Panethnicity, Ethnic Diversity, and Residential Segregation[1]

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The theoretical and empirical implications of the structural basis of panethnicity and of the layering of ethnic boundaries in residential patterns are considered while simultaneously evaluating the "panethnic hypothesis," the extent to which homogeneity within panethnic categories can be assumed. Results show a panethnic effect—greater residential proximity within panethnic boundaries than between, net of ethnic group size and metropolitan area—that is dependent on immigration. A lower degree of social distance between panethnic subgroups is observed for blacks, whites, and Latinos, and less for Asians, yet ethnonational groups continue to maintain some degree of distinctiveness within a racialized context.

INTRODUCTION

Increasing ethnic and racial diversity brings about the opportunity for the remaking of ethnic boundaries and for new ethnic categorizations through the dynamic interplay of ethnic integration and host society reception. As the ethnic and generational mix of a society shifts or expands, so too might the position of boundaries that define larger ethnic clusters. In the United States, panethnicity as a concept has only recently become established in the sociological literature. The appeal in the notion of panethnicity lies in the recognition of ethnic and cultural diversity within its boundaries. For the panethnic group, boundaries expand beyond national

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origins to encompass a range of groups perceived to share some structural or cultural traits (Trottier 1981; Lopez and Espiritu 1990) but do not cross ethnonational lines. Moreover, ethnonational boundaries continue to remain meaningful for groups sharing a panethnic marker, being facilitated by continuing immigration streams as well as by contact between ethnic groups that serve to underscore their differences as much as their commonalities. That is, ethnic boundaries persist despite interaction between groups and as a result of it (Barth 1969). This overlap of panethnicity and ethnicity has been demonstrated in the work on identities (Waters 1990; Itzigsohn and Dore-Cabral 2000; Min and Kim 2000; Kibria 2002), but it has yet to be theoretically and empirically demonstrated in the structural conditions that have been argued to give rise to it.

Shared structural positions as a result of occupational or geographic concentration have been highlighted as conditions that can lead to the formation of ethnic and panethnic identities and boundaries (Lopez and Espiritu 1990; Sanders 2002), but few studies have systematically addressed whether ethnic group interaction is actually structured in these assumed ways. Through an empirical test of the layering of ethnicity in residential patterns, our study offers some theoretical backing to work on panethnic boundary maintenance and identity as well as refine our theoretical understanding of racial and ethnic residential segregation by not treating race and ethnicity as mutually exclusive but intertwined.

We evaluate the role of panethnic groupings within the urban context for determining ethnic residential outcomes. Much of the current literature on racial and ethnic residential patterns in the United States either applies a broad panethnic approach and excludes a more refined ethnic definition or examines the location of a selected number of ethnic groups to the exclusion of panethnic categories. We diverge from this traditional approach and add to the body of literature an analysis of the interrelatedness between the broader concept of panethnicity and a more narrow delineation of ethnicity, that of ancestral origins, with respect to residential patterns. We evaluate the "panethnic assumption"—the extent to which homogeneity within panethnic categories can be assumed or at least the extent to which we can assume a lower degree of social distance between constituent ethnic groups. Panethnicity suggests that social distance would be lower between subgroup members than between those situated at different sides of the social boundary.

We meet the two objectives by asking whether ethnonational origin groups falling within a panethnic boundary are also likely to share residential space. An affirmative finding would suggest that there is evidence of panethnicity in residential patterns and would buttress the theoretical arguments surrounding the emergence of panethnic identities as well as argue for the continuing relevance of studies of broad racial and panethnic

residential patterns. However, a negative finding would suggest that a shared spatial location within urban areas is not a necessary condition for panethnic consciousness. Additionally, it would argue for a more detailed approach to the study of residential patterns, with an emphasis on ethnic distinctions. In this manner, our analysis is designed to shed light on some of the theoretical issues related to the construction of ethnic group boundaries in the context of increasing ethnic diversity and experiences and to the study of racial and ethnic residential patterns.

SEGREGATION, PANETHNICITY, AND ETHNIC DIFFERENTIATION: BACKGROUND AND LITERATURE

The formation of group boundaries and ethnic labeling has substantial implications for the measurement and analysis of residential segregation. When European groups comprised the majority of international migration flows into the United States, much segregation work focused on residential segregation patterns of white ethnic groups and blacks (Duncan and Duncan 1955; Lieberson 1963; Taeuber and Taeuber 1964; Kantrowitz 1973; Guest and Weed 1976; Lieberson 1980). However, with the growth of ethnic and racial origins that followed the post-1965 shifts in migration flows and the perception of European assimilation across the generations, researchers tended to turn to panethnic or racial comparisons to ease interpretation and analysis (Massey and Denton 1987; Alba and Logan 1993; Fong 1994; Frey and Farley 1996; Crowder 1999; St. John and Clymer 2000; Fischer 2003; Logan, Stults, and Farley 2004; Wilkes and Iceland 2004; Iceland and Scopilliti 2008), although there are exceptions (Zhou and Logan 1991; Alba and Logan 1993; Logan and Alba 1993; White, Biddlecom, and Guo 1993; White and Omer 1997; Crowder 1999; White and Glick 1999; White, Fong, and Cai 2003). The use of the broader categories of white, black, Latino, Asian, and Native American was further facilitated by the way data were collected and disseminated, most ostensibly in categories employed in the U.S. decennial census. The practice of using this classification system continues, justified by reference to U.S. racial and ethnic history and by the argument that these categories provide the most information about inequality and social distance among groups.

While many empirical studies implicitly abide by this rationale, some scholars recognize that there is a substantial problem with this approach, which stems from the nature of social groupings. The very use of the broad categories of Asian, black, Latino, Native American, and white tends to reinforce a notion of homogeneity within the groups (Charles 2003). But more important, use of these categories leaves little room for

distinction within categories, as subgroups are not differentiated, and internal ethnicity is obscured. These labels, it is argued, misrepresent subgroups and ignore and minimize the diversity of experiences (Chan and Hune 1995; Cornell and Hartmann 1998; Kibria 1998; Yanow 2003). Furthermore, the relevant populations are affected by internal conflict and fractures based on national origins (Lieberson and Waters 1990; Itzigsohn 2004), and, within national origin groups themselves, there are even further cleavages based on ethnic or regional ties (Light, Sabagh, and Bozorgmehr 1997).

Further complicating quantitative studies on racial and ethnic residential patterns is the way in which ethnic categories are continuously produced and reproduced, or constructed and reconstructed, through social interaction and institutional practices. The evolution of the U.S. census with respect to questions on race and ethnic origin is one prominent illustration of this process, with each census revealing a snapshot of prevailing boundaries. Racial distinctions in the U.S. census have endured since its inception over 200 years ago—direct questions on race began in 1820—yet, we continue to observe decennial changes in its measurement (Snipp 2003). Hispanic identity and ethnic ancestry are recent census items appearing in the latter half of the 20th century, and they also undergo constant fine tuning. Thus, ethnic and racial classification schemes are determined by a socially and politically constructed process that is continually evolving over time and place. At any given time, research based on these classification schemes shapes our understanding of race and ethnic relations. In studies of racial residential segregation, the broader categories of Asian, black, Latino, and white structure our perceptions of meaningful group distinctions. Yet, the layering of ethnic identities suggests that national origins remain as a salient group boundary (Jones-Correa and Leal 1996; Itzigsohn and Dore-Cabral 2000; Kibria 2002; Duany 2003; Okamoto 2003).

A number of empirical studies demonstrate ethnic diversity in residential patterns. In examining white ethnic group segregation, Kantrowitz (1973) argued against the prediction that immigrant segregation would be replaced by racial segregation. He asserted that racial segregation was an extension of ethnic segregation and implied that it could mask ethnic segregation when voluntary separation at this more narrowly defined ethnic level was still possible, even into the second generation. Using 1960 census data on birthplace and parentage (national origin), he found moderate levels of ethnic group segregation and inferred little change over the previous decade in European intragroup segregation in the New York metropolis by comparing it to other U.S. metropolitan areas. This, he argued, indicated that European ethnic groups maintained a degree of separateness that would contribute to high levels of racial segregation.

Lieberson (1980) also underscored the importance of disaggregating white ethnic groups in studies of intergroup relations. He examined regional settlement patterns of large European and non-European ethnic groups and found that European groups varied tremendously in their degree of regional concentration. On the other hand, Alba and Logan (1993) found that ethnonational origin for whites was not a significant predictor of residential proximity to whites, once proficiency in the English language was controlled, although in a different paper, it was a significant predictor for access to suburban community resources (Logan and Alba 1993).

A more recent study estimated the dissimilarity index for 39 ethnic groups and found evidence supporting Lieberson's (1980) and Kantrowitz's (1973) contention that European-origin groups are not equivalently intermingled with the rest of society (White and Glick 1999). But these researchers were interested in the effect of immigration on black-white segregation and, as a result, did not investigate variation within and between panethnic groups. In a second study comparing segregation patterns in Canada and the United States, a range of ethnonational groups were classified according to panethnic grouping, and the panethnic boundary was found to be meaningful for residential segregation (Kim 2005). Asian origin groups were more segregated than white ethnic groups in Canada but less segregated than white ethnic groups in the United States. Black groups were more segregated than white groups in the United States but were not significantly different than white groups in Canada. While this study takes a step closer to examining the layering of ethnicity, like previous studies, it does not address questions related to the social (and residential) proximity of ethnonational groups within panethnic boundaries.

In a study of the New York metropolis, Zhou and Logan (1991) investigated the residential patterns of the Chinese. They questioned the applicability to the Chinese experience of previous studies using aggregate Asian data, and they examined pairwise segregation between Chinese and other Asian ethnic groups, blacks, Latinos, and whites. They found virtually equivalent levels of segregation between Chinese and other Asian subgroups and the rest of the population. Hence, they concluded, "that measures for Asians notably understate the residential separation of these subgroups" (Zhou and Logan 1991, p. 404). Other studies have also demonstrated significant differences in the residential outcomes of Asian subgroups (Alba and Logan 1993; Logan and Alba 1993; White et al. 2003). These differences have been attributed to the historical, cultural, and structural conditions of the various Asian ethnic communities and to conditions in countries of origin (Logan and Alba 1993; White et al. 1993; White et al. 2003). In addition, significant differences in other social, demographic, and economic aspects have also been revealed (Waters and Eschbach 1995; Ishii-Kuntz 1997; Mui et al. 2007).

With respect to blacks, Crowder (1999) found that West Indians were confined to areas of large black concentrations, suggesting convergence according to racial attributes. However, he also found that they attempted to maintain a distinct West Indian identity and carved out separate residential enclaves in black areas. Other studies on black immigrants, though not on their residential patterns, have also demonstrated variation from native-born blacks and across national groups (Farley and Allen 1987; Model 1991; Waters 1999). Waters (1999) found West Indian immigrants and black Americans to assert distinctive identities and to maintain social boundaries while sharing the same employer. Similarly, Model (1991) found that national origin variation was appreciable in the socioeconomic outcomes of West Indian–origin individuals, when compared to other black Americans. These studies suggest that caution must be taken when drawing conclusions about panethnic or racial groups, as there may be firmly delineated boundaries between subgroups as well as contestations and negotiations over which ethnic groups have rightful claim to the racial or panethnic identity (Shankar and Srikanth 1998; St. Louis 2005).

Scholars are well aware of the heterogeneity that characterizes Latinos according to racial, cultural, historical, and structural features. Here the literature is arguably most developed (Bean and Tienda 1987; Waters and Eschbach 1995; Portes and Rumbaut 1996; Freeman 1999; Montalvo and Codina 2001; Duany 2003; Itzigsohn 2004; Tienda and Mitchell 2006). For some groups, this heterogeneity translates into residential separation. First, there have been high levels of regional concentration, with Mexicans in the South and West, Puerto Ricans in the Northeast, and Cubans in the South (Bean and Tienda 1987). Mexicans, Cubans, and Puerto Ricans have been found to have high levels of residential segregation from one another, differential trajectories of spatial assimilation, and residential outcomes (Massey 1981; Alba and Logan 1993; Logan and Alba 1993; South, Crowder, and Chavez 2005), resulting in a Hispanic ethnic hierarchy in residential patterns, evident in New York (Lobo, Flores, and Salvo 2007). Segregation within the Spanish origin population may be further exacerbated by black-white segregation and differential housing options (Massey and Denton 1987; White 1987; Rosenbaum 1996). Differences in other characteristics, such as English-language proficiency, education, labor force participation, fertility, and mortality have also been found across Latino groups (Bean and Tienda 1987; Portes and Rumbaut 1996; Hummer et al. 2000; Jasinski 2000; Jensen 2001).

Existing studies offer one step toward understanding diversity within panethnicity, but they tend to present a limited window on residential patterns, with a focus on the subgroups of a particular panethnic group rather than on several panethnic groupings at once. In addition, geo-

graphic representation is often limited to a handful of metropolitan areas. Massey and Denton (1987) offer one of the few studies that attempt to account for diversity within racial or panethnic groups in residential trends. Their study found that, for Hispanic segregation, the higher percentage of black Hispanics in a socioeconomic metropolitan statistical area contributed to lower probabilities of contact with Anglos (Massey and Denton 1987). For Asians, a higher proportion of Chinese also reduced the likelihood of Asian contact with Anglos. This suggests that the degree of Asian and Latino segregation within a given urban area is, to some extent, affected by their racial or national origin composition. However, we still do not have a firm understanding of the degree to which panethnicity can account for ethnic residential segregation across an extensive number of groups.

INCORPORATING PANETHNICITY IN THEORIES OF RESIDENTIAL SEGREGATION

To explain racial or ethnic residential patterns, three key theoretical perspectives are often considered: spatial assimilation theory, place stratification theory, and the theory of ethnic retention (Kim 2005). The first two theories can be applied to explain panethnic residential patterns, that is, to explain why we might find ethnonational groups falling within a panethnic boundary to be less segregated from one another. However, the third approach offers a contrasting perspective and helps us understand why ethnonational origins may remain a more meaningful boundary in residential behavior and why we might expect ethnonational boundaries to be more salient than racial or panethnic ones.

We present a slightly amended version of spatial assimilation theory to account for the concomitant processes of immigrant ethnogenesis and racialization in the United States, and we refer to this as a theory of racialized spatial assimilation. The spatial assimilation perspective incorporates a status attainment process to explain how ethnic minorities move into white neighborhoods—which are also assumed to be more desirable (Massey and Mullen 1984). The theory argues that ethnic minorities, many of whom are immigrants or their children, initially live in ethnic enclaves due to linguistic and cultural barriers, and, with acculturation and the acquisition of socioeconomic resources, they move out of these immigrant settlements into more affluent and white residential areas (Logan and Alba 1993).

The spatial assimilation framework highlights the process of immigrant residential integration, and, according to this theory, the ethnonational group is the more salient boundary, not racial or panethnic ones. Yet,

these concepts of race and ethnicity have often been confounded in the segregation literature, and much of the current research applies the assimilation perspective to large racial categories that do not differentiate among the experiences of different immigrant groups. In essence, the link between ethnicity and race or panethnicity is lacking theoretically.

A racialized spatial assimilation perspective suggests that, as part of the immigrant settlement experience, immigrants undergo processes of ethnicization and racialization simultaneously. Overlapping cultures, a shared structural position, treatment by outsiders, and institutional practices all contribute to establishing panethnic boundaries. Cultural dimensions include a shared linguistic heritage, religion, or the construction of unifying symbols of a common identity (Trottier 1981; Lopez and Espiritu 1990). With or without cultural overlap, ethnic group members may find themselves situated in a similar position as members of other ethnic groups in racial status, social class, occupations, geography, and generation. A process of racialization describes the attribution of racial meaning to social groups and stems from the inability of outsiders to identify group members through racial assignment or racial "tags" (Omi and Winant 1986; Bashi and McDaniel 1997; Cornell and Hartmann 1998). Immigrants not only find themselves lumped into racial categories by way of social interaction but they must also identify themselves racially in governmental and other institutional documents and materials. For many then, an identity is imposed and does not reflect the intensity of affiliation with it (Kibria 1998). These structural factors bear upon the formation of widening ethnic boundaries and identities as demonstrated in each of the five panethnic groups.

The incipience of the label "Hispanic" to refer to Latin American groups has been credited to the U.S. government and the media (Calderon 1992). The panethnic identity emerged afterward, out of the politics of ethnic and racial classification by the state through practices such as the census (Itzigsohn 2004). Contemporary scholars now point to notions of "Hispanicity" (Bean and Tienda 1987) or "Latinismo," suggesting that there is some degree of panethnic consciousness, which is reinforced by community leaders (Padilla 1984) and facilitated by a common language and religion.

It is generally understood that the Asian-American identity emerged within the political context of the civil rights movement of the 1960s and 1970s and from the experience of discrimination and outright exclusion within a racialized society (Espiritu 1992), and Asian consciousness continues to persist by these means (Masuoka 2006). Although the pan-Asian grouping is characterized by a high degree of cultural variation among subgroups, their shared experience of racial lumping in the host society provides the nexus for solidarity (Lopez and Espiritu 1990). The ethno-

genesis of the racialized Asian-American is attributed to the reaction of Asians to the perception and treatment by non-Asians and not out of common cultural affinities (Trottier 1981; Espiritu 1992; Kibria 1998, 2002).

While Latino subgroups appear to have more cultural commonalities, and Asian subgroups share more structural characteristics, both elements can be found in Native Americans. According to Nagel (1995), three factors lead to the resurgence of a Native American ethnic identity—federal policies of relocation, which brought Native Indians into geographic proximity in urban areas; ethnic politics, which created an environment of ethnic pride and entitlement; and political activism, which fostered Native American pride—despite the linguistic, cultural, and religious differences among subgroups as well as differences in organizational structures. A constructed pan-Indian cultural symbol that is tied to an oppressed status also serves to expand the Native identification beyond the tribal boundary. Trottier (1981) highlights the kinship metaphor of a link to the land, of "mother earth," used by Native American activists to bring about unity and a pan-Indian consciousness. This is framed in terms of state oppression and white domination.

The term "panethnicity" appears to be more prominent in the literature on Asian-Americans, Native Americans, and Latinos, and less so on blacks and whites. But there is reason to believe that analytically, panethnicity may be applied to these groups as well, especially in light of past and present migration flows from the vast regions of Europe, Africa, and the Caribbean. Non-Hispanic black would be the relevant panethnic category, as it is a broader ethnic boundary that includes multiple ancestry groups. Subgroups share some structural characteristics, most notably a racial marker, although the forces promoting panethnicity are weakened by cultural variation. A movement to mobilize along panethnic lines also exists. The pan-African movement has a long history, linked to W. E. B. DuBois in the United States in the early 1900s, and it exists to unite the experiences of the African diaspora (Marable 1998; Nantambu 1998), although it is not without controversy (St. Louis 2005). Differing from the more U.S.-based panethnic movements characterizing Asians and Latinos, pan-Africanism is an international movement and extends beyond non-Hispanic blacks in the United States to include blacks with Latin American ancestries. Yet, akin to the other panethnic movements, it appeals to shared historical ties and common interests (Hamilton 1974; Adeleke 1998).

For the white identity, the boundaries have shifted to becoming more inclusive of European immigrant groups over time (Waters 1990; Ignatiev 1995) and from white ethnic identities to a racial one (McDermott and Samson 2005), yet there is a clear boundary for exclusion. We also observe

ethnic diversity for whites, although prior to the 1980 census, the national origins of those beyond the second generation were unidentifiable, being "administratively assimilated" through the census (White and Sassler 1995). As a panethnic group, the category of white incorporates the largest array of national and ancestry groups and is likely to be characterized by the most diversity in language and religion, and in occupational and geographic concentration, migration history, and social and economic position. Still, the use of this category implies some degree of homogeneity.

The cultural and structural conditions that provide the impetus for ethnic boundary change are further buttressed by formal institutions. Panethnic identities have been institutionalized in U.S. society by the state and in political and civic organizations, and through policies and administrative practices (Yanow 2003). The collection of racial and panethnic information elevates these groupings into public consciousness that is reinforced by differential access to programs and services. The census also instills into the population a particular "cosmology" of racial and panethnic identities (Snipp 2003). While institutional practices may have been developed to reflect the way people see themselves, categorizing people also contributes to essentializing groups (Yanow 2003) and to promoting the perception of natural demarcations, which then become legitimized within institutions and individuals. The solidification of these external and internal boundaries manifest as social outcomes such as residential patterns, which is a key feature of the contemporary urban landscape in the United States (White 1987). In essence, what plays out in social fields also plays out in spatial ones (Bourdieu 1984).

To some extent, panethnic segregation trends may be indicative of the extent to which these broader-based markers are internalized by group members and, in turn, are a result of voluntary integration within the panethnic group. Heightened panethnic identity and consciousness can lead to panethnic behavior, such as in political activism, friendships and intermarriage, hiring practices, and residential concentration. Increased social interaction and the building of social networks, perceptions of "sameness," and perceptions about which neighborhoods are friendly and accessible all contribute to shared spatial locations. Members find neighbors with whom they feel they can blend in, and they find jobs in longer-standing and more established ethnic enclaves. Ethnic businesses and services that cater to more than one ethnic group also promote this racialized assimilation process. As a result, we are witnessing the spatial conglomeration of ethnic communities within larger racial and panethnic clusters. And the evidence is pointing to these trends: Chinatowns have opened to other immigrants from Asia (Skeldon 1995), multiple Latin American groups are found in mixed Latino neighborhoods (Pessar 1995; Ricourt and Danta 2003), and West Indian enclaves persist within largely

black areas (Crowder 1999). It is from these racial or panethnic clusters that immigrants are expected to experience social and spatial mobility.

Yet, boundaries are also related to the perceptions and behaviors of nonmembers, which can further racial or panethnic residential concentration. The place stratification perspective offers insight into this process for immigrant groups. Neighborhoods, like social groups, are stratified, and dominant group members use spatial distance as a way to preserve social distance and their advantaged position (Logan and Alba 1993). The racialized nature of social interaction leads to segregated patterns, which come about as a direct result of discrimination against minorities in search of housing as well as an indirect result of the residential mobility of majority group members themselves. Individuals and families are steered into particular neighborhoods by real estate agents, mortgage lenders, and landlords based on what they believe to be a home seeker's race or ethnic affiliation (Yinger 1995). In contrast to the racialized spatial assimilation perspective, which predicts the eventual integration of ethnic minorities with majority group members, the place stratification approach suggests that desegregated neighborhoods are not likely, due to structural barriers and to the higher costs to minorities in gaining access to these neighborhoods (Logan and Alba 1993).

Given both subjective affiliations and objective boundary maintenance, we expect that in the racialized U.S. context, panethnicity should account for residential patterns among relevant ethnic groups. What follows from these two perspectives is the panethnic hypothesis, which posits that groups sharing a panethnic marker should be less segregated from one another than from those that do not share the marker.

Second, insofar as the racialization process affects groups in different ways, there should be panethnic variation in residential segregation. It is not always clear, a priori, however, how relatively strong various panethnic groupings might be. One line of argument is that Latino groups should reside closer to one another because of the high degree of linguistic commonality and shared religious beliefs and culture (Rosenfeld 2001; Duany 2003). A similar expectation can be advanced for black subgroups although for different reasons, including the commonality of historical ties and interests (Adeleke 1998), as well as the racial distance guarded by the dominant group of whites. The diversity of language, religion, culture, and history of regional conflict among Asians and among whites suggest that they would be less likely to share residential spaces within their groupings than Latinos and blacks.

A third possible outcome is a lack of panethnic patterning in ethnic residential segregation. This is predicted by the ethnic retention approach, which suggests that the more narrowly defined ethnic identity, one often based on a national or ancestral origin, is more defining of immigrants'

experiences. Members of an ethnic group may prefer to live with members of their own community due to shared symbols and understanding through language, religion, and history, which link individuals to a common culture. Migration networks serve to reinforce clustered residential patterns, as successive newcomers settle near conationals. These migration streams are most often nation-specific, as immigrants are perceived to be emigrants from a particular country and are associated with others from the same national origin despite regional differences in the origin; the experience of Italians (Luconi 2001) and Poles (Lopata 1964) in the United States provide such examples. The existence of formal institutions and strong ethnic networks based on national origins also contribute to this type of separation. Finally, a history of cross-national conflict between groups encompassed within a panethnic boundary further supports nationalist orientations (Itzigsohn 2004). In essence, the differential integration experiences of ancestry groups based on their settlement histories and reception by host societies suggest that this layer may retain its importance for residential processes, especially for recent immigrants.

A final theoretical consideration in residential segregation is offered by the ecological model, which highlights how key factors such as population size, housing construction, and migration flows influence residential patterns within metropolitan areas (Farley and Frey 1994; White et al. 2003; Logan et al. 2004). Group relations do not form in isolation from the urban structure and environment but are shaped through the opportunities and constraints that have shaped the city over time. The degree of panethnic segregation, then, is likely to vary by metropolitan area, and these factors must be accounted for to explain group interactions.

DATA AND METHODS

The 2000 U.S. Census Summary Files 1 and 3 (SF1 and SF3) provide data for the analysis. We use both SF1 and SF3, as neither file on its own provides data on the 56 distinct ethnic origin groups (and one residual category) included in the analysis and for which we estimate pairwise segregation. The SF1 includes a count of the total population and provides data for selected ethnic and racial groups, and the SF3 is based on the long form of the census, distributed to one in six households, and contains data on ancestry. We limit the analysis to the 20 largest U.S. metropolitan areas (consolidated metropolitan statistical area [CMSA]/metropolitan statistical area [MSA]). The largest ethnic groups were selected based on total population in all metropolitan areas combined. (Native American subgroups were pooled due to their small numbers.) The census offers a representative data set identifying numerous ethnic groups that can be

reclassified into panethnic categories. Since our objective is not to ascertain the degree to which these identities are internalized but the external manifestation of them in residential patterns, the census offers the most comprehensive data for this investigation. Census data are also preferred for understanding residential patterns, since these data are based on sufficient numbers to generate ethnic composition tabulations for census tracts, the standard geography unit used to approximate neighborhoods and widely employed in segregation studies. The disadvantage of using census categories is the reification of panethnic and ethnic identities. The malleability of racial and ethnic boundaries evident in the ever-changing census classifications is a reminder of the social construction of race and ethnicity.

An additional challenge in measuring racial and ethnic groups in censuses and other surveys arises from the overlapping and subjective nature of these concepts (Farley 1991; Lieberson and Waters 1993; Hirschman, Alba, and Farley 2000). Racial and ethnic identities are not mutually exclusive but are layered (Itzigsohn and Dore-Cabral 2000; Okamoto 2003), and ethnic categories can comprise a set of situational identity choices for society and individuals to invoke and discard as circumstances and preferences dictate. For example, an American-born child of Mexican immigrants may consider herself/himself white, American, Mexican, and Latino, and has the ability to choose among these identities in various situations, including on the census form. The census attempts to capture this layering of identities, as well as multiple identities, as demonstrated in the 2000 long-form questionnaire, where respondents were asked three separate questions related to race and ethnicity: Hispanic or non-Hispanic, race, and ancestry.

What concerns us here is the selectivity of ancestral origins by respondents, especially among the native born, and how this might be reflective of their place of residence. Two individuals (or groups of individuals), with seemingly identical ancestral origins, may respond differently to census questions on ethnic origins. If the selection of an ancestral identity in the census is reflective of the intensity of ethnic identity as well as residence in an ethnic neighborhood, and the decision to not choose that identity is associated with residence not in the ethnic neighborhood, the within-panethnic-segregation measure would be biased upward. We consider this in the interpretation of our results.

In any case, to the degree that there are high levels of segregation among panethnic subgroups, this suggests that residential patterns are not easily subject to broader classifications that assume homogeneity. The point here is that the degree of aggregation—both in terms of personal identity and "official" statistics—is very much an area of contention. Moreover, it is something on which we build, given constraints in the data to which we have access.

Our initial step entailed the determination of the size of each of the 57 groups for each metropolitan area, which required two sets of calculations. In the first stage, we constructed mutually exclusive categories of ethnic groups and assigned individuals to one group using racial, Spanish origin, and first ancestry tables from both SF1 and SF3. For Asian and Latino subgroups, population counts were obtained directly from SF1 tables. For American Indians, Pacific Islanders, and white and black subgroups, we used SF3 tables. An indirect estimation procedure for American blacks involved subtracting ancestral sub-Saharan Africans and West Indians from the total number of non-Hispanic blacks counted in the "race" question. We also included a residual category for other groups with the total metropolitan area population, using indirect methods. Among others not captured in the ethnic categories, the "all others" group also included respondents with multiple races. For a minority of tracts in each metropolitan area, we obtained a negative estimate due to the subtraction of subgroups that was then redistributed proportionally among tracts with persons.

This approach resulted in an estimate of 56 distinct ethnic groups that accounted for first ancestries and single-race persons. Although we assumed a single ethnicity for American blacks, Asian, Latino, American Indian, and Pacific Islander groups, we incorporated multiple ancestries where possible in the second stage. The allocation procedure weighted the number of responses for 38 ancestry groups in each census tract (table PCT18 in SF3) by the ratio of total persons to total multiple responses for that tract. For white ancestry groups and sub-Saharan Africans and West Indians, then, we use a count of proportional allocated persons that sums to the original metropolitan population.

There are obvious limitations to this approach that are affected by the degree of correspondence between census summary files and our allocation procedure. Furthermore, while we recognize the overlapping of ethnic identities, mutually exclusive categories were required for the analysis. In essence, these limitations contribute to errors in the estimations of ethnic group populations, but our counts should be an adequate reflection of the relative size of ethnic groups and their panethnic membership. A tabulation of all ancestries in detail, including those for Asian and Latino groups, would provide an improved measure of ethnic group membership, but census tables assume ancestry to be relevant only for whites and blacks. Note also that while the allocation of fractional persons may seem a bit awkward at first, results are equivalent to multiplying all units by a value to achieve a whole number.

Once we approximated population counts of ethnic groups, we employed the entropy index to derive pairwise ethnic residential segregation resulting in 1,596 segregation statistics for each metropolitan area. The

entropy index, introduced by Theil and Finizza (1971), is an adjusted measure of the more general entropy or information index (H) and provides an indication of the deviation in diversity of the average tract from the diversity of the city (for a more technical discussion on the properties of the index, see James and Taeuber [1985]; White [1986]; and Reardon and Firebaugh [2002]). The entropy index is bounded from zero to one, where zero indicates no segregation between two ethnic groups, and one suggests complete segregation. In the pairwise entropy index, we have a measure of the deviation of the average tract diversity of each pair of ethnic groups from their citywide diversity. The pairwise entropy index follows the expression

$$H = (H^* - \bar{H})/H^*,$$

$$\begin{aligned}
\bar{H} &= (-1)\sum_{i=1}^{I}[(n_{1i} + n_{2i})/(N_1 + N_2)][p_i \ln (p_i) \\
&\quad + (1 - p_i)\ln (1 - p_i)], \\
p_i &= n_{1i}/(n_{1i} + n_{2i}), \\
H^* &= (-1)[P \ln (P) + (1 - P)\ln (1 - P)], \\
P &= N_1/(N_1 + N_2),
\end{aligned}$$

where $\bar{H}$ is the average census tract pairwise entropy measure, H^* is the citywide pairwise entropy measure, n_{1i} is the population of ethnic group 1 in the census tract i, n_{2i} is the population of ethnic group 2 in the census tract i, N_1 is the citywide population of ethnic group 1, and N_2 is the citywide population of ethnic group 2. The entropy index is also able to handle multiple groups, and we estimated a multigroup entropy index for each metropolitan area using the following expression:

$$H_m = (H_m^* - \bar{H}_m)/H_m^*,$$

$$\bar{H}_m = \sum_{i=1}^{I}\sum_{g=1}^{57}(n_i/N)[p_{gi} \ln (1/p_{gi})],$$

$$H_m^* = \sum_{g=1}^{57}[P_g \ln (1/P_g)],$$

where H_m is the multigroup entropy index for the city, $\bar{H}_m$ is the average census tract entropy measure, H_m^* is the citywide entropy measure, n_i is

the population of the census tract i, N is the city population, p_{gi} is the proportion of ethnic group g in the census tract i, and P_g is the proportion of the ethnic group g in the city.

To facilitate interpretation and analysis of these segregation values, we generated metro-specific configurations of ethnic residential segregation using a multidimensional scaling technique in Stata. Multidimensional scaling (MDS) is a data reduction technique that is utilized to reveal the latent data structure among a number of objects in low dimensional space. One key advantage of MDS is that it is not limited to geographic distances but can be applied using any data matrix that reflects the degree of similarity or dissimilarity among variables or observations, and, in our case, we apply this technique to our collection of pairwise "social" distances.

Given our 57 × 57 data matrix of ethnic groups and 1,596 pairwise segregation values for 20 metropolitan areas, MDS offers us a way of reducing this vast array of data into a more manageable analysis without excluding any of the groups. Essentially, each group was assigned coordinates on a two-dimensional configuration in relation to the magnitude of values between it and each of the 56 other groups. The procedure seeks the best approximation of the original matrix and has been revitalized in the study of ethnic segregation (White, Kim, and Glick 2005).

In the final stages of setting up our data, we classified ethnic pairs into one of five panethnic groups: black, white, Latino, Asian, and cross-group (table 1), following census classifications in published SF1 and SF3 documentation. This part of the analysis used 54 groups, as Pacific Islanders, American Indians, and others were omitted due to small numbers. Ethnic groupings (and thus panthethnic categories) do not map perfectly onto racial categories, and this has implications for processes of residential segregation. For example, among Latinos, racial characteristics have been found to be associated with different residential outcomes (Massey and Denton 1987; White 1987; Rosenbaum 1996). To the degree that race crosscuts panethnic boundaries, most especially for Latinos and possibly to a lesser extent for the others, our results would be biased toward increased segregation within panethnicity. We also bear this in mind in the interpretation of our results.

All pairwise entropy indices were then pooled across the 20 metropolitan areas, giving us 28,620 unique pairs. Finally, we employed multivariate methods, including some fixed-effects models, to identify the effect of panethnicity on pairwise ethnic segregation patterns. In the multiple re-

TABLE 1
CLASSIFICATION OF ETHNIC GROUPS BY PANETHNICITY

Panethnic Group	Ethnic Groups		
	(1)	(2)	(3)
Black	Blacks	Sub-Saharan African	West Indian
White	American	Finnish	Polish
	Arab	French	Portuguese
	Armenian	French Canadian	Romanian
	Austrian	German	Russian
	British	Greek	Scandinavian
	Canadian	Hungarian	Scotch-Irish
	Czech	Iranian	Scottish
	Czechoslovakian	Irish	Slovak
	Danish	Israeli	Swedish
	Dutch	Italian	Swiss
	English	Lithuanian	Ukrainian
	European	Norwegian	Welsh
Latino	Central American	Mexican	South American
	Cuban	Puerto Rican	Latino other
	Dominican		
Asian	Cambodian	Indian	Vietnamese
	Chinese	Japanese	Asian other
	Filipino	Korean	

gression analysis, for each pairwise grouping in a metropolitan area, our model is specified by

$$\hat{H} = \alpha + \sum_{p} \beta_{p} X_{p} + \beta_{f} X_{f} + \sum_{p} \beta_{pf} (X_{p} X_{f}) + \sum_{m} \sum_{g} \beta_{mg} X_{mg},$$

where $\hat{H}$ is the predicted value of pairwise entropy; X_{p} is the panethnic pair, cross-group, black, white, Latino, Asian; X_{f} indicates the proportion foreign born of the ethnic pair; and X_{mg} indicates ethnic group g in the metropolitan area m (a set of 1,080 dummy variables for fixed effects).

ETHNIC RESIDENTIAL SEGREGATION, 57 GROUPS

Table 2 presents a summary of segregation of the 57 ethnic groups for each metropolitan area. The multigroup entropy index in the second column of values suggests that the most segregated major cities in our sample (using these 57 groups) are Chicago and New York. Seattle and Minne-

apolis–St. Paul appeared to be the least segregated.[2] We can see that most of the mean values of the pairwise statistic for the 20 major cities are in the vicinity of .35–.45, pointing to a skew generated by higher values of less populous groups. The highest average level of pairwise segregation is found in the most populous metropolis, New York, and the lowest average level is found not in the smallest of the top 20 but in Seattle, which falls near the middle of the list. The standard deviations of entropy values do not differ appreciably across metropolitan areas. Upon closer examination of the data, lower levels of segregation are generally found between pairs of larger European-origin groups, such as Irish, German, and English. The highest levels of segregation are between the smallest groups, such as Israelis, Pacific Islanders, and Cambodians.

Ethnic residential patterns can be observed in all 20 MDS configurations, one for each metropolitan area. We show four selected MDS configurations (in the interest of space), which represent segregation among 57 groups for New York (fig. 1), Los Angeles (fig. 2), Chicago (fig. 3), and Seattle (fig. 4). While each MDS configuration is an imperfect visualization of pairwise segregation as suggested by the values of stress or goodness of fit, we observe each city's unique patterns.[3] Yet, we also find pairwise segregation to be highly correlated among all 20 metropolitan areas. Specifically, if the Greeks and the English are highly segregated in one city, they are likely to be highly segregated in the others. Correlation coefficients range from .66 between Miami and Minneapolis–St. Paul to .97 between Houston and Dallas.

The two-dimensional representations of ethnic residential segregation reveal some degree of clustering according to panethnicity in the four urban areas presented. For blacks, obvious clusters emerge in New York (fig. 1) and Chicago (fig. 3), and clusters of white groups are notable in each configuration.[4] For Asians and Latinos, there is some degree of over-

[2] The ranking of cities is broadly consistent with that indicated by the mean pairwise segregation in table 2. The correlation between the multigroup entropy index and the mean pairwise entropy index is .71.

[3] Stress statistics for New York, Los Angeles, Chicago, and Seattle are .28, .26, .28, and .27, respectively. Scree plots using the stress values revealed that for most metropolitan areas greater than two dimensions did not provide a significant improvement of fit.

[4] We recognize that the disaggregation of blacks into three subgroups, i.e., black American, West Indian, and sub-Saharan African, may subject our analysis to the same critique we offered of others. To evaluate this possibility, we reanalyzed the data for an expanded set of black subgroups using their total population numbers in metropolitan areas: Jamaican, Haitian, Trinidadian and Tobagonian, Nigerian, Ethiopian, other West Indians, and other sub-Saharan Africans. This increased the number of ethnic groups to 62. This further disaggregation of black groups resulted in higher levels of metropolitan segregation overall, in large part due to small group populations

TABLE 2

SUMMARY STATISTICS OF METROPOLITAN AREAS (N = 1,596 per MSA/CMSA)

Metropolitan Area	Metropolitan Designation	Population Size (Thousands)	Multigroup Entropy Index	Mean Pairwise Entropy Index (SD)	Pairwise Entropy Index Range (Min–Max)
New York	CMSA	21,200	.204	.451 (.18)	.028–.951
Los Angeles	CMSA	16,374	.170	.371 (.17)	.015–.922
Chicago	CMSA	9,158	.208	.399 (.18)	.026–.945
Washington, D.C.–Baltimore	CMSA	7,608	.152	.324 (.15)	.018–.854
San Francisco	CMSA	7,039	.128	.311 (.16)	.014–.856
Philadelphia	CMSA	6,189	.159	.417 (.19)	.028–.924
Boston	CMSA	5,819	.116	.397 (.18)	.023–.900
Detroit	CMSA	5,456	.184	.411 (.20)	.018–.956
Dallas	CMSA	5,222	.137	.364 (.17)	.014–.896
Houston	CMSA	4,670	.155	.363 (.17)	.016–.935
Atlanta	MSA	4,112	.152	.329 (.16)	.014–.899
Miami	CMSA	3,876	.187	.348 (.16)	.018–.933
Seattle	CMSA	3,555	.059	.286 (.16)	.010–.863
Phoenix	MSA	3,252	.097	.308 (.17)	.010–.902
Minneapolis–St. Paul	MSA	2,969	.070	.335 (.19)	.014–.943
Cleveland	CMSA	2,946	.149	.413 (.21)	.015–.991
San Diego	MSA	2,814	.112	.307 (.16)	.011–.858
St. Louis	MSA	2,604	.142	.370 (.19)	.017–.951
Denver	CMSA	2,582	.086	.315 (.18)	.011–.917
Tampa	MSA	2,396	.098	.332 (.18)	.009–.939

NOTE.—MSA = metropolitan statistical area; CMSA = consolidated metropolitan statistical area.

FIG. 1.—Multidimensional scaling (MDS) configuration for 57 ethnic groups in New York, entropy index

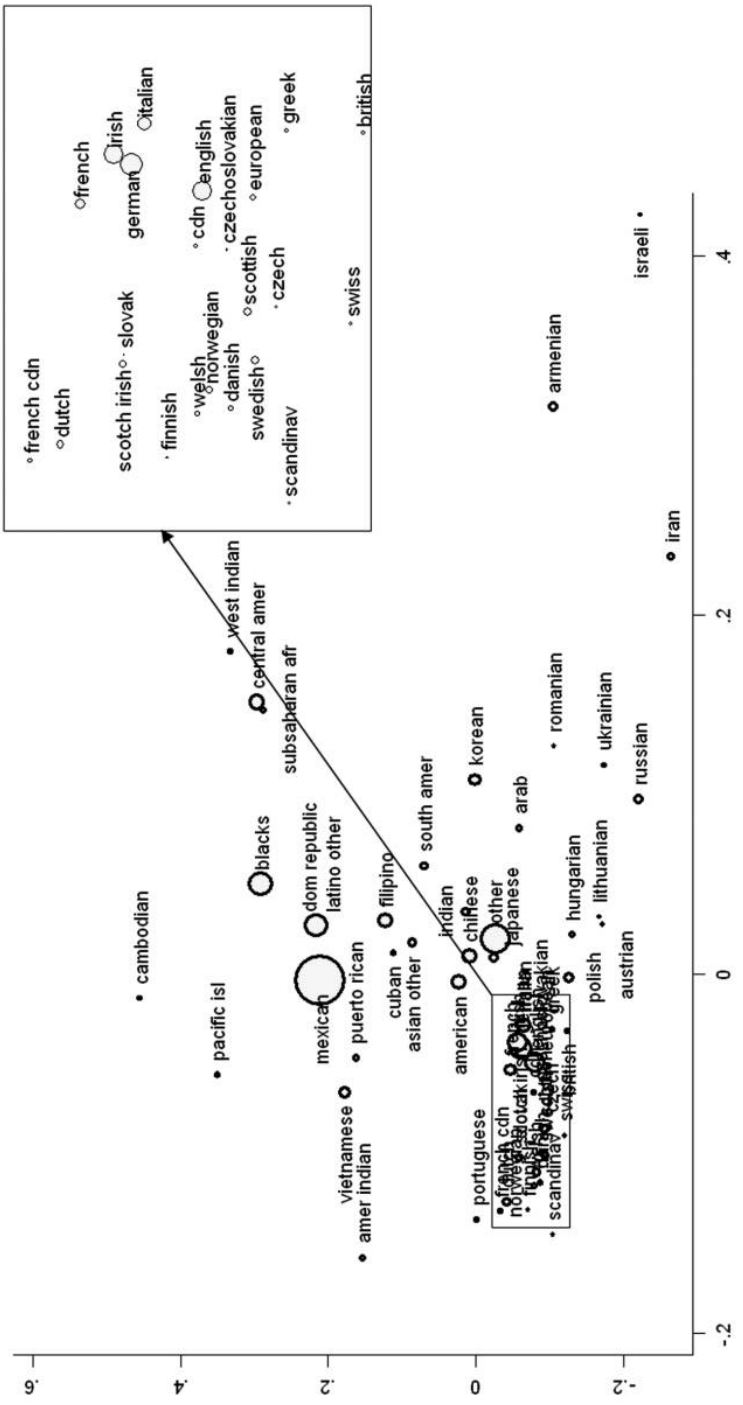

FIG. 2.—MDS configuration for 57 ethnic groups in Los Angeles, entropy index

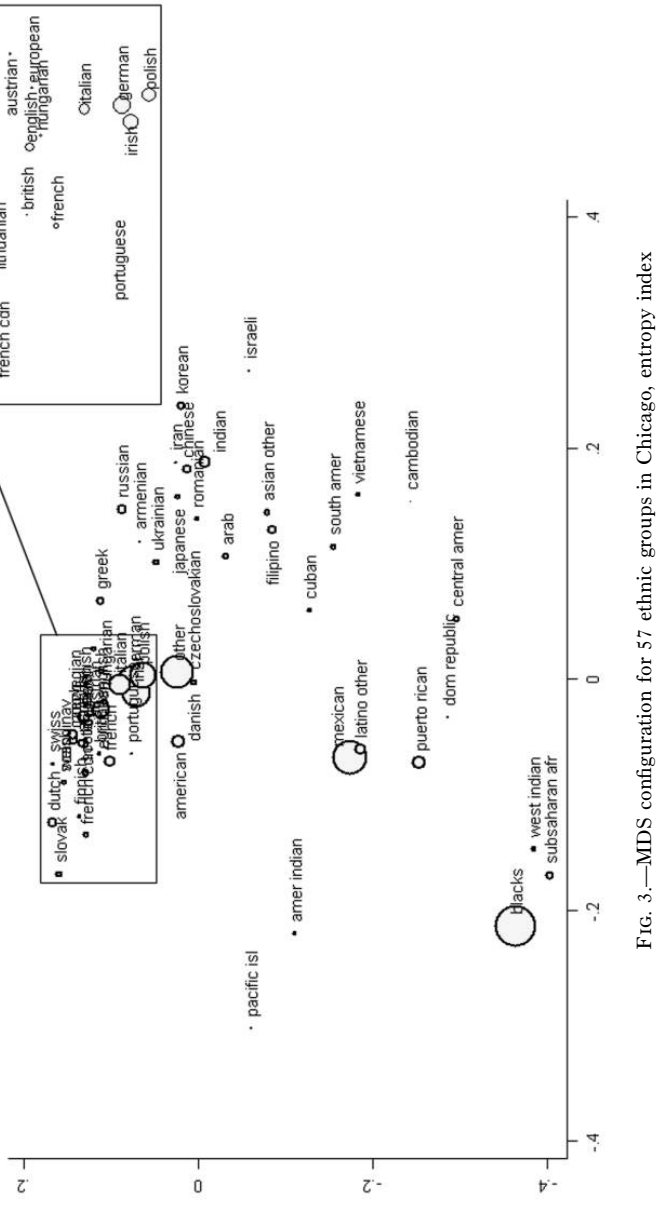

FIG. 3.—MDS configuration for 57 ethnic groups in Chicago, entropy index

FIG. 4.—MDS configuration for 57 ethnic groups in Seattle, entropy index

lap across panethnic boundaries. Furthermore, in most places, a white-nonwhite dimension is readily observable. The magnitude of the circles in each graph, used to symbolize ethnic group sizes, provides further evidence that segregation is not an artifact of group size. Blacks and Mexicans in a number of metropolitan areas, particularly in the pictures of segregation in New York and Chicago, suggest that other processes are operating.

THE DIVERSITY WITHIN, 54 GROUPS

A one-way ANOVA test reveals significant differences in mean levels of pairwise segregation across panethnic categories. The mean level of residential segregation among pairs of Latino subgroups is the lowest at .21, which suggests that Cubans are more likely to share neighborhoods with other Latinos than sub-Saharan Africans with other blacks or the Irish with other whites. On average, Asian subgroups are the most segregated from one another (.32) than all other within-panethnic pairs. They also reveal high variation as shown in the box plot (fig. 5). Among black subgroups, we find a mean segregation of .25. A higher level of within-panethnic segregation is found for white subgroups (.29). Not surprisingly, those pairs of ancestry groups that do not share a panethnic identifier are the most segregated from one another (.41). These initial unweighted results demonstrate the relevance of panethnicity on ethnic residential outcomes overall, most especially for blacks and Latinos. Broader categorizations do not appear to be as meaningful for Asian or white ethnic groups.[5]

The dispersion of within-panethnic groups also tells a remarkable story. Black groups' pairwise segregation across all metropolitan areas falls in the range of .10–.52. Latino pairs are a little more dispersed, ranging from .02 to .64. Among Latino groups, Dominicans and South Americans in Detroit are the most segregated with one another, and Mexicans and "other" Latinos in Houston are the least segregated. White ethnic groups have the greatest range in segregation levels (.009–.92) followed by Asian subgroups (.09–.85). The least segregated white pair is found in Tampa (Irish and Germans) and the most segregated in Cleveland (Israeli and Portuguese). Indians and "other" Asians in Houston are the least segre-

in many areas. We opted to present the results from the 57-group analysis due to the very small group sizes in the expanded set.

[5] These results are from the unweighted ANOVA test. Using the population size of ethnic pairs as weights, Asians remain the most segregated within-panethnic group and continue to show high variation. Panethnicity among whites appears to become more important with lesser average segregation among white pairs in the weighted test.

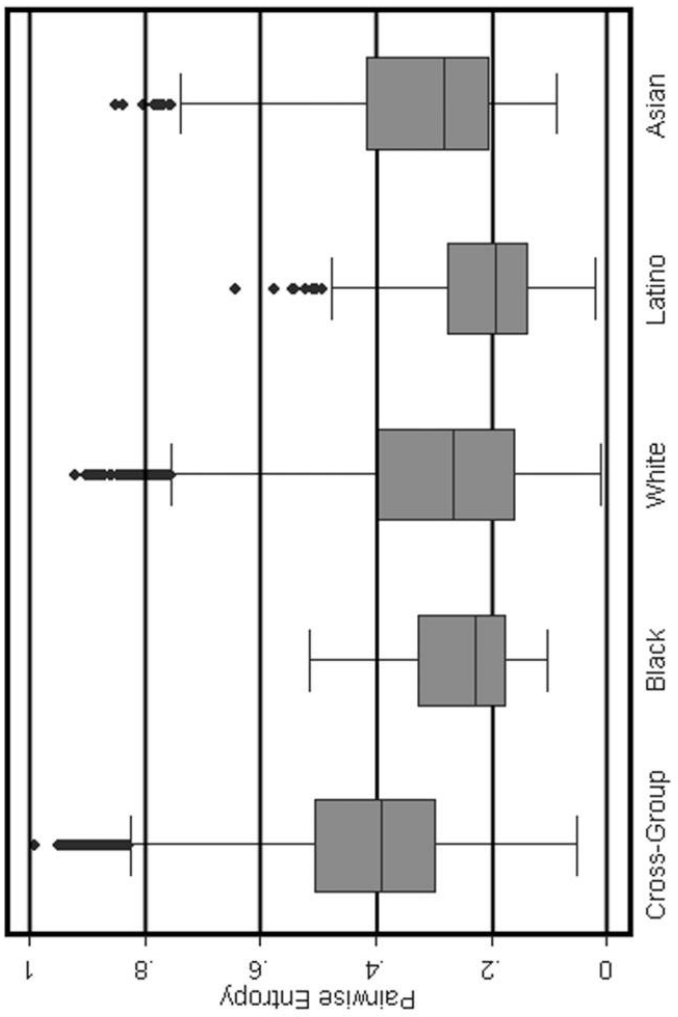

FIG. 5.—Box plots of ethnic pairwise segregation, grouped by panethnicity. Note: statistically significant differences across groups, $P < .001$, unweighted.

gated pair, while Cambodians and Japanese are the most separated. Some of the high values can be attributed to small population sizes, but, in general, we find that groups sharing a panethnic marker can have high levels of segregation.

The eta-squared (η^2) statistic suggests that panethnicity can explain approximately 12% of the variation in ethnic residential segregation ($F(4, 28615) = 973.5$; $P < .0001$). Obviously, there are other factors involved in explaining the different levels of segregation among ethnic groups, but even this modest level of variance explained is noteworthy, given the variation in mapping groups onto census geography, socioeconomic heterogeneity within groups, and the like.

Tables 3 and 4 provide another view of the mean level of panethnic segregation by each of the 54 ethnic groups. We examine these tables for evidence of panethnic residential behavior, expecting that ethnic groups would be less segregated from others of their group (shown in bold) compared to those of other groups. We find this to be the case for blacks, Latinos, and whites, but clearly not for Asians. Cambodians, Filipinos, Japanese, and Vietnamese are as segregated from Asians as they are from blacks, Latinos, and whites, if not more. The remaining Asian groups show no more than an 8-point difference between segregation from other Asians and segregation from Latinos or whites.

Black groups are the least segregated from other black groups, with a minimum of a 12-point difference between them and Latinos. Latino groups are also the least segregated from other Latino groups but are generally closer to Asians than to whites or blacks, with the exception of Central Americans and those from the Dominican Republic. White ethnic groups are generally closer to other white groups, although for four groups, Arabs, Iranians, Israelis, and Portuguese, the differences are minor. White groups are also less segregated from Latinos and Asians than they are from blacks.

Supporting our initial results, the detailed tables reveal evidence of panethnicity in residential patterns for blacks and Latinos and to a lesser extent for whites and Asians. We now turn to evaluating the effect of panethnicity, controlling for the urban context and group size with a fixed-effects model.

PAIRWISE ETHNIC SEGREGATION AND THE URBAN CONTEXT

Our panethnic groupings remain the same as for the bivariate test in the previous section. Most ethnic pairs are interpanethnic, that is, with crossed panethnic boundaries (52.3%); white pairs comprise the largest within-panethnic portion (44%), followed by Asian pairs (2%), Latino pairs (1.5%),

TABLE 3
PANETHNIC SEGREGATION FOR ASIAN, BLACK, AND LATINO ETHNIC GROUPS

	Asian		Black		Latino		White	
	M	SD	*M*	SD	*M*	SD	*M*	SD
Cambodian	**.52**	**.14**	.56	.15	.51	.15	.63	.15
Chinese	**.27**	**.14**	.49	.11	.35	.12	.35	.10
Filipino	**.29**	**.12**	.40	.12	.27	.11	.33	.13
Asian Indian	**.27**	**.14**	.46	.10	.34	.12	.34	.09
Japanese	**.32**	**.17**	.47	.12	.33	.14	.31	.14
Korean	**.29**	**.16**	.49	.12	.35	.13	.33	.11
Vietnamese	**.35**	**.10**	.46	.12	.35	.09	.47	.11
Asian other	**.28**	**.12**	.42	.11	.31	.11	.38	.11
Black	.41	.11	**.21**	**.07**	.33	.11	.49	.09
Sub-Saharan African	.48	.12	**.26**	**.12**	.38	.11	.55	.11
West Indian	.52	.13	**.29**	**.10**	.44	.13	.56	.14
Central American	.40	.11	.39	.12	**.22**	**.10**	.45	.13
Cuban	.33	.13	.40	.12	**.23**	**.11**	.35	.14
Dominican	.46	.15	.43	.15	**.29**	**.12**	.52	.17
Mexican	.34	.10	.36	.12	**.19**	**.10**	.35	.10
Puerto Rican	.33	.14	.35	.13	**.19**	**.08**	.36	.15
South American	.27	.13	.42	.11	**.22**	**.10**	.31	.12
Latino other	.31	.10	.34	.10	**.14**	**.07**	.33	.11

NOTE.—Segregation values for each subgroup of the panethnic group are in bold for contrast.

and black pairs (.2%). Table 5 shows the results of four nested models using ordinary least squares (OLS) regression analysis. In model 1, we regress the measure of ethnic segregation (pairwise entropy for 54 groups) on panethnicity only. Negative values here indicate less within-group segregation, compared to the reference category of cross-group segregation, and all panethnic groups show statistically significant negative differences from cross-group pairs ($P < .05$). This is as expected, given the visual depiction in figure 5. Further analysis shows that levels between panethnic groups are also significant. Compared to black pairs, Asian pairs are significantly more segregated from one another but not Latino or white pairs. The levels of within-group Latino and within-group white segregation are not statistically different from the pairwise segregation of black subgroups. Thus, while there is group variation, these initial tests show that all within-panethnic pairs are less segregated from one another than they are from groups not part of the panethnic grouping.

In model 2 (table 5), we apply a fixed-effects model due to the nonindependence of observations; that is, the pairwise segregation values of the same ethnic group within a given metropolitan area are likely to be correlated. The fixed-effects model includes 1,079 dichotomous variables (one omitted) to account for each ethnic group in each metropolitan area

TABLE 4
PANETHNIC SEGREGATION FOR ETHNIC GROUPS

	Asian		Black		Latino		White	
	M	SD	*M*	SD	*M*	SD	*M*	SD
American	.29	.11	.40	.09	.24	.10	**.19**	**.10**
Arab	.37	.12	.52	.10	.37	.10	**.36**	**.11**
Armenian	.55	.13	.65	.11	.55	.12	**.48**	**.14**
Austrian	.41	.13	.56	.09	.41	.11	**.30**	**.13**
British	.39	.14	.52	.10	.38	.12	**.28**	**.13**
Canadian	.43	.13	.54	.10	.41	.12	**.33**	**.15**
Czech	.41	.13	.55	.10	.38	.12	**.29**	**.14**
Czechoslovakian	.45	.13	.57	.11	.42	.12	**.34**	**.15**
Danish	.41	.14	.54	.11	.38	.13	**.29**	**.15**
Dutch	.35	.13	.49	.11	.32	.13	**.22**	**.13**
English	.27	.13	.46	.12	.28	.14	**.14**	**.10**
European	.38	.14	.51	.10	.36	.13	**.27**	**.13**
Finnish	.49	.14	.59	.11	.45	.13	**.38**	**.16**
French	.30	.13	.46	.11	.27	.13	**.17**	**.11**
French Canadian	.39	.13	.51	.11	.35	.13	**.27**	**.15**
German	.25	.13	.44	.13	.25	.14	**.12**	**.09**
Greek	.39	.12	.55	.09	.39	.11	**.30**	**.13**
Hungarian	.37	.13	.53	.09	.37	.11	**.26**	**.13**
Iranian	.52	.16	.64	.11	.56	.13	**.50**	**.13**
Irish	.25	.12	.43	.12	.25	.13	**.13**	**.09**
Israeli	.62	.14	.67	.10	.65	.12	**.59**	**.13**
Italian	.27	.12	.46	.11	.27	.12	**.16**	**.10**
Lithuanian	.44	.12	.57	.09	.43	.11	**.33**	**.14**
Norwegian	.35	.15	.51	.12	.34	.14	**.23**	**.14**
Polish	.29	.13	.48	.09	.29	.12	**.17**	**.10**
Portuguese	.48	.14	.56	.13	.44	.15	**.41**	**.16**
Romanian	.46	.12	.59	.10	.46	.11	**.41**	**.13**
Russian	.35	.14	.54	.08	.39	.12	**.27**	**.10**
Scandinavian	.50	.15	.58	.12	.46	.14	**.39**	**.17**
Scotch Irish	.33	.13	.49	.10	.30	.13	**.20**	**.13**
Scottish	.32	.14	.49	.10	.31	.13	**.18**	**.12**
Slovak	.47	.13	.60	.10	.46	.12	**.37**	**.16**
Swedish	.34	.14	.50	.11	.33	.13	**.21**	**.13**
Swiss	.43	.14	.56	.10	.41	.13	**.31**	**.15**
Ukrainian	.42	.12	.56	.09	.42	.10	**.34**	**.13**
Welsh	.38	.13	.52	.10	.35	.13	**.25**	**.14**

NOTE.—Segregation values for each subgroup of the panethnic group are in bold for contrast.

TABLE 5
MULTIVARIATE OLS REGRESSION RESULTS ON PAIRWISE ENTROPY

Variable	Model 1	Model 2	Model 3	Model 4
Panethnicity:				
Cross group (omitted)	. . .	. . .	. . .	. . .
Black	−.155 (.021)	−.335 (.008)	−.337 (.008)	−.365 (.010)
White	−.117 (.002)	−.160 (.002)	−.160 (.002)	−.181 (.002)
Latino	−.195 (.008)	−.098 (.003)	−.100 (.003)	−.108 (.007)
Asian	−.083 (.007)	−.018 (.003)	−.019 (.003)	.164 (.030)
Group by metro dummy[a]		Included	Included	Included
Pair FB (prop)			−.015 (.004)	−.018 (.004)
Panethnicity*pair FB:				
Black*pair FB				.155 (.036)
White*pair FB				.211 (.006)
Latino*pair FB				.017 (.013)*
Asian*pair FB				−.254 (.042)
Intercept	.407 (.001)	.287 (.016)	.303 (.016)	.304 (.016)
Adjusted R^2	.120	.889	.889	.894
N	28,620	28,620	28,462[b]	28,462[b]

NOTE.—Standard errors in parentheses. FB = foreign born; prop = proportion.
[a] 1,079 dichotomous variables included in the models where indicated but not presented. Complete results available upon request to the authors.
[b] Sample size is smaller than in models 1 and 2 due to missing foreign-born data for Cambodians in Miami and St. Louis and for Dominicans in St. Louis.
* Not significant at $P < .05$.

and, in effect, controls for group size—which has been shown in the MDS configurations to play some role in pairwise ethnic segregation—and local urban ecology.[6] We control for urban ecology, as the literature highlights both historical factors and recent developments as significant influences on segregation patterns (Massey and Denton 1987; Farley and Frey 1994; Frey and Farley 1996; White and Glick 1999).

In the presence of the fixed effects of model 2, panethnic pairings remain significantly less segregated than pairings not within a panethnic grouping. However, the magnitude of the panethnic coefficients has changed

[6] All four models were tested using only ethnic groups larger than 20,000 in a given metropolitan area as well as all four models using only the largest 10 metropolitan areas. Substantive results mirror the results found here with the exception of the interaction model in the sample with 10 metropolitan areas. The statistical significance of the interaction terms for blacks and Latinos change, from significance to nonsignificance and vice versa, respectively, but the direction of the association remains. The 54 groups were kept to maintain sufficient ethnic diversity within panethnic clusters, as well as the largest 20 metropolitan areas, as this provides the most information. In addition, the fixed-effects model addresses issues of group sparseness and the uniqueness of each metropolitan area.

along with their rank ordering, suggesting that the panethnic effect in model 1 was confounded by group characteristics and metropolitan area. Specifically, black subgroups are less segregated from one another than subgroups within each of the other panethnic groups (and this was confirmed to be statistically significant in a separate test). They are followed by white subgroups, who are less segregated than Latino subgroups, and Latinos, in turn, are less segregated from one another than Asian subgroups.

This rank ordering of panethnic segregation persists in model 3, also presented in table 5 with the proportion of foreign born of the pair added to the fixed-effects model. This expanded model addresses the concern that segregation between panethnic pairs may be affected by immigration, particularly as new immigrants can maintain or increase ethnic segregation and neighborhoods established by earlier immigrants (Lobo et al. 2007). Yet, despite controlling for this dimension—and it is statistically significant—panethnicity remains a salient predictor of segregation patterns.

We add a fourth model to the analysis by interacting the foreign-born proportion with panethnicity, with the expectation that the effect of immigration may operate in distinct ways for each of the panethnic groups. The coefficients in model 4 (table 5) demonstrate this to be the case. The model continues to show that blacks are the least segregated panethnic group compared to cross-group pairs and all other within-panethnic pairs, being, on average, .37 points less segregated than cross-group pairs, net of covariates. But, compared to the nonpanethnic or cross-group pairs, this interaction model reveals that this occurs only when all members of the pair are native born; that is, when the proportion of foreign born within the pair is zero. An increasing foreign-born contingent within the black pair is associated with higher levels of segregation between the black pairs. In other words, black immigrants have the effect of increasing segregation between black subgroups, such as sub-Saharan African, West Indian, and African-Americans.

This pattern is observed for white subgroups as well. Although they are significantly less segregated from one another than cross-group pairs (by .18 points when there are no foreign-born members in the pair), Latino pairs, and Asian pairs, and more segregated than black subgroups, the effect of immigration is positive and similar to blacks. That is, white immigrants have a positive effect on pairwise segregation levels between white national origin groups. With no foreign-born members, Latinos are also less segregated from one another than cross-group pairs, by .11 points, and Asian pairs, net of group and metropolitan effects, but they are more segregated from one another than black and white subgroups. In contrast to blacks and whites, the effect of the foreign-born proportion in the Latino pair is no different from the effect of the foreign born on cross-group pairs.

The relevant coefficients for Asians provide an interesting contrast to

all of the other panethnic groups in model 4. According to the model, with a zero foreign-born proportion in the pair, they are more segregated from one another than cross-group pairs, by .16 points on average, and this is in stark contrast to the other less segregated panethnic groups. But again, the interaction model shows that levels of panethnic segregation depend on the proportion of foreign born in the group. To elaborate, the negative interaction effect suggests that for pairs of Asian subgroups, an increase in their foreign-born proportion is associated with a decrease in segregation between the Asian subgroups, and this is significantly different from cross-group pairs. To put it another way, as the immigration of Asians increases in a metropolitan area, we can expect segregation levels between Asian ethnic groups to decrease, net of group and metropolitan area effects. Thus, Asian immigration appears to reduce segregation between Asian subgroups rather than increase it, as is the case with groups that share a panethnic black or white marker. This model explains close to 90% of the variation in pairwise segregation patterns.

Taken together, the results demonstrate that some panethnic pairs are significantly less segregated than cross-group pairs but that the levels of segregation for groups sharing a panethnic boundary vary according to the group and clearly depend on the proportion of foreign born in the group, net of the fixed effects.

DISCUSSION AND CONCLUSIONS

Social space and physical space are mutually reflective in the contemporary American urban mosaic. How one draws the boundaries between ethnic groups in those spaces is as difficult as it is consequential. It is common in much social science analysis to use broad ethnic groupings. The relevance of panethnicity arises partly from theoretical concerns and partly from more mundane data limitations. Yet, rarely have the impact of panethnicity and the layering of ethnic identities been examined comprehensively in residential settings. At the same time, residential patterns are clear manifestations of intergroup relations. Our efforts in this article are guided by previous discussions in the literature regarding the issue of ethnic boundaries and the potential classification of groups based on national origin and language, and they are limited by the nature of census classifications. We recognize also that ethnic groupings result both from self-identification and from a dynamic process of interaction between group members and the balance of society (both other ethnic groups and institutional structures).

Our analysis allowed us to test for the effect of panethnicity using the racialized spatial assimilation theory as a guiding framework. We find

some support for our first, overarching, hypothesis. Without any controls, ethnic groups that share a panethnic classification do exhibit greater residential proximity than those that do not share a panethnic boundary.[7] However, this statement requires further qualification. First, in accordance with our second hypothesis that predicted variation by panethnic grouping, the panethnic effect applies more to blacks, whites, and Latinos than to Asians. That is, black, white, and Latino subgroups demonstrate lower levels of residential segregation within their respective panethnic boundaries than to those groups situated outside of those boundaries. Asian ethnonational groups are also generally less segregated within their respective boundaries, but there is greater variation across subgroups.

Second, this panethnic effect is observed when no other factors are considered, such as group size, metropolitan area, and immigration. When group and metropolitan area fixed effects are introduced into the analysis and panethnicity is interacted with the proportion of foreign born, we see that the panethnic effect clearly depends on the proportion of foreign born for blacks, whites, and Asians. Asian, black, and white panethnic segregation levels depend on immigration. Foreign birth has a negative association with segregation between Asian subgroups but positive associations for black subgroup segregation and white subgroup segregation.

The third key finding is that none of the panethnic groups are fully integrated among all pairs of ethnic groups belonging to it, although we recognize that ethnic options exercised in the census may have led to higher within-group panethnic segregation. Nevertheless, from our knowledge of ethnic dynamics in the U.S. context, ethnonational boundaries continue to retain their importance for integration processes.

These findings are consistent with our racialized spatial assimilation theory that predicts some degree of racial and panethnic clustering of ethnic groups, but they refine our understanding of the influence of immigration on the process. For ethnic groups subsumed under a white or black panethnic label, our results are consistent with the idea that new immigrants may likely settle in immigrant enclaves specific to their national origin upon arrival and then eventually disperse into racialized white or black neighborhoods, respectively, over time. In other words, we might infer from the analysis that immigrants of sub-Saharan African origin would first settle in African residential enclaves and over time integrate with black Americans and West Indians. The results suggest that this pattern of integration is likely to take place for whites as well. This is consistent with the traditional spatial assimilation perspective that

[7] The data did not permit analysis of Native American groups, but the contemporary resurgence of the Native American identity suggests a similiar pattern should surface (Nagel 1995).

predicts greater intermingling with exposure, except that we must now consider whether this process is racialized.

Asians also undergo a racialized assimilation process, but it is evident in newer arrivals rather than in later generations of immigrants. Asian residential enclaves, in contrast to the native-born character of black and white panethnic residential areas, are likely to be comprised of a blend of Asian immigrants rather than based on a single national origin, confirming patterns already observed (Skeldon 1995). Yet, once established socially, culturally, and economically, Asian immigrants are likely to disperse out of these Asian enclaves, following the traditional path of assimilation. Latino groups differ from both patterns. While they are generally less segregated from one another, the foreign-born proportion is less relevant for segregation levels. It is likely then for Latinos that some new immigrants move into immigrant enclaves based on national origins while others move into existing panethnic Latino neighborhoods. In any case, Latino groups remain more intermingled with one another than groups that do not share a panethnic marker.

Such patterns might also suggest that there is a process of segmented assimilation occurring for some of these groups. That is, racialized assimilation may be linked to economic class attainment, particularly in the second and subsequent generations (Zhou 1997; Portes and Rumbaut 2001). As we did not have data on the socioeconomic standing of neighborhoods as well as immigrant generational status, we were unable to investigate this possibility and leave it as an open question for future consideration.

In our study, we focused more on questions of racialized spatial assimilation and its implications for theories of panethnicity and for the kinds of racial and ethnic distinctions to be made in future research. Lopez and Espiritu (1990) reasoned that the degree to which the panethnic construct is relevant for ethnic groups can vary according to shared cultural and structural factors. They argued that those with the greatest structural similarities have the best potential for panethnic development, despite substantial cultural diversity. This is reiterated by others (Okamoto 2006, 2007; Feliciano 2009) in their examination of the link between structural conditions and panethnic behavior. In our foregoing examination of residential patterns, we find that shared neighborhood space is a condition that could be relevant for all panethnic groups but that panethnicity is tied to immigration.

Residential proximity, contact, and interaction between subgroups are likely to facilitate a heightened sense of panethnic identity and consciousness for blacks, Latinos, and whites. Despite arguments that white ethnic groups have, for the most part, lost their distinctiveness and maintain links to their ethnic ancestries in only symbolic ways (see Gans 1979; Alba 1985; and Waters 1990), we find that the structural basis of ethnicity still

remains; white ethnic groups are still quite distinguishable from one another in their residential patterns. We observe a similar pattern of segregation among Asian subgroups that questions the applicability, and perhaps viability, of a cohesive Asian panethnic boundary, particularly if residential patterns within the metropolitan area of the second generation are expected to have influence. Rather, for the Asian second generation, it is likely through other structural conditions that panethnic consciousness has emerged, such as occupational segregation and concentration in educational institutions. Nevertheless, segregation by a collectivity of ethnic groups, whether foreign born or otherwise, may serve to bolster broader-based identities and mobilize panethnic claims. Collective actions based on such newly formed boundaries are structured by opportunities for interaction and perceptions of shared experience or position.

Proximity in residence for Latinos, Asian immigrants, blacks, and whites suggests that a strengthening of identities based on panethnic classifications is an increasingly probable outcome. This is especially so for blacks and whites. The fact that groups sharing a panethnic boundary live closer to one another points to the potential for subjective ethnic identities to shift to this higher-order level through increasing contact, interaction, and observation. Moreover, the shift reinforces any trend toward political and civic claims to be based on panethnic identifiers. The circular process leads panethnic neighborhoods and organizations to further validate other people's perceptions that panethnic groupings are homogeneous and that subgroups may, in fact, be similar to one another. This could have consequences for group treatment and behavior, such as political mobilization and steering in the housing market.

Our findings also suggest that the broad racial and panethnic classification system does have meaning for residential segregation in the United States. However, this should not be accepted without qualification and without further attention to the layering of ethnic boundaries and the role of immigration. As we observed, ethnic groups continue to maintain some degree of distinctiveness within a racialized context.

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