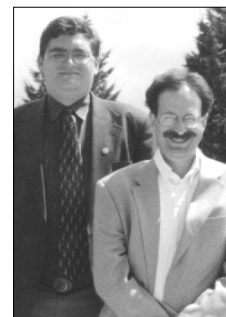

WINDOW ON WASHINGTON

*Daniel Cork and Michael Cohen,
Column Editors*



Column Editors' Note: Every year, the results of two large data collection efforts are used to gauge the problem of crime in America. These two data series are intended to measure different aspects of crime, but this point is often lost in the front-page headline summaries of whether crime is “up,” “down,” or about the same. Confusion regarding the two crime indicators is exacerbated when the two data series show substantially different trends, as was the case with the most recent release of data in 2001. For this column, we asked Michael Rand and Callie Rennison of the U.S. Bureau of Justice Statistics to describe the two national crime indicators and their differences. Their article clearly describes the distinct approaches to measuring crime used by these two data series, and provides a strong justification for maintaining these two approaches to address very distinct policy needs.

Just a thought... A previous Window on Washington column from summer 1998 discussed the U.S. Census Bureau's Small-Area Income and Poverty Estimates Program, which used administrative records and census data in conjunction with Current Population Survey estimates to produce model-based small-area estimates that incorporated information from all these sources. It would be interesting to see if a similar approach might be used to provide small-area estimates of violent crime, possibly by fitting a regression model to the National Crime Victimization Survey data, using the Uniform Crime Reports and other data as explanatory variables. Such approaches to combine information from the two national crime indicators—continuing efforts to refine inferences from two frequently confused data series—are interesting possibilities for future research.

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True Crime Stories? Accounting for Differences in Our National Crime Indicators

**Michael R. Rand and
Callie M. Rennison**

In May 2001, the FBI released preliminary estimates from the Uniform Crime Reporting (UCR) Program, showing that violent crime in the United States had stabilized in 2000 after several years of decline. Two weeks later, the Bureau of Justice Statistics (BJS) released findings from the National Crime Victimization Survey (NCVS) indicating that in 2000 the violent crime rate had fallen by 15 percent from its 1999 level, the greatest percentage decline in the survey's 28-year history.

At the time of the NCVS release, the media reported that “criminologists were at a loss to explain the difference between the two sets of figures” (*Irish Independent*, June 15, 2001), that “it’s possible that both are correct” (*Washington Post*, June 19, 2001), that “the Justice Department and many statisticians regard the victim survey as a more accurate gauge of actual crime than the FBI study” (*Washington Post*, June 14, 2001) and that “most criminologists regard the FBI’s report as the more valid yardstick” (*USA Today*, June 15, 2001). Each of these statements reflects confusion about the purposes, advantages, and disadvantages of the UCR and the NCVS.

UCR and NCVS

The UCR and NCVS are the U.S. Department of Justice's two national measures of crime in the United States. The UCR, the older of the two programs, is compiled from monthly reports transmitted to the FBI from law enforcement agencies across the country, either directly or through centralized state agencies. It was begun in 1929 to provide information at the national level on a set of serious crimes reported to local law enforcement agencies. The crimes selected for inclusion in the UCR Program were chosen because they were considered both serious offenses and likely to be reported to the police. The specific crime types monitored by the UCR Program are referred to as "Index Crimes," and they are used to form a composite Crime Index of offenses known to law enforcement.

The NCVS is a victimization survey conducted from a large sample of U.S. households. First fielded in 1972, the survey was designed to serve as a benchmark for UCR statistics on crime reported to police; to measure what was called "the dark figure of unreported crime"; and to fill a perceived need for information on the characteristics of crime not provided by the UCR. The President's Commission on Law Enforcement and the Administration of Justice, established by President Johnson, noted in a task force report that, "If we knew more about the character of both offenders and victims, the nature of their relationships and the circumstances that create a high probability of crime conduct, it seems likely that crime prevention programs could be made much more effective" (President's Commission, 1967). It is therefore no surprise that the types of crime measured by the NCVS are similar to those measured by the UCR; (see Table 1).

Both programs are essential because crime, unlike the weather, is a phenomenon that is not directly observable. No one measure is capable of providing all the information about the extent and characteristics of crime. The UCR measures crimes that are reported to law enforcement agencies across the Nation, while the NCVS measures crimes that people have experienced, whether or not reported to police. "Because the UCR and NCVS programs are conducted for different purposes, use different methods, and focus on somewhat different aspects of crime, the information they produce together provides a more comprehensive panorama of the Nation's crime problem than either could produce alone" (U.S. Department of Justice, 2000).

Since the NCVS and UCR measure the same general set of offenses, there is some expectation that the two programs would provide similar portraits of the Nation's crime problem. The two programs have often, but not always, presented similar year-to-year crime change estimates. Since 1972, year-to-year violent crime change estimates from the NCVS and UCR moved in the same direction, either up or down, about 3/5 of the time. Property crime rates have moved in the same direction about 3/4 of the time. The period 1994 to 1999 was the longest for which the UCR and NCVS both moved in the same direction. The differences found in the 2001 release therefore seemed more shocking because they diverged from a long period of agreement between the two measures.

The reality is that the differences between the two programs—in terms of their purposes, methods and even

Table 1 — Crimes Measured by the UCR and NCVS

UCR	NCVS
Homicide	
Rape	Rape/sexual assault
Robbery	Robbery
Aggravated assault	Aggravated assault
	Simple assault
Theft	Theft
Burglary	Burglary
Motor vehicle theft	Motor vehicle theft
Arson	

offenses measured—are considerable. Once these methodological differences are understood, the differences in estimates become more comprehensible. The UCR and NCVS measure different aspects of the crime problem, much the same way that the S&P Indexes and Dow Jones Averages measure different aspects of the stock market.

Nature of Differences Between NCVS and UCR

Because the UCR and NCVS are conducted for different purposes, their differences are substantial. They use different data collection methods and measure an overlapping—but not identical—set of offenses against an overlapping—but not identical—population. Even the way the two programs count offenses and calculate crime rates differs. Moreover, these different approaches provide the two programs with their unique strengths that allow them to fulfill the different purposes for which they were designed.

One of the greatest differences between the UCR and NCVS may be the most obvious, but is often overlooked in the headlines and news articles. The UCR measures only crimes reported to law enforcement agencies throughout the country, while the NCVS measures both reported and unreported crime. The *New York Times* article on the May 2001 FBI release opened, "The number of serious crimes in the United States remained steady last year..." Nowhere in the opening paragraphs was it mentioned that the data were based on crimes reported to police and exclude unreported crime.

Another difference between the UCR and NCVS is their population coverage. The UCR measures crimes reported to law enforcement agencies committed against any person or entity in the country. This includes young children, visitors from other countries, and businesses or organizations. The NCVS measures crimes against people age 12 or older and their households. It excludes crimes committed against young children, businesses or other organizations, and people without a permanent residence in the United States.

The crime coverage of the two programs is similar, but there are some important differences. The UCR includes homicide and arson, neither of which are measured by the

NCVS, while the survey measures simple assault—the most common violent crime but an offense not included in the UCR's set of measured Index Crimes.

Additionally, the NCVS and UCR define some crimes differently, and use different protocols to categorize and count crimes. For example, the UCR defines rape as “the carnal knowledge of a female forcibly and against her will,” and excludes rapes of males and other forms of sexual assault. The NCVS measures rape and sexual assault of women and men.

The basic counting unit of the NCVS is the victimization. A victimization is defined as “a specific criminal act as it affects a single victim, whether a person or household” (Bureau of Justice Statistics, 2001). In crimes against people (rape, sexual assault, robbery, assault, or purse snatching or pocket picking), the number of victimizations is equal to the number of victims. For crimes against households (theft, household burglary, and motor vehicle theft), the crime is assumed to involve one victim, the affected household. Rates of violent crime are calculated as the number of victimizations per 1,000 people age 12 or older. For crimes against households, rates are per 1,000 households.

The basic counting unit for the UCR is the offense. For some crimes, such as assault and rape, the frequency of offense is equal to the number of victims. For other crimes, such as burglary or robbery, the number of offenses equals the number of incidents. All UCR crime rates, regardless of the victim (individual or organization), are calculated on a per capita basis: the number of offenses per 100,000 people. For some crimes, the NCVS and UCR counting rules are similar. If in an incident two people were threatened by someone with a knife, both programs would count two aggravated assaults. (For the NCVS, this assumes that both victims were in sample. If only one was in sample, the survey's procedures that weight estimates to national totals would account for the other victimization.)

For other crimes, such as robbery, the programs differ in significant ways. For example, if two people were robbed on the street by an armed gunman, the UCR would count one offense, but the NCVS would, if both people were in sample, count two victimizations. Additionally, if a bank teller was threatened by an armed assailant during a bank robbery, the UCR would count this as a robbery with a weapon. The NCVS, which measures only crimes against people and their households, would classify the crime as an aggravated assault victimization (assuming that no personal property was stolen from the teller).

Both the UCR and the NCVS are subject to limitations and sources of error associated with their respective methodologies that impact the quality, accuracy, and reliability of estimates and hence affect comparisons between the two programs. As a voluntary program, the UCR is subject to incomplete reporting by local jurisdictions. In addition, the submissions of some jurisdictions sometimes do not meet the FBI's guidelines for completeness and accuracy. The FBI has developed protocols to impute data to adjust for non-participating jurisdictions and those reporting partial data. However, the degree of imputation at the national level is not small and varies in magnitude from year to year. “Complete data for Illinois, for example, have not been included in the UCR since 1985, initially because the Illinois statu-

tory definition of sexual assault is inconsistent with the UCR definition of rape, and since 1992 because the Illinois UCR submissions did not adhere to the UCR's ‘hierarchy rule,’” a protocol for classifying crimes according to their most serious element (Maltz, 1999).

Like all sample surveys, the NCVS is subject to sampling error, and confidence intervals are supplied for the resulting survey estimates to account for sampling variability. For example, the estimated violent crime rate for 2000 was 27.9 victimizations per 1,000 people age 12 and older. The 95% confidence interval around this estimate is 25.85 to 29.95 victimizations per 1,000 people age 12 and older.

NCVS estimates are also subject to nonsampling error. Though every effort is taken to reduce nonsampling error, an unquantified amount remains in all data collections. One source of nonsampling error in the NCVS derives from the inability of some respondents to recall in detail the crimes which occurred during the six-month reference period. Some victims also may not report crimes committed by offenders who are not strangers, especially if they are relatives. In addition, for some persons, assaultive violence may be a part of their everyday life, and they may therefore either forget such incidents or not consider them important enough to mention to a survey interviewer. These recall problems may result in an underestimate of the actual rate of victimization.

Series victimizations represent another source of error in victimization rates and counts. A series victimization is defined as six or more similar but separate crimes which the victim is unable to recall individually or describe in detail to an interviewer. Series victimizations are an issue because in the NCVS, crime classification is based upon the respondent's answers to several questions. Some people who are victimized repeatedly cannot provide the information required to classify every incident that they experienced. If the person was the victim of six or more similar crimes during the six-month reference period, and cannot provide the details about each incident, one report is taken for the entire series of victimizations. Details of the most recent incident are obtained, and the victimization is counted as a single (1) victimization. This procedure may also result in an underestimate of the actual rate of victimization.

Impact of Programmatic Differences on Crime Trends

Because it is based on crimes reported to police, the UCR is not a measure of all crime occurring in the United States, even for the offenses that it measures. Police reporting is related to a variety of factors. NCVS data have shown that people tend to report crimes to police for a wide variety of reasons: to recover property or make an insurance claim, to end the incident, to prevent future crimes to themselves or others, or just because a crime was committed. There are, similarly, a number of reasons why people do not report crimes: mistrust of police or the criminal justice system, a belief that the police would not act, a feeling that the incident was not important enough, fear of reprisal or embarrassment, or a belief that the incident was a private or personal matter.

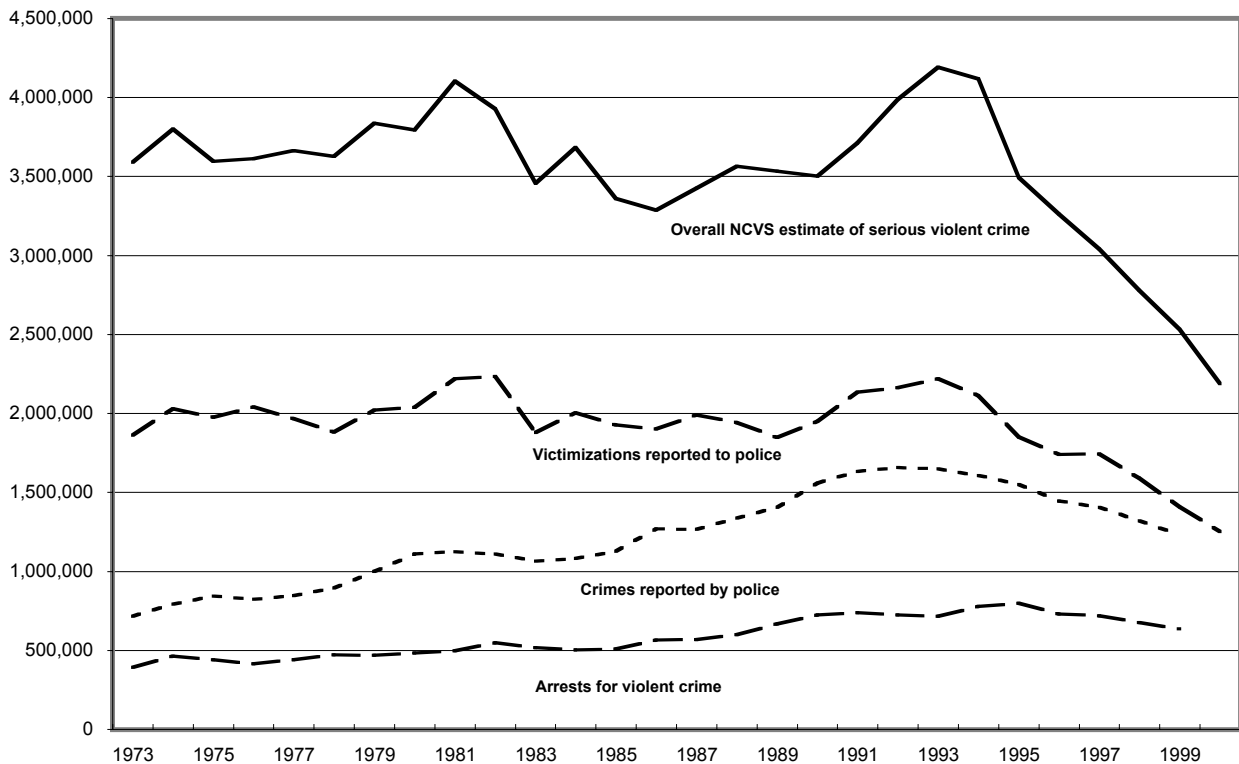


Figure 1. Four measures of serious violent crime.

Many of the reasons influencing people to either report or not report crime may be affected by public policy at all levels of government, as well as by a variety of other factors, all of which can change over time. Changes in the way rape victims are treated may encourage other victims to report their victimizations. So might community efforts to clean up neighborhoods. Conversely, lack of adequate police manpower to take reports may discourage crime victims from reporting. It is therefore possible for crime reported to police, as measured by the UCR, to rise or fall independent of the change in overall crime (reported and unreported crime), as measured by the NCVS.

In fact, in 2000 the NCVS did measure an increase in reporting of crime to police. The percentage of violent crimes reported to police rose from 44 to 48%. Reports of property crime rose from 34 to 36%. The steep 1999–2000 decline measured by the NCVS largely resulted from a decline in crimes victims said they did not report to police. Violent crimes not reported to police fell by 20%, while violent crimes victims said they reported to police fell by 6%. Virtually the entire decline in simple assault, the least serious violent crime and an offense not measured by the UCR, was from simple assaults not reported to police.

The impact of other differences between the programs is measurable to varying degrees. Some percentage of the rapes, robberies, and aggravated assaults measured by the UCR were committed against children under age 12, but no source of recurring national data exists to provide ongoing estimates of this percentage. On the other hand, the UCR provides

some information about the circumstances of robberies. In 1999, for example, about a third of robberies and burglaries were committed against commercial entities such as stores, offices, banks, and service stations (Federal Bureau of Investigation, 2000). Because such victimizations are measured by the UCR but not by the NCVS, if there is variation over time in the percentage of crimes against children under 12 or in crimes against commercial establishments, only the UCR measure of crime and crime trends would be affected.

Assessing 1999–2000 Change Estimates

While it is not possible to remove every difference between the NCVS and UCR, the Bureau of Justice Statistics has developed a procedure that allows for comparison of the types of crime common to both programs. This procedure entails removing crimes against children under 12 and commercial robberies from the UCR, removing simple assault and crimes not reported to police from the NCVS, and adding homicides to the NCVS. Figure 1 is based on a chart from the BJS website that presents four measures of serious violent crime derived from the NCVS and UCR. The top curve represents the overall NCVS estimate of serious violent crime (rape, robbery, and aggravated assault, with homicide data added from the UCR). The curves labeled “Victimizations reported to police” and “Crimes recorded by police” present

data modified to eliminate, to the extent possible, incongruous elements. They represent, respectively, NCVS victims of serious violent crime who said they reported the crime to the police and the UCR estimate of reported violent crime.

A comparison of the two measures using this procedure results in a convergence in their long-term trends and less disparity in year-to-year change estimates. While overall NCVS violent crime declined by 15% in 2000, serious violent crime (rape, robbery, and aggravated assault) reported to police declined by 11%. (UCR estimates for 2000 are not shown in Fig. 1 because final UCR data for 2000, required to make adjustments, were not available at the time this article was prepared.)

Summary

The UCR and NCVS programs are conducted for different purposes, use different methods, and focus on somewhat different aspects of crime. Together, they tell us that crime is pervasive. This is evident whether we consider the victim's perspective or that of law enforcement. The way the United States measures crime is efficient and practical. In fact, other countries have emulated our approach and simultaneously collect information from victims and law enforcement agencies.

Rather than being problematic, independent measures of a social issue are valuable. In the economic area, economists use many indicators which often conflict to get a more comprehensive picture of the economy of the nation. We need NCVS, since as much as two-thirds of property crime and half of all violent crime are not reported to police. The NCVS is the only national forum that victims have to inform us about crimes they are reluctant to report to police. We need the UCR, since it is the only national data series that provides information by state and city, and it is the only system that compiles administrative records from local police departments to tell us how much crime has been reported to police

throughout the United States. Together, the measures enhance our understanding of crime.

One of the questions raised in the media as a result of the UCR and NCVS releases was, "Which is the better measure of crime?" This question misstates the issue and is based on a misunderstanding of the relationship between the two programs. Both are the better measure *for what they are intended to measure*. The UCR provides information on the amount of crime reaching law enforcement, and can help inform police departments on their manpower needs. The NCVS provides a national picture of what people are experiencing, what proportion of crime does not reach police, the characteristics associated with offenses, and the consequences and costs of crime. Crime, like other phenomena, must be examined from a number of perspectives in order to fully understand it.

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