The Incivilities Thesis: Theory, Measurement, and Policy

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This paper traces the theoretical evolution over the last two decades of a close-knit family of theories linking incivilities to reactions to crime, crime changes, and neighborhood changes. Incivility indicators are social and physical conditions in a neighborhood that are viewed as troublesome and potentially threatening by its residents and users of its public spaces. More recent as compared to earlier theorists in this area have shifted from a psychological to an ecological perspective on responsible processes; expanded the scope of relevant outcomes; separated the causes of crime from the causes of incivilities, justifying a separate policy and theoretical focus on the latter; and switched from a cross-sectional to a longitudinal focus. Several measurement questions are raised by the thesis and its variations:

- The thesis proposes that incivilities represent a construct separate from other related features of the individual, street block, and neighborhood. But researchers have not yet examined the discriminant validity of incivilities indicators.

- Later versions of the thesis emphasize ecological processes. Indicators at this level are available from different sources, and we do not know yet whether those indicators display multimethod convergent validity.

- Later versions of the thesis focus on community change. We do not know if incivility indicators capturing change display convergent validity.

This paper analyzes data from different sources (Atlanta, Baltimore, Chicago, Minneapolis-St. Paul, and Seattle) to address these issues. Early, individual-centered versions of the thesis receive the strongest empirical support and rely on indicators with satisfactory measurement processes. Shifting to later versions of the thesis and focusing on community dynamics and change, empirical support weakens and measurement issues prove more troubling. These concerns deserve attention from practitioners and policymakers

charged with framing or evaluating order maintenance policing initiatives.

Controversy calls for reexamination

We witnessed during the early months of 1997, in the wake of falling violent crime rates in several large cities—with New York City's being the most noted—articles in the popular media debating the contributions made by police initiatives toward reducing grime and disorderly street activity. Jerry Skolnick (Skolnick, 1997) and George Kelling (Kelling, 1997) argued that these police efforts played a pivotal role; Richard Moran said we just could not know (Moran, 1997). At about the same time, in Baltimore, city council leaders harshly criticized Chief of Police Frazier for failing to mount policies similar to New York's zero tolerance for disorder.

At the center of these controversies are questions about the relative contributions of order maintenance policing—one component of community policing—versus traditional policing practices, to reductions in serious crime. Community policing and problem-oriented policing include order maintenance as well as numerous other strategies geared to address problems in a community that may precede serious crime (Goldstein 1990, 1993; Greene and Mastrofski, 1988). Receiving increasing attention during the past 20 years in such police strategies have been social and physical incivilities, also called signs of disorder, or simply disorder. These incivilities include public order problems such as groups of rowdy teens, public drunkenness, public drug use or sales, people fighting, street hassles, prostitution, aggressive panhandling, vacant or burned out buildings, shuttered stores, unsavory businesses such as adult bookstores, abandoned and trash-filled lots, graffiti, litter, and abandoned cars. Community and problem-oriented policing initiatives focus on far more than just these problems; nevertheless, these concerns have received

considerable community and problem-oriented polic-
ing attention (Buerger, 1994; Greene and Taylor,
1988; Greene and McLaughlin, 1993; Pate, 1986 and
1989).

Given current public controversies about whether in-
civility-reduction community policing can help reduce
serious crime, an examination of the proposed theo-
retical rationales underlying these initiatives seems
overdue. What have theorists in this area told us about
how these incivilities cause crime, inspire fear in resi-
dents, and contribute to neighborhood decline? This
paper undertakes such a review, examining a family of
theories describing these processes. I will suggest that
theorizing in the area has evolved in a number of dis-
cernible directions.[1] The theorizing and its evolution
raise three distinct, but related, measurement ques-
tions, not as yet satisfactorily answered by the empiri-
cal research. First, is the incivility construct separable
from related constructs? Do its indicators demonstrate
discriminant validity (Campbell and Fiske, 1959)?
Second, later versions of the thesis focus on commu-
nity dynamics, giving researchers a choice of how to
capture disorder. They can rely on aggregated resident
perceptions or assessments of onsite conditions. Do
indicators from different methods display convergent
validity (Campbell and Fiske, 1959)? Finally, when
we examine disorder change over time, to which the
later versions of the theory direct our attention, do the
change indicators demonstrate convergent validity?

Organization

Beginning in the mid-1970s, five distinct variants of
the incivilities thesis emerged: James Q. Wilson,
Garofalo, and Laub; Hunter; Wilson and Kelling;
Lewis and Salem; and Skogan. I describe the central
processes highlighted by each theory. Placing these
versions of the incivilities thesis in a temporal order-
ing reveals several clear shifts in emphasis and scope
over the period, and I describe these changes. I then
briefly summarize empirical support to date for some
of the key hypotheses in each version of the theory.
Following that, I turn to a detailed consideration of
the three measurement questions raised above, using
data from five different cities. I close with a discus-
sion of the policy, practice, and theory implications of
these measurement results.

Variations on a theme

In this section I summarize five different versions of
the incivilities thesis. After reviewing the processes of
central interest to each, I describe in more detail how
thinking has shifted on this topic from earlier to later
versions of the thesis.

Wilson, 1975, and Garofalo and Laub, 1978. In
Thinking About Crime, Wilson takes up the question
of why urban residents are so fearful for their safety
(Wilson, 1975). He suggests it is not only crimes that
they find troubling. The daily hassles they are con-
fronted with on the street—street people, panhandlers,
rowdy youths, or "hey honey" hassles—and the dete-
riorated conditions that surround them—trash-strewn
alleys and vacant lots, graffiti, and deteriorated or
abandoned housing—inspire concern. Wilson does
not provide extensive detail on the interpretations
residents made when confronting minor disorderly
conditions, except to point out the fear they inspired
among residents and users of urban spaces.

In a closely related vein, Garofalo and Laub suggest
that fear of crime reflects a more general "urban un-
ease" rather than a specific concern about crimes that
have occurred or may occur (Garofalo and Laub,
1978). This led to their dictum that fear of crime was
more than "fear" of "crime." Again, the key idea is
that urban conditions, not just crime, are troublesome
and inspire residents' concern for safety.

These theories emerged in the wake of the first
analyses of the National Crime Victimization Survey
showing that residents' fear was far more widespread
than their victimization (Cook and Skogan, 1984;
DuBow et al., 1979), and represented attempts to ex-
plain this discrepancy. For both sets of authors, the
outcome of interest is fear of crime, an affective state
reflecting safety-related concerns about possible street
victimization (Ferraro, 1994). It is distinct from per-
ceptions of risk, a more cognitive assessment of the
likelihood of victimization (LaGrange and Ferraro,
1989). It is also separate from worry about property
crimes while away from home, or worry about the
potential victimization of family members (DuBow
et al., 1979; Taylor and Hale, 1986).

In both of these theories focusing on fear, there is no
explicit specification of the relationship between the
conditions inspiring concern and local crime, except

to note that the conditions are far more prevalent than crime incidents. In short, they do not try to either connect or disconnect the causes of incivilities from the causes of crime.

One further similarity is the focus on psychological rather than community dynamics. Although community differences are implicitly acknowledged, the key focus is on why so many more people are afraid than would be expected given the prevalence of victimization.[2]

Hunter, 1978. Al Hunter presented a paper entitled "Symbols of Incivility" at the 1978 American Society of Criminology (ASC) conference.[3] Like the Wilson, Garofalo, and Laub version, the outcome in question is still fear of crime, and it is assumed that incivilities are far more prevalent than crime or victimization.[4] Exhibit 1 depicts Hunter's causal model of the thesis.

Hunter's framework elaborates on earlier statements in four major ways. Perhaps most importantly, he describes in some detail how residents may interpret signs of incivility; he considers what residents read into these conditions. He proposes that local residents attribute disorderly actions and deteriorating physical conditions to two complementary sources. Internally, the perceivers attribute conditions to local residents and organizations unable to manage or preserve the neighborhood. Beyond the neighborhood, perceivers conclude that the external agencies of control, which

bear some responsibility for preserving order, are unwilling or incapable of doing so in that locale.

Therefore, because matters are out of hand in the neighborhood and local actors and external agencies cannot or will not intercede, residents feel personally at risk of victimization. This description is important because it suggests that the causal attributions residents make—their conclusions on why the incivilities occur and persist—shape their fear. It is not just the presence of the signs of incivilities that is threatening to them, it is also the meaning attached to them. Those origins, he suggests, are viewed as both endogenous and exogenous to the community.

Hunter's second specification is to nonrecursively link crime and signs of incivility. Each causes the other; one does not precede the other. This view suggests that extensive incivilities will be found in high-crime neighborhoods, and high crime will be found in neighborhoods with extensive deterioration.

Third, Hunter connects incivilities and crime again through a common underlying exogenous cause: neighborhood disorder. It is not clear, however, if by disorder he specifically means social disorganization—the inability of a community to regulate itself and work toward common goals (Bursik, 1988)—or the community characteristics more generally associated with high offense or high offender rates (Baldwin and Bottoms, 1976; Harries, 1980).

Exhibit 1. Hunter's Incivilities Thesis
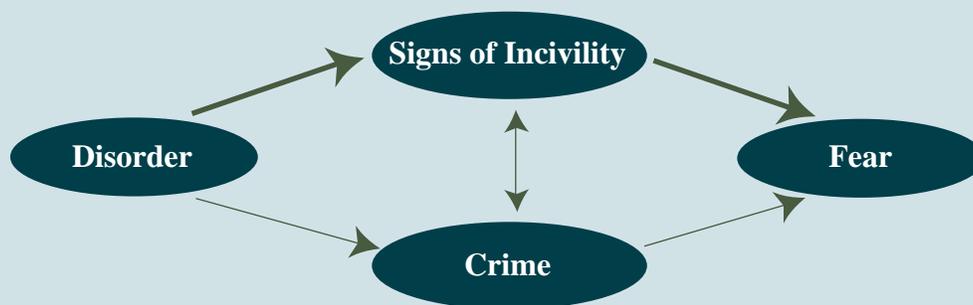
Note: Heavy arrows indicate most common pathway. Reproduced from Hunter, A., "Symbols of Incivility," paper presented at the annual meeting of the American Society of Criminology, Dallas, TX, November 1978.

Finally, Hunter's model moves us from the individual-level processes described by Wilson, Garofalo, and Laub to a contextual model (Boyd and Iversen, 1979). The earlier focus was on psychological processes. Here, these processes are elaborated, but with the inclusion of neighborhood crime rates and mutual impacts of crime and incivilities, these psychological processes are placed within varying community contexts.

Hunter's elaboration of the thesis leads to specific empirical predictions: Communities with higher crime rates should have more extensive incivilities; high community crime rates and extensive incivilities share common structural origins, such as instability, low status, and more extensive minority populations. But even after putting these common origins aside, crime and incivilities will still feed one another. Controlling for structural origins, crime should have an independent impact on incivilities and incivilities should have an independent impact on crime.

Wilson and Kelling, 1982. In their first *Atlantic Monthly* piece, Wilson and Kelling elaborate on the thesis in three important ways (Wilson and Kelling, 1982). This piece has proved enormously influential on researchers examining fear of crime (Ferraro, 1994) and on policy analysts in community policing (Greene and Taylor, 1988).

First, Wilson and Kelling inject a temporal perspective, describing a specific, multistep process whereby persistent physical or social incivilities lead to higher neighborhood crime rates. Their causal model of the thesis appears in exhibit 2.

The proposed sequence is as follows. A sign of incivility, such as a broken window, is not important per se. Windows are always getting broken, homes are always deteriorating, and some homes are always being abandoned. More important is how long the broken window remains unrepaired, the house remains in bad condition, or the building stays unoccupied. If the condition is not repaired in a relatively short time, then residents will infer that resident-based informal control on the street is weak and other residents do not care about what is happening in their neighborhood; they will surmise that the neighborhood is socially disorganized.[5] Making such a judgment, residents become increasingly reluctant to use public spaces or to intervene in disorderly situations. As the withdrawal becomes more general and resi-

dents' informal control weakens, they become increasingly concerned about their safety. In the language of routine activity theory, natural guardians and place managers grow more reluctant to act (Eck, 1995). In Jane Jacobs' terms, there are fewer eyes on the street (Jacobs, 1961).

At the same time, local "lightweight" offenders, such as teens who spray paint buildings or taunt passersby, will become emboldened, causing further resident apprehension and withdrawal. For local delinquent youths and at-risk children, the persistent physical incivilities symbolize opportunities for delinquency (Cloward and Ohlin, 1960; Taylor and Covington, 1993).

After the above conditions have been in place for some time and local resident-based control has weakened markedly, motivated "heavy duty" offenders from outside the neighborhood will become aware of the conditions, the opportunities to victimize others, and the lower risks of detection or apprehension associated with offending in that locale. If offender motivation is high enough and enough targets are available, they will move into the neighborhood to commit street crimes.

In short, the authors temporally sequence the connections between physical deterioration, increased delinquency, decreased resident-based control, and increased serious crime.[6] Time shapes not only the flow of consequences, but also the meaning attributed to the signs of incivility by residents and other users of local spaces.

Kelling and Coles (1996) update the thesis and provide a broader context. They further develop the rationale for order maintenance policing structured around social incivilities, but they also point out the challenges when police and the community work closely together to try to reduce disorder. In addition, they argue that disorder has increased in the past few decades in part because police have retreated from order maintenance, concentrating on serious crime. This retreat has coincided with shifts in civil law, placing limits on police and other agents of public control, further facilitating burgeoning disorder.

As is apparent from the above suggested dynamics, a second major difference in Wilson and Kelling's thesis compared to prior incarnations, is the expanded range of outcomes. Individual and group behaviors

and ecological features of the setting are now of interest. The authors move beyond fear per se, to also include resident-based informal social control on the street, the vitality of street life itself, and, perhaps most importantly, increasing neighborhood crime rates. Their inclusion of neighborhood crime rates as the ultimate outcome of interest justifies community policing initiatives designed to reduce social incivilities or to facilitate service delivery from other public agencies addressing physical incivilities.
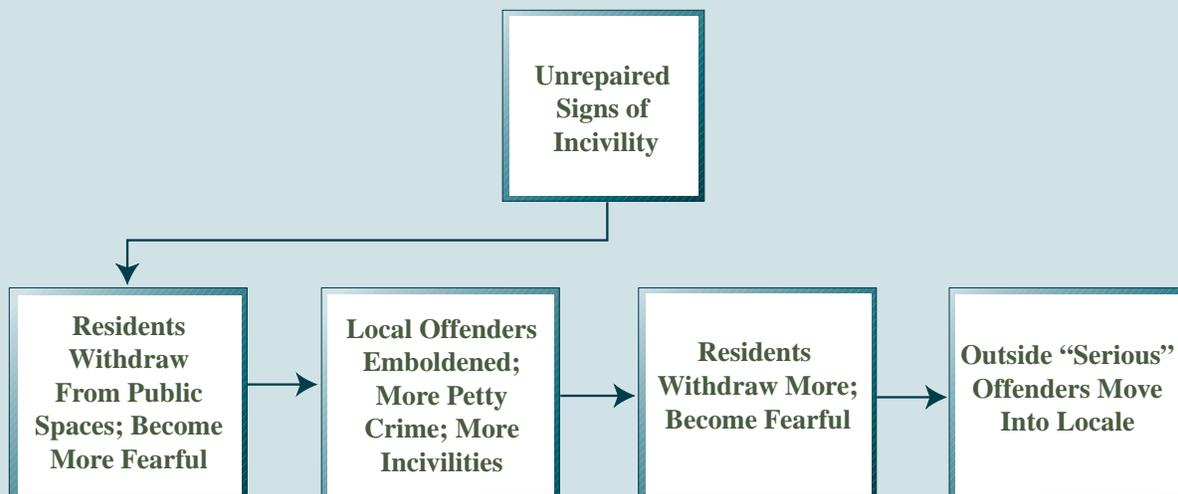
Given their concern for community policing, the authors also consider where to deploy these officers. Their stronger attention to local context represents an important third difference from prior treatments. They roughly separate communities into three groups: those with assured stability, those that are deteriorated and beyond hope, and those that have been stable but are currently threatened with an uncertain future. They suggest that this last group of teetering neighborhoods is where signs of incivility will have the strongest impacts on behavioral, crime, and emotional outcomes. Therefore, it is in these sites that remediation efforts, including community policing, should be concentrated.

The above focus brings us to the final contribution of the current model. Wilson and Kelling discuss the specific roles police officers can play in helping communities address disorderly conditions. In essence, the job of community police or problem-oriented police is to learn what conditions are troubling residents and merchants in these teetering neighborhoods and then help them address these concerns. (Kelling and Coles [1996] develop in detail what actions are relevant and address some of the issues surrounding officer-community cooperation.) The officers might be moving rowdy groups out of an area, notifying agencies so that landlords are cited for needed repairs, or arranging to get junked cars towed or trash-filled lots cleaned. These problem-solving roles for community police officers have received attention in different demonstrations and evaluations (e.g., Greene and McLaughlin, 1993; Spelman and Eck, 1987).

Lewis and Salem, 1986. Dan Lewis and Greta Salem returned to a sole focus on fear of crime and a cross-sectional, as opposed to longitudinal, perspective in their 1986 volume *Fear of Crime* (Lewis and Maxfield, 1980; Lewis and Salem, 1986). They argue that both the extent of signs of incivility and crime levels contribute synergistically to fear. More specifically, they suggest that if crime and signs of incivility are both at high levels, residents will exhibit the highest fear levels. If crime is high but signs of incivility are not, or if signs of incivility are high but crime is not, residents will be less fearful. In analysis of variance terminology, it is the interaction effect of the two that influence fear, not the main effects of either. The authors support their argument using data from a

Exhibit 2. Wilson and Kelling's (1982) Incivilities Thesis

Unrepaired Signs of Incivility

Residents Withdraw From Public Spaces; Become More Fearful → Local Offenders Emboldened; More Petty Crime; More Incivilities → Residents Withdraw More; Become Fearful → Outside "Serious" Offenders Move Into Locale

three-city, multineighborhood survey conducted as part of the 1975–80 Northwestern University Reactions to Crime project.

This model is of interest because it continues the trend of separating the causes of crime and incivility. By implication, if one can be high and the other low, each has causes that are somewhat unique from the causes of the other. The origins of each are distinct, strengthening our rationale for looking at incivilities as problems separate from serious crimes.

Skogan, 1990. Skogan provides an extended theoretical and empirical investigation of how incivilities influence crime and fear at the neighborhood level (Skogan, 1986, 1990).

Skogan's variant of the incivilities thesis (1986, 1990) focuses on neighborhood change as the ultimate outcome of interest. Labeling signs of incivility as disorder (1990: 2), he argues that "disorder plays an important role in sparking urban decline." He defines disorder by saying: "[It] reflects the inability of communities to mobilize resources to deal with urban woes. The distribution of disorder thus mirrors the larger pattern of structured inequality that makes inner-city neighborhoods vulnerable to all manner of threats to the health and safety of their residents" (p. 173). In short, as with Hunter's model, there are two causes of disorder: social disorganization within the community itself and inequality resulting from the sorting of neighborhoods in the urban fabric. This interpretation of incivilities again ties us to the extensive social disorganization literature and, simultaneously, to the extensive literature on urban inequality (Wilson, 1996).

Incivilities spur neighborhood decline because they influence a range of psychological, social psychological, and behavioral outcomes such as, respectively, fear, informal social control, and offender in-migration and resident out-migration. In short, according to Skogan, physical and social incivilities engender a range of consequences that ultimately result in neighborhood decline.

Skogan is clear about the processes mediating the connection between incivilities and neighborhood decline. First, echoing Wilson and Kelling, he suggests that incivilities undermine informal social control (Skogan, 1990). Second, echoing several of the prior theorists, he proposes that disorder "sparks concern

about neighborhood safety, and perhaps even causes crime itself. This further undermines community morale" (Skogan, 1990: 65). Third, incivilities "undermine the stability of the housing market" (Skogan, 1990: 65). This latter economic impact means that a neighborhood's housing prices would decrease relative to other urban neighborhoods. Impacts of neighborhood crime on housing values have been well established in the academic literature (Little, 1976; Taylor, 1995a); separate impacts of incivilities on house prices, net of other factors, have not.

Skogan states clearly that signs of incivility play an important part in this process. "Disorder can play an important, *independent* role in stimulating this kind of urban decline" (Skogan, 1990: 12, emphasis added). Current theorists (Kelling and Coles, 1996: 25) agree that Skogan has proven that "disorder, both directly and as a precursor to crime, played an important role in neighborhood crime."

Skogan's thesis represents an evolution beyond Wilson and Kelling's model in three respects. First, he has moved to an explicit focus on neighborhood change, in the form of decline, as the ultimate outcome of interest. This outcome was included but not emphasized in Wilson and Kelling's treatment; now it has been promoted as the outcome of most interest to residents and policymakers alike. High fear and weak informal social control by residents are important not in their own right, but rather because they result in later decline. With Skogan's model, we have completed the evolution from a focus solely on psychological outcomes represented by Wilson, Garofalo, and Laub, to a focus solely on ecological outcomes, leading Skogan to test his thesis using only neighborhood-level information.

Since the outcome in Skogan's model is explicitly neighborhood change, this leads him to expand the scope of contributing and mediating dynamics. The first versions of the incivilities thesis focused on fear; subsequent versions expanded to include weak informal social control and withdrawal from street life. Skogan further augments the relevant process dynamics to consider intent to move, neighborhood satisfaction (Skogan, 1990: 88), community solidarity (Skogan, 1990: 70), and involvement in privatistic crime prevention. Other authors (e.g., Kirschenbaum, 1983: abstract) have argued that perceptions of neighborhood deterioration act "as a major catalyst in provoking a move," or contribute independently to

neighborhood decline (Fisher, 1991). The literature, however, fails to consistently link crime or crime-related neighborhood conditions with mobility (Taylor, 1995a).

Third, Skogan explicitly acknowledges in several models that structural conditions give rise to signs of incivility. He reports that poverty, instability, and racial composition all contribute equally to signs of incivility and crime in the form of robbery victimization rates (Skogan, 1990: 75). In an earlier statement of the thesis, he suggests that "random shocks" arising from factors outside the neighborhood itself also can influence the expansion of incivilities (Skogan, 1986). In his 1990 analysis, signs of incivility almost totally mediate the effects of neighborhood structure on victimization.[7] His is the first model to begin examining links between incivilities and community structure. His suggested causal dynamics appear in exhibit 3.

Evolution of the perspective

The main variants of the incivilities thesis reviewed above reveal numerous differences. In four areas, these differences reflect a clear evolution of the perspective applied.

Expansion of outcomes. The models progress from a sole focus on fear of crime (Wilson, Garofalo, and Laub; Hunter; Lewis and Salem) to concern about neighborhood street life and crime (Wilson and Kelling) to neighborhood structural decline (Skogan). The enlargement of outcomes increases the importance of the thesis; it is relevant not only to reactions

to crime but also to the stability and viability of urban communities. The broadening scope also provides rationales for community policing initiatives focusing on order maintenance. It highlights the short-term (lower crime, residents taking back the streets) and long-term (neighborhood stability) benefits of such initiatives.

Shifting levels of analysis. As theorists have augmented outcomes, they also have shifted upward in their levels of analysis. Early statements of the thesis clearly present a psychological perspective. Garofalo's and Laub's notion that fear reflects "urban unease" expects that perceptions of local order-related problems will inspire residents' fear. The dynamics in question are internal to individuals. Hunter's and Lewis and Salem's models are contextual, pointing out impacts of community as well as psychological factors on psychological outcomes such as fear. Wilson and Kelling's discussion includes both street block and neighborhood outcomes, but the most central dynamics appear to be operating at the street block level (Taylor, 1997b). Skogan moves us explicitly to the neighborhood level, using neighborhood predictors and neighborhood outcomes. Reactions to crime, such as fear, and other person-environment transactions, such as neighborhood satisfaction or intention to move, are modeled at the neighborhood level because they contribute to long-term neighborhood decline. We are now interested solely in ecological dynamics.

When examining measurement issues, two concerns surface related to this shift in interest. The migration of interest upward presumes that the reactions to

Exhibit 3. Skogan's Decline and Disorder Thesis
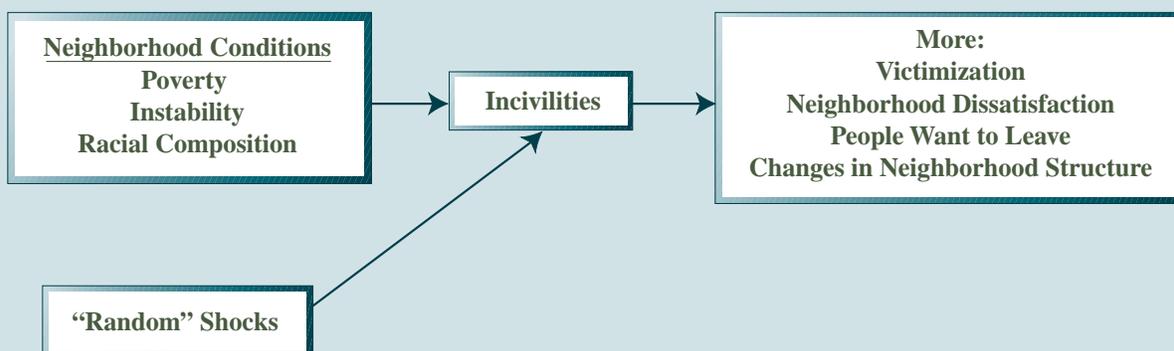
crime and person-environment transactions seen as part of the neighborhood dynamics have substantial ecological components; that is, that sizable between-neighborhood variance exists in these variables relative to the pooled within-neighborhood variance. In addition, the migration suggests researchers might want to use ecologically based rather than psychologically based incivilities indicators. These measurement issues receive consideration below.

Shifting temporal perspective. Models clearly evolve in their temporal perspective. Theorists start out discussing why some people are more afraid than others at one point in time (Wilson; Garofalo and Laub; Hunter) and end by focusing on changes in fear, informal social control, street life, neighborhood crime rates, and neighborhood structure (Wilson and Kelling; Skogan). Wilson and Kelling provide the most detailed temporal sequencing here, describing specific series of events linking incivilities, fear, resident withdrawal, petty crime, and, finally, increased serious crime. Again, as with the change in levels of concern, there are measurement implications. One would expect, given the shift from cross-sectional to longitudinal processes, that indicators would change correspondingly and that researchers would begin to look at changes in fear, neighborhood structure, and incivilities, for example.

Progressive unlinking of crime and incivilities. The early models (Wilson; Garofalo and Laub; Hunter) suggested a common origin for crime and incivilities. Incivilities were presumed to vary from neighborhood to neighborhood, roughly paralleling the crime differences from neighborhood to neighborhood, but taking place at higher rates than crime and thus influencing more residents. Hunter's model provides incivilities and crime with a common exogenous variable. Skogan, by contrast, explicitly anticipates that incivilities will make independent contributions to neighborhood change, net of neighborhood structure and, presumably neighborhood crime, although indicators for the latter were not available in his data set.[8] Lewis and Salem anticipate that crime and incivilities can vary independently, leading to situations where one is high and the other not. The modeling implication is that neighborhood crime rates and neighborhood incivilities can be separated in a cross-sectional model and that changes in each can be separated in a longitudinal model.

Empirical support for hypotheses

Before turning to a detailed discussion of measurement issues, I provide a brief summary of what we know about some of the key hypotheses generated by each version of the incivilities thesis. I organize the evidence by theory version. I do not consider the extensive evaluation research on community policing programs based on some version of this thesis. (For recent reviews of this work, see Kelling and Coles, 1996; Sherman, 1997; Eck, 1997.) That evaluation work often fails to provide sufficient detail in the timing of measurement and the scope of indicators to address specific hypotheses mounted in these models.

Wilson, Garofalo, and Laub. The key idea that those perceiving more neighborhood problems are more concerned for their safety has been repeatedly supported. Initial analyses of individual-level outcomes confounding between- and within-neighborhood predictor variance (e.g., Lewis and Maxfield, 1980) have been confirmed by later studies partitioning predictor variance (Covington and Taylor, 1991), correctly modeling within-neighborhood correlated errors and controlling for direct and indirect victimization experiences (Taylor, 1997a). Rountree and Land (1996a, 1996b) found effects of community-level perceived incivilities on perceived risk and fear of crime in hierarchical linear models, but did not include perceived incivilities as individual-level predictors, in accord with the thesis discussed here.

In short, we have strong evidence that those who are more afraid than their neighbors see more local problems than their neighbors. At this time, it is not clear if social or physical disorders are more troubling to residents.

Hunter. Hunter's key idea is that both incivilities and local crime rates may contribute independently to outcomes like fear. One study using assessed indicators could not test this thesis because incivilities and crime were so closely linked (Taylor, 1996b). It is the case that, controlling for neighborhood crime rates, individuals who perceive more local problems than their neighbors are more fearful than their neighbors (Taylor, 1997a). Rountree and Land find that average perceived incivilities in a neighborhood and the neighborhood burglary rate contribute independently

to burglary-specific fear of crime (Rountree and Land, 1996a) and to perceived crime risk (Rountree and Land, 1996b). They do not test the contributions of perceived incivilities at the individual level to fear of crime or perceived risk, controlling for the local victimization rate.

The work so far suggests that, net of local crime rates, both individual and community differences in perceived incivilities contribute to reactions to crime such as fear and increased perceived risk. We do not yet have studies simultaneously examining impacts of individual and community perceived incivilities while controlling for local crime or victimization rates and individual victimizations.

Wilson and Kelling. Numerous studies claim to find support for portions of the Wilson and Kelling thesis, varying in the degree to which they apply needed statistical controls.

Although we do not have longitudinal confirmation, we do have cross-sectional confirmation that perceived incivilities predict perceived crime at the street block level, controlling for block composition and layout (Perkins et al., 1992).[9] Wilson and Kelling anticipate that over time more incivilities on a block will lead to more crime problems. This street block analysis does not confirm that tenet in the longitudinal manner in which it was framed, but it does provide cross-sectional confirmation using crime perceptions.

Returning in the 1990s to local leaders in neighborhoods where residents had been interviewed in the late 1970s and early 1980s, Skogan and Lurigio (1992) find that average perceived social and physical disorder reported 7–12 years previously strongly predicts severity of current drug problems in the neighborhood. The authors conclude that these results "point strongly in the direction of the 'broken windows' hypothesis: that levels of noncriminal decay and social disruption can spawn more serious problems in the future by undermining the capacity of communities to respond to crime . . . " (p. 525). This conclusion, however, may be premature. The authors did not control for the earlier level of perceived drug problems in the community; thus, their outcome does not reflect community change. In addition, their data source, with a small number of communities, does not allow researchers to control for community structure.

Another longitudinal hypothesis receiving some cross-sectional support is Wilson and Kelling's suggestion that incivilities have the strongest impact on teetering neighborhoods. In 66 neighborhoods studied in Baltimore, we found impacts of assessed social and physical incivilities on fear of crime were most evident in moderate-stability neighborhoods (Taylor et al., 1985). This analysis, however, failed to simultaneously control for socioeconomic status and racial composition. In addition, it appears that the impacts of incivilities on fear are extremely weak in the most deteriorated neighborhoods (Taylor and Shumaker, 1990).

Empirical research on interactions between incivilities and other predictors appears to have moved beyond the theoretical groundwork already laid out. For example, Rountree and Land (1996b) found that average neighborhood perceived incivilities shape the impact of race and unoccupied homes on individual risk perception. The relevant conceptual underpinnings for these moderating effects are not clear. More clear is the theoretical basis for interactions between perceived disorder at the individual level and social support on fear of crime. Ross and Jang (1996) find that among those with more local ties, the impact of perceived disorder on fear is weaker. This represents an example of the buffering hypothesis developed in the social support literature (House et al., 1988). The moderating effect, however, was extremely small in size compared to the main effect.

A third feature of the model receiving empirical support is Wilson and Kelling's suggestion that increasing incivilities may signal opportunities for delinquency for local teens and other "lightweight" offenders. Replicated contextual models link neighborhood-assessed deterioration with residents' belief that groups of unsupervised teens are problems in their neighborhoods (Taylor and Covington, 1993). Again, this confirmation is cross-sectional rather than longitudinal. This connection is of further significance because it connects theories about incivilities with social disorganization processes. Unsupervised teen peer groups have been used as a key indicator of weak local informal social control (Sampson and Grove, 1989).

Skogan. Skogan connects data from different studies spanning 40 neighborhoods in 6 cities, which was originally gathered between 1977 and 1983. Eighteen

of the different study areas are Chicago communities, some of which were surveyed three times (Skogan, 1990: 88). He operationalizes incivilities using subjective, survey-based responses in which respondents indicated how serious they perceived different incivilities to be in their own neighborhoods. He analyzes neighborhood-level outcomes using simple and multiple regressions and path models. Treating the time of the surveys as roughly comparable, he analyzes all the data in a cross-sectional design.

Skogan examines the causes of incivilities (Skogan, 1990: 60). He finds that nonwhite neighborhood racial composition, poverty, and instability are all linked to higher incivility levels. He also examines a range of the consequences of incivilities. He finds that in neighborhoods where incivilities are perceived to be more intense, neighbors are less willing to help one another (p. 71), robbery victimization is more extensive (p. 75), residential satisfaction is lower, and more people intend to move (p. 82). He also finds some extremely strong correlations (greater than .80) between signs of incivility and indicators of neighborhood structure, such as unemployment (p. 173). He models the perceived incivilities as mediating the impacts of neighborhood structure on the outcomes, leaving open the question of whether incivilities make independent contributions to these outcomes.

Harrell and Gouvis (1994) propose to test Skogan's thesis using census and crime data for Cleveland and Washington, D.C. Using the census tract as the unit of analysis, they determine if leading indicators of decay help predict later crime changes. Unfortunately, questions arise about their decay indicators, which do not focus on deterioration but instead are rates for crimes like arson. Their study appears to be showing that some crime rates help predict shifts in other crime rates.

Summing up empirical support. To date, we have the strongest confirmation for the Wilson, Garofalo, and Laub psychological model. Studies routinely find extremely strong correlations between individual differences in perceived incivilities and individual differences in fear of crime; these remain after controlling for neighborhood crime rates and neighborhood structure. Studies also find contextual impacts of neighborhood-level perceived (or assessed) disorder, suggesting that multilevel impacts may be operating. We do not yet have studies using the same indicator that compare individual and contextual disorder impacts.

The main effects of incivilities observed at the individual and community levels appear to be contingent on other factors. At the community level, Wilson and Kelling's thesis predicts that disorder impacts are contingent on community stability; Lewis and Salem's model predicts that impacts are contingent on local crime rates. Some empirical support has been obtained for the first model, although further testing with more adequate statistical controls is needed. Lewis and Salem's hypothesized interaction effect has not yet been tested. Part of the problem with doing so is that, especially with assessed indicators, disorder usually correlates very strongly with local crime rates. Researchers have begun suggesting that individual-level impacts of perceived incivility may be conditioned by other personal attributes, and work looking at these contingent impacts is beginning.

Hunter's version of the thesis also has received substantial support. It suggests that both crime and disorder contribute to the fear of crime. This idea is supported by perceived disorder indicators at the individual and community levels, controlling for other personal and neighborhood features. Assessed disorder at the community level correlates too strongly with crime to test for independent contributions without committing the partialling fallacy. You commit the partialling fallacy when you have two highly correlated variables, and you partial on the first variable and attempt to interpret how the second variable links to other variables. After partialling, there is too little of the second variable remaining for meaningful interpretation.

The support picture appears far murkier when we turn to versions of the incivilities thesis—Wilson and Kelling's, and Skogan's—that are explicitly longitudinal. Researchers interpret results from several cross-sectional studies as lending support to the thesis. But cross-sectional data do not provide an adequate test of the thesis. To test Wilson and Kelling's thesis, we need longitudinal studies of individuals within communities, using a large number of communities. This would permit us to gauge the independent impacts of incivilities to changes over time in fear of crime, perception of risk, and offender movement patterns. To test Skogan's thesis, we need to assess impacts of incivilities, independent of community structure and crime rates, to neighborhood structural changes and crime changes. These studies have not yet been completed.

From theory to research: incivilities indicators

Three important measurement questions arise from the incivilities thesis. First, all variants of the thesis presume that incivilities refer to a construct independent of related constructs. At the individual level, this means that incivilities indicators would be separate from indicators for perceived risk, fear of crime, territorial cognitions, sense of community, attachment to place, or neighborhood confidence and satisfaction. At the neighborhood level, this means that incivilities indicators would be separate from indicators for neighborhood structure (status, stability, racial composition) and crime. In short, all versions of the thesis presume that discriminant validity (Campbell and Fiske, 1959) has been established for incivilities indicators. In this section, we will look at a small number of data sets to determine whether this presumption is correct.

A second important measurement question raised by the evolution of the incivilities thesis is multimethod convergent validity. As noted above, incivilities theories began with a focus on psychological dynamics (Wilson, Garofalo, and Laub), moved forward to an interest in social psychological processes (Wilson and Kelling), and finally evolved into a focus on community dynamics and outcomes (Skogan). Paralleling this drift across analysis levels have been shifts in the incivilities indicators used. For psychological processes, researchers used perceived incivilities. To capture social psychological and ecological variations in incivilities, most researchers have averaged survey-based perceptions across residents in a neighborhood. A smaller number of researchers have responded to the ecological drift by gathering onsite assessment data, including site and street block features and aggregating those items to the street block level for social psychological investigations, and to the neighborhood level for ecological investigations.[10] Our confidence in the construct validity of incivilities will be boosted if we find that incivilities indicators from different methods converge. Researchers have not yet investigated this question. Ideally, at each level of aggregation, different indicators of incivilities based on different data collection procedures would correlate closely with one another and would barely correlate with related constructs (Campbell and Fiske, 1959).

Finally, the latest variant of the incivilities thesis focuses on changes over time. Changes in disorder should, according to Skogan, lead to a host of consequences for a neighborhood. However, researchers have not yet extensively examined relationships among disorder change indicators.

Discriminant validity

What evidence do we have that incivilities indicators are distinct from other features of a community, such as its structure, crime rates, and land-use patterns?

Structural dimensions of community. Researchers using census data to describe community structure generally refer to three independent dimensions: socioeconomic status, stability, and racial and youth composition (Berry and Kasarda, 1977; Hunter, 1974a, 1974b).[11] These dimensions appear when researchers analyze census data from cities in the United States and abroad. These three dimensions also can be used to describe the structural pathways along which neighborhoods may change over time (Hunter, 1974a; Taylor and Covington, 1988).

Socioeconomic status is captured by variables reflecting income levels, housing values, occupational status, educational levels, and the extent of poverty and unemployment. *Stability* is best captured by variables reflecting the extent of home ownership and the proportion of residents living at the same address during the 5 years prior to the census. Housing type, such as the percentage of single-family structures, is also relevant. *Race and youth composition* is reflected in percentages of Hispanic and African-American persons and the proportions of the population under the age of 5, or between 6 and 13 years of age.

Assessed incivilities indicators appear to be linked to neighborhood structure. Using 1981 data from onsite assessments of more than 800 street blocks in Baltimore, aggregated to the neighborhood level (*N*=66), we completed an exploratory principal-components analysis of assessment-based incivilities and land-use indicators (Taylor et al., 1985). We defined a general incivilities index based primarily on physical items, but included some social factors as well.[12] We found moderate to strong links between this index and both reported crime and community structure. The simple correlations were: crime, 0.64; instability, 0.59;

Exhibit 4. Exploratory Principal-Components Analysis of Community-Level Indicators

Component	1	2	3	4	5
VANDLSM2	0.916	0.092	0.070	-0.031	0.197
TEEN2	0.856	0.015	0.064	0.298	-0.016
ABNDBLD2	0.643	0.215	0.401	0.237	0.163
LENGTH5	0.032	-0.906	-0.054	0.281	-0.029
OWN	-0.224	-0.854	-0.121	-0.282	-0.110
ASTRATE	0.142	0.111	0.935	0.164	0.178
BLACK	0.144	-0.005	0.159	0.914	0.215
EDUC2	-0.485	0.103	-0.225	-0.615	0.459
ROBRATE	0.312	0.121	0.372	0.203	0.788
Lambda	2.411	1.644	1.277	1.585	0.989

Note: VANDLSM2, TEEN2, and ABNDBLD2 refer, respectively, to neighborhood problems with vandalism, unsupervised or rowdy teens, and abandoned buildings. Indicators are dichotomous. LENGTH5 refers to the proportion of residents living in the community at least 5 years. OWN is the proportion of homeowning respondents. ASTRATE is the reported assault rate. ROBRATE is the reported robbery rate. BLACK is the proportion of African-American respondents in the community. EDUC2 is the respondents' years of education. Varimax rotation. Community-level indicators are from five different data sets in five cities. The number of communities in each city appear below. Suburban communities were removed from the Chicago data set, as were Chicago communities with fewer than five respondents.

City	Frequency	Percent
Atlanta	6	2.8
Baltimore	30	13.9
Chicago	56	25.9
Minneapolis-St. Paul	24	11.1
Seattle	100	46.3
Total	216	100.0

income, -0.53; and proportion of African-Americans, 0.40 (Taylor et al., 1985). Neighborhood structure explained 63 percent of the variation in assessed signs of incivility and 55.8 percent of the variation in residents' perceived signs of incivility. Exploratory principal-components analyses closely connect this same incivilities index with a structural component capturing poverty, low education levels, and neighborhood instability. Even if we rotate four separate principal components, incivilities continue to load highly on a poverty component.

Reanalysis of data from 24 small commercial centers and their residential surroundings in Minneapolis-St. Paul showed neighborhood instability correlating 0.62 with vacancies in small commercial centers, and assessed graffiti correlating 0.87 with the percentage of the neighborhood that was African-American (Taylor, 1995c). Exploratory principal-components analyses with the Minneapolis-St. Paul data, looking at specific assessed incivilities rather than a broad index, linked graffiti with the racial dimension of neighborhood structure and vacancies with instability in the surrounding neighborhood.[13] (For a description of the original data collection, see McPherson and Silloway, 1986.)

These two analyses suggest indicators of assessed incivilities are not readily separable from neighborhood structure and crime. When we turn to perceived disorder indicators, however, what do we find?

We constructed a 5-city data set spanning 216 communities. The data were drawn from Atlanta (Greenberg et al., 1982), Baltimore (Taylor, 1996a), Chicago (Lavrakas, 1982), Minneapolis-St. Paul (McPherson and Silloway, 1986), and Seattle (Miethe and Meier, 1995). Only the six neighborhood Atlanta data set overlaps with those examined by Skogan (1990). All five data sets share several perceived incivilities. Aggregating perceived incivilities to the community level and carrying out an exploratory principal-components analysis of those items along with neighborhood structure and crime indicators generates the results shown in exhibit 4. Five components were rotated: incivilities (1), crime (1), and neighborhood structure (3). The three incivilities emerge distinctly on their own components. The only other variable loading above 0.40 on this component is the average years of education of residents. In this set of cities, although data suggest a modest connection between

incivilities and low socioeconomic status, perceived incivilities appear to be relatively independent of crime and structure at the neighborhood level. This analysis is limited, of course.[14] Reanalysis with more indicators and a confirmatory, rather than exploratory, approach is desirable.

Using the same variables from the five cities, but not including the two crime rate variables, we carried out a series of exploratory individual-level principal-components analyses, using four components: socioeconomic status, stability, race, and incivilities (N=8,195). Again, as with the ecological-level principal-components analyses, the incivilities indicators formed their own separate component. No other variables loaded above 0.40 on the incivilities component.[15] At the individual level, perceived incivilities separate clearly from other social demographics. When we added two indicators for person-environment bonds (neighborhood satisfaction, and attachment to place) and completed an exploratory principal-components analysis requesting five components, perceived incivilities and person-environment bonds each associated with different components.

Crime. Using the same five-city data set, we examined neighborhood-level connections between neighborhood perceived incivilities and neighborhood crime rates, before and after controlling for neighborhood structure. The number of neighborhoods ranged from 6 in Atlanta to more than 100 in Seattle. Results appear in exhibit 5. The first column shows the city-by-city correlations of community-level perceived problems with vandalism, teens, and abandoned buildings, and the community robbery rate. The second column repeats these correlations after partialling for the percentage of African-Americans, percentage of homeowners, and average education level. The third and fourth columns repeat the same information for the assault rate. Correlations are averaged across the five cities at the bottom of the table. Given the small number of neighborhoods in Atlanta, the numbers are reaveraged after excluding Atlanta.

The partialled correlations based on the four cities suggest that community-level perceived incivilities correlate modestly with street crime rates after removing community structure; the average partialled correlations, excluding Atlanta, range from 0.20 to 0.43. Perceived incivilities at the community level overlap enough with crime to lend support for

Hunter's proposal that the two may nonrecursively influence each other, even after controlling for common structural origins. Comparable analyses from multiple cities using assessed incivilities are needed.

Land-use features. Using our 1981 general index of assessed incivilities, which was based on information from 66 Baltimore neighborhoods (Taylor et al., 1985), we were able to separate signs of social and physical incivility from indicators of residential versus nonresidential land-use mix. (The resulting component loadings appear in endnote 11.) These results suggested that signs of incivility could be discriminated from land-use and block layout patterns and that indicators of signs of incivility converged as expected.

We were similarly successful in Baltimore and Philadelphia using street block data and more rigorous analytic techniques. In the early 1990s, Barbara Koons, Ellen Kurtz, and Jack Greene collected onsite information from a large number of blocks in Logan, a North Philadelphia neighborhood. Using this information, along with onsite assessments from 50 Baltimore blocks collected in the late 1980s, we successfully separated land-use mix from signs of incivility using confirmatory factor analyses (Taylor et al., 1995). I am not aware of any other data sources available that would permit examining connections between land-use and assessed incivilities.[16]

Defensible space features and territorial signage. If we turn to other microlevel features in the urban

Exhibit 5. Neighborhood-Level Correlations: Crime Rates and Perceived Incivilities

City	Incivility	Crime			
		Robbery Rate	Partialled	Assault Rate	Partialled
Atlanta	Vandalism	.53	.69	-.13	.99
	Rowdy Teens	.32	.81	.52	.06
	Abandoned Buildings	.76	.88	.94	.92
Baltimore	Vandalism	.10	.14	.10	.03
	Rowdy Teens	.09	.18	.32	.05
	Abandoned Buildings	.34	.33	.54	.26
Chicago	Vandalism	.22	.45	.23	.38
	Rowdy Teens	.30	.25	.38	.34
	Abandoned Buildings	.56	.30	.67	.50
Minneapolis-St. Paul	Vandalism	.72	.40	.73	.45
	Rowdy Teens	.32	.22	.46	.46
	Abandoned Buildings	.68	.38	.73	.63
Seattle	Vandalism	.71	.49	.72	.51
	Rowdy Teens	.51	.15	.62	.15
	Abandoned Buildings	.54	.18	.65	.31
Average	Vandalism	.46	.43	.33	.47
	Rowdy Teens	.31	.32	.46	.21
	Abandoned Buildings	.58	.41	.71	.52
Four-City Average	Vandalism	.44	.37	.45	.34
	Rowdy Teens	.31	.20	.45	.25
	Abandoned Buildings	.53	.30	.65	.43

Note: The four-city average ignores Atlanta's data because the city had only six neighborhoods. The second and fourth columns control for percentage of African-Americans, percentage of homeowners, and average education level.

residential environment, such as defensible space features and territorial signage (Taylor, 1988), we do not yet know if they can be separated from signs of incivility. Multitrait, multimethod investigations at the block and neighborhood level are needed. Territorial signage refers to things people do to sites to show that they own or care about them. Features may include high levels of upkeep, intensive gardening, and signs of personal identification.

Summing discriminant validity. Is it possible to separate disorder at the community level from community structure and crime? The answer is yes, if we use indicators based on aggregated resident perceptions. It is not as easy to clearly separate them if we rely on indicators from onsite assessments. Analyses at the street block level in two different cities and at the neighborhood level in one city show that assessed incivilities are clearly separable from land-use features. At the community level, discriminant validity with respect to some community features depends in part on the type of indicator used.

At the individual level, disorder appears to be easily separable from other constructs, such as person-environment bonds, when both constructs rely on the same data collection instrument. Researchers have not yet investigated connections between disorder and related constructs like territorial signage, where the two constructs rely on different data collection methods.

Convergent validity and multiple assessment modes

A key idea behind the multitrait, multimethod approach to validity is that expected convergences and divergences within and between constructs, respectively, should appear even when multiple methods provide indicators of the same construct (Campbell and Fiske, 1959). When we turn to multiple methods, focusing on cross-sectional or longitudinal perspectives, we see incivilities indicators from different data sources failing to converge as expected.

Using cross-sectional data described in detail in Perkins and Taylor (1996), I completed an exploratory principal-components analysis of indicators of signs of incivility and crime. The analysis suggested two independent dimensions.[17] The results appear in exhibit 6.

These mid-1980s data come from analyses of 50 different blocks, each in a different neighborhood in Baltimore. Three types of assessment are included: onsite assessments by trained raters, perceptions as reported by residents and aggregated to the block level, and coverage of crime and incivility issues in the neighborhood as reported by local newspapers.

Unfortunately, the multitrait, multimethod matrix does not generate strong evidence of convergent and discriminant validity independent of assessment method. Three variables with high loadings on the first component refer to signs of incivility: perceived social disorder, perceived physical disorder, and assessed incivilities of on-block households. These three high loadings suggest the first component refers to signs of incivility. Two survey items "go together" with one of our onsite assessment indicators.

Regrettably, this interpretation runs into two problems. First, onsite assessments of social incivilities—counts of people outside—do not load strongly on the component (0.168). In addition, serious crime news, measured from newspaper stories, does load on the component (0.639).

On the second component, the item with the highest loading is disorder news from newspaper stories. Nonresidential assessed incivilities, groups of young males loitering, and other crime news also load highly on the component, as does serious crime news. In short, the second component contains indicators of both signs of incivility and crime from two different methods. The second component appears to favor items based on newspaper sources.

The results from these 50 blocks in Baltimore are somewhat encouraging, in that two survey-based disorder items and one assessment-based disorder item appear together. However, they are discouraging because one component seems to favor the survey items, while the second component favors newspaper- or assessment-based items. Such results need to be considered with great caution given the small number of cases.

The incivilities thesis, especially as stated by Wilson and Kelling and Skogan, emphasizes the importance of *changes* in disorder. In 1981 and 1982, we collected survey data from residents in a random sample of Baltimore neighborhoods and completed onsite assessments in those neighborhoods (Taylor, 1996;

Exhibit 6. Exploratory Principal-Components Analysis of Cross-Sectional Disorder Indicators: Loadings

Variable	Name	Component I	Component II
Perceived physical disorder [S]	ZPHYSINC	0.94	0.10
Average residential address-level score on index combining litter, dilapidation, and vandalism [A]	ZAGINCIV	0.85	0.24
Perceived social disorder [S]	ZSOCINCV	0.85	0.24
Serious crime news (homicides, rapes, assaults, robberies, burglaries) [N]	ZSERCRNW	0.64	0.58
Disorder news (physical deterioration, racial unrest) [N]	ZDISNEWS	0.05	0.82
Nonresidential disorder (poorly maintained open land, graffiti, dilapidated buildings) [A]	ZNRINCIV	0.27	0.77
Young men outdoors (as proportion of housing units on block) [A]	ZMALEPRO	0.17	0.74
Quality-of-life crime news (drug abuse, carrying weapons, domestic disturbances, prostitution, vandalism, disorderly conduct) [N]	ZOTHCRNW	0.54	0.72
Lambda (before rotation)		**4.61**	**1.32**

Note: Principal-component loadings given are after varimax rotation.

Note: [S] = survey-based data source; [A] = onsite assessment items; [N] = based on newspaper archive. Survey and assessment information is based on 50 blocks, each in a separate neighborhood; newspaper data are based on reports from each of 50 neighborhoods during the study period. For more detail, see Perkins and Taylor (1996).

The loadings that are shown indicate how strongly each variable "correlates" with the broader component. A large number indicates a stronger "correlation." Lambda indicates the size of the underlying component before rotation. A larger lambda indicates a more sizable component. Components are rotated using a varimax solution, designed to provide simple structure, i.e., a few variables with high loadings, and the remaining variables with loadings close to zero.

Taylor and Covington, 1993). Returning to a stratified sample of 30 of those neighborhood blocks in 1994, we interviewed residents again and completed onsite assessments. These data permit us to see how unexpected changes in perceived incivilities and assessed incivilities relate. Each variable in the analysis reflects unexpected change—1994 scores after partialling for respective 1981–82 scores. We used two survey-based measures of perceived changes in disorder: changes in physical incivilities and changes in social incivilities. We used two measures in assessed disorder: changes in vacant, boarded up houses and changes in the amount of graffiti.

Exploratory principal-components analysis suggests changes in disorder based on survey questions are relatively separate from changes based on onsite assessments. The results appear in exhibit 7.

Two measures of changing perceptions of disorder relate closely to one another, appearing with large loadings on the first component. Two measures of changing physical conditions based on assessments relate closely to one another and have high loadings on the second component. Stated differently, the changes cluster according to the assessment method used.

We repeated the analysis adding reactions to crime, such as changes in avoidance. Again, the survey items related closely to one another, loading better than 0.80 on their dimension. The two assessment items loaded better than 0.80 on a separate dimension.

Repeating the analysis again adding unexpected changes in three crimes—robbery, assault, and larceny—provided a diffuse pattern as well. The crime variables went together on one dimension, the survey items went on a different dimension, and the assessment variables clustered by themselves. If we asked for a two- rather than three-component solution, results became rather unclear, but we still saw the assessment-based variables separating from the survey-based variables.[18]

These analyses using different data sources raise questions. The latter finding regarding changes in disorder, although deserving an extremely cautious interpretation, suggests that changes in disorder may be far less unitary than previously thought. Neighborhoods where perceptions of disorder were increasing were not necessarily the same neighborhoods where

on-street conditions were worsening, nor were they the same neighborhoods where crime rates were rising.

The divergent patterns apparent in the latter analysis suggest two possible interpretations. One is that changes in different incivilities indicators may be driven by different processes. For example, the processes driving shifts in residents' perceptions may be heavily influenced by media reports and certain high-profile events in the neighborhood, whereas changes in vacancies may be driven by longer term trends in local housing and job markets.

Another possible interpretation is that perceptions do not immediately respond to ongoing changes in the locale. The perceptions may be "sticky" and slow to incorporate more recent events.[19]

Conclusions on measurement questions

This portion of the paper addresses three measurement questions raised by the incivilities thesis.

The first and second questions are: Can we separate incivilities indicators from related constructs? Are incivilities at the neighborhood level distinct from community structure and community crime rates? The answer to both questions is yes if we use aggregated indicators based on residents' perceptions. If we use assessed indicators, we have more trouble separating them from community structure and crime, but we can separate them from land-use features. At the individual level, perceived incivilities appear to be easily separable from related constructs, such as attachment to place. In short, discriminant validity for survey-based items appears acceptable, but not so for assessment-based items.

The third question asked about cross-sectional and longitudinal convergent validity is: Do incivilities indicators based on different data collection methods converge as expected? The data examined suggest they do not. Cross-sectionally, at the street block and neighborhood levels, indicators tend to converge as much by method as by construct. When we examine longitudinal data focusing on unexpected changes in neighborhoods over an extended period, such as a decade, indicators also cluster by method. Other researchers using shorter time frames have observed comparable patterns.

Implications for policy practice and theory

There are four approaches to gauging the amount of disorder in a locale: surveys, onsite assessments of conditions by trained raters, census data, and archival data. Most of the work on the incivilities thesis has used indicators based on the first two methods.

Incivilities theorizing, as described above, has moved through several levels over time, with a current focus on neighborhood dynamics. At the neighborhood level, we have a choice of how to measure incivilities, relying either on aggregated survey responses or assessments of local conditions. Theoretically, which is more appropriate?

One can argue for aggregated survey responses because those capture residents' current views, subject only to the limitations of the sampling and surveying processes. They provide a snapshot of how residents gauge the problems in the community, and reveal the collective view.

Alternatively, one can argue for reliance on assessments. For example, by counting boarded-up houses, abandoned stores, and graffiti, raters can present

Exhibit 7. Unexpected Changes in Disorder: Exploratory Principal-Components Analysis

Variable	Component I	Component II
Unexpected changes in perceived social incivilities [S]	0.91	-0.09
Unexpected changes in perceived physical incivilities [S]	0.84	0.29
Unexpected changes in vacant, boarded up houses [A]	-0.02	0.83
Unexpected changes in graffiti [A]	0.17	0.80
Lambda	**1.77**	**1.20**

Note: [S] = survey-based data source, 17–28 respondents per neighborhood (24 = average); [A] = onsite assessment items.

All indicators are neighborhood-level indicators. Unexpected change = 1994 actual score–1994 predicted score, where the actual score is an empirical Bayes estimate of true neighborhood score derived from hierarchical linear models (HLM). The predicted score is likewise derived from HLM (*n*=30 neighborhoods).

For the onsite assessment items, the period of change is 1981–1994 with the same blocks assessed in 1981 and 1994. For the survey items, the period of change is 1982–1994. Excellent inter-rater reliability was obtained for both items at both time points. For vacant houses, the reliability coefficients were 0.78 (1981) and 0.93 (1995) using Cronbach's alpha. For graffiti present/absent on each block, the reliability coefficients were 0.78 (1981) and 0.83 (1995) using Kappa as the reliability coefficient.

The perceived problems used the standard format in which respondents were asked if the issue was not a problem (0), somewhat of a problem (1), or a big problem (2). We carried out a principal-components analysis of the perceived problems, extracting two eigenvalues explaining 60 percent of the total variance. Rotating the two components to a varimax solution one component picks up physical problems only: vacant houses, vacant lots, people who do not maintain their property, and litter. A second component focuses on social problems: insults, teens, noise, bad elements moving in, and people fighting. Vandalism had moderate loadings on both components. Putting vandalism together with the other physical problems, we created an index with a reliability (alpha) of 0.80. The reliability of the social problems was 0.86.

conditions on neighborhood streets subject only to the limitations linked to the raters' schedule of observations and inter-rater agreement.

Practitioners and policymakers evaluating initiatives geared to reducing incivilities need to choose the type of data on which they will rely for evaluating program impact. The foregoing analyses suggest which type they choose will have important implications for their evaluations.

If they choose survey-based assessments, they are focusing on an outcome more readily separable from fundamental community fabric. It should be easier to achieve changes on survey-based outcomes than on assessment-based outcomes because the former are somewhat more independent. If they choose survey-based measures, they can more easily argue that incivilities are a problem separate from neighborhood fabric and neighborhood crime and can more easily produce results.

The analyses presented, however, in particular the investigation into changes in incivilities, warn against assuming that conditions have improved just because residents think they have. Over a long period, such as a decade, it appears that different incivility indicators tap into different pathways of neighborhood change. Resident perceptions might worsen while neighborhood conditions improve, or the reverse could occur. Other researchers, using much shorter timeframes of 1 to 2 years, also find divergence between perceived incivility changes and assessed incivility changes (Giacomazzi et al., 1996; Popkin et al., 1996). If evaluators rely on survey-based incivility indicators, they may more readily find resident views improved but will not necessarily know how conditions have actually changed.

In sum, what we know about disorder and how to remedy these conditions depends on the theory used to frame the issue and the type of indicators chosen. The version of the theory receiving strongest empirical support to date is the Wilson, Garofalo, and Laub, individual-level theory. In addition, the disorder indicators it views as appropriate—survey-based reports of neighborhood problems—have demonstrated the expected convergent and discriminant validity patterns. These indicators point most clearly to a separate problem deserving separate policy attention. The intervention focus suggested by the thesis calls for identifying individuals who are more troubled by

local conditions than their neighbors and intervening with those individuals.

By contrast, when we move to the later versions of the incivilities thesis, shifting from an individual to a community focus, and from a cross-sectional to a longitudinal perspective, empirical support is much weaker and measurement questions persist. To date, we have no longitudinal tests of the independent contributions of incivilities to neighborhood changes in fear, crime, or structure. In addition, it is not clear if we should rely on onsite assessments or aggregated resident perceptions to gauge incivilities. The two types of indicators appear to reflect different, relatively independent dynamics and fail to demonstrate convergent validity when indicators from more than one method are used.

Researchers, practitioners, and policymakers also may want to widen the scope of inquiry into incivilities to consider two additional issues: a group that has been excluded in previous studies and a concept that has been ignored.

Researchers have overlooked many others who use neighborhoods besides residents: business personnel working at local establishments; or service providers passing through, such as delivery drivers, cable technicians, or phone company personnel. Researchers have not considered their perspectives: What types of local conditions draw their attention? Do they make inferences comparable to those made by residents? Are their conclusions markedly different? In short, are the attributions made dependent on the type of interpreter? We have one study from Minneapolis-St. Paul where impacts of assessed incivilities on business personnel were the opposite of what was expected based on research with residents (Taylor, 1997a).

Turning back to theory, researchers also have not explored the connection between incivilities and social disorganization. An extraordinarily rich conceptual and empirical literature exists on the latter topic (Kornhauser, 1978; Sampson 1988, 1991; Sampson and Grove, 1989). One of the premier items used to gauge social disorganization is the presence of unsupervised teen groups. This concern also has been labeled as a key social incivility. Are social incivilities little more than indicators of social disorganization, or do they refer to a related but distinct set of local processes? How should we establish the latter processes? If we are concerned that incivilities are little more

than perceived social disorganizing action, how do we resolve those concerns? Is the Wilson, Garofalo, and Laub incivilities thesis no more than the psychological counterpart of community social disorganization dynamics?

The discussion here faintly echoes the debate in the 1960s in the literature regarding anomie, social status, and delinquency (Chilton, 1964; Gordon, 1967; Lander, 1954). Given our current concerns, if we consider the relationship between incivilities and social disorganization, research in this area will at least become less theoretically insular.

Notes

1. It is not possible within the confines of this article to also review empirical work on the impacts of physical and social incivilities or empirical work on community policing impacts on incivilities.

2. Skogan and Maxfield's (1981) indirect victimization model also attempts to address this question. Instead of moving beyond crime per se, the authors discuss how crime impacts can be amplified through local social networks.

3. Although, to my knowledge, this presentation was never published, it significantly influenced workers in the field at that time and merits attention here. Hunter's influence can

be seen in publications like Lewis and Maxfield (1980) and Skogan and Maxfield (1981).

4. Hunter appears to be the first to coin the term "symbols of incivility."

5. Whereas Hunter allows that residents would make inferences about residents within the neighborhood, public agencies outside the neighborhood, or both, Wilson and Kelling suggest that the inference made refers to internal actors, such as other residents.

6. Unrepaired signs of incivility inspire nonserious crime initially, but contribute to later increases in serious crime arising from offender in-migration. Unfortunately, Wilson and Kelling fail to explain how prior crime levels might contribute to unrepaired signs of incivility in the first place. Their view appears to be different from Hunter's. He suggests that crime and incivilities have the same structural origin and are nonrecursively locked in an escalating loop.

7. Skogan's modeling of incivilities as mediating variables seems counter to his statement that incivilities make an independent contribution to the outcomes examined.

8. Skogan uses robbery victimization as an outcome variable, but does not carry out analyses that use victimization as a predictor, so that its impact can be separated from the impact of perceived incivilities.

9. The partial impact, however, exceeded the coefficient linking perceived vandalism with assessed vandalism on the block, suggesting that onsite incivilities may influence local crime in ways that do not involve residents' perceptions.

10. The only previously archived data set containing extensive assessed and perceived incivilities at the Interuniversity Consortium for Political and Social Research is from Minneapolis-St. Paul (McPherson and Silloway, 1986).

11. Prior to 1970, variables describing youth population related to the stability dimension, which was sometimes referred to as the familism dimension. From 1970 to the present, youth population relates more closely to the race dimension. Thus, we refer to the latter as a race and youth dimension.

12. The individual items and the principal component loadings are shown below. The loadings show the "correlation" between the item and the underlying, broader component. The larger the lambda, the more sizeable the component.

	Incivilities	Commercial/ Residential
Small groups	.86	.06
Graffiti	.78	.33
Volume of males on street	.72	-.04
Vacant houses	.71	.23
Housing density/block size	.69	.32
Litter	.69	.46
Commercial/industrial/ institutional land use	.13	.86
Percent residential frontage	-.35	-.84
Parking lots	.04	.77
Amenities drawing foot traffic	.31	.64
High traffic/high volume streets	.08	.52
Vacant lots	.14	.50
Lambda	5.25	1.79

13. The exploratory principal-components analyses reported here for Baltimore and Minneapolis-St. Paul need to be interpreted with extreme caution, given the extremely low ratios of cases to variables.

14. Although this exploratory principal-components analysis has an acceptable ratio of cases to variables (216:9), it is problematic in that socioeconomic status and racial composition have only one indicator variable each. Thus, these components cannot be clearly defined. Nonetheless, we have three perceived indicators of incivilities which provide a relatively clear definition.

15. Removing Seattle from the analysis, because its more than 5,000 cases drove the analysis, and reanalyzing the remaining 2,893 cases, produced slightly different results. Most notably, education almost reached a sizable negative loading (-0.39) on the incivilities component, suggesting that low socioeconomic status and perceived neighborhood problems are weakly related. However, the incivilities indicators continued to load tightly together.

16. The Greenberg et al. (1982) data set from Atlanta contains perceived incivilities along with land-use information. But, it does not contain information on assessed incivilities.

17. Strictly speaking, principal-components analysis extracts linear composites, not underlying dimensions. These results should be viewed cautiously because the ratio of variables to cases does not reach the recommended ratio of 1:10.

18. Some researchers might argue that we should have tried a solution rotating to correlated components rather than orthogonal components and simple structure.

Oblique rotations raise extremely serious concerns about construct clarity (Gordon, 1968). Furthermore, looking at the factor loadings suggested clear orthogonality between the two components noted in exhibit 7.

19. I am indebted to Pam Lattimore and Jack Riley from the National Institute of Justice for this suggestion.

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