Black Immigrant Residential Segregation: An Investigation of the Primacy of Race in Locational Attainment

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Introduction

Sociologists have long viewed residential segregation as a key aspect of assimilation (Charles 2003). Residential patterns and, more specifically, the kinds of locations to which racial minority and immigrant groups are able to gain access, reflect minority and immigrant incorporation into the larger society (Logan and Alba 1993). Despite laws prohibiting discrimination in the housing market, research consistently shows that racial and ethnic segregation still exists at high levels even after controlling for racial differences in socioeconomic characteristics (Alba, Logan et al. 2000; Darden and Kamel 2000; Charles 2003; Iceland and Wilkes 2006; Parisi, Lichter et al. 2011). Due to their continuous segregation in the United States, blacks experience higher levels of poverty than they would in less segregated areas (Ananat 2011), live in potentially adverse neighborhoods (Rosenbaum and Friedman 2001), and are disproportionately likely to receive lower quality public services (Cutler, Glaeser et al. 2008).

Although the consequences of living in highly segregated areas are most severe for low-income individuals, living in racially segregated neighborhoods also disadvantages blacks of higher socioeconomic status. Even as their income and educational attainment increase, blacks remain highly segregated from whites and live in neighborhoods with lower socioeconomic characteristics than their white peers (Alba, Logan et al. 2000). The persistence of black segregation even after controlling for individual characteristics has led researchers to conclude that residential proximity to whites is determined substantially by race (Alba and Logan 1993; Logan and Alba 1993; Darden and Kamel 2000; Freeman 2002).

Due both to their distinct ethnicity and high socioeconomic status relative to U.S.-born blacks, researchers have hypothesized that black immigrants would achieve higher levels of integration than U.S.-born blacks. However, research thus far finds that foreign-born blacks are even *more* segregated from whites than U.S.-born blacks (Iceland and Scopilliti 2008) and Asian and

Hispanic immigrants (Cutler, Glaeser et al. 2008) due to the combination of their race and nativity. Caribbean immigrants are more evenly distributed (Crowder 1999) than U.S.-born blacks, however, they cluster in enclaves in areas close to U.S.-born blacks and are just as highly segregated from whites as U.S.-born blacks (Crowder 1999; Freeman 2002). African immigrants in the Washington D.C. area are disproportionately found in areas where blacks are in the majority (Friedman, Singer et al. 2005).

These studies of foreign-born blacks' residential patterns provided important insights into black immigrant segregation, however, with the exception of (Freeman 2002), the bases for their conclusions stem from aggregate level analyses. Like most segregation research, these studies are based on theories specified at the individual level but rely on aggregate data (Alba and Logan 1992) and primarily measure segregation using the dissimilarity or exposure indices. However, this work may not adequately capture the individual processes determining segregation and therefore risk ecological interference. The locational attainment model, by contrast, avoids some of the drawbacks of traditional segregation measures by using individual level data to predict racial segregation levels (Charles 2003).

The locational attainment model can also be used to measure socioeconomic segregation, an aspect of residential attainment that is much less researched than racial segregation. Previous black immigrant segregation research has focused exclusively on racial segregation, most likely due to its relationship to socioeconomic inequality among U.S.-born blacks. Persistent racial neighborhood disparities and segregation indicate that even when blacks have high levels of socioeconomic status they are unable to move into neighborhoods similar to those of whites with the same socioeconomic status. Middle class blacks do not live in neighborhoods equal to those of middle class whites in terms of neighborhood affluence (Adelman 2005). They also live with more poverty, crime, and unemployment than similar whites and even much poorer whites (Patillo 2005). These patterns accurately describe the relationship between racial and economic segregation among U.S.-born blacks. However, because little research investigates the kinds of

neighborhoods in which black immigrants live it is unclear if it also describes the residential patterns of foreign-born blacks.

Black immigrants are highly segregated from whites, but they are also segregated from U.S.-born blacks, forming ethnic enclaves (Freeman 2002). Foreign-born blacks have higher average socioeconomic status relative to the U.S.-born, therefore, even if they are *racially* segregated, if they live in enclaves they may still be living in neighborhoods with higher average socioeconomic characteristics than U.S.-born blacks. Living in areas with higher average socioeconomic characteristics will provide foreign-born blacks with access to better public services and public school systems than U.S.-born blacks.

Given the possible importance of ethnic enclaves in determining the quality of black immigrant neighborhoods, it is extremely important to measure segregation in multiple types of immigrant settlement areas. Yet previous research has focused only on the national level or one or two major immigrant settlement areas. The geographic focus of previous work allowed researchers to compare the racial segregation of black immigrants at the national level to trends of U.S.-born blacks as well as other foreign-born groups in major immigrant settlement areas. However this research does not address the new immigrant destinations that have emerged in recent years. Changes in immigration patterns have led to the formation of multiethnic metropolitan areas in parts of the country that are not traditional locations for blacks and this dynamic reduces the residential segregation of blacks (Frey and Farley 1996). These new immigrant settlement areas may also benefit immigrants in that the lack of immigration history allows immigrants more freedom to define their social position in these communities (Waters and Jiménez 2005). Segregation patterns of black immigrants may therefore vary by settlement area in ways that have not been captured in previous work.

This paper investigates the segregation level of black immigrants by using the locational attainment model to measure the racial and socioeconomic segregation of black immigrants in both traditional and non-traditional immigrant settlement areas. In doing so, this paper broadens the foreign-born black segregation literature in a number of ways. By using the locational

attainment model, I determine how individual level characteristics of black immigrants affect their spatial locations. I also assess the extent to which black immigrant residential segregation varies by type of immigrant settlement area and whether they attain neighborhoods that are commensurate with their socioeconomic status. This analysis will shed new light not only on the theories related to residential segregation, but also on our understanding of the socioeconomic consequences of segregation in the United States.

Background

A large sociological literature attempts to explain the persistence of racial and nativity segregation over time, with most research focusing on the spatial assimilation and place stratification theories. Much less discussed is the importance of metropolitan area characteristics on the residential patterns of minorities and immigrants. In this section, I describe each theory and the state of empirical evidence on the theory.

Spatial Assimilation

Spatial assimilation proposes that residential mobility stems from acculturation and social mobility (Alba and Logan 1991) and that an individual attains spatial outcomes based on socioeconomic characteristics (Alba and Logan 1992). This theory predicts that as members of minority groups acculturate and establish themselves in the labor market, they convert their socioeconomic attainment into residential gain by moving to neighborhoods with greater advantages and amenities (Alba 2003). In essence, the spatial assimilation model assumes that group differences in socioeconomic characteristics explain residential segregation.

Research testing this hypothesis finds some evidence in support of spatial assimilation in that socioeconomic status and immigration characteristics play a significant role in the residential outcomes of minority groups. Low SES blacks, Hispanics, and Asians are all more segregated from non-Hispanic whites than their counterparts of higher SES (Iceland and Wilkes 2006). Among the foreign-born, the highly educated are less geographically concentrated and more likely to live outside of the top immigrant settlement areas (Bartel 1989) and English fluency increases proximity to whites (Freeman 2000).

For Asians and Hispanics, regardless of nativity, improvements in socioeconomic status are correlated with substantial declines in segregation from whites (Charles 2003). However, controlling for socioeconomic differences between racial and ethnic groups alleviates little of the high overall levels of segregation among blacks (Logan, Alba et al. 1996; Darden and Kamel 2000; Iceland and Wilkes 2006). As blacks' socioeconomic status increases, blacks are able to gain greater proximity to whites, but the starting point is so far behind that of Asians and Latinos that they continue to live in segregated neighborhoods (Freeman 2000). In addition, increases in socioeconomic status have a much smaller effect on blacks' neighborhoods than whites (Logan and Alba 1993) and socioeconomic status has little influence on the high levels of black residential segregation (Darden and Kamel 2000).

Spatial assimilation theory's inability to explain the segregation patterns of blacks also extends to foreign-born blacks. In the case of immigrants, the process of spatial assimilation is affected by increased time in the United States and improved English ability (Charles 2006); immigrants who have lived in the United States longer are expected to live in less segregated neighborhoods (Cutler, Glaeser et al. 2008). However citizenship, a key sign of assimilation because it indicates a commitment to live in the United States permanently, makes virtually no difference in the levels of segregation experienced by foreign-born blacks (Freeman 2002). Also counter to the predictions of spatial assimilation theory, English ability does not decrease segregation levels of blacks (Logan and Alba 1993) and more time in the United States corresponds with *more* black neighbors rather than less (Freeman 2002).

Place Stratification

The failure of socioeconomic characteristics to explain persistent racial segregation in the United States led to the development of the place stratification theory. Place stratification theory argues that minorities are sorted according to their relative standing in society, limiting the ability of even the socially mobile members of that group to live in the same communities as comparable whites (Alba and Logan 1993). The strength of the ranking of racial groups in the Untied States leaves blacks at the bottom of the hierarchy and, according to this theory, explains their persistently high

levels of segregation. Although place stratification theory acknowledges that socioeconomic characteristics significantly influence minority access to less segregated neighborhoods (Crowder, South et al. 2006), it emphasizes the importance of persistent prejudice and discrimination in constraining the residential mobility of minorities (Charles 2003).

Numerous studies investigating explanations for racial segregation have found evidence for place stratification theory. In 1993, Alba and Logan found that residential proximity to whites is determined substantially by race with other individual characteristics having little effect (Alba and Logan 1993). This pattern has not changed over time. SES plays a substantially smaller role in explaining black-white segregation than Asian-white and Hispanic-white segregation, and black-white segregation has not declined relative to Asian-white and Hispanic-white segregation holding other factors constant (Iceland and Wilkes 2006). By and large, socioeconomic status has little influence on the high level of black residential segregation and isolation in the city or suburbs (Darden and Kamel 2000).

There is also some evidence that place stratification theory describes the residential patterns of foreign-born blacks. In the Washington D.C. metropolitan area, African immigrants are disproportionately found in areas where blacks are the majority and are more likely than other immigrant newcomers to settle in neighborhoods where the percent black is much higher than the mean percent black in the area (Friedman, Singer et al. 2005). The results for U.S. and foreign-born blacks call attention to processes of racial stratification because higher status suburban blacks face a double disadvantage. These blacks tend to live in racially segregated communities (which have fewer socioeconomic resources), and even when they live in suburbs, these suburbs have lower socioeconomic status neighbors than the communities of comparable whites (Logan and Alba 1993).

Location

While spatial assimilation and place stratification theories are widely discussed as explanations for segregation patterns in the United States, the effect of immigrant settlement area is much less studied. In part, the lack of research is a consequence of the small proportion of immigrants who

settle outside of traditional immigrant settlement areas. However in recent years, immigrants have begun to move away from these metropolitan areas and the growth of the immigrant population in new immigrant settlement areas represents a significant shift in the settlement patterns of immigrants (Waters and Jiménez 2005). There are now signs that immigrants are no longer as likely to choose destinations based on family reunification and ethnic clustering and more likely to base their decision on factors such as jobs and standard of living (Baird, Adelman et al. 2008).

Integration in large immigrant settlement areas is greater today than even two decades ago with education and income predicting much of the segregation patterns observed (Clark and Blue 2004) providing support for the spatial assimilation model. However spatial assimilation is less successful at characterizing the residential choices of recent immigrants in newer immigrant settlement areas (Price, Cheung et al. 2005). One reason spatial assimilation may not describe the segregation patterns outside of major immigrant settlement areas is that the socioeconomic characteristics of these areas and the characteristics of the immigrant groups differ. Immigrants to new destinations are generally heterogeneous in terms of individual traits and characteristics, but all of the metropolitan areas tend to be places with well developed and growing low skill service sectors (Leach and Bean 2008). Most research in these new immigrant settlement areas focuses on Hispanic immigrants, many of whom moved to these areas due to the abundance of low skilled employment. However, among foreign-born blacks, Africans are more likely than Caribbean immigrants to live in these settlement areas. Africans are one of the most highly educated ethnic groups in the United States and therefore are unlikely to have moved to these areas in search of unskilled jobs. Given the large differences in human capital between the majority of immigrants and African-born blacks in new immigrant gateways, foreign-born blacks' residential patterns may vary substantially from the segregation levels observed among Hispanics in these new immigrant settlement areas.

Data and Methods

To determine black immigrant segregation, I use individual (Public Use Micro Sample [PUMS]) and aggregate (American FactFinder) data from the 2006-2010 pooled American Community Survey. I include individual level measures for men and women who are 18 and over who live in the top five settlement areas for Africans and the top five settlement areas for Caribbean immigrants. Because there is some overlap between African and Caribbean settlement areas, I analyze segregation in a total of 8 metropolitan areas: Atlanta, Ft. Lauderdale, Houston, Miami, Minneapolis, New York, Washington D.C., and West Palm Beach.

To determine black immigrant segregation, I use the locational attainment model (Alba and Logan 1992). This method uses data from aggregate and individual level census data to build a correlation matrix. I calculate the correlation between the dependent and independent variables from tract level data and the correlations among independent variables are estimated from the individual level data. I then combine the correlations from the aggregate and individual data into a common matrix to estimate the ordinary least squares regression models for each metropolitan area. The correlation between dependent and independent variables and among independent variables can be combined into one matrix because individual (PUMS) data is a sample from which the tract (American FactFinder) data are constructed and therefore the aggregate and individual level data sets are consistent (Alba, Logan et al. 2000). It is then possible to estimate the regression models from this correlation matrix because all relevant means, standard deviations, and sample size are known (Hanushek and Jackson 1977). As in Alba and Logan (1992), I take the means and standard deviations from the aggregate level data because it is based on the larger sample and therefore provides more efficient estimates. However, the N used to calculate measures of statistical significance (total population in the metropolitan area) is drawn from the individual level data. This is the more conservative approach, but, more importantly, it is also most appropriate for this analysis because the interest lies in the analysis of individual rather than aggregate processes.

The resulting regression model uses the following equation:

$$Y_{ij} = \alpha + \beta_1 X_{1ij} + \beta_2 X_{2ij} \ldots + \varepsilon_{ij}$$

The subscript *j* represents the census tracts within each metropolitan area and the subscript *i* represents the individuals within each census tract. In this analysis, there are three dependent variables: the percent in the census tract that is non-Hispanic U.S.-born white[1], percent of the census tract that has attained at least four years of college, and the percent of the census tract whose income is at least three times the poverty line. All three dependent variables, specified as Y_{ij}, are aggregate rather than individual level characteristics, therefore they are assumed to be constant across *i* for any value of *j*.

Unlike most other locational analyses, I do not estimate separate models for the major racial/ethnic groups under consideration. The Hispanic category includes individuals of all races in the aggregate data, therefore if race/ethnicity were included as a categorical variable there would be overlap between racial/ethnic categories. For this reason, previous research estimates models separately for each major racial/ethnic group (white, black, Asian, Hispanic). However, due to of the small size of the foreign-born black population, aggregate level data on socioeconomic characteristics is unavailable for this group, making it impossible to run a separate black immigrant regression model. As a result, in this analysis I have excluded the Hispanic category because there are Hispanics present in both the black and Asian populations. Consequently, the race/immigrant variable includes U.S.-born non-Hispanic whites, U.S.-born blacks, foreign-born blacks, U.S.-born Asians, and foreign-born Asians.

In addition to race/nativity, I control for individual level characteristics that play a role in the segregation levels of minority groups. The spatial assimilation model predicts that the segregation of minority groups is largely attributable to differences in socioeconomic characteristics. Based on this theory, segregation decreases as education and income increase and as immigrants spend more time in the United States and increase their English ability.

[1] I also conducted analyses using all U.S.-born whites (Hispanic and non-Hispanic) and there is very little difference between those results and those presented.

Accordingly, I include educational attainment, income to poverty ratio, English ability, and naturalized citizenship. I use the income to poverty ratio rather than income because individual income is not available for those 18 and over at the aggregate level[2]. I also include age and marital status. The coefficients in this equation can be interpreted as a form of standardized exposure index for people with particular background characteristics (Logan, Alba et al. 1996).

Results

Descriptive Statistics

Tables one and two present the descriptive statistics by region for each metropolitan area and tables three and four for individuals *in* each metropolitan area. While U.S.-born non-Hispanic whites make up the majority of the population in the nation as a whole in this survey period, U.S.-born non-Hispanic whites are the majority in only three of the eight metropolitan areas included in this analysis (Table one). In fact, less than 1/3 of the population in two metropolitan areas (Miami, and New York) is non-Hispanic white. U.S.-born blacks, by contrast, comprise less than 10% of the populations in two of the eight metropolitan areas under investigation. It is important to note these vast differences in the racial makeup of each metro area because areas with more blacks are more likely to have poor populations that are segregated across places (Lichter, Parisi et al. 2012). In addition, the greater the percentage of blacks in an area, the more likely it is that whites will not know about that neighborhood (Krysan and Bader 2009), making whites less likely to live in these neighborhoods.

[2] I use the income to poverty ratio rather than household income because I am measuring segregation at the individual rather than household level. Measuring segregation at the household level assumes a racially homogenous household, which is inaccurate given that 10% of married couples had partners of different race or ethnic origin Lofquist, D., T. Lugaila, et al. (2012). Households and Families: 2010. Washington D.C., U.S. Census Bureau. This proportion of racially heterogeneous couples is not consistent across racial/ethnic groups.

Table 1. Race/Nativity Characteristics of Metropolitan Areas by Region, 2006-2010 pooled aggregate ACS (Adults age 18+)

	African to Caribbean ratio (2006-2010 pooled ACS, PUMS)	% U.S. -born non-Hispanic white	% U.S. -born black	% Foreign -born black	% U.S. -born Asian	% Foreign-born Asian
East						
New York	0.16	30.8	13.6	9.0	1.7	10.2
Washington D.C.	2.74	48.7	20.8	4.1	1.3	7.8
Midwest						
Minneapolis	21.98	81.0	4.0	2.1	0.9	4.1
West						
Houston	2.04	39.9	16.2	1.4	0.9	6.1
South						
Atlanta	0.90	51.6	27.8	3.2	0.6	4.3
Ft. Lauderdale	0.02	42.1	11.9	11.7	0.4	2.8
Miami	0.02	12.6	11.0	6.8	0.2	1.5
West Palm Beach	0.01	59.8	8.3	6.3	0.3	2.0

As expected, the foreign-born black proportion of each metropolitan area is quite small, making up less than 5% of the population in half of the top black immigrant settlement areas. In New York and Ft. Lauderdale, however, they make up a substantial portion of the population (9% and 11.7% respectively), numbers that are very close to that of the U.S.-born black population in those metropolitan areas. The percent foreign-born black varies by African to Caribbean ratio in the metropolitan area; the percent of the population that is foreign-born black is generally higher in areas where Caribbean immigrants make up the majority of the black immigrant population.

Among the Asian population, there are stark differences between U.S. and foreign-born populations. While the foreign-born population is substantially larger than the foreign-born black population in nearly all metropolitan areas, the U.S.-born Asian population is much smaller indicating that U.S.-born Asians are settling in different metropolitan areas than the foreign-born or may be more likely than foreign-born Asians to be settled outside of metropolitan areas. It could also reflect immigrant to native ratios overall

Table 2. Socioeconomic Characteristics of Metropolitan Areas by Region, 2006-2010 pooled aggregate ACS (Adults age 18+)

	% Speaks English at least very well	% Married	% College+	% Income to poverty ratio>=3
East				
New York	75.8	47.5	32.4	51.9
Washington D.C.	88.8	54.8	42.9	71.2
Midwest				
Minneapolis	94.4	56.9	34.6	64.7
West				
Houston	79.7	57.5	25.9	51.7
South				
Atlanta	91.0	55.6	32.0	56.9
Ft. Lauderdale	83.2	51.2	25.0	53.5
Miami	59.3	50.2	23.9	41.5
West Palm Beach	86.0	54.0	29.4	55.5

The eight metropolitan areas are very similar in terms of socioeconomic characteristics (Table two). Although there is some variation, the vast majority of adults in all metro areas speak English at least very well; Miami is the only metropolitan area where less than 3/4 of the population speaks English at least very well. Educational attainment varies by metropolitan area, with the highest proportion (43%) in Washington D.C. and the lowest in Ft. Lauderdale, Houston, and Miami where only about ¼ have a college degree. Given the association between education and income, it is not surprising that the proportion of the population with an income to poverty ratio of three or more is also lowest in these metropolitan areas.

Although it is possible to determine the educational attainment and income to poverty ratio of most race/nativity groups using the aggregate data, most likely due to the small size of the population, it is impossible to do so for black immigrants. Because of this, I provide socioeconomic characteristics by race/nativity group using individual level data (Tables three and four). Overall, the educational attainment and income to poverty ratio of each race/nativity group are similar across metropolitan areas. However, again, there are differences in foreign-born black socioeconomic characteristics by metropolitan area. In areas where the black immigrant population is predominantly Caribbean (Atlanta, Ft. Lauderdale, Miami, New York, and West

Palm Beach), percent with a college degree is closer to that of U.S.-born blacks (15-19%) than U.S.-born whites (33-50%).

Despite the differences in educational attainment among black immigrant settlement areas, there is very little difference in terms of the income to poverty ratio. This finding mirrors the results of previous research showing that, while Caribbean-born blacks are not as highly educated as the African-born, they earn higher wages (Butcher 1994; Darity Jr., Guilkey et al. 1996; Corra and Kimuna 2009). The percent of the foreign-born black population with an income to poverty ratio of 3 or more mirrors that of U.S.-born blacks. Both foreign and U.S.-born Asians, however, have income to poverty ratios that are very similar to that of whites.

Table 3. Percent Completed at least College by Race/Nativity, 2006-2010 pooled individual level ACS (Adults age 18+)

	U.S.-born non-Hispanic white	**U.S.-born black**	**Foreign-born black**	**U.S.-born Asian**	**Foreign-born Asian**
East					
New York	50.63	18.99	20.66	55.92	38.33
Washington D.C.	56.72	26.52	36.02	59.71	59.09
Midwest					
Minneapolis	35.81	15.40	24.12	24.60	40.76
West					
Houston	38.73	18.60	39.36	44.44	51.44
South					
Atlanta	39.48	24.24	32.87	44.88	50.96
Ft. Lauderdale	33.53	18.51	19.05	49.04	44.94
Miami	44.50	14.20	15.66	42.31	47.06
West Palm Beach	37.04	15.63	14.88	31.30	51.18

Table 4. Percent with an Income to Poverty Ratio of Three or More, 2006-2010 pooled individual level ACS (Adults age 18+)

	U.S.-born non-Hispanic white	U.S.-born black	Foreign-born black	U.S.-born Asian	Foreign-born Asian
East					
New York	73.45	45.57	51.94	66.49	49.41
Washington D.C.	85.55	66.23	59.85	81.76	74.65
Midwest					
Minneapolis	73.16	36.33	32.04	49.53	57.04
West					
Houston	74.20	44.25	49.09	67.95	61.09
South					
Atlanta	71.65	48.63	46.75	65.32	57.55
Ft. Lauderdale	66.89	42.73	39.88	64.75	57.24
Miami	70.69	37.94	55.78	61.71	55.78
West Palm Beach	68.46	36.31	34.25	64.61	61.43

Locational Attainment Analyses

Tables five through seven present the locational attainment model results for percent U.S.-born non-Hispanic white, percent with a college degree or higher, and percent with an income to poverty ratio of three or more respectively[3]. The coefficients presented should be interpreted as a form of standardized exposure index (Logan, Alba et al. 1996): the probability that members of the group have residential contact with the group in the dependent variable (Alba and Logan 1993). In Table five, I find that foreign-born blacks' segregation patterns vary by region. On the east coast and in the south, black immigrants' exposure to whites is very similar to that of U.S.-born blacks with the exception of the New York and Miami metropolitan areas; on average all blacks are 30% less likely than whites to be exposed to other whites. However, in the Midwest, black immigrants' segregation patterns mirrors that of U.S.-born Asians (-16). In most southern metropolitan areas, black immigrants are nearly as highly segregated from whites as U.S.-born blacks. Houston and Miami are outliers in that black immigrants are at least as likely as whites to be exposed to other whites in their census tract in all four metropolitan areas.

[3] The full models of all locational attainment analyses are presented in the Appendix.

Table 5. Locational Attainment Model Predicting Percent U.S.-born non-Hispanic white in Census Tract (ref. U.S.-born non-Hispanic white)

	U.S.-born black	Foreign-born black	U.S.-born Asian	Foreign-born Asian	R^2	*N*
			East			
New York	-26.15***	-8.75***	-5.58***	-2.23***	*0.33*	*299,276*
Washington D.C.	-32.78***	-28.36***	-7.53***	-9.43***	*0.30*	*197,564*
			Midwest			
Minneapolis	-21.76***	-15.68***	-13.75***	-8.55***	*0.22*	*81,622*
			West			
Houston	-17.84***	0.23	-5.93	28.73	*0.35*	*159,018*
			South			
Atlanta	-33.63***	-27.42***	-6.31***	-6.49***	*0.35*	*168,817*
Ft. Lauderdale	-25.93***	-28.54***	-7.21***	-0.002***	*0.27*	*64,747*
Miami	-3.21***	12.59***	4.22***	16.15***	*0.17*	*82,681*
West Palm Beach	-25.96***	-12.87***	0.48	-0.33	*0.34*	*55,861*

Regression models run separately for each metropolitan area.
In addition to race/nativity, all models control for educational attainment, income to poverty ratio, marital status, English ability, age category, and citizenship

Table six presents exposure to individuals who have completed at least four years of college in each census tract. What is immediately clear is that U.S.-born blacks are significantly less likely than whites to be exposed to those with at least a college education in all metropolitan areas even after controlling for individual-level socioeconomic characteristics and they are the only race/nativity group for which this is true. Unlike the relative consistency of U.S.-born blacks' coefficients, black immigrants' exposure to those with at least a college degree varies dramatically by metropolitan area. In Ft. Lauderdale, black immigrants are 12% less likely than whites to be exposed to college graduates, but are 20% *more* likely in Houston.

Black immigrants' exposure to those with at least a college degree seems to vary almost exclusively by the African to Caribbean ratio among foreign-born blacks in the metropolitan area. In areas where the foreign-born population is predominantly African-born (Houston, Minneapolis, and Washington D.C.), black immigrants are either significantly more likely to live in a census tract where they are exposed to the college educated than whites (Houston) or only 2% less likely after controlling for individual level characteristics. The segregation levels in areas with a predominantly African foreign-born population are similar to, but the coefficients are still lower than, that of foreign-born Asians.

Table 6. Locational Attainment Model Predicting Percent Completed at least College in Census Tract (ref. U.S.-born non-Hispanic white)

	U.S.-born black	Foreign-born black	U.S.-born Asian	Foreign-born Asian	R^2	*N*
			East			
New York	-8.04***	-1.32***	4.21***	3.21***	*0.30*	*299,276*
Washington D.C.	-10.09***	-2.23***	7.22***	8.26***	*0.26*	*197,564*
			Midwest			
Minneapolis	-3.47***	-1.77***	-3.03***	0.98*	*0.16*	*81,622*
			West			
Houston	-0.83***	20.02***	152.16***	43.25***	*0.43*	*159,018*
			South			
Atlanta	-2.33***	-0.18	2.87***	5.75***	*0.22*	*168,817*
Ft. Lauderdale	-9.01***	-11.78***	0.17	-5.57***	*0.26*	*64,747*
Miami	-9.66***	-7.36***	0.47	-0.51	*0.26*	*82,681*
West Palm Beach	-9.47***	-4.47***	3.97***	2.69***	*0.27*	*55,861*

Regression models run separately for each metropolitan area.

In addition to race/nativity, all models control for educational attainment, income to poverty ratio, marital status, English ability, age category, and citizenship

Exposure to individuals with an income to poverty ratio of three or more (Table 5) follows very similar patterns as the results in Table 4. U.S.-born blacks are significantly less likely than whites to live in census tracts where they would be exposed to individuals of higher income in all metropolitan areas except Los Angeles. Here again, foreign-born blacks living in areas where the black immigrant population is predominantly African are highly significantly more likely than whites to be exposed to high income individuals in their census tract. Foreign-born blacks' coefficients in these areas are closer to that of foreign-born Asians than that of U.S.-born blacks.

Table 7. Locational Attainment Model Predicting Percent with an Income to Poverty Ratio of Three or More in Census Tract (ref. U.S.-born non-Hispanic white)

	U.S.-born black	Foreign-born black	U.S.-born Asian	Foreign-born Asian	R^2	*N*
			East			
New York	-5.12***	1.58***	3.74***	1.58***	*0.34*	*299,276*
Washington D.C.	-4.26***	-1.74***	2.92***	6.59***	*0.27*	*197,564*
			Midwest			
Minneapolis	-11.0***	-9.69***	-3.88***	-1.75***	*0.25*	*81,622*
			West			
Houston	-3.11***	17.26***	130.7***	44.19***	*0.50*	*159,018*
			South			
Atlanta	-9.06***	-3.43***	0.26	10.13***	*0.29*	*168,817*
Ft. Lauderdale	-12.18***	-14.79***	1.09	-0.001***	*0.28*	*64,747*
Miami	-7.88***	-6.07***	1.05	-0.37	*0.29*	*82,681*
West Palm Beach	-12.74***	-3.02***	4.72**	5.39***	*0.30*	*55,861*

Regression models run separately for each metropolitan area.

In addition to race/nativity, all models control for educational attainment, income to poverty ratio, marital status, English ability, age category, and citizenship

Conclusions

Recent research has lamented that, unlike Asian and Hispanic immigrant groups, any group racially defined as black continue to face barriers to accessing neighborhoods comparable to those of whites (Charles 2003). However, particularly in the case of black immigrants, research thus far has focused on racial rather than socioeconomic segregation. This focus indicates an assumption that racial segregation means the same thing for U.S. and foreign-born blacks and that, by and large, racial stratification will explain black immigrant neighborhood characteristics. However the results of this analysis finds that black immigrant residential outcomes do not directly follow that of U.S.-born blacks, nor are they consistent with previous black immigrant racial segregation findings.

In terms of racial segregation, after controlling for individual level characteristics I find that foreign-born blacks are *less* segregated from whites than U.S.-born blacks, a departure from the findings of previous work. While U.S.-born blacks are highly segregated from U.S.-born non-Hispanic whites in all metropolitan areas, the same is not true of foreign-born blacks. However, there is variation in the level of black immigrant exposure to whites. In Miami and Houston, black immigrants are actually just as likely or significantly more likely to be exposed to whites than other

whites after controlling for educational attainment, income to poverty ratio, English ability, naturalized citizenship, age group, and marital status. These findings indicate that previous work finding high levels of foreign-born black racial segregation may actually be due to group level differences in individual level socioeconomic characteristics.

Metropolitan areas in which foreign-born blacks have positive coefficients are areas where the foreign-born black population is predominantly African. Although I control for education, differences in racial segregation by African to Caribbean ratio may be attributable to some aspects of education that I do not capture. For example, because Africans are, on average, highly educated, they may interact with lending and real estate agents differently than those with lower levels of education. In addition, they may have a different type of social network than other groups because of their high levels of education, which may allow them to move into neighborhoods they may otherwise have been unable to access.

The above results describe the racial segregation patterns of black immigrants in all metropolitan areas with the exception of Miami. Miami may be an outlier because of the small size of the U.S.-born non-Hispanic white population in the metropolitan area. Analyses have shown that indices are sensitive to the scale or mean population size of small areas such as census tracts (Simpson 2007). Exposure measures are asymmetrical since the probability of a member of one group interacting with the member of another group is a function of the relative size of the two groups as well as their residential distributions (Crowder 1999). In Miami there is less differences in the relative size of whites and black immigrants compared to other metropolitan areas that may, at least in part, explain the lower levels of minority segregation from U.S.-born non-Hispanic whites.

Overall, the results of the racial segregation analysis do not provide adequate evidence for the spatial assimilation model. After controlling for socioeconomic characteristics, black immigrants are still at least 15% more segregated from whites than whites in half of the metropolitan areas. This is in contrast to the findings of foreign-born Asians who are much better able to translate their socioeconomic characteristics into more racially integrated neighborhoods.

Although spatial assimilation is an insufficient explanation for foreign-born blacks' segregation levels, racial stratification does not adequately describe black immigrant segregation patterns either. If racial stratification truly drove the results of this analysis, foreign-born blacks' results would largely mirror that of U.S.-born blacks. However, in some metropolitan areas, predominantly in the west, foreign-born blacks are significantly more likely to be exposed to U.S.-born non-Hispanic whites than even U.S.-born non-Hispanic whites after controlling for socioeconomic characteristics.

The results of this analysis indicate that the primary explanation for black immigrant racial segregation patterns seems to be location. Although there is some link between region and racial segregation patterns, the more important aspect of location is that in areas where the foreign-born black population is predominantly African-born, black immigrants experience less racial segregation. This may either be due to characteristics of the area itself or due to characteristics of the immigrants who settled there. Because these areas do not have a long history of immigration or segregation, there may be less resistance to integration. Alternatively, Africans' high levels of education and English ability may provide Africans with a social network that provides them access to more racially integrated and/or higher quality neighborhoods.

Unlike racial segregation, socioeconomic segregation has received little attention in the black immigrant literature. However, integration means more than the racial composition of neighborhoods. An important aspect of integration is the ability of minority groups to gain access to high quality neighborhoods. Previous research has focused on racial segregation because of its association with a neighborhood's socioeconomic characteristics and I do find a relationship between the racial and socioeconomic characteristics of black neighborhoods. Like the U.S.-born, the racial segregation of foreign-born blacks seems to be related to their socioeconomic segregation. In the metropolitan areas in which foreign-born blacks are less racially segregated, foreign-born blacks they are also less likely to be segregated from those with at least a college degree or with an income to poverty ratio of three or more.

Black immigrants experience less socioeconomic segregation than U.S.-born blacks, but do not consistently reach parity with whites or the high levels of exposure to high SES neighbors as foreign-born Asians. Although the results provide some evidence for the assumption of racial segregation predicting socioeconomic segregation, it is not the full story. The level of racial segregation does not directly relate to socioeconomic segregation patterns. All blacks experience less socioeconomic segregation than racial segregation in all metropolitan areas. In addition, black immigrants' coefficients are positive in more metropolitan areas in the socioeconomic analyses than the racial analyses and when black immigrants' coefficients are positive, they are much larger in the socioeconomic analysis than in the racial segregation analysis. Given these findings, there is not adequate evidence for either the spatial assimilation or place stratification models in determining socioeconomic segregation. Just as in the racial segregation analysis, location seems to be the most important factor in the socioeconomic characteristics of foreign-born blacks' neighborhoods

This analysis shows that African and Caribbean immigrants do not in fact live in more segregated neighborhoods than U.S.-born blacks and that African and Caribbean immigrants' neighborhoods also have very different racial and socioeconomic characteristics. It also provides further evidence that we cannot simply accept an assimilation model, because each new minority group is distinct (Logan, Alba et al. 1996) and theories should be expanded to reflect the variation in experiences. One way in which this can be done is by incorporating the importance of location on residential patterns. This analysis shows that location plays an important role in the segregation of foreign-born blacks. While some research has explored the importance of location in examining the residential patterns of immigrants in new immigrant settlement areas, this research has focused on low skilled Hispanic immigrants. Future research should expand this work to include high skilled groups to determine whether the differences between the results presented here and previous work on Hispanics is due to differences in skill level or differences in immigrant reception in these new immigrant gateways.

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Appendix - Full Locational Attainment Models

	Atlanta		
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-33.63***	-2.33***	-9.06***
Foreign-born black	-27.42***	-0.18	-3.43***
U.S.-born Asian	-6.31***	2.87***	0.26
Foreign-born Asian	-6.49***	5.75***	10.13***
Educational Attainment (ref. 4+ years college)			
Some College	-0.29	-3.61***	-2.52***
High School/GED Diploma	-1.09***	-5.57***	-5.08***
Less than High School	-3.84***	-6.68***	-9.32***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	0.25	1.02***	1.13***
1-2	0.85***	0.96***	2.85***
3-4	4.98***	2.66***	11.0***
5+	6.77***	5.40***	15.43***
Marital Status (ref. Married)			
Single	-6.53***	0.97***	-4.75***
Divorced	-2.32***	0.56***	-1.23***
Widowed	-0.70*	1.16***	0.22
Speaks English at least very well	14.40***	4.04***	13.89***
Age (ref. 25-64)			
18-25	2.43***	-0.47***	-0.17
65+	1.54***	2.13***	3.35***
Naturalized Citizen	5.10***	0.35**	3.38***

Ft. Lauderdale			
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-25.93***	-9.01***	-12.18***
Foreign-born black	-28.54***	-11.78***	-14.79***
U.S.-born Asian	7.21***	0.17	1.09***
Foreign-born Asian	-0.002***	-5.57***	-0.001***
Educational Attainment (ref. 4+ years college)			
Some College	-1.94***	-3.20***	-1.83***
High School/GED Diploma	-3.49***	-6.01***	-5.19***
Less than High School	-4.81***	-7.22***	-7.51***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	1.27***	0.47*	-0.45
1-2	1.07***	0.66***	0.60**
3-4	2.75***	3.80***	7.54***
5+	5.84***	7.87***	12.84***
Marital Status (ref. Married)			
Single	0.96***	-1.31***	-3.54***
Divorced	1.19***	-0.96***	-2.03***
Widowed	1.62***	0.06	-0.26
Speaks English at least very well	-0.10	0.34*	1.87***
Age (ref. 25-64)			
18-25	-0.64*	1.94***	4.11***
65+	4.46***	0.36*	-1.31***
Naturalized Citizen	8.70***	6.53***	9.42***

Houston			
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-17.84***	-0.83***	-3.11***
Foreign-born black	0.23	20.02***	17.26***
U.S.-born Asian	-5.93	152.159***	130.7***
Foreign-born Asian	28.73***	43.25***	44.19***
Educational Attainment (ref. 4+ years college)			
Some College	3.35***	-3.62***	2.04***
High School/GED Diploma	0.02	-7.87***	-2.19***
Less than High School	-9.69***	-13.15***	-11.97***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	3.10***	3.69***	3.33***
1-2	2.82***	3.03***	4.14***
3-4	14.44***	12.10***	19.72***
5+	21.75***	21.52***	28.56***
Marital Status (ref. Married)			
Single	-1.63***	2.28***	-2.00***
Divorced	1.11***	1.24***	0.89***
Widowed	4.60***	4.19***	4.43***
Speaks English at least very well	25.13***	20.68***	26.11***
Age (ref. 25-64)			
18-25	-0.34	-1.27***	-0.29*
65+	7.02***	7.18***	6.86***
Naturalized Citizen	-11.07***	-12.50***	-10.64***

Miami			
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-3.21***	-9.66***	-7.88***
Foreign-born black	12.59***	-7.36***	6.07***
U.S.-born Asian	4.22***	0.47	1.05
Foreign-born Asian	16.15***	-0.51	-0.37
Educational Attainment (ref. 4+ years college)			
Some College	-1.49***	-3.69***	-0.11
High School/GED Diploma	-3.21***	-6.21***	-3.16***
Less than High School	-4.18***	-8.44***	-7.63***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	0.72***	5.49***	5.62***
1-2	-0.25	4.35***	5.44***
3-4	2.31***	8.66***	16.01***
5+	9.01***	15.53***	23.27***
Marital Status (ref. Married)			
Single	1.10***	-0.49**	-3.20***
Divorced	0.65***	0.23	-1.31***
Widowed	1.48***	1.47***	1.42***
Speaks English at least very well	8.19***	4.06***	5.91***
Age (ref. 25-64)			
18-25	1.05***	1.18***	3.31***
65+	1.05***	0.49**	-0.32
Naturalized Citizen	-3.63***	4.03***	6.48***

Minneapolis			
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-21.755***	-3.47***	-11.0***
Foreign-born black	-15.68***	-1.77***	-9.69***
U.S.-born Asian	-13.75***	-3.03***	-3.88***
Foreign-born Asian	-8.55***	0.98*	-1.75***
Educational Attainment (ref. 4+ years college)			
Some College	1.18***	-7.55***	-1.64***
High School/GED Diploma	0.85***	-10.63***	-1.62***
Less than High School	-4.96***	-11.52***	-5.34***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	-4.21***	0.70**	-3.31***
1-2	-2.09***	0.88***	1.87***
3-4	4.30***	3.50***	10.94***
5+	5.61***	7.84***	14.56***
Marital Status (ref. Married)			
Single	-6.05***	2.09***	-7.44***
Divorced	-1.56***	0.53**	-1.44***
Widowed	0.53	1.48***	-0.18
Speaks English at least very well	12.04***	4.16***	10.01***
Age (ref. 25-64)			
18-25	1.71***	-0.36	-2.15***
65+	1.24***	3.34***	0.82***
Naturalized Citizen	2.71***	2.51***	3.98***

New York			
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-26.15***	-8.04***	-5.12***
Foreign-born black	-8.75***	-1.32***	1.58***
U.S.-born Asian	-5.58***	4.21***	3.74***
Foreign-born Asian	-2.23***	3.21***	5.33***
Educational Attainment (ref. 4+ years college)			
Some College	-2.40***	-7.52***	-2.01***
High School/GED Diploma	-3.53***	-10.15***	-3.64***
Less than High School	-7.78***	-12.15***	-9.50***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	2.64***	2.88***	1.37***
1-2	2.66***	2.95***	4.01***
3-4	7.72***	6.44***	13.72***
5+	15.73***	13.77***	21.20***
Marital Status (ref. Married)			
Single	-1.80***	1.58***	-1.49***
Divorced	-1.47***	1.61***	-0.41***
Widowed	0.89***	1.85***	1.68***
Speaks English at least very well	9.96***	8.78***	13.76***
Age (ref. 25-64)			
18-25	0.99***	-1.23***	-0.61***
65+	4.63***	5.36***	5.93***
Naturalized Citizen	2.65***	-2.19***	-3.99***

Washington D.C.			
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-32.78***	-10.09***	-4.26***
Foreign-born black	-28.36***	-2.23***	-1.74***
U.S.-born Asian	-7.53***	7.22***	2.92***
Foreign-born Asian	-9.43***	8.26***	6.59***
Educational Attainment (ref. 4+ years college)			
Some College	1.17***	-9.76***	-2.14***
High School/GED Diploma	1.38***	-12.81***	-2.48***
Less than High School	-4.23***	-13.34***	-6.37***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	0.81**	8.14***	7.26***
1-2	0.35	5.15***	7.67***
3-4	2.00***	8.75***	16.34***
5+	3.64***	14.09***	20.21***
Marital Status (ref. Married)			
Single	-5.22***	2.47***	-4.10***
Divorced	-1.96***	1.01***	-0.83***
Widowed	-0.53*	2.61***	1.15***
Speaks English at least very well	9.91***	5.00***	6.28***
Age (ref. 25-64)			
18-25	2.57***	-1.92***	-2.89***
65+	2.62***	5.07***	2.35***
Naturalized Citizen	2.73***	2.01***	1.3***

West Palm Beach			
	% white	% college	% 3+ income to poverty ratio
Race/Ethnicity (ref. U.S.-born N.H. white)			
U.S.-born black	-25.96***	-9.47***	-12.74***
Foreign-born black	-12.87***	-4.47***	-3.02***
U.S.-born Asian	0.48	3.97***	4.72**
Foreign-born Asian	-0.33	2.69***	5.39***
Educational Attainment (ref. 4+ years college)			
Some College	-0.31	-7.72***	-0.60**
High School/GED Diploma	-2.69***	0.22	-2.87***
Less than High School	-9.87***	-0.78***	-9.18***
Income to Poverty Ratio(ref. 2.00-2.99)			
<1	-1.09**	-6.50***	-0.06
1-2	0.1	-2.74***	0.89***
3-4	5.70***	2.03***	9.27***
5+	10.84***	8.73***	15.16***
Marital Status (ref. Married)			
Single	-1.65***	-0.89***	-3.89***
Divorced	1.02***	0.23	-1.43***
Widowed	2.51***	0.48*	0.06
Speaks English at least very well	11.07***	8.05***	10.43***
Age (ref. 25-64)			
18-25	0.61	0.10	1.62***
65+	10.33***	3.21***	2.19***
Naturalized Citizen	6.58***	3.39***	4.50***