From Heterogeneity to Concentration: Latino Immigrant Neighborhoods and Collective Efficacy Perceptions in Los Angeles and Chicago

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Abstract

Latino immigrant presence in urban neighborhoods has been linked with reduced neighborhood cohesion in social disorganization-based ethnic heterogeneity hypotheses and enhanced cohesion in immigration revitalization approaches. Using the 2000-2002 Los Angeles Family and Neighborhood Survey and the 1994-1995 Project on Human Development in Chicago Neighborhoods Community Survey, we explore the association between Latino immigrant concentration and both levels of, and agreement about, neighborhood collective efficacy. Findings from multilevel models with heteroskedastic variance indicate that Latino immigrant concentration exhibits a nonlinear association with collective efficacy. At low levels, increases in Latino immigrant concentration diminish collective efficacy, consistent with a heterogeneity hypothesis. The negative association between Latino immigrant concentration and collective efficacy declines in magnitude as immigrant concentration increases and, particularly in LA, becomes positive beyond a threshold, consistent with an immigration revitalization effect. We also find an inverse nonlinear pattern of association with the variance of collective efficacy. At low levels, increasing Latino immigrant concentration increases the variance of collective efficacy (reflecting more disagreement), but beyond a threshold, this association becomes negative (reflecting increasing agreement). This pattern is observed in both LA and Chicago. The prevalence of social interaction and reciprocated exchange within neighborhoods explains a modest proportion of the Latino immigrant concentration effect on mean levels of collective efficacy in Chicago, but does little to explain effects on the mean in LA or effects on the variance in either LA or Chicago. These findings offer insight into the complex role Latino immigrant presence plays in shaping neighborhood social climate.

Keywords

Immigrant concentration; immigration revitalization; social disorganization; collective efficacy; Latino; neighborhood; multilevel models; heteroskedastic variance

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Introduction

A substantial body of research on social disorganization within urban communities has argued that increases in Latino immigrant concentration capture "ethnic heterogeneity" in urban neighborhoods – a structural characteristic thought to be associated with community fragmentation and diminished social cohesion (Sampson, Raudenbush, and Earls 1997). In this view, an increase in Latino immigrant presence is associated with ethnic diversity and associated distrust, diminished solidarity, and community withdrawal (Putnam 2007; Shaw and McKay 1969). Indeed, a number of studies have offered evidence of negative associations between Latino and immigrant presence and measures of neighborhood cohesion (Almeida et al. 2009) and *collective efficacy* – understood as the combination of mutual trust and the joint willingness to act on behalf of shared neighborhood goals (Morenoff, Sampson, and Raudenbush 2001; Sampson, Raudenbush, and Earls 1997).

In contrast, research on the "immigrant revitalization" hypothesis has attracted increasing attention in recent years in response to mounting evidence that residence in immigrant concentrated communities confers benefits in the form of reduced crime (Graif and Sampson 2009; Kubrin and Desmond 2015; Kubrin and Ishizawa 2012; Lee and Martinez 2000; Lee and Martinez 2009; MacDonald, Hipp, and Gill 2013) and enhanced health and wellbeing (Bécares, Nazroo, and Stafford 2009; Cagney, Browning, and Wallace 2007; Ostir et al. 2003; Patel et al. 2003). Much of the research on immigrant concentration has focused on historical periods and contexts in which Latinos dominate the immigrant population, leading some researchers to couch findings regarding the beneficial effects of immigrant concentration with specific reference to the Latino population (e.g., the "Latino or Hispanic paradox" in health research [Markides and Coreil 1986; Markides and Eschbach 2011]). Positive outcomes of residence in Latino immigrant concentrated neighborhoods are unexpected to the extent that such concentrations are typically associated with a range of other structural disadvantages, notably high levels of poverty (Markides and Coreil 1986). Some scholars hypothesize that Latino immigrant concentration fosters community trust and shared expectations for mutual support and informal social control leading, in turn, to a range of beneficial outcomes for individual residents (Almeida et al. 2009; Eschbach et al. 2004; Lee and Martinez 2002).

We integrate the ethnic heterogeneity and immigrant revitalization hypotheses, arguing that the relationship between Latino immigrant concentration and collective efficacy is nonlinear. Specifically, we test whether the association between Latino immigrant concentration and collective efficacy is negative at low levels – capturing the fragmentation expected by the ethnic heterogeneity hypothesis – and positive at higher levels, when the benefits of immigrant concentration begin to emerge. Beyond assessments of the perceived level of collective efficacy, we also consider hypotheses regarding the relationship between Latino immigrant concentration and within-neighborhood *agreement* with respect to collective efficacy assessments. Increasing neighborhood fragmentation associated with heterogeneous composition is likely to lead not only to diminished *mean* levels of collective efficacy, but more limited consensus regarding collective efficacy in the local context as reflected in amplified neighborhood *variances* in collective efficacy evaluations. As Latino immigrant concentration increases beyond a threshold, we would expect greater agreement in collective

efficacy reports and associated reductions in neighborhood-specific variances. Accordingly, the integrated approach we adopt expects nonlinear but inverse patterns of association between Latino immigrant concentration and the mean and variance of neighborhood collective efficacy perceptions.

Collective efficacy has been demonstrated to have wide-ranging health and developmental benefits for urban residents (Ahern and Galea 2011; Cohen et al. 2006; Fagan, Wright, and Pinchevsky 2014; Molnar et al. 2008), highlighting the importance of insight into the conditions under which immigrant communities promote or impede its emergence. Variation in neighborhood evaluations has been neglected in extant neighborhood research, but may have important implications for the capacity of communities to act collectively. We use data on both Los Angeles (the 2002-2002 Los Angeles Family and Neighborhood Survey (L.A.FANS)) and Chicago (the 1994-95 Project on Human Development in Chicago Neighborhoods Community Survey (PHDCN-CS)) to consider the robustness of observed relationships between Latino immigrant concentration and collective efficacy across two large urban contexts. We model variability in the means and variances of collective efficacy evaluations employing multilevel models with heteroskedastic variance (Li and Hedeker 2012; Raudenbush and Bryk 2002). Our approach offers the first tests of a nonlinear specification of Latino immigration concentration effects on collective efficacy in two major US urban areas.

Theoretical Background

Ethnic Heterogeneity and Immigrant Concentration in the Social Disorganization Tradition

Shaw and McKay's classic work *Juvenile Delinquency in Urban Areas* (1969) highlighted poverty, residential instability, and ethnic heterogeneity as important neighborhood structural determinants of a community's capacity for self-regulation. When resources are limited, population turnover high, and group differences salient, integrating institutions (such as schools, religious groups, and other voluntary organizations) lack support, community attachments are weakened, and social network ties are less prevalent. The resulting attenuation of informal social control capacity is expected to result in increased crime and other community ills.

Shaw and McKay's work remains highly influential in research on crime and urban community social organization (Kubrin 2009). In addition to poverty and instability, measures of race/ethnic heterogeneity are now routinely incorporated in neighborhood effects research (Hipp 2007; Sampson and Groves 1989). Recent decades, however, have seen a move toward conceptualization and operationalization of race/ethnic heterogeneity focusing on the presence of Latino immigrants. This trend has been shaped by the ascendancy of Latin American countries – particularly Mexico – as major sources of immigration to the US, resulting in increasing convergence in the concentration of Latino and foreign-born residents within urban neighborhoods. The rationale behind this approach is captured by Sampson et al.'s (1997) measurement strategy. In their view, the increasing presence of Latino and foreign-born residents captures higher levels of "ethnic and linguistic heterogeneity" with corrosive implications for collective efficacy. Using data from the 1994 Project on Human Development in Chicago Neighborhoods Community Survey [PHDCN-

CS], they employ a combined measure of the percent Latino and percent foreign born to capture "immigrant concentration" (Sampson, Raudenbush, and Earls 1997, 920). Their analyses, reinforced by subsequent findings (Morenoff, Sampson, and Raudenbush 2001), demonstrated a negative and significant association between Latino and immigrant concentration and collective efficacy.

More recently, Almeida et al. (2009) examined the hypothesis that neighborhood-level Mexican immigrant concentration influences both social ties and social cohesion, again using PHDCN-CS data. The authors used a measure of percent Mexican in the census tract to capture Mexican immigrant presence, finding that the prevalence of Mexicans was positively associated with larger reported social networks (only for Latinos), but negatively associated with social cohesion (i.e., whether neighbors are trustworthy, helpful, close knit, share the same values, and generally get along). These findings are consistent with some studies of the link between Latino and immigrant concentration and hypothesized outcomes of neighborhood cohesiveness, particularly violence. For instance, Sampson and colleagues (1997) found positive associations between Latino and immigrant concentration and measures of violence in Chicago neighborhoods (although Morenoff et al. (2001) report mixed findings on the link between Latino and immigrant concentration and homicide in Chicago). Thus extant research finds some evidence in support of the hypothesis that neighborhood social organization and wellbeing are diminished in the context of (Latino-dominated) immigrant concentration.

The Immigration Revitalization Approach

Although the limited research on social cohesion and some research on crime offer evidence of compromised neighborhood functioning as immigrant presence increases, a rapidly expanding theoretical and empirical literature argues that the concentration of immigrants confers substantial benefits to communities along a host of dimensions. The *immigration revitalization* approach emphasizes the network and institutional benefits of immigrant concentration for informal social control capacity at the neighborhood level (Kubrin and Desmond 2015; Lee and Martinez 2002). Immigrant neighborhoods have been hypothesized to engender more prevalent social support networks with a range of associated benefits (Cagney, Browning, and Wallace 2007; Moore and Pinderhughes 1993; Ostir et al. 2003; Portes 1995). In addition to network ties, immigrant communities may support integrating local institutions such as schools, churches, businesses and other culturally-oriented local organizations that provide important formal and informal resources (Allard and Small 2013; Portes and Rumbaut 2006) and enhance perceptions of community cohesion. The density of organizations in immigrant communities may also elicit widespread use of neighborhood public space, fostering a sense of shared, place-based attachments and associated trust (Browning and Soller 2014; Jacobs 1961). Consequently, increases in the prevalence of immigrants may be associated with gains in cohesion and collective efficacy.

Consistent with expectations of the immigration revitalization approach, a mounting literature finds evidence of protective effects of immigrant presence on both crime (Akins, Rumbaut, and Stansfield 2009; Desmond and Kubrin 2009; Graif and Sampson 2009; Kubrin and Ishizawa 2012; Lee, Martinez, and Rosenfeld 2001; MacDonald, Hipp, and Gill

2013; Martinez, Stowell, and Cancino 2008; Martinez, Stowell, and Lee 2010; Nielsen, Lee, and Martinez 2005; Peterson and Krivo 2010; Stowell and Martinez 2009; Vélez 2009) and health (Ford and Browning 2015; Kershaw, Albrecht, and Carnethon 2013; Mair, Diez Roux, and Galea 2008; Mason et al. 2011; Viruell-Fuentes, Ponce, and Alegría 2012). As with research finding detrimental effects of immigrant concentration, a majority of the studies demonstrating protective effects of immigrant concentration either explicitly examine Latino immigrant concentration or consider places and historical periods in which Latinos dominate the immigrant population. Thus, the observed beneficial associations of immigrant concentration may be more pronounced where immigrant concentration is associated with high levels of co-ethnicity.

Yet, the consistency of the findings regarding the beneficial effects of immigrant concentration is difficult to reconcile with extant evidence regarding the apparent negative association between various measures of neighborhood-level immigrant and Latino presence and social cohesion/collective efficacy (Almeida et al. 2009; Sampson, Raudenbush, and Earls 1997; see also Putnam 2007). Collectively, these finding indicate that neighborhood social organization in the form of cohesion and informal social control expectations (collective efficacy) is compromised in immigrant communities and is thus unlikely to account for the benefits of residence in immigrant concentrated neighborhoods.

We argue that this conclusion is premature, offering an integrated ethnic heterogeneity and immigrant revitalization approach that sheds light on the complexity of extant findings. Moreover, we extend our approach beyond the assessment of variation in mean levels of collective efficacy across contexts as a function of immigrant concentration to include levels of *agreement* regarding neighborhood social organization conditions as well.

From Heterogeneity to Concentration

We apply our model to the case of Latino immigrant concentration, emphasizing the dominant immigrant population in the contemporary US and one which offers the greatest variability in concentration levels in major urban contexts. Combining ethnic heterogeneity and immigrant revitalization hypotheses, we argue that, at low levels, increases in the Latino immigrant population are likely to produce the conditions expected under Shaw and McKay's original ethnic heterogeneity hypothesis. Communities in which a Latino immigrant presence is emerging may engender conflict as co-resident groups respond to overt distinctions in language, lifestyle, and other cultural characteristics. Although the visible cultural and linguistic differences that contribute to neighborhood fragmentation are unlikely to extend to core values, such as the need for safety in public space, their salience may constitute a powerful social psychological deterrent to interaction, diminishing expectations for pro-social collective action.

Beyond a threshold, however, the prevalence of the Latino immigrant population within an urban community may counteract the disintegrating influences of heterogeneity. At high levels, increases in Latino immigrant concentration, as noted, may enhance social support networks, contribute to the density of integrating institutions with resource benefits for local residents, and foster shared use of neighborhood public space, with implications for place-based trust and pro-social orientations. At higher concentrations, the benefits of Latino

immigrant concentration, particularly institutional and public space advantages, may extend to other resident groups as well.[Endnote [1]]

When Latino immigrant populations achieve sufficient presence within a neighborhood, increases in their numbers reinforce the benefits of immigrant concentration. In contrast, at low levels, increases in Latino immigrants may make neighborhood fragmentation more salient, while being insufficient to yield social support, institutional, and public space benefits for neighborhood social organization. Although linear specifications of Latino immigration effects on neighborhood social organization may yield apparently negative associations, interpreting such effects as indicating that high levels of Latino immigrant concentration are detrimental for social climate may be inappropriate.

Immigrant Concentration and the Convergence of Neighborhood Evaluations

Latino immigrant concentration may not only enhance overall levels of collective efficacy, but also result in increasing *convergence of neighborhood evaluations*. Extant research on collective efficacy evaluations finds substantial disagreement regarding the social climate of urban neighborhoods.[Endnote [2]] We suggest two reasons to expect that increases in Latino and immigrant concentration at low levels would increase disagreement with respect to neighborhood perceptions (and decrease disagreement at high levels). Neighborhood perceptions may differ due to diverging targets of evaluation or diverging perceptions of common evaluation targets (or both).

First, when asked to evaluate their neighborhood, urban residents of a given census tract may not understand the physical space of their neighborhood similarly. Some may be evaluating an area surrounding their residence; others may be evaluating an area corresponding to an activity space encompassing locations of routine destinations such as the local grocery store, school, or day care center. Latino immigrants who reside in a given tract may bound their neighborhood differently than other residents due to differences in the locations of routine activities. Moreover, at low levels of immigrant concentration, fewer local resources specifically targeting immigrants may be available, including jobs, commercial opportunities, and local organizations. In such communities, the routine activity spaces of immigrants may evolve idiosyncratically, as jobs and other amenities are sought beyond the local area. The consequences of differences in daily exposures between Latino immigrant groups and other resident populations as well as differences *within* immigrant groups may result in larger variability in collective efficacy evaluations at low levels of immigrant concentration.

Second, residentially proximate immigrant and non-immigrant populations may evaluate the same neighborhood space differently due to differences in the neighborhood narrative frames (Small 2004) employed by local residents to generate impressions of urban contexts.

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[1]Although most neighborhoods with high levels of Latino immigrant concentration are still likely to be characterized by heterogeneity with respect to ethnicity and nativity, we expect that when Latino immigrant population reaches sufficient density, network, institutional, and public space benefits spillover to other resident populations, despite residual heterogeneity. This process may occur even when the Latino immigrant population is not a majority (see Logan et al. (2002) for a discussion of the emergence of reputationally immigrant-dominated communities even in contexts where the focal co-ethnic immigrant group remains a minority).
[2]Perceptions of neighborhood collective efficacy exhibit substantial within-neighborhood variability. For instance, Sampson, Raudenbush, and Earls (1997) find that nearly 80% of the variance in collective efficacy perceptions is within-neighborhood.

Neighborhood narrative frames are "the continuously shifting but nonetheless concrete sets of categories through which the neighborhood's houses, streets, parks, population, location, families, murals, history, heritage, and institutions are made sense of and understood" (Small 2004, 22). A reliance on a frame-based approach (Kirk and Papachristos 2011; Lamont and Small 2008) calls attention to the potential for local structural position to influence the interpretation of jointly experienced conditions. For instance, when the presence of Latino immigrants within a community is small, informal social control of immigrant Latino youth may more often involve sanctioning by other (non-immigrant Latino) residents of the neighborhood. These events may enhance non-Latino-immigrants' impressions of informal social capacity, but they may also diminish Latino immigrants' sense of cohesion. As the Latino immigrant presence in the community increases, however, emerging neighborhood homogeneity may diminish the salience of group differences as the neighborhood develops a clearly co-ethnic immigrant social and institutional presence. These factors are likely to foster convergence in perceptions of collective efficacy.

In practice, both processes – diverging/converging targets of evaluation and perceptions of common evaluation targets – may be operating across the continuum of Latino immigrant concentration. Consequently, we expect that increasing immigrant presence at low levels is likely to result not only in more negative perceptions of neighborhood conditions overall, but greater *variability* in perceptions as well. In contrast, as Latino and immigrant concentration increases beyond a threshold, shared routines, increased social interaction, and converging neighborhood narrative frames will tend to produce greater levels of agreement regarding neighborhood social climates.

In summary, we ask whether Latino immigrant concentration exhibits a nonlinear relationship with both the *average level of, and agreement about*, collective efficacy across neighborhood contexts. Combining the expectations of heterogeneity and immigrant revitalization approaches, we expect that, at low levels, the increasing presence of Latino immigrant residents will diminish both average levels of collective efficacy and within-neighborhood agreement in collective efficacy evaluations (as captured by increasing neighborhood-specific variances in collective efficacy reports). Beyond a threshold, however, the presence of Latino immigrant residents will increase average levels of, and agreement about collective efficacy (the latter captured by decreasing neighborhood-specific variances in collective efficacy reports). Finally, we examine the extent to which neighborhood levels of social network support (interaction and exchange) account for any observed associations between Latino and immigrant concentration and collective efficacy.

We consider these associations in both Chicago (1994-95) and Los Angeles (2000-2002) – two major traditional US destinations for Latino immigrants – allowing for a more rigorous test of our hypotheses. Although the historical period of observation and magnitude of the Latino immigrant populations differ across the two sites we consider, both cities have comparatively large Latino immigrant populations and are consequently appropriate settings for the investigation of Latino immigrant concentration effects at the neighborhood level.

Data and Measures

We use data from the Los Angeles Family and Neighborhood Survey (L.A.FANS) and the Project on Human Development in Chicago Neighborhoods Community Survey (PHDCN-CS) to examine individual and neighborhood factors predicting neighborhood evaluations. L.A.FANS data are based on a stratified, random sample of 65 census tracts in Los Angeles County, California. High-poverty tracts were oversampled. Households were sampled within each tract, and within each household a randomly selected adult (RSA) was interviewed. If children under age 17 lived in the household, then the primary caregiver, a randomly selected child, and one of the child's siblings also were interviewed. The analysis is based on the sample of RSAs (N=2,619; missing data yielded a final sample size of 2,483). The average within-tract sample size is approximately 38 respondents. The dependent variable and individual-level controls are derived from the first wave of L.A.FANS data, which was collected between 2000 and 2002. The cooperation rate for eligible RSAs for the L.A.FANS was 85%, with a response rate adjusted for unknown eligibility by AAPOR standards of 61%.

The PHDCN-CS is a probability sample of residents of Chicago (age 18 and older) focusing on respondent assessments of the communities in which they live. Unlike the L.A.FANS, the PHDCN-CS data include neighborhood reports on a majority of census tracts within the City (796 of 847). The three-stage sampling strategy selected city blocks within neighborhood clusters (aggregations of 2-3 census tracts), dwelling units within blocks, and respondents (one adult, age 18 or over, per household) within dwelling units. The PHDCN-CS achieved a final sample size of 8782 respondents. With missing data, the analytic sample was 7,156 respondents in 780 tracts, for a within-tract sample size of approximately 9 respondents). [Endnote [3]] The PHDCN-CS data were collected between 1994 and 1995. The response rate was 75%.

Neighborhood variables are based on 2000 Census data for Los Angeles and 1990 data for Chicago. Because the L.A.FANS sampling design is based on 1990 tracts, we apply the 2000 data to the 1990 tract boundaries (for more information on this crosswalk procedure see Peterson, Pebley, and Sastry 2007). We use tracts to approximate neighborhoods. Although use of administratively defined neighborhood boundaries has acknowledged limitations (Browning and Soller 2014; Hipp 2007), we employ this approach in order to respect the sampling strategy of the L.A.FANS and to maintain consistency with prior research (Ellis, Wright, and Parks 2004; Peterson and Krivo 2005).

Dependent Measure

Following Sampson, Raudenbush, and Earls (1997), we constructed a *collective efficacy* measure using respondent reports on levels of social cohesion and informal social control in their neighborhoods. The L.A.FANS includes eight of the ten items originally employed by Sampson et al. (1997) to measure collective efficacy, allowing for comparable measurement

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[3]Listwise deletion of missing data on component items of the dependent variable in addition to missing data on independent variables led to a substantially reduced analytic sample. Models employing multiple imputation and three-level item-response estimation (adjustment for missing data at level 1) as well as heteroskedastic variance across neighborhoods are not available within HLM 7. Consequently, we opted for a listwise deletion approach.

across contexts (the correlation between the eight- and ten-item version in Chicago was .98). Information on neighborhood social cohesion is based on responses to items measuring respondents' level of agreement (on a 5-point scale) with the following statements: (1) "People around here are willing to help their neighbors," (2) "This is a close-knit neighborhood," (3) "People in this neighborhood can be trusted," (4) "People in this neighborhood generally don't get along with each other," and (5) "People in this neighborhood do not share the same values." We reverse-coded the latter two items. Informal social control assessments are based on items inquiring about the likelihood that respondents' neighbors could be counted on to intervene if (1) "Children were skipping school and hanging out on a street corner," (2) "Children were spray-painting graffiti on a local building," (3) Children were "showing disrespect to an adult," Responses were given on a five-point scale. The outcome is the mean of the standardized scale items. Data were pooled across LA and Chicago to construct the final scale (a = .79).

Independent Measures

Individual level measures—A number of individual level attributes that might influence respondents' neighborhood perceptions were included in the analysis. The variables were measured comparably across L.A.FANS and PHDCN-CS, except where explicitly noted. Demographic controls include *gender*, *race*, and *age*. *Gender* is captured by a dummy variable (male = 1). *Race/ethnicity* is represented using three dummy variables that record if the respondent is white, black or other (Latino is omitted as the reference group). *Age* is captured by three dummy variables: whether the respondent was between ages 30 to 49, 50 to 69, or 70 to 99, compared to the reference group of respondents ages 15 to 29. *Foreign born Latino* is measured by a dummy variable indicating whether the respondent is Latino and was born outside the US in LA and an indicator of language use in the household in Chicago.[Endnote 4] The *educational level* of respondents was included as dummy variables capturing less than a high school degree, some college, or a college degree and higher, compared to those with a high school degree. We also control for *residential tenure*, which indicates if the respondent has moved in the past 5 years. Finally, dummy variables are used to measure if a respondent is *currently employed* as well as if they are *single* or *cohabiting*, compared to married.

Neighborhood Characteristics—In order to generate measures of structural factors that could be compared across context, we pooled 1990 Illinois and 2000 California census data to generate principal components factor scores. Publically available Census data for 1990 tract boundaries do not include the cross-tabulation of Latino ethnicity and foreign-born status, precluding construction of a measure of the percent immigrant Latino for both LA and Chicago. We combine the percent Latino and percent foreign born to capture the increasing concentration of Latino immigrants (Sampson, Raudenbush, and Earls 1997). In LA, where we do have the ability to isolate the Latino foreign born population (in 2000), principal component factors scores for our measure of *Latino immigrant concentration* are very highly correlated with the percent Latino foreign born (.96), indicating that our measure

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[4]In the case of the PHDCN-CS, information on foreign-born status was not directly available. As a proxy, we included a dummy variable indicating whether Spanish alone or a combination of Spanish and English was used in the household.

closely approximates the concentration of Latino immigrants. Although we cannot reproduce this correlation for Chicago, we observe that the correlation between the percent of the tract population that is foreign born and the percent Latino is marginally higher in Chicago tracts in 1990 (r=.70) than in LA in 2000 (r=.65), indicating that the association between the percent Latino immigrant and our combined index is not likely to be lower in Chicago vs. LA. We include supplementary tests of our hypotheses examining a measure of the percent Latino immigrant in LA to corroborate our findings with the combined index. A square term captures nonlinearity.

Additional measures yielded by the principal components analysis include *concentrated disadvantage* – which exhibits high factor loadings for (1) percentage in poverty, (2) percentage female-headed households, (3) unemployment rate, (4) percentage of residents employed in managerial/professional occupations, and (5) percentage of high school graduates – and *residential instability* – dominated by (1) percentage of residents aged five and older who have moved within the last five years and (2) percentage of total occupied housing units that are renter occupied. *Percent black* and *racial heterogeneity* are included as additional controls. The latter is based on the census racial classifications and is operationalized as $1 - [\mathrm{Pr(white)}^2 + \mathrm{Pr(black)}^2 + \mathrm{Pr(Asian)}^2 + \mathrm{Pr(Other\ Race)}^2]$. In addition to an ethnicity, Latinos also select an individual racial affiliation (typically white or other race). Incorporating a measure of racial diversity ensures that any observed effects of heterogeneity by ethnicity and nativity (captured by Latino immigrant concentration scores) are not confounded with racial heterogeneity.[Endnote 5]

We include a measure of neighborhood-based *social interaction and exchange* as a potential mediator. The measure is based on responses to questions asking the respondent how often neighbors (1) do favors for each other, (2) watch each other's property, and (3) ask each other for advice. Responses were given on a four-point scale (a = .73). The neighborhood-level measure is the mean value for the tract.

Analytic Strategy

To model mean levels of collective efficacy, we employ a conventional two-level model with random intercepts and robust standard errors. Our modeling approach is distinguished, however, from the conventional multilevel model by incorporating the potential for heteroskedastic within-neighborhood variance. The model takes the following form: At level 1, let Y_{ij} be the collective efficacy scale score for respondent i in neighborhood j. At level 1, the collective efficacy scale score is modeled as follows:

$$Y_{ij} = \beta_{0j} + \sum_{p=1}^{P} \beta_{pj} X_{ij} + r_{ij} \qquad r_{ij} \sim N(0, \sigma_{ij}^2)$$

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[5]Census-based racial classifications are not ideal, particularly used to identify racial sub-groups within the Latino population. We examined multiple specifications of the racial heterogeneity index, including a measure based only on the non-Latino population in the tract. Alternative specifications resulted in negligible change in coefficients for Latino and immigrant concentration effects on the mean and variance of collective efficacy.

Here, β_{0j} is the intercept, β_{pj} are coefficients estimating the effects of P individual level covariates X_p on collective efficacy perceptions, and r_{ij} is an independently, normally distributed error term with mean 0 and variance σ_{ij}^2.

At level two (between neighborhoods), neighborhood-level covariates, including linear and quadratic terms for Latino immigrant concentration are included predicting mean levels of collective efficacy at the tract level, as follows:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(W_{LAT/IMMj}) + \gamma_{02}(W_{LAT/IMMj}^2) + \sum_{q=3}^{Q}\gamma_{0q}W_{qj} + u_{0j} \quad u_{0j} \sim N(0, \tau_{00})$$

where γ_{00} is a neighborhood-level intercept, γ_{01} is the coefficient capturing the linear effect of Latino immigrant concentration, γ_{02} is the coefficient capturing the quadratic effect of Latino immigrant concentration, γ_{0q} are coefficients for Q-2 neighborhood-level control variables W_q, and u_{0j} is an independently, normally distributed neighborhood-level error term with mean 0 and variance τ_{00}. Level 1 covariates are grand-mean centered.

Finally, the model assumes heteroskedastic within-neighborhood variances and allows for individual and neighborhood predictors of variance in collective efficacy evaluations:

$$\ln(\sigma_{ij}^2) - \pi_{00} + \pi_{01}(Z_{LAT/MMj}) + \pi_{02}(Z_{LAT/MMj}^2) + \sum_{s=3}^{S}\pi_{0s}Z_{sij}$$

where the natural log of σ_{ij}^2 is the within-neighborhood variance term (allowed to vary across j neighborhoods), π_{00} is the intercept, π_{01} is the coefficient capturing the linear effect of Latino immigrant concentration, π_{02} is the coefficient capturing the quadratic effect of Latino immigrant concentration, and π_{0s} are coefficients for the effects of S-2 covariates Z. Models of the mean and variance include equivalent covariates.

Results

Table 1 presents descriptive statistics for variables included in the analysis by city. Race/ethnic breakdowns highlight key compositional differences between the two samples. The PHDCN-CS has a substantially larger African American sample and smaller (but non-trivial) Latino sample than L.A.FANS sample, reflecting differences in the 1994-95 Chicago and 2000-02 Los Angeles populations.[Endnote 6]

Table 2 reports results of multilevel linear models of collective efficacy perceptions with robust standard errors. The top panel includes coefficients for models of mean collective efficacy without (Models 1a and 1b) and with (Models 2a and 2b) a control for neighborhood-level social interaction and exchange. Comparable models are estimated for

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[6]Note that descriptive statistics from L.A.FANS are not weighted to account for the oversample of economically disadvantaged neighborhoods.

LA and Chicago (a and b, respectively). The bottom panel of the table reports the results of simultaneously estimated heteroskedastic variance models.

Beginning with results for the collective efficacy mean, Model 1a (LA) indicates that, at the individual level, being 30 to 49 years old, and foreign-born Latino status increase collective efficacy perceptions, whereas shorter residential tenure, being single, or cohabiting with a partner decrease perceptions of collective efficacy. At the neighborhood level, concentrated disadvantage and residential instability are negatively associated with collective efficacy, consistent with prior research (Sampson, Raudenbush, and Earls 1997). Results for Latino immigrant concentration indicate that the linear term is negative and significant ($p < .01$); however, the quadratic term is positive and significant ($p < .05$), offering evidence of nonlinearity in the association between Latino immigrant concentration and collective efficacy. Figure 1 graphs the relationship between Latino immigrant concentration and collective efficacy over the range of the scale represented by LA County tracts (to which the L.A.FANS tract sample generalizes). Although a clear negative association is observed as Latino immigrant concentration increases at low levels, beyond a threshold, Latino immigrant concentration exerts a positive influence on collective efficacy.

Model 1b (Chicago) indicates that being 30 years old or older, being employed, and having a college degree are positively associated with collective efficacy while residential tenure and being single or cohabiting are negatively associated with the outcome. At the neighborhood level, all variables are significant predictors of collective efficacy (though racial diversity only at the $p < .10$ level). Increases in concentrated disadvantage, residential instability, and the percent Black reduce collective efficacy perceptions while increases in diversity are positively associated with the outcome. Consistent with results for LA, Latino immigrant concentration exhibits a nonlinear association with collective efficacy with linear and quadratic effects achieving significance at $p < .001$ and $p < .05$ respectively. Figure 1 graphs the nonlinear association between Latino immigrant concentration and collective efficacy over the range of neighborhoods represented in Chicago. Compared with LA, the nonlinear association does not result in a similar uptick in the curve at high levels of Latino immigrant presence. However, the distribution of Latino immigrant concentration in Chicago does not include tracts with concentrations comparable to those at the high end of the LA distribution. Consequently, the model results for Chicago indicate that, at high levels of Latino immigrant concentration, the negative association with collective efficacy effectively disappears.

Models 2a and 2b (panel 1) report results of models of mean collective efficacy including a measure of social interaction and exchange to examine whether this factor mediates the effects of structural characteristics on the outcome. In LA, although a highly significant predictor of collective efficacy, social interaction and exchange does little to mediate the effects of neighborhood structural predictors, with the exception of residential instability, which is reduced in magnitude by roughly 70% and rendered insignificant in Model 2a. Coefficients for Latino immigrant concentration, however, remain relatively unchanged. The effect of racial heterogeneity actually increases in magnitude. In Chicago, consistent with LA, social interaction and exchange is a powerful predictor of collective efficacy and reduces the magnitude of the residential instability effect by roughly 60% (although it remains significant ($p < .01$). In contrast to LA, however, social interaction and exchange

reduces the significant effect of percent Black by about 17% and the racial heterogeneity effect by nearly half, rendering it insignificant in Model 2b. With respect to Latino immigrant concentration, the linear term is reduced by a quarter with the introduction of social interaction and exchange while the quadratic term is reduced by a third. While the effect remains statistically significant, the quadratic term becomes only marginally significant at $p<.10$. Thus social interaction and exchange appears to play a more important mediating role in Chicago than LA, but this process does not fully account for the Latino immigrant concentration effect on collective efficacy in the former context.

We next turn to results for models of the variance in collective efficacy across neighborhoods. Panel 2 of Table 2 reports results of heteroskedastic variance models, estimated simultaneously with models of the mean. Tests of goodness-of-fit comparing models assuming homogeneous vs. heterogeneous collective efficacy variance (prior to the inclusion of covariates in the variance model) indicate that the latter significantly improve model fit in both settings. Beginning with LA, Model 1a indicates that, at the individual level, being male, having less than a high school education, and Latino foreign born status reduce the variance in collective efficacy – i.e., are associated with greater agreement on collective efficacy perceptions. At the neighborhood level, concentrated disadvantage increases the variance (i.e., reduces agreement), but is only marginally significant. Latino immigrant concentration exhibits a nonlinear association with the variance of collective efficacy. At low levels, increases in Latino immigrant concentration increase the variance, consistent with the hypothesis that increasing heterogeneity reduces agreement regarding the neighborhood social conditions. Beyond a threshold, increases in Latino immigrant concentration reduce the variance in collective efficacy, reflecting increasing agreement on social conditions.

Model 1b, panel 2 reports the results of heteroskedastic variance models for Chicago. At the individual level, being male (marginal significance) and Latino foreign born ($p<.05$) are both negatively associated with the variance of collective efficacy, consistent with LA. Being age 70 or older is negatively associated with the variance, and having some college education but no degree is positively associated with the variance of collective efficacy, but both only marginally significant. Other individual level predictors are not significant, however. At the neighborhood level, only diversity is *not* associated with the variance of collective efficacy. Concentrated disadvantage and the percent Black both increase the variance (increase disagreement) while residential stability is a marginally significant negative predictor of the variance. The effect of concentrated disadvantage on the variance is consistent across LA and Chicago. However, the percent Black and residential instability are significant predictors of the variance only in Chicago. Latino immigrant concentration exhibits a statistically significant ($p<.05$) nonlinear pattern of association with the variance of collective efficacy similar to that observed in LA. At low levels, increases in Latino and immigrant concentration increase the variance but at higher levels the association is reversed.

Figure 2 graphs the association between Latino immigrant concentration and the variance of collective efficacy for LA and Chicago. Overall, the variance of collective efficacy is larger

in Chicago than LA, but the nonlinear pattern of association is observed across both contexts.

Finally, panel 2 of Models 2a and 2b add neighborhood-level social interaction and exchange. In Model 2a, consistent with expectations, more prevalent neighborhood interaction and exchange lead to greater agreement on collective efficacy perceptions in LA. However, the inclusion of this variable does little to change the coefficients estimates in Model 1a. Latino immigrant concentration coefficients actually increase somewhat with the inclusion of social interaction and exchange. In Chicago, Model 2b indicates that social interaction and exchange is *not* a significant predictor of the variance in collective efficacy. Accordingly, Latino immigrant concentration effects remain comparable to those observed in Model 1b.

Although we were unable to examine the impact of the percent Latino immigrant directly in both cities, we were able to do so in LA using 2000 census data. Table 3 reports results of comparable models to those presented in Table 2 employing a measure of the percent Latino immigrant. Results are comparable to those for LA using the combined index. The percent Latino immigrant exhibits the expected nonlinear associations with both the collective efficacy mean and its variance across neighborhoods. See Figures 3 and 4 for comparable plots of the association between percent Latino immigrants and collective efficacy.

At what point in the distribution of neighborhood Latino immigrant concentration do benefits of such concentration emerge? We estimated the percentile of Latino immigrant concentration at its inflection point for both LA and Chicago. The inflection point of the mean model for Los Angeles occurs at the 58th percentile of the combined Latino immigrant scale, while for Chicago this occurs at the 99th percentile. At the inflection point, the estimated percent foreign born is 45 in LA and 54 in Chicago. The percent Latino at the inflection point is 70 in LA and 93 in Chicago. In the supplementary model for LA (estimating the effect of percent Latino foreign born), the inflection point for the mean model is 40.1 percent and occurs at the 65th percentile. Thus the model indicates that growth in the Latino immigrant population beyond about 40 percent may enhance the neighborhood social climates of LA communities.

Discussion

We integrated social disorganization-based ethnic heterogeneity and immigrant revitalization approaches to examine the link between Latino immigrant concentration and perceptions of collective efficacy in two major US Latino immigrant destinations – Los Angeles and Chicago. Arguing that the two perspectives are applicable at different ranges of the neighborhood-level distribution of Latino immigrant prevalence, we examined the expectation of a nonlinear association between Latino immigrant concentration and collective efficacy. We found evidence that increases in Latino immigrant concentration at low levels diminish perceptions of collective efficacy, consistent with the classic social disorganization hypothesis that ethnic heterogeneity at the neighborhood level attenuates cohesion and shared expectations for pro-social action. We also found evidence of nonlinearities in the association between Latino immigrant concentration and collective

efficacy in both LA and Chicago. Quadratic terms in models of the mean perception of collective efficacy were significant and positive for both cities, indicating that, as Latino immigrant concentration increases, the magnitude of the negative effect declined. In the LA context – although to a lesser extent in Chicago – the nonlinear association resulted in an increasingly positive effect of Latino immigrant concentration on collective efficacy at the high end of the distribution, consistent with the immigrant revitalization hypothesis. Census tracts with a substantial Latino immigrant presence benefited from increases in this population with respect to evaluations of cohesiveness and informal social control capacity.

Evidence of both heterogeneity and immigrant revitalization effects on collective efficacy perceptions helps address equivocal findings on the influence of Latino immigrant presence on neighborhood social climate and wellbeing. Extant findings suggesting that Latino immigrant concentration reduces cohesion (Morenoff, Sampson, and Raudenbush 2001; Sampson, Raudenbush, and Earls 1997) examined only linear effects using data on only one city. Almeida et al. (2009) examined the potential for nonlinearities in the association between Mexican concentration and neighborhood cohesion, but did not consider the potentially beneficial role of immigrant concentration. The findings suggest that studies investigating the effects of Latino immigrant concentration on other aspects of neighborhood wellbeing such as crime would also benefit from considering nonlinear associations. Although evidence of the potentially protective effect of Latino immigrant concentration on outcomes such as crime and health is mounting, studies that neglect to consider the range of Latino immigrant concentration in the specific setting under investigation and the potential for nonlinearities in associations with key outcomes may yield biased results.

We note that the positive effect of Latino immigrant concentration on collective efficacy was more pronounced in LA. This may be due to the relatively lower prevalence of tracts with very high levels of Latino immigrant concentration in Chicago. However, disparate findings may also be a function of compositional differences across the two cities. Higher levels of Latino immigrant concentration at the city level in LA vs. Chicago may produce distinct tract-level environments despite comparable levels of within-tract concentration, generating conditions that favor the translation of tract-level Latino immigrant concentration into cohesion in LA. For instance, LA may be characterized by more established immigrant-serving, integrating institutions such as schools and churches.

The historical timing of the studies may also contribute to differences in the nonlinear effect across the two sites. The PHDCN-CS occurred during a period of relatively rapid increase in immigration of Latinos to destinations beyond the southwest, while simultaneously, immigration to Los Angeles and other historically important destinations slowed (Massey and Capoferro 2008). Differences in the national climate of accommodation toward immigrants across the two periods may have influenced perceptions of neighborhood environment in Latino immigrant-concentrated areas. Anti-immigrant sentiment, as tracked by answers to the question "In your view, should immigration be kept at its present level, increased, or decreased" (Gallup Historical Trends 2015) peaked during the mid-1990s, with 65% of respondents indicating a preference for decreased immigration. This percentage dropped precipitously between the mid-1990s and 2000, dipping below 40%. However, the events of September 11th, 2001, rapidly reversed this trend (the L.A.FANS was fielded

between 2000 and 2002). The national climate during the period of the PHDCN may have suppressed the beneficial effects of Latino immigrant concentration on collective efficacy, potentially resulting in a decline in the sense of trust and cohesion generally (including assessments of local communities). Although it is important to acknowledge the potential for the Chicago-based models to differ in the nonlinear association between Latino immigrant concentration and collective efficacy, we also stress that differences in the shape of the nonlinear distribution across the two contexts are minimal. The expectation that nonlinear impacts of Latino immigrant concentration might emerge with increased representation at the high end of the distribution remains a highly plausible hypothesis. Longitudinal data on a larger number of contexts are clearly needed to assess the stability and comparability of the observed patterns both within and across cities.

In addition to examination of nonlinearities in the association between Latino immigrant concentration and mean levels of collective efficacy in two major urban areas, a novel feature of the study was the effort to consider variability in levels of agreement in collective efficacy perceptions across neighborhoods. Specifically, we employed multilevel heteroskedastic variance models to assess the association between Latino immigrant concentration and within-neighborhood variances in collective efficacy. Consistent with the integrated model, we found evidence of a nonlinear association between Latino immigrant concentration and collective efficacy variances. At low levels, increasing Latino immigrant concentration increases within-neighborhood variance in collective efficacy (decreasing agreement) but, beyond a threshold, increases in Latino immigrant concentration decrease the variance. The consistency of the pattern across the two sites offers robust evidence that the heterogeneity associated with low but increasing levels of Latino immigrant concentration is reflected in more disparate perceptions of community social conditions. In turn, immigrant-concentrated settings engender increasing homogeneity of neighborhood assessments.

To date, studies of Latino immigrant concentration effects (and structural influences more generally) on neighborhood conditions have neglected homogeneity of perceptions, focusing exclusively on differences in average evaluations of neighborhood environments. Yet, agreement is fundamental to the notion of cohesion and may independently contribute to neighborhood outcomes. Lack of agreement about neighborhood social conditions suggests that respondents are bringing distinct frames to the task of evaluating neighborhoods, with implications for the effectiveness of collective action. Higher levels of collective efficacy may not translate into coordinated action on behalf of communities if also accompanied by substantial disagreement. Research investigating the effects of comparable levels of neighborhood collective efficacy under conditions of varying agreement may yield insight into equivocal findings on collective efficacy in the extant literature (Browning, Cagney, and Boettner 2016).

Future research will also benefit from investigations that more precisely assess the geographic parameters of respondent evaluations. The geographic boundaries of neighborhood definitions may vary for different groups who reside within the same census tract. Activity spaces may also vary across co-resident groups, resulting in distinct exposure patterns and "neighborhood" evaluations. In this view, differential neighborhood evaluation

results from dissimilar exposures rather than different frames brought to the same exposure. Assessing these alternative hypotheses, however, is only possible with richer information on the nature of routine activity patterns in urban settings (Browning and Soller 2014).

Finally, we examined what is, perhaps, the most widely proffered explanation for the opposing effects of heterogeneity and enclave conditions on perceptions of neighborhood social climate – social network interaction. Specifically, we considered the role of neighbor-based social interaction and reciprocated exchange in models of both the mean and variance of collective efficacy. Social interaction and exchange was a powerful predictor of average levels of collective efficacy in both Chicago and LA, consistent with prior research (Morenoff, Sampson, and Raudenbush 2001). Social interaction and exchange was also negatively associated with the variance of collective efficacy, but only in LA. Social interaction and exchange did not, however, explain a substantial proportion of Latino immigrant concentration effects on these outcomes. Only in analyses of the mean in Chicago did social interaction and exchange exhibit any explanatory power (and coefficients for Latino immigrant concentration remained significant – or marginally so – after the inclusion of social interaction and exchange). Alternative explanations for Latino immigrant concentration effects on collective efficacy emphasize the presence or absence of integrating institutions and shared public spaces in engendering both positive and homogeneous evaluations of neighborhood environments. Research that incorporates information on the organizational environment in combination with patterns of shared space use may offer more explanatory insight into the processes that link Latino immigrant concentration with perceptions of the social climate.

A number of limitations characterize our analysis. First, although we incorporated data on two cities – an atypical approach in neighborhood effects research – we were nevertheless limited by differences in the timing of the data collection efforts and the prevalence of Latino immigrants, leading to some ambiguity in the interpretation of results. Although we employed a combined measure of Latino and immigrant presence that was highly correlated with the percent Latino immigrant (in LA), we were unable to measure the percentage of Latino immigrants directly in Chicago. Moreover, we considered only the average effect of Latino immigrant concentration across the concentration continuum. An important question concerns the potential for variability in the impact of Latino immigrant concentration on collective efficacy depending upon the composition of the non-Latino-immigrant population. Are the benefits of Latino immigrant concentration most pronounced when neighborhoods are otherwise dominated by native-born Latinos? Are potentially beneficial effects of Latino immigrant concentration diminished in the context of salient gentrification processes? Relatedly, decomposition of the Latino immigrant population by region of origin and documentation status would also provide additional information on the potential for within-Latino heterogeneity to influence the extent of cohesion in immigrant concentrated communities (Logan, Alba, and Leung 1996; South, Crowder, and Chavez 2005).[Endnote 7] Menjívar (1997a; 1997b; 2000) has also argued that cohesion within Latino immigrant

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[7]In supplementary models, we examined whether the presence of Caribbean, Central, or South American immigrants modified the observed associations. The observed associations between Latino immigrant concentration and collective efficacy were virtually unchanged.

communities is compromised in the context of very high levels of poverty. Future research using larger samples of neighborhoods will enable researchers to examine the conditions under which departures from the observed patterns emerge. Additional urban contexts – e.g., "New Destination" contexts where Latino immigrant populations may be emerging (Lichter and Johnson 2009; Tienda and Fuentes 2014) – would offer corroborative tests of the perspective advanced here.

The last two decades have seen substantial increases in Latino immigration, raising the question of whether the observed relationship between Latino immigrant concentration and collective efficacy would hold in the contemporary context. The timing of the PHDCN and LAFANS surveys limits our ability to address this question directly. However, with respect to demographic change, we observe notable increases in Latino immigrant concentration in Chicago, particularly at the high end of the distribution. Examining Census tracts in Cook County, Latino and immigrant concentration are both higher at the 90th percentile of each distribution in 2010 (85% Latino; 48% foreign-born) compared to 1990 (73% Latino; 43% foreign-born). To the extent that the observed relationship with collective efficacy holds, we would expect to see a more robust positive association between Latino immigrant concentration and collective emerge at the high end of the distribution as additional tracts reach higher levels of observed Latino immigrant concentration compared to 1990. In Los Angeles County, the concentration of Latinos and foreign-born residents at the high ends of each distribution has not changed significantly.

With respect to analytic strategy, our modeling approach did not incorporate random effects for collective efficacy variances (a feature not included in HLM's version of the heteroskedastic variance model; Raudenbush et al. 2011). Sensitivity analyses employing more advanced software options to estimate a heteroskedastic variance model with random effects for variances (Hedeker and Nordgren 2013) yielded results consistent with our conclusions. However, we were unable to include all covariates in these models due to convergence problems encountered with the software. Another concern is that the relationship between immigrant concentration and collective efficacy is more complex than a simple parabolic shape. Tests of hypotheses regarding alternative nonlinear relationships may be informative. Larger neighborhood samples will also facilitate tests of more complex nonlinear specifications of the immigrant concentration-collective efficacy association. Finally, the cross-sectional nature of the data limits the capacity to draw robust conclusions regarding the causal effects of our key predictors.

Despite these limitations, the analyses constitute an important advance in our understanding of the contribution of Latino immigrant concentration to neighborhood social climate. Research on the consequences of both neighborhood diversity and immigrant concentration has proceeded largely independently, with provocative but nevertheless mixed findings. Moreover, beyond neighborhood social organizational outcomes such as collective efficacy, the association between Latino immigrant concentration and outcomes such as health and crime may be more complex than previously understood as well. Integrating heterogeneity and immigration revitalization perspectives will aid in the ongoing effort to understand the contribution of Latino immigrant concentration to a range of urban outcomes.

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Acknowledgments

Biographies

Christopher R. Browning is a Professor of Sociology and an affiliate of the Institute for Population Research at Ohio State University. His research focuses on neighborhood and activity space influences on health and development, emphasizing the causes and consequences of social processes such as collective efficacy and routine activities. His work has appeared in *American Sociological Review, Demography*, and the *Journal of Health and Social Behavior*, among other outlets.

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Figure 1.
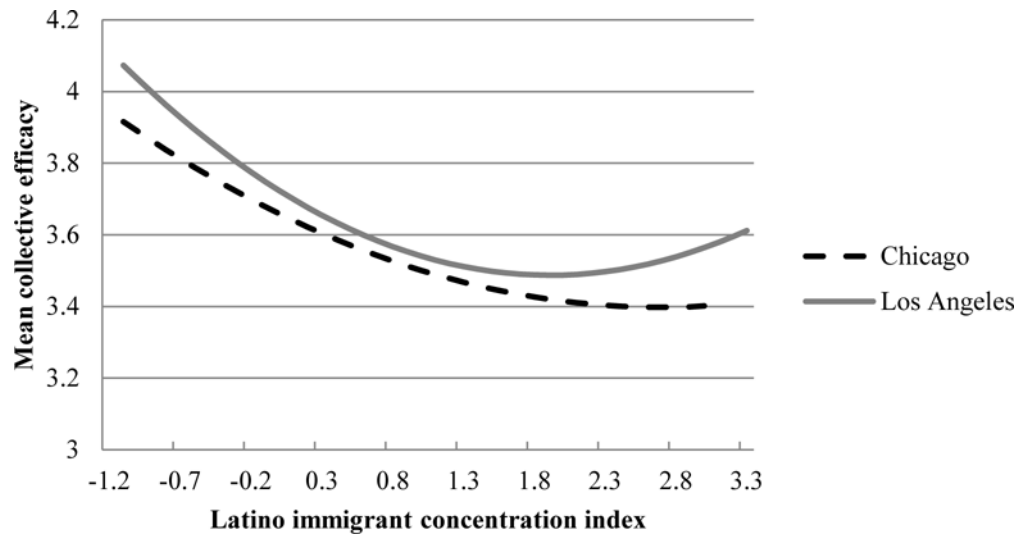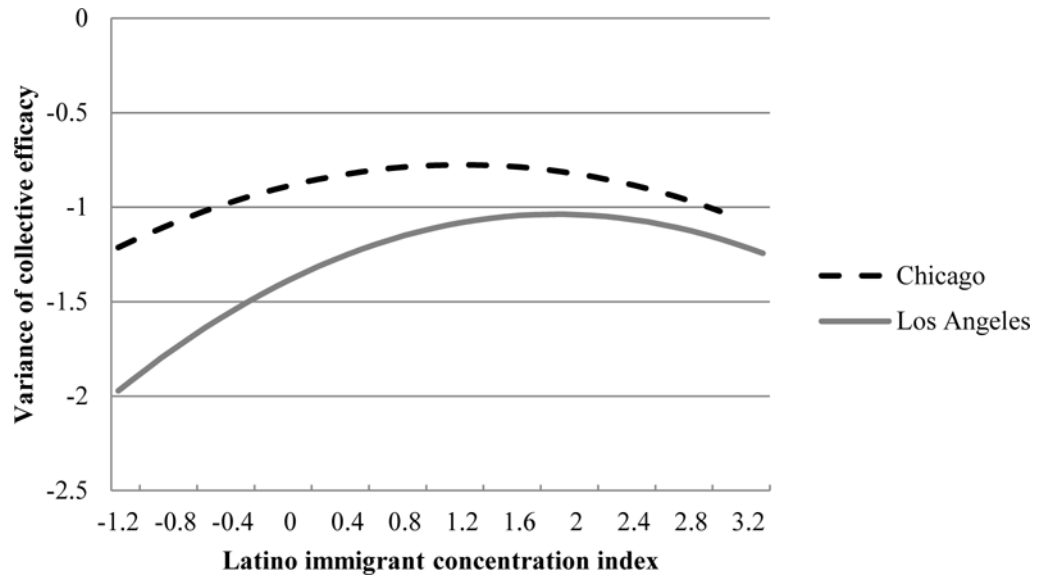The Effect of Immigrant Concentration on the Mean of Collective Efficacy

Figure 2.
The Effect of Immigrant Concentration on the Log Variance of Collective Efficacy
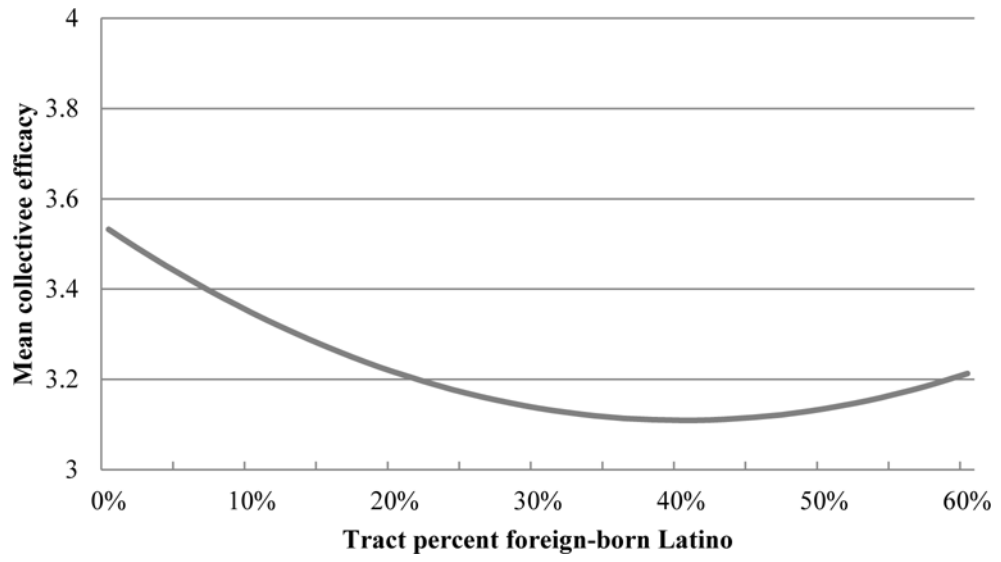
Figure 3.
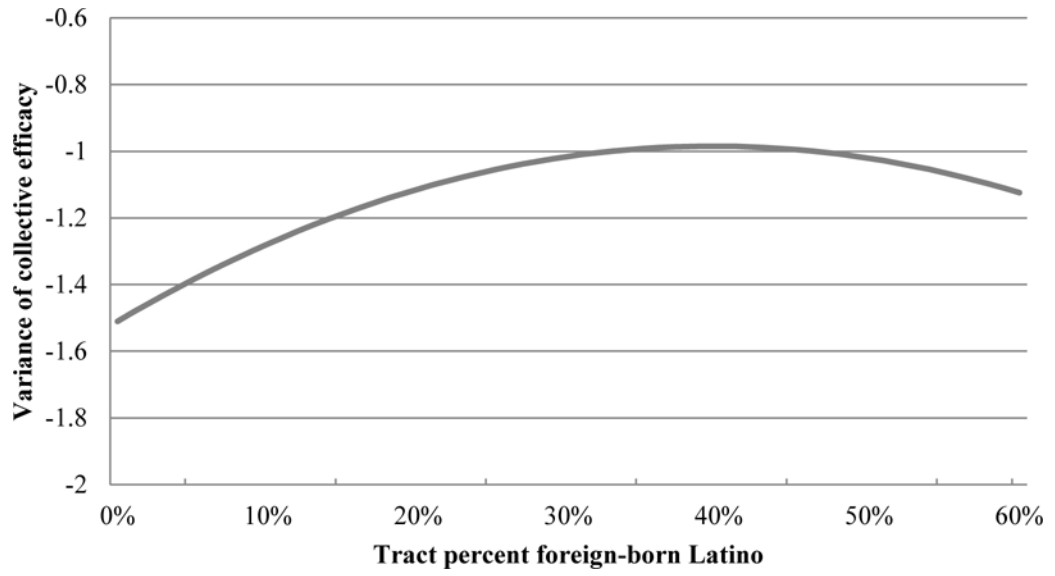The Effect of Foreign-Born Latino Concentration on the Mean of Collective Efficacy in Los Angeles

Figure 4.
The Effect of Foreign-Born Latino Concentration on the Log Variance of Collective Efficacy
in Los Angeles

Table 1

Descriptive Statistics for Variables in the Analysis (LAFANS and PHDCN-CS)

	Los Angeles		Chicago	
	Mean	**Standard Deviation**	**Mean**	**Standard Deviation**
Individual Level	N=2483		N=7156	
Age 15-29	0.25	–	0.25	–
Age 30-49	0.54	–	0.45	–
Age 50-69	0.15	–	0.20	–
Age 70-99	0.05	–	0.09	–
Male	0.41	–	0.41	–
Black	0.10	–	0.39	–
White	0.26	–	0.27	–
Other	0.09	–	0.08	–
Latino	0.56	–	0.26	–
Residential Tenure	0.59	–	0.49	–
Married	0.52	–	0.37	–
Cohabiting	0.09	–	0.04	–
Single	0.39	–	0.58	–
Employed	0.65	–	0.58	–
Education - Less Than High School	0.35	–	0.26	–
Education - High School Degree	0.21	–	0.33	–
Education - Some College	0.25	–	0.21	–
Education - College Degree (BA or higher)	0.19	–	0.19	–
Foreign Born Latino[a]	0.42	–	0.22	–
Neighborhood Level	N=65		N=780	
Immigrant Concentration	1.39	1.05	−0.20	1.00
Percent Black	0.09	0.10	0.42	0.44
Racial Diversity	0.56	0.12	0.25	0.22
Concentrated Disadvantage	0.58	1.15	1.20	1.26
Residential Instability	0.48	0.94	0.31	1.03
Social Interaction	−2.36	0.22	−2.30	0.44

[a]In the PHDCN-CS, information on foreign born status was not directly available. We included a dummy variable indicating whether Spanish alone or a combination of Spanish and English was used in the household.

Table 2

Multilevel Linear Models of Collective Efficacy Perceptions with Robust Standard Errors and Heteroskedastic Within-Neighborhood Variances

Panel 1. Models on the Mean				
	Model 1a	Model 1b	Model 2a	Model 2b
	Los Angeles	Chicago	Los Angeles	Chicago
Individual Level				
Age 15-29 (omitted)				
Age 30-49	0.077 *	0.099 ***	0.071 *	0.090 ***
Age 50-69	0.069	0.117 ***	0.077 †	0.108 ***
Age 70-99	0.100	0.163 ***	0.103 †	0.160 ***
Male	0.030	0.002	0.028	0.002
Black	0.046	−0.002	0.036	−0.013
White	0.022	0.025	0.009	0.019
Other	−0.029	−0.044	−0.048	−0.056
Latino (omitted)				
Residential Tenure	−0.044 †	−0.093 ***	−0.042 †	−0.080 ***
Married (omitted)				
Cohabiting	−0.142 *	−0.017	−0.149 **	−0.023
Single	−0.067 *	−0.025	−0.071 **	−0.021
Employed	−0.017	0.044 *	−0.015	0.049 *
Education–Less Than HS	0.030	−0.018	0.037	−0.024
Education–HS (omitted)				
Education–Some College	0.015	0.006	0.017	−0.001
Education–College Degree	−0.032	0.054 *	−0.035	0.045 †
Foreign Born Latino	0.179 ***	0.047	0.171 ***	0.046
Neighborhood Level				
Immigrant Concentration	−0.247 **	−0.194 ***	−0.261 **	−0.142 ***
Immigrant Concentration^2	0.065 *	0.036 *	0.093 **	0.023 †
Percent Black	−0.362 †	−0.419 ***	−0.072	−0.347 ***
Racial Diversity	0.212	0.185 †	0.422 **	0.097
Concentrated Disadvantage	−0.150 **	−0.080 ***	−0.178 ***	−0.078 ***
Residential Instability	−0.080 **	−0.102 ***	−0.024	−0.041 **
Social Interaction			0.621 ***	0.365 ***
Intercept	3.723 ***	3.659 ***	4.956 ***	4.493 ***
σ^2	0.379	0.419	0.379	0.417
τ	0.015	0.018	0.005	0.07

Panel 2. Models on the Variance

	Model 1a	Model 1b	Model 2a	Model 2b
	Los Angeles	Chicago	Los Angeles	Chicago
Individual Level				
Age 15-29 (omitted)				
Age 30-49	0.116	0.012	0.127†	0.010
Age 50-69	0.174†	−0.067	0.176†	−0.072
Age 70-99	0.006	−0.141†	−0.002	−0.131†
Male	−0.141*	−0.066†	−0.139*	−0.063†
Black	0.019	0.007	0.074	−0.002
White	0.022	−0.086	0.066	−0.059
Other	−0.213	−0.030	−0.130	−0.020
Latino (omitted)				
Residential Tenure	0.102	0.000	0.100	−0.004
Married (omitted)				
Cohabiting	0.014	−0.048	0.015	−0.034
Single	−0.091	−0.019	−0.091	−0.007
Employed	−0.063	0.000	−0.046	−0.006
Education–Less Than HS	−0.195*	−0.003	−0.232**	−0.014
Education–HS (omitted)				
Education–Some College	−0.057	0.089†	−0.069	0.098*
Education–College Degree	0.019	−0.044	0.012	−0.040
Foreign Born Latino	−0.270**	−0.191*	−0.246*	−0.167†
Neighborhood Level				
Immigrant Concentration	0.371*	0.182**	0.420**	0.186**
Immigrant Concentration^2	−0.100*	−0.076**	−0.148**	−0.071**
Percent Black	0.055	0.446***	−0.319	0.439***
Racial Diversity	−0.027	0.064	−0.307	0.045
Concentrated Disadvantage	0.142†	0.077**	0.195*	0.064**
Residential Instability	0.024	−0.037†	−0.037	−0.030
Social Interaction			−0.660***	0.034
Intercept	−1.281***	−1.051***	−2.580***	−0.964***

***p<.001;

**p<.01;

*p<.05;

†p<.10

Table 3

Multilevel Linear Models of Collective Efficacy Perceptions with Robust Standard Errors and Heteroskedastic Within-Neighborhood Variances

Panel 1. Models on the Mean		
	Model 1	**Model 2**
	Los Angeles	**Los Angeles**
Individual Level		
Age 15-29 (omitted)		
Age 30-49	0.077 *	0.072 *
Age 50-69	0.073	0.082 †
Age 70-99	0.093	0.095
Male	0.034	0.034
Black	0.046	0.039
White	0.020	0.010
Other	−0.040	−0.055
Latino (omitted)		
Residential Tenure	−0.040	−0.037
Married		
Cohabiting	−0.142 *	−0.146 *
Single	−0.070 *	−0.074 **
Employed	−0.020	−0.019
Education–Less Than HS	0.030	0.037
Education–HS (omitted)		
Education–Some College	0.013	0.016
Education–College Degree	−0.036	−0.038
Foreign Born Latino	0.178 ***	0.171 ***
Neighborhood Level		
Latino Foreign Born	−2.108 *	−1.664 **
Latino Foreign Born^2	2.626 *	2.710 **
Percent Black	−0.266	−0.045
Racial Diversity	0.044	0.207 †
Concentrated Disadvantage	−0.111 *	−0.168 **
Residential Instability	−0.088 ***	−0.030 †
Social Interaction		0.577 ***
Intercept	3.532 ***	3.527 ***
σ^2	0.378	0.379
τ	0.014	0.006

Panel 2. Models on the Variance		
	Model 1	**Model 2**
	Los Angeles	**Los Angeles**
Individual Level		
Age 15-29 (omitted)		
Age 30-49	0.117	0.127 [†]
Age 50-69	0.169 [†]	0.168 [†]
Age 70-99	0.017	0.021
Male	−0.152 [*]	−0.152 [*]
Black	0.032	0.081
White	0.033	0.064
Other	−0.168	−0.099
Latino (omitted)		
Residential Tenure	0.090	0.084
Married (omitted)		
Cohabiting	0.013	0.013
Single	−0.080	−0.080
Employed	−0.047	−0.026
Education–Less Than HS	−0.266 [**]	−0.241 [*]
Education–HS (omitted)	−0.200 [*]	−0.231 [**]
Education–Some College		
Education–College Degree	−0.058	−0.072
Foreign Born Latino	0.031	0.022
Neighborhood Level		
Latino Foreign Born	2.654 [**]	2.446 [*]
Latino Foreign Born^2	−3.352 [*]	−4.006 [**]
Percent Black	−0.096	−0.337
Racial Diversity	0.182	−0.042
Concentrated Disadvantage	0.118	0.193 [*]
Residential Instability	0.031	−0.031
Social Interaction		−0.606 [**]
Intercept	−1.528 [***]	−2.699 [***]

[***]
p<.001;

[**]
p<.01;

[*]
p<.05;

[†]
p<.10