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Ethnic Residential Segregation by Nativity in Great Britain and the United States*

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Abstract

This study examines patterns of ethnic residential integration in Great Britain and the United States. Using data from 2000/2001 censuses from these two countries, we compute segregation indexes for comparably-defined ethnic groups by nativity and for specific foreign-born groups. We find that blacks are much less segregated in Great Britain than in the U.S, and black segregation patterns by nativity tend to be consistent with spatial assimilation in the former country (the foreign born are more segregated than the native born) but not in the latter. Among Asian groups, however, segregation tends to be lower in the United States, and segregation patterns by nativity are more consistent with spatial assimilation in the U.S. but not in Great Britain. These findings suggest that intergenerational minority disadvantage persists among blacks in the U.S. and among Asians in Great Britain. We caution, however, that there are important differences in levels of segregation among specific foreign-born Asian groups, suggesting that assimilation trajectories likely differ by country of origin. Finally, the fact that segregation levels are considerably higher in the U.S. for a majority of groups, including white foreign-born groups, suggests that factors not solely related to race or physical appearance drive higher levels of ethnic residential segregation in the U.S.

Keywords

segregation; immigration; integration; ethnicity

Introduction

Sustained immigration flows over the last few decades have increased ethnic diversity in Great Britain, the United States, and in countries around the globe. We are only beginning to understand the consequences of this diversity in many immigrant-receiving countries, with often heated debates about whether immigration is contributing to acute national divisions and deep social isolation among newcomers and their children (Massey 2007; Simpson 2004). There is particular concern about whether the divide between ethnic minorities and the majority ethnic group will eventually result in race-based stratification reflected by, and

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preserved in, 'ethnic ghettos' (Johnston, Poulsen, and Forrest 2002; Peach 1996). The long-run effects of immigration will be contingent on how successfully immigrants are incorporated in their new destinations, as reflected by the degree of generational change in outcomes between immigrants and their offspring.

In this paper we develop a cross-national comparison of the residential or "spatial" incorporation of immigrant and ethnic minority groups in Great Britain and the United States.[1] The focus here is not just on differences in segregation across ethnic groups, but specifically on how patterns differ by nativity. This approach sheds light on intergenerational patterns of integration among different groups. Our cross-national comparison also provides a broader perspective of the factors that affect residential segregation and integration in each of the two countries. For example, analysts in the United States often take for granted that African Americans are a uniquely disadvantaged minority group. However, in other countries other groups, such as South Asians, face the greatest disadvantage. This study thus focuses on differences in residential patterns across ethnic groups and the role that nativity plays in shaping them in different contexts. More specifically, the analyses are guided by the following four research questions:

1. How do levels of ethnic segregation compare in the United States and Great Britain?
2. To what extent do these patterns vary by the ethnic group being considered?
3. What is the role of nativity in explaining these patterns?
4. Does the role of nativity differ in the United States and Great Britain, and is this comparison affected by the ethnic group being considered?

The first two research questions are largely descriptive and to some extent replicate previous studies (with some substantive and methodological contributions described in the next section). The third and fourth questions, by focusing on the role of nativity, examine the possible extent of intergenerational assimilation of ethnic groups in the two countries.

Previous comparative studies of segregation have generally indicated that the level of racial and ethnic residential segregation (especially black-white segregation) in the United States is relatively high when compared with levels in other immigrant-receiving countries, including Great Britain (e.g., Peach 1999; Johnston, Poulsen, and Forrest 2007). These findings suggest that ethnic group divisions might be more salient in the U.S. than in Great Britain, or that immigrants are not integrating as easily in the former country. However, to date no study has compared the role of nativity in explaining intergenerational segregation patterns in Great Britain versus the U.S. If the native-born of a particular ethnic group are less segregated than the foreign born, this would suggest that some measure of spatial incorporation is occurring across generations.

[1] In this study we refer to "immigrants" as those residents born outside of the host country and the term "ethnic minorities" to refer to all individuals who are not classified as "non-Hispanic White" in the U.S. or "White British" in Great Britain (i.e., the ethnic majorities in each country). The term "racial minority," while commonly used in the U.S., is not the term of choice in Great Britain and other European countries.

Using data from the 2001 British census and the 2000 U.S. census, we therefore compute levels of residential segregation, using the information theory and isolation indexes, for a set of comparably defined panethnic groups (blacks and Asians) by nativity. We further examine segregation patterns for specific foreign-born groups (e.g., Chinese, Pakistanis, Jamaicans) to provide a better sense of the variation in segregation patterns across a wide variety of groups and even within panethnic groups. Our ultimate aim is to arrive at a better understanding of the ethnic integration process in the U.S. and Great Britain.

Background

Theories of Immigrant Incorporation

Three theoretical perspectives commonly used to explain how immigrants and minority groups become incorporated into a society are assimilation, segmented assimilation, and ethnic disadvantage (Alba and Nee 2003; Iceland 2009). Classic spatial assimilation theory posits that immigrant groups experience a process towards integration with a society's majority group through the adoption of mainstream attitudes, culture, and human capital attributes (Alba and Nee 2003). Early in this process groups may live apart from the native majority and in more disadvantaged neighborhoods for a number of reasons. The low socioeconomic status of many immigrant groups means that such individuals may simply not be able to afford to live in the same neighborhoods as the more affluent native majority. People with low levels of human capital may also be principally dependent on their ethnic communities to gain access to jobs, housing, and credit (Alba and Nee 2003; Portes and Rumbaut 2006). Social networks—both kin and community—are key factors shaping where internal migrants and immigrants live. This is particularly true in the years shortly after immigrants arrive in the host country. However, immigrant group members are more likely to move into residential areas outside ethnic enclaves if and as they acculturate and become more socioeconomically similar to the native majority. Over the long run, this process of decreasing social distance results in a convergence in residential patterns and outcomes across groups over time. Alba and Nee (2003) emphasize that assimilation is often a process that occurs across generations. While immigrants themselves might assimilate to some extent, progress is predicted to be more evident among their children, who presumably grow up fully acculturated.

The segmented assimilation perspective, as principally discussed in the U.S. immigrant incorporation literature, focuses on divergent patterns of incorporation among contemporary immigrants and their descendents (Portes and Zhou 1993). According to this theory, the host society offers uneven possibilities to different groups based on social factors, including ethnic origin. Recent immigrants become absorbed by different segments of the 'native society', ranging from, in the U.S. context, affluent and predominantly Anglo middle-class suburbs to impoverished predominantly African American inner-city ghettos. Structural factors that affect patterns of incorporation include racial stratification and the range of economic opportunities available in a particular place at a particular time. Racial discrimination in particular may diminish the opportunities available to nonwhite immigrants (Zhou 1999).

Thus, according to the segmented assimilation model, we should expect to see considerable differences in levels of residential segregation among different groups. For example, black immigrants may be much more segregated from the native white population in the U.S. than Asian immigrants because discrimination against the blacks in general is more prevalent there (Ross and Turner 2005). The segmented assimilation perspective may have salience in Great Britain too, where immigrant groups appear to vary widely in their outcomes, with South Asian groups such Bangladeshis and Pakistanis often appearing to be among the most disadvantaged—though Indians in Great Britain are showing signs of recent upward residential mobility (Finney and Simpson 2009b).

In contrast to the residential convergence of groups predicted by spatial assimilation theory, or even the divergence in outcomes across immigrant groups, the ethnic disadvantage perspective emphasizes the widespread retention of ethnic ties and ethnic communities over time and across generations (Charles 2006). Ethnic group members often have preferences to maintain residence within their traditional ethnic communities even when they could afford to live in other areas. Some also argue that prejudice and discrimination by the majority group (e.g., whites in the U.S. context) serve to maintain their social distance from other minority groups (Massey and Denton 1993). The effects of structural barriers are thought to be greatest for blacks in the U.S. because blacks have historically been perceived in the most unfavorable terms (Charles 2006). Despite some declines in discrimination in recent years, many believe that both its effects and white avoidance of racially mixed or minority neighborhoods still play central roles in shaping the residential patterns of minority group members in the United States (Ross and Turner 2005). In contrast, in Great Britain black immigrants, predominantly from the Caribbean, fare relatively well, while, as mentioned above, some Asian groups do less well (Peach 1999).

Studies of Residential Segregation in Great Britain and the U.S

It was only in 1991 that Great Britain added a question on ethnicity in their decennial census. Since then, there have been a few comparative studies of racial and ethnic segregation that included the U.S. and Great Britain. Peach (1999) compared residential patterns in New York and London based on U.S. and British decennial census data respectively for 1990 and 1991. He found that London's Afro-Caribbean population was much less segregated from the white population than African Americans in New York—who continued to live in "hyper-segregated" ghettos. He also found, however, that South Asians in London were following a more structural, pluralistic path characterized by fairly high levels of segregation, while Latinos in New York were, like Afro- Caribbeans in London, edging toward integration. In a more recent study, Peach (2009) finds that minority segregation in Great Britain declined from 1991 to 2001 period for all groups, though segregation levels are still fairly high in absolute terms among Pakistanis and Bangladeshis (see also Sabater 2008; Simpson 2007; Musterd 2005; Johnston, Poulsen, and Forrest 2007). These analyses use multiple measures of segregation and consider different ethnic groups. However, these studies do not directly examine segregation by nativity.

Some studies have documented that nativity plays a role in affecting patterns of residential segregation in the U.S. The foreign-born of various ethnic groups tend to be more

segregated from whites and less likely to move into white neighborhoods than the native-born of their respective ethnic groups (Iceland and Scopilliti 2008; Iceland and Nelson 2008; South, Crowder, and Chavez 2005a, 2005b). These patterns are generally consistent with the spatial assimilation perspective. However, this effect of nativity is at times overshadowed by the particular ethnicity of the immigrants (among black immigrants in particular) which is to some extent consistent with segmented assimilation theory (Iceland 2009). To the best of our knowledge, the effect of nativity on segregation levels, and hence its inter-generational *resilience*, has not been systematically examined in Great Britain.

Issues of ethnicity and nativity aside, Van Kempen and Murie (2009) note that, more generally, spatial arrangements in European cities, including Great Britain, often differ from those in American ones due to broader structural factors. They focus specifically on the stronger interventionist traditions of European governments—including more centralized urban planning and decommodified housing—that differ markedly from the more *laissez faire* housing market in the United States. For example, there is much more public housing stock in Great Britain than in the United States, and such housing is not especially or necessarily marginalized (Van Kempen and Ozuekren 1998). British cities are also denser and more compact than U.S. cities with a strong reliance on public transport; this may promote closer socio-spatial interaction between ethnic groups. The result of this difference is that spatial divisions, both economic and ethnic, may be smaller in British cities than American ones. The implication too is that American theories of assimilation and neighborhood change may be less applicable in the British context.

Research Gaps and Contributions

As described above, a number of studies have compared residential segregation levels of specific ethnic groups in selected cities and metropolitan areas in Great Britain and U.S. However, to the best of our knowledge, no study has systematically examined the effect of nativity in shaping residential patterns in Great Britain or compared the effect of nativity in the two contexts. The issue of generational differences is crucial for understanding the immigrant incorporation process. For example, high levels of segregation among first generation immigrants might be of no great cause for alarm among those who worry about immigrant integration if the second and subsequent generations show signs of lower levels of segregation.

Our study also contains other data and methodological elements that add contributions to the existing literature. We examine segregation patterns across a wide range of metropolitan areas in both countries (up to 497)—considerably more than previous studies. Furthermore, we use two measures of segregation that tap into different dimensions of separation—exposure and evenness (Massey and Denton 1988). We measure the former with the isolation index (Pxx) and the latter with the information theory index (or Theil's H), including a measure of multigroup segregation using *H* that gauges the segregation of multiple groups from each other. We look at the segregation of a greater number of foreign-born groups and world regions of birth than previous studies, and we run simple multivariate models that compare segregation scores across groups and contexts that also control for metropolitan area and groups sizes.

Data and Methods

The analyses rely on data from the 2001 British and 2000 U.S. censuses that contain the size and distribution of different ethnic groups needed to calculate residential segregation indexes. Residential segregation typically describes the distribution of different groups across smaller areal units within a larger area, such as a metropolitan area (Massey and Denton 1988). Thus, to measure residential segregation, one usually has to define both the appropriate larger area and its component parts, or neighborhoods. The most common larger geographic unit chosen is in fact the metropolitan area, which is a reasonable approximation of a housing and job market. Using housing and job markets for the computation of segregation indexes is based on the notion that a person (or household) who works in a given commutable area can potentially choose to live in any community within the housing market. In the U.S, metropolitan areas were designed to represent housing and labor markets and generally contain at least 50,000 people. For the 2000 U.S. census data, we use 1999 county-based Metropolitan Statistical Area/Primary Statistical Area (MSA/PMSA) definitions, which yield 318 metropolitan areas in total.

For Great Britain the analyses are based on 2007 Travel to Work Areas (TTWA) (Bond and Coombes 2007), an official geographical unit produced by the Office for National Statistics (ONS) based on work journeys between Census Super Output Areas, and that divide the entire territory of Great Britain into 232 TTWAs. This choice differs from those of many previous segregation studies in Britain. Previous studies typically used local government administrative boundaries (Local Authorities or Districts) that do not necessarily resemble the housing and job market areas within which residential decisions are made, as they often detach many metropolitan urban cores from their commuter hinterland. An alternative geography would have been the definition of *Urban Areas* produced by the Office for National Statistics for the 2001 Census (Bibby and Shepherd 2004; ONS 2004). However, these *Urban Areas* are comprised of contiguous built-up areas with a high population density, and they therefore purposely exclude adjacent rural areas in the urban fringe and within the metropolitan commuter belt. However, it is precisely in these fringe areas where contemporary residential segregation processes are likely most acute in Great Britain, through the suburbanization of affluent groups into sparse rural commuter belts where urban expansion is largely forbidden by strict planning regulations. This phenomenon is commonly ignored by segregation studies in Great Britain that repeatedly just concentrate on urban cores and administrative areas.

Because of this, we decided to use TTWAs as the only available standard geography that is closest in definition to U.S. metropolitan areas-- functional regions. However, there is an important difference between the two. U.S. metropolitan areas are defined above a minimum population threshold that exclude half of the counties and approximately 20% of the population, while TTWAs are drawn without any population thresholds and cover the whole territory. Hence although in the U.S. some rural areas in the urban fringe are included within the constituent metropolitan counties, TTWAs contain a much higher proportion of rural areas. To account for the difference in the proportion of “rurality” between TTWAs and MSAs in the U.S. we could have re-engineered TTWAs through applying population and distance thresholds to create an exact match to MSAs, but we discarded this option since we

would end up with non-standard regions that will make future comparisons difficult. We finally decided to eliminate from the analysis those TTWAs with a total population below 50,000 people (the U.S. minimum threshold for a metropolitan area), resulting in 179 TTWAs for the analyses below. The results of the paper do not significantly differ with or without these small areas. For ease of interpretation, in both countries we refer to these housing market units as "metropolitan areas."

The next geographic consideration is the basic unit of analysis—the neighborhood. In U.S. studies of segregation, the "census tract" is the most common unit chosen (e.g., Logan, Stults, and Farley 2004; Iceland, Weinberg, and Steinmetz 2002; Massey and Denton 1993). Census tracts typically have between 2,000 and 8,000 people, with an average size of about 4,000. The comparable unit used with the British data are Middle Level Super Output Areas (MSOAs: Mean=7,200 people) in England and Wales, and *Intermediate Geography* in Scotland (Mean=4,000 people), both referred to as MSOAs in this paper (overall Mean= 6,600 people) (ONS 2010). These geographical units are an aggregation of the Census smallest areas (Output Areas) for the collection and dissemination of government statistics using units of similar population size across the country compared to, for example, electoral wards. We used MSOAs as the most similar unit to U.S. census tracts in terms of population size and much smaller variance than electoral wards (with a large variance around Mean=5,500 people).

To test the comparability and sensitivity of using different neighborhood definitions we also examined block group areas in the U.S., which have an average of 1,000 people, and Lower Level Super Output Areas (LSOAs: mean=1,500 people) in Great Britain. Smaller areas tend to be more homogeneous, and thus display higher levels of ethnic segregation (Voas and Williamson 2000). Overall, as is shown in the results section, segregation scores for most groups are considerably higher in the U.S. than in Great Britain, and would remain higher even if we were to use census tracts (the larger unit) in the U.S. and LSOAs (the smaller unit) in Great Britain.[2] Since data on detailed groups in the U.S. are much more limited at the block group level, the analyses focus on patterns using census tracts and the nearest unit in Great Britain—the MSOA.

Group definitions

This study compares the residential segregation of ethnic groups present in both Great Britain and the U.S., and examines the role of nativity in explaining patterns. For this kind of analysis, one would ideally like to have data available on the residential patterns of the foreign- and native-born for a wide variety of specific ethnic groups, such as Pakistanis, Indians, and so forth (Mateos, Singleton, and Longley 2009). These detailed data are partially available in the British Census (for the largest ethnic groups the ethnicity question can be cross-tabulated by the country of birth question), but not in the U.S., because the race question focuses on physical appearance (not ethno-cultural groups) and the uneven quality

[2]We estimate that the magnitude of the bias of having larger MSOA-based indexes compared to smaller census tract-based indexes is likely in the 6 to 12 percent range for the panethnic groups (i.e., MSOAs understate the extent of segregation by 6 to 12 percent in Great Britain relative to the U.S.), and averaging about 25 percent for the 8 countries of origin in Table 2 using *H*. This ballpark estimate of bias is based on a linear interpolation of LSOA-based and MSOA-based segregation scores in Great Britain, where we take the point between the two that would equal the average size of a U.S. census tract.

of the data from the ancestry question[3]. This means that with the U.S. data, one can obtain counts of foreign-born Pakistanis (from the place of birth question), but not necessarily reliable counts of U.S.-born people of Pakistani origin

This limitation is addressed in this study with the following strategy. First, for both the U.S. and Great Britain one can calculate reliable number of native- and foreign-born people of *panethnic* groups. In the U.S. context, common panethnic groups used in segregation studies include non-Hispanic whites, blacks, and Asians (e.g., Logan, Stults, and Farley 2004) (we do not include Hispanics in this study because of the small number of Hispanics in Great Britain). The British census data contain counts of these groups by nativity as well. Thus, we examine three panethnic groups that are present in large numbers in both countries[4]-- non-Hispanic whites/white British, blacks, and Asians—and the role that nativity plays among them.

Since "race" and "ethnicity" are socially constructed concepts, a challenge confronting this kind of cross-national comparison is that these ethnic categories do not have precisely the same meaning in the Great Britain and the United States. In addition, the composition of the panethnic groups varies in the two countries. For example, within the Asian *panethnic* group there are more South Asians in Great Britain and more East Asians in the United States. These groups likely differ in their settlement patterns in each of the countries. To address these issues, we examine the residential patterns of specific *foreign-born* groups, such as Bangladeshis, Jamaicans, Indians, Germans, and those born in Hong Kong. This provides insight on how residential patterns differ across specific national groups, as well as *within* the panethnic groups defined above.

Segregation indexes are calculated for a given group in a metropolitan area only if there are at least 1,000 group members living there, as segregation indexes for metropolitan areas with small minority populations are less reliable than those with larger ones.[5] In order to make meaningful experiences of particular groups across the U.S. and the U.K., we narrowed the set of countries to those present in at least 10 metropolitan areas in both the U.S. and the U.K that met the criterion of a minimum population of 1,000 group members per area. This procedure results in the inclusion of eight countries of birth located in various world regions: Bangladesh, France, Germany, Hong Kong, India, Italy, Jamaica, and Pakistan. Our conclusions about the variation in segregation patterns within panethnic groups and across the United State and Great Britain do not differ if we adjust the selection criteria, such as by allowing a greater number of countries of origin to be included in the analyses (these results are available upon request).

[3]While the ancestry question on the U.S. census allows people to identify specific countries as their place of ancestry (such as Pakistan), these data likely undercount the number of people from many countries. For example, for many groups included in the analysis below, there were more foreign-born people of a particular country than the total number of people claiming that country's ancestry, even though the former should be a subset of the latter.

[4]In Great Britain, the *black* group is comprised of the amalgamation of the following census ethnic groups: "Black Caribbean," "Black African," "Black Other," "Mixed: White and Black Caribbean," and "Mixed: White and Black African," while the *Asian* group includes: "Indian," "Pakistani," "Bangladeshi," "Asian Other," "Chinese," and "Mixed: White and Asian." No data are available for blacks by nativity in Scotland. Thus, Scottish metropolitan areas are omitted from the analyses of blacks by nativity.

[5]Random factors and geocoding errors are more likely to play a large role in determining the settlement pattern of group members when fewer members are present, causing these indexes to contain greater volatility (Massey and Denton 1988). The 1,000 group population cutoff is one chosen by some other studies (Frey and Myers 2002; Iceland and Scopilliti 2008).

While these countries are located in a variety of continents, they provide information on only a slice of the foreign-born populations in the United States and Great Britain. Thus, the analyses below also include information on the foreign-born by world region. As above, indexes are calculated in metropolitan areas where at least 1,000 group members were present in at least 10 metropolitan areas in both the U.S. and Great Britain. The world regions included are: sub-Saharan Africa, Middle East, Eastern Europe, South Asia, Far East, Southern Europe, North Western Europe, North America, and the Caribbean. Table 1 contains descriptive statistics about how many people are in each group and how many metropolitan areas for each group are in the analyses.

Measures of segregation

The analyses use two common segregation measures, the information theory index (or Theil's *H*) and the isolation (*Pxx*) index. The information theory index is a measure of evenness. Evenness refers to the differential distribution of the subject population across neighborhoods in a metropolitan area. More specifically, *H* is the weighted average deviation of each unit's "entropy" (or diversity) from the metropolitan-wide entropy, expressed as a fraction of the metropolitan area's total entropy. The analysis includes both dual-group and *multigroup* versions of the information theory index (Iceland 2004; Reardon and Firebaugh 2002). The former compares the segregation of one particular group from another, while the latter measures the joint distribution of several groups simultaneously. Additional analyses were run with another measure of evenness, dissimilarity (D), but results were for the most part similar to results with *H*, and we thus include only *H* (rather than dissimilarity) because of the advantageous attributes of *H* (see Reardon and Firebaugh 2002). Of particular interest here is the ability to calculate the *multigroup* version of *H*, which allows one to look at the joint distribution of several groups simultaneously. In this way, one does not have to rely only on two-group measures, which typically involve picking a specific reference group (such as "whites"). As such, *H* has been recently used with increasing frequency in segregation studies (e.g. Farrell 2008; Fischer 2008; Lee et al. 2008).

The information theory index is specifically calculated as follows. Since *H* is the weighted average deviation of each unit's entropy (or diversity) from the metropolitan-wide entropy, one first calculates each metropolitan area's entropy score as:

$$E=\sum_{r=1}^{r}(\Pi_r)\ln[1/\Pi_r]$$

where Π_r refers to a particular racial/ethnic group's proportion of the total metropolitan area population. All logarithmic calculations use the natural log. The higher the number, the more diverse an area is. The maximum level of entropy is given by the natural log of the number of groups used in the calculations. The multigroup *H* used in this study calculates the segregation of three panethnic groups (described above) from each other: whites, Asians, and blacks. In order to include the entire U.S. and British population in these segregation calculations (i.e., in order to have a set of mutually exclusive and exhaustive groups, as is common in calculations of multigroup *H*), we add a fourth group that contains the residual

population (termed "other").[6] With four racial/ethnic groups, the maximum entropy is log 4 or 1.39.

A unit within the metropolitan area, such as a census tract, would analogously have its entropy score, or diversity, defined as:

$$E_i = \sum_{r=1}^{r} (\Pi_{ri}) \ln[1/\Pi_{ri}]$$

where Π_{ri} refers to a particular racial/ethnic group's proportion of the population in tract *i*. The information theory index is the weighted average deviation of each unit's entropy from the metropolitan-wide entropy, expressed as a fraction of the metropolitan area's total entropy:

$$H = \sum_{i=1}^{n} \left[\frac{t_i (E - E_i)}{ET} \right]$$

where t_i refers to the total population of tract *i*, *T* is the is the metropolitan area population, *n* is the number of neighborhoods, and E_i and *E* represent neighborhood *i*'s diversity (entropy) and metropolitan area diversity, respectively. The information theory index varies between 0, when all areas have the same composition as the entire metropolitan area (i.e., maximum integration), to a high of 1, when all areas contain one group only (maximum segregation).

The second index used in the analysis, isolation, is the most widely used measure of "exposure" (one of the dimensions of segregation defined by Massey and Denton (1988)). The isolation index indicates the average percentage of group members (of the group of interest) in the neighborhood where the typical group member lives. The index varies from 0 to 1, with 1 indicating the highest level of segregation. A black isolation score of 0.60 in a particular metropolitan area, for example, would indicate that the typical African American lives in a neighborhood that is 60 percent African American. The formula for isolation is as follows:

$$P_{xx} = \sum_{i=1}^{n} [x_i/X][x_i/t_i]$$

where P_{xx} is the usual notation for the isolation index, x_i is the population of the minority group of interest in neighborhood *i*, X is that group's population in the metropolitan area as a whole, and t_i refers to the sum of the minority and reference group populations in neighborhood *i*.

[6] In the U.S., the "other" ethnic category includes Hispanics, people who chose "some other race," and those who chose more than one race. In Great Britain, the "other" ethnic category includes people who were "White Irish", "White Other", people who chose "other" ethnicities that were not Asian or black, and mixed-ethnicity individuals.

When comparing the two indexes (*H* and P_{xx}), the information theory index has the advantage of not being sensitive to the relative size of the groups in question. It merely provides information on how evenly members groups are distributed across neighborhoods. In contrast, the isolation index is sensitive to the relative size of the groups being studied. Other factors being equal, larger ethnic groups will be more isolated than smaller ones simply because there are more co-ethnics present with which to share neighborhoods. For example, isolation is generally higher for blacks in the U.S. metropolitan areas with many blacks (e.g., Detroit) rather than ones with fewer blacks (e.g., Salt Lake City). This is not necessarily a negative feature of the index; from a sociological point of view it can be useful to know to what extent a person of a particular ethnic group lives with co-ethnics, and hence in an ethnic community. There are some cases, for example, where a group is fairly evenly distributed across neighborhoods (where *H* would be low), but if that group comprises a large proportion of the overall metropolitan population, its isolation (*Pxx*) may be relatively high—indicating that that group lives in neighborhoods with mostly co-ethnics. The reason we use two measures in this study (*H* and *Pxx*) is to capture these distinct and meaningful dimensions of segregation (Massey and Denton 1988; Massey, White, and Phua 1997; White 1986). Nevertheless, the different features of the two indexes need to be kept in mind when interpreting cross-group differences in segregation, as we do below.

A final methodological issue that arises when implementing dual-group indexes revolves around whom to use as the "reference group" in dual-group segregation calculations. In the U.S., studies have typically measured the segregation of various minority groups from non-Hispanic whites, and in Great Britain vis-à-vis white British.[7] Specifically, we use the native born of these groups in our study, sometimes termed 'white' or 'ethnic majority' for short in the paper. A sensitivity analysis was also conducted where we calculated the segregation of different ethnic groups from a reference group consisting of all people who are not of the ethnic group in question; these scores were similar, if a little lower, and highly correlated to those calculated with the white majority as the reference group, so we present results only with native-born whites as the reference group.

Analytical Strategy

To answer the first two research questions posed in the introduction (1. How do levels of ethnic segregation compare in the United States and Great Britain? 2. To what extent do these patterns vary by the ethnic group being considered?), the analysis begins with a descriptive examination of segregation scores (information theory and isolation) by country (Great Britain and U.S.), ethnicity, nativity, and, among the foreign born, by country and world region of birth. The prime interest here is to examine the extent to which segregation differs in the two countries, and among which ethnic and immigrant groups differences appear greater.

[7]"White British" refers to this ethnic group as defined in the British 2001 census; this definition omits white minority groups, namely "white Irish" and "white other," from the reference group. The exclusion of these white groups from the reference groups is analogous to excluding white Hispanics from the reference group in the U.S. context. In Scotland, the "White Scottish" and "Other White British" categories were combined into a single category also termed "White British" for ease of exposition in this paper.

The subsequent regression analysis then provides more detailed analyses to answer our third and fourth questions: 3) What is the role of nativity in explaining these patterns? and 4) Does the role of nativity differ in the United States and Great Britain, and is this comparison affected by the ethnic group being considered? We run regressions using metropolitan area information theory index and the isolation index scores as dependent variables.

Model 1 of each of the regressions includes two basic independent variables. First is a dummy variable indicating if the metropolitan area observation is in the U.S. or Great Britain. The coefficient of this variable will indicate whether metropolitan area segregation indexes are generally higher in Great Britain or the U.S. (the omitted category). The second independent variable measures nativity, which is at the heart of research question 3 above. Specifically, for each metropolitan area, a segregation index is computed for the native-born of the panethnic group in question, as well as for the foreign-born of that group. Thus, each of the regression models actually contain two observations per metropolitan area (one representing the index of native born and one representing the index of the foreign born of the panethnic group being considered). For example, in the regressions that examine the effect of nativity on Asian-white segregation, we include two observations per metropolitan area: one for the segregation of foreign-born Asians from whites and the second representing the segregation of native-born Asians from whites. A dummy variable is then included to indicate if the segregation index represents that of foreign-born Asians (with the native-born Asian index as the omitted category). With this strategy, we can directly test whether segregation indexes are higher among foreign-born Asians than native-born ones in the metropolitan areas in our analyses. We follow the same strategy when looking at the segregation of blacks. Because in these regression models the same metropolitan areas are included up to two times in the models, we produce corrected standard errors by using Generalized Linear Regression models that account for the correlated error structure (i.e., because we are using repeated, clustered observations by metropolitan area) among the independent variables.[8] This modeling strategy is similar to that employed in some other studies of ethnic and/or nativity variation in segregation (Iceland and Nelson 2008; Massey and Denton 1989).

Model 2 in the regressions answers our fourth research question, whether the effect of nativity varies by country (U.S. vs. Great Britain) and by panethnic group being considered. Specifically, this model adds an interaction term between country (Great Britain) and nativity, which tells us if the effect of nativity varies by country. The regressions with the *H* index have one set of models that examine the segregation of multiple groups from each other (whites, Asians, blacks, and “others”, as described above). However, in order to examine whether the effect of nativity varies by panethnic group (and country), we also run separate models for Asian-white and black-white segregation (using both *Pxx* and *H*). This will allow us to see if the interaction between country and nativity applies, for example, to Asian-white segregation but not to black-white segregation. Interpreting results from these separate models is easier than including three-way interaction terms between panethnic group, nativity, and host country. Model 2 in each set of regressions also includes two basic

[8]We used the SAS proc genmod procedure with repeated statements. Liang and Zeger (1986) originally introduced generalized estimating equations as a method of dealing with correlated data.

control variables—for metropolitan area population size and population size of the group in question in a given metropolitan area.

In terms of how this analytical strategy speak to the theoretical perspectives (assimilation, segmented assimilation, and ethnic disadvantage), if the coefficient for foreign-born dummy variable is positive and significant, this indicates that segregation scores for the foreign-born are generally higher than those for the native-born. This finding would be consistent with the predictions of spatial assimilation, which predicts lower segregation across generations. If nativity matters for some groups (e.g., blacks) but not others (e.g., Asians), this provides some support for segmented assimilation—that groups are experiencing different kinds of assimilation trajectories. Finally, if nativity does not matter for any panethnic group in any country, this provides some support for the ethnic disadvantage approach. That is, over time and across generations, we may not see decreasing ethnic residential segregation. Finally, the country*nativity interaction describes the extent to which assimilation for a given group might apply more in one country than the other (i.e., Great Britain or the U.S.).

Results

Table 2 shows levels of segregation by group and segregation measure in the U.S. and Great Britain. We begin with a discussion of the panethnic group results before proceeding to results by country of birth and world region of birth among the foreign born.

Segregation patterns of panethnic groups

The multigroup *H* indicates that the segregation of panethnic groups from each other is much higher in the U.S. (0.265) than in Great Britain (0.115). Among specific panethnic groups, we see that this is particular true for blacks. For Asians, however, the results are somewhat mixed, with the information theory index (*H*), showing higher segregation in Great Britain among Asians, but non-significant differences when using the isolation index (*Pxx*). As mentioned in the data and methods section above, the isolation index is affected by the relative size of groups, and Table 1 indicated that Asians are proportionally modestly larger in the U.S. than in Great Britain, which would serve to increase their isolation, other factors being equal (Asians comprise 6.4% of the combined Asian and native white population in the U.S. in the metropolitan areas in the analysis, compared to 5.4% in Great Britain).[9]

When looking at the role of nativity among panethnic groups between the two countries, we see little difference in the segregation of Asians by nativity in Great Britain. For example, the *H* score is 0.222 for native-born Asians in Great Britain, which is similar to (if slightly higher than) the 0.213 score among the foreign born. Among blacks in Great Britain, the effect of nativity is more apparent in the manner consistent with assimilation: native-born blacks tend to be less segregated (particularly *H*) than foreign-born blacks. In the U.S., native-born Asians are less segregated than foreign-born Asians. The patterns for blacks in

[9]Because the units of analysis in Great Britain (middle-level super output areas, with a mean of 6,600 people) are larger than the units of analysis in the U.S. (census tracts, with a mean of 4,000 people), British segregation indexes in the table are actually modestly understated compared to those in the U.S. The data and methods section contains additional discussion of this issue.

the U.S. are mixed, with little difference when using *H* and some difference indicating greater segregation among the native born when using isolation. These isolation scores are in part explained by the fact that the native black population in the U.S. is much larger than the foreign-born black population. Results from the *multigroup H* (top of Table 2) show little difference in segregation by nativity. The small difference here could reflect some of the countervailing patterns for blacks and Asians in both countries.

Within-country ethnic group comparisons indicate that blacks are much more segregated from the white reference group than Asians in the U.S., regardless of the measure. The opposite is true in Great Britain, where Asians are more segregated from whites than blacks —consistent with the literature indicating that some Asians groups tend to be more disadvantaged there.

Segregation of the foreign born by country and world region of birth

There is considerable variation in levels of segregation by country of birth in both the U.S. and Great Britain. In the U.S., the highest *H* and *Pxx* scores are for immigrants from Jamaica —a mainly black immigrant group—followed by immigrants from Bangladesh. In Great Britain, *H* and *Pxx* are highest for Bangladeshis and Pakistanis, followed by Indians —all South Asian groups. The results also indicate that *H* is higher in the U.S. than in Great Britain for all immigrant groups except Pakistanis, where the difference is not significant. The results for isolation are a little more mixed. Jamaicans are considerably more isolated in the U.S. than in Great Britain, though two South Asian groups—Pakistanis and Bangladeshis—are more isolated in Great Britain. Germans are also more isolated in Great Britain than in the U.S., though their absolute levels of isolation are quite low in both contexts.

Results by world region of birth indicate that immigrants from the Caribbean and Sub-Saharan Africa, both mainly black groups, have among the highest levels of segregation (*H* and *Pxx*) in the U.S. In contrast, South Asian immigrants stand out as having the highest levels of segregation in Great Britain. In terms of cross-country (i.e., Great Britain vs. U.S.) comparisons, we see that segregation, especially *H*, is higher in the U.S. among most groups. Among the other exceptions to the general pattern of higher segregation in the U.S. are immigrants from North America, and mixed results for immigrants from Northern and Western Europe. The North American category includes only Canadians in the U.S., though both Canadian and U.S. immigrants in Great Britain. In the U.S., a significant proportion of immigrants from Northern and Western Europe arrived in the U.S. decades ago (Iceland 2009), while a substantial proportion of migration into Great Britain from this region has occurred over the last two decades following the introduction of the single European market in 1992. In both the U.S. and Great Britain, immigrants from this region display fairly low levels of both *H* and *Pxx*. In addition, in both the U.S. and Great Britain, segregation tends to be lower among immigrants from developed countries and regions with largely white populations, although Southern Europeans are slightly more segregated than the rest of Europe, especially in the U.S.

Finally, Table 2 also indicates that segregation is often considerable higher in the U.S. than in Great Britain (especially when using *H*) even among mainly white immigrants—such as

those from Italy, France, and Eastern Europe. For example, the *H* score among those from Eastern Europe, at 0.188 in the U.S., was more than double the score for the same group in Great Britain (0.077), although this large difference could have been reduced after the migration flows that followed the 2004 European Union enlargement to Eastern Europe and hence not captured in these data. The Great Britain-U.S. difference is consistent with the notions that socio-spatial divisions in the U.S. tend to be larger than in Great Britain (Van Kempen and Murie 2009).

Multivariate Results

Table 3 contains multivariate results when using the information theory index (*H*). The first two models use the multigroup *H*. As described above, the focus of the regressions is on the role of nativity in explaining residential patterns among panethnic groups. According to model 1, multigroup *H* scores are, as expected, lower in Great Britain than in the U.S. and on the whole there is no significant difference in the scores of the native born and foreign born across the pooled metropolitan areas in the U.S. and Great Britain (descriptive Table 2 also showed little difference in multigroup *H* scores in either the U.S. or Great Britain by nativity). In model 2, when an interaction term between country and nativity and a basic population control are added, the Great Britain coefficient continues to be significant, and the foreign-born variable and Great Britain*foreign born coefficients are not significant, indicating little difference in multigroup scores by nativity or a differential effect of nativity across countries. The metropolitan size control indicates that larger metropolitan areas tend to have higher levels of segregation.

Results in Models 1 and 2 for Asians indicate that Asian segregation does not differ much by country (the Great Britain term is insignificant), nor does the effect of nativity significantly vary by country. This indicates little evidence of assimilation of Asians in either country with this measure (*H*). The interaction term between Great Britain and foreign born is significant only among blacks (Model 2 for blacks), indicating a differential effect of nativity in Great Britain vs. the U.S. The positive sign of the interaction term (combined with the small and insignificant coefficient for foreign born) suggests that spatial assimilation is evident among blacks in Great Britain. This finding confirms Peach (1996, 1999) observations of higher social and residential integration of blacks in Great Britain (especially black Caribbeans). Indeed, when we look at the descriptive results in Table 2, we see little difference in *H* across native- and foreign-born blacks in the U.S. (0.456 and 0.459, respectively), with larger differences in these respective groups in Great Britain (0.160 and 0.191). Finally, in all models, group size is positively associated with levels of segregation.

Table 4 contains results using the isolation index (*Pxx*). These models show different effects of nativity by ethnic group in the U.S. and Great Britain. Results in Model 2 suggest that Asian generational assimilation is evident in the U.S. but not Great Britain. The first order foreign born term is positive and significant (0.012), suggesting that foreign-born Asians show modestly higher levels of segregation than native-born Asians in the U.S. The G.B.*foreign-born coefficient (−0.026) indicates that foreign born Asians in Great Britain have lower levels of segregation than native-born Asians there (the net effect is 0.012–0.026 = −0.014), which is inconsistent with assimilation. Results in Model 2 for blacks indicate a

very different effect of nativity in the U.S. and Great Britain for this group. In Great Britain, there is little difference in the segregation of native- and foreign-born blacks.[10] In the U.S., foreign-born blacks are much less isolated than native-born blacks (−.0199), which is inconsistent with spatial assimilation and may in part denote very different migration streams in terms of historic national groups and socioeconomic status (i.e. recent black migrants vs. native-born black Americans).

Conclusions

The goal of this study is to compare levels of segregation of similarly defined ethnic and immigrant groups in the U.S. and Great Britain and examine the effect of nativity and country and world region of birth on these patterns. We use data from the 2000 and 2001 U.S. and British censuses, respectively, to compute information theory (*H*) and isolation (*Pxx*) indexes for a variety of groups. Our results, consistent with the sparse comparative literature available, indicate that levels of segregation are lower in Great Britain than the U.S. for most ethnic and immigrant groups. The pattern was strongest for blacks—both native and foreign born—and among the latter both from the Caribbean and Africa, who were much less segregated in Great Britain. The pattern differed mainly for one prominent group—Asians—where segregation tended to be higher in Great Britain than in the U.S. The findings are consistent with the notion that minority disadvantage is greatest among blacks in the U.S., but among some South Asian (particularly Muslim) groups in the U.K, although it is worth noting that Asians in Great Britain are still considerably less segregated than blacks in the U.S.

The role of nativity in cross-country segregation comparisons is somewhat mixed, depends on the measure of segregation being used, and is on the whole small in both countries. The results tend to show that blacks are residentially assimilating in Great Britain and not in the U.S. This is consistent with the literature that points to a large second generation of upwardly mobile black Caribbeans in Great Britain with high rates of intermarriage and residential integration, while blacks in the U.S. continue to display high (albeit declining over time) levels of segregation. At the same time, Asians are residentially integrating in the U.S. but not necessarily in Great Britain. These findings on mixed trajectories among different panethnic groups in both countries on the whole provide some support for segmented assimilation, which predicts divergent trends across groups.

Our analysis did not aim to identify the precise mechanisms explaining group differences in assimilation trajectories in the two countries. Based on the existing literature, we can surmise that the long history of discrimination against blacks and the deepness of the black-white divide in the United States contribute to continuing high levels of black segregation there—even with moderate declines in black-white segregation in recent decades (Massey and Denton 1993). In contrast, the color line between blacks and whites is not nearly as historically salient or entrenched in Great Britain, because blacks have traditionally come from the Caribbean with high levels of linguistic, cultural and inter-marriage integration,

[10]The total effect of nativity in Great Britain is calculated by adding the foreign born coefficient to the G.B.*foreign born interaction term: −0.199 + 0.204 = 0.005.

while relatively new arrivals from Africa are generally more educated and stay for shorter periods than the average migrant group (Peach 2006; 2009).

While Asians were historically discriminated against in the United States (Chinese immigration, for example, was halted altogether in 1882 for several decades), discrimination against Asians today is considered not nearly as virulent as that against blacks, and indeed Asians fare well on average in terms of educational attainment and earnings in the United States (Sakamoto, Wu, and Tzeng 2000; Sakamoto, Goyette, and Kim 2009). Meanwhile, some Asian groups in Great Britain face marginalization and discrimination (Nazroo 2003), with the highest levels of disadvantage experienced by more recently arrived – and generally poorer- Pakistani and Bangladeshi groups. However, segregation patterns of South Asian groups by ethnicity and nativity are further shaped by religious difference, in particular Muslim and Sikh Asian subgroups (Peach 2006).

Because of the differences in levels of segregation among the foreign-born by country of birth within the Asian panethnic group in the U.S. and especially Great Britain, we emphasize that the broad panethnic groups “Asians” obscures important variation in the experiences of specific groups. For example, foreign-born Hong Kong Chinese have very low levels of segregation in Great Britain, and Indians have moderate levels of segregation in both the U.S. and Great Britain. Pakistanis and Bangladeshis standout as having relatively high levels of segregation in both countries, and especially in Great Britain. Thus, it could very well be that particular ethno-national Asian groups are spatially integrating more than others in both countries. On the other hand, differences within Asian world regions of birth (i.e., Far East and South Asia) between the two countries are likely to be driven by various factors such as recency of the migration stream, socioeconomic status selection of the different migration flows, post-colonial and geopolitical events and preferences in migration legislation (e.g. British Commonwealth and U.S. Cold War refugee policy in the Far East and Pacific). Historical differences of a similar nature between the two countries also apply to migration streams from other world regions, primarily the Caribbean and Sub-Saharan Africa.

In both the U.K. and U.S., immigrants from countries and world regions with largely white populations (e.g. from continental Europe) tend to have relatively low levels of segregation from the native white reference group population. However, it is notable that the lower levels of segregation found among most groups in Great Britain when compared to the U.S. extend to many white foreign born groups as well, such as immigrants from Eastern and Southern Europe and specific countries like and Italy, though the differences tend to be more prominent when using *H* than *Pxx* (in part because the latter index is sensitive to the relative size of different groups while the former is not). One possible explanation as to why most ethnic and immigrant groups—including white immigrants—are more segregated in the U.S. than in Great Britain is that social and spatial divisions in general are larger in the U.S. than in European countries, including Great Britain (Van Kempen and Murie 2009). This is a function of the state playing a larger role in determining the quantity, quality, location, and allocation of the housing stock in Great Britain. Housing is treated more as a free-market commodity in the U.S., which—combined with greater inequalities in income and wealth—generates more unequal social and spatial outcomes there. Finally, differences in the historic

settlement patterns of cities and overall population dynamics have resulted in more compact built environment in British cities, and populations that are more prone to use public transport and less geographically mobile than U.S. residents, all of which very likely affect the differential patterns of residential segregation found in this study.

Potentially affecting the international comparisons presented in the paper are a few methodological issues. Differences in the number and sizes of small area units considered, in definitions and delineation of metropolitan areas, and the categorization of ethnic groups across countries (including the white majority reference group), are all bound to influence the results of segregation analysis, although we have taken great care in minimizing these effects by meticulously selecting comparable geographies and groups.

Our study suggests a number of avenues for future research. For one, future studies would benefit by including more ethnic and immigrant group characteristics in the analysis. For example, it would be useful to gauge the extent to which socioeconomic differences across groups explain levels of residential segregation in the U.S. and Great Britain. In addition, case studies of particular metropolitan areas could shed greater light on the spatial similarities and differences in the U.S. and Great Britain that are driving higher levels of segregation for most groups in the U.S. Finally, comparisons of segregation patterns across time would give a more dynamic view of the immigrant incorporation process and could reveal whether patterns in 2000/2001 have changed, particularly in light of changes in immigration patterns and ethnic relations in both the U.S. and Great Britain.

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Biographies

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Table 1

Descriptive Statistics for the United States and Great Britain, 2000–2001

	Number of U.S. Metro Areas	Number of G.B. Metro Areas	U.S. population	G.B. population
Panethnic Groups				
Native Non-Hispanic White/White British	318	179	142,779,553	49,347,979
Asian	261	113	9,720,235	2,804,907
Native-Born	181	82	2,938,434	1,320,813
Foreign-Born	241	90	6,719,237	1,447,004
Black	299	79	29,607,104	1,443,356
Native-Born	293	59	27,546,288	816,113
Foreign-Born	118	42	2,003,274	593,044
Country of Birth among the Foreign Born				
Bangladesh	13	16	72,431	133,022
France	31	15	96,174	61,525
Germany	117	74	538,207	204,814
Hong Kong	28	20	171,350	55,873
India	109	48	1,022,552	431,976
Italy	58	22	412,041	73,338
Jamaica	43	14	509,452	129,428
Pakistan	34	38	179,381	316,032
World Region of Birth among the Foreign Born				
Caribbean	96	26	2,858,535	232,567
Eastern Europe	136	37	1,787,861	154,609
Far East	228	70	5,512,511	349,830
Middle East & North Africa	101	35	1,097,686	247,914
North America	122	44	654,464	173,608
Northern & Western Europe	201	149	1,808,551	1,044,595
South Asia	120	77	1,304,909	1,006,186
Southern Europe	94	47	857,439	263,695
Sub-Saharan Africa	72	73	559,539	717,542
Total metropolitan population in census year	318	179	281,421,906	57,075,654

Note: Minimum threshold per MA = 1,000 people per group.

Table 2

Segregation from Native-Born Non-Hispanic Whites/White British, by Group, 2000–2001

	Theil's H			Isolation		
	U.S.	**G.B**	**Highest Country**	**U.S.**	**G.B.**	**Highest Country**
Panethnic Groups						
Multigroup H (whites, Asians, blacks, others)	.265	.115	U.S.			
Native born of the pan-ethnic groups	.287	.119	U.S.			
Foreign born of the pan-ethnic groups	.278	.117	U.S.			
Asian	.202	.233	G.B.	.319	.330	*N/S*
Native-Born	.172	.222	G.B.	.204	.241	*N/S*
Foreign-Born	.210	.213	*N/S*	.272	.243	*N/S*
Black	.455	.186	U.S.	.607	.233	U.S.
Native-Born	.456	.160	U.S.	.600	.147	U.S.
Foreign-Born	.459	.191	U.S.	.428	.158	U.S.
Country of Origin among the Foreign Born						
Bangladesh	.483	.362	U.S.	.211	.183	*N/S*
France	.176	.091	U.S.	.015	.060	*N/S*
Germany	.081	.026	U.S.	.015	.053	G.B.
Hong Kong	.260	.059	U.S.	.084	.074	*N/S*
India	.221	.197	U.S.	.091	.146	G.B.
Italy	.132	.079	U.S.	.038	.050	*N/S*
Jamaica	.493	.196	U.S.	.402	.064	U.S.
Pakistan	.294	.304	*N/S*	.074	.201	G.B.
World Region of Origin among the Foreign Born						
Caribbean	.398	.176	U.S.	.536	.079	U.S.
Eastern Europe	.188	.077	U.S.	.131	.043	U.S.
Far East	.216	.076	U.S.	.270	.075	U.S.
Middle East & North Africa	.192	.125	U.S.	.112	.090	*N/S*
North America	.078	.098	G.B.	.019	.115	G.B.
Northern & Western Europe	.055	.035	U.S.	.033	.095	G.B.
South Asia	.225	.238	*N/S*	.120	.231	G.B.

	Theil's H			Isolation		
	U.S.	**G.B**	**Highest Country**	**U.S.**	**G.B.**	**Highest Country**
Southern Europe	.142	.090	U.S.	.071	.067	*N/S*
Sub-Saharan Africa	.327	.118	U.S.	.157	.134	*N/S*

Notes: National weighted average across relevant metropolitan areas. Minimum threshold per MA = 1,000 people for all groups. U.S. whites are non-Hispanic whites. G.B. whites are White British. N/S= not significant.

Table 3

Generalized Linear Regressions with Levels of Theil's H by Ethnicity, 2000–2001

	Multi-Group H				Asians				Blacks			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.
Intercept	0.226 **	0.008	0.200 **	0.009	0.135 **	0.004	0.129 **	0.004	0.292 **	0.008	0.258 **	0.008
Country												
U.S. (omitted)												
G.B.	−0.128 **	0.010	−0.111 **	0.012	−0.010	0.011	−0.009	0.011	−0.195 **	0.010	−0.198 **	0.010
Nativity												
Native-born (omitted)												
Foreign-born	0.011	0.006	0.006	0.008	0.002	0.002	−0.001	0.003	−0.002	0.007	−0.009	0.010
G.B. * Foreign-born			−0.009	0.010			0.001	0.004			0.058 **	0.012
Group population (10,000s)							0.003 **	0.001			0.003 **	0.001
M etropolitan population (100,000s)			0.002 **	0.000			0.000	0.000			0.002 **	0.001
Log-Likelihood	392.98		419.90		743.63		776.28		354.12		434.31	
df	382		380		591		588		509		506	

** p<0.01

* p<0.05

Notes: The unit of analysis is the segregation score for an ethnicity and nativity group in a given metropolitan area. Includes metropolitan areas with at least 1,000 members of the groups in question. Reference groups in all dual-group measures are native-born non-Hispanic whites in the U.S. and native-born white British in Great Britain.

Table 4

Generalized Linear Regressions with Levels of Isolation by Ethnicity, 2000–2001

	Asians				Blacks			
	Model 1		Model 2		Model 1		Model 2	
	coef.	std. err.	coef.	std. err.	coef.	std. err.	coef.	std. err.
Intercept	0.061 **	0.006	0.055 **	0.009	0.337 **	0.012	0.298 **	0.012
Country								
U.S. (omitted)								
G.B.	0.066 *	0.011	0.080 **	0.028	−0.227 **	0.012	−0.277 **	0.012
Nativity								
Native-born (omitted)								
Foreign-born	0.015 **	0.003	0.012 *	0.005	−0.187 **	0.014	−0.199 **	0.015
G.B. * Foreign-born			−0.026 **	0.007			0.204 **	0.015
Group population (10,000s)			0.011 **	0.003			0.006 **	0.001
M etropolitan population (100,000s)			−0.002	0.001			0.000	0.001
Log-Likelihood	295.47		340.18		153.81		260.81	
df	591		588		509		506	

** p<0.01

* p<0.05

Notes: The unit of analysis is the segregation score for an ethnicity and nativity group in a given metropolitan area. Includes metropolitan areas with at least 1,000 members of the groups in question. Reference groups in all dual-group measures are native- born non-Hispanic whites in the U.S. and native-born white British in Great Britain.