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The Impact of Crime on Communities

By RALPH B. TAYLOR

ABSTRACT: Current wisdom suggests that high or increasing crime levels make communities decline. Researchers usually translate decline to mean an increasing desire to move or higher actual mobility of residents; weaker attachments of residents to, and satisfaction with, their neighborhood; less local involvement; and lower house values. Empirical research confirms only some of this wisdom. Crime relates as expected to house prices, neighborhood satisfaction, and the desire to move. But research simultaneously suggests that crime neither spurs mobility nor necessarily decreases local involvement. Past research fails to differentiate the impacts of specific crime rates and does not examine impacts of static versus changing crime rates. This article examines impacts of past and changing crime levels on changes in relative house values and vacancy rates in Baltimore, Maryland, neighborhoods in the 1970s. The results reveal that different crimes influence different aspects of the housing market. Past and changing crime rates play roles in ecological transitions of neighborhoods. In keeping with the current findings of contingent impacts of racial change on mobility, I suggest that impacts of crime and related problems on neighborhood viability may be contingent on personal, historical, and locale-specific factors.

Ralph B. Taylor has held positions at Virginia Tech University and Johns Hopkins University. He authored Human Territorial Functioning (1988) and Research Methods in Criminal Justice (1993); he edited Urban Neighborhoods (1984). He has been at Temple University since 1984, and he served as associate dean for graduate studies and research in the College of Arts and Sciences there from 1989 to 1992.
ANY assume that if a neighborhood experiences a high crime rate or an increasing crime rate, this will cause the neighborhood to decline. "Decline" is a broad term, usually including a wide range of behavioral, social, psychological, social psychological, and economic consequences. The psychological consequences include decreased neighborhood satisfaction, an increased desire to relocate, increasing fear, and a weaker attachment to place and sense of community. The social psychological consequences include decreased willingness to intervene in events on the street, more mistrust between neighbors, and less cooperation.

The behavioral consequences for residents include limiting their round of activities, avoiding dangerous places, participating less in local affairs, and moving out of the neighborhood or out of the city. The behavioral consequences also can be external. Those outside the neighborhood may be less likely to move into a neighborhood or buy a house or business there because of concerns about crime. Economic consequences include low or decreasing house values, low or decreasing socioeconomic status of incoming as compared to current residents, and high or increasing vacancy rates. The behavioral consequences presumably emerge from the psychological and social psychological consequences and, in turn, drive the economic consequences.

The effects of crime thus have broader ecological implications. Human ecology examines the factors influencing the relative position of a community in a larger arena of communities. Communities are sorted or ordered relative to one another on different attributes such as status, stability, and ethnicity. The consequences of crime may result in a community's slipping relative to other neighborhoods in the locale on one or more of these dimensions.

In these studies, the crime measures most often used depend on the level of aggregation. Research focusing on communities, cities, or standard metropolitan statistical areas typically uses officially reported Part I (serious) crime rates like those published by the Federal Bureau of Investigation. These figures—on murder, rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft, and arson—are the most readily available. By contrast, analyses focusing on individuals typically use measures of perceived crime problems as independent variables.

1. Robert Bursik, "Social Disorganization and Theories of Crime and Delinquency," 

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More recently, there has been new interest in the impacts of signs of disorder, which are crime-related factors independently influencing decline. Such signs include manifestations of physical deterioration and lack of care (vacant or dilapidated housing, trashy vacant lots, extensive litter and graffiti) as well as social events suggesting trouble (large groups of people hanging out, public drug use or drug dealing, street hassles, and so on).

In this article, I organize research on crime and neighborhoods by type of outcome, separating it into psychological and social psychological, behavioral, and economic. I review representative studies in each area, noting at the close of each section major conclusions and limitations of work to date. Following the review, I present some original findings on the impacts of prior and changing crime rates on changes in relative house values and vacancy rates in Baltimore, Maryland, neighborhoods in the 1970s.

**PSYCHOLOGICAL AND SOCIAL PSYCHOLOGICAL CONSEQUENCES**

In this section, I describe research focusing on person-place transactions as the outcome: attachment to place, territorial functioning, neighborhood satisfaction, and intent to move.

**Attachment**

People can feel more or less connected to the neighborhood in which they live. Some may view it as home, while others think of it as just a place to live. Controlling for features of neighborhood and block context, a study of 63 blocks in 12 neighborhoods in Baltimore conducted in the late 1970s found that perceived minor crime problems dampened feelings of emotional investment in the neighborhood. Actual and perceived measures of crime, however, did not influence local social involvement.

**Territorial behaviors**

These focus on small-scale, usually delimited locations. For example, a resident may chase off youths who are using his backyard as a shortcut, or he or she may simply tell them to mind the flower beds while moving through. Such efforts are geared toward boundary control and internal regulation of the space in question. So, too, are efforts indicative of vigilance, such as surveillance behaviors. Also relevant are the behaviors required to produce territorial markers explicitly focused on boundary control. The building of fences, locking of gates, and planting of border shrubs with sharp thorns all fall into this category. In a residential context, territorial functioning creates a bridge between the individ-


ual household and street-block society; it also contributes to the efficient functioning of that block.\textsuperscript{5}

A few studies find that disorder and territorial behavior are inversely related to one another, probably in a systemlike pattern of reciprocal influence. The Baltimore study found that residents experienced less territorial control on blocks generating higher volumes of police activity for social nuisance problems. Research in Minneapolis and St. Paul, Minnesota, found that residents perceiving more intense crime-related problems in the nearby small commercial centers expressed weaker feelings of neighborhood attachment and neighborhood satisfaction.\textsuperscript{6}

Although it seems clear that crime and the perception of crime-related problems may interfere with person-environment transactions, we need to know more about several matters. First, what are the relative impacts of different crimes? Which interfere more with residents’ involvement in street life and their commitment to the neighborhood or block? Is personal victimization or indirect victimization—hearing about local crime events from others—as important as the local crime rate per se or more important? What are the effects on territorial functioning of changes in crime rates as compared to high crime rates at one point in time?

\textbf{Satisfaction}

Numerous studies using both city and national samples find that perceptions of crime problems have a negative relationship with neighborhood satisfaction.\textsuperscript{8} For example, analyzing cross-sectional data at the community level for 29 communities spread across five cities, Skogan found that robbery victimization was associated with lower satisfaction.\textsuperscript{9}

More recently, Skogan suggested that similar impacts may emerge from features of physical deterioration that, in the minds of residents, portend crime problems.\textsuperscript{10} Looking at a related outcome, confidence about the future of the neighborhood and using on-site assessments of physical conditions, a Baltimore study of 66 neighborhoods controlled for other neighborhood features and found


9. Skogan, \textit{Decline and Disorder}.

10. Ibid.
that physical deterioration had a negative impact on confidence about the neighborhood's future.  

In sum, research confirms that neighborhood crime, and crime-related problems such as physical deterioration, interfere with neighborhood satisfaction. We should be cautious, however, because most of these studies rely on perceptions of crime, or perceptions of crime-related problems, rather than measures of reported crime, experienced victimization, or on-site assessments of physical or social conditions.

**Intent to move**

Several studies link perceptions of crime problems with an intent to move. For example, one research project used perceptions of crime and violence rather than actual crime or victimization rates. In it, more than 1400 households in 43 metropolitan areas were interviewed at two points in time. Researchers found that perceptions of disorder were strongly linked to a desire to move. The connection appeared stronger for central city as compared to suburban residents. Skogan, in a cross-sectional study of forty neighborhoods in six different cities, found that robbery victimization and perceptions of crime-related problems correlated with a desire to move out.

13. Skogan, *Decline and Disorder*, p. 82.

**Summary**

Crime and related problems appear to be connected to a range of psychological and social psychological outcomes relevant to continued neighborhood viability. Most research has used perceptions of crime rather than actual crime, but studies using measures of police activity find comparable impacts. Confidence in these findings would be strengthened through more extensive use of actual crime measures. We know little about differential impacts of specific crimes or the impacts of different victimization rates.

**BEHAVIORAL OUTCOMES**

Studies have examined whether crime makes people less involved in group efforts to keep up their community or more desirous of leaving it.

**Local participation**

For a neighborhood to remain viable, residents must contribute to efforts to maintain it. Numerous scholars argue that crime atomizes community, that higher crime or more extensive crime-related problems interfere with residents' participation in community maintenance. Research suggests, however, that the reverse may be true. Under some conditions, more intense problems may spur more involvement. A study of participation in Brooklyn, New York, block associations found that on blocks where residents perceived more problems with physical upkeep, participation in the block associations was more widespread. On-block measures of crime and victimization
had no impact on participation. Comparable findings emerged from a Baltimore study from the mid-1970s of more than twenty neighborhoods. The individuals most involved in local improvement efforts were those perceiving the most problems. (The effects of crime on involvement were not examined in that study.) Other research suggests that the relationship between local disorder and local participation may depend on the goals of the local organizations themselves. Nevertheless, at the very least, it is clear that crime does not unequivocally reduce participation in local improvement efforts.

Mobility

Contrary to popular wisdom, at the aggregate and individual level, crime and perceptions of the crime problem do not translate into higher mobility or into suburban flight. This conclusion rests on studies spanning the mid-1960s through the late 1970s.


model, however, has been mixed. Neighborhood and housing satisfaction may not consistently mediate the relationship between mobility and external factors such as income, race, age, and stage of life cycle.

What does the Annual Housing Survey reveal about crime? It confirms that crime, most often measured via residents' perceptions of crime or related problems, does not spur actual moves. For example, one author concluded, "This study's findings . . . refute the commonly accepted belief that many urban families move because of poor schools, the lack of police protection, or for other deficiencies in public service." The relationship fails to appear even when African Americans and whites are modeled separately. Demographic factors such as race and income, stage of life cycle, and location of employment are the factors most strongly influencing actual moves.

Suppose we accept the conclusion of these studies that no relationship actually exists between neighborhood crime conditions and mobility of current residents. What might explain this lack of a connection between the two?

First, mobility is limited by numerous constraints, including inadequate resources and segregated housing markets. Anticipated or actual discrimination has been identified as one cause of the slower suburbanization of African Americans, in comparison to whites, during the 1970s. If people want to move to destinations where there are more people like them, and if there are fewer such locations, their mobility will be less.

Second, those living in higher-crime locales may have adapted somewhat to those conditions. As part of the coping process, they may have made perceptual and behavioral adjustments to living in a dangerous environment. Such adaptations may develop and function differently across various segments of society.

Third, it may be that changes in crime, particularly rapid ones, are more important determinants of moving than is the level per se. Researchers have yet to consider impacts of changes in crime on mobility.

Fourth, residents may be willing to bear the cost of living in a higher-crime neighborhood because other

21. South and Deane, "Race and Residential Mobility."
22. Varady, "Determinants of Residential Mobility Decisions."
23. South and Deane, "Race and Residential Mobility."
25. Goodman, "Explaining Racial Differences."
29. In a recent Doonesbury comic strip, Mike mused on the words of Senator Moynihan as he listened to late-night gunshots: if increasing city violence had happened suddenly rather than over 25 years, everyone would have left. His wife predicted that the farm was coming.
advantages accrue as a result of living there. Richard Taub and his colleagues interviewed owners and renters in eight neighborhoods in Chicago. They found that homeowners living in some high-crime neighborhoods insisted they would stay there, in large part because their investment in their home was appreciating at the time. This research was conducted in the late 1970s and early 1980s, when significant house value appreciation was occurring in revitalizing neighborhoods in Chicago and other cities.

If such a relationship between crime, or changes in crime, and leaving the neighborhood did not exist, could crime still be responsible for changing residential composition in a community? Yes, because it could influence how likely people were to move into the area. For example, a recent study of racially changing communities in three English cities examined shop owners' buying and selling as the community changed. Whites were not more likely to sell as the neighborhood changed. But, as ethnic residential succession progressed, whites were less likely to buy shops that were being sold, while minorities were more likely to buy such shops. Increasing crime may change the relative willingness of those from different segments of society to buy houses or stores in a neighborhood.

Alternatively, it is possible that neighborhood crime rates do influence mobility but that studies have failed to observe this due to measurement problems. Few individual-level studies include actual crime rates or victimization rates. The perceptual measures used instead have been skimpy at best; in some studies, the crime problem has been joined with measures of other perceived neighborhood problems.

Aggregate-level investigations of city-suburban moves similarly find that city crime rates do not influence suburbanward mobility. For example, Frey analyzed 39 large standard metropolitan statistical areas in 1970. He conceptualized the city-to-suburb migration stream as a two-stage process: "(1) the decision to move, and (2) the choice of destination." He observed no effect of crime rate on mobility incidence (rates) but did observe some effects of crime on the selection by recent movers of suburban destinations. Other measures of central city decline, such as city-suburban tax rate differentials, did contribute to suburbanward mobility.

Two potential limitations of this style of research deserve mention. First, researchers may be using different predictors that correlate highly with one another. For example,

34. Goodman, "Explaining Racial Differences."
ple, the Frey study previously mentioned saw a sizable correlation (.41) between proportion of the central city population that was black and central city crime rates. This makes it extremely difficult to discover the independent impact of each one. Second, there may be problems with the crime rate measures used. If only some types of crime rates have an impact, those could be lost when an overall crime index is used. Further, change in the crime rate, not the rate per se, may be important in spurring mobility.

**Summary**

Despite clear connections between intent to move and perceptions of neighborhood crime and related problems, individual- and aggregate-level studies fail to find impacts of neighborhood or city crime on, respectively, mobility and suburbanward mobility rates. The null findings may reflect the actual situation, or they may indicate measurement or analytical problems. Little is known about the impacts of changing crime rates.

**ECONOMIC CONSEQUENCES**

One of the most well researched topics in this area has been the impact of crime on house prices. Fewer studies have examined links with broader socioeconomic status.

**House values**

Researchers assume that buyers are willing to pay more for living in neighborhoods with lower crime rates or, alternatively, that the buy-  

ers expect discounts for purchasing houses in neighborhoods with higher crime rates. In addition to the buyer and seller, other actors in housing transactions may play roles in bringing about these economic impacts. Concerns about crime, perhaps spurred in part by actual crime, influence judgments of property values made by assessors, realtors, and lenders. Lower house values in higher-crime locations also can translate into lower property tax returns, further eroding the community's economic base.

Research in cities such as Boston, Baltimore, and Chicago confirm that there are sizable impacts of local crime rates on house prices. For example, work in Boston suggests that a 5 percent decrease in crime could result in $7 million to $30 million in increased tax revenue. Baltimore researchers examined the effects of local crime rates on house sale values in Baltimore City and suburban Baltimore County, controlling for structural housing features and school quality. This approach typifies he-


donic price analysis and allows the researchers to discover how much a buyer was willing to pay for specific features of a house and a neighborhood. In this model,

$$\text{house price} = f(\text{housing characteristics } 1 \ldots h) + (\text{neighborhood characteristics } 1 \ldots n).$$

The Baltimore researchers found sizable effects of crime on house prices in both Baltimore City and Baltimore County locations, with larger effects evident in the city. For example, in the city a one standard unit increase on the violent crime component implied a drop of more than $3000 in house values during the late 1970s.\(^{37}\)

Researchers have found crime impacts in locales beyond large cities and their immediate suburbs. Hakim, Buck, and their colleagues investigated the impact of Atlantic City casinos and the associated increased crime on house prices in three southern New Jersey counties.\(^{38}\) They found sizable depressing effects of crime on house values. House prices in communities more accessible to Atlantic City experienced more severe economic impacts. Their corresponding microeconomic model of offender behavior explains how high-crime areas serve to draw more offenders in, further intensifying the negative economic impacts.\(^{39}\) Crime in a community affects rents as well as house values.\(^{40}\) Crime rates in adjoining communities can have economic impacts on house values.\(^{41}\) In short, crime affects house values and rents in the immediate community and house values in adjoining communities.

These crime impacts on house values, however, may not be as large as studies have indicated. Mark Cohen has recently suggested that studies examining the impact of crime on housing prices may be overstating effects for the following reasons.\(^{42}\) Neighborhoods with high crime also may experience other conditions lowering house values, such as air pollution or proximity to major highways or industrial land use. Since researchers typically do not control for these conditions, their analyses inflate estimates of how much crime lowers house values. Second, researchers also may overstate impacts because they fail to control for unreported crimes. Taking the reporting


\(^{40}\) Rizzo, "Cost of Crime to Victims."


rate into account, the per crime impact of crime on house values decreases. The amount of the decrease depends on whether a total, property, or violent crime index was used as the crime gauge. Cohen proceeds to revise per crime cost estimates from prior studies downward by as much as two-thirds.

But suppose we conclude that crime does have substantial effects on house prices and that something should be done about it. The policy avenue for reducing these crime impacts is not clear. In a study examining effects of restoring public safety, Buck and colleagues reach a troubling conclusion: communities can offer better police protection to lower crime and raise house values, but the increased real estate taxes to pay for police may induce households to seek housing elsewhere.\(^{43}\)

**Delinquency and socioeconomic status**

In contrast to studies examining crime, cross-sectional studies using delinquency as an indicator of disorder, and broader measures of neighborhood economic conditions, find that disorder and socioeconomic status are positively related.\(^{44}\) The same connection has been observed in longitudinal studies. In Chicago, Bursik found that communities with higher delinquency rates in 1960 were more likely to experience unexpected increases in socioeconomic status over the following decade.\(^{45}\) He argues that high delinquency rates may have attracted gentrifiers to nonminority neighborhoods because of the relatively cheaper housing available there. Similar findings emerge from Schuerman and Kobrin’s analysis of clusters of Los Angeles census tracts. They found that during the 1960s, past socioeconomic levels drove up later delinquency rates.\(^{46}\) Although the connection is in the opposite direction—higher socioeconomic status leading to delinquency instead of delinquency leading to higher socioeconomic status—from what we are discussing here, it emerged during the same time period as that examined by Bursik. These studies suggest that high delinquency rates can help create conditions for subsequent socioeconomic improvement, given certain setting conditions.

**Summary**

Crime depresses house values and rents, resulting in lost property tax revenue. Researchers are now refining the precision of these estimates by controlling for crime reporting rates and other neighborhood condi-


tions. Controlling for the former clearly reduces the per crime impacts on house values. It remains to be seen if estimates of the economic impacts of crime on house values will substantially diminish as researchers control for a wider range of neighborhood features.

We also do not yet know how the impacts differ by specific crime. Such specific information can be important for practical purposes. Further, we do not yet know how changing crime may influence house values over time. With the exception of the Atlantic City work of Hakim, Buck, and colleagues, crime and real estate prices have been measured at only one point in time.

The policy implications of work in this area also are not clear. Increased taxes for more police to reduce crime may lead house buyers to look elsewhere. 47

Running contrary to the bulk of the work in this area, a small number of studies suggest that high rates of disorder, as indicated by high delinquency rates, relate cross-sectionally and over time to higher relative socio-economic status of a community.

EFFECTS OF CRIME ON RELATIVE HOUSE VALUES AND VACANCY: BALTIMORE NEIGHBORHOODS IN THE 1970S

Much of the work on crime impacts to date has failed to separate differential impacts by type of crime. Further, most studies concentrate solely on impacts of crime rates at one point in time. I report here on an investiga-

tion of community attributes exploring the impact of separate crimes. I also use a longitudinal design to differentiate the effects of earlier versus changing crime rates on community changes. The outcomes are unexpected changes over time in relative house value and vacant housing rates.

Which crimes have more impact?

Much of the research on the impacts of crime on residents has emphasized impacts of stranger-to-stranger street crime such as robberies and assaults. 48 If this is the case, then these crimes would have more influence on neighborhood decline than would property crimes such as larceny and burglary. I investigate that possibility here.

Does changing crime influence changes in community?

In addition, I investigate changes in community attributes using an explicitly ecological perspective. Human ecology focuses on the relationship of communities to one another in the urban mosaic, suggesting that processes of invasion and succession have important impacts because they change the position of the communities relative to one another. 49 Therefore I use crime and house price measures that explicitly take into account the position of a community


49. Robert J. Bursik, “Ecological Stability and the Dynamics of Delinquency,” in Communities and Crime, ed. Reiss and Tonry,
on the attribute in relationship to other communities. Further, given the dynamic nature of the ecological perspective, I use outcome measures capturing unexpected change—changes not predictable given the community’s initial position on the attribute and not predictable given the overall changes in the area during the period in question.

Site and period

I focus on the city of Baltimore’s ecologically defined neighborhoods. Baltimore is an older, industrial, mid-Atlantic city with a population that had declined for several decades to a size of slightly under 700,000 by 1990. Significant center city revitalization occurred during the 1970s and 1980s. The period examined in the data is the 1970s. During that time, several neighborhoods experienced significant gentrification. At the same time, the number of extremely poor neighborhoods, and the severity of the poverty in several of these neighborhoods, also increased.

Dependent variables

Using 1970 and 1980 census data recompiled into neighborhoods, I constructed percentile scores on housing value for each point in time. A neighborhood where the average house value was greater than the value in communities housing 75 percent of households in the city would receive a score of 75; the lowest possible score was close to zero, while the highest possible score was close to 100. The measure captures the dominance of a neighborhood in the city housing market. Percentile house value scores from 1980 were regressed on 1970 percentile house value scores, and the residuals were retained. These residuals represent unexpected change—change predictable neither from the overall changes on the attribute during the period nor from the neighborhood’s initial score on the attribute. A positive score means a neighborhood moved up relative to other neighborhoods during the period; a negative score means it slipped. Scores were then logged to reduce skewness to an acceptable level.

I also explored changes in the percentage of housing in a neighborhood that was vacant. Again, 1980 scores were regressed on 1970 scores, and the residuals capturing unexpected change were retained. To reduce skewness, the outcome variable was log transformed.


50. Ralph B. Taylor, Sidney Brower, and Whitney Drain, A Map of Baltimore Neighborhoods (Baltimore, MD: Johns Hopkins University, Center for Metropolitan Planning and Research, 1979).


These two outcomes—the log of unexpected changes in relative house prices and the log of unexpected changes in vacant housing rates—are relatively independent of one another \( r = -0.03, \ p > 0.60, \ n = 229 \), suggesting they capture different features of housing dynamics during the period.

**Predictors**

Research on urban ecology suggests three independent dimensions of community fabric: status, stability, and racial and youth composition.\(^5\) In order to assess the independent effects of earlier and changing crime rates on outcomes, one needs to control these three dimensions. For each of these three attributes, therefore, I always included two measures: one capturing scores at the beginning of the decade and one capturing unexpected changes during the decade. The specific measure picked was the one correlating most strongly with the outcome. I also included two types of crime measures. Beginning-of-decade crime measures capture lagged impacts; unexpected change measures capture contemporaneous impacts. Each neighborhood's 1970 and 1980 reported crime rate for each Part I offense was converted to a weighted percentile score. Measures for 1980 were regressed on the respective 1970 measures, and residuals capturing unexpected change were retained.

**Modeling**

I use ordinary least squares regressions. Measures of initial urban ecology, and changes therein, were forced into each equation. After their entry, significant measures of initial crime rates and unexpected changes in crime rates were allowed to enter. Therefore the model controls for previous ecology and changes in ecology, and it explores the subsequent independent contribution of crime and changing crime. I examined leverage and other diagnostics to ensure that results were not unduly influenced by specific neighborhoods.

**Results**

**Unexpected changes in relative house value.** Table 1 displays the results for residual changes in relative house value. Conditions at the beginning of the decade on all three dimensions of urban ecology influenced subsequent changes in relative house value. Relative house value went up more in neighborhoods that, at the beginning of the decade, had lower proportions of African Americans, more residents with education beyond high school, and lower proportions of owned housing. The negative effect of initial ownership on subsequent price increases probably occurred because more available rental housing in a neighborhood permitted more subsequent gentrification to occur.\(^5\)

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\(^5\) Covington and Taylor, "Gentrification and Crime."
TABLE 1
PREDICTING UNEXPECTED CHANGES IN RELATIVE HOUSE PRICES:
BALTIMORE NEIGHBORHOODS, 1970s

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>Standard Error of b</th>
<th>Beta</th>
<th>t</th>
<th>p &lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner occupied homes: 1970*</td>
<td>-.002</td>
<td>.0006</td>
<td>-.211</td>
<td>-3.657</td>
<td>.001</td>
</tr>
<tr>
<td>Owner occupied homes: change*</td>
<td>.0003</td>
<td>.001</td>
<td>.016</td>
<td>&lt; 1</td>
<td>n.s.</td>
</tr>
<tr>
<td>Residents with more than a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>high school education: 1970*</td>
<td>.006</td>
<td>.0009</td>
<td>.405</td>
<td>7.215</td>
<td>.001</td>
</tr>
<tr>
<td>Residents with more than a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>high school education: change*</td>
<td>.014</td>
<td>.002</td>
<td>.360</td>
<td>7.142</td>
<td>.001</td>
</tr>
<tr>
<td>African American residents: 1970*</td>
<td>-.002</td>
<td>.0003</td>
<td>-.356</td>
<td>-6.117</td>
<td>.001</td>
</tr>
<tr>
<td>African American residents: change*</td>
<td>-.007</td>
<td>.0006</td>
<td>-.056</td>
<td>-1.158</td>
<td>n.s.</td>
</tr>
<tr>
<td>Aggravated assault: 1970</td>
<td>.0015</td>
<td>.0005</td>
<td>.200</td>
<td>2.766</td>
<td>.01</td>
</tr>
<tr>
<td>Aggravated assault: change</td>
<td>-.002</td>
<td>.0008</td>
<td>-.154</td>
<td>-3.132</td>
<td>.01</td>
</tr>
<tr>
<td>Murder: change</td>
<td>-.001</td>
<td>.0005</td>
<td>-.112</td>
<td>-2.290</td>
<td>.05</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.368</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R² = .526 (adjusted R² = .506)
F(9, 214) = 24.43; p < .001

NOTE: Outcome = log of unexpected change in house value percentile. All predictors labeled "change" capture unexpected changes.

*Percentages.

Only one of the three structural change dimensions influenced changes in house prices; as the portion of well-educated residents in a community increased unexpectedly, relative house prices also increased unexpectedly. Again, this may be due to gentrification in some neighborhoods and residents’ moving out of other locations where housing was losing value and filtering down.

Of particular interest are the impacts of initial crime and subsequent unexpected crime changes. Neighborhoods decreasing unexpectedly on aggravated assault and murder increased unexpectedly on relative value (beta = -0.15 and -0.11, respectively). These coefficients suggest that buyers are sensitive to changing crime conditions.

One initial crime level, however, appears to have had an impact reverse of the expected. Neighborhoods with higher relative assault rates in 1970 unexpectedly gained in relative value. This surprising coefficient echoes Bursik’s finding that initial delinquency rates were associated with higher socioeconomic status a decade later. Relatively high crime, if not of an extremely serious nature, along with a relatively dilapidated but renewable housing stock, aplaceable population, and proximity to valued locations, may have helped set the stage for subsequent gentrification by making more discounted desirable housing available.

Unexpected changes in vacant housing: Table 2 presents the results of the regression predicting unexpected vacancy rate changes. Initial ecological conditions influenced changes in vacant housing. Vacancies
TABLE 2
PREDICTING UNEXPECTED CHANGES IN PERCENTAGE OF HOUSING
THAT IS VACANT: BALTIMORE NEIGHBORHOODS, 1970s

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>Standard Error of b</th>
<th>Beta</th>
<th>t</th>
<th>p &lt;</th>
</tr>
</thead>
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<tr>
<td>Owner-occupied housing units: 1970*</td>
<td>-.002</td>
<td>.0008</td>
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<td>-2.31</td>
<td>.05</td>
</tr>
<tr>
<td>Owner-occupied housing units: change*</td>
<td>.0009</td>
<td>.002</td>
<td>.035</td>
<td>&lt; 1</td>
<td>n.s.</td>
</tr>
<tr>
<td>Residents who are</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American: 1970*</td>
<td>-.0001</td>
<td>.0004</td>
<td>-.020</td>
<td>&lt; 1</td>
<td>n.s.</td>
</tr>
<tr>
<td>Residents who are</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American: change*</td>
<td>-.001</td>
<td>.0008</td>
<td>-.100</td>
<td>-1.57</td>
<td>n.s.</td>
</tr>
<tr>
<td>Households that are in poverty: 1970*</td>
<td>.004</td>
<td>.002</td>
<td>.333</td>
<td>4.19</td>
<td>.001</td>
</tr>
<tr>
<td>Households that are in poverty: change*</td>
<td>.004</td>
<td>.002</td>
<td>.129</td>
<td>1.84</td>
<td>.10</td>
</tr>
<tr>
<td>Residential burglary: change</td>
<td>.002</td>
<td>.0009</td>
<td>.147</td>
<td>2.32</td>
<td>.05</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.993</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

$R^2 = .244$ (adjusted $R^2 = .219$)

$F(7, 216) = 9.94; p < .001$

NOTE: Outcome = log of unexpected change in percentage of housing that is vacant. All predictors labeled “change” capture unexpected changes.

*Percentages.

increased dramatically in locations where there were fewer owners and more poverty in 1970. One ecological change—increasing poverty—accompanied increasing vacancies. Of most interest to us here is the independent impact of crime. Controlling for initial structural conditions and structural changes, unexpected increases in burglary accompanied increasing vacancy rates. As the neighborhood’s vacancy rate increased unexpectedly, so too did its burglary rate relative to the rest of the city. (This impact is not due simply to the way I constructed the denominators for the crime rates.) This suggests that increasing property crime may have played a role in accelerating processes of housing abandonment.

Limitations and implications

The results shown capture dynamics in just one city at one historical moment. The relations observed here may not appear in other locations or in the same location at different time periods. Further, the results do not control for measurement errors in the variables and do not take possible spatial autocorrelation into account. The modeling also does not allow for two-way relationships where the unexpected change predictor and outcome can influence one another. These limitations notwithstanding, the results do suggest that changes in specific crimes accompany changes in relative house value and vacancy rates. These impacts are sizable. In addition, different crimes influence different aspects of neighborhood economic change. Whereas assault and murder changes influenced house value changes, burglary changes influenced vacancy changes. Further, initial and changing assault crime rates in the first regression had impacts going in opposite ways. This
finding underscores the earlier suggestion that it is important to separate out the impacts of specific crimes and to differentiate cross-sectional from dynamic impacts. Extending the earlier conclusions of Kobern, Schuerman, and Bursik based on delinquency rates, we see here that crime changes, as well as initial crime conditions, play roles in shaping ecological transitions in communities.

GENERAL ISSUES TO BE ADDRESSED

Future research in this area faces a number of challenges. They can be grouped into conceptual clarification and issues of measurement.

Conceptual clarification is needed in three arenas. In this article, I have reviewed a range of possible outcomes, relevant to community viability, that may be influenced by crime. Plausible connections between individual-level outcomes, and between aggregate ones, have been assumed but not investigated. For example, at the individual level, we do not know how attachment, territorial functioning, local participation, desire to move, and actual mobility interrelate in a detailed way. Research to date suggests some contradictions; higher crime or perceived crime apparently spurs both local involvement and the desire to move, for example. Perhaps crime influences different types of residents in differing ways.

Second, contextual and individual-level factors shaping and constraining potential impacts of crime on community-relevant outcomes need to be clarified. Work on white flight in response to racial change may prove instructive. Earlier work suggested a universal tipping point—a point when the racial composition became such that most whites sought to leave. More recent work suggests that the process is more complex; there is no universal tipping point. Rather, how residents respond depends on local factors, racial composition, and their own segregationist attitudes. Taub's Chicago study suggests that similarly complex dynamics may be at work when homeowners gauge their responses to crime. We need research exploring how historical, ecological, economic, and personal factors influence tolerance for high crime rates. A stress and coping perspective may provide insights.

Finally, a third conceptual issue is how to develop a dynamic perspective on this issue. How do changes in crime affect communities? Are these influences dissimilar from those of persistently high crime rates? Does the rate of increase matter?

Researchers need to address measurement issues as well. The mean-


57. Taub, Taylor, and Dunham, *Paths of Neighborhood Change*.

58. Taylor and Shumaker, “Local Crime as a Natural Hazard.”


60. Schuerman and Kobern, “Community Careers in Crime.”
measure of crime itself has been limited in different ways, depending on the study. Aggregate studies using just an overall crime index may be overlooking impacts of individual, specific crime that get washed out in the total crime figures. Further, aggregate studies have used measures of central city decline that reference city attributes to suburban attributes, such as tax rate differentials. They have not developed similarly relative measures for crime. Third, the widely used Annual Housing Survey contains only one limited measure of neighborhood crime problems. Inadequate operationalization may in part be responsible for the weak impacts found in some studies. Measurement improvements seem unlikely, however, to reverse a long-standing and consistent series of studies finding no impact of crime on actual mobility, given the nature of the mobility process and the fact that constraints on actual mobility are likely to be highest for those in the highest-crime areas.

Studies have established clear impacts of crime on house prices. These per crime impacts probably have been substantially overestimated because, as Cohen pointed out, underreporting has not been considered.\textsuperscript{61} I agree with him that we also need to include other neighborhood covariates, so that negative impacts of other conditions are not misattributed to crime impacts.

The clear and consistent findings to date linking higher crime with depressed house values notwithstanding, the policy implications of this work are not clear. If increased taxes to pay for more public protection induce owners to buy elsewhere, as Buck and colleagues have suggested,\textsuperscript{62} this cost of increased safety may outweigh the benefit of increased tax revenue from higher-priced housing in safer neighborhoods. We need empirical as well as theoretical economic impact analyses and social impact assessments so that we can precisely gauge these costs and benefits.

\textsuperscript{61} Cohen, "Note on the Cost of Crime."
\textsuperscript{62} Buck, Hakim, and Spiegel, "Endogenous Crime Victimization."