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# Trends in Whites' Perceived Black-White Residential Integration, 1972-2008

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# Trends in Whites' Perceived Black-White Residential Integration, 1972-2008 **Cover Page Footnote** An earlier version of this article was presented at the 103rd Annual Meeting of the American Sociological Association in Boston, August 1-4, 2008. We express our gratitude to the three anonymous reviewers of JPPS for their affirmation of the value of this article and their constructive critiques and suggestions.

#### **INTRODUCTION**

Trends and patterns in black-white residential segregation in the United States have been studied extensively (see, for example, Farley and Frey 1994; Iceland 2009; Iceland, Weinberg, and Steinmetz 2002; Logan, Stults, and Farley 2004; Massey and Denton 1987, 1993; Sorensen, Taeuber, and Hollingsworth 1975; Taeuber and Taeuber 1965). The evidence from the literature clearly shows that black-white residential segregation in terms of dissimilarity index declined modestly from 1970 to 2000, but remained highest compared to Hispanic-white segregation and Asian-white segregation (Farley and Frey 1994; Iceland, Weinberg, and Steinmetz 2002; Logan, Stults, and Farley 2004; Massey and Denton 1987, 1993). The "hyper-segregation" of blacks from whites has continued (Denton 1994).

Most previous studies have used aggregate data at the census-tract level to examine the level of black-white neighborhood residential segregation. The use of dissimilarity index (the most widely used measure) at the tract level to measure neighborhood residential segregation has long been questioned (Farley and Frey 1994; Frey and Farley 1996; Frey and Myers 2005; Lee et al. 2008; Reardon et al. 2008; Taeuber and Taeuber 1965). Since a census tract typically contains several thousand households, it can easily conceal substantial segregation at the block level. As a result, the level of segregation could be quite low at the tract level, but very high at the block level (Ellen 2000). Despite its varying perceptions, the concept of "neighborhood" normally carries a connotation of an intimate space or surrounding rather than a large space of several thousand households. Frey and Myers (2005) contended that a block group with an average population of 1,100 more closely approximates a neighborhood than a census tract with an average population of 5,000 and can detect segregation patterns for smaller minority populations or in small areas camouflaged by the use of tract-based measures. A few studies (Farley and Frey 1994; Frey and Farley 1996; Frey and Myers 2005) used data at the block-group level to measure neighborhood residential segregation, but the findings do not change the conclusion that black-white residential segregation has declined over time. Challenging the traditional tractbased residential segregation literature, Lee et al. (2008) and Reardon et al. (2008) developed a tract-free approach to measure residential segregation across local environments of varying sizes, but their results based on aggregate census data still confirm a higher level of black-white segregation than Hispanic-white and Asian-white segregation. Another alternative, perhaps a complementary one, is to use individual-level data that report neighborhood residential patterns. To our knowledge, no existing study has used such individual-level data, and it is not clear whether and to what extent individual-level data will make a difference in research results.<sup>1</sup> It is important to use individual-level data to study residential segregation or integration, because it can avoid an ecological fallacy of making inference about individual behavior from aggregate-level data and provide an alternative measure of black-white residential segregation or integration that may confirm or cast doubt on results of black-white residential segregation or integration measured at the aggregate level in prior studies. Fortunately, the General Social Survey (GSS) offers some useful information on neighborhood residential patterns at the individual level.

Furthermore, up to about a decade ago most studies had uniformly focused on the "dark side" of the issue—"residential segregation" (Charles 2003), but paid little attention to the existence of "residential integration" and trends associated with it. The emphasis on racially/ethnically segregated spaces has been justified because residential segregation is the norm and has deleterious consequences on intergroup relations, social mobility, and racial/ethnic inequality (Charles 2003; Maly 2005). Nevertheless, it should be recognized that racially/ethnically integrated neighborhoods were more common before 1970 than what has been portrayed in the dominant residential segregation literature (e.g., Bradburn, Sudman, and Gockel 1971; Ottensmann and Gleason 1992; Rapkin and Grigsby 1960). Moreover, recent studies (Ellen 1998, 2000; Fasenfest, Booza, and Metzger 2004; Friedman 2008; Maly 2005) have documented the existence and growth of racially/ethnically integrated neighborhoods and called for attention to the new development. However, these integration analyses are also conducted at the aggregate level of census tract.

Prior studies of trends in black-white residential segregation or integration typically used decennial census data at two or three points in time, which are essentially two or three cross-sectional data sets spanning ten years between two censuses. Changes could occur between censuses but are not reflected in census data (Friedman 2008). Using continuous yearly data can better reflect changes over time.

The United States is not monolithic in residential segregation or integration. Regions differ in the level of residential integration because of regional differences in historical, demographic, socioeconomic, and attitudinal

<sup>&</sup>lt;sup>1</sup> Alba and Logan (1992, 1993) did use individual-level data in their analyses of residential segregation by appending the aggregate-level 1980 Census data on residential segregation to the individual-level 1980 Public Use Microdata Sample. However, unlike ours, their dependent variable (i.e., percentage of non-Hispanic whites in a community) is at the aggregate level. Furthermore, their studies do not analyze trends in residential segregation or integration and are limited to the New York City Consolidated Metropolitan Statistical Area. Echenique and Fryer (2007) developed a measure of segregation based on individual social interactions, but used the block-level data from the 2000 U.S. Census in the application of this measure to residential segregation.

changes (Ellen 2000). It is important to ascertain regional differences in the trend of residential integration in order to monitor its progress across regions and to facilitate residential integration according to regional patterns. Although there is no paucity of information on regional differences in residential segregation (e.g., Farley and Frey 1994; Frey and Myers 2005; Iceland, Weinberg, and Steinmetz 2002; Logan, Stults, and Farley 2004), there is inadequate quantitative analysis of how different regions differ in residential *integration*.

To fill the gaps in the literature, this study turns to the other side of residential segregation to examine trends in perceived black-white residential integration using individual-level data. Neighborhood racial integration is conceptualized and operationalized differently in the literature. The term "racial integration" carries two meanings: social integration and demographic integration (Molotch 1972). Social integration refers to the integrated social relations of racial groups that involve positive interpersonal contact and primary group interaction as well as transracial solidarity (Molotch 1972). Demographic integration refers to racial mixture, with no implications for the quality of social relations (Smith 1998). In the recent neighborhood racial integration literature, there appears to be a consensus that the analysis of neighborhood racial integration should be restricted to neighborhood racial mixture partly because of the difficulty to measure social integration using available data (see Ellen 1998; Galster 1998; Smith 1998). There are two general approaches to measuring neighborhood racial integration or mixture. The absolute approach uses a fixed range of racial composition (Ellen 1998, 2000; Fasenfest, Booza, and Metzger 2004; Friedman 2008; Lee 1985; Lee and Wood 1990, 1991). For example, Ellen (1998, 2000) defined a racially integrated neighborhood as a neighborhood (measured by census tract) that is between 10 percent to 50 percent black. The relative (or comparative) approach matches the racial composition of a neighborhood with that of the larger geographic area in which the neighborhood is located, such as a city, county, or metropolitan area (Maly 2005; Nyden, Maly, and Lukehart 1997; Salman 1990; Smith 1998). For instance, Maly (2005) defined neighborhood racial integration as the proportional representation of racial or ethnic groups in a neighborhood that roughly reflects the racial or ethnic composition of a city. Both the absolute and relative approaches have their advantages and limitations.<sup>2</sup> For

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<sup>&</sup>lt;sup>2</sup> The absolute approach can produce clear, common-sense, nontrivial patterns of neighborhood racial integration and enable cross-area and intertemporal comparisons, but the cut-off ranges for integration may be arbitrary and too wide, leading to possible misclassification. On the other hand, the relative approach can more accurately capture the integration pattern of a neighborhood in racially diverse communities, but it could misspecify a relatively homogeneous (i.e., segregated) neighborhood as an integrated neighborhood in a racially relatively homogeneous city, county, or metropolitan area and has limited cross-area and intertemporal comparability due to the lack of a constant reference range. Both approaches may be to some extent atheoretical (Galster 1998). Both may offer different but complementary information on neighborhood integration patterns.

the purpose of this study, we define black-white neighborhood racial integration as the process of sharing the same residential neighborhood by blacks and whites, which can vary from 0 percent to 100 percent rather than fix at a particular percentage point or a range of percentage points. This paper attempts to answer the following four research questions:

- 1. How has the rate of whites' perceived black-white residential integration changed over time?
- 2. How has the likelihood that whites reported blacks living in their neighborhoods changed over time, holding relevant variables constant?
- 3. What types of whites are more or less likely to report living with blacks in the same neighborhood?
- 4. How do different geographic regions differ in the rate and likelihood of whites' perceived black-white residential integration over time?

We use the 1972-2008 GSS data to answer our research questions. Following this introductory section, we present our hypotheses. We then describe the data, variables, and measurements used to test our hypotheses and methods of analysis. Results of statistical analysis follow. Finally, we summarize our findings and discuss their implications.

#### **HYPOTHESES**

Our first hypothesis is that the rate of whites' perceived black-white residential integration has gradually increased over time. Our second hypothesis is that the likelihood that whites reported blacks living in their neighborhoods has also increased over time, controlling for other relevant factors such as socioeconomic, demographic, and residential variables. Several factors have contributed to the increases in the rate and likelihood of whites' perceived black-white residential integration. One is the enactment and enforcement of legislation that have dismantled systems of housing and mortgage discrimination. Title III of the Civil Rights Act of 1968, commonly known as The Fair Housing Act of 1968 (Pub. L 90-284; 82 Stat. 73), and its amendments prohibited discrimination in the sale, rental, and financing of dwellings, and in other housing-related transactions, based on race, color, national origin, religion, sex, familial status, and disability. The 1988 amendments to this act greatly increased the enforcement role of the Department of Housing and Urban Development (HUD). The Equal Credit

The absolute approach may be more useful for cross-area and cross-time comparisons, whereas the relative approach may be more instrumental for location-specific case studies. For detailed discussions of their advantages and disadvantages, the reader is referred to the works of Ellen (1998); Fasenfest, Booza, and Metzger (2004); Galster (1998); and Smith (1998).

Opportunity Act of 1974 (ECOA) (Pub. L 93-495; 88 Stat. 1521) made it unlawful for "any creditor to discriminate against any applicant with respect to any aspect of a credit transaction on the basis of race, color, religion, national origin, sex, marital status, age (provided the applicant has the capacity to contract), receipt of income from any public assistance program, or good faith exercise of any right under the Consumer Credit Protection Act. The ECOA has been enforced by the Federal Reserve Board's Regulation B. The Home Mortgage Disclosure Act (HMDA) of 1975 (Pub. L 94-200; 89 Stat. 1125), and its amendments required lending institutions including banks, saving and loan associations, credit unions, and other mortgage lenders to maintain and annually disclose public load data in terms of the race, ethnicity, gender, and income of loan applicants and borrowers. The HMDA has been implemented by the Federal Reserve Board's Regulation C. Seeking to reduce the so-called redlining discriminatory credit practice against low-income neighborhoods, the Community Reinvestment Act of 1977 (Pub. L 95-128; 91 Stat. 1147) required federally chartered banks and savings institutions to meet the credit needs of borrowers in the entire communities including low-income neighborhoods. The national audits of housing discrimination conducted by the HUD in 1977 and 1989 detected evidence of "systematic discrimination" against blacks and Hispanics in housing rental and sales. Continuing the paired-testing or audit methodology, the HUD's 2000 Housing Discrimination Study further extended and expanded the previous audits to obtain more details about where and how housing discrimination occurred in cities and included some Asian groups and Native Americans in the study. All of these laws and their enforcement as well as monitoring have substantially reduced overt discrimination in the housing and mortgage markets that maintain residential segregation.

Another important factor is changes in the racial attitudes of whites toward black-white residential segregation and integration. The endorsement of black-white residential segregation as a principle has declined substantially over time. For example, the endorsement of the statement that "White people have a right to keep (Negroes/blacks/African Americans) out of their neighborhoods if they want to, and (Negroes/blacks/African Americans) should respect that right" had decreased from 60 percent in 1963 to 13 percent in 1996 (Schuman, Steeh, and Bobo 1997: Table 3.1B). Moreover, whites' tolerance or acceptance of black neighbors has risen over time. For instance, according to the results of Gallup polls, in 1958 only 56 percent of whites would not move if blacks became their next-door neighbors (22 percent would definitely move and 23 percent might move), but in 1990 the percentage to the same question rose to 95 percent (1 percent would definitely move and 4 percent might move) (Schuman, Steeh, and Bobo 1997: Table 3.3). The well-known Detroit Area Study conducted by Farley

and his associates in 1976 and 1992 (Farley et al. 1978; Farley et al. 1994) also found increasing tolerance of whites toward black neighbors.

Third, the growth of the black middle class has facilitated black-white residential integration. In the era of the post-Civil Rights movement, class has played an increasing role in neighborhood choices. Although Massey and Denton (1993) found that black-white segregation did not vary by affluence, more recent studies (e.g., Alba, Logan, and Stults 2000; Clark 2007; Freeman 2008) showed that income does matter in black residential choices. Farley and Frey (1994) reported that the black middle class grew faster than the white middle class in the period of 1940-1970. Although middle class status can be measured by different indicators, a recent study using the black middle class index based on education, occupational score, per person income, and homeownership and the 1980-2000 census data confirms the continuous growth of the black middle class from 1980 to 2000 (Marsh et al. 2007). The growth of the black middle class has made possible the purchase of houses in higher-income neighborhoods where whites are more likely to live.

Fourth, the supply of new housing has also contributed to increased black-white residential integration. Many older communities tend to have a higher degree of residential segregation since they contain places where only blacks live (Farley and Frey 1994). Since the Fair Housing Act of 1968, new housing construction has reduced black-white residential segregation. Farley and Frey (1994) and Logan, Stults, and Farley (2004) found that in the newer metropolitan areas with a great deal of new housing construction, black-white residential segregation tended to be lower. South and Crowder (1998) also reported that a greater supply of new housing in the metropolitan areas increased blacks' likelihood of moving into white tracts.

Finally, crucial to the increasing trend in black-white residential integration is the pro-integration movement. Dubbed also the "open housing movement" and the "neighborhood stabilization movement," the pro-integration movement emerged out of the second black Great Migration to the North and the West, neighborhood racial transition, and the Civil Rights movement in the 1950s and 1960s (Maly 2005; Saltman 1971, 1978, 1990). The main goals of this movement were to prevent neighborhood racial resegregation or maintain neighborhood racial integration through organized and active community intervention. It is called "neighborhood stabilization movement," because it seeks to promote stable neighborhood integration by developing a range of organizations, social networks, and institutions. For instance, in the process of stabilizing their communities, maintaining racial integration, and avoiding resegregation, a national movement organization called National Neighbors was created in 1969, which represented over 200 neighborhood integration groups by the mid-1970s (Saltman 1990). Residents of the communities mobilized their

resources and institutional networks for collective action to resist racial transition. Two types of intervention strategies have been used to stabilize neighborhoods and preserve racial integration. One category of strategies aims at maintaining the racial mix of community or preventing resegregation through race-neutral policies. These include the implementation of anti-solicitation regulations to discourage panic selling and blockbusting, the ban of "For Sale" signs on front lawns to avoid perceptions of racial transition, the offer of equity insurance programs to protect property values of existing residents, the undertaking of community betterment projects to increase the physical appeal of the community or to reduce its crime rate, and general community building to increase social cohesion and social capital in the community (Ellen 2000; Keating 1994; Saltman 1990; Smith 1993). The second type of strategies is to encourage racial residential mixture through race-conscious policies. One such policy is to set a "benign housing ceiling" for a minority group in order to keep the racial mix of a community, but this policy has been struck down by courts (Ellen 2000). Another policy is known as "affirmative marketing" (Ellen 2000), which encourages home seekers to move into neighborhoods in which their racial or ethnic group is underrepresented. Whites are often encouraged to consider a minority neighborhood, and minorities are encouraged to look for housing in predominantly white suburban areas. This "benign steering" policy has been received favorably by courts. A third policy is to provide mortgage incentives for home buyers to move into racially integrated neighborhoods (Chandler 1992). The ultimate goal of the pro-integration movement is to improve or maintain the quality of life in the community.

All of the above-mentioned factors have increased whites' perceived black-white residential integration. However, black-white racial tensions remained high as shown in such events as the Rodney King trials, the O.J. Simpson trials, and the dragging death of James Byrd Jr. The gap between blacks and whites in attitudes toward racial integration continues to be large. The prointegration movement appears to be fragile and sometimes ineffective (Saltman 1990). Hence, the improvement in black-white residential integration may be slow.

In addition, we propose a number of hypotheses to answer our third research question. Two types of factors may distinguish whites in the likelihood of their self-reports of living with blacks in the same neighborhood: factors that may increase or decrease whites' aversion to share a neighborhood with blacks, and factors that may increase or decrease whites' exposure to blacks. The factors associated with aversion may include education, age, sex, family, children, and religious affiliation and activities. Education can reduce whites' aversion to blacks. We hypothesize that holding other variables constant, more educated whites are more likely to report sharing the same neighborhood with blacks

because education makes people (whites or nonwhites) more open-minded, reduces racial prejudices, and increases the acceptance of residential integration. This liberalizing effect of education on residential integration is largely confirmed by Farley, Fielding, and Krysan's (1997) study of whites' residential preferences in Atlanta, Boston, Detroit, and Los Angeles.

We also expect to find that older whites are less likely to report living with blacks in racially integrated neighborhoods than younger whites. This is so because the older they are, the more likely they had grown up in a segregated environment and had been socialized into a segregated *milieu*. A greater willingness of younger whites to live in racially mixed neighborhoods than their older counterparts was borne out by Farley, Fielding, and Krysan's (1997) study.

Schuman et al. (1997: 235) found that although men are more conservative than women in racial attitudes related to racial inequality, they are more liberal than women in more intimate areas of racial contact such as integrated schools and interracial marriage; "being female hinders rather than promotes racial integration" in these more intimate areas of racial contact. Hence, we hypothesize that white men are more likely than white women to report sharing the same neighborhood with blacks, all else being equal.

Family and children could have a significant bearing on the choice of residential neighborhoods. We anticipate that whites who have a family (currently married) are less likely than those without a family to report sharing a neighborhood with blacks because compared to non-married whites, married whites are more concerned about the negative impact of a high proportion of blacks in their neighborhoods on their families. In the same vein, owing to concerns about the undesirable impact of the racial makeup of public schools on their children, whites with children at home may be more reluctant to live in a neighborhood with blacks than whites without children at home (Emerson, Yancey, and Chai 2001).

Religious affiliation and activities may exert some impact on whites' residential choices. In the United States, Protestants are more likely to be conservative than non-Protestants including Catholics and Jews (Gallup 1982; Wilson 1978), probably because they have historically occupied a privileged social position. They may perceive residential integration as a threat to their status of privileges. A recent study (Blanchard 2007) found that the theological and value orientation of white conservative Protestant congregations undermines the creation of bridging group ties and is directly associated with black-white residential segregation. Thus, we hypothesize that because of their conservatism, white Protestants are less likely to report sharing a residential neighborhood with blacks than their non-Protestant counterparts. Ihlanfeldt and Scafidi (2004) contended that whites who attend church more frequently may be more prone to receive "racial instruction" from others in this setting and therefore less likely to

share a residential neighborhood with blacks. Hence, we expect that whites who attend church more frequently are less likely to report sharing the same neighborhood with blacks than those who attend church less frequently.

The exposure factors may include income, type of neighborhood, and region. A higher family income reduces whites' exposure to blacks because of the latter's lower average income. Farley, Fielding, and Krysan's (1997) study also detected a negative relationship between family income and whites' preferences to share neighborhoods with blacks in their multivariate analysis, although their bivariate analysis revealed a positive relationship. Thus, we expect a negative relationship between family income and the likelihood of whites' self-reports of living with blacks in the same neighborhood, other things being equal.

The type of neighborhood that whites live in a metropolitan area may influence their exposure to blacks and therefore their likelihood of sharing a neighborhood with them. Since blacks are concentrated in central cities, white residing in a central city neighborhood are more likely to live with blacks in this type of neighborhood. Logan, Stults, and Farley (2004) found that suburbanization increased black-white segregation. We expect that compared to whites in central cities, whites in suburban, other urban, and rural areas should be less likely to report sharing a residential neighborhood with blacks simply because there are fewer blacks in those areas.

Historically, blacks were highly concentrated in the South, which was known for its slavery, segregation, and resistance to desegregation. According to the 2000 Census data, the majority of blacks still lived in the South. Some studies suggest that as the proportion of blacks increases, whites' perceived threat and opposition to integration will increase (Fosset and Kiecolt 1989). Hence, a region with a higher proportion of blacks may witness a lower level of black-white residential integration. However, existent studies reveal that patterns of blackwhite residential segregation or integration are somewhat different in the South. Historically, segregation levels in the South had been relatively low because of the distinctive history and character of southern cities. Before the 1960s, blacks and whites often lived in close physical proximity with black-resided alleys being intermingled between larger, white-occupied avenues (Demerath and Gilmore 1954). During the housing boom after World War II, rural black settlements were often overtaken by expanding white suburbs, leading to residential integration (Massey 2001). Massey and Denton (1993) reported that black-white segregation scores in the South were on average 10 points lower than those in the North. Southern metropolitan areas have shown lower levels of racial segregation than metropolitan areas in the Northeast, the Midwest, and the West. Iceland, Weinberg, and Steinmetz's (2002) latest study evinces that in 1980, 1990, and 2000, compared to other regions the South had the lowest or almost the lowest level of residential segregation in terms of dissimilarity index, isolation index,

Delta index, absolute centralization index, and spatial proximity index at the tract level. Farley and Frey (1994) and Frey and Myers (2005) found that at the blockgroup level, level of segregation in terms of dissimilarity index in the South was lower than those in the Northeast and the Midwest. Emerson (1994) also pointed out that black concentration in large central cities in the non-South regions may lead to increased residential segregation. Because of these reasons, we hypothesize that whites in the South may be more likely to report sharing the same neighborhood with blacks than whites in other regions.

Using aggregate-level data, previous studies have detected significant regional differences in black-white residential segregation and faster declines in the South and West (e.g., Farley and Frey 1994; Frey and Myers 2005; Iceland, Weinberg, and Steinmetz 2002; Logan, Stults, and Farley 2004). There is also evidence of more rapid declines in antiblack prejudice in the South (Firebaugh and Davis 1988). Hence, we anticipate that at the individual level, just as in the nation as a whole, whites' perceived black-white residential integration has increased over time across regions, but significant variation exists among different regions.

#### **DATA AND METHODS**

Data for this study come from the 1972-2008 GSS cumulative file (National Opinion Research Center 2009). The GSS is a nationally representative sample of the U.S. non-institutionalized English-speaking adult population. We weighted the data to take into account the selection of one adult per household by adjusting for the number of adults in the household, so that our findings can be generalized to adults living in households in the United States. We restricted our analysis to white respondents who provided valid responses to the question on our dependent variable (described below) since only white respondents were asked the question on the dependent variable consistently from 1972 to 2008. The restricted sample consists of a total of 38,047 cases.

Our dependent variable is perceived black-white residential integration, which is based on the following question: "Are there any blacks/African Americans living in this neighborhood now?" Here "this neighborhood" refers to the neighborhood in which the white respondent lived. This variable was recoded

<sup>&</sup>lt;sup>3</sup> Unlike objective measures of black-white residential integration (e.g., 10 percent to 50 percent blacks living in a white neighborhood, used by Ellen (2000)), our measure of residential integration is subjective. Thus, we label it "perceived black-white residential integration." Nonetheless, "perceived" in this context should not be construed as "imagined" or "unreal" because the respondents did not have any incentives to report distorted reality.

as a dichotomous variable with 1 indicating "yes" (residential integration), and 0 indicating "no" (residential segregation).

Our main independent variable is year since this is a trend analysis. In order to test the nonlinear effects of time on black-white residential integration, we coded the 27 years from 1972-2008 as a set of individual dummy variables with 1 indicating the designated year (e.g., 2008) and 0 otherwise and used 1972 as the reference category in our logistic regression models.

Other predictors include education, age, gender, marital status, presence of children at home, religion, church attendance, family income, type of neighborhood, and region. Education is a ratio variable measured by the highest year of schooling completed at the time of the survey with a range of 0 to 20. Age is a ratio variable measured by years. Male is a dummy variable with 1 indicating male and 0 indicating female. Marital status was dummy coded with 1 referring to "currently married" and 0 otherwise. Presence of children at home is a dummy variable, scored 1 for those with children at home and 0 otherwise. We recoded religion as a dummy variable with 1 denoting "Protestant" and 0 otherwise. Church attendance is an ordinal variable with nine categories (0 = never, and 8 = several times a week). Family income is an ordinal variable with 12 categories. We created a set of dummy variables for different types of neighborhood in suburb, other urban area (i.e., small towns of 10,000 population or more), and rural area with central city as the reference category for the logistic regression analysis. Region was dummy coded 1 for the South and 0 otherwise.

Our measure of perceived black-white residential integration—white respondents' self reports of blacks living in their neighborhoods—can provide useful information to validate or question findings of black-white residential integration or segregation based on aggregate-level measurements reported in previous studies. Aggregate-level studies of individual behavior risk the problem of ecological inference (Charles 2003: 177-178). Moreover, our measure of perceived residential integration is "intimate" and concrete, reflecting what the respondents actually observed in their neighborhood rather than in a much greater area. The "neighborhood" concept conveyed to the respondents was more or less in line with the concept of a census block group, normally within eight blocks and occasionally over eight blocks or one mile (see National Opinion Research Center 2009). This neighborhood concept has remained unchanged over time in the GSS.

<sup>&</sup>lt;sup>4</sup> We use a simple measure of religion because in this study we focus on the difference between Protestants, the majority religious group, and non-Protestants, the minority religious group, in perceived black-white residential integration. We are aware of religious differences among non-Protestants and also among various denominations within Protestants. But our preliminary analysis indicates that the differences in whites' perceived residential integration among non-Protestant groups are quite small. The denominational differences among Protestants cannot be tested because the inclusion of the denomination variable would drop more than 16,000 cases from our sample.

One limitation with our perceived residential integration measure is that perception may not be accurate, but the more intimate neighborhood concept communicated to the respondents as mentioned above should significantly reduce the inaccurate knowledge. Another limitation is that our perceived residential integration measure only tells whether blacks and whites share the same neighborhood, but it does not measure the extent of residential integration or the proportion of blacks in the neighborhood.

Compared to the decennial census and survey data used in existing studies, our main independent variable—year—also has an advantage, since it can capture changes between census years and can help better detect if there is any nonlinear effect. One imperfection with time is that the GSS was not conducted in every year; the data are available only for 27 years during the 36-year span.

In addition, the GSS includes numerous demographic, socioeconomic, and attitudinal predictor variables not available in the census data such as type of neighborhood and church attendance. One shortcoming is that some predictors found to be important in previous studies are not available for the entire period under study and therefore cannot be used in our study of changes in perceived residential integration over 36 years. For example, one variable pertaining to the perception of discrimination against blacks in housing is only available for 1990, and another variable related to the perception of blacks' propensity for violence is available only in 1990 and 2000. Another predictor is nativity. The GSS did not ask respondents about their place of birth until 1977. Political orientation may be relevant too, but the GSS did not collect data on this variable until 1974. Homeownership is not available.<sup>5</sup>

Some limitations notwithstanding, the GSS is the only data set that contains information on perceived black-white residential integration at the individual level over time. Its large sample size can ensure reliable statistical estimates. The representativeness of the sample will enable the generalization of the findings to the population at the national level.

We begin with descriptive analysis. We then examine changes in the rate of whites' perceived black-white residential integration over time. To address our second and third questions, we use logistic regression because our dependent variable is dichotomous. Finally, we analyze the rate and likelihood of whites' perceived black-white residential integration over time by region. An examination of the correlation matrices indicates that there is no multicollinearity problem in any part of the logistic regression analyses. The highest correlation coefficient is .442 between the dummy variable for currently married and the dummy variable for presence of children at home.

<sup>&</sup>lt;sup>5</sup> One variable very close to homeownership is "Have you ever purchased a home?", which was asked only in 1996.

#### **RESULTS**

#### **Descriptive Analysis**

Descriptive statistics of all variables used in the analysis are shown in Table 1. Mean of a dummy variable can be interpreted as percentage after multiplying it by 100. As shown in Table 1, 52 percent of the white respondents in our pooled sample of 1972-2008 reported that blacks lived in their neighborhoods. On average, the respondents completed 12.8 years of schooling with a standard deviation of 3 years. The average age of the respondents was about 45 years old. About 47 percent of the respondents were male, and 53 percent female. Nearly two thirds were currently married at the time of the surveys, and 73 percent had children at home. The majority of them were Protestant, and typically they attended church several times a year. The median score of family income (=11) indicates that half of the respondents had a family income above \$20,000-24,999 and half of them were below. Only 17 percent lived in central cities, more had homes in suburbs of metropolitan areas and other urban areas (i.e., small towns), and even less resided in rural areas. The Southerners made up 32 percent of the sample, and non-Southerners 68 percent.

### Trend in the Rate of Whites' Self-Reports of Sharing a Neighborhood with Blacks

Figure 1 shows that the rate of whites' self-reports of sharing the same residential neighborhood with blacks had continuously increased with fluctuations from 30 percent in 1972 to slightly over 66 percent in 2008, which more than doubled the rate in 1972 and represented an average of 1 percent increment per year during the 36-year span. This integration rate peaked in the year 2002 with approximately 67 percent, indicating that two thirds of white Americans reported blacks lived in their neighborhoods. The rates reported in Figure 1 and in Figure 3 later may seem somewhat inflated *prima facie*, especially given the observation that whites tend to overestimate the size of the black population relative to the white population (see Gallagher 2003). However, a careful examination suggests that these rates are not improbable since our measure of integration is based on any number of blacks in the neighborhood. Overall, the evidence supports our first hypothesis that perceived black-white residential integration rate has increased over time.

## Trend in the Likelihood of Whites' Self-Reports of Living with Blacks in Their Neighborhood

To answer our second research question, we did logistic regression analysis. The results are shown in Table 2. We tested two models. Model 1 includes only the dummy variables for years as predictors with 1972 as the reference category. In

Table 1. Descriptive Statistics of Variables Used in the Analysis, U.S. White Adults, GSS 1972-2008

| Variable   | Mean  | S.D.  |
|--|-------|-------|
| Dependent Variable Perceived black-white residential integration | .520  | .500  |
| Predictor Variables  |       |       |
| Year (coded as a set of dummy variables)                         |       |       |
| Highest year of school completed                                 | 12.8  | 3.0   |
| Age  | 44.9  | 17.2  |
| Male   | .470  | .499  |
| Currently married  | .660  | .474  |
| Children at home   | .730  | .445  |
| Protestant   | .580  | .494  |
| Church attendance (9-point scale)                                | 3.0a  | 8.0b  |
| Family income (12-point scale)                                   | 11.0a | 11.0b |
| Place of residence<br>Central city                               | .170  | .377  |
| Suburb   | .270  | .444  |
| Other urban  | .410  | .492  |
| Rural  | .150  | .358  |
| South  | .320  | .468  |

a Median

b Range

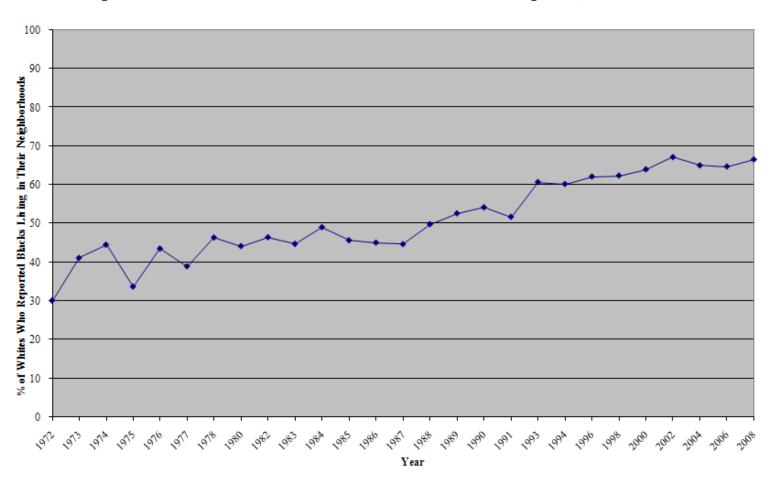


Figure 1. Rates of Whites' Perceived Black-White Residential Integration, GSS 1972-2008

Table 2. Logistic Regression Estimates Predicting Whites' Perceived Black-White Residential Integration, GSS 1972-2008

| Predictor          | Model    | 1     | Mode              | Model 2 |  |  |
|--------------------|----------|-------|-------------------|---------|--|--|
|                    |          | Odds  |                   | Odds    |  |  |
|                    | В        | ratio | В                 | ratio   |  |  |
| Year (Ref. = 1972) |          |       |                   |         |  |  |
| 1973               | .484***  | 1.623 | .733***           | 2.080   |  |  |
| 1773               | (.084)   | 1.023 | (.095)            | 2.000   |  |  |
| 1974               | .623***  | 1.865 | .911***           | 2.487   |  |  |
| 17/4               | (.083)   | 1.003 | (.094)            | 2.407   |  |  |
| 1975               | .167*    | 1.181 | .418***           | 1.519   |  |  |
| 1973               | (.085)   | 1.101 | (.096)            | 1.319   |  |  |
| 1976               | .583***  | 1.791 | .941***           | 2.562   |  |  |
| 1970               | (.083)   | 1.791 | (.094)            | 2.302   |  |  |
| 1977               | .394***  | 1.483 | .758***           | 2.134   |  |  |
| 1977               | (.083)   | 1.465 | (.095)            | 2.134   |  |  |
| 1978               | .698***  | 2.009 | 1.079***          | 2.940   |  |  |
| 1978               |          | 2.009 |                   | 2.940   |  |  |
| 1000               | (.082)   | 1 020 | (.094)<br>.973*** | 2 ( 15  |  |  |
| 1980               | .608***  | 1.838 |                   | 2.645   |  |  |
| 1002               | (.083)   | 2.015 | (.096)            | 2 217   |  |  |
| 1982               | .701***  | 2.015 | 1.168***          | 3.217   |  |  |
| 1002               | (.083)   | 1.002 | (.097)            | 2 007   |  |  |
| 1983               | .632***  | 1.882 | 1.032***          | 2.807   |  |  |
| 1004               | (.082)   | 2.226 | (.094)            | • • • • |  |  |
| 1984               | .805***  | 2.236 | 1.089***          | 2.970   |  |  |
| 100-               | (.084)   |       | (.097)            |         |  |  |
| 1985               | .669***  | 1.953 | 1.083***          | 2.954   |  |  |
|                    | (.083)   |       | (.096)            |         |  |  |
| 1986               | .646***  | 1.907 | .977***           | 2.657   |  |  |
|                    | (.084)   |       | (.097)            |         |  |  |
| 1987               | .629***  | 1.877 | .938***           | 2.555   |  |  |
|                    | (.085)   |       | (.098)            |         |  |  |
| 1988               | .836***  | 2.307 | 1.121***          | 3.068   |  |  |
|                    | (.084)   |       | (.098)            |         |  |  |
| 1989               | .948***  | 2.579 | 1.376***          | 3.961   |  |  |
|                    | (.083)   |       | (.098)            |         |  |  |
| 1990               | 1.010*** | 2.745 | 1.434***          | 4.196   |  |  |
|                    | (.086)   |       | (.101)            |         |  |  |
| 1991               | .911***  | 2.488 | 1.292***          | 3.639   |  |  |
|                    | (.084)   |       | (.098)            |         |  |  |

**Table 2. (Continued)** 

| Predictor                    | Model    | Model | Model 2   |       |  |
|------------------------------|----------|-------|-----------|-------|--|
|                              |          | Odds  |           | Odds  |  |
|                              | В        | ratio | В         | ratio |  |
| 1993                         | 1.278*** | 3.588 | 1.603***  | 4.966 |  |
|                              | (.084)   |       | (.098)    |       |  |
| 1994                         | 1.257*** | 3.513 | 1.628***  | 5.092 |  |
|                              | (.074)   |       | (.089)    |       |  |
| 1996                         | 1.338*** | 3.810 | 1.678***  | 5.354 |  |
|                              | (.075)   |       | (.090)    |       |  |
| 1998                         | 1.348*** | 3.850 | 1.718***  | 5.575 |  |
|                              | (.076)   |       | (.092)    |       |  |
| 2000                         | 1.418*** | 4.127 | 1.827***  | 6.212 |  |
|                              | (.076)   |       | (.093)    |       |  |
| 2002                         | 1.557*** | 4.745 | 1.972***  | 7.188 |  |
|                              | (.090)   |       | (.106)    |       |  |
| 2004                         | 1.461*** | 4.312 | 1.930***  | 6.892 |  |
|                              | (.090)   |       | (.106)    |       |  |
| 2006                         | 1.449*** | 4.260 | 1.841***  | 6.305 |  |
|                              | (.076)   |       | (.092)    |       |  |
| 2008                         | 1.530*** | 4.617 | 1.990***  | 7.319 |  |
|                              | (.082)   |       | (.099)    |       |  |
| Education                    |          |       | .022***   | 1.022 |  |
|                              |          |       | (.004)    |       |  |
| Age                          |          |       | 009***    | .991  |  |
|                              |          |       | (.001)    |       |  |
| Male                         |          |       | .094**    | 1.098 |  |
|                              |          |       | (.024)    |       |  |
| Currently married            |          |       | 087**     | .917  |  |
|                              |          |       | (.029)    |       |  |
| Children at home             |          |       | 002       | .998  |  |
|                              |          |       | (.032)    |       |  |
| Protestant                   |          |       | 078**     | .925  |  |
|                              |          |       | (.025)    |       |  |
| Church attendance            |          |       | 014**     | .986  |  |
|                              |          |       | (.005)    |       |  |
| Family income                |          |       | 034***    | .967  |  |
|                              |          |       | (.006)    |       |  |
| Residence (Ref. = Central ci | ty)      |       |           |       |  |
| Suburb                       |          |       | 551***    | .577  |  |
|                              |          |       | (.039)    |       |  |
| Other urban                  |          |       | -1.367*** | .255  |  |
|                              |          |       | (.037)    |       |  |

Table 2. (Continued)

| Predictor             | Model 1 | 1     | Model 2   |       |  |
|-----------------------|---------|-------|-----------|-------|--|
|                       |         | Odds  |           | Odds  |  |
|                       | В       | ratio | В         | ratio |  |
| Rural                 |         |       | -1.916*** | .147  |  |
|                       |         |       | (.046)    |       |  |
| South                 |         |       | .375***   | 1.454 |  |
|                       |         |       | (.026)    |       |  |
| Constant              | 848***  | .428  | .273**    | 1.314 |  |
|                       | (.061)  |       | (.100)    |       |  |
| -2 log likelihood     | 51,068  |       | 41,879    |       |  |
| Model χ <sup>2</sup>  | 1,649   |       | 4,946     |       |  |
| Pseudo R <sup>2</sup> | .057    |       | .181      |       |  |
| Degrees of freedom    | 26      |       | 38        |       |  |
| N                     | 38,047  |       | 34,035    |       |  |

Notes: The odds ratio is the antilog of the B, and standard errors are in parentheses.

Model 2, we add the following control variables: education, age, church attendance, family income, and dummy variables for male, currently married, children at home, Protestant, the South, and different types of residence. To accurately estimate the effect of year on the dependent variable, it is important to control these variables. Model 1 reveals that compared to respondents in 1972, the odds of whites living with blacks in the same neighborhood have gradually increased over time with fluctuations. For example, as the odds ratio suggests, respondents in 1973 were about 62.3 percent (1.623 - 1 = .623) more likely to report living with blacks in the same neighborhood than respondents in 1972. Respondents in 2008 were 4.6 times as likely as respondents in 1972 to report sharing the same neighborhood with blacks. Despite ups and downs, the overall trend was increasing residential integration. These results are consistent with the evidence shown in Figure 1. The pseudo R<sup>2</sup> (.057) indicates that year explains about 5.7 percent of the variance in the likelihood of perceived black-white residential integration.

In Model 2, the addition of the control variables to Model 1 increases the pseudo R<sup>2</sup> to .181, indicating that these variables together explain about 18 percent of the variance in the likelihood of perceived black-white residential integration. Model 2 fits the data better than Model 1 because the difference

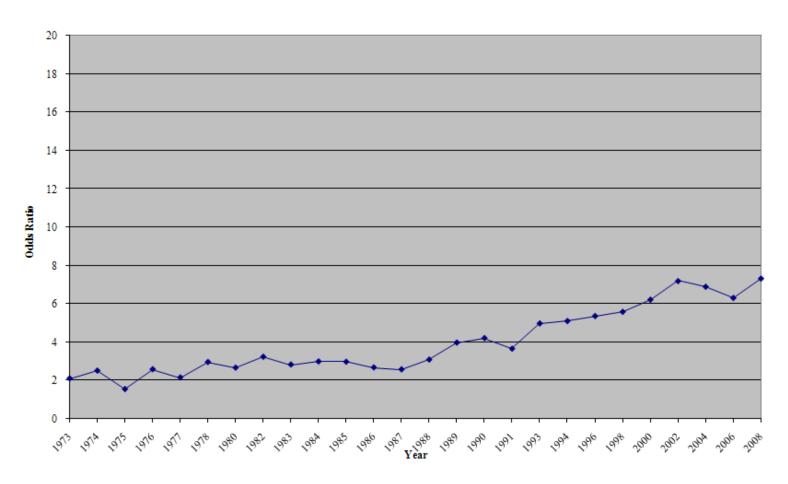
between the two models in Model  $\chi^2$  is 3,297, which is highly significant with a difference of 12 degrees of freedom. Figure 2 based on the odds ratios of the dummy variables for years in Model 2 shows that, controlling for education, age, sex, marital status, presence of children at home, religion, church attendance, family income, place of residence, and region, the odds of whites who reported living with blacks in the same neighborhood increased significantly from 1973 to 1982, leveled off or slightly decreased between 1983 and 1987, and rose more rapidly since 1988. The evidence is largely consistent with our second hypothesis.

#### Profiles of Whites Who Self-Reported Sharing Neighborhoods with Blacks

What types of whites are more or less likely to report sharing the same neighborhoods with blacks? Model 2 shows that as hypothesized, more educated whites are more likely to report living with blacks in the same neighborhood than less educated whites. For each year increase in education, the odds of whites' selfreports of living with blacks increase by 2.2 percent (1.022 - 1 = .022), holding other variables in the model constant. Older whites are less likely to do so than younger whites, confirming our hypothesis and the finding of previous studies. White men are about 10 percent more likely to do so than white women. As expected, whites who are currently married are less likely to report sharing the same neighborhood with blacks than whites who are not currently married. Whites who have children at home are slightly less likely to do so than whites who have no children at home, but the difference does not attain statistical significance at the .05 level. As anticipated, white Protestants are 7.5 percent less likely to report living with blacks in the same neighborhood than white non-Protestants. As expected, whites who attend church more frequently are slightly less likely to do so than whites who attend church less frequently. Consistent with our hypothesis, higher-income whites are less likely to share the same neighborhood with blacks than lower-income whites. For each level increase in family income, the odds of whites living with blacks decrease by 3.3 percent (.967) - 1 = -.033), controlling for other predictors. Compared to whites living in central cities, whites living in suburbs, other urban areas, and rural areas are less likely to share the same neighborhood with blacks, lending support to our hypothesis. In agreement with our hypothesis and prior studies, whites in the South are more likely to live with blacks in the same neighborhood than whites in other regions.

<sup>&</sup>lt;sup>6</sup> The negative relationship between family income and the likelihood of whites' self-reports of sharing the same neighborhood with blacks is unlikely to be the result of multicollinearity between education and family income. The Pearson's r for education and family income is only .365.

Figure 2. Odds Ratios Predicting Whites' Perceived Black-White Residential Integration, Controlling for Other Variables, GSS 1973-2008 (Reference Year=1972)



All of these results coincide with our hypotheses, except for the insignificant effect of presence of children at home.<sup>7</sup>

#### Regional Analysis

Findings of our analysis at the national level indicate that whites in the South were more likely than whites in other regions to report living in the same neighborhood with blacks. Has the South made faster progress in perceived black-white residential integration than other regions? How do different geographic regions vary in the rate and likelihood of perceived black-white residential integration over time? These questions call for further analysis.

Figure 3 displays trends in rates of perceived black-white residential integration by region. It is evident that in all four U.S. regions, the rate of perceived black-white residential integration has uniformly increased with fluctuations. The South saw the most dramatic increase from nearly 23 percent in 1972 to 75 percent in 2008, an increase of about 52 percent. This change in rate was about 22 percent higher than that of the Northeast, which increased from almost 35 percent in 1972 to about 65 percent in 2008. The Midwest showed an increase of about 35 percent from 1972 to 2008, whereas the rate of the West with the least amount of fluctuations increased by about 21 percent from 1972 to 2008.

Table 3 shows the odds ratios of logistic regression models predicting the likelihood of perceived black-white residential integration over time for each of the four regions. Each region has two models: Model 1 includes dummy variables for years, and Model 2 adds control variables minus region. For all four regions, Model 2 fits the data much better than Model 1. Both the model  $\chi^2$ 's and the pseudo R²'s for all the regions increase substantially from Model 1 to Model 2, suggesting that Model 2 in each case explains a great deal more variation in perceived black-white residential integration than Model 1. Figure 4 based on Model 2 of each region in Table 3 displays variations in the odds of whites' self-reports of living with blacks in the same neighborhood by region over time. Once again, controlling for other variables the South had experienced the most dramatic

<sup>&</sup>lt;sup>7</sup> In our preliminary analysis, we included political conservatism, an ordinal variable with seven categories (1 = extremely liberal, and 7 = extremely conservative), in Model 2. The result indicates that whites who are more conservative are significantly less likely to report living with blacks in the same neighborhood than whites who are less conservative. However, we removed this predictor from the final model presented here because the use of this variable would drop all cases in 1972 and 1973. We also included nativity (1 = foreign born, and 0 = U.S.-born) as a predictor in Model 2 since previous studies (Iceland 2009; Iceland and Scopilliti 2008) found that immigrants tended to have a higher level of residential segregation than the native-born. This variable turns out to have no significant effect on the dependent variable. More importantly, the inclusion of this predictor would exclude all cases from 1972 to 1976 since the nativity question was not asked prior to 1977. Hence, we dropped this variable from our final model. In both cases, the effects of other predictors remain essentially the same and will not change our conclusions.

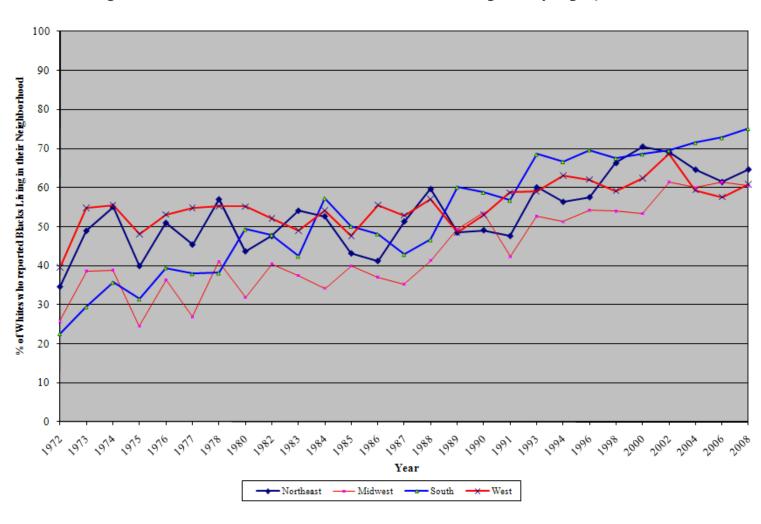


Figure 3. Rates of Whites' Perceived Black-White Residential Integration by Region, GSS 1972-2008

Table 3. Odds Ratios Predicting Whites' Perceived Black-White Residential Integration by Region, GSS 1972-2008

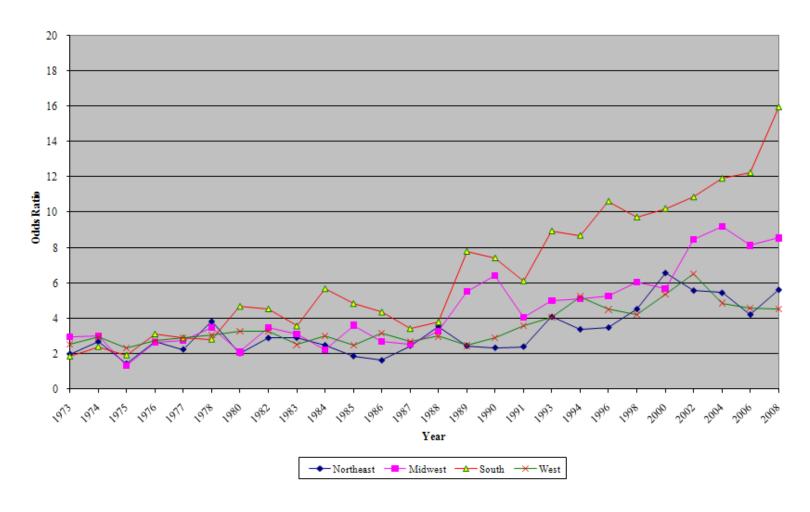
|               | Northeast |          | Midwest  |          | South     |           | West     |          |
|---------------|-----------|----------|----------|----------|-----------|-----------|----------|----------|
| Predictor     | Model 1   | Model 2  | Model 1  | Model 2  | Model 1   | Model 2   | Model 1  | Model 2  |
| Year (Ref. =1 | 972)      |          |          |          |           |           |          |          |
| 1973          | 1.812***  | 1.968*** | 1.813*** | 2.924*** | 1.433*    | 1.829**   | 1.850*** | 2.501*** |
| 1974          | 2.322***  | 2.667*** | 1.832*** | 3.007*** | 1.909***  | 2.377***  | 1.904*** | 2.930*** |
| 1975          | 1.255     | 1.412    | .936     | 1.300    | 1.579**   | 1.901***  | 1.414    | 2.305*** |
| 1976          | 1.966***  | 2.661*** | 1.645**  | 2.628*** | 2.236***  | 3.092***  | 1.728**  | 2.711*** |
| 1977          | 1.573**   | 2.223*** | 1.060    | 1.712**  | 2.098***  | 2.876***  | 1.854*** | 2.884*** |
| 1978          | 2.511***  | 3.809*** | 2.007*** | 3.483*** | 2.117***  | 2.795***  | 1.886*** | 3.028*** |
| 1980          | 1.466**   | 2.010*** | 1.349    | 2.079*** | 3.341***  | 4.658***  | 1.877*** | 3.262*** |
| 1982          | 1.715***  | 2.875*** | 1.955*** | 3.467*** | 3.160***  | 4.509***  | 1.659**  | 3.262*** |
| 1983          | 2.230***  | 2.884*** | 1.727*** | 3.078*** | 2.533***  | 3.548***  | 1.465*   | 2.497*** |
| 1984          | 2.104***  | 2.464*** | 1.498**  | 2.222*** | 4.608***  | 5.660***  | 1.802**  | 3.010*** |
| 1985          | 1.435*    | 1.846**  | 1.918*** | 3.595*** | 3.444***  | 4.813***  | 1.389    | 2.463*** |
| 1986          | 1.325     | 1.605*   | 1.697*** | 2.700*** | 3.184***  | 4.335***  | 1.908*** | 3.156*** |
| 1987          | 1.995***  | 2.441*** | 1.571**  | 2.507*** | 2.579***  | 3.400***  | 1.713**  | 2.671*** |
| 1988          | 2.800***  | 3.526*** | 2.031*** | 3.271*** | 3.001***  | 3.771***  | 2.029*** | 2.969*** |
| 1989          | 1.781***  | 2.432*** | 2.797*** | 5.491*** | 5.169***  | 7.771***  | 1.436*   | 2.445*** |
| 1990          | 1.824***  | 2.320*** | 3.310*** | 6.399*** | 4.899***  | 7.399***  | 1.727**  | 2.870*** |
| 1991          | 1.718***  | 2.383*** | 2.111*** | 4.059*** | 4.501***  | 6.097***  | 2.174*** | 3.586*** |
| 1993          | 2.850***  | 4.076*** | 3.198*** | 4.974*** | 7.486***  | 8.928***  | 2.192*** | 4.054*** |
| 1994          | 2.446***  | 3.367*** | 3.027*** | 5.099*** | 6.855***  | 8.676***  | 2.610*** | 5.219*** |
| 1996          | 2.567***  | 3.467*** | 3.409*** | 5.235*** | 7.876***  | 10.612*** | 2.497*** | 4.491*** |
| 1998          | 3.730***  | 4.514*** | 3.376*** | 6.046*** | 7.152***  | 9.715***  | 2.212*** | 4.216*** |
| 2000          | 4.535***  | 6.565*** | 3.296*** | 5.669*** | 7.495***  | 10.204*** | 2.539*** | 5.348*** |
| 2002          | 4.223***  | 5.566*** | 4.594*** | 8.437*** | 7.800***  | 10.850*** | 3.361*** | 6.510*** |
| 2004          | 3.459***  | 5.439*** | 4.313*** | 9.199*** | 8.612***  | 11 908*** | 2.231*** | 4.854*** |
| 2006          | 3.018***  | 4.203*** | 4.570*** | 8.110*** | 9.198***  | 12.223*** | 2.074*** | 4.554*** |
| 2008          | 3.467***  | 5.607*** | 4.404*** | 8.529*** | 10.364*** | 15.944*** | 2.377*** | 4.500*** |

Table 3 (Continued)

|                       | Northeast       |          | Mic     | Midwest  |         | South   |         | West     |  |
|-----------------------|-----------------|----------|---------|----------|---------|---------|---------|----------|--|
| Predictor             | Model 1         | Model 2  | Model 1 | Model 2  | Model 1 | Model 2 | Model 1 | Model 2  |  |
| Education             |                 | 1.033*** |         | 1.060*** |         | 1.007   |         | 1.017    |  |
| Age                   |                 | .992***  |         | .993***  |         | .992*** |         | .986***  |  |
| Male                  |                 | 1.028    |         | 1.066    |         | 1.136** |         | 1.161**  |  |
| Currently marrie      | đ               | .904     |         | .864**   |         | .911    |         | 1.044    |  |
| Children at home      |                 | 1.074    |         | .997     |         | .913    |         | 1.057    |  |
| Protestant            |                 | .909     |         | 1.011    |         | .838*** |         | 1.021    |  |
| Church attendand      | ce              | .988     |         | .968***  |         | 1.001   |         | .995     |  |
| Family income         |                 | .982     |         | .950***  |         | .978*   |         | .950***  |  |
| Residence (Ref. :     | = Central city) |          |         |          |         |         |         |          |  |
| Suburb                |                 | .412***  |         | .517***  |         | .836*   |         | .539***  |  |
| Other u               | rban            | .225***  |         | .246***  |         | .342*** |         | .189***  |  |
| Rura1                 |                 | .125***  |         | .065***  |         | .318*** |         | .147***  |  |
| Constant              | .528***         | 1.422    | .347*** | .988     | .292*** | .945    | .655**  | 2.583*** |  |
| -2 log likelihood     | 10,761          | 8,688    | 13,902  | 11,027   | 15,855  | 13,232  | 9,800   | 8,168    |  |
| Model χ <sup>2</sup>  | 283             | 855      | 524     | 1,947    | 1,124   | 1,691   | 97      | 886      |  |
| Pseudo R <sup>2</sup> | .046            | .155     | .065    | .249     | .116    | .193    | .018    | .168     |  |
| df                    | 26              | 37       | 26      | 37       | 24      | 37      | 26      | 37       |  |
| N                     | 7,698           | 6,722    | 10,638  | 9,613    | 12,400  | 10,963  | 7,311   | 6,737    |  |

<sup>\*</sup>  $p \le .05$  \*\*  $p \le .01$  \*\*\* $p \le .001$ 

Figure 4. Odds Ratios Predicting Whites' Perceived Black-White Residential Integration by Region, Controlling for Other Variables, GSS 1973-2008 (Reference Year=1972)



increases in the likelihood of perceived black-white residential integration since the late 1980s, whereas other regions had witnessed much slower increases in the integration than the South. The accelerated increases in the likelihood of residential integration in the South vis-à-vis other regions suggest that socioeconomic and demographic variables mediate the relationship between year and the likelihood of perceived black-white residential integration and that whites with the same socioeconomic and demographic characteristics in the South had been more likely to live with blacks in the same neighborhood than their counterparts in other regions.

The effects of the control variables in Model 2's of Table 3 remain largely similar to those in Table 2. In all four regions, educated whites are more likely to report sharing the same residential neighborhood with blacks than less-educated whites, but the effect of education on the dependent variable is only significant for the Northeast and the Midwest. Older whites are significantly less likely to do so than younger whites across all regions. White men are more likely than white women to report living in the same neighborhood with blacks, but this gender difference is only significant in the South and the West. Presence of children at home makes no significant difference in whites' self-reports of living with blacks in the same neighborhood. Whites with a higher family income are less likely to report living with blacks in the same neighborhood than whites with a lower family income, and this income effect is significant in all regions except for the Northeast. Uniformly, whites living in suburbs, other urban areas, and especially rural areas are a great deal less likely to report sharing the same neighborhood with blacks than whites residing in central cities. The effects of other predictors are somewhat less uniform. Being currently married decreases the likelihood of whites' self-reports of living with blacks in the same neighborhood in three of the four regions, but is significantly only in the Midwest. Being Protestant significantly reduces the likelihood of perceived black-white residential integration only in the South. Church attendance has a negative effect on perceived black-white residential integration in three of the four regions, but is significant only in the Midwest.

#### CONCLUSION

Our main finding is that at the national level, the rate and likelihood of whites' self-reports of sharing the same residential neighborhood with blacks had continuously increased from 1972 to 2008. Our regional analyses further confirm that the rates of whites' self-reports of living with blacks in the same residential neighborhood had risen in the same period uniformly across regions with the South making the greatest strides and that, controlling for other variables, the

likelihood of whites' perceived black-white residential integration had increased dramatically in the South since the late 1980s and relatively slowly in other regions. In addition, more educated whites, white men, and Southern whites are more likely to report sharing the same neighborhood with blacks than less educated whites, white women, and non-Southern whites, respectively. Whites who are older, have a higher income level, attend church more frequently, are Protestant, and are currently married are less likely to report living with blacks in the same neighborhood than their respective white counterparts. Whites residing in suburbs, small towns, and rural areas are less likely to report so than whites living in central cities. Having children at home has no significant effect on such reporting.

Our findings based on whites' self reports at the individual level largely cross-validate the findings of prior studies based on aggregate data at the tract and block-group levels that black-white residential segregation had declined from 1970 to 2000 (Farley and Frey 1994; Frey and Myers 2005; Iceland, Weinberg, and Steinmetz 2002; Logan, Stults, and Farley 2004; Massey and Denton 1987, 1993). Our findings hint that the picture of black-white residential segregation may not be that gloomy. Our data indicate that more and more whites had been sharing the same neighborhood with blacks and that the pace of this black-white residential integration appeared to have accelerated since the late 1980s. Our results are consistent with findings of some recent residential integration studies using aggregate-level data (Ellen 1998, 2000; Fasenfest, Booza, and Metzger 2004; Maly 2005) that despite far from being common, stable, and robust, racial/ethnic integration in residential neighborhoods (including black-white residential integration) has been happening across America. We believe that this integration is the result of anti-discrimination legislation, changing racial attitudes, growth of the black middle class, construction of new housing, and the pro-integration movement. Racially and ethnically integrated neighborhoods do exist and grow. Because of immigration and globalization, racial and ethnic transformations in the United States may lead to new types of integrated multiracial and multiethnic communities (Friedman 2008; Maly 2005). A more racially and ethnically integrated America is possible in the 21<sup>st</sup> century. The election of Barack Obama as the 44th president of the United States is a harbinger to that prospect.

Our result of increasing whites' perceived black-white residential integration corroborates the finding of previous studies that the percentage of whites supporting the rights of whites to practice housing segregation has declined sharply (Kluegel 1990; Schuman, Steeh, and Bobo 1997). Furthermore, this finding may suggest that whites' endorsement of black-white integration in principle may be followed by an actual change in their behavior, such as choosing to live in more integrated neighborhood. This finding challenges the argument

that although whites in principle agree that blacks are equal, their behavior (e.g., residential choice, school choice) may not necessarily reflect the treatment of blacks as equal and the support for racial integration (Sikkink and Emerson 2008).

Our results also suggest that change in whites' perceived black-white residential integration may not pace the same over time. The acceleration in the rate and likelihood of whites' perceived black-white residential integration since the late 1980s detected in our study appears to lend credence to this claim. This also suggests that the use of more continuous data rather than decennial census data may be a useful analytical strategy.

In addition, our findings suggest that education is a positive force that can increase black-white residential integration, but family income, age, church attendance, being Protestant, and being currently married among whites operate in the opposite direction. Presence of children at home makes no significant difference in whites' perceived black-white residential integration. Our result of a gender difference in whites' self-reports of sharing the same neighborhood with blacks is in agreement with Schuman, Steeh, and Bob's (1997) finding that men are more liberal than women in more intimate areas of racial contact despite their high degree of conservatism than women on racial attitudes related to racial inequality.

The findings of our regional analyses reveal that, unlike what most lay people normally expect based on its past history and tradition, the South has been changing in whites' perceived black-white residential integration perhaps partly because of in-migration and social transformations in the last several decades and partly because of declines in antiblack prejudices and the "Southern subculture" (Firebaugh and Davis 1988; Giles and Evans 1985). The fact that the South had gone through the greatest increases in whites' perceived black-white residential integration in more recent decades compared to other regions offers some partial evidence. Words of caution are in order here. The greatest progress in whites' perceived black-white residential integration in the South could be due to the possibility that simply higher proportions of blacks in the South increase the likelihood of living together between blacks and whites. Furthermore, our measure of black-white residential integration only gauges if blacks and whites live in the same neighborhood, but it does not consider neighborhood racial composition.

Hence, in order to fully understand trends in perceived black-white residential integration at the individual level, additional measurements in the GSS that can gauge the extent of black-white neighborhood sharing are called for. Blacks' self reports of whites living in their neighborhoods may also be used to verify whites' self reports of blacks living in their neighborhoods if such data become available. Future research may further pursue individual-level analyses of multiracial or multiethnic residential integration.

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