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Geographic Patterns

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Geographic Patterns

Criminologists, law enforcement officials, and city planners have long been interested in the relationship between geography and crime. Some of the earliest empirical studies of crime were conducted in the 1830s and 1840s by Andre Michel Guerry and Adolphe Quetelet, who plotted recorded crimes on maps and showed considerable variation in the numbers of crimes across geographic areas. As part of the Chicago ecological school of the 1920s and 1930s, Clifford Shaw and Henry McKay examined rates of delinquency in reference to the concentric zones in urban areas. The development of social area analysis and factor analytic techniques in the 1950s and 1960s renewed interest in the relationship between space and crime. These methods demonstrated a strong relationship between the population characteristics and crime rates in areas. The related fields of environmental criminology and the geography of crime emerged in the 1970s and 1980s, demonstrating the multidisciplinary nature of the subject. These fields seek to explain the spatial distribution of offenses and the spatial distribution of offenders. While many of these developments have focused on an understanding and explanation of spatial variations in interpersonal crime per se, they also have contributed to crime prevention and control efforts.

Understanding Spatial Variations

Research on geography and interpersonal violence examines variations in violence across very broad geographical areas down to relatively small areas. It has demonstrated significant regional variations within countries, variation within regions, within cities, and within neighborhoods. Many of the studies of the relationship between geography and crime rely on official data provided by law enforcement officials such as the Federal Bureau of Investigation's Uniform Crime Reporting (UCR) Program. Since many crimes of violence are not reported to the police, these findings must be viewed cautiously. Other studies use data generated by self-report studies, including the Department of Justice National Crime Victimization Survey (NCVS).

Throughout the 20th century, homicide rates showed a consistent regional variation. The South has had the highest rate of homicides, followed by the West, then the Midwest. The Northeast has consistently had the lowest homicide rate. Rates of sexual assault and other assaults also vary across regions. Based on the recent self-report studies of the NCVS, the Northeast has the lowest rate of sexual assaults. The Midwest has the next lowest rate of sexual assaults, and the South and the West report the highest rates.

Within regions, there is considerable variation in violent crime rates across areas. Data from the UCR and the NCVS show that urban areas have higher rates of violent offenses than suburban areas, which are higher than rural areas. The 2005 NCVS reported a violent victimization rate for persons age 12 and over of 29.8 per 1,000 urban residents, 18.6 for suburban residents, and 16.4 for rural residents. This overall pattern was similar for rapes and sexual assaults (1.5 per 1,000 for urban areas, 0.7 for suburban areas, and 0.1 for rural

areas) as well as robberies (4.7, 1.9, 1.4, respectively) and other assaults (23.6, 16.0, 14.9, respectively).

Crime is not evenly distributed across city neighborhoods. Many neighborhoods in the same city have much higher crime rates than others. In most cities, the majority of violent offenses occur in a small percentage of the city's neighborhoods. For example, William J. Wilson pointed out that over half of the murders and aggravated assaults in Chicago occurred in 7 of the city's 24 police districts. Areas that have higher rates of violent offenses tend to have higher rates of poverty, residential mobility, and ethnic heterogeneity. Extremely deprived areas have much higher rates of violent crime than areas with moderate or low levels of disadvantage.

Even within neighborhoods, crime is not evenly distributed across all spaces. Recent research has begun to use a "micro" approach that focuses on specific places within neighborhoods. These may be particular buildings or addresses, blocks or street segments. One study found that 14% of all crimes against persons were concentrated in 56 hot spots that comprised only 4% of all street segments or intersections in the city.

Research on the geography of crime also shows that most violent criminals tend to commit their crimes close to home and most crime victims are victimized near their homes. Numerous studies of murder, robbery, and rape show that offenders commit a high percentage of offenses within a short distance of their homes. The average violent offender travels 1.5 miles to the location of the crime. About 25% of all murder offenders commit their offense within two blocks of their home. Spontaneous offenses tend to occur in places where offenders spend the majority of their time (i.e., close to home). Offenders choose to commit premeditated offenses in areas that they know well, again, areas closer to home.

Recent research suggests that about 25% of all violent victimizations occur in the victim's home. Fifty percent of violent victimizations occur within 1 mile of the victim's home, and over 75% occur within 5 miles of the victim's home. The NCVS report shows that 38% of rapes and sexual assaults occurred in the victim's home and another 23% occurred within 1 mile of the victim's home. Thirty-three percent of assaults occurred inside or near the victim's home and another 17% occurred within a mile of the victim's home.

Explanation of Spatial Variations

Social scientists have tried to explain these variations in crime across physical space from a number of different perspectives, including the social disorganization and routine activities approaches. Social disorganization is defined as the inability of a community to achieve the common goals of its residents and maintain effective controls. The social disorganization approach, rooted in the early works of Clifford Shaw and Henry McKay on juvenile delinquency, suggests

that crime is higher in communities characterized by low socioeconomic status, high rates of transiency, racial heterogeneity, and family disruption. It is not these demographic characteristics themselves that directly lead to high rates of crime. Rather, these

characteristics are related to low levels of neighborhood friendship networks, low levels of membership in local organizations, and high levels of unsupervised youth. These are the factors that contribute to higher levels of crime in some neighborhoods.

The routine activities approach, again based on the human ecological model, seeks to explain crimes involving direct contact between a victim and offender. It suggests that there must be a convergence in time and space of three essential components of crime: an offender motivated to commit a crime, a suitable target, and the absence of guardians capable of preventing the crime. The convergence of these factors depends on the structure of everyday routine interactions. The nature of these everyday activities determines the location of potential victims and the pool of personal contacts they will have, including contacts with potential offenders.

Crime Prevention and Control

Law enforcement officials have a particular interest in the geography of crime. Knowledge of the relationship between physical space and crime provides police with important information that affects their allocation of resources and criminal investigations. Simple mapping techniques that plot known offenses allow police to target certain hot spots for special attention. Geographic profiling assists law enforcement in investigations. When serial violent offenders are suspected, the locations of crime sites are entered into a computer and analyzed to determine the area where the offender is most likely to reside.

The relationship between space and crime is also of interest to groups concerned with crime prevention, including urban planners and architects. Drawing from the concepts of the social disorganization and routine activities approaches, some researchers suggest that buildings and areas can be designed to reduce crime. Jane Jacobs suggests that buildings should be oriented toward the street to encourage surveillance by residents and that there should be a clear separation between public and private spaces. Oscar Newman's defensible space concept suggests the use of real or symbolic barriers to divide neighborhoods into manageable areas. The barriers, either gates or clearly marked entrances to areas, may reduce access to the area by outsiders. Gated communities, suburban cul-de-sacs, and inner-city street closings all serve to reduce the likelihood of potential offenders entering the area and becoming familiar with the area. Reducing the number of outsiders coming into the community may also increase the territoriality of residents, who will be more likely to notice and be more watchful of any strangers who do enter the area. Offenders would be deterred by the increased likelihood of being observed and few escape routes if they were observed. Crime would be lower in areas with these designs, because the physical layout of the areas and the heightened social organization of residents would make potential offenders less likely to enter areas to commit their crimes.

The work of Jane Jacobs and Oscar Newman contributed to the growth of C. Ray Jeffery's urban and architectural design perspective, Crime Prevention Through Environmental Design (CPTED). This approach focuses on reducing crime through design principles that include providing natural surveillance of areas, territorial reinforcement,

access control, and target hardening. Implementing CPTED has resulted in significant decreases in criminal activity in some communities.

Patrick G. Donnelly *See also*

[Legal System, Criminal Justice Strategies to Reduce Interpersonal Violence](#)

[National Crime Victimization Survey](#)

[Uniform Crime Reports](#)

Further Readings

Brantingham, P. , Brantingham, P. (1984). Patterns in crime. New York: Macmillan.
Evans, D. J. , Herbert, D. T. (1989). The geography of crime. New York: Routledge.