 1977, p. 76). Rand's Inmate Survey I found that street criminals who were regular users of hard drugs were no more likely than others to commit robbery; however, among those who do rob, the drug users had a robbery offense rate almost twice that of non-drug users (p. ISO).

Interviews with over 10,000 inmates of state correctional institutions found that 39 percent of all those incarcerated for robbery reported that they had been drinking at the time of their offense (Roizen and Schneberk, 1978). This percentage is lower than for other crimes of violence.

The overall conclusion is this:

> "Approximately one-quarter (of respondents) did no planning or preparation whatsoever for burglaries and robberies...; about half did none or very little... For the typical offender, pre-crime planning involved only visiting the location before the crime, and less often, staking out the target (p. 60).[M]

One respondent (p. 61) made the interesting observation that, while he did not plan particular crimes, he devoted considerable time to thinking about different methods for committing crimes successfully and preparing himself in a general way for any opportunities that might arise.

This survey found that the amount of planning was greater during the respondent's adult career than their juvenile careers. It was also found that the tendency to use partners declined markedly with age (p. *66),* apparently in part because of a concern that a partner might inform on them at some point.

Conclusions

The most interesting lesson from this review is that any attempt to create a typology of robbers must deal with the fact that most robberies are not committed by "robbers" (people who specialize in robbery), but rather by street criminals who commit a wide variety of crimes. Nevertheless, at any one time it appears that a small fraction of street criminals commit the majority of all robberies — robbery com-

mission rates differ enormously among active robbers, and the most active group are very active indeed <a*era(robberies

each wee

generaliz

bout ro [intensive group dif-

fers in important respects than others. For example, if drug-using robbers are much more active than others, then the fraction of robbers who use drugs will be much lower than the fraction of robberies committed by drug-using robbers. It is not clear at this point whether a random sampie of robbers in prison tends to be more representative of robberies or robbers. For this reason, among others, results from inmate surveys should be interpreted with considerable caution.

Summary

The primary motivation for robbery ^ ^ ^ ffloney ,

among street criminals, and may influence criminal career patterns — robbers who use drugs are twice as active as those who do not.

Robbery's advantages relative to other crimes are that it is quick, easy, and requires little planning or preparation.

9. An Overview of the Robbery Process

The descriptive information presented above is useful in establishing the dimensions of the robbery problem and providing some indication of where policymakers should focus their attention in addressing this problem. This final chapter introduces each of the general strategies for controlling robbery in the context of an overview of the determinants of robbery rates, patterns, and average seriousness.

Determinants of Robbery Rates and Patterns

Observed robbery patterns are the outcome of the interaction between a group of people that can be called (somewhat loosely) "street criminals" and the robbery opportunities provided them by the environment Most of the street criminals commit a variety of crimes, at rates that differ widely among individuals and vary over time for any one individual. The mix of crimes committed by this group, as between robbery and other crime types, depends in part on how lucrative and safe robbery opportunities are relative to other opportunities for illicit income.

The street criminal exists in an environment of opportunities for economic gain — opportunities to commit robberies, burglaries, larcenies, drug sales, "cons," and so forth, as well as legitimate economic opportunities. People who commit robberies usually have a variety of other sources (licit and illicit) of income. The incidence of robbery will depend on the number of active street criminals, their "tastes" for violent confrontations, the attractiveness of robbery opportunities relative to other opportunities for economic gain, and the availability of firearms. The relative incidence of robberies among different target types can be explained in similar fashion.

Number of Street Criminals

The fraction of the population actively engaged in "hustling** on the street depends on demographic, cultural, and economic factors — the so-called "root causes" of crime — as well as the effectiveness of the criminal justice system. Despite good intentions and high hopes of the Great Society era of the 1960s, it has proven exceedingly difficult to transform the socioeconomic and cultural conditions that encourage urban youths to hustle for some part of their income and "kicks.[1]* The downward trend in the probabilities of conviction and punishment for crime during the massive crime wave of the 1960s sad early 1970s may have contributed to the failure of these programs.

The role of the criminal justice system in preventing robbery is complex and poorly understood. The main preventive effects of punishment are deterrence and incapacitation. An increase in the likelihood and/or severity of punishment for robbery will deter some street criminals from committing robbery, or at least cause robbers to rob less frequently. If this increase in CIS effectiveness is specific to robbery, this reduction is likely to be coupled with an increase in other forms of street crime (substitution). If the increase in criminal justice system effectiveness is more comprehensive, then the result may be to encourage a number of street criminals to go into early retirement and discourage other youths from beginning criminal careers. This general deterrence process has been studied extensively by economists and others during the last decade (Blumstein, Cohen, and Nagin, 1978). The empirical results derived from aggregate data have been uninformative, but the predictions of deterrence theory have received some support from "natural experiments" (Cook, 1980).

Punishment in the form of incarceration physically prevents the convict from committing crimes against people outside of the prison. This incapacitation effect has also been studied extensively in recent years (Cohen, 1978). The subject is more complicated than it may seem at first blush. Consider the following problems in estimating the magnitude of the incapacitation effect with respect to robbery: (1) Estimating the total incapacitation effect with respect to robbery requires some accounting of all inmates, not just those actually convicted of robbery — remember that most robberies are not committed by robbery specialists; (2) Estimating the number of robberies prevented by locking up, say, one thousand street criminals for a year requires a method for

estimating the number of robberies they would have committed if they had been given a suspended sentence (or had never been caught) — a difficult task, given the volatility and vast interpersonal differences in robbery commission rates; (3) Most beries, especially those committed by youths, are commit* ted by groups of two or more. The problem that group crime poses to criminologists seeking to estimate the magnitude of the incapacitation effect is illustrated by this question: Will locking up a youth who would have committed six robberies, each with two accomplices, prevent all six robberies from occurring? Or none of them? Or perhaps two of them? (Reiss, 1980; Zimring 1980); and (4) It is possible under some assumptions that some of the robbers who are incapacitated will be replaced by other criminals, though this eventuality seems less likely for robbery than for, say, prostitution (Cook, 1977; Ehrlich, 1981).

In sum, the number of active robbers at any time is influenced by the criminal justice system, through the deterrent and incapacitative effects of punishment There are a number of other determinants of the size of the street criminal population. These determinants are no doubt influenced by a variety of public programs outside the criminal justice system; however, the linkages between, say, anti-poverty programs and criminal activity are poorly understood.

Motivation and Personality

What factors influence street criminals' crime-related choices? The various types of crime included in the hustler's "nortfolio" differ in a number of respects. Robbery is a quick, implicated way of obtaining cash, that does not require making any arrangements with other people such as fences, drug buyers, etc. Its drawbacks are a relatively high probability of arrest, typically tow "take" (in street robbery), and the possibility of being injured by the victim (in commercial robbery) (Petersilia, Greenwood, and Lavin, 1977, pp. 64-65). The necessity for physical confrontation and possible attack of the victim may be a drawback for some, but not for others who have more of a taste for violence. Indeed, street robberies committed by large gangs of youths may be more of a violent "sport*[1] than a way of making money (Cook, 1980).

There are no interventions that have been demonstrated to be effective in reducing robbery by changing street criminals[1] tastes, skills, or special circumstances. The special "circumstance" that has received the most attention during the last decade is drug addiction, a concern that has elicited massive law enforcement efforts to reduce the availability of illicit drugs and bring addicts into rehabilitation programs (Gandossy et al., 1980). While it seems reasonable that addicts in search of a quick fix would find robbery a particularly attractive crime, Rand's Inmate Survey I found otherwise — regular users of hard drugs were about as likely as other respondents to have been active in robbery.

Drunkenness may also play an important role in robbery. Drunks may be more likely to commit an impulsive robbery and also to serve as especially vulnerable victims.

Opportunities

A robbery "opportunity** — potential victim — has a variety of characteristics of relevance to the street criminal, such as location, potential take, capability of defending against robbery, likelihood of intervention by bystanders, and the presence of alarms, cameras, and guards. From the criminal's viewpoint, these features determine the perceived attractiveness of the target, and particularly the following: (1) the amount of preparation required; (2) The likelihood of success given the weapons, skills, and accomplices available to the criminals; (3) The expected "take" if the robbery is successful; (4) The likelihood of injury at the hands of the victim; (5) The likelihood of arrest and conviction; and (6) The expected severity of punishment if convicted. The attributes are determined by the specific characteristics of the potential victim, interacting with the criminal justice system and the characteristics of the robber. Table 20 illustrates this point for commercial robbery by listing some of the ^eienr.inants of the probabilities of conviction and injury and uf the expected take.

The street criminal is faced with a variety of robbery and other criminal opportunities. The overall duality of the robbery opportunities will influence the distribution of robberies among targets.

There are two types of interventions that can be discussed within this general framework. First, commercial robbery targets may be encouraged or required to adopt special measures to defend against robbery: reduce the cash on hand, hire guards, install alarms and hidden cameras, train clerks, and so forth. If only a few places take these actions, the likely effect is simply to reduce victimization rates there at the expense of increased robbery rates at other places that lack such precautions; if enough commercial targets adopt such measures, the effect may be to reduce the overall robbery rate. A second type of intervention would be government actions to increase surveillance (by police, neighbors, etc.) of likely robbery locations, improve street lighting, improve security in school restrooms and parking tots, organize neighborhood watch associations, design public housing projects to create "defensible space," and so forth.

Gun Availability

To complete a robbery successfully, the offender must find the means to intimidate or overpower the victim, and prevent intervention by bystanders. The inherent difficulty of this task depends on the nature of the victim and the circumstances. The most vulnerable victims are the elderly and the very young when they are by themselves. The least vulnerable targets are commercial places which have armed guards and other means of protection. The observed patterns in robbery

Table 20

Determinants of Commercial Robbery Outcomes

	Likelihood of Arrest and Conviction	Likelihood of Injury to Robber	Expected "Take"
Store Characteristics	1. Hidden camera 2. Alarm 3. Guard 4. Location (ease of escape)	1. Guard 2. Clerk's attitude, training, and weapons	1. Policy on holding cash 2. Access to vault
CJS Characteristics	1. Police response time 2. Priority assigned to such robberies by detectives and prosecutor 3. Court resources	1. Police policy on use of firearms	
Robber Characteristics	1. Sophistication, planning 2. Prior criminal record* 3. Number of accomplices	1. Weapons and other means of Intimidation 2. Skill	1. Amount of time spent in store 2. Planning

"If the robber is known to the police from previous arrests, the probability of his being identified through the "mug shot" files Is increased. Prior record also increases the probability of conviction given arrest, since prosecutors are likely to devote greater resources to gaining convictions of career criminals.

clearly reflect the tendency of offenders to take victim vulnerability into account (Cook, 1976 and 1981; Skogan, 198D)Pcommercial targets, especially those with several employees, are typically robbed by gun-toting adults, whereas male victims on the street are typically robbed by unarmed youths. The age, sex, and number of robbers, together wfth the lethality of their weapons, determine their capability; there is a strong tendency for the robber's capability to be inversely related to the vulnerability of his victim.

The principal intervention suggested by these observations is the regulation of gun commerce and use. Gun control measures, if they are effective in depriving some street criminals of guns, should reduce the commercial robbery rate by reducing the robbers' capability.

Gun control measures may also have some effect on the injury and death rate in robbery, as discussed below.

Robbery Consequences

Robbery is such a serious crime in part because of the large number of robbery-related injuries and deaths. Some of these injuries and deaths are an inescapable by-product of the robbery process, and most any intervention that reduced the overall rpbbery rate would probably also reduce the number of victim 'casualities. There is considerable evidence, on the other hand, that there exists a good deal of "excess violence" in robbery — gratuitous violence that is not the consequence of victim resistance (Cook, 1980). For this reason, it is conceivaole that interventions could be designed that would reduce the amount of violence in robbery without reducing the overall robbery rate. The felony murder rule is an example of such an intervention. Other possibilities for reducing robbery murder include strengthening legal controls on gun commerce and adopting special sentencing provisions for robbers, who use guns.

Interventions that are oriented towards reducing gun use will not reduce the injury rate in robbery, since gun robberies are much less likely to result in victim injury than other types of robbery. One possible intervention focused on robbery injury is to single out robbery defendants who are also chargeable with injuring their victims for high priority handling in the courts.

Robberies result in financial losses to victims as well as physical or psychological trauma. Potential victims can limit the financial loss by limiting the amount of cash they carry. This policy has of course been adopted by a number of commercial targets in large cities — gas stations, buses, taxis, and so forth. Bur the public concern about robbery is motivated by the fear of injury more than by the concern with financial loss; that is precisely why robbery is so much more serious than purse snatching or shoplifting. Indeed, the most important effect of "cash limitation" policies by commercial places and public transport vehicles is to reduce the likelihood of injury to employees by reducing the robbery victimization rate.

Summary

There are a number of interventions available to the

criminal justice system that have the potential for reducing either the rate or the seriousness of robbery.

First is the traditional strategy of devoting greater effort, or perhaps better focused effort, to arresting, convicting, and incarcerating robbers. Given limited resources, the problem is to set appropriate priorities for the allocation of prosecution and prison capacity among robbery defendants. One aspect of tiiis problem is to develop means for identifying that subgroup of robbery defendants who are most likely to pursue active criminal careers and/or inflict serious injuries on their future victims. Criminal careers research is directly relevant in this context. A second aspect of the priority setting problem is to determine which types of robbery induce the greatest harm and hence should be most actively discouraged. One traditional distinction in this regard is between armed and unarmed robbery; many jurisdictions have recently created an additional distinction between robbery with a gun and robbery committed with another weapon. The wisdom of these distinctions can be investigated by studying the causal rote of weapons in determining the outcome of the robbery.

A second type of intervention is to encourage robbery targets to protect themselves, and to cooperate with the criminal justice system investigation and prosecution of rob' bery suspects. The possibilities here include everything from the formation of neighborhood watch associations to the installation of hidden cameras and methods for limiting the amount of readily available "loot." Reliable evaluation of such mesures is difficult due to the resistance of public agencies to conducting experiments, but even post hoc evaluations of existing programs can generate some useful evidence.

A third type of intervention applies specifically to schools. If the robbery problem is anywhere near as severe in junior and senior high schools as indicated by the *Violent Schools-Safe Schools* report, then it warrants immediate attention. It is possible that a good deal can be accomplished to reduce inschool robberies through internal policies implemented by school officials. More problematic is the extent to which the criminal justice system can and should be directly involved in maintaining order within the schools — indeed, parents and school officials are often inclined to resist outside "interference" in what they consider to be internal concerns. In any event, the first major research project in this area should be to develop a reliable characterization of the nature and seriousness of the problem.

The fourth and final type of intervention is to modify policies directed at controlling youth's access to drugs, alcohol, and guns. Despite years of research on the drug/crime nexus, it is still not clear whether a more active policy in controlling illicit drugs would reduce or increase the robbery rate. The causal role of alcohol use in robbery has not been evaluated. The relationship between gun availability and robbery patterns is better understood, but certainly not resolved.

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