Race, Gender, and Residence: The Influence of Family Structure and Children on Residential Segregation

Samantha Friedman*
University at Albany, SUNY
Department of Sociology

Samuel Garrow
University at Albany, SUNY
Department of Sociology

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Abstract

Today's youth are increasingly comprised of racial and ethnic minorities, and the family types within which these children reside vary considerably by race/ethnicity. Surprisingly, little is known about the residential patterns of different minority family types with and without children, despite the fact that housing discrimination against families and by sex comprises a sizeable share of complaints made to HUD. This study seeks to document the residential segregation of minority families with and without children, overall and by family type, relative to all white households. Preliminary results indicate that family structure has a larger impact on the segregation of minority families from whites than the presence of children. However, the results also show that the effect of the presence of children differs by family structure and race/ethnicity. These initial findings suggest that more attention should be paid to the intersection of race/ethnicity and gender in the study of residential segregation.

*Direct correspondence to Samantha Friedman, Department of Sociology, University at Albany, SUNY, 348 Arts and Sciences Building, 1400 Washington Avenue, Albany, NY 12222 (samfriedman@albany.edu); phone (518-442-5458); fax (518-442-4936).

Introduction

Today's youth are increasingly comprised of racial and ethnic minorities. Recently released data from the U.S. Census Bureau reveal that in 2011, the majority of the population under the age of 1 (50.4 percent) is comprised of minorities (U.S. Census Bureau 2012). Moreover, 49.7 percent of those younger than 5 years of age are nonwhites.

The living arrangements of children also differ by their race and ethnicity. White children are much more likely to live in two-parent families than Hispanic and especially black children. According to data from the 2010 Current Population Survey, 77.5 percent of white children lived in two-parent families compared to 67.0 percent of Hispanic children and 39.2 percent of black children (US Census Bureau 2010). Of those children not living in two-parent families, the majority of them lived in single, female-headed families. In 2010, 15.5 percent of white children lived in such families, compared to 26.3 percent of Hispanic children and 49.7 black children.

Despite the growth of minorities in the under-18 aged segment of the US population and the fact that their living arrangements vary considerably by race and ethnicity, little is known about the residential patterns of families with and without children, overall and by family type. To our knowledge, only one study has explored the residential segregation of minorities and whites by household structure (Iceland et al. 2010). However, the study is limited by the fact that it does not directly assess the distribution of minority children relative to all white households, nor does it explicitly consider the patterns of single, female-headed families. Therefore, we do not have a comprehensive understanding of the access that minority families and particularly children have to all whites. Moreover, the numbers of metropolitan areas used to calculate many of the segregation scores are quite low, limiting the generalizability of the study.

In addition to the fact that very little scholarly research exists on this topic, documenting the segregation patterns of minority families with and without children, overall, and by family type, relative to whites is important from a legal standpoint. Between 2007 and 2010, the third largest number of housing discrimination complaints filed with federal, state, and local fair housing agencies and with private fair housing groups were based upon familial status (U.S. Department of Housing and Urban Development 2010). In 2010, of the 10,155 complaints filed with HUD or FHAP agencies, 15 percent alleged discrimination on the basis of family status. Moreover, complaints alleging discrimination on the basis of family status were more likely to be found to have "reasonable cause" by such agencies than those based upon race or disability (Schill and Friedman 1999). Discrimination on the basis of sex – comprising 11 percent of the complaints -- is also forbidden under the Fair Housing Act, warranting the study of single, female-headed households.

The main goal of this study is to document the residential segregation of families with and without children, overall and by family type, relative to all white households (hereafter referred to as all whites or whites for simplicity). More specifically, using 2010 decennial census data, we will calculate segregation scores for: 1) black, Hispanic, and Asian families with children, relative to whites, and compare them to the scores of black, Hispanic, and Asian families without children, relative to whites; 2) black, Hispanic, and Asian husband-wife families, relative to whites, and compare them to the scores of black, Hispanic, and Asian single, female-headed families, relative to whites; and 3) family types interacted with the presence of children among black, Hispanic, and Asian families, relative to whites (e.g., the segregation relative to whites of: black husband-wife families with children, black husband-wife families without children, black single, female-headed families with children, and black single, female-headed families without children). Following these descriptive analyses, we will examine whether and how family structure and the presence of children influences segregation scores, after controlling for relevant group- and metropolitan-level characteristics typically associated with variation in metropolitan-level residential segregation. The data on the independent variables for

these groups will come from the 2006-2010 American Community Survey at the metropolitan (or CBSA) level of analysis.

Background

Studies on residential segregation offer a way to characterize the differential distribution of groups across different neighborhoods, but such studies have failed to explicitly examine the distributions of racial and ethnic groups of families with and without children and by family type. Neighborhood location is inextricably linked to access to the opportunity structure, including quality schools, public safety, employment, and transportation all of which are particularly important in fostering the social mobility of the growing share of minority children present in our society.

While the segregation of minorities and whites has been declining over time, it is important to examine whether family subgroups within these larger populations, particularly those with children, vary in their segregation from whites. Significant changes have occurred in the living arrangements of American households. Between 1970 and 2008, the percent of American households that are "non-family" households, the majority of which are comprised of one person, nearly doubled, increasing from 19 to 34 percent (The Brookings Institution 2010: 93). In 2008, 35 percent of white households were nonfamily households, 32 percent were married couples without children, 20 percent were married couples with children, 9 percent were single, female-headed families, and 4 percent were single-male headed families (The Brookings Institution 2010: 94). These shifts in the household composition of majority group members away from being comprised of families with children (i.e., 67 percent) could have significant implications for their shared residential patterns with minority group members in families with children.

Two broad theoretical perspectives are generally used to explain variation in residential segregation. The main theoretical model used to explain variation in segregation across metropolitan areas is *the spatial assimilation model* (Alba and Logan 1991; Charles 2003; Massey 1985). In general, the model maintains that the residential distribution of households across neighborhoods of varying proximity to whites is influenced by household demographic factors, acculturation, and socioeconomic status. It suggests that segregation should be higher for minority-group members relative to whites, but also that minority group segregation should be accounted for by the inequality in socioeconomic and acculturation-related characteristics between minority and majority group members. Theories on residential mobility reveal that life course variables such as marital status and the presence of children shape household residential preferences and thus, segregation in the aggregate (Speare, Goldstein, and Frey 1975; Lee, Oropesa, and Kanan 1994). Families with children want to live in the neighborhoods that afford them the most access to the opportunity structure (e.g., good schools, job opportunities). However, their location in such areas will depend upon their financial means to realize their residential preferences. The expectation derived from the spatial assimilation model is that families with children should be less segregated from whites than families without children. However, support for this hypothesis may more clearly emerge in the multivariate analysis that controls for the socioeconomic status of such groups rather than in the descriptive analysis.

The significance of structural constraints in maintaining racial/ethnic inequality in residential location has given rise to a second theoretical model, the *place stratification model* (Alba and Logan 1991, 1993; Logan and Alba 1993; Logan and Molotch 1987). The model maintains that household access to the best residential opportunities is constrained by the actions of powerful groups as well as structural factors that differentially allocate housing opportunities on the basis of race/ethnicity. A hierarchical ordering exists among groups within society, and more advantaged groups use their power to maintain social and physical distance from the least advantaged groups (Logan and Molotch 1987). This power is often manifested in various forms of discriminatory actions, which effectively

constrain minority choices within the housing market and cause them to be segregated (Massey and Denton 1993; Turner et al. 2002; Yinger 1995).

Discrimination on the basis of family status and sex could also be a way that powerful groups constrain minority access to majority-group members. In their telephone audit study of the Philadelphia rental housing market, Massey and Lundy (2001) find that lower-class black females were the most disadvantaged group in terms of their access to housing. They were the least likely to contact and speak with a rental agent, and even if they did get in contact, they were the least likely to be told that the unit is available and the most likely to pay an application fee. With regard to the presence of children, the place stratification perspective maintains that whites have an interest in keeping blacks with children out of their neighborhoods in order to resist the integration of local schools. While audit studies rarely include the presence of children into their research designs, one study finds that black families with children were more likely to experience discrimination in the sales market than white families with children (Yinger, 1986).

Based on the tenets of the place stratification model, it is expected that the segregation of minority single, female-headed families and families with children from whites will be larger than the segregation of minority husband-wife families and families without children from whites. It is expected that controls for household demographic factors, acculturation, and socioeconomic status will not diminish such differences.

Data and Methods

Data from the short-form files of 2010 census are used to calculate residential segregation measures by family status and the presence of children. Consistent with previous research, we focus on segregation at the metropolitan-level of analysis (e.g., Iceland, Weinburg, and Steinmetz 2002). We calculate segregation estimates for metropolitan areas per the definitions used to collect the 2010 decennial census (i.e., 2009 core-based statistical area definitions (CBSAs)). Census tracts are the building blocks upon which our measures of residential segregation are constructed, again consistent with previous segregation research (e.g., Iceland et al. 2002; Massey and Denton 1993).

We will use the index of dissimilarity to characterize inequalities in the residential distribution of minorities from whites by family status and the presence of children. The index of dissimilarity measures the evenness of two groups over a geographic unit of interest, in this case census tracts. Dissimilarity scores will be calculated for metropolitan areas with at least 300 families in each minority group family type (disaggregated by the presence of children) largely because segregation indices are less reliable for areas with smaller minority populations than in areas with larger populations (Iceland et al. 2002).

Although not without limitations, the index of dissimilarity is the most commonly used measure of residential segregation found in the literature. It ranges from 0, indicating no segregation, to 1, indicating complete segregation. It may be interpreted as the proportion of either group that would have to move in order to achieve a fully integrated residential distribution. In general, dissimilarity indices that are over .60 are considered to indicate “high” levels of segregation; indices between .30 and .60 indicate “moderate” segregation; and less than .30 indicate “low” segregation (Massey and Denton 1993). The index of dissimilarity is one of several measures of segregation that may be calculated to characterize the residential separation of minority groups from whites. We focus on this index or the “D-score” because of its widespread use in the literature and ease of interpretation.

Our analysis of segregation relies upon data at the family level of analysis rather than data on the total population of groups. We calculate indices of dissimilarity for all pairwise comparisons where all non-Hispanic white households form the reference group. We calculate three sets of scores for

each minority group, relative to whites. The first set compares the segregation between minority families with children and whites to that between minority families without children and whites. The second set of scores compares the segregation between minority husband-wife families and whites to the segregation between minority single, female-headed families and whites. The third set of scores interacts family status and the presence of children. For each minority group, we compare the segregation between whites and: 1) minority husband-wife families with no children; 2) minority husband-wife families with children; 3) single, female-headed families with no children; and 4) single, female-headed families with children.

Our analysis will proceed as follows. First, we will present unweighted mean indices of dissimilarity. These descriptive analyses will be supplemented by minority group-specific, multivariate regression analyses that control for group-specific and metropolitan-level characteristics. In the multivariate analyses, the models will also not be weighted but instead control for the population size within metropolitan areas, similar to previous research (Iceland and Wilkes 2006).

For each racial and ethnic group, three models will be run, corresponding to the three sets of d-scores described above. The main dependent variable will focus on the variation in dissimilarity indexes in 2010. In the three models, our key independent variable will be a set of dummy variables derived from each of the three classifications of the dissimilarity scores, which are based upon the family status and presence of children of the groups being compared. In the first model, we use a dummy variable indicating whether the score is that gauging segregation between white-minority families with children or between white-minority families without children. In the second model, we use a dummy variable indicating whether the score is that gauging segregation between white-minority husband-wife families or between white-minority single, female-headed families. In the third model, we use several dummy variables to gauge whether the score is gauging segregation between white-minority husband-wife families with no children (the reference group) and: 1) white-minority husband-wife families with children; 2) white-minority single, female-headed households with children; and 3) white-minority single, female-headed households without children.

In each of these sets of models, the same metropolitan areas will be represented more than once (e.g., the first two sets of models will contain two scores for each metropolitan area and the third set will contain four scores). Because of the lack of independence of observations in the data, we are unable to use standard multiple regression techniques that assume the observations in the analysis are independent. We, therefore, use generalized linear models and more specifically generalized equation estimation (GEE), in order to account for the fact that our independent variables have a correlated error structure (Liang and Zeger 1986).

The models will contain a number of control variables at the group and metropolitan levels of analysis that will come from the 2006-2010 American Community Survey data. At the group level, we will control for group size and the poverty status of each group. At the metropolitan level of analysis, we will employ a number of control variables traditionally used in other segregation research (e.g., Farley and Frey 1994; Iceland and Wilkes 2006; Massey and Denton 1993). These variables will be used to capture metropolitan variation in housing- and labor-market structure and population demographics that have been found to explain variation in segregation scores. Specifically, we plan to include control variables for each metropolitan area's total population; percent minority; percent of blacks, Hispanics, and Asians that are homeowners; percent of the population: in manufacturing, government, and the military; percent of the population over 65 years old, percent of housing units built in the last 10 years; percent of the population enrolled in college and in suburbs; and region (dummy variables for West, South, Midwest, and Northeast (with the latter being the reference group)).

Preliminary Results

Table 1 presents the mean dissimilarity scores of black, Hispanic, and Asian families broken down by the presence of children and family structure, relative to all white households. The results in the first two rows of Table 1 in Panel A reveal that for Hispanic and Asian families, the average residential segregation from white households is slightly larger in magnitude when there are children present than when there are no children present. For example, the average d-score between Hispanic families with children, relative to white households, is .423, which is about .033 units higher than the average d-score between Hispanic families with no children, relative to white households. For blacks, the presence or absence of children does not influence family segregation from white households. Not surprisingly, black segregation from whites is larger in magnitude than the segregation of Hispanics and Asians.

How does family structure shape minority-white segregation? Panel B reveals that for all minority groups, segregation between single, female-headed families and white households is larger than the segregation between two-parent families and white households. For blacks, the magnitude of the difference in the d-scores by family structure is the largest (i.e., .109 units), for Asians, the smallest (i.e., .024 units), and for Hispanics, the magnitude of the difference is in the middle (i.e., .086).

Panel C of Table 1 reveals that the presence of children within a family type shapes patterns of segregation for two-parent households more so than for single, female-headed households, but the direction and strength of the effect of the presence of children varies across the minority groups. For example, among blacks, the segregation of two-parent families without children from white households is greater than the segregation of two-parent families with children. However, for Hispanics and Asians, it is just the opposite. Two-parent families with children are considerably more segregated from white households than two-parent families without children. Across all minority groups, single, female-headed families experience greater levels of segregation from white households than two-parent families, regardless of the presence or absence of children.

Taken together, these preliminary results suggest that race/ethnicity, gender as gauged by family structure type, and the presence of children all interact to shape minority access to whites in metropolitan America. However, further analyses are needed to determine whether such disparities will remain after controlling for the poverty status of the various minority subfamily groups as well as metropolitan variation in other characteristics that generally predict variation in residential segregation (e.g., minority composition, region, housing market characteristics). Initial generalized least squares regression analyses (not shown) indicate that such interactions remain and continue to shape minority segregation from whites, thereby suggesting that future analyses pay more attention to the intersections of race/ethnicity and gender in the study of residential segregation.

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Table 1. Unweighted Mean Dissimilarity Scores of Minority Groups from All White Households by Presence of Children and Family Structure, 2010

Subgroup of Interest	**Black**	**Hispanic**	**Asian**
Panel A. Presence of Children	(1)	(2)	(3)
Children present	0.472	0.423	0.436
No Children present	0.472	0.390	0.402
Panel B. Family Structure			
Two-Parent Families	0.418	0.382	0.417
Single, female-headed Families	0.527	0.468	0.441
Panel C. Family Structure by Presence of Children			
Two-Parent Families with children	0.411	0.404	0.449
Two-Parent Families with no children	0.436	0.358	0.403
Single, Female-headed families with children	0.535	0.477	0.470
Single, Female-headed families with no children	0.534	0.474	0.486
N	335	185	69

Note: Includes only those CBSAs with at least 300 minority families in each of the family structure/presence of children categories.