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Understanding Crime Statistics

Revisiting the Divergence of the NCVS and the UCR

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In *Understanding Crime Statistics*, Lynch and Addington draw on the work of leading experts on U.S. crime statistics to provide much-needed research on appropriate use of this data. Specifically, the contributors explore the issues surrounding divergence in the Uniform Crime Reports (UCR) and the National Crime Victimization Survey (NCVS), which have been the two major indicators of the level and of the change in level of crime in the United States for the past 30 years. This book examines recent changes in the UCR and the NCVS and assesses the effect these have had on divergence. By focusing on divergence, the authors encourage readers to think about how these data systems filter the reality of crime. *Understanding Crime Statistics* builds on this discussion of divergence to explain how the two data systems can be used as they were intended - in complementary rather than competitive ways.

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Contributors

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user disinterest and the defensiveness and poverty of statistical agencies perpetuates ignorance of the social organization of statistical systems necessary to use these data appropriately and in a complementary fashion. We hope our book will enlighten readers about the important aspects of these statistical systems that affect the data they produce.

OVERVIEW OF THE VOLUME

Understanding Crime Statistics addresses the general ignorance of the NCVS and UCR that impedes understanding these systems and using their data appropriately. To begin the volume, the first two chapters provide detailed, but focused, information on these two systems that identifies those aspects of the social organization of both series that are likely to have a major effect on the divergence of the resulting trends. Using the information from these chapters as a foundation, our book turns to crime-specific and issue-specific discussions. These chapters examine specific aspects of the social organization of the UCR and NCVS systems and assess empirically whether particular factors contribute to divergence. Finally, our book concludes with a discussion of the lessons learned and suggestions for how to utilize the UCR and NCVS in complementary ways. The following provides a more detailed summary of the chapters included in this volume.

In Chapter 2, Callie Rennison and Michael Rand provide a description of the purpose and design of the NCVS. The NCVS gathers information on the incidence of criminal victimization for households and household members aged 12 and older from a nationally representative sample of households. Specific types of victimization counted in the NCVS include completed and attempted rapes and sexual assaults, robberies, aggravated and simple assaults, burglaries, thefts, and car thefts. This chapter concerns not only the current design but also the substantial redesign of the crime survey that occurred in 1992.

In Chapter 3, Cynthia Barnett-Ryan provides an overview of the UCR. The Uniform Crime Reporting System is administered by the Federal Bureau of Investigation and collects crime data from state and local police departments. The UCR includes information on murder, forcible rape, robbery, aggravated assault, burglary, theft, motor vehicle theft, and arson. In addition to crimes known to police, the

UCR also collects arrest information. Under its traditional "summary system," the UCR collected aggregate-level data from agencies and used specific classification and counting rules to facilitate accurate counting of crime events. This chapter describes those rules and procedures, some of which are discussed in subsequent chapters as sources of divergence. This summary system is in the process of changing to an incident-based system, the NIBRS. This chapter addresses both the traditional way in which the UCR collected crime statistics as well as the changes instituted with NIBRS.

The volume then turns to the issue of investigating divergence and assessing what is currently known about it. David McDowall and Colin Loftin, in Chapter 4, introduce the topic of divergence (and convergence) and consider the definitions and measures of divergence. Literature in this area is summarized with an eye to evaluate critically the definitions proposed by previous researchers and to examine how these definitions have been used to evaluate divergence in the UCR and NCVS. The chapter focuses on four of these definitions that range from more to less demanding requirements for finding divergence. Under the strictest or most demanding definitions, the data systems show little evidence that they converge. Under broader criteria, support for convergence (and against divergence) is stronger. The authors also explore an important complicating factor that divergence itself may have changed over time.

The next two sections of the volume concern specific sources of divergence, first with a view to sources from the NCVS and then with a focus on the UCR. In Chapter 5, Shannan Catalano focuses on how changes from the 1992 massive redesign of the NCVS may have affected divergence between the NCVS and UCR. Specifically, this chapter focuses on the effect of particular aspects of the redesign (new instrument, increased use of computer-assisted telephone interviewing) as well as other changes in the crime survey over time (reduction in sample size, declining response rates). The chapter addresses how these changes in the NCVS could contribute to divergence in the two series with regard to estimates of violent crimes such as aggravated assault and robbery.

Mike Planty examines in Chapter 6 the effect of series victimization reporting in the NCVS on divergence. Some individuals experience

criminal victimization reporting is a major problem for crime surveys because it is difficult to distinguish these victimizations from other events using different procedures to identify them. The NCVS employs a series of individual reports six or more times a year. The number of events is counted only on the most recent in a series. This has had an effect on divergence between the two series. Certain crimes like domestic violence are not counted in all violence over time series victimizations. Planty examines in particular how reasonable estimates in annual estimates may be affected. The term overlap is used to describe estimates for violence events not reported to the police.

In Chapter 7, Jacqueline C. Gelles discusses a source of divergence that may be present in the NCVS compared with the UCR: the reporting frame. The chapter examines how the sampling frame has resulted in differences between the two series. The problem by comparing the National Health and Medical Care Survey (NHAMCS) with the NCVS is that a sample of emergency room visits done in the NCVS and other sources may differ. Differences between the NCVS and UCR emergency room visits due to underrepresentation of many other possible explanations for the NCVS's housing unit frame and procedures in the two series.

The next section focuses on Chapter 8, Lynn Addington

criminal victimization repeatedly. These high-volume victims pose a problem for crime surveys because respondents cannot always distinguish these victimizations as discrete events. Surveys have developed different procedures to identify and count this special case of victimization. The NCVS employs a "series victimization" procedure when an individual reports six or more victimizations that are similar in nature. The number of events is counted, but detailed information is collected only on the most recent incident. Series victimizations are excluded from annual estimates published by BJS. It is likely this decision rule has had an effect on divergence between the NCVS and UCR because certain crimes like domestic assaults that have increased as a proportion of all violence over time include a disproportionate number of series victimizations. Planty's chapter examines this issue, considering in particular how reasonable methods of including series victimizations in annual estimates might affect divergence as well as "overlap." The term overlap is used to refer to the instances when the UCR rate estimates for violence exceed those rates of the NCVS violent crime reported to the police.

In Chapter 7, Jacqueline Cohen and James Lynch consider another source of divergence that may arise from the eligible respondents to the NCVS compared with the general population served by police agencies. The chapter examines whether the NCVS's household sampling frame has resulted in the underrepresentation of marginal populations and an undercounting of behavior such as violent crime victimization that is prevalent in these populations. This chapter identifies the problem by comparing data from the National Hospital Ambulatory Care Survey (NHAMCS) with the NCVS. The NHAMCS employs a sample of emergency rooms rather than housing units sample as is done in the NCVS and other Census-administered surveys. Large differences between the NCVS and NHAMCS are found in the rate of emergency room visits due to violent victimization. In addition to the underrepresentation of marginal populations, the chapter examines other possible explanations for this disparity such as the degeneration of the NCVS's housing unit frame as well as differences in definitions and procedures in the two surveys.

The next section focuses on sources of divergence in the UCR. In Chapter 8, Lynn Addington examines how changes in the UCR may

help us to understand the extent to which sources of definitional differences contribute to divergence between UCR and NCVS. Two in particular are the inclusion of commercial victims of crime (burglaries, robberies, thefts, and motor vehicle theft) in the UCR but not in the NCVS and the inclusion of victims under age 12 in the UCR but not in the NCVS. In addition, the UCR uses a "Hierarchy Rule" that is not used in the NCVS. It is generally assumed that all three of these factors contribute to divergence. Until this point, it was unclear to what degree. The chapter uses the incident-level data in NIBRS to estimate how much the inclusion these two victim groups and the Hierarchy Rule contribute to UCR crime trends and divergence with the NCVS. This chapter also describes caveats of using the NIBRS data, which is relatively new and does not have full participation from law enforcement agencies nationwide.

Richard Rosenfeld addresses changes in the police industry and their contribution to divergence in Chapter 9. Specifically, the chapter focuses on how changes in police recording of aggravated assaults have contributed to recent convergence in the UCR and NCVS. Widespread speculation exists that police agencies have broadened the scope of aggravated assaults over the past two decades and upgraded events, especially in the domestic violence category, from simple to aggravated assaults. These changes are believed to be less likely to have affected assaults committed with a firearm or other weapon than those without weapons. It is expected that little change should be observed over time in the relationship between the weapon-related offenses in the two series and that convergence should be limited to time trends in the nonweapon events. Rosenfeld examines national-level trends in weapon and nonweapon UCR and NCVS assaults since 1980 and finds evidence for both of these expectations.

In Chapter 10, Michael Maltz deals with the issue of missing data and its possible effect on divergence of the two data series. Missing data is a substantial issue in the UCR. To the extent that the contours of the missing data problem have changed over time, this could affect the convergence and divergence of the UCR and the NCVS trends. To explore this possibility, Maltz relies on a new analytic tool based on annotated UCR data to identify patterns of missing data and sheds new light on the divergence issue. His chapter focuses on missing

data in the aggregate counts of data collected by the UCR. The imputing UCR data may correct series.

The volume concludes with trends diverge and what this development of these data series differences in the two systems provide a more accurate and item. The concluding chapter use of existing data in a comparison for more systematic change to

data in the aggregate counts of crimes known to police and the arrest data collected by the UCR. The chapter also addresses ways in which imputing UCR data may contribute to divergence between the two series.

The volume concludes with a discussion of why the NCVS and UCR trends diverge and what this divergence means for the use and development of these data series. Specific attention is given to how the differences in the two systems can be used in a complementary way to provide a more accurate and enlightening picture of the crime problem. The concluding chapter includes suggestions for how to increase use of existing data in a complementary way as well as initial proposals for more systematic change that would enhance complementarity.