



National Institute of Justice

R e s e a r c h i n B r i e f

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July 1999

Issues and Findings

Discussed in this Brief: A research project to gauge the effects over time of social disorder (social incivilities) and physical deterioration (physical incivilities) on neighborhood residents' fear, crime changes, and changes in basic neighborhood makeup. Researchers interviewed residents in 66 Baltimore, Maryland, neighborhoods in 1982 after assessing conditions on the same street blocks in 1981. Researchers returned to 30 Baltimore neighborhoods in 1994, assessed physical and social conditions on 90 street blocks, and interviewed residents on those blocks.

Key issues: The impacts of social and physical incivilities *over time* have not been examined. To learn if incivilities contribute independently to changing neighborhood fear, crime, and decline, this study examined these outcomes at two points in time. More specifically, after controlling for other factors, researchers sought to determine whether incivilities at an earlier point in time result in subsequent increases in neighborhood fear and crime and a structurally weakened neighborhood, where vacancies and poverty are higher and education levels of residents or homeownership or house values are lower.

Key findings: Using assessment and survey data and crime and census data, researchers learned that:

- Physical conditions had deteriorated significantly on the street blocks assessed in 1981 and 1994. Graffiti and abandoned houses occurred more frequently.

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Crime, Grime, Fear, and Decline: A Longitudinal Look

By Ralph B. Taylor

Changing urban neighborhoods are sometimes characterized by a pattern of deterioration where resident-based control of street life gives way to disorderly social and physical conditions known as incivilities. Examples of social incivilities include public drinking or drunkenness, rowdy and unsupervised teen groups, sexual harassment on the street, arguing or fighting among neighbors, open prostitution, and—since the mid-1980s—public drug sales and the presence of crack addicts. Physical incivilities include abandoned buildings, graffiti, litter, vacant and trash-filled lots, unkempt yards and housing exteriors, abandoned cars, and—again, since the mid-1980s—the conversion of houses and apartments to drug-selling locations.

To investigate the connection, if any, between incivilities and changes in crime, residents' fear, and further erosion of the neighborhood fabric, the National Institute of Justice (NIJ) supported a longitudinal study that examined developments in Baltimore, Maryland, neighborhoods over more than a decade. Researchers returned to 30 neighborhoods in Baltimore in 1994. They assessed conditions on 90 street blocks and interviewed residents. Researchers had previously interviewed other residents in these and 36 other Baltimore

neighborhoods in 1982 and assessed conditions on the same street blocks in 1981. This *Research in Brief* discusses the findings of the study.

In the late 1970s, researchers and policy analysts began connecting disorderly social and physical conditions with reactions to crime such as fear. Over the past 20 years, they have further expanded this thesis and developed new outcomes. Initially, researchers theorized that incivilities influenced residents' reactions to crime. Over the years, researchers have expanded their field of focus from individual residents to entire neighborhoods and added changing crime and neighborhood decline to the outcomes of interest (see *Evolution of the Incivilities Thesis*).

What do we know?

Since the early 1980s, researchers have successfully linked an individual's perception of incivilities with reactions to crime such as fear and a desire to protect one's family and property, and negative evaluations of neighborhood conditions—for example, decreased residential satisfaction and an increased desire to move.¹ Other researchers have observed these links at the neighborhood level, as well.²

Issues and Findings

continued...

- Despite the worsening physical conditions, residents did not report that local physical or social problems in the neighborhood were significantly worse. Nor were residents living in significantly more fear, as measured by three of four indicators.
- Some crimes increased faster in neighborhoods starting out with more incivilities. Nevertheless, the connections were not consistent across crimes, type of indicator (perceived by residents versus assessed by raters), or type of incivility (physical versus social).
- Neighborhood status at the beginning of the period showed a far more powerful influence on neighborhood crime changes. Five Part 1 crimes, including one property crime, declined faster, or increased more slowly, in neighborhoods with higher house values.
- Earlier deterioration did not cause a neighborhood to “go downhill” faster for most aspects of decline examined. Incivilities made no independent impacts on changes in house value, homeownership, or education levels. Incivilities did, however, shape later changes in poverty and vacancy rates.
- The earlier makeup of the neighborhood more powerfully influenced if or how fast a neighborhood went downhill. Again, initial status proved most important.
- Neither residents’ reports of incivilities in 1982, nor incivilities assessed in 1981, contributed independently and substantially to changes in fear of crime in the neighborhoods between 1982 and 1994. Far more influential was earlier neighborhood status.
- Earlier incivilities showed a sizable impact on changes in moving intentions.

Target audience: Federal, State, and local law enforcement officials; State and local government officials; and criminal justice practitioners and researchers.

Nevertheless, researchers continue to question the impacts of incivilities. One national survey showed that those residents who see more local problems had less fear, after removing other factors.³ Data from 66 Baltimore neighborhoods, compiled during the earlier phase of this study, showed a nonsignificant overall impact of incivilities on residents’ responses to disorder.⁴ Terance Miethe recently concluded: “The empirical evidence on the direct and indirect impact of measures of neighborhood incivilities on individuals’ fear of crime is inconclusive.”⁵

Most importantly, researchers have not examined the impact of incivilities *over time*. To learn if incivilities contribute independently to changing fear, neighborhood crime, or neighborhood decline, these outcomes must be examined at two points in time. More specifically, the current study, after controlling for other factors, addressed the questions of whether incivilities at an earlier point in time result in:

- Subsequent increases in neighborhood fear.
- Subsequent increases in neighborhood crime.
- A structurally weakened neighborhood where vacancies and poverty are higher and education levels of residents, homeownership, or house values are lower.

The questions are ecological and longitudinal concerning neighborhood shifts over time.

Gauging the independent contribution of incivilities to these outcomes provides important policy information in three arenas: community preservation, community policing, and neighborhood commitment. Those concerned with community preservation will benefit by learning the

potency of incivilities, helping them assess how much attention to devote to these concerns in contrast to other features of neighborhood health and stability.

The information proves relevant to practitioners charged with overseeing community policing efforts. Community policing and problem-oriented policing represent well-stocked toolboxes. Of late, incivility-reduction strategies, either “grime reduction” or “zero tolerance,” have overshadowed other problem-oriented approaches, such as ministations or beat meetings with residents, in many locations. Many argue incivility reduction should be the first tool out of the box, whatever the problem may be.

Do incivility-reduction strategies deserve to be the first ones out of the problem-oriented policing toolbox? By concentrating on them, are we ignoring other effective approaches? Although the current project does not assess the relative efficacy of various community-oriented policing strategies, it does provide information on the long-term impacts of strategies designed to reduce incivilities.

Finally, the information to be gathered should prove relevant for those agents interested in reducing fear and promoting neighborhood commitment. In addition to community policing leaders, managers and officers, neighborhood leaders, and local planners have stakes in both of these outcomes.

Changes from 1981 to 1994

Looking at conditions on the 90 street blocks assessed by raters in both 1981 and 1994, researchers were not surprised to encounter the following changes:

- Graffiti had increased significantly. Whereas 80 percent of the blocks were graffiti free in 1981, only 63 percent were free of graffiti in 1994.

Exhibit 1a. Fear of crime: 1982 and 1994

| Time of Day | Block | | | | Neighborhood | | | |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | Day | | Night | | Day | | Night | |
| | 1982 | 1994 | 1982 | 1994 | 1982 | 1994 | 1982 | 1994 |
| Very Safe | (602) 81.9% | (538) 76.4% | (332) 45.2% | (217) 30.8% | (517) 70.3% | (400) 56.8% | (194) 26.4% | (93) 13.2% |
| Somewhat Safe | (114) 15.5% | (139) 19.7% | (229) 31.2% | (285) 40.5% | (160) 21.8% | (230) 32.7% | (244) 33.2% | (267) 37.9% |
| Somewhat Unsafe | (15) 2.0% | (17) 2.4% | (98) 13.3% | (116) 16.5% | (43) 5.9% | (50) 7.1% | (160) 21.8% | (161) 22.9% |
| Very Unsafe | (4) 0.5% | (7) 1.0% | (69) 9.4% | (79) 11.2% | (11) 1.5% | (124) 2.7% | (174) 24.7% | (19) 2.7% |
| Don't Know | | (3) 0.4% | (7) 1.0% | (7) 1.0% | (4) 0.5% | (5) 0.7% | (13) 1.8% | (9) 1.3% |
| Mean | 1.212 | 1.277 | 1.868 | 2.082 | 1.382 | 1.554 | 2.296 | 2.599 |
| Standard Deviation | 0.491 | 0.556 | 0.977 | 0.962 | 0.667 | 0.744 | 1.044 | 1.005 |

1982, n=735
1994, n=704

Note: The fear of crime items used a format similar to that of the National Crime Victimization Survey: "How safe would you feel being out alone (on your block/elsewhere in the neighborhood) (during the day/at night after dark)?"

- The percentage of vacant and boarded-up housing on the blocks also had increased from 1 to 2 percent of all residential addresses. This shift was not surprising given the large increases in vacant housing across Baltimore in the early 1990s.⁶
- Nevertheless, following trends first documented in the 1970s (with a few exceptions), most of the increased deterioration was concentrated in inner-ring neighborhoods, closer to the city center on the east and west sides of the downtown.⁷

Further, in keeping with the spatially concentrated nature of the increasing deterioration, when the 1982 and 1994 surveys were compared, researchers expected but did not find significant increases in reports of either physical or social incivilities. Compared with the 1982 interviewees, residents in 1994 did not see their neighborhood as markedly more problem ridden. The survey items used

here have been widely employed by researchers in numerous studies of perceived incivilities.

Finally, compared with those in 1982, residents surveyed in 1994 were not generally more fearful or more concerned about nearby danger. Residents of the 1990s were not more likely to see widely recognized dangerous locations nearby than were residents from the same neighborhoods in the 1980s. At both points in time, about 40 percent of respondents

reported one or more places nearby that were known to be dangerous. Further, when residents were asked whether they felt fear either on their block during the day or at night, their responses in 1982 and 1994 were not significantly different. Only when they were asked about their nighttime fears on blocks other than their own were the fears of 1994 residents significantly higher than those of 1982 residents (see exhibits 1a and 1b).

Do incivilities influence later crime changes?

To find out if incivilities influenced later neighborhood crime changes, researchers used information from all 66 sampled neighborhoods in the original 1981 and 1982 studies. For each Part I crime (except arson), they calculated how much each neighborhood's crime rate had gone up or down between the early 1980s and the early 1990s, relative to all other neighborhoods in the city. They then tried to predict these changes using each neighborhood's incivility scores from 1981 and 1982. Researchers looked at impacts of both assessed conditions at the beginning of the period and residents' perceptions of those conditions. To ensure that the impacts of incivilities over time were independent, researchers controlled for neighborhood structure.

Exhibit 1b. Dangerous places to avoid: 1982 and 1994

| Are there any specific places in your neighborhood that many people try to avoid because they think these places might be dangerous? | 1982 | | 1994 | |
|--|------|-------|------|-------|
| | N | % | N | % |
| No | 376 | 51.20 | 363 | 51.56 |
| Yes | 280 | 38.10 | 295 | 41.90 |
| Don't Know | 79 | 10.70 | 46 | 6.53 |

Exhibit 2 shows connections between assessed incivilities at the beginning of the 1980s and unexpected crime changes over the following decade.⁸ In the first column, impacts are shown before controlling for 1980 neighborhood structure. The second column shows the independent impact of assessed incivilities after the influence of overall neighborhood structure was

removed. None of the nonparametric correlations were significant. Assessed incivilities did not influence later neighborhood crime shifts; the expected impacts failed to appear. The lack of significance is not attributable to a lack of statistical power.⁹

Because different types of incivility indicators often fail to provide closely

comparable “readings,” examining the impacts of perceived incivilities might produce different results.¹⁰ Separate analyses of the impacts of perceived physical and social problems were performed¹¹ and revealed that various incivilities can have different impacts¹² (see exhibit 3).

D Evolution of the Incivilities Thesis

ifferent versions of the incivilities thesis have circulated for more than 20 years. In the mid-1970s, researchers, responding to early findings from the first National Crime Surveys that showed many more residents were fearful than were victimized, suggested urbanites found not just crime—but also the disorderly social and physical conditions around it—bothersome.^a Perhaps, James Garofalo and John Laub suggested, “fear of crime” was more than “fear” of “crime.”^b

Al Hunter amplified the thesis by describing inferences residents make when they are surrounded by disorderly conditions.^c Seeing that matters have gotten out of hand in the neighborhood, they presume local actors and external agencies cannot or will not intercede, thus their own chances of becoming a crime victim are greater.

In their first *Atlantic Monthly* piece in 1982, James Q. Wilson and George Kelling elaborated on the thesis in several important ways.^d Changing neighborhood crime rates became an outcome. They outlined how a multistep process of increasing incivilities could unfold over time, leading to weakened resident-based control over street life and greater neighborhood fear and crime. They shifted the focus from individuals to groups of residents, offenders outside as well as inside the locale, and declining

neighborhood safety. Kelling and Catherine Coles further developed the rationale for order maintenance policing focused on social incivilities and attributed increasing social incivilities to shifts in public law over the past three decades.^e

Wesley Skogan further “ecologized” the thesis in 1990 by focusing on neighborhood change as the ultimate outcome of interest. He argued that disorder plays an important role in sparking urban decline.^f “Incivilities heighten residents’ safety concerns, may contribute to additional crime, and soften the housing market,” he wrote.^g He also suggested that “[d]isorder can play an important, *independent* role in stimulating this kind of urban decline.”^h

Originally, the incivilities thesis suggested that those residents who experienced more fear than their neighbors were more sensitive to disorder-related problems in their neighborhoods. Later versions of the thesis suggested that, over time, physical disorder could spark not only resident concern but increase neighborhood crime, as well. Finally, researchers added neighborhood decline as the ultimate outcome of interest. Simply put, according to this thesis, researchers linked incivilities to three outcome categories: reactions to crime, increasing neighborhood crime, and neighborhood structural decline.

Author’s note: An expanded discussion of the theoretical evolution of the incivilities thesis can be found in Taylor, R.B., “The Inci-

vilities Thesis: Theory, Measurement, and Policy,” in *Measuring What Matters: Proceedings From the Policing Research Institute Meetings*, ed. Robert Langworthy, Washington, DC: U.S. Department of Justice, National Institute of Justice, July 1999, NCJ 170610.

Notes

- a. Wilson, J.Q., *Thinking About Crime*, New York: Basic Books, 1975.
- b. Garofalo, J., and J. Laub, “The Fear of Crime: Broadening Our Perspective,” *Victimology* 3 (1978): 242–253.
- c. Hunter, A., “Symbols of Incivility,” paper presented at the annual meeting of the American Society of Criminology, Dallas, Texas, 1978.
- d. Wilson, J.Q., and G. Kelling, “Broken Windows,” *Atlantic Monthly* 211 (1982): 29–38.
- e. Kelling, G., and C.M. Coles, *Fixing Broken Windows: Restoring Order and Reducing Crime in American Cities*, New York: Free Press, 1996.
- f. Skogan, W., *Disorder and Decline: Crime and the Spiral of Decay in American Cities*, New York: Free Press, 1990: 2.
- g. Ibid, 65.
- h. Ibid, 12, emphasis added.

Exhibit 2. Correlations of 1981 assessed incivilities with later crime changes: 1980–1982 to 1990–1992

| Crime | Assessed Incivilities | |
|---------------------|---|---|
| | Not Controlling for 1980 Neighborhood Structure | Controlling for 1980 Neighborhood Structure |
| Homicide | 0.2380* | 0.0431 |
| Robbery | 0.1207† | -0.0294 |
| Rape | 0.1963* | -0.0378 |
| Aggravated Assault | 0.1702‡ | -0.0993 |
| Burglary | 0.2149* | 0.0294 |
| Larceny | 0.1664‡ | -0.0023 |
| Motor Vehicle Theft | -0.0089 | 0.0517 |

Note: Kendall Tau-B correlation coefficients. One-tailed probabilities: † p<0.10; ‡ p<0.05; *p<0.01. n=66 neighborhoods. Crime change scores are unexpected crime percentile changes. The right column shows impacts after controlling for 1980 percentage owner-occupied, percentage black, and house value percentile. Incivility indicator used is based on principal components scores where the principal component included largely physical incivility indicators but some social ones as well. For details on indicator construction, see Taylor, R.B., W. Shumaker, and S.D. Gottfredson, "Neighborhood-Level Links Between Physical Features and Local Sentiments: Deterioration, Fear of Crime, and Confidence," *Journal of Architectural Planning and Research* 2 (1985): 261–275.

There are four significant impacts of partialled incivilities.¹³ Controlling for community makeup in neighborhoods where residents perceived more social problems in 1982, researchers found that increases in rape relative to other neighborhoods were more likely in the following decade.¹⁴ In neighborhoods where residents perceived more physical problems in 1982, relative increases in aggravated assault, burglary, and motor vehicle theft were more likely over the following decade. Robbery, the street crime thought to be the most fear-inspiring and the crime directly addressed by Wilson and Kelling, was not shaped by earlier perceived social or physical incivilities.

To sum up the question of crime change: There was some evidence that earlier incivilities had an independent impact on later crime changes. This impact, however, was not consistent across crimes, across type of indicator (assessed versus perceived by residents),

or across type of incivility (physical versus social).¹⁵

Do incivilities influence later neighborhood decline?

For structural decline, researchers focused on six indicators: changes in house value percentile, owner occupancy, percentage of single-unit structures, percentage of respondents

with a high school education, poverty, and vacant housing.¹⁶ These six indicators were collapsed into three independent dimensions:¹⁷

- Changes in homeownership and single-unit structures clustered together to reflect a shift in “stability.”
- Changes in vacant housing and poverty rates joined to reflect changes in degree of “disadvantage.”
- Changes in the portion of high school graduates and house value ranked together to form a dimension of “status” change.

Using the 1981 assessed incivilities indicator and controlling for neighborhood makeup, researchers examined the impact of incivilities on later changes in neighborhood structural disadvantage (see exhibit 4). Disadvantage increased more in neighborhoods where incivilities were initially higher. Relying on residents’ perceptions of incivilities in 1982, however, there was no significant relationship for this aspect of decline or the other two change pathways, after controlling for 1980 neighborhood makeup.

Exhibit 3. Correlations of 1982 perceived incivilities with later crime changes: 1980–1982 to 1990–1992

| Crime | Perceived Incivilities | |
|---------------------|------------------------|----------|
| | Social | Physical |
| Homicide | 0.0056 | 0.0590 |
| Robbery | 0.0648 | 0.0769 |
| Rape | 0.1142† | 0.0219 |
| Aggravated Assault | 0.0340 | 0.1152† |
| Burglary | 0.0564 | 0.1170† |
| Larceny | 0.0508 | 0.0089 |
| Motor Vehicle Theft | 0.0490 | 0.1226† |

Note: Kendall Tau-B nonparametric correlation coefficients. One-tailed probabilities: † p<0.10. n=66 neighborhoods. Perceived physical and social problems have been residualized with respect to: 1980 percentage black, percentage owner-occupied, house value percentile, and percentage ages 6–13.

In sum, whether the expected link between earlier incivilities and later neighborhood decline appeared depended on the type of incivilities indicator used and the dimension of decline examined. Broad lagged impacts across both types of indicators, affecting all three types of decline, failed to appear.

Impacts of structure

Contrasting disorder’s impacts with the impacts of structure on later crime changes and structural changes is instructive. Several sociological theorists link fundamental neighborhood fabric to later neighborhood decline or later increases in crime through a complex web of relationships among the neighborhood, outside agencies, market forces, and service delivery.¹⁸ Some concentrate on impacts linked to low neighborhood status, others on racial composition, and still others on lack of stability.¹⁹

Neighborhood features connected very much as expected with later crime shifts (results not shown). Looking first at personal crimes, researchers found

that relative assault and rape rates were more likely to increase subsequently in neighborhoods with lower house values, more renters, and more blacks in 1980. Initial racial composition and status connected similarly to later relative homicide increases. In more stable neighborhoods, robbery was less likely to increase.

With regard to property crime, two connections appeared as expected: Relative burglary rates were less likely to increase in more stable locales and higher status locales. Another connection was unexpected: higher status neighborhoods experienced stronger, later increases in motor vehicle theft. Given that there were probably more attractive targets in those locales, however, the latter result makes sense from an opportunity perspective.

Examination of structural changes in the 1980s showed connections with the earlier neighborhood fabric (results not shown). Increasing status was more likely in neighborhoods that started with a higher status and less likely in neighborhoods with a higher proportion of blacks at the beginning of the

period. Increasing disadvantage was less likely in neighborhoods that were more stable at the beginning of the period.

In sum, earlier neighborhood fabric connected more consistently to later neighborhood decline and crime shifts than did incivilities. The dynamics that explain these connections are extremely complex. Neighborhood “basics” were at least as important as, and perhaps more important than, incivilities and changes in incivilities.

Impacts on reactions to crime and neighborhood commitment

As mentioned earlier, four questions associated with fear asked about residents’ fear during the day, at night, on the block, and elsewhere in the neighborhood. Another survey question asked if there were dangerous places nearby that many residents actively avoided. To get at neighborhood commitment, a survey item asked if the respondent thought seriously about moving, and if so, how often.

For these analyses, researchers were restricted to the 30 neighborhoods where resident interviews were completed in both 1982 and 1994. They controlled for several factors: the composition of the neighborhood in 1980, crime in 1980–82, and each neighborhood’s average score on the outcome in 1982. Because researchers controlled for this last variable, at the neighborhood level the outcome was *changes* in the reaction to crime between 1982 and 1994. Finally, the team included available incivility indicators from 1981 or 1982 in the equation. The key question is whether, after researchers controlled for these other factors, the earlier incivilities signifi-

Exhibit 4. Correlations of assessed and perceived incivilities with neighborhood decline

| Neighborhood Change | Incivilities | | |
|---------------------|---------------------|-----------|----------|
| | Assessed | Perceived | |
| | | Social | Physical |
| Stability | -0.0107 | -0.0490 | -0.0517 |
| Disadvantage | 0.1096 [†] | -0.0648 | -0.0974 |
| Status | 0.0219 | -0.0779 | -0.0322 |

Note: Kendall Tau-B nonparametric correlation coefficients. [†] = p<0.10, one-tailed test. n=66 neighborhoods. Assessed incivilities have been partialled with respect to 1980 percentage owner-occupied, percentage black, and house value percentile. Perceived incivilities have been partialled with respect to 1980 percentage owner-occupied, percentage black, house value percentile, and percentage ages 6–13. Neighborhood change indicators reflect unexpected change on three independent dimensions, where each dimension is defined by two change indicators: percentage owner-occupied and percentage one-unit structures for stability; percentage vacant for sale or rent and percentage households below poverty for disadvantage; and relative house value percentile and percentage with high school education for status.

cantly influenced subsequent changes in the outcome.²⁰ Researchers used multilevel models that permitted them to separate neighborhood dynamics from individual-level dynamics.

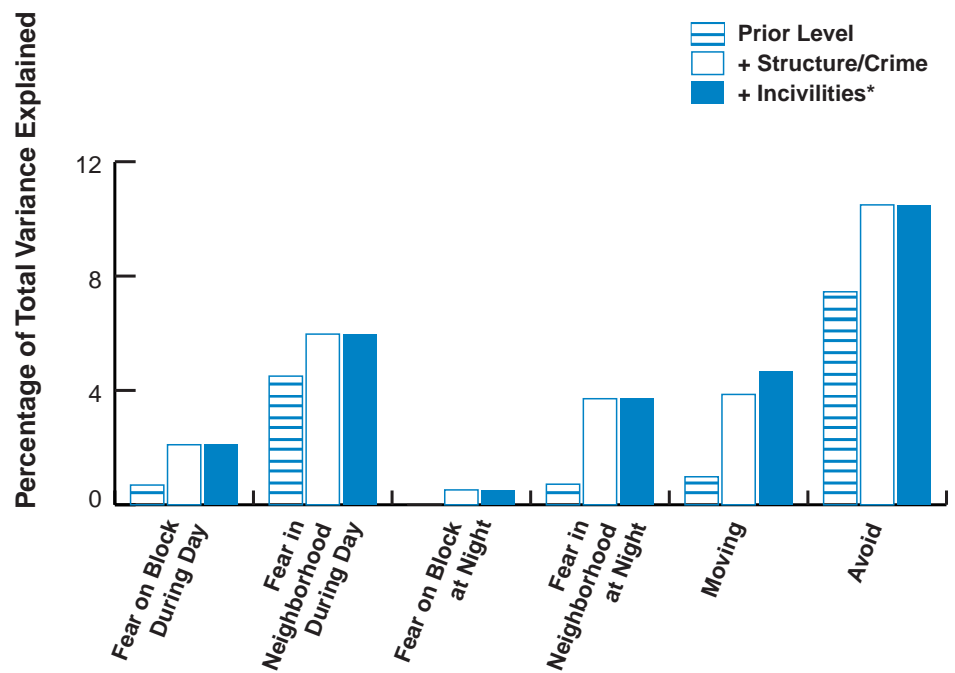
Exhibit 5 shows the contrast in neighborhood-level results from three sets of models.²¹ The striped bars show how much of the outcome was explained by entering the 1982 neighborhood outcome score. The white bars show how much was explained by the 1982 outcome score, 1980 neighborhood structure, and crime at the beginning of the period (1980–82). The solid bars show how much of the outcome was explained by all of the above, as well as by adding the 1981 assessed or 1982 perceived neighborhood-level incivilities.

The biggest contribution by prior neighborhood incivilities appeared for moving intentions. Adding 1982 perceived incivilities increases explained outcome variation from 3.9 percent to 4.7 percent. The only other significant impact of earlier incivilities was on nighttime fear on the block, which increased more in neighborhoods where graffiti was more prevalent in 1981.

For both neighborhood fear items, earlier neighborhood incivilities were not entered. After researchers had included earlier fear, neighborhood structure, and crime, no significant differences remained among neighborhoods for additional predictors to explain. For daytime fear on the block and dangerous places to avoid, 1981 or 1982 incivilities were entered but did not produce significant impacts.

In sum, for two out of six outcomes (moving intention and nighttime fear on the block), prior neighborhood incivilities showed statistically significant impacts, which were, in practical terms, modest.

Exhibit 5. Percentage of total variance explained by level-two predictors



* Incivilities not added to all models. See text.

For two other outcomes (daytime fear on the block and dangerous places to avoid), prior neighborhood incivilities were entered but had no significant effects. After controlling for other factors, incivilities for both neighborhood fear items did not even merit entry because only trivial between-neighborhood differences remained in the outcome.

Not shown here are strong cross-sectional connections at the *individual* level between these outcomes and perceived incivilities in 1994. Those residents who perceived more social or physical problems in their neighborhood than their neighbors did in 1994 also were more fearful, less committed, and more likely to see nearby danger. Most of the fear differences seen represented differences among neighbors, not differences among neighborhoods.

Summary

Using assessment and survey data as well as crime and census data, researchers learned that:

- Physical conditions had deteriorated significantly on the street blocks assessed in 1981 and 1994. Graffiti and abandoned houses occurred more frequently. Despite the worsening physical conditions, residents did not report that local physical or social problems in the neighborhood were significantly worse.
- Incivilities increased over time in neighborhoods where housing prices were lower and there were fewer black residents. Lower initial stability also contributed to later increases in graffiti.

B Study Design and Method

Baltimore neighborhoods served as the primary sampling unit in 1982. After excluding the downtown area, a dozen public housing communities, 39 unorganized areas that were generally small, and a half-dozen neighborhoods consisting extensively or exclusively of garden apartment complexes, researchers randomly sampled 66 of the city's 277 neighborhoods.^a

Within each neighborhood, the research team randomly selected census blocks and then random sides within each block. That block side, in essence, half of a street block, was "accepted" as a block if it met the eligibility criteria.^b If, in the course of interviewing, researchers failed to obtain the desired 25 completed interviews per neighborhood after contacting all sampled households on the eight sampled blocks, the team randomly sampled additional blocks and block sides using the same procedures. The research team drew an additional 35 blocks for this reason and sampled a total of 562 street block sides.

The team interval-sampled households from those with listed telephones, treating each of the 66 neighborhoods as a separate stratum. Eligible respondents were household heads or spouses of heads. When there was more than one eligible respondent, researchers used a random Kish selection procedure after sorting the eligibles by age.^c

The initial contact attempts were completed by telephone. Overall, although the completion rates varied considerably by neighborhood, 87.6 percent of all the interviews were completed by telephone. There were few differences between those contacted by telephone and those contacted in the field.^d The response rate was 73 percent.

The resulting sample was 66 percent female and 37 percent black; median 1981 household income was between \$20,000 and \$25,000; median education level was completion of the 12th grade.

1981 physical assessment procedures.

Separate from the selection of street blocks for interviewing purposes, researchers randomly selected 20 percent of all street blocks in each sampled neighborhood for physical assessment. Trained teams of raters completed assessments of onsite social and physical conditions on both sides of each street block. The features assessed included graffiti, abandoned houses, and other incivilities.^e Street blocks could be selected for assessment even if there were no occupied residential addresses there.

1994 sample selection. Although the Baltimore Department of Planning changed boundaries and names of some neighborhoods in its 1992 statistics, researchers opted to leave each neighborhood's boundaries unchanged to increase the comparability between current and previously collected data.^f

Because of financial constraints, the most recent study was limited to no more than 30 neighborhoods. The research team opted for stratified sampling over simple random sampling of the 30 neighborhoods from the original 66 neighborhoods. By stratifying, the researchers hoped to maximize crime changes from the early 1980s to the early 1990s. Strata were based on cross-classifying relative changes in violent and property crime during this period.

Researchers compared the 30 selected neighborhoods with the 36 nonselected neighborhoods in terms of percentage of black and percentage of owner-occupied households in 1990. On these two parameters, sampled and nonsampled neighborhoods were not statisti-

cally distinguishable by tests for differences in proportions. On the unexpected crime change parameters, since researchers oversampled increasing crime-change neighborhoods, the sampled neighborhoods scored higher than the nonsampled neighborhoods. The sampled neighborhoods also have a larger standard error, which was what researchers hoped to achieve with the stratification plan.

Block selection criteria were: 1981 incivilities assessment available, telephone numbers listed in Stewart's reverse telephone directory, telephone listings not dominated by large apartment buildings (more than six per address with different last names), and at least 12 households with telephones. In contrast to the 1982 sample, researchers took addresses from both sides of the street block rather than just one side, except in the case of neighborhood boundary blocks.

As onsite raters traveled to individual blocks, the research team discovered a small number of blocks (<5) that did not fit the sampling selection criteria, although they appeared to do so from the maps and the reverse telephone directory. These blocks were dropped and replaced with other blocks in the neighborhood meeting the same criteria as the original set.

As in 1982, telephone listings for selected blocks, three per neighborhood in 1994, were merged into a list. Duplicate telephone numbers, nonresidential telephones, and large apartment buildings (more than six telephones at an address with different last names) were eliminated. Simple random sampling was used to draw two replicate samples to reduce the chance on small blocks that residents

would be overwhelmed all at once with preapproach letters and initial contact attempts. Researchers used simple random sampling rather than the systematic sampling that was done in 1982 because it avoided some "mechanistic" outcomes of the sampling in neighborhoods with small blocks (e.g., taking every other house).

Although researchers did not treat street blocks as strata within neighborhoods, they hoped to conduct block-level analyses. To make such analyses more viable, they set minimum and maximum block quotas and instructed interviewers to obtain at least 4 and no more than 16 completed interviews per block.

The 1,279 sampled addresses within each neighborhood were transmitted to the survey team. An additional 100 numbers from 7 additional blocks, 1 in each of 7 neighborhoods, were sampled and forwarded in October 1994. It was necessary to open up additional blocks because of low response rates. Researchers obtained 704 completed interviews, for a response rate of at least 51 percent.⁹

To ensure interviews were spread over the length of a large block, sampled addresses were randomly sorted. Therefore, if interviewers worked halfway through a list of numbers on a block, they were unlikely to have worked halfway down the geographic block.

Researchers drew a random subsample of six addresses per block from the sampled addresses. Photographs were taken of those addresses, and raters used close-ended forms to rate housing conditions and territorial signage using previously developed scales.^h These data permit the team to contrast sampled and interviewed addresses with sampled but not interviewed addresses.ⁱ There appeared to be no upkeep or defensible space feature differences between interviewed and noninterviewed addresses, although territorial functioning may have been slightly

stronger at interviewed addresses, as reflected in gardening and neatness differences.^j

Respondent selection was the same in 1994 as in 1982. If there was one household head, he or she was selected. If there were multiple household heads or spouses of household heads, they were listed by decreasing age, and one was randomly sampled using a Kish procedure.

Interviewing began in early September 1994 and was completed in early November 1994. All interviews were completed by telephone. (Data were processed using a CATI system.) Characteristics of 1994 respondents appear in exhibit 6.

Notes

- a. Taylor, R.B., S. Brower, and W. Drain, *A Map of Baltimore Neighborhoods*, Baltimore, MD: Johns Hopkins University, Center for Metropolitan Planning and Research, 1979; and Goodman, A.C., and R.B. Taylor, eds., *The Baltimore Neighborhood Fact Book*, Baltimore, MD: Johns Hopkins University, Center for Metropolitan Planning and Research, 1983.
- b. Taylor, R.B., and J. Covington, "Community Structural Change and Fear of Crime," *Social Problems* 40 (1993): 374–397.
- c. Kish, L., "A Procedure for Objective Respondent Selection Within the Household," *Journal of the American Statistical Association* 44 (1949): 380–387.
- d. Taylor and Covington, "Community Structural Change and Fear of Crime," 380.
- e. For details on original data collection procedures see Taylor, R.B., W. Shumaker, and S.D. Gottfredson, "Neighborhood-Level Links Between Physical Features and Local Sentiments: Deterioration, Fear of Crime, and Confidence," *Journal of Architectural Planning and Research* 2 (1985): 261–275.

f. The research team later investigated the factors causing these boundary shifts. See Taylor, R.B., *Crime, Grime, Fear, and Decline*, New York: Westview, forthcoming: Chapter 10.

g. Many of the sampled addresses were not contacted because quotas on the block or the neighborhood already had been completed. If researchers looked just at the fraction of contacted addresses resulting in an interview, the response rate was more than 70 percent.

h. Taylor, R.B., S.D. Gottfredson, and S. Brower, "Block Crime and Fear: Local Social Ties and Territorial Functioning," *Journal of Research in Crime and Delinquency* 21 (1984): 303–331.

i. Six conditions were rated: gardening (intraclass correlation=0.92), neatness (intraclass correlation=0.74), ornamentation (intraclass correlation=0.89), real barriers between public and private property (intraclass correlation=0.97), presence of symbolic barriers between public and private properties (intraclass correlation=0.94), and overall structural condition of the housing unit (intraclass correlation=0.82). Ratings for each pictured address were averaged across the two raters. Inter-rater reliability, as shown by the above intraclass correlations, was quite high. Using a Bonferroni-adjusted alpha level of 0.008, there were no significant differences between interviewed (n ranged from 183 to 205) and noninterviewed addresses (n ranged from 196 to 242) on the amount of ornamentation ($t < 1$), presence of real barriers ($t = -1.72$, ns), structural upkeep ($t < 1$), and presence of symbolic barriers ($t = -1.98$, $p < 0.05$). There were significant differences in the amount of gardening ($t = -3.90$; $p < 0.001$) and neatness ($t = -2.74$; $p < 0.007$) with interviewed addresses scoring higher.

j. Taylor, R.B., *Human Territorial Functioning*, Cambridge, England: Cambridge University Press, 1988.

- Neighborhood status at the beginning of the period showed a powerful influence on neighborhood crime changes. Five Part I crimes, including one property crime, declined faster, or increased more slowly, in neighborhoods with higher initial house values.
- Neither residents' reports of incivilities in 1982, nor incivilities assessed in 1981, contributed consistently, independently, and substantially to changes in fear of crime in the neighborhoods between 1982 and 1994. These changes over time in outcomes, such as fear and moving intentions, were produced by earlier, more fundamental features of the neighborhood fabric.
- At the same time, results showed that those residents who view their neighborhood as more problem-ridden than their neighbors do were more fearful and less committed than their neighbors. There was a strong psychological connection for individuals between perceived problems—especially social problems—and these outcomes.
- High levels of incivilities may cause later increases in crime, but effects are not as consistent as expected.
- Earlier deterioration did not cause a neighborhood to “go downhill” faster. Incivilities made no independent impacts on changes in house value, homeownership, or educational levels. Incivilities did, however, shape later changes in poverty and vacancy rates.

Policy implications

The present results have implications for community planners, prevention specialists, and those involved in policing.

Community planners concerned with long-term neighborhood viability ought not overlook neighborhood basics. Neighborhood fabric and alterations in that fabric have strong impacts on later decline and moderate impacts on later crime changes. Direct efforts to enhance neighborhood stability, maintain house prices, and improve local economic development are needed to change crime levels.

For those concerned about reducing residents' fear and enhancing commitment to the locale, these results point toward the need for a “direct marketing” approach.²² Efforts should be made to find those individuals who are more fearful and less committed than their

neighbors and work with them. Can community policing officers effectively find those residents and business personnel whose local commitment needs the most bolstering and take steps to address those perceptions? With such strategies, what are the limits of the intervention? To what extent are these appropriate roles for community policing officers? These are some questions posed by the results of the research discussed here.

For community policing, more generally, the present results argue *against* according grime reduction or zero tolerance policies a privileged status, relative to other community policing

Exhibit 6. Household demographics of 1994 survey respondents

| Part A | Mean | Standard Deviation | Median | Minimum | Maximum |
|---------------------|------|--------------------|--------|---------|---------|
| Age | 51.6 | 16.6 | 50 | 20 | 94 |
| Length of Residence | 18.8 | 16.2 | 14 | 0 | 85 |

| Part B | | N | % | Missing/Refused |
|----------------|--|-----|------|-----------------|
| Gender | Male | 275 | 39.1 | |
| | Female | 429 | 60.1 | |
| Occupant Type | Owner | 529 | 75.1 | |
| | Renter | 175 | 24.9 | |
| Race | Black | 231 | 32.8 | 15 (2.2%) |
| | White | 425 | 60.4 | |
| | Other | 33 | 4.7 | |
| Education | <High school | 121 | 17.2 | 13 (1.8%) |
| | High school only | 226 | 32.1 | |
| | Some college | 134 | 19.0 | |
| | BA/BS only | 115 | 16.3 | |
| | Graduate degree | 95 | 13.5 | |
| Household Size | 1 | 184 | 26.1 | 2 (0.3%) |
| | 2 | 236 | 33.5 | |
| | 3 or more | 282 | 40.1 | |
| Marital Status | Married | 364 | 51.7 | |
| | Single, widowed, divorced, never married | 340 | 48.3 | |

initiatives. Although this study did not directly assess impacts of programs geared to reducing grime and disorderly street behavior, such features appear, depending on several factors, to be of weak to moderate relevance to neighborhood futures. Other community policing or problem-oriented policing tools, as well as resources devoted to traditional enforcement, should not be set aside a priori in favor of grime reduction or zero tolerance.

Neighborhood stabilization efforts that address disorder will prove most useful if carried out within a context recognizing the structural sources of neighborhood changes. Study results warn against problem-oriented policing or community oriented policing efforts that concentrate too heavily on fixing physical problems as a way to revitalize a neighborhood or reduce residents' fear. Neighborhood status and low crime are more important than "broken windows" in a neighborhood for long-term stability and low fear.

Notes

- Miethe, T., "Fear and Withdrawal from Urban Life," *Annals of the American Academy of Political and Social Sciences* 539 (1995): 14–27; and Ferraro, K.F., *Fear of Crime: Interpreting Victimization Risk*, Albany, NY: State University of New York Press, 1994.
- Hope, T., and M. Hough, "Area Crime and Incivility: A Profile from the British Crime Survey," in *Communities and Crime Reduction*, ed. T. Hope and M. Shaw, London: Her Majesty's Stationery Office, 1988: 30–47.
- This was a negative direct impact in a path analysis. See Ferraro, K.F., *Fear of Crime: Interpreting Victimization Risk*, p. 62.
- The total impact combined the direct and indirect impacts in a path analysis model using structural equation modeling. See Taylor, R.B., "Neighborhood Responses to Disorder and Local Attachments: The Systemic Model of Attachment and Neighborhood Use Value," *Sociological Forum* 11 (1996): 41–74.
- Miethe, "Fear and Withdrawal from Urban Life," 21.
- Taylor, R.B., *Crime, Grime, Fear, and Decline*, New York: Westview, forthcoming.
- Taylor, R.B., and T. Webb, "Changes in Owner Occupancy and Vacancy Levels in Baltimore Census Tracts," *Census Note 4*, Baltimore, MD: Johns Hopkins University, Center for Metropolitan Planning and Research, 1982.
- Assessed incivility indicators were collected in 1981; perceived incivility indicators were gathered in 1982. The incivility indicator shown is a principal components score based largely on physical incivilities but with some social incivilities included as well. For details on construction of the measure, see Taylor, R.B., W. Shumaker, and S.D. Gottfredson, "Neighborhood-Level Links Between Physical Features and Local Sentiments: Deterioration, Fear of Crime, and Confidence," *Journal of Architectural Planning and Research* 2 (1985): 261–275.
- Siegel, S., *Nonparametric Statistics for the Behavioral Sciences*, New York: McGraw-Hill, 1956: 223. It was necessary to use nonparametric correlation coefficients because the crime change outcomes were markedly non-normal. In power analysis, $r=0.30$ is considered a medium size effect, and $r=0.10$ is considered a small effect. Given the 91-percent efficiency of the Kendall rank correlation coefficient compared to Pearson's r , assuming 60 cases rather than 66 given the partialling already carried out, and applying that to the results of power analysis for Pearson's r , this one-tailed test with an alpha of 0.10 has a statistical power of approximately 0.79 for detecting a medium size effect, which is quite close to Cohen's suggested benchmark of 80-percent power. Its power to detect a small effect size is unacceptably weak.
- Taylor, R.B., "The Incivilities Thesis: Theory, Measurement, and Policy," in *Measuring What Matters*, ed. Robert Langworthy, Washington, DC: U.S. Department of Justice, National Institute of Justice, forthcoming. Also, see Taylor, R.B., *Crime, Grime, Fear, and Decline*, chapter 2.
- The research team carried out a principal components analysis of the perceived problems, extracting two eigenvalues explaining 60 percent of the total variance. After rotation of the two components to a varimax solution, one component picks up just physical problems: vacant houses, vacant lots, people who do not keep their property up, and litter. A second component focuses on social problems: insults, rowdy teens, noise, bad elements moving in, and people fighting. Vandalism had moderate loadings on both components. Putting vandalism together with the other physical problems, researchers created an index with a reliability (alpha) of 0.80. The reliability of the social problems was 0.86.
- Taylor, R.B., and E. Kurtz, "Reactions to Crime and Specific Incivilities in Five Cities," paper presented at the annual meeting of the American Society of Criminology, San Diego, CA, November 1997.
- It is necessary to use the $\alpha=0.10$ to generate sufficient statistical power. The power for these tests is the same for the prior tests.
- Although an alpha level of 0.10 is used in exhibits 2 and 3, one could argue it should be lower, given the multiple correlated outcomes. The Bonferroni adjusted alpha level would be 0.014. To use that level, however, reduces statistical power markedly.
- These independent impacts of incivilities control for earlier crime levels because the outcome represents changes independent of earlier crime levels.
- As with the crime changes discussed above, these are "unexpected" structural changes residualized in the same way.
- Principal components analysis with varimax rotation was carried out, and three dimensions, each with an eigenvalue >1.0 , were rotated. For the first two components, the variables mentioned loaded better than 0.80 on the component. For the last component mentioned, status change, house value loaded 0.76 and education change loaded 0.67.
- Logan, J.R., and H. Molotch, *Urban Fortunes*, Berkeley, CA: University of California Press, 1987; Gottdiener, M., *The New Urban Sociology*, New York: McGraw-Hill, 1994; and Gottdiener, M., and C. Pickvance, "Introduction," in *Urban Life in Transition*, eds. M. Gottdiener and C. Pickvance, Newbury Park, CA: SAGE Publications, 1991: 1–11.
- For status see Logan, J.R., and H. Molotch, *Urban Fortunes*; for race see McDougall, H.A., *Black Baltimore: A New Theory of Community*, Philadelphia, PA: Temple University Press, 1993; for stability see Bursik, R.J., "Social

Disorganization and Theories of Crime and Delinquency,” *Criminology* 26 (1988): 519–551; Henig, J.R., “Neighborhood Response to Gentrification: Conditions of Mobilization,” *Urban Affairs Quarterly* 17 (1982): 343–358; and Ahlbrandt, R., and J. Cunningham, *A New Public Policy for Neighborhood Preservation*, New York: Praeger, 1979.

20. Before entering predictors, we investigated how much of each outcome was due to differences between neighbors and error, and how much was due to “true” differences among neighborhoods. We learned that all of the

outcomes contained significant differences among neighborhoods (all $p < 0.01$). The significant between-neighborhood variation ranged from 15.1 percent to 3.7 percent of the total variance (mean=7.2 percent, median=6.2 percent).

21. Results here do not show the individual-level impacts. For more details, see Taylor, *Crime, Grime, Fear, and Decline*, forthcoming. There was a very strong cross-sectional connection between perceived incivilities in 1994 and the outcomes examined here. In other words, those residents who perceived more incivilities in 1994 than their neighbors also were more

fearful; were more likely to nominate dangerous places to avoid; and were more likely to intend to move. Those connections do not address the ecological, longitudinal decline and disorder thesis.

22. Policy implications on reactions to crime such as fear and commitment would be stronger if we were able to know which of the residents interviewed in 1982 stayed and which left. But this information is not available. It is plausible that policy implications about this class of outcomes, the psychological reactions, would be different if such information were available.

Ralph B. Taylor, Ph.D., is Professor, Department of Criminal Justice, Temple University. This research was supported by NIJ grants 80-IJ-CX-0077 (Stephen Gottfredson, Dean, College of Humanities and Sciences, Virginia Commonwealth University, coprincipal investigator), 93-IJ-CX-0022 (Sidney Brower, Associate Professor, Program in Urban Studies and Planning, University of Maryland, College Park, coprincipal investigator), and 94-IJ-CX-0018. While writing and revising this manuscript, the author received support from a NIJ fellowship (96-IJ-CX-0067) and a

summer research fellowship from Temple University.

The author would like to thank the Baltimore Police Department, the Mayor’s Coordinating Council on Criminal Justice, and the 1982 and 1994 study participants. The author also thanks Sande Ezrine, Diane Berkom, Pat Smith, Michael Clifton, Ruth Eichmiller, Dave Linne, Mary Poulin, Mary Blazofsky, Jianming Ding, Sidney Brower, and Steve Pardue for their research assistance. The author is indebted to Dr. Richard Titus, who served as grant monitor.

Findings and conclusions of the research reported here are those of the author and do not necessarily reflect the official position or policies of the U.S. Department of Justice or Temple University.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, the Bureau of Justice Statistics, the Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

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