

Impacts of Violent Crime and Neighborhood Structure on Trusting Your Neighbors

R. Marie Garcia, Ralph B. Taylor and Brian A. Lawton

The current work investigated impacts of local violent crime rates on residents' willingness to trust neighbors. Crime has been thought to "atomize" community. Many works have considered impacts of crime on local social climate or vice versa. A smaller number of works have linked crime with general judgments about trustworthiness, but there has been little work on crime and trust of neighbors. 2002 survey data of 4,133 Philadelphia residents in 45 neighborhoods were combined with census and reported crime data to address this question. Multilevel, multinomial logit models confirmed that residents' willingness to trust their neighbors varied significantly across neighborhoods for two response category contrasts: strongly agreeing or agreeing neighbors were trustworthy, each relative to strongly disagreeing. As expected, residents in neighborhoods with higher crime rates judged their neighbors as less dependable, even after controlling for local participation. Neighborhood crime and status impacts both depended on the contrast considered and on how status and crime were disentangled. Results align with some earlier works showing contingent effects of crime on ties, or contingent effects of ties on crime. Results extend earlier works by simultaneously focusing on one critical and central assessment of neighbors, showing important differences across response categories, and simultaneously finding extraneighborhood impacts.

Keywords trust; spatial lag; neighbors; neighborhood structure; violent crime; communities and crime

R. Marie Garcia is a fifth-year doctoral student in the department of Criminal Justice at Temple University. Her dissertation research examines perceptions of danger among Federal correctional officers. Ralph Taylor's recent and forthcoming publications have been in the areas of community change and motor vehicle theft (Walsh and Taylor), determinants of household gun collection sizes (Wyant and Taylor), the middle stages of jury selection, and untested and perhaps unrealistic assumptions behind some DNA policies. Brian A. Lawton is currently an Assistant Professor in the College of Criminal Justice at Sam Houston State University. His research interests include police discretion and accountability, police use of force, research methodology, and quantitative analyses. Correspondence to: R. Marie Garcia, Department of Criminal Justice, Temple University, 1115 West Berks Street, Philadelphia, PA 19122, USA. E-mail: rmgarcia@temple.edu

Introduction

Trust between neighbors is a key element of local social fabric. Confidence in neighbors links in complex and bidirectional ways to local ties, especially strong ones; to willingness to intervene, the key component of collective efficacy (Taylor, 2002); to the "bonded" component of attachment; and to local participation rates (Duncan, Duncan, Okut, Strycker, & Hix-Small, 2003; Riger & Lavrakas, 1981; Roman & Moore, 2004; Sampson, 1988; Sampson, Raudenbush, & Earls, 1997). Simply stated, many benefits may flow out of and simultaneously reinforce local trust.

Trust also links more broadly to issues of social capital. Two widely known scholars in this area see widespread declines in social capital or trust in the US in recent decades, albeit for different reasons (Fukuyama, 1995a, 1995b; Putnam, 2000). Of particular interest here is Fukuyama's argument proposing that "communities share norms and values. Out of such shared values comes trust" (Fukuyama, 1995a, p. 43). Declining trust, Fukuyama argued, arises in part from "the inherent tendency of rights-based liberalism to expand and multiply those rights against the authority of virtually all existing communities" (op. cit.), and is manifested in part by "the rise of violent crime" (op. cit.). In other words, his argument explicitly suggested a high violent crime—low trust connection, although the causal direction was unclear.

Other scholars have been clearer about the causal direction. Some have suggested violent crime "atomizes" community (Conklin, 1975). "Crime produces insecurity, distrust, and a negative view of the community. Although we lack conclusive evidence, crime also seems to reduce social interaction as fear and suspicion drive people apart" (Conklin, 1975; quoted in Lewis 1996, p. 104).

Alternatively, perhaps because communities are "atomized," they experience consequently higher violent crime rates. Research, described below, has investigated both causal chains. It will be argued that when added up, the research paints a contingent picture of evidence for each causal ordering (more crime → weaker local social climate; weaker local social climate → more crime), and some evidence contradicting the first ordering (i.e., more crime → stronger local social cohesion). But more importantly, it will be suggested that the research says little about the effects of local violent crime rates specifically on local trust, the focus here. Work with social climate indicators as outcomes has found crime effects dependent in part on the social climate dimension considered. Consequently, and in light of other limitations of earlier work noted below, it is maintained that the effect of local violent crime rates on trust of neighbors remains an open and important question.

The next section outlines major points emerging from the work treating local social climate and dynamics as predictors of victimization or crime outcomes. Next the work examining the impacts community crime or victimization rates is considered. Throughout, the term "local social climate" refers to a broad array of social network dimensions and social dynamics such as: local social support, instrumental helping, local cohesion, local trust, and local participation.

Although it is recognized that local ties and local network parameters are distinct from features of local social climate such as cohesion (Sampson, 1988), the sections below treat these together.

Local Social Climate Influences Local Victimization or Crime Rates

In general, works in this area find impacts of local ties on crime. Some work suggests, however, the connection may be dependent on the social climate attributes captured, and may be mediated by a wide range of intervening processes.

Sampson and Groves's (1989) ecological analyses using the British Crime Survey assessed two different elements of local social climate: organizational participation, and proportion of friends living nearby. A perceived social incivility, problems linked to local, unsupervised teen groups, was a social climate indicator. Different structural dimensions of political wards linked to different social outcomes. But both local participation and local friendship ties affected violent victimization rates. These results were replicated using later BCS data (Lowenkamp, Cullen, & Pratt, 2003). Path analyses of the original data, however, suggested impacts of structural features on the outcomes were not completely mediated by local social dynamics (Veysey & Messner, 1999).

An increasingly popular index for local social climate has been that developed by Sampson and colleagues in their work on the Project on Human Development in Chicago Neighborhoods. It captured both elements of social cohesion and willingness to intervene in small-scale problems. They called it collective efficacy because the two components correlated so strongly at the neighborhood level (Sampson et al., 1997). Social cohesion items included one item about local trust.¹ Controlling for resident and neighborhood characteristics, collective efficacy linked with lower perceived crime, lower violent victimization rates, and lower homicide rates. Turning the problem around and treating crime as the predictor, a survey of residents in 55 neighborhoods in a northwest metropolitan area found perceptions of violent crime as well as reported rates of crime both linked independently and negatively with Sampson et al.'s (1997) index (Duncan et al., 2003).²

Messner, Baumer, and Rosenfeld (2004) looked at both relationships simultaneously. Using geographic areas ranging from part of a city to a full state, they modeled a bidirectional connection between trust and homicide. Higher trust

1. The five social cohesion items were "'people around here are willing to help their neighbors,' 'this is a close-knit neighborhood,' 'people in this neighborhood can be trusted,' 'people in this neighborhood generally don't get along with each other,' and 'people in this neighborhood do not share the same values' (the last two statements were reverse-coded)" (Sampson et al., 1997, p. 922).

2. The first author reported using for their social cohesion index the same items used by Sampson et al. (1997). Personal communication, August 19, 2005.

significantly depressed homicide rates and homicide rates simultaneously depressed trust. The authors concluded their results had implications for both the causal chains mentioned above: "for theories of social capital that emphasize the protective benefits of high social trust levels and for theories of trust that highlight the potential adverse consequences of threatening environments" (Messner et al., 2004, p. 895).

Qualifications to the influence of local social climate on local crime or victimization risk abound. For example, the connection may hold only for local ties among women residents (Rountree & Warner, 1999).³ So the impacts on crime may depend on gender of the ties.

Effects of Crime or Victimization on Local Social Climate

Looking at the opposite causal chain (crime → social climate), work sometimes shows: (a) no impacts of crime, (b) depressing impacts of crime, and/or (c) elevating impacts of crime. Starting with the last idea, several studies suggested higher local crime rates may spur local social involvement at the streetblock level (Perkins, Florin, Rich, Wandersman, & Chavis, 1990) and at the neighborhood level (Taylor, 1996). Local crime and related agendas can be powerful catalysts for mobilization (Lewis, Grant, & Rosenbaum, 1988), can be linked to stronger local ties (Taylor, 1996), or simply can create more participation opportunities for civic-minded citizens (Lavrakas & Herz, 1982). How that increased local participation or activism plays out is highly contingent, depending on the fundamental demographic fabric of the community and the nature of the crime problems confronted (Podolefsky, 1983; Taylor, 2001). Some studies with null findings led one author to conclude "that victimization and perception of crime—which many assume instigate detachment and isolation—do not elicit negative attitudes toward the neighborhood or decrease the tendency to neighbor" (Woldoff, 2002, p. 107).⁴ Bellair (2000) used Rountree and Warner's (1999) social index from the same data source but separated it from two other types of instrumental helping—watching a neighbor's house, or having a neighbor watch your house—which he called informal surveillance. Not surprisingly, if residents were willing to ask for or to give informal surveillance, there were stronger ties between neighbors (his table 3). Crime's impacts on surveillance depended on the type of crime: violent crime depressed it, burglary stimulated it. So the impacts of crime may depend on the crime in question. Other ethnographic (Bourgois, 1996; Pattillo, 1998; Simon & Burns, 1997), qualitative pieces (Podolefsky, 1983; Taylor, 2001) and at least one quantitative piece (Browning, Feinberg, & Dietz, 2004) underscore complex, contingent relationships between local offending or crime rates, local offenders, non-offending local residents,

3. The social ties index contained three items ranging across several elements of local social fabric: instrumental helping (borrowing food or tools), minimal shared socializing (having lunch or dinner, location unspecified), and broader social support (helping a neighbor with a problem).

4. This study, however, used only individual-level analyses.

and local social climate. Some studies have even suggested the reverse, along Durkheimian lines (Liska & Warner, 1991), that crime solidifies community and enhances cohesion. Although it is true that some studies (Duncan et al., 2003) have found impacts of crime along the lines anticipated by Conklin, "at the very least, it is clear that crime does not unequivocally reduce participation in local improvement efforts" (Taylor, 1995, p. 33) or unequivocally impair local social climate.

Limitations of Work to Date

When the focus is on local trust, several concerns surface about the work to date linking crime rates and social climate. First, much of the work has used broader indices, of which trust is only a component (e.g., Duncan et al., 2003). Since the connections between the various components of local social climate such as local ties, cohesion, and informal social control are complex (see Sampson, 2002; Sampson, Morenoff, & Gannon-Rowley, 2002) and disputed (Browning et al., 2004), impacts of crime on other social climate components may not apply to trust. One unpublished study analyzed a single local trust item separate from other local social climate indicators because it did not "fit" with the latter (Roman & Moore, 2004). This suggests relatively "deep" components of local social climate such as trust of neighbors may not align with other local social dimensions, and/or may have markedly different predictors. Further, some studies which have looked at trust (Messner et al., 2004; Liska & Warner, 1991) have not directed respondents' attention to *local* trust.

Second, it is not clear how tightly connected the processes are, whereby local social climate influences crime rates, across different sized geographical units. Is it one set of related processes which "scale" from streetblocks to neighborhoods to cities and metropolitan areas? Or are different processes involved at different levels of aggregation? Microecological dynamics may be relevant for streetblocks (Taylor, 1997), whereas well-discussed secondary control dynamics of the systemic attachment model or social disorganization model may be relevant for neighborhoods (Bursik & Grasmick, 1993; Hunter, 2003), and a more complicated sociopolitical-institutional mix may be relevant at the city level and above (Ferman, 1996). Since the connections between processes at different scales are not known, it is not clear whether results from studies done with units of aggregation at the city level and above (e.g., Messner et al., 2004) should apply to neighborhood-size units.

Third, along a slightly related line, many analyses have been spatially naïve (for an exception see Browning et al., 2004) in that they have not considered how processes beyond the immediate neighborhood might influence these outcomes. Inclusion of appropriately constructed spatial lag variables (Land & Deane, 1992) seems essential for clearly specifying dynamics endogenous to the ecological units specified.

Statement of the Model

The impacts of local crime on trust of neighbors—the “crime atomizes community” thesis of Conklin (1975)—remains an open question. Work to date has found some albeit inconsistent support for Conklin’s thesis. Further, some work has found support for the reverse, more Durkheimian (Liska & Warner, 1991) idea that crime enhances local ties perhaps by spurring community mobilization against crime. In parsing out possible effects of local crime on trust, it is important to control for three key neighborhood level determinants of trust. Trust is weaker in more racially heterogeneous neighborhoods (Merry, 1981; Sullivan, 2003, p. 1413), so the model will control for this factor. Further, the social disorganization model (Bursik, 1988) focuses on stability, and that must be considered as well. Since the work on local social climate has sometimes linked it with neighborhood status (Bellair, 1997; Sampson, 1988), it also must be considered. A spatially lagged version of the outcome will control for spatial autocorrelation.

Since, as is well known from the communities and crime literature, crime influences neighborhood structure, and vice versa (Taylor, 1995), crime and neighborhood status often correlate strongly. In the data analyzed here, they correlate too strongly to be included in the same model.⁵ Therefore two series of models were pursued. One, in keeping with the crime → community structure model, partials the effects of crime from neighborhood status. The second, in keeping with the community structure → crime model, partials the effects of neighborhood status from local crime rates.

Individual-level variables were included as well. When uncentered, they permitted testing for effects of neighborhood predictors after controlling for compositional effects (Sampson et al., 2002). When group mean centered, they permitted seeing if certain factors, like status and stability, had effects on the outcome at multiple levels. Individual level predictors included not only basic demographics—age, gender, race, marital status, own/rent status, education, and income—but also whether the respondent belonged to local groups. Including this last variable permitted gauging impacts of individual level demographics on the outcome net of this element of local involvement.

For the other ecological predictors beyond crime, the following patterns were anticipated: more trust in higher status neighborhoods due to stricter income sorting of residents in higher-status locales (Crenson, 1983); more trust in more stable neighborhoods given increased informal controls and stronger local acquaintanceship in such locations (Bursik & Grasmick, 1993); and less trust in more diverse neighborhoods due to increased difficulties in decoding fellow residents’ behaviors (Merry, 1981; Sullivan, 2003).

For the individual level predictors (see below), given the systemic model of local attachment generally (Kasarda & Janowitz, 1974) and models of neighboring, even after controlling for local involvement, it was expected that those

5. The shared variance was .646.

who would be more trusting would be those who: were older (and thus had perhaps lived there longer), were homeowners, and were married. Given complex research findings linking status and gender in various ways to local involvement and perceived local problems (Ross, Mirowsky, & Pribesh, 2002; Crenson, 1983; Taylor, 2001), no specific predictions were made for education, income, or gender. Despite Sampson's suggestion that trust can emerge without strong local ties, it was expected that those participating more locally would trust nearby others more (Unger & Wandersman, 1985).

Data, Methods, and Analysis Plan

Data Sources

The Philadelphia Health Management Corporation's (PHMC) 2002 Southeastern Pennsylvania survey is the largest and most comprehensive health survey of the Delaware Valley (Philadelphia Health Management Corporation, 2003). First administered in 1983, the survey examines a five-county area (Philadelphia, Bucks, Montgomery, Delaware and Chester counties) in southeast Pennsylvania with a focus on adult and child health care. In 2002, over 10,000 household interviews were conducted. This study utilized PHMC 2002 data for Philadelphia County (unweighted $n = 4,133$), as well as data from the 2000 US Census and crime statistics from the Philadelphia Police Department (January 2001-July 2002).

The 2002 PHMC survey was conducted between July and September through telephone interviews with randomly selected adults at least 18 years old. Within the five counties, "The sample was stratified by 54 service areas to ensure sufficient representation within smaller geographic subareas" composed of clusters of zip codes (PHMC, 2003, p. 5). Households were randomly selected using a computerized Random Digit Dialing (RDD). Random within-household adult respondent selection was accomplished using the last birthday method. Interviews were conducted in Spanish as needed. "The final sample of interviews is representative of the population in each of the five counties so that the results can be generalized to the populations of these counties" (PHMC, 2003, p. 5).

A total of 4,133 adults were interviewed in Philadelphia County. So that the results from this sample would be representative of Philadelphia County, rather than the five-county region, weights were constructed as follows. For each Census household, one random adult was extracted from the 2000 Census Public Use Microdata Sample data file for Philadelphia. Those data were then cross-tabulated by gender, education (\leq high school vs. greater) and race (White vs. non-White). These percentages of the total PUMS random sample for each of the eight groups were used to construct weights for the PHMC Philadelphia data. The resulting weights ranged from .63 to 1.84. After applying the weights, the percentages in each of the eight groups of PHMC data matched within .1

Table 1 Descriptive statistics for individual-level and ecological variables

Outcome						
"Most people in my neighborhood can be trusted"	<i>n</i>	Unweighted proportion	<i>n</i>	Weighted proportion		
<i>Response</i>						
Strongly agree	1	637	0.15	667	0.16	
Agree	2	2,258	0.55	2,264	0.55	
Disagree	3	910	0.22	878	0.21	
Strongly disagree (reference category)	4	328	0.08	322	0.08	
Total		4,133		4131		
Predictors						
		Weighted <i>n</i>	<i>M</i>	<i>SD</i>	Min	Max
<i>Individual-level</i>						
Male (= 1, female = 0)		4,131	0.42	0.49	0	1
White (= 1; non-White=0)		4,131	0.51	0.50	0	1
Age (in years)		4,131	47.49	18.62	18	96
Education > high school (=1; HS or less=0)		4,131	0.40	0.49	0	1
Owner-occupied household (=1; rent = 0)		4,131	0.63	0.48	0	1
≥1.5 × federal poverty line (= 1; 0 = below)		4,131	0.75	0.44	0	1
Married (= 1; other = 0)		4,131	0.35	0.48	0	1
Participate in one or more local groups (= 1; none = 0)		4,131	0.43	0.50	0	1
Weighting variable		4,131	1.11	0.36	0.63	1.84
<i>Neighborhood-level</i>						
	<i>n</i>	<i>M</i>	<i>SD</i>	Min	Max	
Status index	45	0.00	0.87	-1.48	2.23	
Stability index	45	59.36	11.11	23.14	78.39	
Percent non-White	45	55.40	32.68	4.14	98.82	
Racial heterogeneity	45	1.43	0.81	0.12	2.50	
Violent crime rate	45	1,401.52	800.18	193.74	3,598.96	
Partialled violent crime rate (status removed)	45	0.59	0.46	-0.31	1.75	
Partialled status (violent crime removed)	45	0.61	0.40	-0.22	1.86	
Spatially lagged trust	45	0.00	1.00	-1.56	2.00	

Note. Individual-level variables from 2002 Philadelphia Health Management Corporation Southeastern Pennsylvania Survey, Philadelphia cases only ($n = 4,133$). Results shown for sample weighted to match 2000 Census of householders on gender, race, and education (weighted $n = 4,131$). Neighborhood data from allocation of 2000 Census Block Group data to PHMC Philadelphia neighborhoods ($n = 45$), or annualized reported crime data for the period 1/2001 to 6/20002 per 100,000 population. Higher scores mean more stability, more socioeconomic status, more racial heterogeneity, or greater percentage of non-White population. See text for details. For partialled crime and partialled status, standardized residuals were saved, then natural logged after adding 2. Spatially lagged outcome variable was a full generalized population potential instrument (see Land & Deane 1992).

percent to each of the PUMS sample percentages.⁶ Descriptive information on the sample appears in Table 1.

PHMC has identified 45 different neighborhoods in Philadelphia, and they were used here. These were first defined when the survey series began in the 1980s. At that time, the PHMC researchers contacted local planners, officials, and organizers in coming up with their neighborhood boundaries in Philadelphia. They have maintained those boundaries over time. Close inspection of their boundaries showed a very close alignment in most parts of the city with the political wards used by Shaw and McKay (1972, map 30) to construct Philadelphia's delinquency rates in the 1920s. The only major noticeable differences were more PHMC neighborhoods in the Greater Northeast and West Oak Lane sections of Philadelphia, which were much more sparsely settled in the 1920s than the 1980s. The average number of survey respondents per neighborhood was 91.84 (median = 84, min = 36, max = 218, $SD = 36.12$).

Missing survey data were extremely infrequent, usually 10 or fewer missing cases except for the trust variable, where there were 429 (unweighted) missing cases (10.4 percent). For all variables, missing values were estimated using an EM algorithm (Hill, 1997). In the case of the trust variable and binary variables, estimated scores were then rounded to the nearest whole number (Regoeczi & Reidel, 2003).

2000 Census block group data were allocated to the PHMC neighborhoods using the proportion of the block group populations in each neighborhood to make the apportionment.

Part I Crime data were obtained from the Philadelphia Police Department and geocoded with a hit rate of 97.4 percent. Violent crime data for the 18-month period spanning January 2001 through June 2002, were used. June 2002 was the period just prior to the fielding of the survey. The total violent crime counts for each neighborhood for the period were annualized (multiplied by 12/18), and then converted into rates per 100,000 population using 2000 population figures.

Outcome

Respondents were asked: "Please tell me if you strongly agree (4), agree (3) disagree (2), or strongly disagree (1) with the following statement: 'Most people in my neighborhood can be trusted.'" Since HLM treats the highest score as the reference category for logistic contrasts, the variable was reversed in the analysis so "strongly disagree" became the reference category. The frequency distribution appears in Table 1.⁷

6. The authors thank Dr. Lillian Dote for completing the work with the PUMS data.

7. The percentages in each category of the outcome before estimating values for missing data were: 17.2 percent (strongly agree); 51.6 percent (agree); 22.4 percent (disagree); and 8.9 percent (strongly disagree)

Individual-Level Predictors

Gender

Males were coded 1, females 0.

Age

Respondent's age was treated as a continuous variable.

Race

Whites were coded 1, non-Whites 0. Most of the non-Whites were African American.⁸

Homeownership

Owner occupied households were coded 1, renter households 0.

Education

Those reporting more than a high school degree were coded 1; those with just a high school degree, and those who did not complete high school, were coded 0.

Income relative to poverty level

Those whose household income for the previous year placed them at or above 1.5 times the poverty level for their sized household were coded 1; those reporting less income were coded 0.

Marital status

Those married or in a stable relationship were coded 1; others were coded 0.

8. Of the 2,310 (unweighted) non-Whites in the sample, 1,627 were African American, 335 were Asian, and 348 were "other." 62 (1.5 percent) did not report race.

Participation

An individual's actual participation in local community groups was used as an individual-level social network variable: "How many local groups or organizations in your neighborhood do you currently participate in such as social, political, religious, school-related, or athletic organizations?" Those reporting one or more groups were coded 1; others were coded 0.⁹

Neighborhood-Level Predictors

Status

From the 2000 Census, four status indicators were z-scored and averaged: median household income; median house value; percent adult population with at least college, and the percent above the poverty line (Cronbach's alpha = .904).

Partialled status

The standardized residual was saved after using the violent crime rate to predict status. It was then logged, after adding a constant, to reduce skewness to less than 1.0.

Violent crime

The violent crime rate, as described above, was used.

Partialled crime

The standardized residual was saved after using status to predict the violent crime rate. It was then logged, after adding a constant, to reduce skewness to less than 1.0.

Stability

From the 2000 Census, the percent of owner-occupied households and percent of households living at the same address since 1995 were averaged to create a stability index (Cronbach's alpha = .812).

9. Not surprisingly, the neighborhood level participation-trust correlation was extremely strong, so it was not possible to separate these two indicators at the neighborhood level, but at least we could do so at the individual level (neighborhood-level correlation of average scores = .372).

Racial heterogeneity

Percent White was multiplied by percent non-White, and the result was multiplied by 100,000, to create a racial heterogeneity variable. Higher scores indicated more mixed neighborhoods.

Racial composition

The percent of the population in 2000 which was non-White was used.

Spatially lagged trust

The significant Global Moran's I ($p < .05$) indicated a spatially autocorrelated outcome. A spatially lagged predictor was introduced using the recommended inverse-distance weighted, population density potential, two-stage least-squares procedure (Land & Deane, 1992) taking into account trust in all Philadelphia neighborhoods, and using as the starting point the Empirical Bayes neighborhood level estimates of the log odds of strongly agreeing, relative to strongly disagreeing, that neighbors could be trusted.

Descriptive statistics for the specific variables used appear in Table 1.

Analytic Issues

Multilevel modeling

Because there was interest in both individual level and neighborhood predictors, and because residents within a neighborhood were presumed to be more similar to one another on the outcome than residents across neighborhoods, multilevel models were employed (Raudenbush & Bryk, 2002).

Level of measurement for the outcome

It was assumed initially that the response categories from "strongly disagree" to "strongly agree" could be treated as an ordinal logit model. A proportional odds assumption underlies an ordinal logit model (Long & Freese, 2006): "the critical assumption [is] that the slope coefficients are identical across each regression" (p. 198). A postestimation approximate likelihood ratio test of the proportionality of odds assumption, based on the ordinal logit results via Stata using just the individual-level predictors and adjusting for clustered observations, indicated the assumption was not met ($p < .001$) (Long & Freese, 2006, p. 199). The Brant test of the assumption showed that the coefficients for more than one predictor

differed significantly across the binary regressions. Given such a violation, there are alternative and appropriate models for ordinal regression (Long & Freese, 2006, pp. 220-222) but these are not widely available in hierarchical modeling versions.

Therefore, the only appropriate alternative was a multinomial logit model via hierarchical linear models (HLM; Raudenbush & Bryk, 2002, pp. 325-333). Treating those who said "strongly disagree" in response to the statement "most of my neighbors can be trusted" as the reference category, the model constructed three independent binary contrasts (i.e., three independent logit models). The first examined the odds of saying "strongly agree" relative to "strongly disagree" (contrast 1), the second the odds of saying "agree" vs. "strongly disagree" (contrast 2), and the third "disagree" vs. "strongly disagree" (contrast 3).

HLM reports a test of the ecological variation for each contrast to gauge whether that variation is significant beyond what would be expected from sampling variation. The HLM ANOVA model with no predictors indicated significant ($p < .001$) between-neighborhood variation for the first two contrasts, but not the third. Therefore no ecological predictors were included in models for the third contrast.

In order to examine possible multilevel effects, the primary analyses group-mean centered all individual level predictors, so the coefficients reflected only (pooled) differences between neighbors. To separate ecological from compositional effects, additional models were run with no centering of individual level predictors.¹⁰ Throughout, the neighborhood level predictors were grand-mean centered, permitting easier interpretation of some parameters.

Models shown used racial heterogeneity as the neighborhood-level race feature. Additional models using racial composition instead of heterogeneity were completed, and differences noted in the text. Because one neighborhood contained the central business district in addition to substantial residential housing, additional models also were completed after removing this neighborhood from the model.

Multicollinearity checks for the individual level predictors showed no VIFs above 1.3 and no tolerances below .8. At the neighborhood level, using either racial composition or racial heterogeneity, and partialled status or partialled crime, no VIFs were above 2.4, and no tolerances were below .4

Results

The initial ANOVA via generalized HLM for a multinomial outcome confirmed significant between-neighborhood differences for two of the three contrasting odds ratios: strongly agreeing relative to strongly disagreeing ($p < .001$; average

10. In the models with no centering of individual level predictors, it was not possible to keep individual level own/rent status in the model, because of its strong connection with neighborhood stability.

reliability = .643; average Empirically Bayes adjusted odds ratio, OR, = 1.92); and agreeing vs. strongly disagreeing that most neighbors could be trusted ($p < .001$; average reliability = .652; average OR = 6.73). Thus, relative to the reference category, respondents' chances of agreeing or strongly agreeing about neighbors' trustworthiness varied significantly across neighborhoods. There was no significant between-neighborhood variation for the odds of disagreeing vs. strongly disagreeing (ns ; average reliability = .092; average OR = 2.81). Complementing the between-neighborhood variation for the first two contrasts, the substantial average reliabilities suggested considerable within-neighborhood agreement as well.

Full Effects of Crime, Partial Effects of Status

Table 2 shows results for the full model when only partial effects of status were entered, i.e., status had been partialled with respect to the violent crime rate. Entering the ecological predictors reduced the remaining ecological variation to nonsignificance ($p > .05$) for the first contrast but not the second ($p < .05$). The neighborhood predictors completely explained ecological variation for the first but not the second contrast.

Focusing on the first contrast and the ecological predictors, the odds of a resident strongly agreeing (relative to strongly disagreeing) that most neighbors could be trusted were higher in neighborhoods where: the violent crime rate

Table 2 Predicting trust, status partialled

	<i>b</i>	<i>SE</i>	OR	<i>p</i> <
<i>Contrast 1: Strongly agree/strongly disagree</i>				
Intercept	0.682		1.979	
<i>Neighborhood-level predictors</i>				
Stability	0.001	0.004	1.001	<i>ns</i>
Violent crime rate	-0.00048	0.00012	0.99952	0.001
Partialled status	0.514	0.169	1.672	0.01
Spatially lagged trust	0.213	0.091	1.237	0.05
Racial heterogeneity	-0.031	0.091	0.969	<i>ns</i>
<i>Individual-level predictors</i>				
Education > high school	0.301	0.170	1.352	†
Age	0.048	0.005	1.049	0.001
Male	0.132	0.140	1.142	<i>ns</i>
Local participation	0.471	0.139	1.601	0.001
White	0.356	0.189	1.427	†
Owner-occupied household	0.537	0.155	1.710	0.001
At or Above 1.5 × poverty line	0.192	0.190	1.212	<i>ns</i>
Married	0.659	0.156	1.933	0.001

Table 2 Continued

	<i>b</i>	<i>SE</i>	<i>OR</i>	<i>p</i> <
Contrast 2: Agree/strongly disagree				
Intercept	2.073		7.946	
<i>Neighborhood-level predictors</i>				
Stability	-0.001	0.005	0.999	<i>ns</i>
Violent crime rate	-0.00048	0.00007	0.99952	0.001
Partialled status	0.223	0.163	1.250	<i>ns</i>
Spatially lagged trust	0.144	0.082	1.155	†
Racial heterogeneity	-0.070	0.076	0.933	<i>ns</i>
<i>Individual-level predictors</i>				
Education > high school	0.483	0.143	1.621	0.001
Age	0.034	0.005	1.035	0.001
Male	0.010	0.117	1.010	<i>ns</i>
Local participation	0.307	0.123	1.359	0.05
White	0.352	0.195	1.422	†
Owner-occupied household	0.276	0.150	1.318	†
At or Above 1.5 × poverty line	0.159	0.147	1.172	<i>ns</i>
Married	0.402	0.123	1.494	0.001
Contrast 3: Disagree/strongly disagree				
Intercept	1.115		3.050	
<i>Individual-level predictors</i>				
Education > HS	0.362	0.178	1.437	0.05
Age	0.016	0.005	1.016	0.01
Male	-0.041	0.120	0.960	<i>ns</i>
Local participation	-0.050	0.117	0.951	<i>ns</i>
White	0.034	0.191	1.035	<i>ns</i>
Owner-occupied household	-0.188	0.182	0.829	<i>ns</i>
At or Above 1.5 × poverty line	-0.156	0.182	0.855	<i>ns</i>
Married	0.205	0.178	1.228	<i>ns</i>
<i>Random effects</i>				
		Variance	χ^2	<i>p</i> <
Contrast 1		0.034	51.031	†
Contrast 2		0.054	55.868	0.05
Contrast 3		0.004	43.773	<i>ns</i>

Note. Results from hierarchical generalized linear model for multinomial outcome. Respondents (weighted $n = 4,131$) nested within neighborhoods ($n = 45$). Reference category is "strongly disagree" "most people in my neighborhood can be trusted." Individual predictors group-mean-centered; neighborhood predictors grand-mean-centered.
 † $p < .10$.

was lower ($p < .001$), the neighborhood was higher on partialled status ($p < .01$), and trust was higher in surrounding neighborhoods ($p < .05$).¹¹ A one standard

11. The coefficient for the crime rate was small because the rate was expressed per 100,000 residents.

deviation increase in the violent crime rate (+800) decreased the predicted probability of a typical respondent in a typical neighborhood saying "strongly agree" vs. "strongly disagree" from 66 percent to 57 percent.¹²

The effects of the partialled status index were similarly substantial. Each standard deviation increase in partialled status increased the odds of strongly agreeing by about 67 percent.

Switching to the second contrast which focused on those who said "agree," the violent crime rate continued to have a significant effect ($p < .001$) of about the same size. Partialled status, however, was not significant.

The roles of ecological factors in increasing the odds of strongly agreeing relative to agreeing about neighbors' dependability was gauged by subtracting the respective coefficients of the second contrast from the first, and testing the difference (Raudenbush & Bryk, 2002, p. 332). Partialled status affected this contrast ($\gamma_{03(1)} - \gamma_{03(2)} = .51 - .22 = .29$; $\chi^2(1) = 9.26$; $p < .01$; OR = 1.33) as did surrounding trust levels ($\gamma_{04(1)} - \gamma_{04(2)} = .21 - .14 = .07$; $\chi^2(1) = 5.49$; $p < .05$; OR = 1.07). So each of these ecological factors made it more likely residents would endorse the most trusting response, relative to the second most trusting response, when asked about their neighbors.

Thus, neighborhood status influenced residents' perceived dependability in two ways: by increasing their odds of strongly agreeing, relative to strongly disagreeing; and by increasing their odds of strongly agreeing, relative to agreeing. The significance of spatially lagged trust confirmed the importance of factors beyond the neighborhood.

Living in a higher-crime-rate neighborhood made residents less likely to agree, or to strongly agree, relative to strongly disagreeing, about neighbors' dependability. But it did not affect the odds of strongly agreeing on this trait, relative to agreeing ($\chi^2(1) < 1$; *ns*).

Substituting racial composition in the form of the percentage of the population non-White for racial heterogeneity produced some slightly different patterns (results not shown). The violent crime rate continued to affect both the first and second contrasts significantly ($p < .001$). Partialled status continued to influence the first contrast as it had before ($p < .01$), but now also influenced the second contrast (agreeing vs. strongly disagreeing) significantly ($p < .05$) in the expected direction. The racial composition variable itself had no significant impact ($p > .05$) on either contrast.

Turning to the individual-level predictors and the results shown in Table 2, those more likely to strongly agree instead of strongly disagree that their neighbors were reliable were also, compared to their average neighbor, more likely to be: older ($p < .001$), a member of at least one local group ($p < .001$), in an

12. Since all individual-level predictors were group-mean-centered, and thus averaged zero in each neighborhood, and since all neighborhood predictors were grand-mean-centered, the probability of an average respondent in an average neighborhood saying "strongly agree" vs. "strongly disagree" was: $1 / 1 + \exp\{-\gamma_{00(1)}\} = 1 / 1 + \exp\{-.682\} = .66$. For an average respondent in a neighborhood at the sample average on all neighborhood-level predictors, but one standard deviation higher (800) on the violent crime rate, the predicted probability was: $1 / 1 + \exp\{-[\gamma_{00(1)} + \gamma_{00(1)} \times 800]\} = .57$.

owned household ($p < .001$), and married ($p < .001$). Having more than a high school education and being White ($p < .10$) were only marginally linked to being more trusting.

With the second contrast and the odds of agreeing about neighbors' reliability, being older ($p < .001$), being involved locally ($p < .05$), and being married ($p < .001$) had significant influences as they did with the first contrast. Having more than a high school education also made one significantly more trusting ($p < .001$). Being in an owner-occupied household and being White made one slightly more trusting ($p < .10$)

For the third contrast, predicting those who "disagreed" vs. "strongly disagreed," only two individual-level predictors shaped the outcome: those more educated ($p < .05$) or older ($p < .01$) than their neighbors were less wary of them.

An additional model entered the individual-level variables uncentered (results not shown). These permitted testing ecological effects after controlling for compositional effects (Sampson et al., 2002).¹³ The violent crime rate continued to significantly affect the first ($p < .05$) and second contrasts ($p < .001$) with higher crime linking to less trust.

Returning to the models with centered individual-level predictors, when racial composition in the form of percent non-White population was substituted for racial heterogeneity, there was only one coefficient that changed in terms of significance vs. non-significance (results not shown). Partialled status, which in Table 2 had no significant impact on the odds of agreeing, became significant ($p < .05$). Otherwise, the pattern of significant findings was identical. The violent crime rate remained highly influential ($p < .001$) for both contrasts.

In sum, at the individual level, age was the only predictor significantly affecting trust across all three contrasts. The variable relevance of the other individual-level attributes depended in part on the contrast in question, supporting the decision to move to a multinomial model. The impacts of age, home ownership, and participating in local groups all fit with a broad systemic model of local social climate (Kasarda & Janowitz, 1974; Riger & Lavrakas, 1981). At the ecological level, the violent crime rate significantly affected both the first and the second contrasts, dampening local trust, regardless of whether compositional effects were controlled, and regardless of how racial composition was modeled.

Full Effects of Status, Partial Effects of Crime

Table 3 shows the results for the model where the full effects of the status index were investigated, and only partial effects of crime were entered, i.e.,

13. These models, as explained above, were identical to those shown except for the centering, and the exclusion of the individual-level own/rent variable. After entering individual-level variables and the spatially lagged outcome, there was marginally significant outcome variation to be explained for the first contrast ($p < .06$) and significant variation for the second contrast ($p < .05$).

the effects of status on crime were removed. In this model, the remaining ecological variation for both the odds of strongly agreeing (versus strongly disagreeing), and of agreeing, were nonsignificant after the ecological predictors were entered ($p > .05$).

Focusing first on the ecological predictors and the odds of strongly agreeing with the statement, status ($p < .001$) and surrounding trust levels ($p < .05$), but not partialled crime (ns), affected the odds. Those surrounded by neighborhoods

Table 3 Predicting trust, violent crime rate partialled

	<i>b</i>	<i>SE</i>	OR	<i>p</i> <
Contrast 1: Strongly agree/strongly disagree				
Intercept	0.686		1.987	
<i>Neighborhood-level predictors</i>				
Stability	0.003	0.005	1.003	<i>ns</i>
Status	0.449	0.101	1.566	0.001
Partialled violent crime rate	-0.087	0.184	0.916	<i>ns</i>
Spatially lagged trust	0.229	0.097	1.257	0.05
Racial heterogeneity	-0.024	0.092	0.976	<i>ns</i>
<i>Individual-level predictors</i>				
Education > high school	0.301	0.170	1.351	†
Age	0.048	0.005	1.049	0.001
Male	0.132	0.140	1.142	<i>ns</i>
Local participation	0.471	0.139	1.602	0.001
White	0.356	0.190	1.427	†
Owner-occupied household	0.537	0.155	1.710	0.001
At or above 1.5 × poverty	0.191	0.190	1.211	<i>ns</i>
Married	0.659	0.156	1.932	0.001
Contrast 2: Agree/strongly disagree				
Intercept	2.072		7.942	
<i>Neighborhood-level predictors</i>				
Stability	0.002	0.005	1.002	<i>ns</i>
Status	0.457	0.067	1.579	0.001
Partialled violent crime rate	-0.341	0.112	0.711	0.01
Spatially lagged trust	0.100	0.084	1.105	<i>ns</i>
Racial heterogeneity	-0.077	0.076	0.926	<i>ns</i>
<i>Individual-level predictors</i>				
Education > high school	0.483	0.143	1.621	0.001
Age	0.034	0.004	1.035	0.001
Male	0.010	0.117	1.010	<i>ns</i>
Local participation	0.307	0.123	1.360	0.05
White	0.353	0.196	1.423	†
Owner-occupied household	0.276	0.151	1.318	†
At or above 1.5 × poverty	0.159	0.147	1.172	<i>ns</i>
Married	0.401	0.123	1.494	0.001

Table 3 Continued.

	<i>b</i>	<i>SE</i>	OR	<i>p</i> <
Contrast 3: Disagree/strongly disagree				
Intercept	1.116		3.053	
<i>Individual-level predictors</i>				
Education > high school	0.363	0.178	1.438	0.05
Age	0.016	0.005	1.016	0.01
Male	-0.041	0.119	0.960	<i>ns</i>
Local participation	-0.049	0.117	0.952	<i>ns</i>
White	0.032	0.192	1.033	<i>ns</i>
Owner-occupied household	-0.188	0.183	0.829	<i>ns</i>
At or above 1.5 × poverty	-0.157	0.182	0.855	<i>ns</i>
Married	0.206	0.178	1.228	<i>ns</i>
<i>Random effects</i>				
		Variance	χ^2	<i>p</i> <
Contrast 1		0.056	53.25	†
Contrast 2		0.035	51.23	†
Contrast 3		0.007	3.61	<i>ns</i>

Note. Results from hierarchical generalized linear model for multinomial outcome. Respondents (weighted $n = 4,131$) nested within neighborhoods ($n = 45$). Reference category is "strongly disagree" "most people in my neighborhood can be trusted." Individual predictors group-mean-centered; neighborhood predictors grand-mean-centered. OR: odds ratio. † $p < .10$.

where residents saw one another as more dependable were more likely themselves to see their own neighbors as highly reliable. A one unit (one standard deviation) increase in surrounding trust levels increased the odds of this outcome about 25 percent. The status impacts were even more sizable. In a neighborhood one standard deviation higher on status than the average neighborhood, the odds of an average neighbor agreeing with this most positive characterization of their neighbors (relative to strongly disagreeing) increased about 57 percent.

Examining the second contrast and the odds of simply agreeing about neighbors' reliability showed a slightly different pattern of ecological impacts. Status continued to have a substantial influence in the expected direction ($p < .001$), but the partialled violent crime rate also emerged as significant in the expected negative direction ($p < .01$). A standard deviation increase on the partialled crime rate was linked to about a 29 percent reduction in the odds of "agreeing" neighbors were dependable. So for this contrast, which contained the largest number of respondents, the local crime rate, even after removing the effects of status, proved relevant. As happened with the other model partialling status (Table 2), spatially lagged trust influenced the odds of strongly agreeing, but not the odds of agreeing.

The model controlling for compositional effects using uncentered individual-level predictors showed the same significance/non-significance pattern for status and partialled crime for the first two contrasts (results not shown). Higher neighborhood status still linked to increased chances of either strongly

agreeing ($p < .01$) or agreeing ($p < .001$) about neighbors' reliability, and partialled crime significantly affected the latter ($p < .05$) but not the former. The impact of partialled crime on agreeing was about the same size as shown in Table 3 ($\gamma_{03(2)} = -.27$; OR = .76). In short, even after controlling for surrounding dynamics, compositional effects and the ecological impacts of status on crime, violent crime continued to affect the odds of agreeing neighbors were dependable, which was the contrast involving the largest number of respondents.

Returning to the model with centered individual-level predictors, the partialled crime rate did not affect the odds of "strongly agreeing" vs. "agreeing" about neighbors' dependability ($\gamma_{03(1)} - \gamma_{03(2)} = -.09$ to $-.34 = .25$; $\chi^2(1) < 1$; *ns*). Adjoining trust levels, however, did affect those odds ($\gamma_{04(1)} - \gamma_{04(2)} = .23 - .10 = .13$; $\chi^2(1) = 5.62$; $p < .05$). More widespread trust of neighbors in adjoining locations pushed residents toward the most trusting view of those inside their own neighborhoods. At the individual level, participating locally also helped further raise individuals' trust of neighbors from the next-to-highest to highest rating ($\gamma_{40(1)} - \gamma_{40(2)} = .47 - .31 = .16$; $\chi^2(1) = 11.4$; $p < .01$).

Additional analyses substituting racial composition for racial heterogeneity, in the form of the percent non-White population, yielded a slightly different pattern of ecological impacts (results not shown) for the second contrast. Although racial composition itself was not significant, it reduced to non-significance ($\gamma_{04(2)} = -.19$; $p < .15$) the impact of the partialled crime rate on the odds of "agreeing" neighbors were trustworthy. Except for that, the pattern of significant findings remained the same. The significance pattern for the individual-level predictors was identical to that seen in the earlier model, since these predictors were group-mean-centered.

Since one of the neighborhoods contained within it much of the central business district (CBD), additional analyses were run with that neighborhood excluded. Results were substantially similar to those shown here.¹⁴

14. When status was partialled, the pattern of significance/non-significance for the neighborhood-level predictors (results not shown) was the same as that shown in Table 2: the crime rate ($p < .001$), the spatially lagged trust variable ($p < .05$), and partialled status ($p < .05$) remained significant for the first contrast, and for the second contrast the violent crime rate remained significant ($p < .001$). For the first two contrasts, the remaining neighborhood-level variation in the outcomes was non-significant ($p > .05$). If percent non-White was used rather than racial heterogeneity at the neighborhood level, the crime rate ($p < .001$), partialled status ($p < .01$) and spatially lagged trust ($p < .05$) remained significant, and remaining between-neighborhood variation on the two outcomes remained non-significant ($p > .05$). When the violent crime rate was partialled, and the neighborhood containing the CBD was removed, the pattern of significance/non-significance for ecological predictors was the same as shown in Table 3 for the first and the second contrasts (results not shown). With the first contrast, status ($p < .001$) and spatially lagged trust ($p < .05$) were both significant. With the second contrast, both partialled violent crime ($p < .01$) and status ($p < .001$) had significant impacts. Remaining ecological variation for both contrasts was non-significant ($p > .05$). When percent non-White was substituted for racial heterogeneity at the neighborhood level, status ($p < .001$) and spatially lagged trust ($p < .05$) affected the first contrast. The only significant ecological predictor of the second contrast was status ($p < .001$); partialled crime had only a marginal ($p < .10$) impact. The same pattern was seen when racial composition was used in the model with all neighborhoods, except that there the impact of partialled crime on the second contrast was slightly more non-significant ($p < .15$). In short, dropping the neighborhood containing the CBD-but also extending well beyond it and containing substantial residential housing-did not affect the pattern of results seen.

Discussion

The current study is afflicted with numerous limitations, which will be addressed further below. It focused on the connections between local violent crime rates, and trust of neighbors, a relatively "deep" component of local social climate. Past work examining impacts of local crime on local social climate had rarely focused specifically on trust. Although most previous work has considered how higher crime rates have deleterious impacts on local social climate, theory and evidence also have supported the opposite, Durkheimian view. The "crime atomizes community" argument suggested higher crime should deepen distrust, while the "crime bands citizens together" argument suggested higher crime should increase resident solidarity and therefore perhaps trust. The current work sought to examine this connection.

The main implications of the current work are twofold and can be simply stated. First, local reported violent crime rates from the period prior to the survey administration did reduce residents' confidence in their neighbors. Second, the deleterious effects of crime on trust were somewhat contingent, depending on three things: the response category of the outcome in question, whether status was partialled from crime or vice versa, and whether racial composition or racial heterogeneity was modeled at the neighborhood level.

The communities and crime literature has confirmed both that crime affects community fabric and the reverse. Not surprisingly, then, neighborhood status and neighborhood reported violent crime rates were strongly linked. To obtain a non-multicollinear matrix of predictors, it was necessary to investigate partialled crime and in one model and partialled status in a second model. Given the theoretical bidirectionality noted immediately above, this seemed a defensible and theoretically appropriate solution to the problem.

Results confirmed the adverse impacts of reported violent crime rates on perceived dependability of neighbors when the effects of status were not removed from crime. Those in higher-crime neighborhoods were less likely to strongly or weakly endorse fellow residents' trustworthiness. Some other studies have found deleterious effects of local reported crime rates on local social climate (e.g., Duncan et al., 2003), but these have not isolated local trust per se, instead usually considering collective efficacy or local social ties. The current work confirmed adverse impacts of local reported crime rates on this more elemental fabric in the local social pattern.

Nonetheless, as noted above, the pattern of adverse impacts also proved contingent. Contingencies have appeared in previous work. For example, impacts of local ties on crime may depend on the gender of the ties (Rountree & Warner, 1999), and impacts of crime on ties may depend on the crime in question (Bellair, 2000).

Here, impacts of crime depended in part on how neighborhood status and neighborhood crime are pulled apart; whether it was assumed that crime shaped community fabric, or that community fabric shaped crime. But even in models where crime was partialled, it continued to significantly influence the

contrast including the largest number of respondents (agree vs. strongly disagree), even in models controlling for compositional effects.

How race was modeled also affected the impacts of partialled crime, but not unpartialled crime. When crime was not partialled—the crime → community fabric perspective—reported violent crime rates significantly affected two contrasts (strongly agree/strongly disagree, agree/strongly disagree) regardless of whether (a) an individual-level, uncentered race variable was used, (b) a centered individual-level race variable and racial heterogeneity at the neighborhood level were used, or (c) a centered individual-level race variable and racial composition at the neighborhood level were used. Impacts of partialled crime—the community fabric → crime perspective—continued to significantly influence the agree/strongly disagree contrast under the first two treatments of race (a and b) above, finally becoming marginally significant ($p < .15$) with the third treatment of race (c).

In short, it was possible to make adverse crime impacts on this outcome non-significant, but doing so required allocating all the shared variance between crime and status to the latter, and simultaneously assuming it was appropriate to model racial composition rather than racial heterogeneity at the neighborhood level. These researchers were unaware of relevant theory, arguing that the former approach to neighborhood race and social climate was preferred to the latter. In fact, the most relevant theoretical framework (Merry, 1981) suggested heterogeneity was the more relevant. So racial composition may not be more theoretically appropriate than racial heterogeneity.

Partialled crime significantly increased residents' odds of agreeing (relative to strongly disagreeing) that neighbors were dependable; but it did not affect their odds of strongly agreeing. This feature of the results seemed to underscore that when residents "strongly agreed" their neighbors were trustworthy, this was somehow different from merely agreeing to the statement. If strongly agreeing was simply more than agreeing, crime's impact on the latter should have been stronger than its impact on the former; it was not. Previous studies which have made trust a binary outcome (e.g., Roman & Moore, 2004) or an interval-level outcome may have been missing something.

The key relationship surfaced here was ecological, and it remained even after controlling for compositional effects, and even after partialling status from violent crime. Although numerous qualitative studies have clarified the complex interpersonal dynamics whereby violence erodes or reshapes local trust (Pattillo, 1998; Simon & Burns, 1997), much of that work, because of its depth, has been conducted in a very small number of neighborhoods. Assuming the findings here about crime and trust are trustworthy, the challenge for better understanding this relationship will be for future studies to examine enough neighborhoods, in enough depth, over a long enough period of time, to clarify the ecological processes behind the ecological patterns seen here.

A portion of neighborhood fabric proving particularly relevant here was neighborhood status. Those in higher-status neighborhoods did trust their neighbors more, and it was not just because there was less crime there, or less racial mixing

there, or more stability there, or more trust nearby. The status effects, like the crime effects, were also somewhat dependent on the contrast considered, and on whether status was partialled. Nonetheless, the question arises: what was it that led neighbors in these locales to trust their neighbors more? A plausible guess is that it was because residents knew there was more homogeneity on income in these locales, and thus they perceived these as more consonant contexts, resulting in more stable collective images of the neighborhoods (Rosenberg, 1972). But that is just a guess and awaits future evidence. Nonetheless, this finding is relevant to previous work, which has not consistently linked status to social climate. The work here has shown multilevel impacts of status.

Turning to spatial patterning, trust levels outside residents' neighborhoods influenced how they viewed those inside their own neighborhoods. The spatial lag variable always influenced the odds of strongly agreeing neighbors were dependable, even after controlling for neighborhood demographic structure and reported crime. In short, trust has individual-level, neighborhood-level, and extraneighborhood dynamics.

Individual-level results generally supported a systemic model of attachment. Those who were more trusting were usually older, homeowners, and married. All these made it more likely that the person had lived longer in the neighborhood. Being there for more time helped cement these individuals to the locale (Kasarda & Janowitz, 1974).

Individual status, race, and gender did not prove as consistently influential as might be expected. Those more educated than their neighbors were sometimes more trusting, depending on the contrast. Race was not relevant unless it was uncentered, suggesting its impact was capturing compositional not individual-level dynamics.

The current study, as noted earlier, has its share of limitations. In essence, it was a cross-sectional case study of residents in one city, with all the restrictions attendant thereto. Future longitudinal work including many residents of many neighborhoods might be able to better unpack the impacts of trust on crime as well as the impacts of crime on trust. Additionally, the survey did not contain detailed victimization data, forcing reliance on police-generated reported crime rates. Perhaps somewhat counterbalancing these limitations were several study strengths including but not limited to: large numbers of respondents per neighborhood; a sample made representative of Philadelphia households after applying modest weights; an analysis making minimal measurement assumptions about the outcome variable; multilevel models permitting simultaneously examining neighborhood and individual effects while controlling for clustering of residents within neighborhoods; models including other relevant demographic features of the locale; models controlling for resident compositional effects; taking spatial autocorrelation into account; and considering neighborhood racial fabric in different ways.

In closing, the current work focused on potentially deleterious impacts of local violent crime rates on a relatively fundamental feature of local social climate: residents' willingness to trust one another. In line with Conklin's (1975)

"crime atomizes community" thesis, results showed that higher crime rates were linked with less local trust. The strength of these adverse impacts depended on the specific response categories contrasted, and on how crime and status were separated from one another.

Acknowledgments

Portions of an earlier version of this paper were presented by the first author at the 2004 annual meetings of the American Society of Criminology, Nashville. The authors thank the Office of the Vice President for Research and Graduate Studies, Ken Soprano, Vice President, for providing the 2002 PHMC data, and Kate Auerhahn, Ron Davis, Jeff Walsh, and Caterina Roman for helpful comments on earlier drafts. Opinions stated herein are solely the authors' and do not reflect the opinions or official policies of Temple University or the Philadelphia Health Management Corporation (PHMC).

References

- Bellair, P. E. (1997). Social interaction and community crime: Examining the importance of neighbor networks. *Criminology*, 35 (4), 677-703.
- Bellair, P. E. (2000). Informal surveillance and street crime: A complex relationship. *Criminology*, 38, 137-169.
- Bourgois, P. (1996). *In search of respect*. Cambridge: Cambridge University Press.
- Browning, C. R., Feinberg, S. L., & Dietz, R. D. (2004). The paradox of social organization: Networks, collective efficacy, and violent crime in urban neighborhoods. *Social Forces*, 83 (2), 503-534.
- Bursik, R. J. (1988). Social disorganization and theories of crime and delinquency. *Criminology*, 26, 519-551.
- Bursik, R. J., Jr., & Grasmick, H. (1993). *Neighborhoods and crime*. Lexington, MA: Lexington.
- Conklin, J. E. (1975). *The impact of crime*. New York: Macmillan.
- Crenson, M. (1983). *Neighborhood politics*. Cambridge: Harvard University Press.
- Duncan, T. E., Duncan, S. C., Okut, H., Strycker, L. A., & Hix-Small, H. (2003). A multilevel contextual model of neighborhood collective efficacy. *American Journal of Community Psychology*, 32 (3/4), 245-252.
- Ferman, B. (1996). *Challenging the growth machine: Neighborhood politics in Chicago and Pittsburgh*. Lawrence: University of Kansas Press.
- Fukuyama, F. (1995a). The economics of trust. *National Review*, August 14, 42-43.
- Fukuyama, F. (1995b). *Trust: The social virtues and the creation of prosperity*. New York: Free Press.
- Hill, M. (1997). *SPSS missing values analysis 7.5*. Chicago: SPSS.
- Hunter, A. (2003). Social control. In K. Christensen & D. Levinson (Eds.), *Encyclopedia of community* (pp. 1297-1302). Thousand Oaks, CA: Sage.
- Kasarda, J. D., & Janowitz, M. (1974). Community attachment in mass society. *American Sociological Review*, 39, 328-339.
- Land, K., & Deane, G. (1992). On the large-sample estimation of regression models with spatial effects terms: A two-stage least squares approach. *Sociological Methodology*, 22, 221-248.

- Lavrakas, P. J., & Herz, E. J. (1982). Citizen participation in neighborhood crime prevention. *Criminology*, 20, 479-488.
- Lewis, D. A. (1996). Crime and community: Continuities, contradictions, and complexities. *Cityscape*, 2 (2), 95-120.
- Lewis, D. A., Grant, J. A., & Rosenbaum, D. A. (1988). *The social construction of reform: Crime prevention and community organizations*. New Brunswick, NJ: Transaction.
- Liska, A. E., & Warner, B. D. (1991). Functions of crime: A paradoxical process. *American Journal of Sociology*, 96, 1441-1463.
- Long, J. S., & Freese, J. (2006). *Regression models for categorical dependent variables using Stata* (2nd ed.). College Station, TX: Stata Press.
- Lowenkamp, C. T., Cullen, F. T., & Pratt, T. C. (2003). Replicating Sampson and Groves's test of social disorganization theory: Revisiting a criminological classic. *Journal of Research in Crime and Delinquency*, 40 (4), 351-373.
- Merry, S. E. (1981). *Urban danger: Life in a neighborhood of strangers*. Philadelphia: Temple University Press.
- Messner, S., Baumer, E., & Rosenfeld, R. (2004). Dimensions of social capital and rates of criminal homicide. *American Sociological Review*, 69 (6), 882-903.
- Pattillo, M. E. (1998). Sweet mothers and gangbangers: Managing crime in a black middle-class neighborhood. *Social Forces*, 76, 747-774.
- Perkins, D. D., Florin, P., Rich, R. C., Wandersman, A., & Chavis, D. M. (1990). Participation and the social and physical environment of residential blocks: Crime and community context. *American Journal of Community Psychology*, 18, 83-115.
- Philadelphia Health Management (2003). *2002 household health survey documentation*. Philadelphia: Philadelphia Health Management Corporation.
- Podolefsky, A. (1983). *Case studies in community crime prevention*. Springfield, IL: Charles C. Thomas.
- Putnam, R. D. (2000). *Bowling alone*. New York: Simon & Schuster.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Regoeczi, W. C., & Reidel, M. (2003). The application of missing data estimation models to the problem of unknown victim/offender relationships in homicide cases. *Journal of Quantitative Criminology*, 19 (2), 155-183.
- Riger, S., & Lavrakas, P. J. (1981). Community ties: Patterns of attachment and social interaction in urban neighborhoods. *American Journal of Community Psychology*, 9, 55-66.
- Roman, C. G., & Moore, G. T. (2004). *Measuring local institutions and organizations: The role of community institutional capacity in social capital. Final research report*. Washington: The Urban Institute.
- Rosenberg, M. (1972). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Ross, C. E., Mirowsky, J., & Pribesh, S. (2002). Disadvantage, disorder, and urban mistrust. *City & Community*, 1 (1), 59-82.
- Rountree, P. W., & Warner, B. D. (1999). Social ties and crime: Is the relationship gendered? *Criminology*, 37 (4), 789-813.
- Sampson, R. J. (1988). Local friendship ties and community attachment in mass society: A multilevel systemic model. *American Sociological Review*, 53 (5), 766-779.
- Sampson, R. J. (2002). Transcending tradition: New directions in community research, Chicago style. *Criminology*, 40 (2), 213-230.
- Sampson, R. J., & Groves, W. (1989). Community structure and crime: Testing social disorganization theory. *American Journal of Sociology*, 94, 774-802.
- Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). Assessing "neighborhood effects": Social processes and new directions in research. *Annual Review of Sociology*, 28, 443-478.

- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multi-level study of collective efficacy. *Science*, *277*, 918-924.
- Shaw, M., & McKay, H. (1972). *Juvenile delinquency and urban areas* (2nd ed.). Chicago: University of Chicago Press.
- Simon, D., & Burns, E. (1997). *The corner: A year in the life of an inner-city neighborhood*. New York: Broadway Books.
- Sullivan, D. M. (2003). Trust. In K. Christensen & D. Levinson (Eds.), *Encyclopedia of community: From the village to the virtual world* (pp. 1412-1414). Thousand Oaks: Sage.
- Taylor, R. B. (1995). The impact of crime on communities. *Annals of the American Academy of Political and Social Science*, *539*, 28-45.
- Taylor, R. B. (1996). Neighborhood responses to disorder and local attachments: The systemic model of attachment, social disorganization, and neighborhood use value. *Sociological Forum*, *11* (1), 41-74.
- Taylor, R. B. (1997). Social order and disorder of streetblocks and neighborhoods: Ecology, microecology and the systemic model of social disorganization. *Journal of Research in Crime and Delinquency*, *33*, 113-155.
- Taylor, R. B. (2001). *Breaking away from broken windows: Evidence from Baltimore neighborhoods and the nationwide fight against crime, grime, fear and decline*. Boulder, CO: Westview Press.
- Taylor, R. B. (2002). Fear of crime, social ties and collective efficacy: Maybe masquerading measurement, maybe deja vu all over again. *Justice Quarterly*, *19*, 773-791
- Unger, D. G., & Wandersman, A. (1985). The importance of neighbors: The social, cognitive, and affective components of neighboring. *American Journal of Community Psychology*, *13* (2), 139-169.
- Veysey, B. M., & Messner, S. E. (1999). Further testing of social disorganization theory: An elaboration of Sampson and Grove's 'community structure and crime.' *Journal of Research in Crime and Delinquency*, *36*, 156-174.
- Woldoff, R. A. (2002). The effects of local stressors on neighborhood attachment. *Social Forces*, *81* (1), 87-116.