



Environment and Crime among Residents in Urban Areas

A Study of Districts in Stockholm

Olof Dahlbäck



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Contents

<i>List of Figures</i>	<i>vii</i>
<i>List of Tables</i>	<i>ix</i>
<i>Acknowledgment</i>	<i>xi</i>
Introduction	1
1 Previous Research	5
2 Theory	17
3 Method	31
4 Results I. Cross-Sectional Relationships	63
5 Results II. Longitudinal Relationships	99
6 Summary and Conclusions	143
References	153
Appendix I Definition of Areas	163
Appendix II Populations of Areas	167
Appendix III Maps	169
Appendix IV Construction of a Measure of Crime in Adjacent Areas	177
Appendix V Tables	179
<i>Index</i>	<i>183</i>

Introduction

How various factors affect the rate of crime committed by residents in districts of large cities is a central issue in criminology. Concern with identifying these factors and understanding their effects has generated a great deal of research. Studies have demonstrated that areas with high rates of such crime have certain characteristics. For example, areas with high rates of crime tend to have a deteriorated physical environment, many residents who lack economic resources, high rates of divorces, and great ethnic heterogeneity. Many of the relationships found are quite strong, giving rise to a series of questions about the causes of crime. How should the criminality of the residents of these different areas be explained? How does the physical and social environment in an area influence crime among those who live there? And what roles are played by selection processes that imply that different types of individuals are attracted to or locked into particular areas? These and related questions are important from a theoretical point of view and they are also of significant socio-political interest, for example in contemporary Swedish society, in which there is great deal of concern about social developments in certain metropolitan areas. Exactly how these questions should be answered has been unclear, however. It seems that there are no empirical studies in which a satisfying causal analysis of the relationships has been carried out. The purpose of the study reported in this book has been to fill this critical gap by analyzing register data of districts in the City of Stockholm.

Thus, the purpose of the study is to determine how the local physical and social environment has affected the rate of crimes committed by residents in different districts in the city. In order to accomplish this, comprehensive area data of register type are analyzed cross-sectionally and longitudinally, with care taken to separate environment's direct effects on crime from its indirect effects via the geographical selection of individuals. The analysis is based on assumptions about the significance of social control and social resources for individuals' criminality as well as assumptions about the significance of dwellings and social resources for their geographical location. Police records of residents suspected of crime are used for measuring the rates of fifteen separate types of crime, with the measurements referring to the years 1980, 1985 and 1990. The data cover most crimes registered. For many independent properties, the project has had access to individual-level data for all residents in Stockholm City. Basic independent variables describe residents' ages, sex, citizenship, families/households, socioeconomic conditions, dwellings, and moves, and most of these refer to the years 1970, 1975, 1980, 1985 and 1990.

In order to make it possible to carry out the analyses intended, it is important that there is an adequate measure of area crime. This seems to be no great problem. For the years studied, it turns out that one single factor explains an overwhelming

part of the total variance of all crime rates. Furthermore, it is found that the correlations between this factor and many independent properties are about the same for the different years and that several of these correlations are very strong.

On the other hand, modeling crime as a function of independent factors is no easy matter. An important task in this connection is to find the right form of model. It may be questioned whether a simple linear form is adequate. Assumably, interaction between factors on the micro level may affect area crime. Therefore models of crime are used in this study in which crime is seen as a function that is characterized by aggregated micro-level interaction. On the micro level, the effect on crime of interaction is modeled as weighted products of independent factors within and between individuals, respectively, assuming that the weight for such a product is the same for different individuals or for different pairs of individuals. The weighted products are aggregated up to the area level. For bivariate analysis, it can be shown algebraically that the aggregate of within-individual products of correlated factors cannot be formulated on the area level in terms of means of the analyzed individual-level factors. This implies that if there is within-individual interaction between correlated factors, crime cannot be perfectly modeled on the area level using factors of ordinary types. However, the aggregate of within-individual products of uncorrelated factors can be formulated on the area level in terms of means of the factors. It can also be shown that if interaction between two different factors for different individuals affects crime in the same way for all pairs of individuals in the area, there will be area-level interaction of corresponding type. Thus, area-level interaction of bivariate type may be due both to interaction within and between individuals. These conditions have multivariate counterparts.

Naturally, knowing the effects on crime of interaction within and between individuals is of great theoretical interest. It is also of great interest to know whether crime is affected by such interaction between individuals that cannot be expressed in area-level terms ordinarily used in criminological research, but must be expressed as means of individual-level products. Should this be the case, research in area-level crime as ordinarily carried on must be modified.

Reasons for assuming that interaction exists within and between individuals are discussed in this book. Much focus is placed on interaction between social control and social resources properties. Thus, I try to find out if the two theoretical perspectives in criminological research that regard these properties as main causes of crime can be joined in the same model in this manner. I investigate empirically whether such interaction exists. However, it turns out that it is difficult to analyze the relationships between these and other independent factors and crime using cross-sectional data. The reason for this is that several independent factors are very strongly correlated with each other, which makes it hard to identify models of crime. The strategy I use to handle this problem is to analyze change data. Changes in the independent properties are as a rule much more weakly correlated with each other than are the cross-sectional values.

Another kind of strategy used in the study is to analyze the influences on crime exerted by long-term residents and by newcomers in the areas. Several

local social processes can be assumed to involve the long-term residents much more than the newcomers, and this fact can be used in the analysis of the influence on crime of independent properties, including the two types of aggregated micro-level interaction.

The distinction between long-term residents and newcomers is important to consider in distinguishing the direct influences on crime of the environment in an area from the indirect influences that go via the geographical selection of individuals. The direct influences on crime of the environment can be assumed to be particularly strong for the long-term residents, and analyzing relationships between independent properties and crime for these residents may therefore discover these influences. Indirect influences via geographical selection are easier to discover by analyzing the relationships for the newcomers.

Another way of analyzing the significance of geographical selection is to decompose the cross-sectional relationship between crime and the independent factors that govern the selection – above all the economic resources and the occurrence of dwellings of particular types. The selection entails that individuals are differentiated geographically, and factors directing the selection may be strongly related to crime cross-sectionally on the area level. However, the influence of these factors, as far as the selective power is concerned, manifests itself as only one part of the factors' cross-sectional relationship with crime. This cross-sectional relationship can be assumed to be made up of four components: the relationships caused by 1) the factors' selective influence, 2) their direct influence, and 3) their indirect, non-selective influence, and 4) the spurious relationship between the factors and crime that is due to the fact that the factors are affected by causes of crime. These components can be described in regression coefficient terms, and the significance of the factors' selective relationship can therefore be estimated as the difference between the coefficient of the cross-sectional relationship that they have with crime and the total of the coefficients of the components 2) – 4). An analysis of this type is performed in the study reported in this book.

However, what above all characterizes the research presented in this book, as distinguished from much other research on the subject, is its profoundly realized micro-macro perspective. The micro-macro link between individual-level independent properties and area crime is modeled and empirically analyzed. The last aspect is worth stressing. The study has an extraordinarily rich database. There is access to data for some years on practically all residents' values on independent properties in all urban areas. The study is probably unique in this respect.

The book is organized as follows. In the first chapter, which deals with previous research on crime among residents in urban areas, I discuss certain relationships commonly found between environment and crime and some theoretical perspectives often used to explain these findings – the social disorganization, social control, social resources, and sub-cultural perspectives. I am skeptical of much in this research, both with respect to its theoretical and methodological content, and in the chapter I present my critical views.

In Chapter 2, I discuss how offender crime rates may be affected by geographical selection of individuals and by local environment. I consider micro- and macro-level aspects of the influences in areas, and I focus on social control and social resources as causes of crime. A basic assumption made is that these two types of factors interact on the individual level in their influences on the generation of crime. I show algebraically how aggregated micro-level interaction within and between individuals may affect area crime.

The method I use to manage the problems that have hampered much previous research is described in Chapter 3. Here, various aspects of the design of my empirical study are detailed – for example, the construction of measures of individual-level and area-level independent factors and of the measure of crime. Moreover, I discuss the relevance of the data used, ways of analyzing causal influences, and the usage of models of different forms.

Chapter 4 describes the cross-sectional analyses made and their results and Chapter 5 the longitudinal analyses and their results. Both chapters include analyses using linear and nonlinear models and analyses of the significance of moves and of aggregated micro-level interaction. Chapter 4 includes an analysis of the influences from adjacent areas, and Chapter 5 includes linear analyses using both point and change data. In Chapter 6, finally, the results, which turn out to differ in several important respects from what has been found in previous research, are summarized and conclusions are drawn.

Chapter 1

Previous Research

Urban Areas and Crime

The subject of how crime emerges and develops in cities is of great criminological significance. The reasons for this are obvious: crime has shown to be strongly related to urbanization – the urban environment seems to be conducive to its inhabitants engaging in criminal activity – and a very large portion of the populations in many countries lives in cities.

The existence of strong relationships between crime rates of the inhabitants of areas in large cities and other social properties of these areas seems to be a highly general phenomenon. For traditional types of crimes, similar relationships have been found in many Western countries (Wikström, 1998). In the cities studied, there seems as a rule to have been a regional differentiation as to various social factors, and several of these factors have been shown to be related to crime. In particular, it has been found that areas with disadvantageous social conditions have high rates of crime. This finding has been obtained for a variety of measures of crime and for areas of different sizes.

Most of the studies dealing with the relationship between crime rates of the inhabitants of urban areas and other social properties of these areas are methodologically simple. The most common design is probably the cross-sectional type applied to register data. The independent factors studied are typically quite similar: as a rule factors describing economic resources, family/civil status, ethnic status, and mobility are included. To a great extent, this is probably due to the fact that these factors can be easily measured by register data. Another reason may be that the research that was conducted by Clifford Shaw and Henry McKay (see below) has been influential in focusing on these types of factors. Nevertheless, it seems clear, as discussed below, that several of these factors are interesting from theoretical points of view.

Relationships of the types mentioned above – between the crime rates of the inhabitants of urban areas and other social properties of these areas – can be found in the City (that is, the municipality) of Stockholm, the capital of Sweden. However, one might think that there is reason to expect that Stockholm would not exhibit these types of relationships. Its regional social differentiation is smaller than for many other cities in Western Europe and in the USA due to the public housing policy in postwar Sweden, which has aimed at counteracting residential segregation by socioeconomic characteristics. Nevertheless, as will be shown in this book, the regional differences in Stockholm have in fact been substantial and large enough to generate strong relationships between social factors and crime on the area level.

Furthermore, postwar Stockholm is interesting to study due to the emergence and development of a variety of problematic conditions. Substantial changes occurred during the 70s and 80s in the social conditions in the city. For example, the numbers of divorced individuals and of immigrants increased strongly. New housing areas were built, some of which later became the locus of serious social problems.

There is a good deal of previous research on crime in Stockholm that makes use of register data. Per-Olof Wikström is among the more prominent of those who have carried out such research. In what is probably his most important study on districts in this city, Wikström (1991) analyzes a comprehensive body of data. The results show the same type of pattern of cross-sectional relationships between crime rates and various factors as can be found in many other studies. However, due to the nature of the data, the possibilities of performing an advanced causal analysis were very limited in Wikström's study.

Theoretical Perspectives

The theories most often discussed in the field attribute causes of crime among residents in urban areas to one or more of the following conditions: *social disorganization*, weak *social control*, lack of *social resources*, or *subcultures* in these areas. Social disorganization theory was developed specifically to explain urban crime. The social control and social resources theories have a more general sociological character, but are interesting because social-control and social-resources factors have been found to vary geographically in large cities and to be strongly related to crime among the residents in the areas. The theory of urban subcultures refers to a variety of deviant behaviors, among these crime.

Social disorganization theory, originally developed by Clifford Shaw and Henry McKay (Shaw and McKay, 1969 [1942]), has played a central role in the research. According to Shaw and MacKay, social disorganization in an urban area is an important cause of crime among the youth living there. By "social disorganization" it is meant that inhabitants have poor social contact with each other and an inadequate organization of activities needed to protect their interests, for example to protect against crime. According to Shaw and McKay, disorganization may be traced back to the lack of economic resources, ethnic heterogeneity, and high mobility of area residents. This theory has been the subject of several different interpretations and revisions (Wikström, 1998), and has also been the target of much criticism (as to criticism focusing on individual-level aspects, see Farrington, 1993). In its modern form, the core of the theory seems to consist of ideas about social control.

According to social disorganization theory, more disorganized urban areas generate more criminal activity. Shaw and McKay maintained that they had shown that registered crime in Chicago was distributed in such a way that the highest level of crime existed in a zone where social organization, measured with a set of indicators, tended to be worst. Moreover, they maintained that this level of

crime remained about the same over time, independent of how the population in large was constituted. Some of their empirical results, for example regarding the permanent level of crime, have been questioned or refuted (see, for example, Bursik, 1988). However, their ideas about the significance of social disorganization and its underlying factors have had great impact on criminological research. They belong to the standard repertoire of theoretical ideas in social ecological contexts.

Social disorganization theory has attracted renewed interest in more recent years, largely inspired by an article by Sampson and Groves (1989). These researchers modified the theory in several ways. For example, they introduced factors that they believed describe disorganization more directly than was previously the case. They argued that the theory had never been tested in full, because disorganization had only been measured indirectly with the three factors assumed to underlie it. They conducted an empirical study that they contended showed relationships on the area level between crime and new direct indicators. Social organization was measured in terms of local friendship networks, control of street corner teenage peer groups, and prevalence of organizational participation. Sampson and Groves' ideas and their study have strongly affected subsequent research about disorganization and crime (for example, Bellair, 1997; Sampson et al., 1997), also research with a critical stance (for example, Veysey and Messner, 1999).

The idea that networks are an important aspect of social organization has played a prominent role in modern research on disorganization and urban crime. For example, Bursick and Grasmick (1993) have argued that disorganization theory should consider not only the local networks among residents, but also the networks that connect neighborhoods with the greater society in which these are imbedded. Connections with schools, churches, the police and other institutions and agencies outside the neighborhood may be important. However, seeing general networks among residents as a factor that keeps crime down has been met with skepticism. It is a fact that there are neighborhoods with relatively dense networks among residents that nevertheless exhibit fairly high crime rates, and it has been argued that while such networks may contribute to neighborhood ability to control crime, they may also provide a source of social capital for offenders (Browning et al., 2004). Furthermore, insofar as networks do affect crime their causal status has been problematized. For example, it has been argued that networks, and local organizations and voluntary associations as well, only have an indirect effect via collective efficacy, measured as residents' views of the social cohesion and social control (Morenoff et al., 2001). In these and other modern researches testing social disorganization theory, the concept of social capital is important (Portes, 1998). Salmi and Kivivuori (2006) studied how crime on the individual level is related to indicators of social capital and various other independent factors, and they found crime to be negatively related to a number of the indicators.

Social disorganization theory has been cited in many contexts. There is probably some truth in it, but it is unclear what and how much it explains and it has been heavily critized. I myself am critical of it and of much of the research that is based on it. I think that its coupling between the micro and macro levels is

unclear and that it is questionable as an explanation of neighborhood crime to the extent that the social organization referred to is assumed to be collective, that is, to exist outside the family (and, in my view, if organization is assumed to refer to the family, the theory has hardly anything unique to contribute). In actuality, tests of the theory have not yielded unequivocally positive results. For example, according to the theory, mobility is expected to have a strongly positive relationship with the crime of the inhabitants on the area level. Certainly, newly arrived inhabitants in an urban area can hardly be socially well organized. The fact is, however, that it has often been difficult to find such an empirical relationship (this is for example the case in the Sampson-Groves study). There is also much to criticize in the research that has been adduced as support for the disorganization theory, particularly regarding the methods used. I therefore believe that the possibilities of drawing conclusions about the validity of the theory from this research are severely limited. Some of my methodological criticisms are presented below.

Much of the modern sociological research on crime is dominated by theories that stress the significance of *social control*. Many of these theories are revised versions of or are strongly influenced by the "social bonding theory" propounded by Travis Hirschi in his book *Causes of Delinquency* (Hirschi, 1969). A main idea in this theory is that crime arises when individuals' bonds to the conventional society are weakened or broken (for a discussion, see Akers, 2000, pp. 105–110). There are several different types of bonds, including personal bonds to individuals not engaged in criminal activities, stakes in conventional work (for example regarding education and occupation), engagement in conventional activities, and belief in conventional values and norms. The Sampson-Laub life-course theory of social control is founded on this perspective (Sampson and Laub, 1990, 1992; Laub and Sampson, 1993). This theory focuses on the influences on crime of the social bonds created by social institutions and major life events (for example, getting a steady job, getting married, becoming a parent) and it deals particularly with how such bonds facilitate desistance from crime.

Social control theories have been supported by many studies (as to the Sampson-Laub theory, see Savolainen, 2009). Family disintegration and attachment to parents are examples of aspects of social bonds that have been found to be associated with crime (Rankin and Kern, 1994; Skarðhamar, 2009).

There are different theories built on the assumption that *lack of social resources and inequality* cause crime, and they have been used as a basis for a comprehensive body of empirical research (Akers, 2000, pp. 143–162). However, the results of the many studies made on the individual level are not, it seems, as clear as are the results obtained in studies in which social control factors are used, at least not as far as the criminality of young individuals is concerned. The association between social class or socioeconomic status or income, which are properties often used to describe social resources, and the criminality of young individuals turns out to be weak or non-existent in most cases. This has made researchers question the existence of such an association of any greater importance and has led to a long debate about the matter and to attempts to show that social class and similar

properties only play a modest role for crime (Tittle et al. 1978; Braithwaite, 1981; Tittle and Meier, 1990; Dunaway et al., 2000; Agnew et al., 2008; see also Becker and Mehlkop, 2006; Ring and Svensson, 2007). Furthermore, there are several questions about the theories, for example, exactly how the lack of resources and the inequality exert an influence on crime.

Thus, the results of the research seem to indicate that the individual-level association between social class or similar properties and crime is weak at most. Furthermore, the influence of social class on crime can be assumed to be indirect, and it has been shown that controlling for various factors supposed to mediate this influence strongly reduces an association found (Fergusson et al., 2004).

However, despite the failure to find a strong relationship between young individuals' criminality and their social class or similar properties, some researchers have maintained that there is such a relationship. For example, it has been suggested that the failure is due to ignorance of the fact that the tendency to become delinquent is extraordinarily strong among individuals who experience persistent childhood poverty. Jarjoura et al. (2002) have presented empirical support for the existence of such a tendency. Thus, it seems that individuals with very poor social resources should be particularly focused when analyzing the causes of criminality. The finding of a relationship on the individual level between severe poverty and criminality has a parallel on the societal level. On this level, it has been found that the crime rates of communities are better predicted by factors that describe the existence of extreme disadvantage of the neighborhood than by factors that describe a more balanced picture of such disadvantage (Krivo and Peterson, 1996).

Social resources may refer to different things – for example, money and things having economic value, knowledge, status, and social relations. As to the economic dimension, the question may be raised whether it is the absolute or the relative economic value of resources that affects crime. It might seem that there are good reasons for focusing on the relative dimension. However, while there may be a relationship on the individual level that implies that poorer individuals tend to commit more crimes, there may on the societal level be a relationship between economic resources and crime that implies that more resources lead to more crime, because greater affluence of resources results in the fact that more objects having economic value are poorly guarded and are therefore easier to steal.

In the research, the predominating idea of how lack of social resources and inequality cause crime on the individual level is the frustration hypothesis. According to this hypothesis crime may be committed by resource-poor individuals, because poor resources lead to failure to achieve positively valued goals and to a sense of being unjustly treated – consequences that lead to frustration and to a pressure for corrective action, which may be crime. This explanation was early suggested by Richard Cloward and Lloyd Ohlin and by Robert Merton (Cloward and Ohlin, 1960; Merton 1968, pp. 185–248).

Robert Agnew has taken up and revised the frustration hypothesis (Agnew, 1992, 1993, 1999), and his theory has attracted much interest in the research in

later years (Froggio, 2007; Rebellon et al., 2009; Froggio et al., 2009; Botchkovar et al., 2009). According to Agnew, the negative emotions that accompany the frustration following lack of social resources and inequality often turn into desires for revenge, which energize the individual for action. These views and emotions may be a motive for committing crime. Furthermore, Agnew has suggested that the strains associated with a lack of social resources and inequality interact with other factors, for example control factors, in the influence on crime (Agnew, 1999; 2001; 2005, pp. 109–120). This interaction could be due to the fact that while lack of social resources provides a motive for committing crime, lack of social control provides a prerequisite for this motive to be realized in action (Agnew, 1993).

Evaluating the results of the tests made of Agnew's strain theory is made difficult by various methodological problems. As to the core of the theory, the results must be characterized as mixed. As to the idea that strain interacts with social control in the influence on crime, the results are still more problematic, but some findings indicate or can be interpreted to indicate that such interaction exists (Agnew and White, 1992; Mazerolle and Maahs, 2000).

Finally, a fourth type of theory seeks the explanation of crime among residents in urban areas in *subcultural conditions* (Fischer, 1995). The fundamental assumption here is that norms and values that make people prone to commit crime can be found in their culturally determined attitudes and ideas. Two types of theories dominate. They explain urban crime by a subculture of violence or by a subculture of poverty. Subculture of poverty theories have often focused on crime in ghettos in central cities, but this is a type of environment that does not exist in Stockholm.

Geographical Selection of Individuals and the Influence from Local Environment

The theories just discussed are not total in the sense that they can on their own adequately explain crime rates of urban areas. Instead, they may offer partial or idealized explanations, focusing on particular aspects. This is not surprising, since the social mechanisms that underlie the crime rates of urban areas can be assumed to be complex and difficult to describe in full. A micro-macro view of the matter provides insights into this complexity. Crime rates and other factors of areas can be seen as aggregates of individual data of the inhabitants. The relationship between the rates and the factors may be analyzed by considering two types of mechanisms: mechanisms producing relationships on the individual level between various properties and the generation of crime (crimes committed by the individual or by others), and geographical selection processes that imply that individuals with certain properties and certain tendencies to generate crime are to be found in certain areas. The mechanisms producing the individual relationships are of two types – those that work on the local level only and those that work on the global level. Global mechanisms are those mechanisms that work in the same way everywhere irrespective of geographical location. Local mechanisms, on the other hand, are

specific for some particular area or areas. They are dependent on the conditions – the physical conditions and the social make-up – in this area or these areas.

Thus, in order to explain a rate of crimes committed by the inhabitants in an area at least three issues must be considered: 1) the global individual-level relationships between the generation of crime and various properties, 2) the geographical selection of individuals according to some factors and the resulting distribution of properties in areas, and 3) the influences of local properties on the generation of crime on the individual level. There can be no doubt that the first two of these issues are important. Certainly, there are properties that are related globally on the individual level to the generation of crime and that are also involved in geographical selection processes, thereby creating a relationship between the rates of properties and the rate of crime in areas. The selection is above all determined by the economic resources of the individuals and by the properties of the areas, including the dwellings in these. The competition among individuals for attractive dwellings and other local advantages lies at bottom of this process. Thus, individuals' economic resources are a very important selective factor, and even if these resources do not cause crime directly on the individual level, they are related to properties, for example other resources properties and control properties, that do cause crime, and these crime-affecting properties are therefore geographically differentiated.

Thus, an area's social make-up may have an indirect influence on its crime because of the selection of individuals with certain tendencies to generate crime globally. But how is it with the direct influence of the social organization of those individuals living in the area? Social organization should then be taken in a broad sense. It is not necessarily a question of any formal organization. Some kind of more permanent, informal social contacts between individuals from different families is sufficient. As we have seen, there is research on crime committed by inhabitants in urban areas that is based on the assumption that there is a local social organization in these areas that affects crime. Social disorganization theory is based on this assumption, and subcultural theory can probably also be seen as being so based to considerable extent. Ideas of this type can also be seen as being consistent with social control theory – social control can be assumed to work better to inhibit crime if the local society is more strongly organized according to conventional lines. Thus, it is or can be assumed in these theories that the cross-sectional relationship that exists on the area level between crime of the inhabitants and other factors is to a significant extent the result of the influence of local social organization.

However, this assumption is not self-evident. It seems that cross-sectional relationships on the area level between crime and social factors of the types in question do not need to be the result of a direct influence of any local social organization at all. They can have at least two other explanations: 1) As mentioned, if the values of crime-affecting individual-level factors are geographically differentiated, a relationship on the area level between the aggregated values of these factors and crime arises. In this case there is no direct influence from conditions of the area on crime, regardless of whether these conditions are

organizational or of some other type. 2) If, on the individual level, there is an influence on the inhabitants of an area and their crime from nonorganizational conditions in the area – for example, the physical opportunities to commit crime – that are related to organizational social conditions, this may, after aggregation, give rise to relationships of the types in question on the area level. Thus, these two types of influences refer to conditions on the individual (or family) level that are not caused directly by social organization, but they lead to relationships on the area level between crime and this organization. It should be noted that the relationships on the individual level might be very weak but still lead to relationships of significant strength on the area level (see below).

There is another problem with the idea that influences from local organization give rise to relationships between crime rates and other factors on the area level, and that is that there is reason to question whether, as a rule, there in large cities really is much local organization of social life of the type referred to here. The high population density, the high degree of anonymity, and the good communications in these cities can be assumed to work against the development of such a state of things. Of course, there are networks of contacts between individuals, but these networks do not need to be locally limited. In fact, it has been found that urban residents have rather few close relationships with neighbors (Wellman, 1979). Thus, the idea of the locally limited social organization probably fits rather poorly as a description of the metropolitan environment. It probably fits the conditions of communities in rural areas better.

Considering the problems discussed above, a central question in the research on urban crime is whether and to what extent the cross-sectional relationships found on the area level between crime and other factors are due to the fact that the area environment exerts an influence on the criminality of the individuals living in the area. Looking at existing research, it is often difficult to decide whether such an influence really exists. The problem of separating the direct influence of the area on the crime of the individuals from the indirect influence of the area that is due to geographical selection has to a rather great extent been ignored in the research – particularly in older research. Researchers have often presupposed in a fairly simplistic manner that statistical relationships on the area level express a direct influence. In modern research, however, more sophisticated methods have been used (the study made by Sampson and Groves, 1989, is an example).

If the area where individuals live affects their criminality, a cross-sectional relationship between area and individual criminality would be expected to exist. However, this cross-sectional, individual-level relationship does not need to be strong in order for there to be strong relationships on the area level between crime and various factors. In a study I carried out examining the individual-level relationship between registered criminality and geographical location among young males who had resided for a long period of time in the same areas of Greater Stockholm, findings indicated that this relationship was very weak for all types of crime and for all points in time (Dahlbäck, 1996a). However, the area-level