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**Disorder: Observational and Perceptual Measures**

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**Overview**

This chapter provides a synopsis of disorder-related research methods, measures, and analytic frameworks. The chapter is intended to give readers a better understanding of trends in disorder-related research and the many facets of disorder analysis; aspects covered in the literature range from the various ways in which individuals and communities conceptualize disorder to the roles of homeownership, organizational participation, and land use in predicting crime in neighborhoods. Methods employed in extensive studies in Chicago, Baltimore, and Salt Lake City are cited here for illustrative purposes. The article concludes with a summary of major findings from those studies as well as suggestions for future disorder-related research. Literature on disorder frequently refers to social or physical *incivilities* (Taylor & Hale, 1986), and this chapter will use the terms *disorder* and *incivilities* interchangeably.

**Main Text**

**The Evolution of Disorder Research**

Conceptualizations of neighborhood-level disorder and its association with crime have evolved over the last half-century; likewise, methodologies employed in disorder-related research have evolved as well. Early research into disorder and crime was heavily influenced by Chicago-school sociologists such as Gerald D. Suttles, whose 1968 work *The Social Order of the Slums* examined the social and economic conditions of a poor Chicago neighborhood. Suttles employed a mixed-methods approach, analyzing quantitative demographic data and presenting ethnographic accounts of everyday life in the Chicago slums.

 With Wilson and Kelling’s advancement of incivilities theory in a 1982 issue of *The Atlantic*, interest in disorder-related research was renewed. As incivilities theory became a mainstay of the social sciences,disorder-related studies sought to test and refine incivilities theory largely by employing sharpened research methods and analytical tools. Methodological advances have allowed researchers and audiences to better understand connections between disorder and crime. Over the last half-century, research on disorder and crime has employed diverse data collection methods and analytic frameworks. While gathering residents’ perceptions and conducting passive surveys are still important in disorder-related research, recent studies tend to rely more on objective measures and active means of data-gathering.

Analytic methods have been greatly improved by newer technologies. Geographic Information Systems (GIS) and hierarchical linear modeling (HLM) software are two examples of such technological advances; GIS gives researchers the ability to analyze spatial patterns and produce informative and interactive graphic representations of their findings, while HLM allows researchers to explore multiple levels of data and effects in an efficient manner. The following sections summarize trends in disorder-related research. These trends include clarification of the units of analysis, evolution of measurement tools, and advances in methods for analyzing data. Extensive studies undertaken by researchers in Chicago, Baltimore, and Salt Lake City serve as primary settings; other exemplary studies are cited when appropriate.

**Units of Analysis**

 Neighborhoods have been conceptualized in many ways ranging from strictly geographic definitions to delineations that account for social and cultural contexts. Disorder-related studies tend toward the former, though questions about the appropriate scope for geographic boundaries persist. Early disorder-related studies typically grouped neighborhoods based on Census Bureau-defined boundaries. The use of such delineations has been problematic for researchers because Census-defined neighborhoods—particularly census tracts—often include artificial or imposed boundaries. Overly broad Census-defined neighborhoods may cross major roads, railroad tracks, and water bodies. Neighborhoods delineated in such a manner often extend far beyond finer, resident-recognized neighborhood boundaries such as street blocks.

 Recognizing the need to define neighborhoods in ways that match residents’ own definitions and are amenable to research, recent studies have focused on Census-defined block groups (a collection of contiguous Census blocks) and an even more precise unit of analysis, individual street block faces. When the basic unit of analysis is an individual street block face, a resident’s neighbors are those on either side of one’s street bounded by cross streets. (By “block” we generally mean street block as opposed to polygonal Census block, which does not include neighbors across the street.) By examining lower geographic levels such as blocks and block groups, researchers have been able to better account for demographic characteristics that tend to be consistent within compact areas but vary—sometimes wildly—within larger areas such as census tracts. The studies highlighted in this chapter utilized blocks as the basic units for their analyses. In the Baltimore study, for example, the authors focused their attention on 50 randomly-selected street blocks (Perkins, Meeks, & Taylor, 1992; Perkins & Taylor, 1996). In the Salt Lake City study, researchers focused on 58 blocks in a transitional suburban setting (Brown, Perkins, & Brown, 2004b). Sampson and Raudenbush (1999, 2004) used the block group as the basic neighborhood delineator in a series of studies on disorder and crime in Chicago; however, like the studies in Baltimore and Salt Lake City, the Chicago-based study relied on individual street blocks for comparative purposes.

 Using the street block as the primary unit of analysis gives researchers the ability to compare data at both the block level and the individual or household level. Such a multilevel approach allows researchers to determine the extent to which disorder as well as demographic and other potential mediating factors, such as collective efficacy, operate at the individual or block level. This is critically important because if virtually all the variance is at the individual level, it suggests that the impact of disorder and its mediators are mainly personal and subjective. If substantial block-level effects exist on top of any individual variation, it essentially shows that those effects are more than simply a matter of individual perception or psychology. They are “real” and “objective” and have an even greater impact insofar as being shared by one’s neighbors. To obtain block-level data, researchers often aggregate individual or household-level data. Although less common, it is helpful to also identify and obtain measures that are not just aggregated but commensurate to the level being studied (Shinn, 1990).

**Data Gathering and Measurement Tools**

Just as conceptualizations of neighborhood delineation have evolved, data-gathering and measurement tools have changed as well. Disorder-related research has become increasingly focused on employing multiple methods of data-gathering and measurement, often relying on advanced quantitative methods not available to previous generations of researchers. Technological and theoretical advances have offered researchers new ways of collecting and examining data. Video recordings, for example, allow researchers to verify their observations of street life and other neighborhood conditions. Thus, the *objectivity* of data-gathering methods has greatly improved.

Aggregation is not the only way to obtain more objective measures. Recent research has also compared residents’ perceptions and independent measures of disorder and crime. While residents’ perceptions continue to be important indicators, such subjective data do not form the sole basis on which disorder is measured. Disorder can be more objectively measured with trained independent observers rating settings using pre-defined scales or checklists. Crime can be measured by analyzing police reports, although such reports have often been charged with political bias and there is often an information gap since crimes are not always reported. Thus, even with the emphasis on objective measures, researchers tend to see a continuing need for resident surveys and interviews.

 As disorder-related research evolved, researchers sought to increase objectivity by employing independent observers to conduct “windshield surveys” (Taylor, Shumaker, & Gottfredson, 1985). These surveys were typically conducted by independent raters who drove through neighborhoods and either made open comments or graded neighborhood characteristics on a number of predetermined criteria. While windshield surveys can be useful in a cursory sense, they may lead to inadvertent oversights on the part of the raters. Walking observations may be more useful as they allow the rater to take a slower pace and make closer observations, often while having impromptu interactions with residents and others in the neighborhood; such interactions can provide valuable insights not typically gleaned through passive windshield surveys.

 Researchers have created various measures and scales for conducting independent visual surveys. In their study of physical decay in low, moderate, and high-income Baltimore neighborhoods, Taylor *et al* (1985) conducted assessments of the physical conditions of 808 street blocks. Independent raters evaluated a wide-ranging set of neighborhood factors including building setbacks, traffic volume, types of land uses, graffiti, and building vacancies. The researchers created three neighborhood-level subscales using aggregated data collected in the block assessments. A street accessibility subscale aggregated measures such as street width, traffic volume, and street lighting. A land use subscale aggregated measures related to type of land use, i.e. residential or nonresidential. A final subscale, density, included measures such as block length and building height. By aggregating data into three subscales, the authors were able to draw comparisons across blocks.

Other observational tools have been used to measure both physical and social disorder. One such tool is the Block Environmental Inventory (BEI). Researchers studying Baltimore neighborhoods in 1987 employed the BEI as a means of examining the social and physical conditions of 50 residential blocks, most of which were assessed by two trained raters to allow for inter-rater reliability tests (Perkins et al., 1992). The BEI included observations at both the house and block levels. At the house-level, the BEI consisted of three main categories: incivilities, defensible space, and territorial markers. The incivilities subscale included items such as litter, vandalism, and dilapidation. The defensible space subscale included visibility, barriers, lighting, and security bars. The territoriality subscale consisted of signs warning of dogs, sitting places, plantings, and home decorations. Block-level items included people outside (by gender, activity, and general age group), open lot frontage (e.g. playgrounds, public gardens, institutional yards), abandoned cars, street trees, and vacant lots. The raters themselves were also part of the BEI; they were to observe whether people noticed them as they assessed the neighborhood (Perkins et al., 1992).

 Another means of objective data-gathering is through the use of Systematic Social Observation (SSO). Sampson and Raudenbush (1999, 2004) employed this method in a study of Chicago neighborhoods. The SSO method included the videotaping of social and physical disorder in 23,816 block faces across 80 neighborhoods. The authors asserted that SSO was an important methodological advance because it could be replicated. Of the 23,816 block faces that were videotaped by independent raters, 15,141 were coded and subsequently utilized in the study. Notably, because of the extensive coding required, SSO may be cost and/or time prohibitive for researchers on unfunded or underfunded projects.

 Resident surveys continue to be popular in disorder-related research. Sampson and colleagues (1989, 1999, 2004) employed resident surveys in both Chicago and the United Kingdom to determine residents’ perceptions of disorder and crime. Likewise, Perkins and colleagues (1990, 1993) in Brooklyn and Queens, New York, Perkins and Taylor (1992, 1996) in Baltimore and Brown, Perkins and Brown (2004a&b) in Salt Lake City employed resident surveys primarily as a means of comparing resident perceptions to independent observations. Surveys, particularly face-to-face interviews, often contextualize objective data, giving researchers unique insights into the subject neighborhoods.

 Researchers have employed several analytical tools for determining actual occurrences of crime. Sampson and Raudenbush (2004) relied on publicly-available data to help them objectively measure both crime and demographics. Particularly, they relied on Census Bureau data and police records of violent crimes. Likewise, Taylor *et al* (1985) relied on police reports from the Baltimore Police Department to measure serious crime in their subject neighborhoods. In addition to reported crime and surveyed victimization, Perkins and Taylor (1996) also analyzed newspaper articles related to crimes in or near neighborhoods included in their study as a measure of media influence on localized fear.

Obtaining reliable measures of crime often proves more difficult than accurately measuring perceptions or media accounts. Police reports are perhaps the most common sources of crime data employed by researchers. However, because crime records may be under- or overcounted for budgetary or political ends and because reporting to police varies by type (e.g., higher-value property crimes and homicides more likely to be reported than lesser property and personal crimes), neighborhood, and city, resident surveys and interviews often provide very different information and insights.

**Means of Analysis**

 Collecting data at both the individual and block levels allows researchers to employ complex statistical methodologies to find associations between disorder and crime. In some cases, however, simpler analytic techniques may yield useful data about the neighborhoods being studied. Using the Chicago, Baltimore, and Salt Lake City studies, this section provides a brief overview of the various statistical techniques employed in disorder-related research.

 Simple correlations may reveal important relationships among variables. Taylor *et al* (1985), for example, found that actual occurrences of crime measured by analyzing Baltimore police reports were positively correlated with physical decay, nonresidential land uses, and vacancy rates. Perkins *et al* (1992) utilized correlations to examine relationships among actual disorder, perceived disorder, and perceived crime in Baltimore neighborhoods. After controlling for race, education level, tenure, and block size, four statistically significant correlations emerged at the block level: 1) the number of street lights was negatively correlated to perceived robberies; 2) the presence of yard decorations was negatively correlated to perceived drug dealing and fighting in the street; 3) yard decorations were negatively correlated to perceived burglaries; and 4) the presence of block watch signs was negatively correlated to perceived burglaries. Clearly, in both Baltimore studies, the use of simple correlations yielded helpful information: certain environmental conditions and features were associated with neighborhood crime reports and perceptions.

 Multiple regression allows researchers to determine the degree to which a combination of independent variables are predictive of a dependent variable. Perkins *et al* (1992) employed multiple regression to determine whether territorial functioning and defensible space features could supplement observed disorder in predicting perceived disorder and crime. The authors found that adding territorial markers and defensible space features to their model explained more of the variance in perceived disorder and crime.

 Hierarchical linear modeling (HLM) and structural equation modeling (SEM) are examples of advanced statistical techniques employed by researchers. With HLM, the effects of predictors at multiple levels and/or over multiple points in time on outcomes can be determined. For example, Perkins and Taylor (1996) used HLM to compare the power of three different methods of measuring aggregated community disorder (surveyed resident perceptions, on-site observations by trained raters, and content analysis of crime- and disorder-related newspaper articles) to predict subsequent fear of crime, controlling for individual-level perceptions of social and physical disorder and independent ratings of physical disorder on respondents’ properties. Sampson and Raudenbush (2004) used HLM to examine the relationship between independently-observed social and physical disorder and perceived disorder both within and between neighborhoods.

 SEM has been employed in disorder-related studies as a means of exploring complex models including latent variables. For example, Sampson and Groves (1989) used SEM in finding that socioeconomic status, ethnic heterogeneity, residential mobility, family disruption, and urbanization predicted crime and delinquency when mediated by local friendship networks, unsupervised teenage peer groups, and low organizational participation.

**Other Common Disorder Research Methods**

Other methods have proven useful in disorder-related research; among these are qualitative analyses and longitudinal studies. Qualitative data can give researchers insights that may be impossible to glean, or less richly developed, through surveys, systematic environmental assessments, crime reports or other quantitative sources. In-depth open-ended or semi-structured interviews, ethnographic accounts, and oral histories are examples of such methods. Earlier disorder-related research conducted by Suttles and other Chicago-school sociologists relied heavily on ethnography; many researchers now utilize qualitative research as one component in a toolbox of data collection methods. Longitudinal studies allow the researcher to discern trends over a period of time. By following-up snapshot data with data collected at a later time or at subsequent intervals, the researcher may gain a better understanding of phenomena that are not static in nature. Because neighborhoods are ever-changing, examining the neighborhood over a period of time can help the researcher contextualize and better understand phenomena and findings.

Several recent disorder-related studies have used many of the research and analytic methods discussed here. The following section highlights findings from those studies, focusing on the methodologies employed in both the data-gathering and data analysis stages. These studies are cited for illustrative purposes; references to additional studies of interest are provided following the chapter’s conclusion.

**Major Findings Using Mixed Research Methods**

 This section provides a brief overview of recent major findings in the disorder-related literature. As a comprehensive review of the literature is beyond the scope of this chapter, this section focuses on findings based on the above methods and means of analysis. Findings are categorized based on the following themes: objective versus subjective measures of disorder and crime; advanced statistical analyses; and challenges to accepted theories.

**Objective and subjective measures**

Early disorder-related research tended to focus on residents’ perceptions of neighborhood disorder, occasionally comparing those perceptions to observations by trained raters. Recent research has in some ways attempted to standardize disorder-related research by balancing residents’ perceptions with objective measures. Data in recent studies include results of independent neighborhood assessments, analyses of media accounts of crime, and analyses of police reports.

Taylor et al. (1985) examined the relationship between observed and perceived physical disorder in their study of Baltimore neighborhoods. Residents and independent raters evaluated four specific indicators of physical disorder: housing vacancies, empty lots, litter, and unkempt properties. After combining the indicators to form a single scale, the authors found a high correlation between resident perceptions and independent observations of physical disorder.

The Block Environmental Inventory (BEI) was used by Perkins *et al* (1992) as a means of objectively measuring disorder, territorial markers, and defensible space features in Baltimore neighborhoods. Researchers obtained data on residents’ perceptions by surveying 412 residents across 50 street blocks either by telephone or in person. Interviewers asked how big a problem (on a three-point scale) each of a list of 12 specific items related to physical disorder, social disorder, and neighborhood crime are on respondents’ blocks. Perkins *et al* used both correlation and regression analyses to determine whether the objective measures of disorder gleaned through the BEI were associated with subjective measures. The authors correlated objective and subjective measures of five specific forms of physical disorder: litter, vandalism, dilapidated exterior, vacant housing, and trashed lots. Correlations for all five forms of disorder were statistically significant. Litter was the strongest correlation, while dilapidated exterior was the weakest. After controlling for race, education, homeownership, and block size, all of the correlations were weakened, but still statistically significant. The authors concluded that residents’ perceptions and independent observations of physical disorder are strongly related, but that the relationship is affected in part by block demographics.

In a 2004 study of Salt Lake City neighborhoods, Brown *et al* considered associations among several predictors of crime: home attachment; observed physical disorder; perceived physical disorder; social ties and collective efficacy; and home ownership and demographics. Besides the demographic variables, all other predictors were scales or composites of multiple measures. Using multilevel modeling (HLM), the authors found that observed disorder and perceived disorder were not related at the individual level (i.e., people tend not to perceive their own properties as disordered). However, as expected, observed and perceived disorder were significantly related at the block level (Brown et al., 2004b).

Sampson and Raudenbush (1999, 2004) found little difference between observed and perceived disorder. For their study, social disorder included adults congregating, public intoxication, selling drugs, and prostitution. Physical disorder ranged from minor offenses (e.g. cigarettes on the street) to more prominent offenses (e.g. gang graffiti on buildings). The researchers employed SSO by having independent raters videotape block faces; the tapes were then coded for both social and physical disorder. The objective data were compared to survey data gathered from 3,864 residents. The authors found that residents’ perceptions of both physical and social disorder were significantly associated with independent measures of disorder.

Specific findings regarding the relationship between objective and subjective measures of disorder have varied by study. However, all of the studies cited in this section have found at least some degree of correlation between independent observations and resident perceptions of disorder. Variation among the findings appears to be attributable at least partially to the particular research setting, research questions, analytic methods, and the variables or characteristics being studied.

**Advanced Statistical Analyses**

Quantitative modeling techniques such as multiple regression, hierarchical linear modeling (HLM), and structural equation modeling (SEM) have been utilized to analyze disorder and crime data. Each method brings its own set of strengths to data analysis. Multiple regression allows researchers to determine the predictive values of independent variables on a particular outcome. Hierarchical linear modeling allows researchers to compare data on multiple levels; change in individuals or neighborhoods can be traced over time, individuals can be compared with their neighbors, and blocks or neighborhoods can be compared to each other. Structural equation modeling allows researchers to determine the effects of latent variables. Both HLM and SEM are relatively new tools. The following subsections explore findings attributable to the use of these tools; specifically, the subsections address findings related to personal characteristics, place characteristics, home and income characteristics, and other important factors.

***Personal Characteristics***

Quantitative analyses reveal that certain personal characteristics are associated with individuals’ perceptions of disorder and crime. Studies from Chicago, Baltimore, and Salt Lake City offer diverse and wide-ranging findings on the associations among crime, fear, disorder, and personal characteristics. With regard to sex, females are likely to perceive more disorder than males (Simpson & Raudenbush, 2004). Likewise, females are likely to express more fear of crime than males at both the within-block and between-blocks levels (Perkins & Taylor, 1996).

Age plays a role in perception and fear, though the findings have been somewhat inconsistent. At the block level, age is a significant predictor of fear of crime. In one study, however, age was not a significant predictor of fear at the individual level (Perkins & Taylor, 1996). In another study, within a given block, older individuals perceived less disorder (Sampson & Raudenbush, 2004), an unexpected finding that may be due to older residents being less aware of specific changing disorder cues.

Race and ethnicity have significant effects at multiple levels. African Americans tend to perceive less disorder than do other residents of their block; however, controlling for social context, blocks with more African Americans tend to have more disorder as perceived by residents of the block. Latinos are also positively associated with perceived disorder at the between-blocks level and are likely to perceive more disorder at the within-block level (Sampson & Raudenbush, 2004). Race has been shown to be a significant predictor of fear of crime as well (Taylor et al., 1985; Perkins & Taylor, 1996).

Marital status plays some role in perception of disorder. Separated and divorced individuals are likely to perceive more disorder at the within-block level than their married and single counterparts. Between blocks, marital status is not significantly associated with perceptions of disorder (Sampson & Raudenbush, 2004). Clearly, sex, age, race and ethnicity, and marital status are all important personal characteristics that shape residents’ perceptions of crime and/or disorder, although their effects tend to vary by location and model.

***Place Characteristics***

 Taylor et al. (1985) found two important correlations between crime and place-based characteristics. First, the authors found a strong positive correlation between crime and vacant housing, indicating that the higher the percentage of vacant housing units in a neighborhood, the higher the amount of crime in that neighborhood. A second statistically significant positive correlation was found between crime and nonresidential land uses. Both vacancy and land use were significant predictors of fear. Perkins and Taylor (1996) found that the physical conditions of nonresidential lots were better predictors of fear of crime than the conditions of residential areas. Land use appears to be a consistent indicator of fear as shown by two separate Baltimore-based studies.

***Home and Income Characteristics***

Researchers have examined the associations between crime and home-based characteristics such as tenure and home attachment, which are both inversely related to observed disorder (Brown et al., 2004b). At the within-block level, homeownership is negatively associated with police reports of crime. At the between-blocks level, home attachment is negatively associated with police reports of crime (Brown et al., 2004b).

Socioeconomic status (SES) has been shown to be a significant predictor of perceived disorder, fear of crime, and neighborhood confidence. Fear and confidence are particularly affected by perception of disorder in moderate-income neighborhoods (Taylor et al., 1985). In a United Kingdom-based study, Sampson and Groves (1989) considered the association between SES and crime. The authors found that SES was a significant predictor of crime. However, a closer look revealed that the presence of unsupervised peer groups mediated the effects of SES on crime. In fact, unsupervised peer groups mediated 80 percent of the effect of SES on mugging and street robbery, 34 percent of the effect of SES on stranger violence, and 68 percent of the effect of SES on total victimization. The presence of unsupervised peer groups had a worsening effect on both household and property victimization, while organizational participation had an inverse effect on both forms of victimization. These findings led Sampson and Groves to conclude that the presence of unsupervised peer groups and the absence of organizational participation were more important to remediate than low SES.

***Other Outcomes***

Brown, Perkins, and Brown (2004a) employed a longitudinal approach to examine the spillover effects of cleaning up a brownfield in Salt Lake City and replacing it with new housing. The researchers were interested in incumbent upgrading—the idea that residents will invest in their own properties if their neighbors do likewise. Independent disorder assessments and resident surveys were taken from 1993 to 1996 (T1) and again from 1998 to 1999 (T2). Police reports of crime were measured from 1995 to 1996 (during T1) and again from 1999 to 2000 (T3). The researchers examined physical disorder using objective raters; home attachment, homeownership, perceived disorder, and crime were measured using resident surveys.

Using correlation analysis, the researchers found that from T1 to T2, observed disorder in the areas surrounding the former brownfield decreased, especially in the blocks closest to the brownfield. HLM analysis indicated that crime reports decreased at T2 in the neighborhoods closest to the brownfield, while crime reports tended to increase in the neighborhoods farther away. The authors found that the presence of independently-observed physical disorder on specific properties increased the likelihood of crime on those properties; further, physical disorder on a particular block increased the likelihood of crime on properties within that block. Conversely, the presence of new houses built on the former brownfield was associated with decreased crime and disorder on nearby blocks. The blocks in which disorder increased between T1 and T2 were more vulnerable to crime at T3. The authors argued that litter and unkempt lawns were two types of physical disorder that could lead to residents investing less in their homes.

In summary, recent research has not revealed any single, dominant predictor of crime. Rather, the research has created a patchwork of findings which—when taken as a whole—provide a clearer picture of how individuals perceive and experience disorder, fear, and crime in their local settings. While some personal characteristics appear to influence both degree of fear and perceptions of crime and disorder, territorial markers, defensible space features, homeownership, home and place attachment, organizational participation, and lack of activities for young people appear to work in some combination to explain the occurrence of crime within neighborhoods. Simple answers have not emerged in disorder-related research, regardless of the methods or analytic means employed.

**Challenges to Accepted Theory**

 The studies included in this section have resulted in findings that challenge long-held assumptions and theories. Taylor *et al* (1985) found that nonresidential land use was significantly correlated with crime and was a significant predictor of perceived physical decay. In a later study, Taylor *et al* (1995) concluded that nonresidential land use in a neighborhood has a statistically significant effect on physical deterioration. Although parks well-used by families may tend to deter crime, in general most nonresidential land uses act as magnets for neighborhood deterioration and subsequent loss of social control, and ultimately (either directly through routine travel patterns of offenders or indirectly through increased disorder) for crime. This conclusion directly refutes Jane Jacobs’ (1961) argument that businesses have positive impacts on the neighborhoods in which they are located. The authors did note that Jacobs wrote in a context in which neighborhoods and neighborhood businesses were typically more closely aligned ethnically. Further, in that context, longer hours kept by business owners may have discouraged loitering in the evening hours. Taylor *et al* suggested that policy focus on preventing or slowing physical deterioration and loss of social control. All of the recommended policies begin with acknowledgement of the relationship between nonresidential land uses and disorder.

Sampson and Raudenbush (2004) directly challenged the broken windows and incivilities theories. In their study of Chicago neighborhoods, the authors employed SEM to examine the effects of structural characteristics—such as race, ethnicity, and class—on physical and social disorder. Observed disorder was a moderate correlate of predatory crime (e.g. robbery, aggravated assault, rape, and homicide) and varied with neighborhood demographic composition. When the demographic characteristics were taken into account, the connections between observed disorder and all but one predatory crime (robbery) were rendered statistically insignificant. The authors argued that concentrated poverty and lack of collective efficacy at the neighborhood level explained disorder and most types of predatory crimes. Rather than using disorder as a predictor of crime, Sampson and Raudenbush argued that disorder was—like crime—an outcome of broader structural factors. The authors concluded by arguing that the mere mitigation of disorder may be inadequate means of combating crime; addressing structural factors and collective efficacy would be a more appropriate response.

**Troublesome Findings and Directions for Future Research**

The relationship between disorder and crime is still a relatively new field of study for social scientists. Thus, many of the findings warrant closer examination. This section considers potential areas for future research. Three specific issues raised in the literature reviewed in this article are presented for consideration: the spatial dimensions of disorder and crime; measurements of social disorder; and the future of *broken windows*.

While units of analyses have been discussed and debated among researchers, few studies have explicitly examined the extended spatial implications of neighborhood disorder. Brown *et al* (2004a) did consider extended neighborhoods in their study of a former brownfield site in Salt Lake City. They found that blocks farther away from the cleaned up area had more crime and disorder. Their study was situated in a first-ring suburban community; it is uncertain whether studies set in an inner city or outer-ring suburb would result in the same or similar findings. Future research might focus on the spatial dimensions of disorder and crime in various settings, comparing perceptions, observations, and occurrences of crime across different types of neighborhoods in different types of communities.

Researchers have found it relatively simple to define physical disorder. After all, such incivilities are visible, sometimes highly so. Broken windows, graffiti, and even cigarette butts in gutters are observable; there would likely be agreement among researchers and residents that most of these are undesirable. Defining social disorder has proven more difficult. A clear way of characterizing social disorder has eluded researchers for the most part. Researchers who describe social interactions and relationships as disorders or incivilities risk pathologizing individuals, neighborhoods, and communities. Studies examined in this article characterize noticeable offenses such as prostitution and drug dealing as social disorder. Yet, social disorder may extend beyond such egregious examples. Future research could delve further into social disorder, seeking to better understand and define it while making sure not to present marginalized and oppressed individuals, neighborhoods, and communities as abnormal or at fault. Interestingly, early disorder-related research was largely centered on the social aspects of disorder; the focus on physical disorder is more recent. In this way, clarifying and better defining social disorder represents a return to the roots of disorder-related research.

Perkins *et al* (1990) join earlier researchers in pointing out that measuring social climate is a controversial issue in disorder-related studies. As this chapter has shown, researchers often rely on measures of social climate to draw conclusions about groups and blocks. Yet such measures are typically collected at the individual level and aggregated to some higher level (e.g., street block or Census tract). The validity and reliability of social climate in disorder-related research warrants scrutiny; future research may focus on issues of data aggregation (Shinn, 1990).

Finally, the work of Sampson and colleagues has called key components of the broken windows theory into question. Their findings indicate that disorder and crime are not necessarily involved in a cause-and-effect relationship. Rather, disorder and crime are both outcomes of greater structural forces. In spite of these findings, broken windows theory continues to be a dominant framework in community policing. Future studies may wish to replicate Sampson’s methods in other settings. By exploring disorder, demographic characteristics, and crime reports in multiple settings, researchers can corroborate or challenge Sampson and colleagues’ findings. Additionally, researchers may choose to employ other data collection and analytic methods. For example, rather than replicating the SSO used by Sampson and Raudenbush (2004), researchers seeking to replicate the U.K. study may opt to use the BEI or some other data collection mechanism. Challenging a dominant paradigm and effecting change in policy and practice are not easy tasks; replicable studies in various settings may help shift the focus from broken windows to a more comprehensive discussion of social context and its manifestations in both disorder and crime.

**Conclusion**

 This article has provided an overview of recent disorder-related research, emphasizing the ways in which data have been collected and analyzed. Over the last few decades, researchers have supplemented resident perceptions of disorder with independent observations made by trained raters. Further, media accounts and police reports of crime have added points of comparison in some disorder-related research. Means of analysis have also evolved; the development of efficient analytic techniques such as hierarchical linear modeling and structural equation modeling has allowed researchers to explore layers of data and the effects of latent variables, respectively. Using these data-gathering methods and analytic techniques, researchers have uncovered personal and environmental characteristics that increase the likelihood of both perceiving and experiencing crime and disorder. Finally, implications recent studies have for future research include topics as diverse as geographic scope, clarification of social disorder, and the future of the broken windows theory.

**Related Entries**

Alcohol Outlets and Crime Patterns
Broken Windows Thesis
Crime Prevention through Environmental Design
Defining Disorder
Design Against Crime
Differential Social Organization Essay 00426 125/125
Disadvantage and Disorganization Essay 00432 126/126
Discrimininant Validity of Disorder and Crime
Drug Trafficking Essay 00629 139/139
Informal social control
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Poverty, Inequality, and Area Differences in Crime Essay 00215 428/428
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Public Housing Transformation and Crime Patterns Essay 00441 467/467
Race, Ethnicity and Disorganization Essay 00430 478/478
Race, Ethnicity, and Youth Gangs Essay 00124 479/479
Social and Physical Disorder in Communities Essay 00015 551/551

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