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An Ecological Assessment of Property and Violent Crime Rates Across a Latino Urban Landscape: The Role of Social Disorganization and Institutional Anomie Theory¹

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Abstract. *The present research put forth an integrated theoretical framework aimed at providing a more holistic community-level approach explaining crime across a heavily populated Latino city. Guided by social disorganization and institutional anomie theory, this study used several data sources and OLS regression techniques to examine the impact of social disorganization, economic and noneconomic institutional characteristics on rates of property and violent crime across 1,016 census block groups in San Antonio, Texas. While several findings emerged, interactions between alcohol density and concentrated disadvantage were significant and positively associated with property and violent crime. Interactions between welfare generosity and concentrated disadvantage were significant and negatively associated with the outcomes.*

Keywords: social disorganization; institutional anomie; Latinos; crime; interaction terms; census block groups

Introduction

For more than half a century, research in the ecological tradition has been dominated by social disorganization theory (Shaw and McKay, 1942). This theory posits that adverse community characteristics such as poverty undermine levels of informal social control, which, in turn, fosters crime in urban settings (Sampson and Groves, 1989). While social disorganization scholars are credited with explaining why crime occurs across different aggregates, a common limitation is that most studies have been conducted in settings absent large Latino populations.

Still working in the ecological tradition, a small number of social scientists have recently enlisted institutional anomie theory to study economic (e.g., Gini index) and noneconomic (e.g., participation in religious engagements) institutional effects on crime (e.g., Maume and Lee, 2003). Developed by Messner and Rosenfeld (1994), institutional anomie claims that community-based economic institutions elevate normlessness (i.e.,

anomie) which produces higher rates of criminal activity; however, noneconomic institutions hold the capacity to buffer anomic-fueled economic effects on crime. While this theory is able to adjust for a wider array of institutions, the drawback is that studies are conducted at a relatively high level of aggregation (e.g., nations, states, counties), which limits consideration of community-level attributes.

Despite these shortcomings, the role of social disorganization and institutional anomie are salient when placed in the context of the systemic network thesis. According to Bursik and Grasmick (1993; see also Kasarda and Janowitz, 1974; Kornhauser, 1978), all kinds of community and institutional components are part and parcel of the private, parochial, and public systemic network that represents different levels of social control. The systemic model posits that a broad range of community and institutional characteristics affect crime indirectly through their effect on informal social control. To further illustrate this point, Wilson's (1987) seminal work depicted how macro-structural antecedents (e.g.,

deindustrialization) impacted the larger institutional fabric of the community—fewer supportive institutions such as churches and family stores—which further influenced localized social pathologies (e.g., female-headed households, unemployment, criminals) that undermined the development of community oversight. Peterson, Krivo, and Harris (2000) argued that impoverished communities also experience difficulty attracting and maintaining institutions that impede criminal behavior. The decline of supportive institutions may consequently attract unconventional crime-inducing institutions, such as bars, due to little business competition and low rents (Chung and Myers, 1999; Lee, 1998).

While the ecological-crime causal relationships is difficult to simplify, the current integrated theoretical framework aimed to provide a more informed understanding of the wide range of community demographics and institutions that act independently and interdependently (via interaction terms) to influence crime. Guided by social disorganization and institutional anomie theory, this study examined the impact of social disorganization (concentrated disadvantage), as well as economic (pawnshops/music CD-exchange stores, alcohol outlets) and noneconomic (welfare generosity, church membership rate, Latino culture, voter turnout rate) institutional characteristics on rates of property and violent crime across census block groups in San Antonio, Texas.

San Antonio was selected as the study site based on the general omission of Latinos in the criminological literature, its large Latino population, and the manner in which this population is related to some of the institutions of interest. The city has a 58 percent Latino population, yet this ethnic group is predominantly of Mexican origin, native-born, disadvantaged, and less educated. In terms of additional Latino specific demographics, Latinos account for 23 percent of those living in poverty (city 16%), 18 percent of female-headed households (city 15%), 8 percent on public assistance (city 9%), and 8 percent with a bachelors degree or higher (city 13%). These figures indicate that Latino communities are more disadvantaged than the rest of the city. By all accounts, San Antonio is an acculturated city. The 2000 U.S. Census revealed that only 5 percent of the Latino population is foreign-born, and 15 percent reported speaking English less than very well. Despite such acculturation, the Latino population shows patterns of ethnic enclaves. According to Allen and Turner (2005), 78 percent of Latino population is residentially concentrated, but not shaped by immigration when compared to other urban areas (e.g., Houston and Los Angeles) with modest to large numbers of Latinos.

Latino demographic characteristics may shape sur-

rounding economic and noneconomic institutions. For example, over 871,000 individuals registered to vote during the 2000 Presidential election and approximately 48 percent participated. However, Spanish surnames accounted for twenty-three percent of the voter turnout. One plausible explanation for the low ethnic turnout is the poor and less educated population. Although San Antonio's legacy is rooted in Catholicism, the Glenmary Research Center and San Antonio Catholic Archdioceses show that from 1990 to 2000 Catholic congregations decreased by 32 percent. Hunt (2000) reported that the Catholic Church is losing Latinos to other religions. In 2003 the city also experienced a reduction in Section 8 housing vouchers which caters to a large Latino population. The San Antonio Housing Authority (SAHA) currently has over 11,000 residents receiving aid, with a waiting list surpassing 5,000. While it appears that institutional features of San Antonio likely to help Latinos are declining (or are weak), other institutions adversely influencing Latinos have increased. For instance, the city's business/assumed names records revealed that 44 new pawnshops were established between 1999 and 2003, and alcohol serving institutions continue to grow. Similar to other large urban cities, much of the institutions considered to undermine pro-social values of restraint and conformity are located in and around Latino communities. In the end, San Antonio is distinctive from other large urban cities due to its large, disadvantaged, working, poor, native-born, Mexican-American communities that tend to be residentially concentrated in areas with declining political, religious, and welfare institutions and increasing crime-inducing institutions.

Overall, the unique research setting of San Antonio provided a rare exposé into community and institutional arrangements of a predominantly Mexican-American Latino urban landscape. Given the rapid growth of this ethnic group, it is plausible that other urban cities will increasingly come to resemble San Antonio (Guzman, 2001). Such locales are likely to be associated with unique Latino experiences, as well as various structural constraints that have plagued this ethnic group. This study follows Martinez's (2002) pioneering research, advocating for criminology that examines the Latino experience with the goal of moving beyond the White/Black urban crime focus.

Literature Review

The literature review is divided into three subsections. The review begins with social disorganization, followed by a discussion on institutional anomie and vari-

ous competing noneconomic and economic institutional dimensions. The final subsection provides an overview of institutional anomie's moderating concept and existing empirical studies.

Social Disorganization

In their classic work, Shaw and McKay (1942) reported that socially disorganized urban communities characterized by residential mobility, ethnic heterogeneity, and low socioeconomic status were associated with crime. Over the years, theoretical adjustments have been articulated and elaborate poverty measures were developed to better understand the changing social ecology of crime across urban settings (see, Duncan and Aber, 1997). For example, Sampson, Raudenbush, and Earls (1997; see also Morenoff, Sampson, and Raudenbush, 2001; Sampson and Raudenbush, 1999; Sampson, Morenoff, and Earls, 1999) found that high levels of concentrated disadvantage, immigrant concentration, and residential instability were positively related to violence at the census tract level. Collective efficacy was also reported to attenuate the effects of concentrated disadvantage and residential instability on violence. In related studies estimating the influence of social disorganization predictors on rates of burglary, researchers found similar direct and mediating results (Lynch and Cantor, 1992; Miethe and McDowall, 1993; Rountree, Land, and Miethe, 1994; Sampson and Groves, 1989; Smith and Jarjoura, 1989).

Another social disorganization condition that has been extensively studied is population turnover (e.g., Browning, Feinburg, and Dietz, 2004; Morenoff et al., 2001). Consistent with Wilson's (1987) conception of social isolation effect, areas with depleted populations may experience higher crime rates due to: (a) an exodus of the upper and middle class and (b) citizens who lack resources to move choose not to participate in regulating community behavior. Morenoff et al. (2001) found a significant negative association between population density and homicide across Chicago census tracts. Based on Wilson's conception of social isolation, Morenoff et al. (2001:539) contend that a negative association is more applicable at the community-level, whereas a positive association is expected at the city-level. Browning et al. (2004) and Morenoff and Sampson (1997) also discovered similar inverse relationships. Furthermore, disorganized communities may attract negative, unconventional institutions, such as alcohol outlets. Kornhauser (1978:79) emphasized the need to focus on the larger institutional characteristics of communities as a way to more effectively realize community normative order. Others have

recently endorsed this line of inquiry (Hunter, 1985; Peterson et al., 2000; Wilson, 1987).

Institutional Anomie and Competing Noneconomic and Economic Institutions

By shifting focus to the institutional arrangement of communities, integrating institutional anomie into the current theoretical argument is applicable. Messner and Rosenfeld (1994) revised Merton's (1938) anomie perspective by shifting the foci to noneconomic institutions. This shift provided the essence of their perspective; namely, that Merton did not (a) account for anomie generated by a heavy reliance on economic institutional opportunities and (b) consider noneconomic institutions as a way to reduce anomie and crime. Scholars argue that institutional anomie is suitable to explain macro-level rates of violent and property crime (Messner and Rosenfeld, 1994:68; see also Messner and Rosenfeld, 2001:42; Savolainen, 2000).² At the center of institutional anomie are two competing dimensions -- noneconomic and economic institutions -- assumed to influence the regulatory capacity of communities.

On one hand, noneconomic religious, political, welfare, and Latino cultural institutions are considered convention-inducing agents that foster mechanisms of community social control and invoke conformity. Researchers, for example, have posited that the social ecology of religious institutions is important in establishing cultural norms, values of conformity, moral communities, and communal goals (Messner and Rosenfeld, 1997:74; Bainbridge, 1989; Bursik and Grasmick, 1993; Stark, 1996:164; Stark, Bainbridge, and Crutchfield, 1983; Warner, 1993). An additional source of noneconomic institutional social control is the local political landscape. Putnam (2000) has identified voting as a key component of political social capital. More recently, Rosenfeld, Messner, and Baumer (2001; see also Messner, Baumer, and Rosenfeld, 2004) noted that social capital can be theoretically linked with crime by drawing on institutional anomie's heritage, because communities characterized by higher levels of political participation can influence the strength of community normative order.

While measures of poverty or some derivation thereof (e.g., concentrated disadvantage) have long been associated with crime, some researchers posit that welfare institutions can reduce crime by wealth redistribution (Benoit and Osborne, 1995; Eaton and White, 1991). More specifically, Zhang (1997) examined the effect of cash and in-kind welfare programs on criminal behavior based on the theoretical notion that programs can reduce

crime. He reported that public housing programs had a significantly negative effect on property crime when compared to Medicaid and school lunch programs. Goering and Feins (2003) and Sampson, Morenoff, and Raudenbush (2005) have recently advocated the use of housing vouchers to aid the poor in securing residence in middle class neighborhoods as a way of reducing crime in impoverished areas.

In his pioneering community-level analysis on Latino homicides across five U.S. cities, Martinez (2002:134) concluded that Latino immigrant communities create a buffer zone against crime by exhibiting higher levels of social (e.g., families, friends, church) and economic (e.g., work and schools) institutional integration. This study extends a similar argument: communities that preserve the Latino culture in terms of Spanish language will also buffer against crime. The Latino culture is commonly conceptualized as the process whereby *change* (e.g., language, behavior, norms) occurs among immigrant populations (e.g., Latinos) due to exposure to and interaction with a cultural system (e.g., American) that is different from the culture of origin (Anderson and Rodriguez, 1984; Rogler, Cortes, and Malgady, 1991). Just as “immigration reinforces the cultural attributes of Latinos by intensifying the use of Spanish” (Martinez, 2002:39), Spanish speaking Latinos are more likely to reside among immigrants, because embedded in language is knowledge of customs, accesses to cultural groups, and its respective artifacts (Vega and Gil, 1998:128). Therefore, Latino communities characterized by a dominance of the English language are likely to be associated with crime, because native cultural attributes (e.g., Spanish language) are replaced by norms associated with the “American Dream” of material wealth. With this said, only one study has investigated acculturation as a contextual characteristic of communities. Using U.S. Census data, Finch et al. (2000) operationalized aspects of acculturation as household linguistic isolation and found that higher levels of community acculturation had a direct relationship with the prevalence of substance abuse among pregnant Latinas.³

On the other hand, economic institutions, such as bars, are likely to obstruct the development of community normative order. For example, Peterson et al. (2000) relied upon physical street addresses of select unconventional institutions to investigate whether local institutions matter for controlling neighborhood violence and found that bars, economic deprivation, and residential instability contributed to an increase in violent crime across census tracts. Interestingly, they also reported that the presence of recreation centers reduced violent crime

in most economically disadvantaged neighborhoods. Alaniz, Cartmill, and Parker (1998; see also Roncek and Bell, 1981; Roncek and Maier, 1991; Roncek and Pravatiner, 1989; Quimet, 2000) conducted a similar study at the block group level across three California communities and reported that violence was a function of alcohol availability and percent divorced. Although an understudied topic, researchers have empirically shown that pawnshop institutions also influence crime (Wright and Decker, 1993; Fass and Francis, 2004). Glover and Larubbia (1996) posited that pawnshops are counter-productive toward establishing normative order because they attract “easy money” criminals.

Institutional Anomie's Moderating Concept and Existing Empirical Studies

Institutional anomie theory claims that the various types of competing institutional dimensions matter most when examined in tandem. In other words, it is the interaction among economic and noneconomic institutions that produces the driving *institutional balance of power* concept characterized by Messner and Rosenfeld (2001:68). Thus, institutional anomie is considered a moderating theory of crime studies (Maume and Lee, 2003).⁴ Institutional anomie's unique contribution, then, is that it emphasizes “the relative strength [interaction] between [economic and noneconomic] institutions in terms of the social structure” (Savolainen, 2000:1002; see also Bernburg, 2002:731; Messner and Rosenfeld, 1997:1408). Put differently, an expansion of economic opportunities is likely to reduce rates of crime only when coupled with a strengthening of noneconomic institutions (Messner and Rosenfeld, 2001:101; see also 1994:68-90).

Institutional anomie has remained understudied when compared to other ecological theories; but recent empirical tests have emerged. Chamlin and Cochran (1995) showed the effects of economic deprivation on property crime were significantly lower across states with higher levels of church membership and percent voting while the effects of economic deprivation on property crimes were significantly higher across states with elevated levels of divorced families. Savolainen (2000) reported nations with generous welfare programs experienced reduced negative effects of economic inequality (Gini coefficient) on homicides. Maume and Lee (2003) estimated the influence of economic pressures (Gini coefficient) and five noneconomic institutions (political voter turnout, familial divorce rate, educational expenditure, civically engaged religious denominations, and welfare expenditure) and

found that the interaction between welfare expenditure and Gini was the only term to significantly moderate the effect of Gini on homicides across 454 counties.⁵

In summary, the literature indicated that diverse types of crime across various geographical aggregates can be explained using social disorganization and institutional anomie theory. The theoretical difference is one mainly of emphasis -- the former aims at explaining direct and mediating influences while the latter aims at explaining moderating influences. With this said, whether the community and institutional fabric of San Antonio influences crime remains an open empirical question.

Research Objectives

The present research put forth an integrated theoretical framework aimed at providing a more holistic community-level approach explaining crime across a heavily populated Latino city. Toward this end, social disorganization and institutional anomie should be viewed as supplementary, rather than competing, theoretical frameworks. Three research objectives sought to (1) determine direct social disorganization effects on the outcomes, (2) better understand the effects of various institutional characteristics on crime, and (3) discover whether the effect of concentrated disadvantage on crime depends on the level of economic and noneconomic institutions. To accomplish these objectives, several contextual multivariate models were estimated, because community institutions will vary with respect to their ability to impose values of restraint and control (Messner and Rosenfeld, 2001:79).

Data and Variables

Several independent data sources were culled to construct the data file: (1) 2000 Census Bureau, (2) Texas Alcohol Beverage Commission (TABC), (3) San Antonio Police Department (SAPD), (4) Bexar County Elections Department, (5) San Antonio Housing Authority (SAHA), (6) San Antonio Catholic Archdiocese, and (7) other public information. The following subsections highlight these data sources, along with the collection and measurement procedures.

The first source of data was the 2000 Census Bureau. This source was used to carry out two broad functions. The first function was to identify the unit of analysis -- San Antonio's 1,016 census block groups (BGs). Smaller geographic aggregates, such as BGs, may yield greater effects due to distinct homogeneous communities (McNulty and Holloway, 2000; Peterson et al., 2000; Simcha-Fagan and Schwartz, 1986; Quimet, 2000;

Warner, 2003; Wooldredge, 2002). As described in the variable section below, the second function was to use the Census Summary Tape File 3 (STF 3) to help identify an array of community and institutional items at the BG level.

The second data source was the Texas Alcohol Beverage Commission (TABC). Consistent with prior research that collected alcohol outlet data (Alaniz et al., 1998; Gyimah-Brempong, 2001; Nielsen and Martinez, 2003; Peterson et al., 2000), the current study secured a list of over 1,400 "on-site" alcohol serving institutions (e.g., restaurants, bars, pubs, clubs) from 2001-2002. The TABC provides information to the public via the Internet in a downloadable version. The data included each institution's physical street address. This made it possible to geocode each institution within San Antonio.

Third, the San Antonio Police Department (SAPD) provided official violent (e.g., robbery) and property (e.g., residential burglary) crime incident records for calendar years 2001-2003. At least three years of crime data is considered adequate to avoid annual fluctuations and increase the likelihood of having sufficient incidents to calculate reliable rates (Messner and Golden, 1992; Peterson et al., 2000; Sampson, 1985, 1987). The SAPD data included attributes of the criminal event, such as date, time, incident address, and incident type. The address where the incident occurred was geocoded to its respective BG. The SAPD also provided physical locations of pawnshop and music CD-exchange stores. According to SAPD, there were 96 pawnshops and 30 music CD-exchange stores. To ensure data quality, information was crosschecked using the Bexar County public records and yellow page directory.

The fourth data source was election voter turnout information obtained from Bexar County Elections Department. This department collects vital information, such as the physical street addresses of those who voted in a particular election. During the 2000 Presidential election, over 415,000 votes were cast by residents of San Antonio.

The fifth data source consisted of 2000-2003 San Antonio Housing Authority (SAHA) Section 8 housing voucher information. These data provided the physical address of the Section 8 home where the client resided and the amount of the monetary stipend the renter received to help pay for housing. From 2000-2003, SAHA provided monetary voucher assistance to over 11,500 clients.

The sixth data source was 2002 church location and membership information. Using the Internet, Bexar County public records, San Antonio Catholic Archdiocese official records, and yellow page directory, church loca-

tions and membership information was collected. Once a church was identified, church staff were contacted and asked to provide the physical street address and number of church members per congregation. San Antonio has over 650 Catholic, Lutheran, Baptist, Presbyterian, Episcopal, and Christian churches serving over 500,000 adherents.

All data were geocoded to their respective BGs, producing an analysis file of 1,016 BGs. Population sizes for the BGs ranged from 226 to 4,292 individuals, with a mean population of approximately 1,400.

Dependent Variables

Two general categories of crime rates were specified as the dependent variables. *Violent crime rate* was operationalized as the three-year (2001-2003) average of homicide, rape, robbery, and assault (simple and aggravated) in each BG per 1,000 residents. *Property crime rate* was measured as the three-year (2001-2003) average of serious property crime (auto theft and residential/vehicular burglary) in each BG per 1,000 residents. To reduce skewness and induce homogeneity in error variance, violent and property crime rates were transformed to natural logarithms.

Social Disorganization and Economic Institutional Independent Variables

Social disorganization and economic institutional predictors were assumed to obstruct the development of community normative order. *Concentrated disadvantage* was operationalized as a weighted factor regression score (eigenvalue = 2.85, factor loadings > .8) that included the following 2000 Census items: percent poverty, percent unemployment, percent female-headed household with children, percent Latino, and to a lesser extent, percent Black. San Antonio is 58 percent Latino with a relatively small African-American (6%) population. Concentrated disadvantage represented economically disadvantaged BGs to which Latinos and single parent families were concentrated. *Percent units vacant* represents the proportion of untended housing units within each BG. *Percent male 15-29 years of age* was operationalized using 2000 census data. These three variables were hypothesized to be positively associated with violent and property crime outcomes. The final social disorganization determinant, *population change*, was measured as the natural logged 2000 BG population subtracted from 1990 BG population.⁶ It was hypothesized that a decrease in population would be associated with an increase in violent and property crime rates, thus, a negative association was

expected.

The following variables represented economic institutional predictors. *Monetary aggravators* were dummy coded and measured as: 1 = one or more pawnshop or music CD-exchange establishment in BG, 0 = no pawnshop or music CD-exchange establishment in BG. This study extended the pawnshop argument to include music CD-exchange stores. Music CD-exchange stores trade and/or purchase merchandise (tapes, records, CDs) from customers. These institutions are counterproductive because they attract “easy money” criminals that reflect American culture’s reliance on unconventional opportunities (i.e., the commission of crime) to acquire materialistic goals (Glover and Larubia, 1996; Chamlin and Cochran, 1995). *Alcohol density* was operationalized as the number of alcohol establishments licensed for on-site consumption (e.g., bars, taverns, pubs, restaurants) in each BG per 1,000 residents. It was hypothesized that monetary aggravators and alcohol density would be positively associated with violent and property crime rates.

Noneconomic Institutional Independent Variables

The next set of variables represented noneconomic institutions that were assumed to invoke values of restraint and reinforce norms of conformity.⁷ *Welfare generosity* was measured as the total Section 8 housing dollar voucher amounts per unit in BG. *Church membership rate* was operationalized as the number of registered church members in each BG per 1,000 residents. To capture the unique experiences that Latino communities face, the level of Spanish/English language usage was gauged in terms of retaining or losing cultural traditions as a group. Knowledge of the Spanish language is positively related to integration with the traditional Latino culture (Buriel, Calzada, and Vasquez, 1982), whereas Portes and Rumbaut (1990) consider English language acquisition a fundamental process of becoming Americanized.⁸ *Latino culture* was operationalized as the percentage of BG households linguistically isolated from the English language as reflected in 2000 Census data. The aim was to capture the level of households that speak Spanish and have difficulty speaking English. BG households characterized by higher levels of linguistic isolation from the English language (i.e., more Spanish speaking Latino households) were expected to be negatively associated with crime. Finally, *voter turnout rate* was measured as the number of voters that participated in the 2000 Presidential election in each BG per 1,000 residents.

Based on these noneconomic institutional variables, the following hypotheses were specified. First, welfare

generosity, church membership rate, Latino culture, and voter turnout rate were expected to be negatively associated with the outcomes. Second, it was hypothesized that welfare generosity, church membership rate, Latino culture, and voter turnout rate would influence the impact of social disorganization and economic institutional independent predictors on the outcomes. Lastly, and consistent with the moderating focal point of institutional anomie research, it was anticipated that all noneconomic and concentrated disadvantage interaction terms (e.g., welfare generosity * concentrated disadvantage) would be negatively associated with the outcomes. In keeping with the institutional anomie spirit, it was hypothesized that both economic and concentrated disadvantage interaction terms (e.g., alcohol density* concentrated disadvantage) would be positively associated with the outcomes. Descriptive statistics for all variables are shown in Table 1. Appendix A provides a variable summary description along with the hypothesized relationships.

Analytical Strategy and Findings

Three analytical strategies were employed. First, bivariate correlations were estimated to: (a) determine the preliminary relationships among the independent and dependent variables, (b) gain a better understanding between the theoretical social disorganization, economic, and noneconomic independent relationships, and (c) address issues concerning multicollinearity. Next, Ordinary Least Squares (OLS) regression was used to estimate several multivariate models. In the process, diagnostic procedures were performed to further investigate multicollinearity, and tests for spatial autocorrelation were conducted.

Due to the spatial nature of the data, contemporary

researchers advocate for the assessment of spatial autocorrelation (Alaniz et al., 1998; Kubrin and Weitzer, 2003a; Messner et al., 2001; Nielsen and Martinez, 2003). Using GeoDa software (Anselin, 2004), Moran’s *I* was used to help detect whether spatial autocorrelation was present. “Moran’s *I* is a cross-product coefficient similar to a Pearson’s correlation coefficient and is bounded by 1 and -1” (Kubrin and Weitzer, 2003b:166). When Moran’s *I* is significantly positive, positive spatial autocorrelation is present. No evidence was found to indicate that property (Moran’s *I* = .12; *p* > .19) and violent (Moran’s *I* = .10; *p* > .11) crime rate in a given BG was spatially dependent on adjacent BGs.⁹ Consistent with Reisig et al. (2004:262) Moran’s *I* was also used to investigate whether the social disorganization, economic and noneconomic independent variables yielded any significant spill-over effect across BGs. While none of the independent variables achieved statistical significance, the largest Moran’s *I* coefficient was observed for concentrated disadvantage (.18), followed by alcohol density (.15), and voter turnout rate (-.12). Hence, no evidence of spill-over was detected.

Table 1 presents the bivariate correlations. Many of the hypothesized relationships between the independent and dependent variables were significant and in the expected direction. The general pattern of findings indicated that as social disorganization and other economic institutional characteristics increased, violent and property crime rates also increased. In contrast, as noneconomic social control institutions increased, violent and property crime rates decreased. In terms of relative magnitude, concentrated disadvantage yielded the strongest correlation for violent crime rate, followed by alcohol density, percent units vacant, population change, monetary aggravators, and voter turnout rate. As for property crime rate, the observed correlations were strongest for alcohol density,

Table 1. Descriptive Statistics and Bivariate Correlations

	(N = 1,016)										Mean	SD	
	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	Y	Z		
X ₁ Concentrated disadvantage ^a	.12 **	.13 **	-.09 **	.04 **	.07 *	-.20 **	-.06	.45 **	-.30	.48 **	.24 **	0.00	1.00
X ₂ Percent units vacant		.09 **	-.06	.00	.03	-.01	.10 **	.08 *	-.08 *	.30 **	.24 **	6.67	8.09
X ₃ Percent male 15-29 yrs. of age			.00	.11 **	-.09 **	.06	-.04	.11 **	-.23 **	.07 *	.03	10.79	5.35
X ₄ Population change ^d				-.06	-.10 **	.02	.05	-.15 **	.09 **	-.23 **	-.24 **	1.42	2.88
X ₅ Monetary aggravators					.02	.09 **	.07 *	.04	-.04	.20 **	.22 **	0.51	0.30
X ₆ Alcohol density						-.03	.06	.03	-.19 **	.41 **	.44 **	3.41	10.07
X ₇ Welfare generosity							-.02	.05	-.09 **	-.09 *	-.08 *	4777.28	9197.33
X ₈ Church membership rate								.04	.04	-.06	-.14 *	35.09	45.50
X ₉ Latino culture									-.17 **	-.10 *	-.09 *	15.56	10.36
X ₁₀ Voter turnout rate										-.15 **	-.10 *	426.79	555.23
Y Violent crime rate ^b											.53 **	1.70	0.78
Z Property crime rate ^b												3.94	1.23

^a Weighted factor score
^b Natural log
* *p* < .05
** *p* < .01

concentrated disadvantage, percent units vacant, population change, monetary aggravators, and church membership rate. Concentrated disadvantage was positively associated with monetary aggravators and alcohol density but negatively associated with welfare generosity, church membership rate, and voter turnout rate. The observed relationship for Latino culture showed that higher levels of Spanish-speaking communities were disadvantaged with low voter turnout rates. Overall, results indicated that multicollinearity was not a problem; Pearson correlation values did not exceed .70.

*Multivariate OLS Regression Results –
Property Crime Rate*

When using small aggregates, Land, McCall, and Cohen (1990) argued researchers need to carefully control for model specification and multicollinearity. The large number of units of analysis (i.e., 1,016 census BGs) created a large sample of aggregates, which in turn allowed more macro-level predictors to be modeled (Wooldredge, 2002). As a result, a total of 9 models were estimated. Models 1 through 3 were additive, whereas 4 through 9 were multiplicative. According to Chamlin and Cochran (1995), additive models have little bearing on the evaluation of institutional anomie theory due to its moderating principles. Instead, such an approach “serves as a baseline for the determination of the contribution of the joint influence [interaction] of economic conditions and measures of noneconomic institutions on crime” (Chamlin and Cochran, 1995:421). The potential for collinearity was investigated further using OLS regression diagnostics. Results (not shown) provided additional support that multicollinearity was not a problem. None of the Variance Inflation Factors (VIF) exceeded 4.0.

Table 2 presents OLS regression models for property crime rate. Model 1 examined whether social disorganization positively affected property crime rate. Consistent with the social disorganization hypotheses, concentrated disadvantage (.20) and percent units vacant (.20) were significantly and positively associated with the outcome; population change (-.21) showed a significant inverse relationship. Model 1 accounted for 14 percent of the explained variation. In Model 2, two economic institutional variables were included in the equation. The logic was that an increase in unconventional institutions may directly influence crime and further undermine levels of social control. The findings indicated that alcohol density (.43), concentrated disadvantage (.22), monetary aggravators (.20), percent units vacant (.19), and a decrease in population (-.16) increased property crime rates across

BGs. The significant and positive association for alcohol density and monetary aggravators support the economic institutional hypotheses. The explained variation for Model 2 (36%) was more than double the explained variation in Model 1 (14%).

Model 3 examined whether an increase in norm inducing noneconomic institutions: (a) were negatively associated with property crime and (b) influenced the impact of social disorganization and economic institutional conditions on the outcome. Welfare generosity (-.09), church membership rate (-.07), and Latino culture (-.09) were significantly and negatively associated with property crime. While voter turnout rate (-.02) failed to achieve statistical significance, its hypothesized association was confirmed. Next, the social disorganization and economic institutional predictors were assessed to detect attenuation in the model. For example, the coefficient for concentrated disadvantage was reduced from .22 in Model 2 to .12 in Model 3. Moreover, with the exception of alcohol density, a slight reduction was observed across the social disorganization and economic coefficients. While the findings suggest theoretically that various supportive and convention inducing institutions may help relieve resource deficient communities in ways that reduce crime, interpretation of the results from a purely statistical perspective remains inconclusive since such decline in magnitude of coefficients was not investigated statistically. Nonetheless, the noneconomic institutional hypotheses were partially supported.

In Models 4-9, estimating procedures allowed the researchers to integrate both theoretical approaches by examining whether: (a) interactions between concentrated disadvantage and other crime prone economic institutional predictors were positively associated with property crime, and (b) the influence of concentrated disadvantage on the outcome was moderated by noneconomic institutions. One of the central debates among institutional anomie theorists (e.g., Maume and Lee, 2003:1155) is how to best measure economic institutions in a way that captures the institutional balance of power.¹⁰ Researchers have remained committed to using variables such as poverty (a deprivation measure) and Gini coefficient (an inequality measure) to reflect the economy (Chamlin and Cochran, 1995; Maume and Lee, 2003; Savolainen, 2000).¹¹ In doing so, scholars regularly calculate an interaction term that includes poverty/Gini and some other noneconomic institution. Rather than rely on a single measure that captures absolute poverty or its inequality continuum equivalent, the current research used concentrated disadvantage rooted in the social disorganization tradition. Justification for this approach is that (1) concentrated disadvantage is

Table 2. Ordinary Least Squares Regression Models for Property Crime Rate^a

(N = 1,016)

Variable	Model 1 β	Model 2 β	Model 3 B	Model 4 β	Model 5 β	Model 6 β	Model 7 β	Model 8 β	Model 9 β
Concentrated disadvantage ^a	.20 *** (.01) [.07]	.22 *** (.01) [.07]	.12 *** (.01) [.04]	.13 *** (.01) [.05]	.15 *** (.01) [.05]	.15 *** (.01) [.05]	.12 *** (.01) [.04]	.18 *** (.01) [.07]	.13 *** (.01) [.05]
Percent units vacant	.20 *** (.00) [.01]	.19 *** (.00) [.01]	.18 *** (.00) [.01]	.18 *** (.00) [.01]	.17 *** (.00) [.01]	.18 *** (.00) [.01]	.18 *** (.00) [.01]	.18 *** (.00) [.01]	.18 *** (.00) [.01]
Percent male 15-29 yrs. of age	-.01 (.00) [-.00]	.01 (.00) [.00]	.00 (.00) [.00]	.00 (.00) [.00]	.02 (.00) [.00]	-.01 (.00) [.00]	.00 (.00) [.00]	-.01 (.00) [-.00]	.00 (.00) [.00]
Population change ^b	-.21 *** (.00) [-.02]	-.16 *** (.00) [-.01]	-.15 *** (.00) [-.01]	-.15 *** (.00) [-.01]	-.14 *** (.00) [-.01]	-.15 *** (.00) [-.01]	-.15 *** (.00) [-.01]	-.15 *** (.00) [-.01]	-.15 *** (.00) [-.01]
Monetary aggravators	—	.20 *** (.03) [.23]	.18 *** (.03) [.21]	.19 *** (.03) [.21]	.17 *** (.03) [.20]	.18 *** (.03) [.21]	.18 *** (.03) [.21]	.18 *** (.03) [.21]	.18 *** (.03) [.21]
Alcohol density	—	.43 *** (.00) [.00]	.44 *** (.00) [.00]	.43 *** (.00) [.00]	.45 *** (.00) [.01]	.43 *** (.00) [.00]	.41 *** (.00) [.00]	.43 *** (.00) [.00]	.43 *** (.00) [.00]
Welfare generosity	—	—	-.09 * (.00) [.00]	-.09 * (.00) [.00]	-.09 * (.00) [.00]	-.10 * (.00) [.00]	-.09 * (.00) [.00]	-.09 * (.00) [.00]	-.09 * (.00) [.00]
Church membership rate	—	—	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.08 * (.00) [.00]	-.08 * (.00) [.00]	-.08 * (.00) [.00]
Latino culture	—	—	-.09 * (.00) [.00]	-.09 * (.00) [.00]	-.04 (.00) [.01]	-.09 * (.00) [.00]	-.09 * (.00) [.00]	-.10 * (.00) [.01]	-.10 * (.00) [.00]
Voter turnout rate	—	—	-.02 (.00) [.00]	-.02 (.00) [.00]	-.04 (.00) [.00]	-.02 (.00) [.00]	-.02 (.00) [.00]	-.01 (.00) [.00]	-.04 (.00) [.00]
Monetary aggravators * Con dis.	—	—	—	.10 * (.03) [.11]	—	—	—	—	—
Alcohol density * Con dis.	—	—	—	—	.19 *** (.00) [.00]	—	—	—	—
Welfare generosity * Con dis.	—	—	—	—	—	-.11 * (.00) [.00]	—	—	—
Church membership rate * Con dis.	—	—	—	—	—	—	-.09 * (.00) [.00]	—	—
Latino culture * Con dis.	—	—	—	—	—	—	—	-.04 (.00) [-.01]	—
Voter turnout rate * Con dis.	—	—	—	—	—	—	—	—	-.05 (.00) [.00]
Constant	3.163 ***	3.126 ***	3.107 ***	3.111 ***	3.112 ***	3.108 ***	3.104 ***	3.102 ***	3.107 ***
F-Statistic	42.09 ***	95.56 ***	61.11 ***	55.83 ***	62.64 ***	56.58 ***	55.59 ***	56.60 ***	55.52 ***
R ²	.14	.36	.38	.38	.41	.38	.38	.38	.38

^aWeighted factor score

^bNatural log.

Standard errors in parentheses and unstandardized coefficients in brackets.

* $p < .05$; ** $p < .01$; *** $p < .001$

considered a resource disadvantage measure that reflects an assortment of community factors (Land et al., 1990; Sampson and Jeglum-Bartusch, 1998), and (2) we seek to integrate two theoretical perspectives. We are unaware of existing studies that model concentrated disadvantage as an interaction term.

To avoid problems with multicollinearity, interaction terms were centered (Jaccard, Turrisi, and Wan, 1990). This practice is consistent with much of the institutional anomie research (e.g., Maume and Lee, 2003; Savolainen, 2000). The observed main effects across Models 4-9 showed little change, further suggesting no problems with multicollinearity. Model 4 specified an interaction term between monetary aggravators and concentrated disadvantage. This interaction term was significantly and positively associated (.06) with the outcome. Unsurprisingly, Model 5 indicated that the interaction between alcohol density and concentrated disadvantage was significant and positively associated (.19) with property crime rate. Thus far, BGs characterized by a combination of concentrated resource disadvantage, pawn shops/music CD-exchange stores, and alcohol density were directly associated with the outcome.

Models 6-9 estimated interaction terms among the noneconomic institutional characteristics (welfare generosity, church membership rate, Latino culture, voter turnout rate) and concentrated disadvantage. The findings showed that rates of property crime were significantly and inversely associated with BGs with higher levels of Section 8 welfare housing vouchers and church membership rate. While interaction terms for Latino culture (-.04) and voter turnout rate (-.05) failed to achieve significance, their hypothesized directional relationships were supported. Overall, two of the four noneconomic institutional interaction terms revealed evidence of moderating influences. In terms of explained variation, R^2 for the multiplicative models were 38 percent and 41 percent respectively.

Multivariate OLS Regression Results – Violent Crime Rate

Table 3 presents OLS regression models for violent crime rate. Similar to the results in Table 2, many of the specified hypotheses were supported, with three of the four social disorganization predictors significantly associated with violent crime. Concentrated disadvantage yielded a much stronger positive (.44) correlation for violent crime, when compared to property crime in Table 2. The explained variation was a healthy 32 percent. In Model 2, monetary aggravators and alcohol density results also

mirrored those from Table 2. However, the coefficient for monetary aggravators (.16) in the violent crime model was weaker, when compared to the same model (.20) in the previous table. Perhaps pawnshops and music CD-exchange stores were positively associated more with property than violent crime. Nonetheless, the economic institutional hypotheses were confirmed to be positively associated with the outcome. More interestingly, Model 2 showed more than half (52%) of the variation in violent crime rate was explained.

When noneconomic institutional variables were entered in Model 3, welfare generosity (-.07), Latino culture (-.10), and voter turnout rate (-.08) were significant and negatively associated with violent crime. These findings are slightly different when compared to property crime Model 3 in Table 2. For example, church membership rate was unrelated to violent crime, but significantly and inversely associated to property crime. Furthermore, voter turnout rate was significant and inversely related to violent crime, but unrelated to property crime. Two possible explanations for such discrepancies were that some scholars posit violent crime should not be linked to dimensions of religion because of the impulsive and emotional nature of such crimes (Bainbridge, 1989; Stark, 1987); and communities characterized by higher levels of voters are less likely to tolerate violence, thereby taking an active and more collective role in expressing disapproval (Messner et al., 2004). After controlling for the noneconomic institutions, the observed coefficient for concentrated disadvantage (.40) showed a slight reduction. Model 3 partially supported the hypotheses for the noneconomic variables, explaining 54 percent of the variation in violent crime rate.

In Models 4-9 for violent crime, a different pattern of results emerged when compared to models for property crime in Table 2. Despite their directional accuracy, Models 4 and 7 indicated that a combination of monetary aggravators and concentrated disadvantage (.05) and church membership and concentrated disadvantage (-.09) were unrelated to violent crime. In Models 8 and 9, the combination of Latino culture and concentrated disadvantage (-.12) and voter turnout rate and concentrated disadvantage (-.10) were significant and negatively associated with violent crime; but in Table 2 these interaction terms were unrelated. In essence, BGs characterized by concentrated disadvantage and alcohol density experienced more violent crime; less violent crime was observed in BGs characterized by concentrated disadvantage, welfare generosity, households that speak Spanish and have difficulty with English, and higher voter turnout. The mixed results seen for Latino culture might suggest Latino

Table 3. Ordinary Least Squares Regression Models for Violent Crime Rate^a

(N = 1,016)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
	β	β	B	β	β	β	β	β	β
Concentrated disadvantage ^a	.44 *** (.01) [.13]	.45 *** (.00) [.14]	.40 *** (.01) [.10]	.36 *** (.01) [.11]	.36 *** (.01) [.11]	.38 *** (.01) [.11]	.35 *** (.01) [.11]	.42 *** (.01) [.13]	.41 *** (.01) [.12]
Percent units vacant	.23 *** (.00) [.01]	.22 *** (.00) [.01]	.21 *** (.00) [.01]	.21 *** (.00) [.01]	.20 *** (.00) [.01]	.21 *** (.00) [.01]	.20 *** (.00) [.01]	.20 *** (.00) [.01]	.21 *** (.00) [.01]
Percent male 15-29 yrs. of age	-.01 (.00) [.00]	.01 (.00) [.00]	.00 (.00) [.00]	.00 (.00) [.00]	.01 (.00) [.00]	.00 (.00) [.00]	.01 (.00) [.00]	-.01 (.00) [.00]	-.01 (.00) [.00]
Population change ^b	-.18 *** (.00) [-.01]	-.13 *** (.00) [-.01]	-.11 *** (.00) [-.01]	-.11 *** (.00) [-.01]	-.11 *** (.00) [-.01]	-.11 *** (.00) [-.01]	-.11 *** (.00) [-.01]	-.11 *** (.00) [-.01]	-.12 *** (.00) [-.01]
Monetary aggravators	—	.16 *** (.02) [.16]	.15 *** (.02) [.14]	.15 *** (.02) [.15]	.14 *** (.02) [.14]	.14 *** (.02) [.14]	.15 *** (.02) [.15]	.15 (.02) [.15]	.15 *** (.02) [.15]
Alcohol density	—	.42 *** (.00) [.00]	.45 *** (.00) [.00]	.44 *** (.00) [.00]	.45 *** (.00) [.01]	.44 *** (.00) [.00]	.40 *** (.00) [.00]	.44 *** (.00) [.01]	.42 *** (.00) [.01]
Welfare generosity	—	—	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.08 * (.00) [.00]	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.07 ** (.00) [.00]
Church membership rate	—	—	-.05 (.00) [.00]	-.05 (.00) [.00]	-.05 (.00) [.00]	-.05 (.00) [.00]	-.05 (.00) [.00]	-.05 (.00) [.00]	-.05 (.00) [.00]
Latino culture	—	—	-.10 * (.00) [.00]	-.09 * (.00) [.00]	-.09 * (.00) [.01]	-.10 * (.00) [.00]	-.09 * (.00) [.00]	.11 * (.00) [.01]	-.10 * (.00) [.00]
Voter turnout rate	—	—	-.08 * (.00) [.00]	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.07 * (.00) [.00]	-.08 * (.00) [.00]	-.07 * (.00) [.00]	-.09 * (.00) [.00]
Monetary aggravators * Con dis.	—	—	—	.05 (.02) [.05]	—	—	—	—	—
Alcohol density * Con dis.	—	—	—	—	.16 *** (.00) [.00]	—	—	—	—
Welfare generosity * Con dis.	—	—	—	—	—	-.09 * (.00) [.00]	—	—	—
Church membership rate * Con dis	—	—	—	—	—	—	-.03 (.00) [.00]	—	—
Latino culture * Con dis.	—	—	—	—	—	—	—	-.12 * (.00) [-.01]	—
Voter turnout rate * Con dis.	—	—	—	—	—	—	—	—	-.10 * (.00) [.00]
Constant	1.396 ***	1.356 ***	1.307 ***	1.308 ***	1.300 ***	1.310 ***	1.308 ***	1.317 ***	1.363 ***
F-Statistic	117.9 ***	181.2 ***	117.0 ***	107.2 ***	110.2 ***	108.4 ***	107.0 ***	110.3 ***	109.1 ***
R ²	.32	.52	.54	.54	.55	.54	.54	.55	.55

^aWeighted factor score

^bNatural log.

Standard errors in parentheses and unstandardized coefficients in brackets.

* $p < .05$; ** $p < .01$; *** $p < .001$

Spanish speaking households reflect immigrant communities that are capable of warding off violent crime, but not property crime. In fact, San Antonio ranks second behind San Diego with the lowest violent crime rate in the U.S. Thus, there is much more to be said and measured about the Latino experience, other than traditional measures such as ethnicity and race (Sampson et al., 2005). Overall, these findings suggest some moderating influence and partially support the directional accuracy of the interaction term hypotheses. The explained variation for Models 4-9 were 54 percent and 55 percent.

Multivariate OLS Regression Results – Summary

In summary, OLS regression results showed five general patterns of findings. First, social disorganization determinants, especially concentrated disadvantage, behaved consistent with previous research. Second, monetary aggravators and alcohol density appeared to make community matters worse by intensifying violent crime more than property crime. Third, noneconomic institutional characteristics seem to adequately relieve the adverse social disorganization and economic institutional influences on crime. Fourth, the interactions between concentrated disadvantage and several of the economic and noneconomic variables produced a mixed set of findings. Interactions between alcohol density and concentrated disadvantage, however, were significant and positively associated with both outcomes; interactions between welfare generosity and concentrated disadvantage were also significant and negatively associated with both outcomes. Fifth, the models revealed moderate to strong explained variation. Overall, the empirical evidence provides some merit to the proposed theoretical integration of social disorganization and institutional anomie, warranting further research.¹²

Discussion and Conclusion

The current study incorporated the theories of social disorganization and institutional anomie. The former was employed to tackle the demographic structure; the latter was enlisted to capture various types of institutions. Taking this approach remains attentive to the wide range of positive and negative community forces associated with crime and explores the conditional nature of crime. For example, the estimated interaction terms allowed the integration of both theories while testing whether substantive connections existed at the census block group level. Based on the findings, both theories can be viewed as supplementary in order to provide a more refined

picture that explains crime. The findings extend the understanding of these theories when conceptualized on a community continuum. At one end, more traditional demographic structures exist; at the opposite end, economic and noneconomic institutions are present. As researchers begin to identify and operationalize demographic and institutional forces more likely to be associated with crime, they can begin to assess the interdependent nature of these ecological characteristics. This process adds to the theoretical viability and utility of each.

The Latino culture findings showed a significant negative association for property and violent crime; but the concentrated disadvantage-Latino culture interaction term suggested a tolerance for property crime and not violent crime. These mixed results add to an ongoing debate whether the Latino experience, in its various forms, impedes or improves community crime. Researchers have posited two divergent perspectives. Sampson et al. (1997:920) reported that higher rates of immigration undermine the capacity of residents to realize common values and to achieve informal social control due to ethnic and linguistic heterogeneity in Chicago (see also Flippen, 2001:301). However, in a more recent study, Sampson et al. (2005) found that lower rates of violence among Latinos, compared to Whites and Blacks, were explained by immigrant concentration.

Martinez's (2002) work also cast doubt on the hypothesis that immigration is associated with crime. Immigration may affect poor Latino neighborhoods positively by helping revitalize areas, strengthening traditional social controls, and creating new community institutions (Elliot and Sims, 2001:344; Buriel et al., 1982), which in turn reduce the likelihood of crime. Scribner (1996) posits that immigrants are generally found to do as well and sometimes better than American citizens. Hagan and Palloni (1999:631) argue future research should focus on the culture and religion of Mexican communities in a manner that emphasizes "ways to preserve, protect, and promote the social and cultural capital that Mexican immigrants bring to their experience in the United States." This research sought to study the Latino experience with the goal of bringing Latinos to the criminological forefront and, in the process, move beyond the White/Black urban crime focus.

The implications of these findings are persuasive enough for rethinking how city officials should plan, implement, and coordinate economic and noneconomic development activities. On one hand, this study identified types of criminogenic economic institutions that officials might regulate more closely. For example, the fact that monetary aggravators and alcohol density were positively

associated with violent and property crime signals the need for regulation of such institutions through zoning. On the other hand, the study also identified noneconomic crime stabilizing mechanisms of social control in which officials might further invest or re-invest. Zoning and land use decisions are likely to have salient consequences (Bursik and Grasmick, 1993:53-55). Land use variables have been found to be an important correlate of crime (e.g., Peterson et al., 2000; Smith, Frazee, and Davison, 2000). By zoning, the goal is to improve the economic, social, cultural, and political efficacy among residents for the purpose of establishing community normative order. According to Kubrin and Weitzer (2003a:385), it “is axiomatic that the priorities and decisions of municipal government officials and business interest can have major effects on a neighborhood’s quality of life and that neighborhoods vary in their capacity to secure valued city services, but we are only beginning to understand how this influences crime.” Few studies have examined how external political decision making influences crime (Stark, 1987; Stucky, 2003; Velez, 2001; Wilson, 1996).

With this said, however, there are three research limitations. The first limitation bears directly on the aforementioned policies. The cross sectional data preclude definitive statements about causal linkages between the independent measures and outcomes. For example, it is unclear whether crime attracts bars or vice versa. If crime is already present, zoning may not matter because bars are an extension of communities, not the cause. This analysis reinforces the notion that the community-crime path is far from unidirectional and suggests that a complex relationship exists. To better isolate causality, future studies may seek to utilize cross sectional data yet employ more sophisticated LISREL simultaneous equation strategies that specify recursive and nonrecursive models (Markowitz et al., 2001; see also Bellair, 2000). The second shortcoming was that the researchers were unable to measure key social disorganization mechanisms of social control, such as collective efficacy. Third, as mentioned earlier, we were unable to determine whether the reduction in magnitude of social disorganization and economic institutional coefficients in Models 3 for property and violent crime rate were statistically significant; which in turn, rendered the evidence inconclusive that mediation exists. Despite these drawbacks, this research has answered the call of previous scholarship (e.g., Morenoff et al., 2001) suggesting that future ecological studies examine more objective institutional measures similar to those used by Peterson et al. (2000). In so doing, we are optimistic that the greatest prospect for these ecological perspectives is their role and utility toward theoretical integration.

Endnotes

1. The authors thank Richard Rosenfeld and anonymous reviewers for their helpful comments and suggestions.

2. There is debate regarding the extent to which institutional anomie applies to violent or property crimes, or both.

3. Justification for this census item is that it “incorporates the level of English-language interaction for an entire household and subsumes important components of contextual census variables such as nativity and length of time in country” (Finch et al., 2000:429).

4. They argue that it is inappropriate to focus exclusively on the direct relationship between economic and noneconomic structures and crime.

5. They also found that the economy (i.e., Gini coefficient of family inequality) was positively and significantly related to various homicide outcomes. Second, noneconomic familial divorce rate was positively and significantly related with homicide; voter turnout, civically engaged adherents, and welfare expenditure were negatively and significantly associated with homicides. In general, voter turnout was responsible for significantly attenuating the effect of economy on homicides. Magnitudes of the coefficients were largest for familial divorce rate, followed by voter turnout, civically engaged adherents, and welfare expenditure.

6. Population change represents the absolute increase or decrease in actual population. The variable can range from negative to positive infinity. The natural log can only be computed for positive integers. To account for this, computing the natural log of the absolute value normalized the variable. Once computed, the direction of the natural log value was changed to negative where a population decrease was experienced.

7. While “direct measures of the extent to which noneconomic institutions provide alternative definitions of self-worth that could serve as countervailing forces against the anomie produced by the unbridled pursuit of the American Dream are not available,” the presumption here is that “certain structural arrangements [e.g., church membership] are more likely than others [e.g., pawnshops/music CD-exchange stores] to promulgate non-materialistic values” (Chamlin and Cochran, 1995:417).

8. Prior research has estimated various aspects of the Latino culture as an intervening and moderating variable (Cuellar, Arnold, and Maldonado, 1995; Rogler et al., 1991:590).

9. The spatial weight matrix was based on rook contiguity. Rook is defined as two neighbors (e.g., census block groups) sharing a common boundary at the edge. Only those cells having a rook's contiguous relation were assigned a value of 1.

10. "For example, using macro-level data, how does one measure the dominance of the economy in the institutional balance of power, the effectiveness of noneconomic institutional controls, or anomie?" (Chamlin and Cochran, 1995:415).

11. Cochran et al. (1995) estimated poverty in their primary models, but also substituted poverty with the Gini coefficient to determine differential effects. The outcome yielded similar results. In contrast, Maume and Lee (2003) estimated the Gini coefficient in their original model, but then substituted the Gini coefficient with poverty. Maume and Lee (2003:1154) also reported that the results were "identical to the ones [with the Gini coefficient]." The lack of variation in results is perhaps due to the fact that such concepts are theoretically distinct, but may share similar qualities when operationalized.

12. As one reviewer suggested, results should be interpreted with caution since concentrated disadvantage: (1) includes outputs of the economy (poverty and unemployment) as well as family structure (female-headed households with children) and (2) incorporates Latino population which makes interpretation of the net effect of Latino culture less precise.

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Appendix A. Operational Definitions of Dependent and Independent Variables and Hypothesized Relationships		
Variable	+/-	Operational definition
Violent crime rate		Three year (2001-2003) average of homicide, rape, robbery, and assault (simple and aggravated) in each BG per 1,000 population. Natural logs were computed to normalize the distribution.
Property crime rate		Three year (2001-2003) average of serious property crime (auto theft, residential burglary, and vehicular burglary) in each BG per 1,000 population. Natural logs were computed to normalize the distribution.
Concentrated disadvantage	+	Weighted factor regression score that included the following 2000 Census items: percent poverty, percent unemployment, percent female-headed household with children, percent Latino, and to a lesser extent, percent Black.
Percent units vacant	+	Percent BG housing units vacant.
Percent males 15-29 years c	+	Percent BG population males between ages 15-29.
Population change	-	Natural logged 2000 BG population subtracted from 1990 BG population.
Monetary aggravators	+	1 = One or more pawnshop or music CD-exchange store establishment in BG. 0 = No pawnshop or music CD-exchange store establishment in BG.
Alcohol density	+	Number of on-site (in-house) consumption alcohol establishments (e.g., bars, taverns, pubs, restaurants) in each BG per 1,000 population.
Welfare generosity	-	Total Section 8 housing dollar voucher amounts per unit in BG.
Church membership rate	-	Number of registered church members in each BG per 1,000 population.
Latino culture	-	Percent BG households linguistically isolated. The census defines "linguistically isolated" household as those in which no person 14 years old and over speaks only English and no person 14 years old and over who speaks a language other than English speaks English "Very well".
Voter turnout rate	-	Number of participated voters in each BG per 1,000 population.