Journal of Research in Crime and Delinquency
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Journal of Research in Crime and Delinquency 2011 48: 298 originally published online 11 January 2011
DOI: 10.1177/0022427810391537

The online version of this article can be found at:
http://jrc.sagepub.com/content/48/2/298

Published by:
SAGE
http://www.sagepublications.com

On behalf of:
John Jay College of Criminal Justice, City University of New York

Article

Journal of Research in Crime and Delinquency
48(2) 298-324

DOI: 10.1177/0022427810391537
http://jrcd.sagepub.com

Ecological Origins of Shared Perceptions of Troublesome Teen Groups: Implications for the Basic Systemic Model of Crime, the Incivilities Thesis, and Political Economy

Ralph B. Taylor[1], Phillip W. Harris[1], Peter R. Jones[1], R. Marie Garcia[2], and Eric S. McCord[3]

Abstract

This work investigates how community variation in perceptions of troublesome teen groups are shaped by delinquency, violent crime, and community socioeconomic status (SES). Experts consider this outcome *the* key indicator of impaired local supervisory control, and past work has

[1] Department of Criminal Justice, Temple University, Philadelphia, PA, USA
[2] National Institute of Justice, Washington, DC, USA
[3] Department of Criminal Justice, University of Louisville, KY, USA

Corresponding Author:
Ralph B. Taylor, Department of Criminal Justice, Temple University, 512 Gladfelter Hall, Philadelphia, PA 19122, USA
Email: ralph.taylor@temple.edu

confirmed its critical role in linking community structure to crime and victimization outcomes. The investigation responds to recent calls to learn more about impacts of crime on key community processes. Analyses of Philadelphia survey, census, violent crime, and delinquency data find strong impacts of SES. Impacts of crime and delinquency are significant but depend on how they are separated from SES. Influences of the spatially lagged outcome and partialled SES highlight connections between public and parochial control dynamics. These deserve closer theoretical scrutiny in both the basic systemic model of crime and the incivilities thesis.

Keywords
communities and crime, criminological theory, social disorganization, delinquency

> Crime is one of the most persistently "disorganizing" conditions confronting any community ... a further theoretical move is now needed that reconceptualizes crime as both an outcome *and source of social disorganization*. (Messner, Baumer, and Rosenfeld 2004:900, emphasis added)

In much ecologically oriented criminological theorizing, crime rates or delinquency rates are of interest primarily as outcomes (Pratt and Cullen 2005). Given hopes of controlling or preventing crime and delinquency, this makes sense.

At the same time a less sizable literature examines the impacts of crime or delinquency on communities (Taylor 1995). Typically considered outcomes might be structural features of a community, like house values (Lynch and Rasmussen 2001; Tita, Petras, and Greenbaum 2006), house sale volume (Hipp, Tita, and Greenbaum 2009), gentrification as reflected in rising socioeconomic status ([SES] Bursik 1986), or businesses moving in or out (Greenbaum and Tita 2004); reactions to crime like fear (Rountree 1998) or person–place bonds (Taylor 1996); or various dimensions of social capital like trust (Garcia, Taylor, and Lawton 2007), surveillance (Bellair 2000) or social activism (Messner et al. 2004). These works have shown that the crime/social capital links are complex (Bellair 2000; Messner et al. 2004). What has not been tested yet, however, are the impacts of crime or delinquency on the most widely accepted indicator of impaired resident-based supervisory capacity: residents' shared perceptions that local unsupervised teen groups are creating neighborhood problems. Those links will be examined here.

The key questions are does crime or delinquency impair residents' supervisory capacity, even after controlling for other structural features of community, compositional effects, and spatial adjacency impacts? A related and important question is do impacts of community SES persist net of crime or delinquency impacts?

More specifically, the outcome of interest here is ecological variation, that is, community differences, in residents' perceptions of troublesome teen groups. Unsupervised teen groups have irked U.S. urban residents for close to 200 years (Schneider 1992). Survey-based responses to the question "How much of a problem are unsupervised teen groups?" have been interpreted as reflecting community differentials in indigenous "supervisory capacity" (Bursik and Grasmick 1993:43). This is a key element of "the abilities of local communities to regulate and control the behavior of their residents" (Bursik and Grasmick 1993:24). In short, this item has been viewed as a key indicator of deficiencies in informal, resident-based supervisory control which is a central thread in the complex concept of social disorganization (Bursik 1988) and its reverse, collective efficacy (Sampson, Raudenbush, and Earls 1997; Wells et al. 2006). Ecological, community-level analyses have repeatedly confirmed that this unsupervised teen group variable is the most key mediator of the impacts of community structural dimensions (status, stability, racial/ethnic composition) on crime and victimization outcomes (Lowenkamp, Cullen, and Pratt 2003; Sampson and Groves 1989; Veysey and Messner 1999:169-171). Those analyses also have found repeatedly that community SES has the strongest structural demographic impact on residents' perceptions of troublesome groups (Lowenkamp et al. 2003:table 1, ignoring urbanization; Sampson & Groves 1989:table 2). But do community SES impacts persist *net* of the contribution of crime or delinquency to impaired local supervision?

A slightly different perspective on perceptions of unsupervised teen groups comes from the incivilities thesis. That framework interprets these perceptions as social incivilities. In the broken windows version of the incivilities thesis, these perceptions play key roles in eroding informal, resident-based supervisory control over local spaces (Kelling and Coles 1996; Wilson and Kelling 1982). Further, for the incivilities thesis, social incivilities like troublesome teen groups, and physical incivilities like abandoned houses, graffiti, and trash filled lots, reflect not only impaired local supervisory capacity but also something broader. What that "something broader" is depends on the version of the thesis. For the decline and disorder version of the incivilities thesis it is disorder, "the inabilities of communities to mobilize resources to deal with urban woes" (Skogan 1990:173).

Some evidence does tie these perceptions of troublesome groups or social incivilities to the mentioned neighborhood conditions. At the neighborhood cluster level in Chicago, a 3-item perceived social incivilities index correlated .56 with on-site assessments of relevant persons and behaviors (Sampson and Raudenbush 1999). At the streetblock level in Baltimore, perceived teen group problems correlated .31 with counts of groups of males hanging out after controlling for demographic structure (Perkins, Meeks, and Taylor 1992). Thus, it seems that shared perceptions of social incivilities generally, and perhaps of the one of central interest here, correspond somewhat to relevant local conditions.

But investigations of community-level impacts of local crime rates on social incivilities, or this specific social incivility, have not yet produced conclusive evidence. Sampson and Raudenbush (2004:table 5) found impacts of poverty, racial composition, and violent crime on a three-item perceived social incivilities index. The index, however, mixed one social incivility ("groups of teenagers or adults hanging out in the neighborhood and causing trouble"), two crimes ("buying or selling drugs"), and one municipal code violation ("drinking in public"). Reanalyses of data from four neighborhood studies in four cities found modest positive connections between neighborhood averages for perceived troublesome teen groups and local robbery and assault rates (Taylor 1999:exhibit 5). That work, however, failed to control for either compositional or spatial adjacency effects. Such limitations cast doubt on the presence of neighborhood effects (Sampson, Morenoff, and Gannon-Rowley 2002). In short, the empirical work to date has suggested but not yet confirmed a crime impact on perceived problems with unsupervised teen groups.

How about delinquency impacts? Delinquency rates have community-level self-propagating effects over time, making the influence of these rates on perceptions of troublesome teen groups likely (Shannon et al. 1988:112). Higher delinquency prevalence rates suggest more unsupervised males to either form or direct local teen groups not under adult surveillance. To these authors' knowledge, that influence has not yet been investigated.

Why would one expect community SES to influence social disorganization or social incivilities net of crime or delinquency impacts? As has been pointed out (Skogan 1990), crime or delinquency can be part of a broader constellation of "urban woes." The severity and breadth of these linked social problems reflect neighborhood exchange value differentials across a city (Gottdiener 1994). The noncrime or nondelinquency portions of those woes have the potential to weaken local supervisory capacities, thus facilitating the emergence of troublesome teen groups.

Answers to these questions posed here are important for four reasons. First, they extend the literature on the ecological consequences of crime and delinquency. Second, they provide a test of the self-propagating theme inherent in both social disorganization and incivilities theories. Third, they may help diminish this indicator's semantic ambiguity (Abbott 2001:69), an ambiguity previously noted (Veysey and Messner 1999). Finally, should community SES impacts persist net of crime or delinquency impacts, they would point toward needed further integration of communities and crime models with broader urban political economy frameworks (Logan and Molotch 1987).

Methods

The current project employed four different types of data: surveys, geocoded serious delinquency prevalence data for males, geocoded Part I violent crime data, and selected census data aggregated to the police district level.

Survey Procedures

The 2003 *Philadelphia Area Survey (PAS*) was a Random Digit Dial (RDD) household survey conducted by the Temple University Institute for Survey Research (ISR) in the fall of 2003 (n completes = 1,028). The sampling frame covered the Philadelphia metropolitan area (Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania, and Burlington, Camden, Gloucester, and Salem counties in New Jersey).[1] Respondents providing a name and mailing address received a $10 money order. Provided addresses were geocoded to place respondents in police districts.

Using the standardized definitions promoted by the American Association of Public Opinion Researchers (AAPOR 2008), response rates ranged from 24.4 percent (AAPOR's RR1: Minimum response rate) to 25.4 percent (AAPOR's RR3: response rate after estimating proportion of unknown eligibility cases would have been eligible) to 27.6 percent (RR5: computed from the total number of eligible households). These response rates roughly match the modal response rate of 25 percent in a review of several RDD surveys (McCarty et al. 2006).[2] The 2003 census population estimate data closely matched the survey sample.[3] This study uses interviews (unweighted n = 342) only from Philadelphia. Representativeness for this subsample also was strong.[4] Philadelphia-specific weights were applied to this subsample.

The number of completed surveys per police district ranged from 3 to 31 (average = 14.7, $SD = 7.3$).[5] Using police districts[6] as the level of aggregation permitted constructing male serious delinquency prevalence rates without any zero rates. These sizable units also raise fewer questions about the error properties in the denominator used to construct delinquency rates.

The Sample

The weighted sample ($n = 342$) was 53 percent White and 59 percent female with an average age of 48 and an average household size of 2.65. The 2002 household income ranged from less than $5,000 to over $120,000 (average= $45,275, median = $35,000), and 24 percent reported income of $15,000 or less. Of the sample, 15 percent had less than a high school diploma and 45 percent had only a high school diploma. Of the sample, 48 percent reported being employed full time. Slightly more than a third (38 percent) had one or more children living at home, 41 percent were married, and two thirds lived in owner-occupied households.

Survey Variables: Outcome

Respondents were asked as part of a series of potential neighborhood concerns "How much of a problem are groups of unsupervised teenagers?" (1 = Serious problem; 2 = Somewhat of a problem; 3 = Minor problem; 4 = Not a problem at all). Since the distances between pairs of these response categories were not known, an ordinal probability model making no assumptions of equal distances between categories was appropriate.[7]

Survey Variables: Predictors

To control for compositional effects, the models used a range of demographic variables. Respondents were coded as White (1) or non-White (0); female (1) or male (0); married (1) or not (0); having children in the household (1) or not (0); and owning (1) or renting (0). In addition, household size, age (in years), and the highest degree earned also were entered. Categories for highest degree were none (1); GED (2); high school diploma (3); tech certificate (4); associate degree (5); bachelor degree (6); masters degree (7); and professional (PhD, JD, MD) (8). The log of household income also was included.

Because those respondents perceiving a larger neighborhood might see greater or fewer problems (Rainwater 1966), perceived neighborhood size

also was used as an individual level predictor. Respondents classified their neighborhood's size using the following six categories: (1) five to six houses nearest yours (13 percent); (2) your street block (9 percent); (3) two to five blocks around your home (24 percent); (4) six to ten blocks around your home (21 percent); (5) one square mile (22 percent); and (6) more than one square mile (12 percent). (Percentages do not add to 100 due to rounding.)

Delinquency Rates

Delinquency data were only available for serious delinquents, that is, those who had been mandated to treatment programs (i.e., receiving more than "straight" supervision) through the Philadelphia Family Court.[8] "Treatment programs" included assignment to all secure facilities. These data were collected for all juvenile delinquents mandated to treatment by Family Court for the years 1996 through 2002. Using their home address, delinquents were geocoded to police districts (geocoding hit rate = 97 percent). Since serious delinquents, first-time delinquents and repeaters both, were about 90 percent male, these analyses used only *male first-time delinquents mandated to treatment* to construct serious delinquency prevalence counts.[9] Counts from calendar years 2001 or 2002 were used here because those were the two years immediately preceding the survey. For this period, the number of new male serious delinquents per district ranged from 6 to 281 (mean = 114.9, median = 113, total = 2,643). Delinquents at time of arrest ranged in age from 10 to 18. Delinquency prevalence rates per 100 males aged 10 to 18 were calculated by aging the counts of males by yearly age categories at the district level using the 2000 census data allocated to districts.[10] The rate used was the average prevalence rate for calendar years 2001 to 2002. The unweighted rates ranged from .14 to 3.11 (mean = 1.4, SD = .82, median = 1.4).[11]

Violent Crime Rates

Reported violent crime data for the period January 1, 2002 through June 30, 2003 were obtained and geocoded (Lawton, Taylor, and Luongo 2005). All four counts (homicide, sexual assault, robbery, and aggravated assault) were summed, converted to one rate per 100,000 population, and then converted to an annualized rate by multiplying by .67 (12/18). The period reflected in the violent crime data ended about two months before the telephone survey was fielded.

Table 1. Descriptive Statistics for Outcome Variable, and Individual- and District-Level Predictor Variables

Dependent Variable: Groups of unsupervised teenagers. (Do you think this is a serious problem, somewhat of a problem, a minor problem, or not a problem at all in your neighborhood?)

	n	Weighted *n*	Percentage (from Weighted *n*)		
Serious problem (1)	98	89.57	26.19		
Somewhat of a problem (2)	76	78.93	23.08		
Minor problem (3)	47	46.51	13.60		
Not a problem at all (4)	121	127.00	37.13		
Total	342	342	100		
	n	Mean	Std. Dev.	Min	Max
Predictors: Individual level					
White (= 1; non-White = 0)	331	.53	.50	0	1
Female (= 1; male = 0)	342	.59	.49	0	1
Married (= 1; other = 0)	340	.41	.49	0	1
Child/Children in household (= 1; 0 = none)	342	.38	.49	0	1
Owner occupied (= 1; rented = 0)	341	.67	.47	0	1
Age (years)	342	47.93	16.20	19	90
Household size	342	2.65	1.51	1	12
Highest degree earned	342	4.09	1.92	1	8
Household income (logged)	342	10.44	.83	8.52	11.74
Perceived neighborhood size	331	3.66	1.52	1	6
Household income ($; shown for descriptive purposes only)	342	45,275	30,988	5,000	125,000

(continued)

Table 1 (continued)

Dependent Variable: Groups of unsupervised teenagers. (Do you think this is a serious problem, somewhat of a problem, a minor problem, or not a problem at all in your neighborhood?)

	n	Mean	Std. Dev.	Min	Max
Predictors: Police district level					
Status index	23	.00	.90	−1.29	1.55
Status index, partialled on delinquency	23	.00	.98	−1.65	2.78
Status index, partialled on violent crime	23	.00	.98	−.76	3.42
Male serious delinquency prevalence rate per 100 boys aged 10-18, average of 2001-2002	23	1.40	.82	.14	3.11
Delinquency rate, partialled on status	23	.00	.98	−1.91	2.44
Reported violent crime rate	23	1569.57	779.16	229.47	2997.59
Reported violent crime rate, partialled on status	23	.00	.98	−1.05	3.30
Stability index	23	57.37	10.33	31.37	69.20
Percentage of African American	23	43.23	32.61	3.07	94.47
Percentage of non-White	23	55.08	30.39	11.87	96.75
Predictor: Spatial lag					
Comprehensive spatial lag: teen groups serious problem	23	.00	1.00	−2.90	.71

Note: Statistics for individual level predictors from 2003 survey of Philadelphia households. Weighted statistics shown. See text for categories on neighborhood size item and education. Statistics for district-level predictors based on unweighted data. Demographic data at district level from 2000 census block group data allocated to police districts. See text for details on delinquency data, partialled indices, and spatial lag variable. Delinquency rate partialled on status, and violent crime rate partialled on status, are both *z* scored.

District Demographic Composition

Decennial 2000 census data at the census block and census block group (CBG) levels were allocated to police districts (n = 23). When CBGs crossed district boundaries, CBG counts were allocated based on the proportion of the population in the district.

An SES index (Cronbach's $\alpha = .90$) was based on four 2000 CBG variables: median household income, median house value, the percentage of the population above the poverty line, and the percentage with at least a completed college degree. The four *z* scored items were then averaged.

A stability index (Cronbach's $\alpha = .81$) used the average of two percentages: owner-occupied households, and households at the same address since at least 1995.

To capture racial composition the percentage of the population which was African American in the 2000 Census was used (unweighted mean = 43 percent, unweighted median = 28 percent, range = 3 to 94 percent).[12]

The above three indicators captured what are widely recognized as the three fundamental structural demographic dimensions of community (Golledge and Stimson 1997:137-140): status, race/ethnicity, and stability/familism.[13]

Partialled SES, Partialled Delinquency, and Partialled Violent Crime

Given their high correlation with one another, delinquency and crime were explored in separate models. It also was necessary to separate each of these from SES given sizable correlations. In order to test simultaneous impacts of SES and delinquency, a partialled version of each—delinquency partialled on SES, SES partialled on delinquency—was created, *z* scored, and retained. In order to test the simultaneous impacts of violent crime and SES, a partialled version of each was similarly created, *z* scored, and retained.

Each of these partialled variables aligned with one view about the connections between community structure and delinquency, or community structure and crime, over time. Crime can shape (Taylor 1995) as well as reflect (Pratt and Cullen 2005) community demographic structure. The same is true of delinquency (see, respectively, Bursik (1986) and McKenzie (1921)). Entering partialled crime or delinquency acknowledged the impact of community fundamental demographic structure on delinquency or crime and sought to identify crime or delinquency influences separate from that dynamic. Entering partialled SES acknowledged the impacts of crime or delinquency on community demographic structure.

Comprehensive Spatial Lag Variable

The outcome was significantly spatially autocorrelated across districts (Global Moran's $I = .26$, $p = .05$; Table 1).[14] The spatial patterning of the outcome, delinquency rates, SES, and partialled delinquency rates are described and mapped in an online appendix at www.rbtaylor.net/teen_groups.pdf. The hierarchical linear models (HLM) analysis of variance (ANOVA) ordered probability model (Table 2, model A) confirmed that differences across districts on the outcome were significant, $\tau 00 = .376$; $\chi^2(df = 22) = 60.35$; $p < .001$; intraclass correlation coefficient (ICC) = .04.[15] The relatively strong average reliability (.59) of the district-level cumulative probability suggested moderately strong consistency across residents in the same district on this outcome.

To control for spatial patterning, a comprehensive spatial lag variable was constructed.[16] A higher score indicated more districts nearby where residents were more likely to view unsupervised teen groups as more problematic.

The spatial lag variable (Table 2, model B) shaped community variation on the outcome ($p < .01$), explaining slightly less than half (41 percent) of the ecological variation. Residents in communities living nearer to districts where residents saw teen groups as more problematic felt similarly. Since this spatial lag impact remained significant in all the models, it suggests dynamics taking place at a broader ecological scale (e.g., city sector) were shaping residents' average views.[17] Significant ($p < .001$) variation across districts remained to be explained.

For descriptive purposes, we also note that delinquency rates, like perceptions of troublesome teen groups, were spatially autocorrelated (global Moran's $I = .49$, $p < .01$). As the maps in the online supplement show, there appeared to be substantial spatial correspondence between perceptions of troublesome teen groups and delinquency rates.

Centering

Individual-level predictors were not centered in order to control for compositional effects. District-level predictors were grand mean centered.

Statistical Power Adjustments for District-Level Tests

Models were based on 23 areal units. To approach the recommended .80 level of statistical power for district-level impacts, a two-tailed α level of $p < .20$ was adopted. Estimated statistical power was .64 for large effects.

Table 2. Predicting Perception that Unsupervised Local Teen Groups are a Serious Problem: Delinquency Rates

	Model A - ANOVA (null)			Model B - Spatial Lag Only					Model C - Delinquency					Model D - Status				
	b	*SE*	OR	*b*	*SE*	OR	*t*	*p*<	*b*	*SE*	OR	*t*	*p* <	*b*	*SE*	OR	*t*	*p* <
District-Level predictors																		
Delinquency rate									.519	.179	1.681	2.898	.01	—				
Delinquency rate, partialled									—					.194	.145	1.214	1.340	.20
Status									—					−.622	.114	.537	−5.443	.001
Status, partialled									−.265	.129	.767	−2.048	.10	—				
Stability									.032	.012	1.033	2.646	.05	.036	.013	1.036	2.702	.05
Percentage African American									−.004	.004	.996	−1.127	ns	−.007	.004	.993	−1.793	.10
Spatial lag				.431	.103	1.539	4.173	.01	.243	.080	1.275	3.036	.01	.210	.090	1.234	2.330	.05
Intercept (γ 00)	−.870	.184	.419	−.876	.153	.416			−4.350	1.953	.013			−3.750	1.858			
Threshold Δ(2)	1.142	.118							1.142	.118				1.142	.118			
Threshold Δ(3)	1.759	.150							1.759	.150				1.757	.149			
Level 2 variance (T00)	.3757			.2199					.0004					.0005				
Chi-squared	60.35	(p < .001)		42.55	(p < .001)				9.395	(ns)				10.61	(ns)			

Note: Multilevel ordinal probability models using weighted Philadelphia data (n = 342 respondents within 23 police districts). Higher score on the outcome means higher cumulative probability that unsupervised teen groups were seen as a more serious problem in the community. Individual level predictors are uncentered, and thus control for compositional effects. Results for individual level predictors not shown. They included the following dummy variables: White (= 1), female (= 1), married (= 1), one or more children (= 1), owner occupied household (= 1). They also included: perceived neighborhood size, highest degree obtained, household size, age, and household income (logged). For these individual level predictors, the only significant coefficient was for married ($b = -.63$ (.23), OR = .53, $t = -2.70$, $p < .01$) with these households being *less* likely to perceive unsupervised teen groups were a serious problem in the neighborhood. District level predictors grand mean centered. Chi-squared values reflect significance of remaining ecological variation on the outcome.

Results

Impacts of Delinquency

Those in communities with higher earlier delinquency rates viewed local unsupervised teen groups as more problematic (odds ratio [OR] =1.681; $p < .01$; Table 2, model C). Each standard deviation (.82) increase in the delinquency rate increased the odds of seeing these groups as more rather than less problematic by 55.9 percent.

If only the portion of delinquency *net* of community SES was entered, the impact of delinquency persisted albeit at a reduced significance level (OR = 1.21; $p < .20$; Table 2, model D). Each standard deviation increase (.98) in partialled delinquency made it 19 percent more likely that an average resident viewed local unsupervised teen groups as more rather than less problematic.[18]

This last finding suggests there is some merit in the meaning assigned to the outcome by incivilities and disorganization models and may provide insight into the self-propagating features of high-delinquency areas (Shannon 1991). Higher earlier delinquency prevalence rates may mean more local youth who previously either defied indigenous attempts to redirect their behaviors or simply received less adult supervision. Those same teens, in the months before the survey was fielded, may have been involved in forming or steering groups of local youth toward activities that were annoying to residents or local businesses, or potentially destructive or violent.

Impacts of Community SES

As expected, community SES, whether it was partialled on delinquency or not, dampened neighborhood-level perceptions of troublesome local teen groups (model C: OR = .77, $p < .10$; model D: OR = .54, $p < .001$). For each additional standard deviation decrease in SES, residents were anywhere from 42 percent to 21 percent *more* likely to say that local teen groups were creating a *more* serious problem for their community.

This result is in line with the basic systemic model of crime, incivilities models that consider structural inequalities, and a political economy perspective. This is the first time that an ecological impact of community SES on perceptions of unsupervised teen groups has been observed *net* of recorded serious delinquency. Implications are addressed in the discussion.

Impacts of Violent Crime

Using reported violent crime instead of delinquency generated a closely comparable pattern of results (Table 3).

Table 3. Predicting Perception that Unsupervised Local Teen Groups are a Serious Problem: Violent Crime Rates

	Model C—Violence					Model D—Status				
	b	*SE*	OR	*t*	*p* <	*b*	*SE*	OR	*t*	*p* <
District-level predictors										
Violent crime rate	.0007	.0001	1.0007	5.44	.001	—	—			
Violent crime rate, partialled	—	—				.2429	.1268	1.2750	1.92	.10
Status	—	—				−.6173	.1045	.5394	-5.91	.001
Status, partialled	−.1730	.1160	.8411	−1.49	.10	—	—			
Stability	.0370	.0123	1.0377	3.01	.01	.0370	.0123	1.0377	3.01	.01
Percentage of African American	−.0048	.0034	.9952	−1.43	.20	−.0048	.0034	.9952	−1.43	.20
Spatial lag	.1464	.0999	1.1577	1.47	.20	.1464	.0999	1.1577	1.47	.20
Intercept (γ 00)	−4.9923	2.0119	.0068			−3.8287	1.9030	.0217		
Threshold Δ(2)	1.1446	.1187				1.1446	.1187			
Threshold Δ(3)	1.7577	.1504				1.7577	.1504			
Level 2 variance (T00)	.0004					.0004				
Chi-squared	10.49	(ns)				10.49	(ns)			

Note: Multilevel ordinal probability models using weighted Philadelphia data (n = 342 respondents within 23 police districts). Higher score on the outcome means higher cumulative probability that unsupervised teen groups were seen as a more serious problem in the community. Individual level predictors are uncentered and thus control for compositional effects. Results for individual level predictors not shown. They included the following dummy variables: White (= 1), female (= 1), married (= 1), one or more children (= 1), owner occupied household (= 1). They also included: perceived neighborhood size, highest degree obtained, household size, age, and household income (logged). For these individual level predictors, the only significant coefficient was for married (b = −.62 (.24), OR = .54, t = −2.59, p < .01) with these households being *less* likely to perceive unsupervised teen groups were a serious problem in the neighborhood. District level predictors grand mean centered. Chi-squared values reflect significance of remaining ecological variation on the outcome.

In communities with higher violent crime rates, it was more likely local teen groups would be seen as more problematic (Table 3, model C: OR = 1.0007, $p < .001$). Each standard deviation increase in the reported violent crime rate increased the odds of these groups being viewed as more (rather than less) troublesome by (.0007 × 779.16 =) 54.5 percent. This impact supported the idea that crime breeds more social incivilities, and/or erodes local oversight of these teen groups (Grinc 1994). Even after the overlap between crime and SES was removed, crime impacts remained significant albeit at a lower α level (Table 3, model D: $p < .10$, OR = 1.275, $p < .10$).[19] Each standard deviation increase in partialled crime increased the odds of viewing teen groups as more rather than less problematic by (.275 × .98=) 26.9 percent. These results are the first of which these authors are aware finding ecological impacts of crime on this outcome, net of adjacency, compositional, and other structural effects.

It is interesting to compare the impacts of violent crime net of SES to male serious delinquency net of SES. Even though the outcome referred specifically to teen groups, the partialled crime impact was comparable to the partialled delinquency impact. This could arise from three different sources. In the study setting, areas high on partialled delinquency were likely also to be high on partialled violent crime (curvilinear r squared = .75). Alternatively, it could be that the teens involved in these troublemaking groups were similarly involved in serious violent crime nearby, something that is a longstanding concern in some Philadelphia neighborhoods (Podolefsky 1983). Or, finally, this could be an ecological counterpart to recent work suggesting that residents are unable to distinguish between incivilities and "real" crimes in their locales (Gau and Pratt 2008).

Impacts of Community SES Net of Violent Crime

Impacts of SES net of violent crime were closely comparable to the SES impacts after controlling for delinquency (Table 3, model C: OR = .84; $p < .10$). Lower SES, apart from its link to either reported crime or delinquency, elevated residents' shared concerns about the activities of local teen groups. Possible reasons are discussed below.

Other

In all of these models, concern about teen groups was stronger in more stable communities ($p < .05$ in delinquency models; $p < .01$ in violent crime models). Although these results directly contradicted the revised

systemic disorganization model, they have been previously observed (Sampson and Groves 1989). Possible reasons for this pattern are taken up in the discussion.

At the individual level, only one compositional factor proved significant (results not shown). Married respondents saw local teen groups as less problematic, even after controlling for the presence of children in the household. In a married couple household, two independent adult sources of information about local events are available. Perhaps this reduced concern about these teen groups.

In all of the models except the unpartialled delinquency one, residents living in *more* predominantly African American communities were *less* likely to see local teen groups as troublesome.[20]

Discussion

As anticipated by both the revised systemic social disorganization model (Sampson and Groves 1989), multiple versions of the incivilities thesis (Skogan 1990; Wilson and Kelling 1982), and recent works calling for more investigation of crime's impacts on community processes (Messner et al. 2004), in communities with higher delinquency rates or higher violent crime rates residents reported that unsupervised teen groups were a more serious neighborhood problem. Effects persisted, albeit at adjusted α levels, when only the portion of violent crime or delinquency independent of community SES was entered. The latter analytic set up was theoretically congruent with the view that demographic structure shapes violent crime or delinquency more than the reverse. Results replicated using nonhierarchical probability models recognizing clustering within communities.

Findings suggest that high violent crime or delinquency rates set in motion or maintain endogenous processes within communities, making it harder to supervise, suppress, redirect, or caution independently operating groups of teens. Community-level awareness of these teen groups arises from weakened socialization or supervisory capacities according to the revised systemic disorganization model, or more diffuse underlying cross-community differences in disorder and structural inequality according to the incivilities thesis and political economy perspectives. Nevertheless, the current results support either interpretation and contribute to the ongoing process of establishing the construct validity—the meaning—of cross-community differences on this survey item. More broadly, the current delinquency results shed light on how "delinquent neighborhoods generate continuities in delinquency and crime" (Shannon et al. 1988: 112).

Of course perceptions of unsupervised teen groups, even when they are shared across community members, are different from the presence of such groups. Ideally future works could combine observations of such groups with survey-based reports in multimethod indices.

The current results also raise questions for both the revised systemic disorganization and incivilities models. Most importantly for both, why should community SES continue to influence shared perceptions of troublesome teen groups after delinquency or violent crime have been taken into account? Partialled SES, the portion independent of crime or delinquency, remained powerfully influential.

This finding argues for a broader integration between the two theories considered here and the work of political economists (Lefebvre 1974; Logan and Molotch 1987). Although the systemic model has been revised in this direction with Bursik and Grasmick's (1993) incorporation of public control dynamics, further conceptual development seems needed. *If* lower community scores on partialled SES reflect lesser abilities to obtain external resources, the current work suggests that public control interacts with within-community parochial control (Hunter 2003) dynamics in complex ways. The clean separation implied by the private/parochial/public tripartite division of control dynamics may need further elaboration.

Bursik and Grasmick's (1993:39) "basic systemic crime" model indicates how relational control may shape public control. But it does not anticipate that a lack of public control might undermine parochial control, a point implied by the partialled SES impacts observed here. In the language of political economists (Logan and Molotch 1987), use value and exchange value intertwine in complex ways, and we need to know more about how exchange value relates to community supervision of teens, the production of local incivilities, and community crime and delinquency rates. The significance of the spatial lag variable in many models argues similarly for paying closer attention to these internal/external intersections.

A concern specific to the revised systemic disorganization model arises from another feature of the present results. Concern about unsupervised teen groups was *higher* in more stable locales. Previous tests of this model have observed similar results (Sampson and Groves 1989; Veysey and Messner 1999). This is exactly counter to what is expected on the basis of a "traditional" social disorganization framework (McKenzie 1921). We suggest two possibilities. Stability in urban neighborhoods may mean something very different now than it did 60 or 80 years ago. The variable is the same but its

meaning may have shifted (Abbott 2001:64-96). Or, perhaps in more stable locales residents worry more about the *long-term* impacts on neighborhood quality of unsupervised teen group activities and are thus more likely to define those groups as problematic. These speculations aside, given the consistency of the "opposite" stability impacts, this incongruent finding deserves exploration.

Limitations and Strengths

Naturally, the current study has limitations. In essence, this is a case study because it is limited to just one municipality. Despite the correct time ordering of predictors and outcomes, essentially the study is cross-sectional. Results may or may not apply to a longitudinal design. Because the study looked at an individual level outcome to control for compositional effects, nonrecursive crime-disorganization links could not be examined. Results may or may not be specific to the type of areal units used—police districts. The modifiable area unit problem (Openshaw and Taylor 1979) and aggregation biases (Hannan 1991) might generate different results with different units of analysis. The use of police districts required inflating α levels to obtain minimally acceptable levels of statistical power for district-level effects, but on the positive side allowed creating two-year average serious male first-time delinquency prevalence rates which were *all* above zero. All of these above limitations are in essence questions of external validity, not of internal validity. As such, they can *only* be answered by future work.

Perhaps partially offsetting the above concerns are study strengths including finding closely comparable impacts for both violent crime and delinquency; modeling appropriate to the ordinal properties of the response categories of the outcome; using multilevel models to separate ecological from compositional effects; comprehensively controlling for adjacency effects; a telephone survey producing a representative sample of Philadelphia households; and a replication of key results using nonhierarchical probability models.

Closing Comment

High-delinquency prevalence rates and high-violent crime rates create many problems for communities. One of those appears to be heightened community concerns about troublesome, unsupervised local teen groups. The dynamics facilitating such groups, perhaps protecting them from supervision or intervention, may contribute to the persistence of relatively

high delinquency or violent crime rates in these communities. Previous ecological interpretations of this key community concern by the revised systemic disorganization model, and the "broken windows" version of the incivilities thesis, receive support from current findings of crime and delinquency impacts. Impacts of community SES net of crime or delinquency, and of the spatially lagged outcome, both point toward further work needed on the intersection of public and parochial control.

Acknowledgments

Portions of this research were presented at the annual meetings of the American Society of Criminology, November, 2006, in Los Angeles. Programming assistance from Jerry Ratcliffe and weighting assistance from Lillian Dote are both gratefully acknowledged. Ron Davis, a handful of conscientious reviewers and the editor provided numerous insightful suggestions on earlier drafts.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

Funding

Collection of the survey data described here was funded by the Office of the Provost, Temple University; the Office of the Vice President for Research and Graduate Studies, Temple University; and the William Penn Foundation. Philadelphia Department of Human Services permitted access to the delinquency data. Analysis of the delinquency data was supported by a grant to the first author from the Open Society Institute through a Temple University subcontract with John Jay College of Criminal Justice, Todd Clear, Principal Investigator. Manuscript revisions were supported by a Temple University research and study leave granted by the Temple University Office of the Provost, Lisa Staiano-Coico, Provost. This project would not have been possible without visionary support from the Philadelphia Area Survey from both Ira Schwartz (former Provost, Temple University) and Ken Soprano (former Vice President for Research and Graduate Studies, Temple University). Opinions stated here are solely the authors, and reflect neither the opinions nor the official policies of anyone else or any organization, including all those named above.

Notes

1. Call attempts were made during daytime and evening hours on weekdays and weekends. Most interviews were completed before six call attempts. Average completion time was 35 minutes. The survey ranged over a broad number of topics including demographics, perceptions of the community, the police, government, and local problems.

2. Low response rates suggest only *potential* non-representativeness; identical surveys with markedly contrasting response rates can generate almost identical patterns of results (Keeter et al. 2000). Non-representativeness is more of an issue than nonresponse (McCarty et al. 2006). *Actual* representativeness was captured for the entire PAS by comparing respondent demographic profiles to 2000 census data.
3. Discrepancies (greater than four percent) were as follows: the PAS overrepresented women by 6 percent and overrepresented African Americans by 6 percent. All age categories closely matched save for those 71 and older who were underrepresented by 8 percent.
4. Randomly sampling one adult from all Philadelphia households in the 2000 Census Public Use Microdata Sample (PUMS) file, a 2 (Gender) $\times$ 2 (Race: White/non-White) $\times$ 2 (Education: $\leq$HS/>HS) table was created. Sample percentages in each cell were compared with PUMS percentages. Before weighting, the PUMS/interview discrepancies were greater than 5 percent for only two of the eight cells in this table (Dote 2006:83): White male, more than high school (PUMS /interviews = 11 percent /5 percent); non-White females with no more than a high school education (PUMS/ nterviews = 19 percent /31 percent). Case weights were constructed and applied. Initial weights were modest (.61 to 2.27) before taking multiple phone lines into account, and in only one cell above 2.0 (White males with better than high school education). After weighting, the sample/PUMS discrepancies in the 2 $\times$ 2 $\times$ 2 table ranged from -2 to 4 (average = .25 percent).
5. Because of the precision weighting and Empirical Bayes estimation in multilevel modeling, it is not the case that districts with a small number of respondents are unduly influential or unduly ignored (Raudenbush and Bryk 2002:38-56, 439; Gelman and Hill 2007:276). Nor was it the case that *n* of respondents per district correlated significantly (Kendall Tau *b*) with the district level error term. Nevertheless, as a further check, analyses also were run using single-level ordinal (ordered logit) models (Long and Freese 2006:183-192), with each district's scores appended to each respondent, and within-district nonindependence of error terms recognized with the Huber/White robust clustering option (White 1982). Odds ratios and significance levels were very close to those reported here. Significant discrepancies are noted individually. One would not expect the two procedures to produce exactly matching results for several reasons, including the Empirical Bayesian estimation in the HLM models.
6. Two police districts with no residential populations, Fairmount Park and the airport, were not included.
7. Ordinal models are recommended for items with response formats like those in the current outcome (Winship and Mare 1984). Tests of the assumption of parallel regression (Long and Freese 2006:197-200) in an ordered logit model

controlling for clustering and entering individual-level predictors confirmed that it was appropriate to treat the outcome as ordinal rather than nominal. The likelihood ratio test of proportionality of odds across response categories was nonsignificant, χ^2 ($df = 10$) = 14.22; $p > .15$.

8. For more details on Philadelphia's juvenile justice system see Taylor et al. (2009). "Mandated to treatment" includes any court decision assigning more than straight probation, including assignment to high- or medium-security programs. Generally, those first-arrest delinquents mandated to treatment programs committed serious offenses (Fader et al. 2001). The focus on serious delinquents, that is, mandated to treatment programs, was a function of data availability but also made sense conceptually. Those juveniles involved in various teen groups creating sufficient problems to affect the awareness of many residents in a large community are more likely to be engaging in serious offenses. The focus on prevalence rates (i.e., first-time delinquency) rather than incidence rates ensures that the delinquency indicator is not shaped by previous criminal justice processing of those specific juveniles (cf. Hindelang, Hirschi, and Weis 1981).
9. The focus is on males only; given the small number of female first-time serious delinquents relative to males, females' year-to-year community-level prevalence rates will be less consistent, creating an indicator with much lower interyear reliability. The focus on only male serious first-time delinquents here does not deny that serious female delinquents also can contribute to community-level differences in perceptions of troublesome local teen groups (Campbell 1984).
10. With "aging" the *n* of 9-year-old males in 2000 becomes the *n* of 10-year-old males in 2001 and the *n* of 11-year-old males in 2002, for example.
11. A variable number of male teenagers could not be included in models with the full or partialled delinquency rate because the count is used to create the denominator for that rate. Entering the number of males aged 10 to 18 in 2000 as a variable in a multilevel model with delinquency and crime rates excluded showed no significant impact (results not shown). The zero-order nonparametric correlation (Kendall's Tau *b*) between the number of males and perceptions of troublesome teen groups was .04 (ns).
12. Of course, Philadelphia's racial and ethnic composition is complex and includes significant Hispanic and Asian populations. The more global White/non-White distinction was used at the individual level given low numbers of respondents in some districts. The percentage of African American was used at the district level because African Americans are the city's largest non-White racial group. Further, this district-level race indicator avoided potential multicollinearity with the individual-level race/ethnicity variable.

13. It was not possible to include the variable percentage of single-parent households with children because it correlated so strongly with the fundamental structural dimensions already identified (.711 with percentage of African-American, −.889 with the status index). Nevertheless, to explore further, this variable was predicted with the three demographic dimensions already described and the spatial lag variable ($R^2 = .861$). The resulting standardized residual had a nonsignificant ($p > .20$) impact on the outcome. The significance levels of other predictors were not altered.
14. This is the global Moran's I for the Empirically Bayes adjusted (via HLM) log of the odds ratio of saying "serious problem" vs. other less serious responses. About the same degree of global spatial autocorrelation appeared if the reference category used was "not at all" vs. "more serious responses" (Global Moran's $I = .25$, $p = .05$).
15. Technically, the ANOVA model confirmed significant variation beyond sampling error in the log odds of a resident responding "serious problem" when asked about groups of unsupervised teenagers, versus any less serious response.
16. This used district centroids and inverse distance weighting of the Empirically Bayes adjusted district proportion of residents who saw unsupervised teenage groups as a serious problem in their neighborhood. Following the recommended two-stage instrumental variables procedure (Land and Deane 1992) an error-free instrument taking all districts into account was constructed. The instrument explained 67 percent of the variation in the spatial potential. It was retained in z scored form.
17. In the delinquency models, including the nonhierarchical ordered logit models, the spatial lag was always significant at the conventional α level ($p < .05$, two tailed), or very close to it ($p = .052$, model D, ordered logit nonhierarchical model). In the violent crime hierarchical models, the spatially lagged predictor was significant at the adjusted α level ($p < .20$), but nonsignificant ($p = .28$) in the nonhierarchical, ordered logit models, even though the odds ratio (OR = 1.14) in the nonhierarchical model was almost equivalent to the one seen in the corresponding hierarchical model.
18. In the nonhierarchical models, the odds ratios and significance levels were closely comparable.
19. In the nonhierarchical ordered logit model OR = 1.22; $p = .11$.
20. This multivariate relationship was opposite the bivariate one. It appeared through a series of stepwise models (results not shown) that the impact of racial composition on the outcome changed sign after district SES was entered. Inspection of the standard error for the race variable suggested this was *not* classic and undesirable "beta bounce," but rather a suppression effect due to the racial composition-status connection.

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Bios

Ralph B. Taylor is a Professor of Criminal Justice at Temple University. Current projects include predicting municipality crime counts, short term changes in intraurban crime risk surfaces, and communities and crime metamodels. Publications are listed at www.rbtaylor.net/pubs.htm.

Philip W. Harris received his Ph.D. from the School of Criminal Justice at SUNY Albany in 1979. His research has focused on correctional decision making, program evaluation, and juvenile justice policy. His recent publications have appeared in the Journal of Youth and Adolescence, Criminology, Justice Quarterly, Criminal Justice and Behavior.

Peter R. Jones is Senior Vice-Provost for Undergraduate Studies and Professor in the Department of Criminal Justice, Temple University. His research involves alternatives to incarceration, pretrial decision making, police corruption, racial profiling and evaluation of juvenile justice treatment programs.

R. Marie Garcia is a Social Science Analyst at the National Institute of Justice. Her portfolio includes research on institutional and community corrections and evaluations of the use of technologies in the criminal justice system. She received her doctorate degree in Criminal Justice from Temple University in 2008.

Eric S. McCord is an Assistant Professor in the Department of Justice Administration at the University of Louisville. His research interests include the spatial analysis of crime, especially in reference to land use, CPTED, and problem-oriented policing.