RACE, ETHNICITY, AND THE SPATIAL PATTERNING OF CRIME

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How do race and ethnicity play into the patterning of crime in the United States? In this paper, we seek to provide some answers to this broad question by examining the ways in which the social structural conditions of neighborhoods and the spatial patterning of these conditions influence differential rates of crime in racially and ethnically distinct local areas. Our theoretical and empirical approach draws on the notion that racial and ethnic inequality in crime is rooted in the diverse social and economic positions of Blacks, Whites, Latinos, and other groups in U.S. society (Krivo and Peterson 2000). Overall socioeconomic inequality combines with residential segregation by class, race, and ethnicity to place groups in local contexts that are highly differentiated by many of the common sources of involvement with crime--levels of poverty, family structure, employment, residential stability, and the like. For example, African American communities typically have higher levels of detrimental social conditions such as poverty, bad jobs, and poor schooling. Conversely, White neighborhoods have considerably more of the most advantageous resources of society including high income, advanced education, and higher status jobs. Such differences are often considered to be the sources of higher levels of crime in Black than White neighborhoods.

Yet even in a highly racially and ethnically stratified society such as the U.S., group differences in community circumstances are not constant. Black, White, and Latino communities sometimes parallel one another in levels of crime. How can we understand the observed racial inequality *and* equality in crime in the U.S.? When, under what circumstances, and why are crime patterns for different racial groups similar or dissimilar? Are the levels and sources of

crime for various groups comparable when the diverse populations are similarly situated? Here, we will explore these questions for neighborhoods in two cities with large non-Hispanic White, non-Hispanic Black, and Hispanic populations--Chicago and Dallas. These two cities are examined because they have predominantly Black and Latino neighborhoods that exhibit lower *and* higher levels of poverty and other disadvantages, a condition that is essential for understanding the contribution of race/ethnic dissimilarity *and* similarity in social circumstances to crime. We compare local areas within these two cities that are predominantly White, Black, and Hispanic, but also incorporate comparisons with neighborhoods that are mixed Hispanic and Black and more broadly integrated.

Our focus in the current analyses will be on understanding the influence of the spatial patterning of structural disadvantage, immigration, and community investments (e.g., mortgage loan patterns) for violent crime in these diverse types of neighborhoods. In earlier work (Krivo and Peterson 1996), we have explored the impact of structural disadvantage within neighborhoods on levels of violent and property crime for Columbus, Ohio. Our results demonstrated that crime rates approach one another in White and Black neighborhoods when community structural conditions are comparable, although rates of violence are still somewhat higher in African American than White areas (see also McNulty 2001). In that paper, we suggested, but did not explore, the possibility that the remaining difference in crime is attributable to the spatial proximity of extremely disadvantaged African American neighborhoods to one other; White disadvantaged areas are dispersed throughout the city.

Other research also indicates that the spatial patterning of structural circumstances is important for understanding the distribution of local community crime and other social outcomes

(Heitgerd and Bursik 1987; Morenoff 2003; Morenoff, Sampson, Raudenbush 2001; Sampson, Morenoff, and Earls 1999). For example, communities that are disadvantaged and surrounded by other highly disadvantaged neighborhoods may be less able than those near middle class areas to garner the informal and formal control needed to lower crime. They may also have more difficulty obtaining investments that stabilize the community and thereby help reduce crime. Relatedly, Patillo-McCoy (1999) shows how middle class African American neighborhoods, that are likely to be near less advantaged areas, face challenges in keeping crime and other social problems out of the community. These spatial dynamics will be systematically examined here for Chicago and Dallas neighborhoods to evaluate whether spatial inequalities across racially and ethnically distinct communities are a source of group differences in urban neighborhood crime patterns.

We will make an additionally important contribution by explicitly examining these relationships for a diverse set of race-ethnic neighborhood types--White, Black, Hispanic, Black-Hispanic, and integrated. In light of dramatic patterns of Black-White residential segregation and large observed aggregate differences in crime between African Americans and Whites, most research on communities and crime has been limited to comparisons of these two racial groups. However, studying just two racial groups provides a limited understanding of the interrelationships among race/ethnicity, community structure, and crime in an increasingly ethnically diverse society such as the U.S. Latinos have now surpassed Blacks in total size, and like African Americans, they are often disproportionately represented among the disadvantaged reflecting both heavy immigration and the race/ethnic structure of society. However, patterns of crime among Hispanic groups are not always commensurate with their levels of disadvantage

(Lee and Martinez 2002; Lee, Martinez and Rosenfeld 2001; Martinez 2002). How do we explain this pattern? Is it accounted for primarily by the role of immigrant communities and family connections for these groups, or by the spatial patterns of immigration, disadvantage, or patterns of community investment? What relevance do these relationships have for the Black-White and integrated neighborhoods?

In order to explore these issues, we have compiled 2000 data for 806 census tracts in Chicago and 265 tracts in Dallas. Across the two cities, there are sufficient numbers of each of the race-ethnic neighborhood types: 204 White, 353 Black, 128 Hispanic, 87 Black-Hispanic, and 299 integrated. The data for Chicago and Dallas include counts of reported incidents of violent (homicide, robbery, and aggravated assault) index offenses for census tracts for circa 2000 obtained from the police departments collected as part of the National Neighborhood Crime Study. These are combined with 2000 census data and Home Mortgage Disclosure Act (HMDA) loan data for tracts. We will explore the spatial relationships using Exploratory Spatial Data Analysis, mapping, and spatial modeling techniques (Anselin 1988, 1995).

DATA AND METHODS

Sample and Data. Our analyses examine differences in violent index crime rates across neighborhoods of varying race/ethnic composition for census tracts in Chicago and Dallas for 2000. Across the two communities there are a total of 1,203 census tracts that are fully or partially within the city boundaries. Our analysis includes 1,071 tracts (or portions of tracts) with at least 300 persons within the city.[1] These include 806 neighborhoods (census tracts) in Chicago

and 265 in Dallas. Using a minimum size of 300 allows us to construct reliable crime rates and measures of other tract characteristics.

Data for the sociodemographic independent variables are from the 2000 U.S. Censuses of Population and Housing Summary File 3A (U.S. Bureau of the Census 2002). Counts of the Federal Bureau of Investigation's violent Index crimes (homicide, robbery, and aggravated assault) were provided by the Chicago and Dallas Police Departments.[2] In the case of Chicago, the original address-based data for 2000 and 2001 were geocoded and provided to us by Wesley Skogan of the Institute on Policy Research at Northwestern University. Information on crimes in Dallas for 1999-2001 was provided to us directly from the police department as address-based incident data, which we then geocoded to the census tract level.[3] The operationalizations of dependent and independent variables along with their means and standard deviations for Chicago and Dallas are presented in Table 1.

Dependent Variable

Violent Crime Rate. An overall rate for the FBI's serious violent Index crimes (homicide, robbery, aggravated assault) provide the dependent variable. Following common practice, average violent crimes per 1,000 population are calculated to minimize the impact of annual fluctuations and increase the likelihood of having sufficient incidents to construct reliable rates for small areas (Messner and Golden 1992; Sampson 1985, 1987). Due to data availability, these rates are two year averages for Chicago (2000-2001) but three year averages for Dallas (1999-2001).

Independent Variables

Race/Ethnic Composition. To assess how race/ethnic composition of neighborhoods affects violent crime, we include measures that distinguish among neighborhoods that are predominantly White, Black, Hispanic, mixed minority (Black and Hispanic), and integrated. Neighborhoods are defined as predominantly Black, White or Hispanic if the respective group constitutes at least 70% of the tract population (Krivo and Peterson 1996). Areas are designated as mixed minority when the combination of Blacks and Hispanics make up 70% or more of the population (but neither group alone is more than 70%). All other tracts are considered as integrated neighborhoods because there is more of a balance of population groups. We created four dummy variables which contrast predominantly Black, Hispanic, mixed minority, and integrated neighborhoods with predominantly White areas. Across the two cities, the racial composition of the neighborhoods is as follows: 33% Black, 12% Hispanic, 8% minority, 28% integrated, and 19% White.

Structural Disadvantage. A major focus of research on crime is the role of socioeconomic disadvantage. We include an index to capture this factor because of substantial intercorrelations among a number of neighborhood indicators, and following the recommendations and practices of recent analysts (Bursik and Grasmick 1993; Land, McCall, and Cohen 1990; Messner and Golden 1992; Morenoff and Sampson 1997). This index is operationalized as the average of the standardized (z) scores for the following six variables: (1) poverty--percent of the tract population that is below the poverty level; (2) joblessness--the percent of the tract population ages 16-64 that is unemployed or not in the labor force; (3) secondary sector, low wage jobs--percent of the employed civilian population in the tract who are 16 and over with service or other

jobs in the six occupational categories with the lowest average incomes;[4] (4) professional workers--percent of the employed civilian population age 16 and over who have professional or managerial occupations (reverse coded); (5) female-headed families--percent of households in the tract consisting of female headed families; and (6) non-high school graduates--the percent of the tract population age 25 and over who are not high-school graduates. Exploratory factor analysis confirmed that the individual indicators reflect the same underlying construct.

The variables included in the disadvantage index have long been considered to affect levels of crime in aggregate units. Poverty is a straightforward indicator of the economic well-being of the tract population. Joblessness, secondary sector low wage jobs, and professional workers capture aspects of labor stratification that Wilson (1987, 1996) and others suggest contribute to crime and other social dislocations within areas (Allan and Steffensmeier 1989; Crutchfield 1989; Crutchfield, Glusker, and Bridges 1999). Some posit that female headed families is an indicator of the relative presence of adults to supervise neighborhood activities and as such is a reflection of the degree of social disorganization in communities (Sampson 1987; Shihadeh and Steffensmeier 1994).

Prevalence of Immigrants. To examine the role of immigrant composition on violent crime in Chicago and Dallas, we include an index combining the average z-scores for the following three factors: the percent of the tract population that is foreign born, the percent of the tract population that recently (since 1990) migrated to the U.S., and the percent of households within the tract that are linguistically isolated.[5] We construct an index of average z-scores because of substantial collinearity among these immigrant status variables. Exploratory factor analysis confirmed that the three variables form a single construct.

Community Investment. To capture investment in the community, we include a measure of the total dollar amount of residential loans originated in the census tract derived from Home Mortgage Disclosure Act Data for 2000 (Federal Financial Institutions Examination Council 2001). These include loans for single or multi-family home purchases, home improvements, or refinancing. Conventional, Federal Housing Administration, and Veteran's Administration Loans are all included.

Other Independent and Control Variables. We include control variables capturing the role of residential instability (a measure of social disorganization), and males in the crime prone years. Residential instability is a composite index comprised of the average z-scores of rental occupancy (percent of occupied housing units that are renter-occupied), the vacancy rate (percent of all housing units that are vacant), and the mobility rate (the percent of persons age 5 and over in the tract who lived in a different house in 1995). Exploratory factor analysis confirmed that the individual indicators reflect the same underlying construct. Young males is measured as the percent of the tract population that is male and in the crime prone ages (15-24).

Statistical Analyses

We begin by examining whether there is notable spatial clustering of the variables of central interest: violent crime, structural disadvantage, prevalence of immigrants, and community investment. To do so, we compute global Moran's I statistics, local Moran's I values, and Moran scatterplots for each factor (Anselin 1995). The global Moran's I values indicate whether there is significant spatial autocorrelation (i.e., geographic clustering) overall for each of the characteristics. The local Moran's I statistics for each case (i.e., census tract)

show whether there is significant spatial clustering of similar levels of a variable with tracts that are adjacent to it. The Moran scatterplot is a simple way to visually see the strength of such clustering by plotting the value for a given variable (e.g., structural disadvantage) against the weighted average of that variable in contiguous neighborhoods.

Next, we estimate multivariate models of neighborhood violence. The first step is to estimate Ordinary Least Squares regressions with all of our variables. We proceed to test whether there is either significant spatial lag in violent crime (i.e., substantive spatial dependence) or spatial error in this outcome (i.e., due to unmeasured variables). If we detect significant spatial effects in the regression, we reestimate our models incorporating the appropriate spatial structure (see Baller et al. 2001; Messner and Anselin 2004; Messner et al. 1999; Morenoff, Sampson, and Raudenbush 2001; Wooldredge and Thistlethwaite 2003 for examples of applications to crime; for technical discussions see Anselin 1988; Cressie 1993). Comparisons of these results to those of OLS regressions will allow for examination of the role of spatial dependence in explaining the influence of substantive predictors of crime.

RESULTS

The descriptive statistics in Table 1 show that the average tract violent crime rate is substantially higher for Chicago in 2000 at 20.2 per 1,000 than is the case for Dallas which has an average rate of 14.6. The cities also differ somewhat in their racial/ethnic makeup. Considerably more of the neighborhoods in Chicago than Dallas are predominantly African American (39% versus 15%) while substantially more areas have combinations of Hispanics and Blacks in Dallas than Chicago (19% versus 4%). It is also notable that about an equal proportion

of tracts in both cities are integrated. In terms of the key independent variables, structural disadvantage is somewhat more pronounced in Chicago than Dallas neighborhoods. This is true for all indicators except the percentage who have not completed high school where the means are about equal. These differences reflect the larger number of African American neighborhoods in Chicago which have high levels of disadvantage mirroring the position of Blacks in society at large. As might be expected, Dallas neighborhoods typically have somewhat more immigrants regardless of which dimension is considered. Differences in levels of community investment are also evident with mean dollars of residential loans per tract being somewhat higher in Chicago. However, this may reflect the higher cost of housing in Chicago than Dallas; the median value of owner occupied housing is over $40,000 higher in Chicago (U.S. Bureau of Census 2002).

Are violent crime rates and the key structural predictors spatially clustered in ways that might be important for understanding the distribution of violent crime across neighborhoods? Exploratory spatial statistics provide an initial answer to this question. To begin, the *global* Moran's I values for the violent crime rate, disadvantage, immigrant prevalence, and community investment are all positive and significant ($p < .001$) for both Chicago and Dallas. This indicates that tracts with high values of these conditions tend to be located next to communities with similarly high values of these characteristics, and areas with low values tend to have neighbors with low levels of the same characteristics. For example, areas of high crime or disadvantage are clustered together as are communities of low crime or disadvantage.

Because such spatial groupings of neighborhood conditions are unlikely to occur throughout all areas of the city, we examined *local* Moran's I values to assess which tracts have significant clusterings of violent crime, disadvantage, immigrant prevalence, and community

investment. These show that local clusters of each characteristic are evidenced along with large numbers of tracts for which similarity of conditions among neighbors is not significant. Although strong groupings of areas with low violence, little disadvantage, few immigrants, and high levels of community investments through residential loans are seen, the stronger clusterings tend to be for high violence, high disadvantage, many new immigrants, and low levels of investment (seen in Moran's scatterplots, not presented here).

To provide an initial and clearer portrait of how geographic clusters of violence are associated with the distribution of important predictors, Figures 1-4 provide maps of Chicago and Dallas tracts with significant local Moran's I values for violent crime overlayed on neighborhood levels of disadvantage (Figures 1 and 2) and race/ethnic composition (Figures 3 and 4). Figure 1 for Chicago shows two particularly large significant clusters of violence. The first is in a highly disadvantaged section of the south side of the city. This area has consistently high rates of violent crime throughout.[6] The second major violence cluster is in the northwest portion of the city where there are consistently low levels of disadvantage (and low crime rates). Other variably sized groups of similar levels of violence are scattered throughout the city including the west side of Chicago where the central portion of a large section of disadvantage is also marked by a strong significant clustering of violence.

Figure 2 shows violence clusters compared with the racial and ethnic composition of areas. Considering this map in comparison with Figure 1 shows clearly how the spatial interconnections of violent crime are associated with race/ethnic composition *and* disadvantage. The significant cluster of high violence on the south side of Chicago is located within only the highly disadvantaged portion of a larger predominantly Black region of the city. This is also

largely true on the west side. The big group of similarly low violent crime neighborhoods in the northwest part of Chicago is mainly heavily White with low levels of disadvantage. One additional point of note from Figure 2 is that none of the predominantly Hispanic neighborhoods have significant clusters of violence (low or high) even though major parts of these communities are highly disadvantaged.

Dallas shows some differences and similarities to Chicago (Figures 3 and 4). The most notable difference is the virtual absence of a clustering of violence in areas of low disadvantage. There is only one such section comprised of two census tracts. Most of the significant clustering of violence is in the south-central section of the city that evidences high level of disadvantage (Figure 3). Figure 4 shows that this cluster of high violent crime is in a mix of Black and minority neighborhoods rather than being so strongly within the African American community. Similar to Chicago is the fact that, in Dallas, Black areas that have moderate or low levels of disadvantage do not have significant connections of violent crime across adjacent communities. Also, Latino areas do not show geographic groupings in levels of violent crime even though they are almost exclusively highly disadvantaged.

How do these spatial associations affect the relationships between neighborhood conditions and violent crime? The results of OLS and spatial regression models presented in Table 2 address this question. Looking first at the OLS regression results shows that several predictors have significant effects on violent crime in both Chicago and Dallas. Consistent with social disorganization theory, neighborhoods with more structural disadvantage and residential instability have significantly higher rates of violent crime. In addition, areas with higher levels of investments in the form of residential loans have significantly less violence. The percent of

young males has an effect on levels of crime in both cities but it is unexpectedly negative. Two important differences are also found across the two cities. In Chicago, predominantly African American communities have violent crime rates that are significantly higher than rates in White areas net of the factors controlled in this model. This is not the case in Dallas where all differences in violence across race/ethnically distinct neighborhoods are non-significant.[7] Immigrant prevalence also has a significant effect on rates of violent crime in Chicago but not Dallas. Consistent with some other previous research, areas in Chicago with greater concentrations of immigrants have lower levels of violence (Lee and Martinez 2002; Lee, Martinez and Rosenfeld 2001; Martinez 2002).

However, these results do not take into account the spatial patterning of violence described above. Tests for spatial dependence in this model indicate that in both cities spatial *error* dependence is not significant (robust LaGrange multiplier statistics equal 1.264 and 1.699 for Chicago and Dallas, respectively) but spatial *lag* dependence is significant (robust LaGrange multiplier statistics equal 20.621 and 29.562 for Chicago and Dallas, respectively). In light of these results, the two right-hand columns of Table 2 present the parameters from the model reestimated using a spatial lag regression. Several findings stand out in these results. First, the spatial lag parameter (rho) is significant in both places indicating that rates of violent crime in neighborhoods have significant substantive influence on rates in adjacent areas. Second, the spillover effects of violent crime are an important source of the effects on violence of some of the other conditions although these vary across the two places. Most notable is the fact that Black neighborhoods in Chicago do not have significantly higher rates of violence after accounting for spatial influence. This suggests that an important reason why African American communities

have more violence is because of the geographical isolation that results from very high levels of segregation in places like Chicago. Taking into account spatial lag also reduces the effect of disadvantage on violence but the decrease is smaller than for race (the disadvantage parameter is 19% smaller in the spatial lag than the OLS model for Chicago). In Dallas, the influence of structural disadvantage on violent crime is more heavily affected by the spatial association of violence across neighboring areas. Indeed, the disadvantage coefficient is 45% smaller after accounting for spatial influences.

CONCLUSIONS

In view of observed racial/ethnic inequality in crime and associated conditions, in this paper we sought to assess how the spatial patterning of local violence and several key predictors (disadvantage, immigration, and community investments) are interconnected. This issue was examined for two cities, Chicago and Dallas, across neighborhoods that are racially/ethnically distinct: predominantly Black, White, Latino, mixed minority, and integrated. We asked two specific questions: (1) is there significant spatial dependence with respect to violent crime and the noted variables in Chicago and Dallas?; and (2) are observed relationships between structural conditions and violent crime explained by spatial proximity?

The findings are instructive. Consistent with a growing body of research on spatial dynamics and crime, they reveal that violence and criminogenic community conditions are clustered in ways that shed light on the distribution of criminal violence in neighborhoods. Disadvantaged African American areas are the most vulnerable to the clustering of neighborhoods with high levels of violence and criminogenic social conditions. Conversely, less

disadvantaged White areas benefit (in terms of reduced crime) from being surrounded by other similar neighborhoods. While these patterns exist in both Chicago and Dallas, they are less pronounced in Dallas where the clustering of violence in areas that are white and have low disadvantage is quite weak.

These findings have important implications for understanding the sources of neighborhood violent crime and how these might differ across cities in the U.S. We demonstrate that in Chicago where Black-White residential segregation is extremely high and entrenched, spatial effects account for all of the difference in violent crime between African American and White communities that remain after accounting for internal community characteristics. In Dallas, where segregation is somewhat lower and Latino and mixed communities are more common, race/ethnic differences in local violent crime are fully accounted for by internal neighborhood conditions and spatial influences are a more important source of the effects of disadvantage. In both places, spatial processes are not especially important for Latino, mixed minority, and integrated neighborhoods. The differential role of spatial proximity for African American and Latino neighborhoods is salient for it underscores recent observations that the common minority status of these two groups does not necessarily led to equivalent outcomes.

How can we account for these similarities and differences across the two cities? While we suggest that residential segregation may be key to understanding varying patterns across Chicago and Dallas, we could not specifically test this contention or explore other broader contextual factors that shape spatial relations in violence at the neighborhood level. Yet, this study of just two cities suggests the need to conduct research that identifies these macro-structural conditions and examines them across a broad array of types of cities. Additionally

important insights will come from developing strategies of analysis that allow us to incorporate actual measures of the social conditions of surrounding neighborhoods.

Although our findings underscore the role of spatial effects as a source of variation in local violence, internal conditions of communities continue to be important in both Chicago and Dallas. Of special note here is the role of two factors that have not been regularly included in structural analyses of crime--the prevalence of immigrants and residential lending. Residential loans signal investment in the community and according to Vélez (2001) may be thought of as a form of public social control that contributes to crime reduction. Immigrant status of communities is associated with reduced rates of violent crime as others have found (Lee and Martinez 2002; Lee, Martinez and Rosenfeld 2001; Martinez 2002), but in our study this is only the case for Chicago. The reason for this pattern is not clear and further highlights the need for cross-city analyses that include larger samples of places so that researchers can explore the macro-sources of differences in the relationships between community conditions and crime. The recent development of a national neighborhood crime database for a large array of cities will provide researchers with an opportunity to address the issues posed here in greater detail. In the meantime, our analysis for Chicago and Dallas set the stage for expecting both a strong influence of spatial location on crime, and a variable influence of proximity in different types of neighborhoods and urban areas.

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1. There are 108 census tracts across the two cities with populations below 300 (51 in Chicago and 57 in Dallas with 35 of the Dallas tracts having zero population). We also exclude 6 census tracts that are extreme outliers in crime rates and 13 tracts that have large groups quarters populations (over 35 percent). The cut-off for group quarters population was determined by carefully examining the distribution of this variable which showed a clear break between 26 and 36 percent group quarters. Finally, five tracts in Chicago that are predominantly Asian are eliminated because there are too few such neighborhoods to analyze separately.

2. Forcible rape is also considered by the Uniform Crime Reporting system as a violent index offense. Rapes are not included in our crime counts because the Dallas Police Department did not provide addresses for rapes to protect the confidentiality of victims. The Chicago Police Department provided rape counts but in Illinois these were not comparable to UCR definitions.

3. The geocoding hit rate was 98.3%.

4. Occupational categories meeting these criteria in order from lowest to highest average incomes are: food preparation and serving related occupations, personal care and service occupations, farming, fishing and forestry occupations, building and grounds cleaning and maintenance occupations, health care support occupations, and material moving workers. Mean incomes for occupational categories were derived from the 2000 census data available in the Integrated Public Use Microdata Series (Ruggles and Sobek et al. 2003).

5. The Census Bureau defines a linguistically isolated household as one in which all

members 14 years old and over speak a non-English language and also speak English less than very well.

6. This conclusion regarding the levels of violent crime in this cluster was drawn from inspection of a map of violent crime rates that is not presented here.

7. In Chicago, Black, Hispanic, minority and integrated neighborhoods all have significantly higher rates of violent crime than White areas until structural disadvantage is added to the model (results not presented). In Dallas, all but the integrated communities have higher rates before controlling for disadvantage.

Table 1. Operationalizations, Means, and Standard Deviations of the Dependent and Independent Variables for Chicago and Dallas Neighborhoods, 2000

VARIABLES	OPERATIONALIZATION	Chicago		Dallas	
		Mean	st. dev.	Mean	st. dev.
Violent Crime	Average rate of homicides, robberies, & aggravated assaults per 1,000 pop.[1]	20.18	18.18	14.63	17.36
Race/Ethnic Composition	Dummy variables distinguishing the following five neighborhood types:				
White Neighborhood	Tract population is at least 70% non-Hispanic White (reference)	.18		.23	
Black Neighborhood	Tract population is at least 70% non-Hispanic Black	.39		.15	
Hispanic Neighborhood	Tract population is at least 70% Hispanic	.11		.14	
Minority Neighborhood	Tract population is at least 70% non-Hispanic Black and Hispanic	.04		.19	
Integrated Neighborhood	Tract population is any other combination of race/ethnicity	.28		.29	
Structural Disadvantage	Index composed of the average z-scores of the following six indicators:	.05	.85	-.17	.83
	% of tract population that is below the poverty level	22.27	16.16	18.06	12.73
	% of tract population age 16-64 that is unemployed or not in labor force	40.50	15.32	34.62	12.70
	% of tract employed civilians ≥ 16 yrs. with service or low wage jobs	19.08	9.52	17.60	9.04
	% of tract employed civilians ≥ 16 yrs. with prof. or manag. occup.	29.90	17.60	31.12	19.61
	% of tract households that are female headed families	23.06	16.38	16.22	10.92
	% of tract population 25 and over who are not high-school graduates	30.93	16.84	30.96	22.20
Immigrant Prevalence	Index comprised of the average z-scores of the following three indicators:	-.08	.93	.23	1.06
	% of tract population that is foreign born	17.43	17.13	21.70	16.23
	% of tract population that immigrated to the U.S. 1990 or later	7.81	8.82	12.59	11.63
	% of tract households that are linguistically isolated	8.99	10.81	10.97	12.33
Community Investment	Total dollars (in $1,000s) of residential loans originated in the census tract	13,379	17,293	11,469	16,058
Residential Instability	Index comprised of the average z-scores of the following three indicators:	.00	.71	-.01	.78
	% of tract occupied housing units that are renter occupied	57.78	22.56	50.98	27.42
	% of tract housing units that are vacant	9.25	8.15	6.68	4.57
	% of tract population ≥ 5 years old that lived in a different house in 1995	45.25	14.42	54.62	16.44
Percent Young Males	Percent of the tract population that is male and 15-24 years of age	7.31	2.48	7.69	3.20
N		806		265	

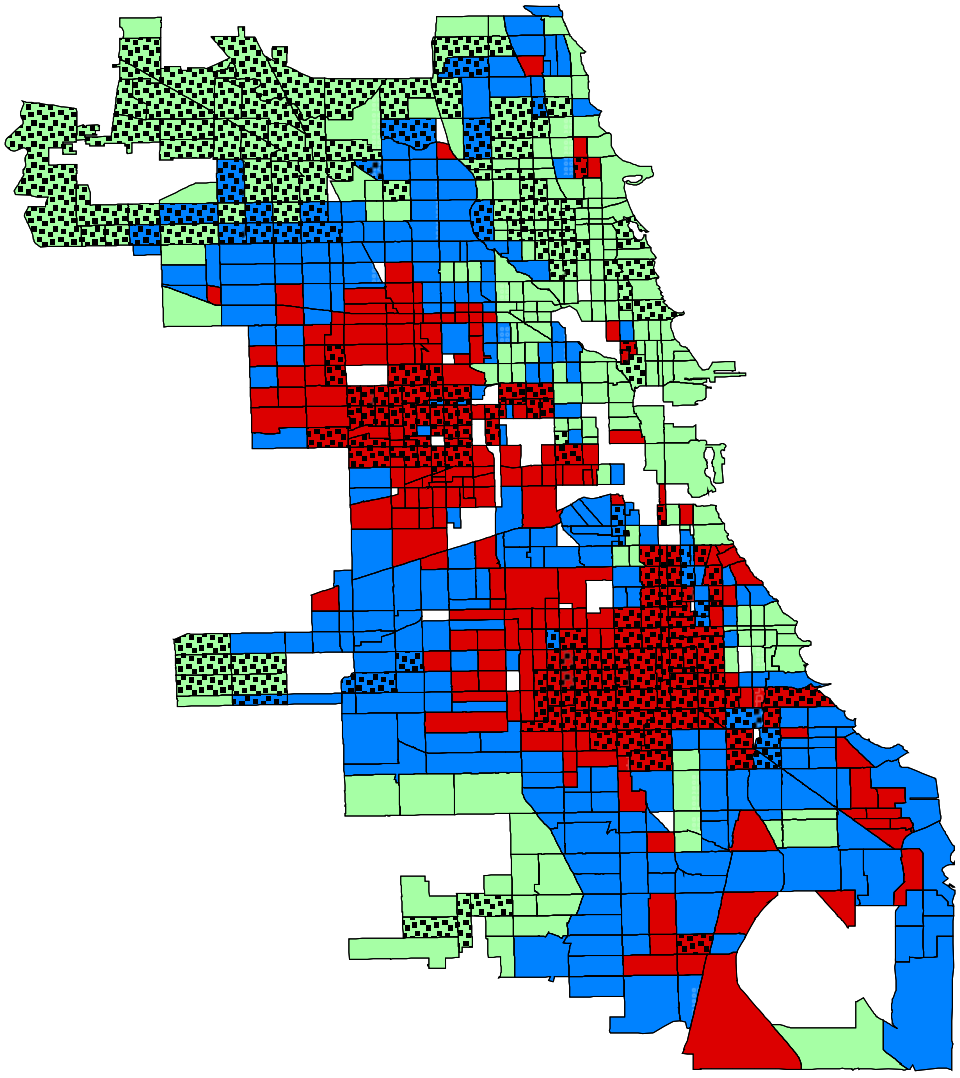
[1]Two year (2000-2001) average for Chicago and three year average (1999-2001) for Dallas.

Table 2. Ordinary Least Squares and Spatial Lag Regressions of Neighborhood Violent Crime for Chicago and Dallas, 2000

	OLS		Spatial Lag	
	Coef.	st. error	Coef.	st. error
Chicago				
Black Neighborhood	6.215*	1.790	2.702	1.768
Hispanic Neighborhood	.739	2.013	-.792	1.930
Minority Neighborhood	.035	2.251	-1.294	2.154
Integrated Neighborhood	.487	1.269	-.302	1.214
Structural Disadvantage	9.105*	.861	7.412*	.851
Immigrant Prevalence	-5.122*	.746	-3.952*	.728
Ln Residential Loans	-1.615*	.347	-1.521*	.331
Residential Instability	6.106*	.545	4.658*	.554
Young Males	-.448*	.169	-.459*	.161
Rho			.289*	.038
Constant	34.161		29.473	
(N=806)				
Dallas				
Black Neighborhood	5.878	4.772	2.000	4.167
Hispanic Neighborhood	-3.333	5.189	-1.937	4.504
Minority Neighborhood	-.784	4.144	.675	3.589
Integrated Neighborhood	-2.706	2.812	-1.496	2.443
Structural Disadvantage	11.577*	2.165	6.381*	1.987
Immigrant Prevalence	-1.796	1.460	-1.069	1.270
Ln Residential Loans	-1.809*	.772	-1.406*	.671
Residential Instability	8.829*	1.228	6.403*	1.091
Young Males	-1.661*	.451	-1.110*	.397
Rho			.489*	.061
Constant	45.722		29.438	
(N=265)				

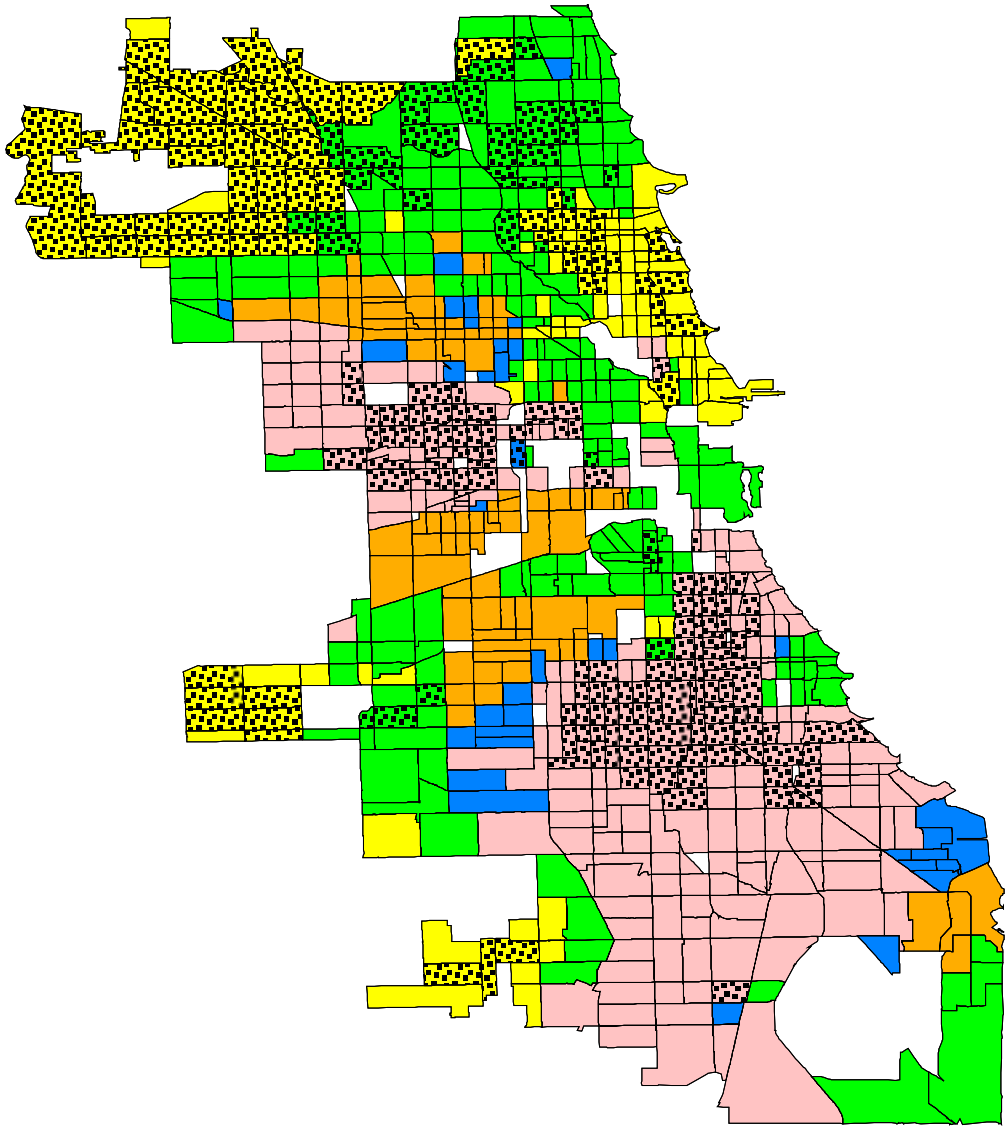
* $p<.05$

Figure 1. Chicago Violent Crime Local Moran's I Values by Disadvantage



Local Moran's I, Violence
significant lisa
non-sig. lisa
Disadvantage
Low Disadvantage
Moderate Disadvantage
High Disadvantage

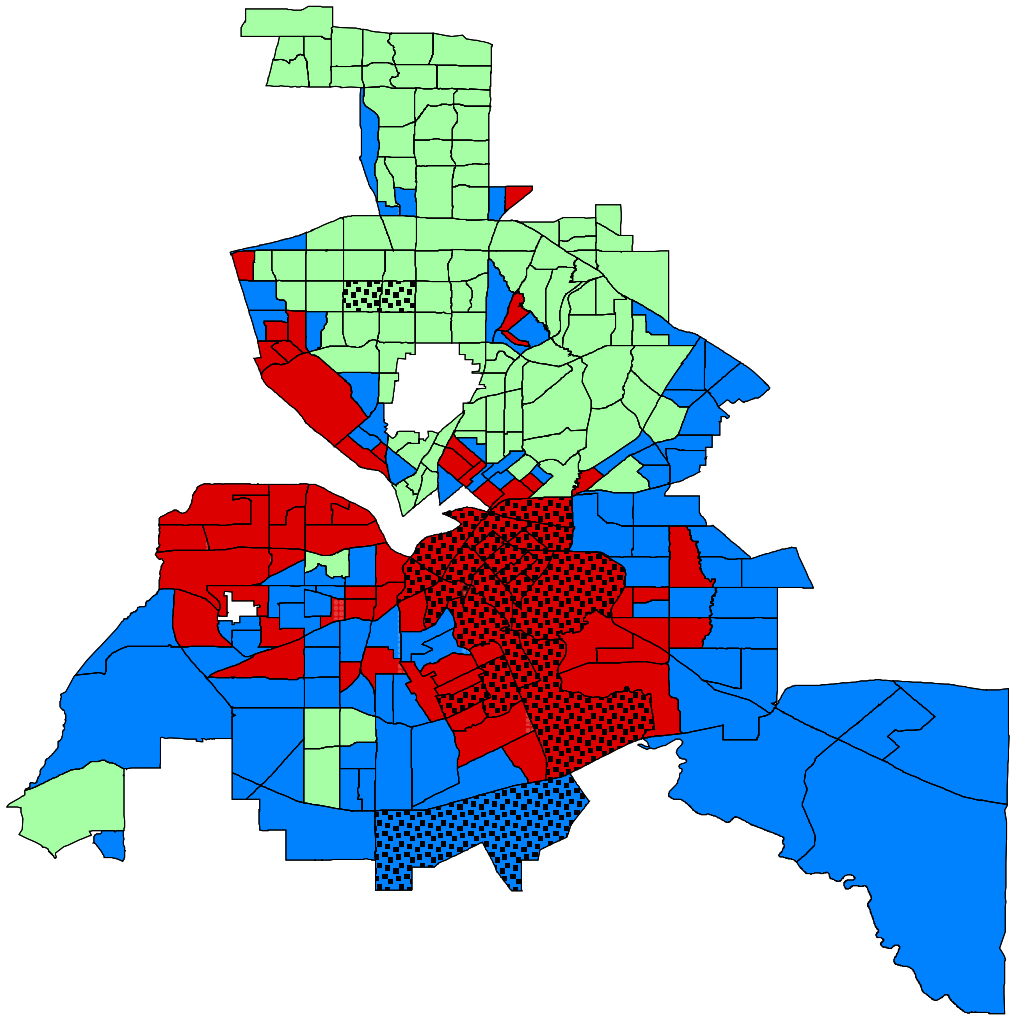
Figure 2. Chicago Violent Crime Local Moran's I Values by Race/ Ethnic Composition



Local Moran's I, Violence
- significant lisa
- non-sig. lisa

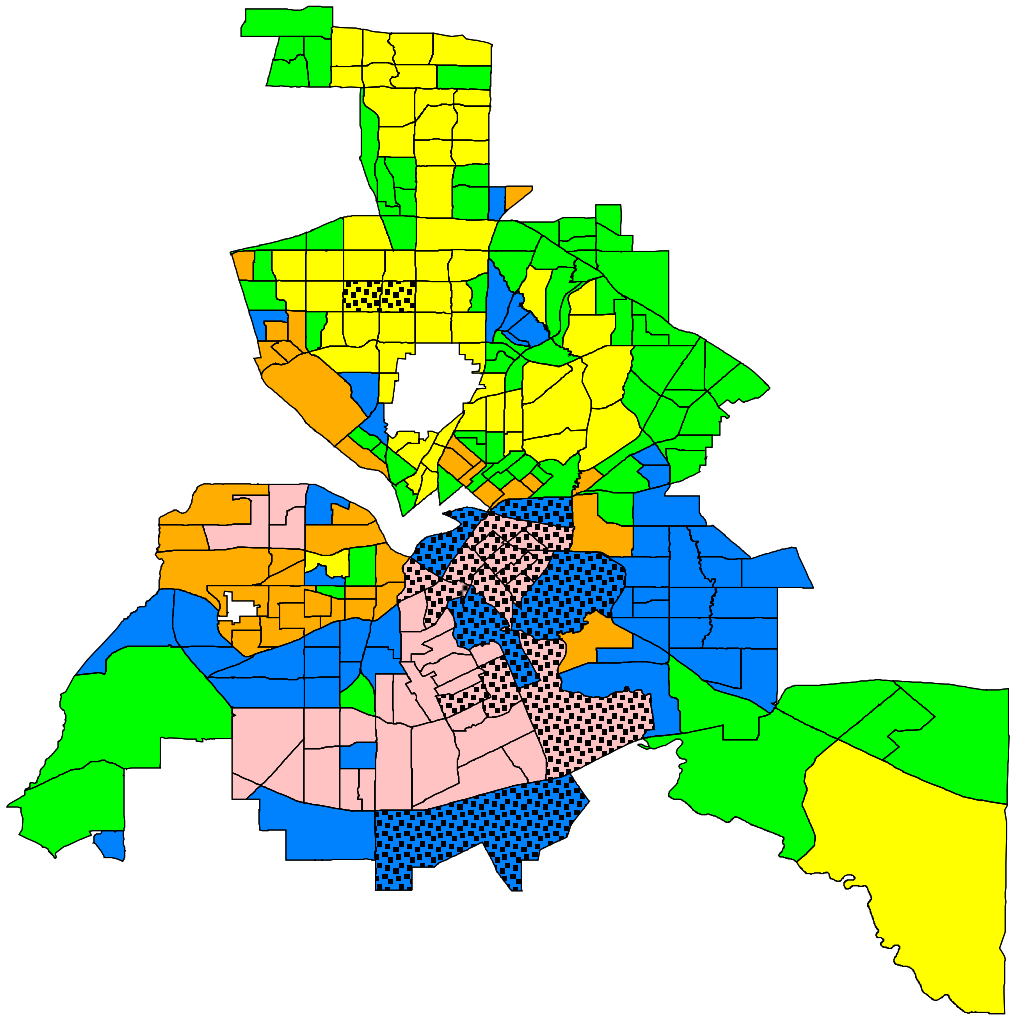
Race/Ethnic Composition
- White Neighborhood
- Black Neighbohood
- Hispanic Neighbohood
- Minority Neighborhood
- Integrated Neighborhood

Figure 3. Dallas Violent Crime Local Moran's I Values by Disadvantage



Local Moran's I, Violence
significant
nonsignificant
Disadvantage
Low Disadvantage
Moderate Disadvantage
High Disadvantage

Figure 4. Dallas Violent Crime Local Moran's I Values by Race/Ethnic Composition



Local Moran's I, Violence
- significant
- nonsignificant

Race/Ehnic Composition
- White Neighborhood
- Black Neighborhood
- Hispanic Neighborhood
- Minority Neighborhood
- Integrated Neighborhood