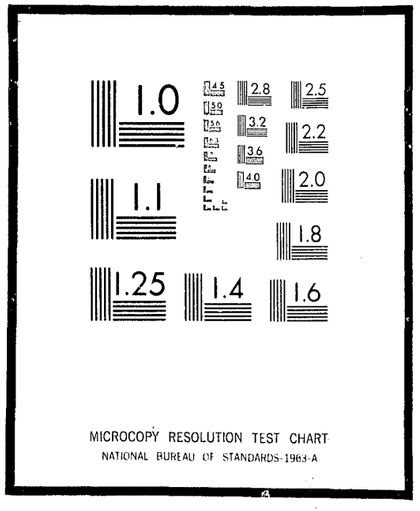

CRIMINAL JUSTICE STATISTICS:

DATA FROM A "NONSYSTEM"*

by

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EXECUTIVE SUMMARY

In order to understand how the criminal justice system functions within a jurisdiction, statistics must be assembled which measure the way a crime is handled from the moment it occurs through the final disposition of an offender or offenders for the crime. This type of information allows one to see whether the problem of handling a particular type of offense is more a result of poor citizen reporting, the difficulty in identifying and apprehending a suspect, problems in obtaining the necessary evidence to convict the suspect, or some other problem. Specific problem areas can be identified for each type of offense, which can then be attacked by the criminal justice agency involved. Only with such an overview of the criminal justice system can resources be systematically allocated to where they are most needed. However, the tracking of crime is difficult, since each part of the criminal justice system tabulates data which are relevant to its needs, but which generally cannot be compared to data from other criminal justice agencies. For example, the police count offenses and arrests; the court counts cases; and corrections counts inmates.

There are at least two units of analysis which need to be traced through the entire system. First, criminal incidents can be tracked from occurrence through court disposition. Second, offenders can be traced from arrest through final disposition and subsequent recidivism. This paper is concerned with the former problem--following a crime through the police and court system.

It would appear, at first glance, that all of the information necessary to produce this flow of incidents is available for Washington, D.C. in 1973. The Law Enforcement Assistance Administration conducted a survey of the District of Columbia, asking citizens to report the victimizations they experienced in 1973; there are Uniform Crime Report figures on reported offenses for 1973; and there are data in PROMIS (Prosecutor's Management Information System) which track adult cases from arrest through final court disposition. From these data sources, one would hope to compute for each type of crime:

- the percentage of incidents reported to the police,
- the percentage of incidents in which at least one arrest was made,
- the percentage of incidents in which at least one defendant was prosecuted, and
- the percentage of prosecuted incidents in which at least one defendant was convicted.

From these percentages, one could finally compute the percentage of criminal incidents which resulted in at least one defendant being convicted for the offense.

The first percentage of interest is the percentage of victimizations which come to the attention of the police. However, published victimization survey data cannot be compared directly to published Uniform Crime Reports. The sources of incompatibility are many, with perhaps the most basic being that the survey measures the victimization experiences of Washington, D.C. residents, regardless of whether the crime actually occurred in the District of Columbia, while the police

record offenses occurring in the District of Columbia, regardless of where the victim lives. To overcome these problems, PROMIS arrest data were compared to both data sources. PROMIS data are flexible and may be aggregated in many ways, since they contain identifiers for the defendant, the offense, the case, and the characteristics of each of these. For example, when comparing PROMIS arrest data to victimization data, incidents involving victims living outside the District of Columbia can be eliminated, whereas when comparing them to police data they can be included.

The first comparison was made between arrest data in PROMIS and victimization survey data for six crimes (rape, assault, personal robbery, household burglary, commerical burglary and commercial robbery). After the necessary adjustments were made for each data source, a percentage of victimizations which resulted in at least one adult arrest could be computed. These percentages are much higher for rape and assault than for robbery and burglary. This may be due to victim reporting behavior or the ability of the police to apprehend a suspect. Apprehension rates were computed, using as a base the crimes victims said they reported to the police. This revealed that the police were much more likely to arrest an adult for a rape or assault incident reported to them than for a robbery or burglary. Of the six crimes, victims were most likely to report a commercial robbery or burglary, thus increasing the base for measuring apprehension rates for these two crimes.

The estimated arrest rates for assault and rape were so high as to make one wonder whether the survey may be underestimating the true

incidence of these crimes. One of the possible factors, suggested from previous research, is that crimes which occur between persons who know each other may not be mentioned to the survey interviewer. In order to test this hypothesis indirectly, the percentages of stranger and non-stranger rapes and assaults were calculated for both the victimization survey and arrest data from PROMIS. The results cast serious doubt on the ability of the victimization survey to measure nonstranger rapes and assaults. The percentage of stranger-to-stranger crimes was much higher according to the victimization survey than according to arrest data. Since other research shows that persons are more likely to report an incident to the police if the offender was a stranger, this is exactly the opposite of what would be expected. The victimization survey should either take steps to improve nonstranger reporting or be limited to stranger-to-stranger victimizations.

The next step was to compare arrest data from PROMIS to reported offenses according to UCR for 1973. Different adjustments were needed to make these comparisons for four crimes: murder and nonnegligent manslaughter, forcible rape, robbery and burglary. Again, the apprehension rates were high for murder and rape, and lower for robbery and burglary. As with the victimization comparison, the arrest rate for robbery was higher than that for burglary.

Given all of the problems of comparison, there were only two crimes which could be followed from victimization through conviction --commercial robbery and burglary. Using the victimization survey's estimates of these crimes and following them through final disposition in PROMIS, the percentage of incidents resulting in at least one adult

conviction was estimated to be five percent for commercial robbery and one percent for commercial burglary. Allowing for sampling error in the survey, the percentages varied between four and six percent for robbery and one to two percent for burglary. The point where cases were least likely to be carried to the next stage was between the reporting of an offense and arrest. For these crimes, apprehension is the most difficult step in the process.

In all of the preceding discussion, only adult arrests have been considered. Automated juvenile data with the flexibility of PROMIS are simply not available for the District of Columbia. In order to improve the accuracy of the apprehension rates, based on reported offenses, arrest figures from PROMIS were increased according to the percentage of juveniles arrested in each crime category, obtained from police figures. This procedure increased all of the arrest rates although the relationships between the rates for different types of crime remained the same. The resulting arrest rates based on reported crimes were 25 and 19 percent for robberies and burglaries, respectively. For assault, rape and murder, all the estimated arrest rates were above 70 percent.

What can be learned from computing all these rates? First, the patterns of handling of homicide, assault and rape are quite different from that of robbery and burglary. Homicide cases have a high arrest rate and have one of the highest conviction rates once an arrest has been made. Assault and rape, however, seem to be treated quite differently. First, there appears to be a problem with the reporting of these crimes--particularly if the victim and offender

know each other. The rate of arrest for these crimes when known to the police appears to be relatively high, but the conviction rates are among the lowest of any type of serious crime. Almost the opposite is true for robberies and burglaries. Rates of reporting, particularly for commercial victimizations, are high, but rates of arrest are low. Once an arrest is made, the conviction rates for robbery and burglary are moderately high. These differences illustrate the need to consider each step in the criminal justice process, in order to evaluate where potential problems lie, and the need to analyze each type of crime separately.

In conclusion, it is recommended that more effort should be made to publish statistics which can be compared. This requires better coordination between different parts of the criminal justice system. In order to allow comparisons to be made more routinely for all crimes, the data published by each part of the criminal justice system should be modified:

(1) Victimization survey data for cities should be tabulated by the place of the offense to enable incidents occurring outside the urban area being surveyed to be excluded if desired for comparative purposes.

(2) UCR data should be collected and tabulated by the age and sex of the victim, the residence of the victim, the type of victim (personal, household or commercial) and the victim-offender relationship.

(3) A prosecutor's or court's data system should include an identifier for the defendant and the offense, the number of victims, the residence of the victim, the type of victim (personal, household or commercial), the victim-offender relationship, and the age and sex of the victim.

(6) A juvenile data system should include all of the items mentioned in (3) as well as indicators as to whether any adult defendant has been charged in a particular crime.

For each data source, additional information is also needed for other purposes. Those outlined above would allow basic comparisons to be made between the statistics collected by the different parts of the criminal justice system, and perhaps enable it to indeed function as a "system".

CRIMINAL JUSTICE STATISTICS: DATA FROM A "NONSYSTEM"

Tracing crime in any large city in the United States from victimization through the police and court systems is difficult, since the statistics collected at one stage cannot be directly compared to those collected at another. This paper first outlines some of the major sources of incomparability between the victimization survey data published by the Law Enforcement Assistance Administration for large cities in the United States, and the reported offenses of the Uniform Crime Reports (UCR) compiled by the Federal Bureau of Investigation. Then, in an effort to show how more compatible data collection would allow measurement of the handling of crime by the criminal justice system within a jurisdiction, both of these data sources are compared to arrest and conviction data from PROMIS (Prosecutor's Management Information System) for the District of Columbia in 1973. The flexibility of PROMIS, which allows classification of the data by offense, defendant or victim, as well as by the characteristics of each, facilitates comparisons which lead to the desired overview of the system. The issue of juvenile statistics is addressed in a final section. Through all of these comparisons, ways of improving crime and court statistics are suggested.

Background

The importance of analyzing the interaction between the components of the criminal justice system has been mentioned by many researchers, including Beattie (1955), Robison (1966), Klein et al. (1971), and

Zeisel (1971). Beattie (1955:185) observed that "it is not enough to measure just the amount of crime, or the work of the police, or the work of the courts, or of probation, or of the prisons, or of parole as independent and unrelated bodies of data." Yet today, twenty years later, the various data sources remain largely unrelated. From the police response to a citizen's report of a burglary, through a parole board's decision of when to release a convicted "burglar," each part of the criminal justice system has a different focus and concern. Reflecting this diversity, each part of the system publishes statistics which cannot be compared. The unit of analysis varies, with victimization surveys counting victims and offenses, and the courts counting defendants and cases. Even within the Uniform Crime Reports, the reporting unit shifts from reported offenses to number of persons arrested, without any attempt to reconcile the two (Mulvihill et al., 1969:33).

To plan a comprehensive approach to the crime problem of any large urban center, statistics measuring the functioning of each level of the system must be available. Klein et al. (1971:357) see this in terms of the fantasy and reality of criminal justice as a "system":

> The reality is that the community, the police, the courts, and the correctional agencies do combine to attack the problem of crime and process the criminal offender. The fantasy lies in the speculation that the various agencies approach these processes in a coordinated and rational fashion. To make the fantasy a reality requires planning comprehensively for the goals, the procedures, and the assessment of the impact of the various components of the criminal justice system.

In developing statistics for the criminal justice system, we can begin from the standpoint of the offender or the offense. In the

former case, one can usually only begin with arrest and trace a person through final disposition and any subsequent rearrest. Using the offense or victim as the unit of analysis, one can follow a crime from victimization through conviction. This paper is primarily concerned with tracing offenses, rather than offenders.

To trace offenses one would like to know how many victimizations there were, how many of these victimizations were reported to the police, how many of these offenses resulted in one or more arrests, how many of the offenses resulting in arrest also resulted in at least one conviction, and finally, how many of these offenses resulted in an incarceration. This paper is an attempt to compute such information for one jurisdiction, illustrating the adjustments which need to be made in various data sources.

Comparing Victimization Surveys to Uniform Crime Reports

The victimization surveys were devised to estimate the so-called "dark figure of crime"--the actual crimes which are occurring, regardless of whether they come to the attention of the police. There is then the natural desire to compare the estimates of crime available from the victim survey to Uniform Crime Reports, in order to see what proportion of crime comes to the attention of the police. Attempts to compare victimization survey data and police figures have been conducted for index crimes in the past (Biderman, 1967; Reiss, 1967; Ennis, 1970) and will undoubtedly be tried in the future, using the recently published results of the LEAA victimization survey and Uniform Crime Reports. However, there are a number of obstacles which arise upon

close examination of the two sources of data which make such comparisons virtually impossible for the city surveys.[1] Some of the sources of non-comparability include: the victimization survey measures victimization of city residents, no matter where the incident occurred, whereas the Uniform Crime Reports measure the crimes occurring in a geographic area, no matter where the victim resides; the victimization survey measures the occurrence of several crimes within one incident, whereas the Uniform Crime Reports classify incidents according to a hierarchy of crime seriousness; the survey only includes the victimization of persons over 12 years, whereas the victim can be any age to be counted in the Uniform Crime Reports; the victimization survey must be compared to UCR data in terms of victims for crimes against the person and in terms of incidents for crimes against property; and the victimization survey is tabulated by type of victim (individual, household, or business) whereas the Uniform Crime Reports do not show such breakdowns.

There are some additional methodological difficulties with the victimization survey and the UCR. Since the estimates of crime obtained from the LEAA survey are derived from a sample survey, they are subject to sampling error. Also, a victim may either forget an incident entirely when questioned by the interviewer or recall an incident which actually occurred prior to the reference period. On the other hand, in compiling statistics for the Uniform Crime Reports, the police in some jurisdictions may fail to record as an offense some of the crimes reported to them.

[1] For a discussion of the problems of estimating crime for the entire United States using the two data sources, see Maltz, 1975.

The purpose of this paper is not to inventory all of the sources of difficulty in attempting to compare UCR and victimization data, which has been done by others (see Skogan, 1975). Instead, data from PROMIS will be compared to both the victimization survey and UCR, making the different adjustments necessary in each case. Through such comparisons, insights can be gained into ways in which the victimization surveys and Uniform Crime Reports can be improved. These comparisons also provide an example of how a flexible statistical data base for the prosecutor or court system can provide an overview of the functioning of the criminal justice system when compared to data from other parts of the system.

The PROMIS Data Base

The first installation of PROMIS was in the Superior Court Division of the U.S. Attorney's Office of the District of Columbia in 1971. This division of the court is equivalent to a state court of general jurisdiction. For each adult defendant arrested for either a felony or misdemeanor, over 170 fields of data are routinely collected in PROMIS at screening and during case processing. The data include items about the defendant, the crime, the victim, witnesses, decisions made during the processing of the case, and the reasons for each decision as stated by the prosecutor. Thus, the information covers the adult court process from arrest through final court disposition.

PROMIS contains items and identifiers which allow statistics to be compiled in many ways. Statistics may be prepared using four different units of analysis:

(1) A court case against one defendant, usually involving only one offense, is one unit of analysis.

(2) A defendant may be the unit of analysis, by using the unique police identification number assigned to each defendant arrested in the District of Columbia.

(3) Cases against several defendants may be grouped in order to study criminal incidents, by using the complaint number assigned by the police to each offense.

(4) The number of victims may be constructed from items in PROMIS to determine the number of victims in homicide and rape cases.

It is this capacity to aggregate data in numerous ways which allows PROMIS data to be compared with data from other parts of the criminal justice system. In addition, items such as the residence of the victim and whether the victim was a business or institution, allow additional adjustments to be made in the data, in order to facilitate more accurate comparisons.

Comparing Victimizations to Arrests

In order to compare data from the victimization survey to arrest data in PROMIS, certain adjustments must be made in both data sources. Specifically, data from PROMIS must be aggregated into criminal incidents involving victims who are residents of the District of Columbia and at least 12 years old or older, and differentiated by whether the victim was an individual, household, or business or institution. Victimization data have to be adjusted for whether the crime reported in

the survey occurred in Washington, D.C. or outside the city. Other sources of error in the victimization data, for which adjustments could not be made, are the series victimizations excluded from the data,[2] the problem of "telescoping,"[3] the victim's failure to report an event to the interviewer, either consciously or due to memory failure, and the related problem of the victim reporting an event which did not occur. An additional problem with the victimization data is sampling error which results from the fact that the data are collected from a sample survey, rather than a census of the population of the entire city. Another area of difficulty is that PROMIS is only installed in the adult court system. In a later section, estimates of juvenile arrests will be made, and the resulting changes in the rates of attrition noted.

Table A and B in the Appendix show the adjustments made in the published victimization survey data and arrest data in PROMIS. The unit of analysis is a criminal incident involving one or more offenders and victims. Comparisons were attempted only for six crimes which did not present difficulties, other than those which have already been mentioned, including: rape, assault, personal robbery, household burglary, commercial robbery, and commercial burglary. Victimization figures for household and commercial burglary and commercial robbery

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[2] Series victimizations are repeated incidents of a similar type involving the same victim which could not be distinguished as separate distinct events and were excluded from the final tabulations.

[3] A victim may tell the interviewer about an event which he believes occurred during 1973, but which actually occurred prior to 1973.

did not require adjustments for age or residence of the victim, or place of the offense, as did the other crimes, and therefore are not included in Appendix Table A.[4]

The adjusted figures for victimizations reported as having occurred during 1973, and comparable offenses in which at least one adult arrest was made during 1973 are shown in Table 1. In column 3 of the table, the percentage of victimizations in which at least one adult arrest was made is shown. These percentages are the product of at least two actions:[5]

(1) the victim reported the crime to the police, and

(2) the police arrested an adult suspect.

The victimization survey asked respondents whether they reported the incident to the police.[6] Using these percentages based on the victim's self-report, shown in column 4 of the table, and the percent of victimizations in which at least one adult arrest was made, the percent of reported offenses in which at least one adult arrest was made can be estimated by dividing column 3 by column 4.

By using these three columns of percentages, several inferences about the handling of crime from victimization through arrest can be

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[4] A business or institution established in the District of Columbia or a household obviously could not be victimized elsewhere, nor could the household or business be located elsewhere.

[5] Additional intermediary steps, including the police considering the complaint a crime, and the police filing a report of the offense will not be discussed in this paper.

[6] There will be some error in these figures. Some persons may say they reported the incident, when they actually did not; others may say they did not report the incident, when they actually did.

TABLE 1.

Comparison of Victimizations with Incidents in Which at Least One Adult Arrest was Made, for Selected Offenses: Washington, D.C., 1973

(Unit of analysis is a criminal incident involving one or more offenders and victims.)

Type of Crime and Victim	1 Victimizations*	2 Incidents in Which at Least One Adult Arrest Was Made **	3 (=2/1) Percent of Victimizations in Which at Least One Adult Arrest Was Made	4 Percent of Victimizations Reported to the Police ***	5 (=3/4) Estimated Percent of Reported Offenses in Which at Least One Adult Arrest Was Made
Personal Victim:					
Assault	5,394	1,791	33%	44%	75%
Rape †	510	258	51%	65%	78%
Robbery	7,176	758	11%	63%	17%
Household Victim:					
Burglary	19,700	922	5%	57%	8%
Commercial Victim:					
Burglary	8,600	292	3%	79%	4%
Robbery	2,300	220 ††	10%	90%	11%

* Source: Criminal Victimization Surveys in 13 American Cities, 1975, p. 245. Figures for assault, rape and robbery adjusted for place of occurrence, see Appendix, Table A.

** Source: Prosecutor's Management Information System, U.S. Attorney's Office of the District of Columbia, Superior Court Division, 1973. Figures for assault, rape and personal robbery adjusted for age and residence of the victim, see Appendix, Table B.

*** Source: Criminal Victimization Surveys in 13 American Cities, 1975, p. 250.

† Includes incidents involving male or female victims age 12 and older.

†† Includes 45 bank robbery incidents in which an arrest was made, obtained from police figures.

drawn. According to column 3, assault and rape victimizations appear to be more likely to result in an adult arrest than the robbery or burglary incidents. However, after examining columns 4 and 5, the crucial difference does not appear to be in terms of victim reporting behavior, but rather in terms of the ability of the police to apprehend a suspect. The estimated arrest rates for reported rapes and assaults are 78 and 75 percent, respectively, whereas the highest arrest rate for any of the four types of burglary or robbery was 17 percent for personal robbery. Victim reporting rates are more uniform. They are lowest for assault, and highest for commercial victimizations.

Robbery cases are slightly more likely to be reported and, if reported, to result in an arrest than burglary cases. This may be due to the fact that robbery involves a face-to-face confrontation, whereas a successful burglary does not. Identification of a burglar is difficult if he was not seen committing the act. It may be the anticipation of the police difficulty in apprehending a burglar which influences the lower reporting rate for burglary as compared to robbery. Skogan (1976) found that citizen reporting appears to correlate with FBI clearance rates.

Reliability of the Reported Victimization Figures for Rape and Assault

Estimates of the incident of assault and rape in the victimization survey may be low due to underreporting by the victim of incidents in which the victim and offender know each other. This is suspected for several reasons. First, such a problem was found in the San Jose Methods Test of Known Crime Victims (1972), and has been mentioned by others (Skogan, 1975). In the San Jose study, a follow-back survey of

assault and rape incidents reported to the police showed that: the percent reporting a rape to a survey interviewer, after having already reported the crime to the police, was highest if the victim and offender were strangers. The percent reporting an assault to the interviewer was lowest if the offender was a relative, higher if the offender was a stranger, and highest if the offender was known, but not a relative (San Jose Methods Test of Known Crime Victims, 1972:9). Thus, there is reason to believe the victimization survey underestimates nonstranger rapes, and assaults between relatives. In addition, the fact that the tabulations of victimizations exclude the series victimizations, which may be more likely to involve nonstrangers, may increase the problem.

In comparing the victimization data to arrest data, there are two intervening steps: whether a victim reports a rape or an assault to the police, and whether a rape or assault reported to the police is likely to end in an arrest. Logically, it would seem that a victim who knows the offender would be reluctant to report the crime to the police. This would mean that reported offenses would contain a higher proportion of stranger-to-stranger cases than the proportion which actually occurred. Skogan (1976) found that assault and rape victims were more likely to report a stranger crime compared to a nonstranger crime, although the difference was much larger for rape than assault. In addition, evidence from several studies indicates that when the police identify a suspect, they are less likely to make an arrest in cases of domestic assault than in other cases, and they are more likely to make an arrest if the victim and offender are strangers (Goldstein, 1967; Parnas, 1967; Reiss, 1971; Truninger, 1971). Of course, the suspect is more likely

to be identified if the victim and offender know each other. In any case, it seems that at least the first step of crime reporting would be more likely to occur if the victim and defendant were strangers. Thus, there should be relatively more stranger-to-stranger cases in arrest data compared to victimization data. This is the opposite of what was found.

Table 2 shows a percentage distribution of the relationship between the victim and the offender for rape and assault from two sources: the victimization survey and arrest data in PROMIS. The figures are not strictly comparable, since the victimization survey is based on victims and the PROMIS data is based on defendants, and the adjustments described in the previous section were not made. In addition, the sampling error for the rape victimization figures is large. Despite these difficulties, the differences in the percentage distributions for the two data sources are large enough to cast serious doubt on the victimization survey's ability to measure the incidence of assault or rape between nonstrangers. For rape, only 9 percent of the rapes in the victimization survey involved nonstrangers, whereas 57 percent of the arrests involved nonstrangers. The absolute number of offenders charged with nonstranger rape according to PROMIS is larger than the number of estimated victims according to the victimization survey (54 estimated victims, resulting in 222 arrests). Given the fact that nonstranger rapes are probably less likely to be reported to the police than stranger rapes, the underestimation of nonstranger rapes in the victimization survey must be substantially greater than it even appears here. There should be many more nonstranger rapes which never result in an arrest. For assault, the same problem exists. The victimization survey estimates that 30

TABLE 2.

Relationship Between the Victim and the Offender for Rape and Assault According to Victimization Survey Data and Arrest Data: Washington, D.C., 1973

Type of Crime and Source of Data	Relationship Between the Victim and the Offender		
	Total	Stranger	Nonstranger
Rape			
Victimizations*			
Number	600	546	54
Percent	100%	91%	9%
Arrests**			
Number	389	167	222
Percent	100%	43%	57%
Assault			
Victimizations*			
Number	6,500	4,550	1,950
Percent	100%	70%	30%
Arrests†			
Number	2,672	680	1,992
Percent	100%	25%	75%

* Source: Criminal Victimization Surveys in 13 American Cities, 1974, p. 246. Numbers computed based on the percentages shown. Figures for nonstranger rape are too small to be reliable.

** Source: Prosecutor's Management Information System, U.S. Attorney's Office of the District of Columbia, Superior Court Division, 1973. Data includes only arrests for the rape of a male or female over age 12. Percent distribution based on cases in which the relationship between the victim and the defendant was known, 82 percent. Unknown cases were distributed according to the percentages based on the known cases.

† Source: Ibid. Percent distribution based on cases in which the relationship between the victim and defendant was known, 79 percent. Unknown cases were distributed according to the percentages based on the known cases.

percent of the victims were assaulted by nonstrangers, whereas arrest data indicate that 75 percent of the defendants were arrested for non-stranger assault.

In terms of the rates discussed in the previous section, underestimation of rape and assault incidents would make the arrest rates based on the victimization survey higher than they should be.

In summary, it appears that the victimization survey, as presently structured, is not adequately measuring nonstranger violence. Either the survey should be restructured in order to obtain better information on nonstranger victimization, or estimates from the survey should be limited to estimates of assault and rape between strangers.

Comparing Reported Offenses to Arrests

In order to compare reported offenses to arrests, police data from the Uniform Crime Reports was compared to court data from PROMIS. Fewer adjustments were needed to make this comparison, than to compare victimization survey data to PROMIS.

The tradition of criticism of the Uniform Crime Reports is well developed (Doleschal and Wilkins, 1969; Mulvihill et al., 1969; Robison, 1966; Pittman and Handy, 1965; Wolfgang, 1963; Cressey, 1957). It includes such difficulties as the lack of comparability of the UCR crime index over time and jurisdictions, the failure to weight criminal incidents for seriousness, the inclusion of both attempted and completed crimes, the inability of the figures to reflect multiple events, as well as criticisms of the statistics and illustrations included in the yearly published reports, such as the "crime clocks." However, before

the victimization surveys, this was all that was available to measure crime occurrence. The problem this paper is most concerned with is that UCR reported offenses usually cannot be compared to court statistics. In the UCR, crimes against the person are counted by the victim, and crimes against property are counted by the offense. Court statistics, on the other hand, are sometimes compiled by counting as a case the charges filed against one defendant, and sometimes by counting as a case the filing of charges against all defendants arrested for a particular crime.

Since PROMIS data may be tabulated in several ways, statistics could also be assembled to be compared with Uniform Crime Reports, as they were to be compared with the victimization survey. Comparisons were made for murder and nonnegligent manslaughter, forcible rape, robbery and burglary for calendar year 1973. UCR figures were used without adjustment.[7] As a first step, cases in PROMIS were aggregated into criminal incidents by grouping the data according to the police criminal complaint number assigned to an offense; i.e., all adult defendants arrested for the same crime were grouped together. The crime was classified by the most serious charge against any adult defendant.[8] For burglary, the aggregation into criminal incidents was all that was necessary. For robbery, an additional adjustment was needed for bank

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[7] Hindelang (1974) found evidence that at least the UCR homicide figures were comparable to mortality statistics.

[8] The crime classification for the criminal event, such as robbery, matched the crime charged to each of the codefendants in the case in a very high proportion of the cases (usually about 95 percent), varying by the type of crime. The crime categories analyzed here all had very high initial charging consistency.

robberies.[9] Offenses reported to the police could then be compared to offenses in which at least one arrest was made, since UCR counts robberies and burglaries in terms of incidents. For murder and rape, the incidents in PROMIS were increased according to the number of victims, since UCR counts crimes against the person in terms of victims. For homicide, an item on the number of persons killed during the offense was tabulated. Homicides in which the number killed was not stated, 14 percent of all homicides, were distributed according to the number of homicide victims in the known cases. The number of victims was then counted. For rape cases only female victims charged under the adult rape statute were included in the count of victims, since the UCR category of forcible rape only includes such victims. A PROMIS item indicating the number of victims of forced sexual intercourse was used to tabulate the number of rape victims, distributing 18 percent of such cases in which the number was not stated. The comparison for homicide and rape is between the number of victims known to the police and the number of victims for which at least one adult defendant was arrested. The results are shown in Table 3.

The figures shown in the table indicate a rather high arrest rate for murder and nonnegligent manslaughter, which is not surprising. Clearance rates for homicide from the police department also indicate

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[9] For robbery, figures on the number of bank robbery incidents in which an arrest was made based on police figures, had to be added to the PROMIS data. Bank robberies are handled by the District Court, where PROMIS was not yet installed in 1973, rather than the Superior Court.

TABLE 3.

Comparison of Reported Offenses with Criminal Incidents in Which at Least One Adult Arrest Was Made, for Selected Crimes: Washington, D.C., 1973

Type of Offense	1 Offenses Reported to the Police*	2 Offenses in which at least One Adult Arrest Was Made**	3 (= 2/1) Percent of Reported Offenses in which at least One Adult Arrest Was Made
Crimes Against Persons (Counted by the Number of Victims)			
Murder and Nonnegligent Manslaughter	268	222***	83%
Forcible Rape†	596	370***	62%
Crimes Against Property (Counted by the Number of Incidents)			
Robbery	7,171	1,290††	18%
Burglary	11,801	1,214	10%

* Source: Uniform Crime Reports, 1973, p. 224.

** Source: Prosecutor's Management Information System, U.S. Attorney's Office of the District of Columbia, Superior Court Division, 1973.

*** Figures adjusted from criminal incidents according to the number of victims.

† Includes only female victims with whom force was used (excludes statutory rape).

†† Includes 45 bank robbery incidents in which an arrest was made, obtained from police figures.

such a pattern. The rate of arrest for rape is also high relative to other crimes--62 percent--but it is lower than the estimates based on the comparison between victimizations and arrests shown in Table 1. Having higher arrest rates for rape according to the survey as compared to UCR would be expected if the victimization survey were underestimating rape, due to the low reporting of nonstranger rapes. Robbery and burglary incidents, on the other hand, are difficult to solve. The arrest rates for robbery and burglary based on UCR data show the same pattern as the victimization survey, with robbery having a higher rate than burglary. The police figures indicate only a slightly higher arrest rate for both crimes than the estimates based on the victimization survey. The arrest rates for all robberies based on comparing UCR to PROMIS was 18 percent, compared to 17 and 11 percent for personal and commercial robberies, respectively, based on comparing the victimization survey to PROMIS. This may be due in part to some citizens saying they reported an incident when actually they did not, or the police sometimes failing to record a reported incident. Another possibility is sampling error from the victimization survey.

"System Flow" Rates for Commercial Burglaries and Robberies

The following discussion of commercial burglaries and robberies is to illustrate the type of statistical data that could be compiled for each type of crime if the different parts of the criminal justice system collected comparable statistics. Table 4 shows attrition rates for commercial burglaries and robberies from victimization through the conviction of one or more adult offenders. These crimes were chosen since

a commercial burglary or robbery occurring in the District of Columbia could be reported only to the police in the District of Columbia, and there were not the same problems with residence and age of the victim as with other crimes. Since the UCR does not differentiate robberies or burglaries by whether the victim was an individual, a household, or a business or institution, estimates of reported offenses were derived from using the percent of victimized businesses who said that they reported the crimes to the police, rather than UCR data. Arrest and conviction figures for business or institutional burglaries and robberies were obtained from criminal incidents in the PROMIS data, with the addition of bank robbery figures provided by the police.

If attrition is defined as the percentage of cases dropped at each stage of the criminal justice process, from victimization through conviction, the point at which the attrition rates are highest is between the filing of an offense report and the arrest of one or more offenders. Table 4 shows that the percentages of commercial robberies and burglaries reported to the police which resulted in at least one adult arrest were 11 and 4 percent, respectively. The comparable figures from Table 3 for the arrest rates for all robberies and burglaries was 18 and 10 percent, respectively. It is possible that these percentages would be higher if police statistics were used, since some of the survey respondents may have said they reported the offense, when actually they did not. Another possibility is that the police did not record a crime, even though it was reported, some proportion of reported

offenses are considered unfounded. When juvenile arrests are included, as discussed in the next section, the rates increase, but not enough to change the fact that apprehension is the point of greatest attrition between victimization and conviction.[10]

By multiplying all of the individual attrition rates in Table 4, one can obtain the probability that a victimization will result in the conviction of one or more adult offenders. The probabilities are quite low--five percent for robbery and one percent for burglary. Of course, they may not be low compared with other jurisdictions. In order to increase these overall rates appreciably, the ability of the police to arrest the offender would have to be improved. This appears to be most difficult step in the process. Even if all citizens reported their victimization to the police, and all arrests resulted in an adult conviction, the overall conviction rate from victimization through conviction would still be only 11 percent for commercial robberies and 4 percent for commercial burglaries.

Still another way of emphasizing the magnitude of the attrition rates for these two crimes is to consider the sampling error in the victimization figures for commercial robberies and burglaries. A 95 percent confidence interval established around the estimates would

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[10] An issue not discussed here is that of "clearance" rates. Clearance rates are computed as the percentage of reported offenses which the police believe they have accounted for by an arrest. Since the same person may commit several crimes, a clearance rate illuminates an important dimension of the pattern of apprehension.

TABLE 4.

Number of Commercial Robberies and Burglaries Reaching Each Stage in the Criminal Justice Process: Washington, D.C., 1973

(Unit of analysis is a criminal incident involving one or more offenders and victims.)

Stages in the Criminal Justice Process	Commercial Robbery		Commerical Burglary	
	Number	Percent of Incidents at Previous Stage	Number	Percent of Incidents at Previous Stage
Victimizations*	2,300	---	8,600	---
Crimes reported to the police**	2,070	90%	6,794	79%
At least one adult arrested †	220	11%	292	4%
At least one adult convicted †	108	49%	113	39%
Percent of victimizations resulting in an adult conviction ††		5%		1%

* Source: Criminal Victimization Surveys in 13 American Cities, 1975, p. 245.

** Source: Ibid., p. 250.

† Source: Prosecutor's Management Information System, U.S. Attorney's Office of the District of Columbia, Superior Court Division, 1973. Robbery figures also include 45 bank robbery incidents in which at least one arrest was made, which resulted in 25 incidents with at least one conviction.

†† Computed as conviction of at least one defendant divided by victimizations, or as the product of the three percentages shown above.

range from 5,081 to 12,083 for commercial burglaries, and from 1,765 to 2,817 for commercial robberies.[11] Using these two intervals, the percentages of victimizations resulting in conviction varies only slightly, ranging from 4 to 6 percent for commercial robberies and from 1 to 2 percent for commercial burglaries.

The Problem of Juvenile Data

In the previous sections, only adult arrests have been considered. In Washington, D.C., as in most other jurisdictions, juvenile delinquents under the age of 18 are handled separately from adult offenders. Juveniles who are 16 or 17 and are charged with a serious felony are sometimes an exception; these cases in Washington may be handled by the adult system. In general, there is a feeling that juveniles should be given a chance to grow up and reform before being penalized severely. The terms used to describe the juvenile system reflect an attitude of lenience and an avoidance of labeling the juvenile as a "criminal:" a crime is a "delinquent act," jail is termed a "receiving home," and the decision of whether to prosecute is termed "petitioning." In many cases there is no determination of guilt or innocence through a trial. Instead, a "consent decree" may be issued upon agreement of the judge, the defense counsel, the juvenile and his parents. The consent decree

[11] Intervals were established by using the standard errors given in Criminal Victimization Surveys in 13 American Cities, 1975, p. 254. A 95 percent confidence interval can be interpreted to mean that if repeated samples were taken the actual number of victimizations could be expected to fall within the interval 95 percent of the time.

puts the youth under supervision of the court without a finding of guilt.

In attempting to track a crime from victimization through conviction, it is important to take juvenile arrests into account. A juvenile arrest may be less satisfying for a victim, from the point of view of assigning responsibility for the offense and punishing the offender, but it is still an apprehension by the police. It is difficult to compare juvenile cases with adult cases because the handling of the juvenile cases is so different. Raw juvenile data are generally unavailable because of problems of confidentiality. Published aggregate statistics, however, cannot be adjusted in all of the ways previously described for the PROMIS data, e.g., arrests cannot be aggregated into criminal incidents, one cannot adjust for where the crime occurred or the age and residence of the victim, etc.

In order to analyze the effect of including juvenile data in the comparisons previously discussed, crude estimates were made based on the percentage of total arrests in which the victim was 17 or younger based on police statistics for five crime categories (see Appendix Table C). The PROMIS figures shown in Tables 1, 3 and 4 were then adjusted on the basis of the crime category closest to the desired category by increasing the criminal incident figures according to this percentage. For example, the criminal incidents of commercial robbery in which at least one adult arrest was made was increased according to the proportion of robbery arrests which were juveniles. This is probably an overestimate of the incidents resulting in a juvenile arrest for two reasons.

First, a criminal incident may involve both adults and juveniles and would thus be counted twice. Second, some juveniles 16 or 17 years old may be prosecuted in the adult system, if the crime is very serious. Again, the incident would be counted twice. However, accurate estimates under the present system of data collection are very difficult to make. If a system analogous to PROMIS were installed in the juvenile court, the methods described in the preceding pages could be applied to these data as well. Lacking such information, these crude estimates will at least indicate the difference between including and excluding the juveniles.

Although the relationships between the handling of different types of crime was not changed by adding an estimate of the number of criminal incidents in which there was a juvenile arrest, it did increase the arrest rates. Table 5 shows the estimated percent of reported offenses in which an adult or juvenile arrest was made, using victimization data. The arrest rates for assault and rape become unbelievably high, emphasizing the probable underestimation of these crimes in the victimization survey. The arrest rates for robbery and burglary increase to 23 and 15 percent for personal and commercial robberies, respectively, and 15 and 8 percent for household and commercial burglaries, respectively. In each instance, the increase was several percentage points.

Table 6 shows the estimated adult and juvenile arrest rates for murder, forcible rape, robbery and burglary, using UCR figures. These figures are quite close to the clearance rates published by the

TABLE 5.

Estimated Percent of Reported Offenses in Which at Least One Arrest was Made Using Victimization Survey Data: Washington, D.C., 1973

Type of Crime and Victim	Estimated Percent of Reported Offenses in Which at Least One Adult or Juvenile Arrest Was Made*
Personal Victim:	
Assault	91%
Rape	96%
Robbery	23%
Household Victim:	
Burglary	15%
Commercial Victim:	
Burglary	8%
Robbery	15%

*Corresponds to Column 5 in Table 1. Percentages computed by first adjusting the criminal incidents in PROMIS in which at least one arrest was made (Column 2 in Table 1), for juvenile arrests, based on the percentage of juveniles arrested in each crime category, shown in Appendix Table C, and then recomputing the calculations shown in Table 1.

TABLE 6.

Estimated Percent of Reported Offenses in Which at Least One Arrest was Made Using Uniform Crime Reports: Washington, D.C., 1972

Type of Offense	Estimated Percent of Reported Offenses in Which at Least One Adult or Juvenile Arrest Was Made*
Murder and Nonnegligent Manslaughter	87%
Forcible Rape	77%
Robbery	25%
Burglary	19%

*Corresponds to Column 3 in Table 3. Percentages computed by first adjusting the PROMIS data (Column 2 in Table 3) for juvenile arrests, based on the percentages of juveniles arrested in each crime category, shown in Appendix Table C, and then recomputing the arrest rates.

District of Columbia Metropolitan Police Department in the annual report for fiscal year 1973 and fiscal year 1974. In fact, the arrest rates shown for murder and rape were higher than the clearance rates published by the police. A possible explanation is that some of these two types of crimes may continue to be investigated after publication of the annual report. Hence, the final clearance rates would be somewhat higher than those shown in the report. For robbery and burglary, the rates shown in the table of 25 percent for robbery and 19 percent for burglary were the same as the police clearance rates for fiscal year 1973.

The previous discussion of Table 4, which gives attrition rates for robbery and burglary can also be modified by including juvenile arrests. Using the arrest rates shown in Table 5 for commercial robberies and burglaries, and assuming that as many juveniles are found guilty[12] of these crimes as adults, the percentage of commercial robberies resulting in conviction would be seven percent and the percentage of commercial burglaries resulting in conviction would be two percent.

Conclusions

The purpose of attempting to follow crime from victimization through conviction is to gain a perspective on the overall effectiveness of the criminal justice system. The difficulties in preparing the statistics needed for doing this have been stressed in this paper.

[12] Due to the problem mentioned earlier of defining a conviction in a juvenile case, one might want to separate adult and juvenile data after arrest, in an ideal criminal justice data system.

From the comparisons which could be made, after making adjustments in the various data sources, the problems of measuring and comparing attrition rates for robbery and burglary were different from those of murder, rape and assault.

The "system rates" prepared for commercial burglaries and robberies from victimization data and PROMIS data show that the overall rate at which anyone is convicted for these crimes is extremely low. Even when juvenile arrests are considered, the rates only increase 1 or 2 percentage points. The point of greatest attrition appears to be whether or not a suspect can be apprehended by the police. Reporting rates are fairly high, as well as the prosecution and conviction rates for adult defendants charged with a commercial robbery or burglary. The police arrest figures for all robberies and burglaries based on the UCR are slightly higher than the estimated arrest rates for robbery and burglary from the victimization survey. However, for both data sources, and regardless of whether juvenile arrests are included or not, the rate for robbery is higher than that for burglary. This is probably because burglars are generally not seen or heard, whereas robbery involves a confrontation, allowing the victim to later make an identification of an offender. Commercial robberies are more likely to be prosecuted and result in conviction than commercial burglaries, once an arrest is made. This would be expected, if burglary cases involved more evidence problems (such as the lack of eyewitnesses) than robbery cases.

The patterns for homicide, assault and rape are quite different from that of robbery and burglary. Homicide, particularly murder, has a high rate of arrest. Probably there is also a high rate of

discovery once the homicide has occurred. Since a victimization survey cannot measure homicide, there is no way to confirm this, although Hindelang's (1974) comparison of mortality statistics with UCR also lends support to this notion. Data from PROMIS for 1973, not included in this paper, show that prosecution and conviction rates for homicide are high. Assault, on the other hand, appears to be one of the most "hidden" of all crimes. The victimization survey figures seem to underestimate assault, particularly among nonstrangers. When the adjusted figures for Washington (Table 2) are shown by the relationship between the victim and the offender, it seems clear that the percent of nonstranger assaults is much lower than would be expected. The difficulty appears to be the victim's reporting behavior, with the police having a relatively high arrest rate once a complaint is recorded. For rape, much the same pattern appears to exist. Women seem unwilling to report the rape, particularly if the rapist is not a stranger, to either the interviewer in the victimization survey or to the police. Rates of reporting to the police seem to be higher for rape than assault, according to the victim's self-report, perhaps because both the victimization and the UCR data indicate that the rate of arrest is relatively high. Both assault and rape have very low rates of conviction, however.[13] In summary, an attempt to increase the reporting of rape and assault would appear to be useful, along with an analysis of the reasons

[13] According to PROMIS data for 1973, the percentage of arrests for assault and rape which resulted in conviction were 26 and 22 percent, respectively, whereas the average conviction rate for all cases was 33 percent.

for the low conviction rates in these cases. In contrast, improved methods are needed for detecting and apprehending robbers and burglars, after the offense is reported, since this appears to be the point of greatest attrition.

There are also implications for the improved collection of criminal justice statistics in the future. First, this paper emphasizes the need to analyze different types of crime separately. There is little understanding to be gained from comparing the UCR Crime Index to the total number of crimes estimated from the victimization survey. Second, there is a need for better criminal justice data coordination. In order to allow comparisons between different parts of the criminal justice system to be made more accurately for all crimes, the data collected by each part of the criminal justice system should be modified for more compatible and systematic compilation. If the following changes were made, comparisons could be made routinely:

(1) Victimization survey data for cities should be tabulated by the place of the offense to enable incidents occurring outside the urban area being surveyed to be excluded if desired for comparative purposes.

(2) UCR data should be collected and tabulated by the age and sex of the victim, the residence of the victim, the type of victim (personal, household or commercial), and the victim-offender relationship.

(3) A prosecutor's or court's data system should include an identifier for the defendant and the offense, the

number of victims, the residence of the victim, the type of victim (personal, household or commercial), the victim-offender relationship and the age and sex of the victim.

(4) A juvenile data system should include all of the items mentioned in (3) as well as indicators as to whether any adult defendant has been charged in a particular crime.

For each data source, additional information is also needed for other purposes. Those outlined above would allow basic comparisons to be made between the statistics collected by the different parts of the criminal justice system, and perhaps enable it to indeed function as a system.

APPENDIX

TABLE A.

Adjustment of Published Victimization Data
for Place of the Offense: Washington, D.C., 1973

Type of Crime and Victim	Unadjusted Victimizations*	Percent of Incidents Occurring Outside D.C.**	Adjusted Victimizations
Personal Victim:			
Assault	5,800	7%	5,394
Rape	600	15%	510
Robbery	7,800	8%	7,176

* Source: Criminal Victimization Surveys in 13 American Cities, 1975, p. 245.

** Source: Law Enforcement Assistance Administration, telephone request, September 15, 1975.

TABLE B.

Adjustment of PROMIS Data for Age and Residence of the Victim: Washington, D.C., 1973

Type of Crime and Victim	Incidents in Which at Least One Arrest Was Made	Estimated Percent of Victims Under Age 12*	Estimate of Incidents With Victim 12 Years and Older	Percent of Victims Not Residing in D.C.	Adjusted Incidents With Victims Over 12 Years Who are D.C. Residents
Personal Victim:					
Assault	2,513	1%	2,488	28%	1,791
Rape	385	16%	323	20%	258
Robbery	1,078	1%	1,067	29%	758

*Estimates based on case data, rather than incident data.

TABLE C.

Percentage of Total Arrests Which Involved a Person Under Age 18: Washington, D.C., 1973

Type of Crime	Percentage of Arrests Involving a Person Under 18 Years
Murder and Nonnegligent Manslaughter	5%
Forcible Rape	19%
Assault*	17%
Robbery	28%
Burglary	46%

*Includes both aggravated and "other" assaults.

Source: Annual Report of the Metropolitan Police Department, Washington, D.C., Fiscal Year 1973, Part II, pp. 28-29.

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