Was William Julius Wilson Right? Examining Black Residential Outcomes by Income, 1960 & 2000[1]

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Abstract

Focusing on William Julius Wilson's *out-migration thesis*, the aim of this study is to determine if the residential outcomes of stable working- and middle- income blacks follow Wilson's predictions for five cities in 1960 and 2000.First, individual-level attainment models are estimated using 1960 and 2000 Census data to evaluate how income and race contribute to the disparity in residential contact with whites between blacks and whites. Second, aggregate-level unevenness and exposure measures are computed for 1960 and 2000 to examine how segregation by race and income varies over time. Findings reveal that at the individual-level, income has a positive effect on white-black contact; however race has more of an impact in shaping segregation over time. At the aggregate-level, on average, middle- and upper-class blacks live in more economically stratified and integrated neighborhoods compared to previous decades.

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Race and class have played a significant role in black residential outcomes throughout U.S. history. Several race-class factors contribute to black neighborhood outcomes, including but not limited to, white prejudice/avoidance (Charles 2003; Ellen 2000; Quillian 2002), class differentiation (Jargowsky 1996, 1997; Wilson 1978, 1987, 2009, 2011), in-group preference (Bobo and Zubrinsky 1996), extra-legal discrimination (Massey and Denton 1993), and legal discrimination (Farley, Fielding, and Krysan 1997). With the exclusion of the latter, there is unanimity of opinion by scholars that these factors currently play a role in white-black segregation.

Regarding class differentiation, William Julius Wilson developed the controversial *out-migration thesis*, asserting that the impact of race in shaping residential outcomes for blacks is diminishing while the role of class is increasing. In other words, institutional interventions (e.g., the Civil Rights Movement) coupled with black upward mobility decreases the relative and absolute saliency of race in black residential outcomes. If Wilson's prediction is correct, class has a growing importance for determining black life chances.

Since the advancement of the out-migration thesis, numerous scholars support Wilson's notion that non-poor blacks (e.g., working- , middle-, and upper-class) are living in improved neighborhood outcomes compared to poor blacks (Adelman 2005; Alba, Logan, and Stults 2000; Jargowsky 1997; Logan and Stults 2011; Logan 2011; Spivak, Bass, and John 2011; Spivak and Monnat 2013). For instance, Spivak, Bass and John (2011) found that affluent black households live in neighborhoods that have, on average, equal number of blacks and whites. Conversely, several researchers have claimed to provide evidence that refutes Wilson's

hypothesis, suggesting that blacks are unable to translate capital gains into better neighborhood outcomes (Feagin and Sikes 1994; Massey and Denton 1993; Massey, Gross, and Shibuya 1994; Niemonen 2002; Pattillo-Mccoy 2000a, 2000b; South and Crowder 1998). For instance, Massey and Denton (1993) contend that whether matched or unmatched on income, blacks and whites do not reside in the same neighborhood. While Massey and Denton's results challenge aspects of black upward mobility and spatial assimilation, their findings do not refute Wilson's argument, such as working- and middle-class blacks are moving into "higher income neighborhoods in other parts of the city and to the suburbs" (Wilson 1987:7).

Using Massey and Denton (1993) study as an example, should researchers only interpret "higher income neighborhoods…" as contact with whites? I argue that black residential mobility can also be interpreted by race and class, because movement from low-income, ghetto[2] neighborhoods into neighborhoods with higher socioeconomic standing and resources is improvement in residential outcomes--a major component of Wilson's hypothesis. Assessing black residential mobility only with whites by income restricts the notion of black upward mobility too narrowly. Thus, a fairer assessment of Wilson is to evaluate residential mobility in terms of both improvements in socioeconomic position as well as contact with whites.

The purpose of this paper is to test Wilson's out-migration thesis to investigate the role income has on black residential outcomes in 1960 and 2000. The beginning of the period, 1960 is an ideal baseline to examine residential segregation and contact because it reflects the impact of Jim Crow in the South and *de facto* segregation in the North predating the Civil Rights era. Moreover, examining residential outcomes over a larger time span is a critical component of Wilson's thesis, which several of Wilson's longstanding opponents have overlooked. There is little research that examines the interplay between race and class before 1970 (see Fischer et

[2] A ghetto is defined as a neighborhood with a high concentration of low-income minority residents. In this paper, ghetto, inner-city, and urban core are used interchangeably.

al. 2004) due to data limitations, such as issues with race comparability with earlier Census data. By making appropriate adjustments, I am able to examine Wilson's arguments at multiple points in time. To fairly assess Wilson, I have identified three elements where some or all components must take place in the out-migration hypothesis (1) middle- and upper-income blacks have more contact with whites over time, (2) working- and middle-income blacks are residing in higher income neighborhoods over time, (3) working- and middle-income blacks are experiencing less contact with low income blacks over time. For this working paper, components 1 and 3 are tested at the individual- (component 1) and aggregate-level (component 1 and 3) for 5 cities using 1960 and 2000 data.

Background of Wilson's Thesis

In the books the *Declining Significance of Race* in 1978 (hereafter, DSR), and *The Truly Disadvantaged* in 1987 (TTD), Wilson proposes a broad conceptual framework where structural and individual processes exacerbate black concentrated poverty within the inner-city. In DSR, Wilson discusses the sociohistorical relationship between the polity and the economy and how it directly relates to U.S. race relations (Wilson 1978, 2011). Focusing on three points in time, pre-industrial/post-antebellum period, industrial period, and modern industrial period, Wilson illustrates how the state and the economy oppressed and in some cases, improved the circumstances for some blacks. For instance, in the pre-industrial/post-antebellum period, Wilson characterizes this period where race relations were driven by economic means, which in turn led to racial inequality. In the modern industrial period, Wilson depicts this era as a transitional period where previous racial oppression is attenuated through institutional changes. As a result, a segmented portion of blacks experience upward mobility through advancements in education and occupational differentiation. Further, the black community becomes economically bifurcated by social class which has deleterious implications for the poor. By this virtue, Wilson contends that previous racial oppression felt by all blacks is now an economic oppression faced

by poor blacks. In other words, social class (while not discrediting the role of race) has a growing importance in black lives.

Building on of DSR, TTD focuses on how economic and spatial changes worsen black concentrated poverty. Economically, Wilson contends that deindustrialization of manufacturing to service sector jobs created a spatial and skillset mismatch for inner-city black residents. Since Wilson's urban economy prediction, numerous empirical studies have generally supported his position (Bound and Holzer 1993; Gobillon, Selod, and Zenou 2003; Jargowsky 1997; Kasarda 1989; O'Connor, Tilly, and Bobo 2001; Quillian 2003; Simpson 2000; Stoll, Holzer, and Ihlanfeldt 2000). Using Census data from 1950-1990, Quillian (2003) confirms Wilson's prediction showing that over time, low-income black tracts doubled their rates of unemployment among working-age men. It should be noted, that I am not testing Wilson's prediction about changes in the urban economy in this paper.

Spatially, Wilson reports that before the Civil Rights and Fair Housing Acts, blacks (regardless of income level) co-resided in the same neighborhoods together. Having ambitions of making out of the ghetto to gain access to better quality housing, discriminatory barriers created and maintained a dual housing market that limited working- and middle-class blacks' ability to realize these goals. Following the Civil Rights Movement, occupational differentiation and educational advancements aided the out-migration of working- and middle-class blacks into other parts of the city. Poor blacks became socially dislocated, and as a result are exposed to joblessness, teenage pregnancy, crime, welfare dependency, school dropout, and declines in municipal services. In other words, a lack of normative reinforcement (due to the out-migration of non-poor blacks) coupled with decentralization of the urban economy, increased and perpetuated "the culture of poverty" within the inner-city. Since positing the spatial hypothesis, several empirical studies have largely supported Wilson's notion (Fernadez and Harris 1992; Jargowsky 1997; Massey and Denton 1993; Rankin and Quane 2000; Shihadeh and Flynn

1996). Testing the link between neighborhood poverty and social isolation, Rankin and Quane (2000) find that black residents of poorer neighborhoods had fewer friends who were stably employed, college educated, and more friends on public assistance than black residents of middle-class neighborhoods.

To review, the out-migration thesis indicates that following institutional changes and upward mobility, working- and middle-class blacks experienced better neighborhood outcomes in comparison to poor blacks. In TTD, Wilson characterizes residential outcomes of the black working- and middle-class by the following description:

> The exodus of black middle-class professionals from the inner city has been increasingly accompanied by the movement of stable working-class blacks to higher-income neighborhoods in other parts of the city and to suburbs (Wilson 1987:143).

White-Black Segregation by Income

Many scholars have investigated whether higher socioeconomic status increases white-black co-residency (Adelman 2004, 2005; Logan and Stults 2011; Massey and Denton 1993; Massey and Eggers 1990; Massey and Fischer 1999; Sharp and Iceland 2013; Spivak et al. 2011; Spivak and Monnat 2013). Research by Massey and Fischer (1999) examines the role income has on residential outcomes for blacks, Hispanics, and Asians relative to whites. Compared to Hispanics and Asians, the authors show white-black segregation across all income levels is substantially higher. Conversely, a study by Spivak and Monnat, (2013) indicates a positive relationship between black residential outcomes and SES. Using unevenness and exposure measures of segregation, the authors argue that black households with higher household income live in neighborhoods with a greater presence of whites while experiencing less contact to other blacks. A study by Logan and Stults (2011) indicates that metropolitan areas are less segregated and more diverse compared to previous decades. Focusing on white-black segregation, the authors note that segregation remains high, albeit declining slowly over time. Despite institutional changes and reaching income parity to whites,

the authors signal that systemic racism is the primary reason why white-black segregation remains high relative to white-Hispanic and white-Asian segregation.

Critics of Wilson's Thesis

Following the publication of DSR and TTD, scholars have critiqued the out-migration thesis (Massey and Denton 1993; Niemonen 2002; Pattillo 2005; Pattillo-Mccoy 2000b). Among those who have done so, their findings do not directly challenge Wilson's prediction. In the book *American Apartheid* (1993), Massey and Denton report two flaws with Wilson's thesis. First, the authors contend that the out-migration of working- and middle-class blacks from the inner-city did not exacerbate the social isolation of low income blacks. Instead, the authors posit static white-black segregation coupled with rising poverty inevitability produced concentrated poverty in the ghetto rather than black upward mobility. However, Jargowsky and Bane (1991) and Jargowsky (1997) show that selective out-migration of non-poor blacks is a contributor of ghettoization patterns in several metropolitan areas.

Second, Massey and Denton question Wilson's findings on the residential outcomes of non-poor blacks. Instead of Wilson's prediction that working- and middle-class blacks achieve improved neighborhood outcomes (relative to poor blacks), the authors argue that on average, non-poor blacks are not living in neighborhoods that are comparable to non-poor whites, Hispanics, and Asians. While Massey and Denton's findings are supported by previous research that compared to whites, blacks tend to have more inferior residential outcomes (Galster and Keeney 1988; Galster 1987, 1991; Logan and Schneider 1984), their findings do not contradict the out-migration thesis. In one sense, movement from a low-income, ghetto neighborhood to a higher income neighborhood (regardless of race) can be considered improved residential outcomes.

Similar to Massey and Denton, Niemonen (2002) contends that working- and middle-class blacks are unable to convert SES into co-residency with whites. According to Niemomen, the most affluent blacks are only able to translate their SES into neighborhoods where the poorest of whites are accustomed to: higher crime, less access to municipal services, and unattractive environs. In a similar vein about my assessment of Massey and Denton's findings, Niemonen's arguments do not contradict Wilson's hypothesis. In his books, Wilson is not specific about whether working- and middle-class blacks live with whites when holding income constant. Instead, Wilson states that non-poor blacks move into "higher income neighborhoods in other parts of the city and to the suburbs" (1978:7). In other words, Wilson focuses on improved conditions for working- and middle-income relative to poor blacks, while critics are instead testing whether they achieve parity with whites (with similar income).

Research by Pattillo-McCoy (2000a) reevaluates the socioeconomic advances of the black middle class and how it translates into residential outcomes. Drawing on various methods (ethnography, historical data, and Census data) for the analysis, Pattillo-McCoy points out faults with Wilson's out-migration thesis. For instance, instead of a mass exodus of middle-income blacks, Pattillo-McCoy argues growth among the black middle class following WWII has a spatial corollary resulting in a ghetto expansion. As a result, working- and middle-class blacks residing in neighborhoods abutting the ghetto are reabsorbed back into the ghetto.

To evaluate Pattillo-McCoy's findings, it's generally understood in segregation literature areas outside of the ghetto (per central city) are considered the suburbs(Frey and Kobrin 1982; Frey 1978, 1985; Hobbs and Stoops 2002; South and Crowder 1997).Moreover, previous black suburbanization research indicates blacks are moving further away from the ghetto compared to previous decades(Clay 1979; Galster 1991; Rose 1976; Schneider and Phelan 1993). Granted, blacks are moving into "turnover tracts" (see Smith 1991). Although Pattillo-McCoy shows that middle class black neighborhoods in Chicago are spatially contiguous with the poorer ghetto

neighborhoods, a more comprehensive study is needed to test whether they experience improved conditions relative to poor blacks, and more so than they did in the past.

Individual-level Hypotheses

To test the out-migration thesis at the individual-level, I measure the extent to which race and income contributes to the disparity in residential contact with whites between blacks and whites. Specifically, I evaluate how much of a role race and income has on residential contact and how it varies over time through standardization and decomposition techniques. To conduct the analysis, locational attainment models are used in both periods. I predict the following hypotheses:

Hypothesis 1: Blacks with higher levels of income will have greater levels of residential contact with whites in both 1960 and 2000.

Hypothesis 2: Income has an increasing effect on white-black individual residential contact over time; however race still plays a role and acts as a barrier for full integration in both 1960 and 2000.

Aggregate-level Hypotheses

At the city-level, I examine patterns of segregation and contact between whites and blacks grouped by income level (per Iceland and Sharp 2013). For example, I group whites and blacks by income quintile and examine contact (using P*) and segregation (using the dissimilarity index) patterns of working- and middle-class blacks from whites at different income levels. I assess change by comparing segregation and contact scores in 1960 and 2000 to determine whether working- and middle-class blacks are experiencing less contact (more segregation) to poor blacks and more contact (less segregation) to whites across metropolitan areas over time. I predict the following hypotheses:

Hypothesis 3: Over time, working- and middle-, and upper-class blacks are experiencing higher levels of segregation (and less contact P*) from poor blacks.

Hypothesis 4: Over time, middle- and upper-class blacks experience lower levels of residential segregation (and more contact P*) to whites.

Data and Methods

Data

For both analyses, I use data from the 1960 and 2000 Censuses. 1960 is selected because Wilson identifies this year as the start of social change and the beginning of residential mobility of working- and middle-class blacks. Moreover, I selected the 1960 Census because it predates the Civil Rights Movement. 2000 is selected to represent the current state of residential outcomes. 2010 Census is not included because the Census no longer asks about income of a large subsample, thus potential comparability issues with the 1960 Census. Note the sample sizes across datasets vary. In 1960 Census, the sample captures 25% (1 in 4) of the population. In 2000 Census, the sample captures 17% (1 in 6) of the population.

Comparability Issues with 1960 Census Data

Historical accounts from the Office of Management and Budget (OMB) indicate prior to the 1970 Census, summary files on minority and ethnic populations were tabulated in a different manner compared to later Censuses (e.g., 2010 Census). Regarding minorities, the 1960 Census aggregated blacks with other nonwhites in the race by income summary tables. In other words, the 1960 housing and population estimates for blacks are tabulated with other minorities groups (e.g., American Indian and Asian). As a result, researchers have shied away from using earlier censuses for segregation analysis. To ensure race comparability over time, I include cities where 95% of the total population is black from the nonwhite category in 1960. Cities that do not meet this cut-off (e.g., Oklahoma City, OK) are excluded from the analysis.

Regarding the Hispanic population, the 1960 Census tabulates persons by Spanish or Puerto Rican origins. Under 1960 Census definition, to be classified as Spanish origin means

the individual or household has a Spanish surname and/or foreign born. It should be noted that Census only tabulated (at the tract-level) the white population with a Spanish surname in five southwestern states: Texas, Arizona, Colorado, California, and New Mexico. To be classified as Puerto Rican means the individual or household has Puerto Rican parentage or born in Puerto Rico. This crude method of ethnic classification can be problematic for segregation analysis at different time periods because the Spanish origins population is not strictly limited to five states in 1960.

Geography

For the individual and aggregate-level of analysis, a census tract is the micro-level unit of analysis. A census tract is a geographic level that has a population ranging from 1,200 to 8,000 individuals and is described as a relatively homogenous entity in terms of population, economic, and living conditions (Anon 2012). The macro-level unit of analysis is a metropolitan statistical area (MSA). A MSA is a geographic entity that contains at least 50,000 inhabitants. Since I am comparing cities over time, shifts in geographical boundaries can occur which can negatively affect substantive findings. To avoid potential issues, I am employing decade-specific boundary definitions in 1960 and 2000 (per Burr, Galle, and Fossett 1990).

Individual-Level Method

To test whether blacks experience more contact to whites by income, I use locational attainment models. Developed by Alba and Logan (1991), a locational attainment model allows researchers to connect individual level characteristics (e.g., income, educational attainment) to the aggregate (e.g., metropolitan statistical area). By doing so, the model eliminates ecological inferences (using aggregate-level data to make inferences about individuals) and multicollinearity (Alba and Logan 1991; Charles Zubrinsky 2006; Massey and Denton 1985). Previous studies using locational attainment models have examined proportion of non-Hispanic

whites in neighborhoods (Alba and Logan 1991, 1993) poverty rates, female-headed households, educational attainment(Adelman et al. 2001), median household income (Alba et al. 2000; Charles 2003; Woldoff 2008), property value, and homeownership (Alba and Logan 1992; Freeman 2008). To employ this method, I disaggregate 1960 and 2000 tract-level Census tabulations to create individual-level microdata files.

The statistical technique I use in this paper is fractional logit regression. Primarily used in economic research, fractional logit regression is starting to grow in segregation research. Unlike ordinary least squares (OLS), fractional logit produces coefficients that are bounded on a 0 to 1 logit curve, thus an appropriate choice for regression analysis.

Standardization and Decomposition Analysis of Locational Attainment

The standardization analysis consists of applying the white income means and white coefficients separately and then together to the black equation. The resulting predicted outcomes can then be compared to measure the group's average residential attainment that would change assuming blacks have the same group means as whites or their rates of return. Standardization procedure produces answers to the following questions: (1) how much white contact do blacks have if they have same income as whites? (2) how much white contact do blacks have if they could convert their income at the same rate as whites? The relevant standardization equations are:

$$(1)\ Y_b = b_{b0} + (b_{b1} * x_{b1}) + (b_{b2} * x_{b2})$$

$$(2)\ Y_b = b_{b0} + (b_{b1} * x_{w1}) + (b_{b2} * x_{w2})$$

$$(3)\ Y_b = b_{w0} + (b_{w1} * x_{b1}) + (b_{w2} * x_{b2})$$

$$(4)\ Y_b = b_{b0} + (b_{w1} * x_{w1}) + (b_{w2} * x_{w2})$$

Where equation (1) is the original equation for blacks with black group means and rates of return, equation (2) calculates the predicted contact blacks would have with whites if subjected to the white group means on the independent variable, equation (3) calculates predicted contact with white when blacks are subjected to white rates of return, and equation (4) calculates predicted contact when blacks are subjected to both the white group means and the white rates of return. Note the equation (1) replicates the black mean on residential contact and equation (4) reproduces the white mean on these same residential outcomes. The difference between the two group means yields the city-level segregation score. Figure 1 provides a visual illustration of standardization procedures described above.

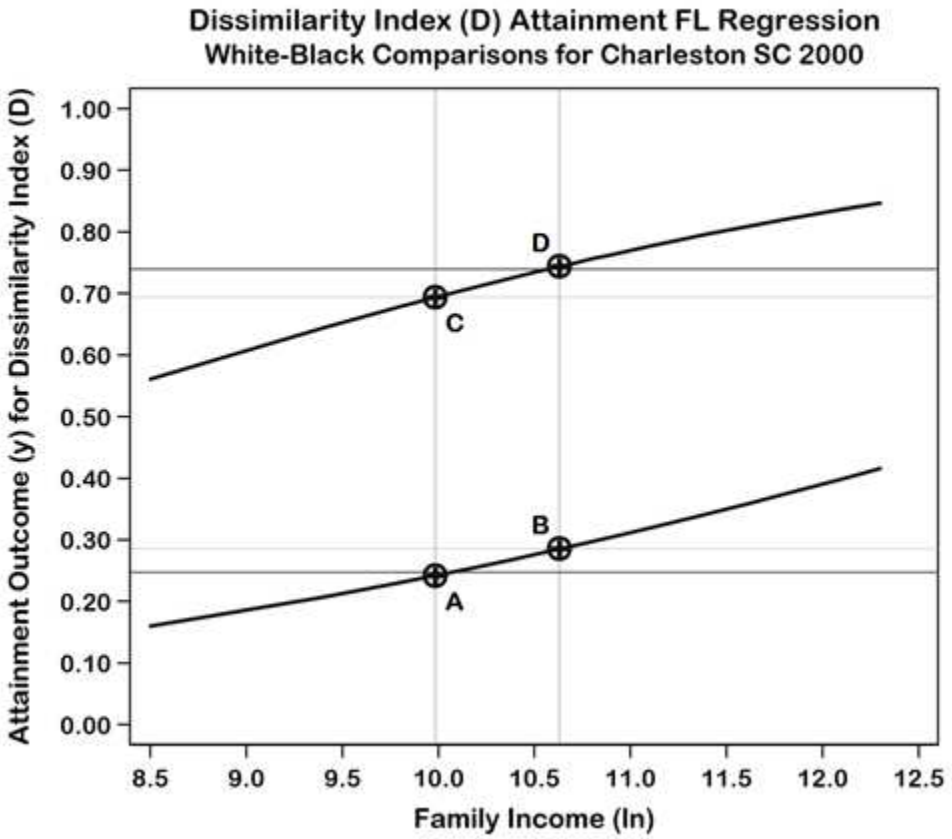

Figure 1 Standardization of locational attainment for the dissimilarity index where (a) black group means and black rates of return, (b) white group means and black rates of return, (c) black group means and white rates of return, and (d) white group means and white rates of return.

The final step of the individual-level study is the decomposition analysis. In the decomposition analysis I take the predicted outcomes from standardization procedure and assess the separate contributions that the differences in income and rate of return have on overall group different in average contact with whites. In other words, results from the analysis indicate the role race and income has on individual residential outcomes.

The decomposition analysis consist of four components: rates of return component by group membership (intercepts), mean component, rates of return component by slopes, and joint/interaction component. Rates of return by intercepts can be interpreted as the difference of residential outcomes due to group membership. Mean component can be interpreted as the amount by which the two groups' difference in residential contact would be decreased (or increased) if the blacks had the same means on the independent variable (e.g. same income as the whites, but retained their own conversion rates). Rates of return by slopes can be interpreted as the amount by which the two groups' difference in residential contact would be decreased (or increased) if the blacks had the same conversion rates as the whites, but retained their mean values on the independent variable. Joint/interaction is the collinearity between differences in slopes and differences in means on the independent variable.

Dependent Variable

The dependent variable used to investigate individual-level analyses of locational attainment model is percent contact with whites via "pair-wise" contact. Pair-wise contact refers to a two group comparison where individual residential outcomes determine uneven distribution. Thus, the dependent variable measures the group average in the proportion of each group who lives in neighborhoods at or above parity.

Linking individual processes which ultimately give rise to city-level distributions, I aggregate locational attainment outcomes to create a summary score that is equivalent to the

dissimilarity index (see Fossett, Forthcoming). Aggregated residential outcomes can be formulated in a common difference of means framework where index values can be obtained from:

$$D = (Y_1 - Y_2)$$

Where

D is the segregation score

Y_1 is the mean score for Group1 contact with whites in the analysis (i.e., $\Sigma y_{1i}/N_1$)

Y_2 is the mean score for Group 2 contact with whites in the analysis (i.e., $\Sigma y_{2i}/N_2$)

Independent Variables

To analyze the disparity of residential contact with whites between blacks and whites, the natural log of family income (ln) and non-Hispanic whites and non-Hispanic blacks are explanatory variables in both 1960 and 2000 models.

Individual-Level Analysis

Tables 1 and 2 present the standardization analysis for the dissimilarity index in 1960 and 2000. To review, the standardization involves producing group-specific predictions by applying the white means on the independent variable (e.g., income) to the black equation and the white rates of return to the black equation to see how white-black contact changes based on these manipulations. In both tables, applying the white mean to the black equation raises the proportion of blacks who live in census tracts at or above parity on percent white. In other words, applying the white mean to the black equation reduces white-black segregation. The largest change occurs when white rates of return are applied to the black equation (where blacks retain their group mean on the independent variable), suggesting that blacks experience disparity when converting their income into more residential contact with whites.

Table 3 and 4 shows the decomposition analysis of the amount each component contributes to the dissimilarity score in 1960 and 2000, respectively. In both tables, race (via rates of return by group membership) is the largest contributor for the index score. By city, race is the largest contributor to the dissimilarity score for Chicago (1960 (89.33) and 2000 (77.65)) and the lowest for Charleston (1960 (56.78) and 2000 (41.00)). Focusing on the mean component results for both years, the results show that the difference in white-black contact decreases over time in all five cities. This finding aligns with Wilson's prediction that the relative role of race is large factor in white-black residential contact---but not the only one. Over time, the mean component (e.g., income) increases, signaling that income improves percent white contact for blacks. Imagining if Wilson's prediction was not correct, the difference of means weighted by black slopes and the difference of slopes weighted by black means would be uniformly zero in all five cities. Instead, the findings indicate that Wilson's prediction is correct---over time, income has a growing impact on white-black residential outcomes.

Aggregate-Level Method

To test the out-migration thesis at the aggregate-level, I conduct white-black and black interclass city-wide segregation and contact analysis grouped by income level (per Sharp and Iceland 2013). Family income, the primary socioeconomic indicator is truncated into income quintiles (group 1 is equal to the 0-19% rank in income distribution and so on) to reflect the following class categories: group 1 (0-19%), group 2 (20-39%), group 3 (40-59%), group 4 (60-79%), and group 5 (80-100%). By this definition, group 3 is the working class, group 4 is the middle class, and group 5 is the upper class. I group whites and blacks by overall income[3] quintile and examine segregation patterns using the dissimilarity index D and P* of working-, middle-, and upper-class blacks from whites at different income levels. Moreover, I assess patterns of change in these segregation comparisons 1960 to 2000 based on calculating

[3] Absolute income

averages of D and P* for the various comparisons across the set of metropolitan areas in 1960 and 2000.

Dissimilarity Index

To measure white-black and black interclass residential segregation by income, I use the dissimilarity index (D). D represents the minimum fraction (or percentage) of a group that would have to move from one neighborhood to another to restore even distribution at the aggregate (Iceland and Weinberg 2002). Note that D scores reflect "pair-wise" contact. The term pair-wise indicates that only the counts for the pair of groups in the two-group comparison are used in the calculation of D. D is computed as:

$$D = (1/2TPQ)\cdot\Sigma t_i|p_i - P|$$

Within the parenthesis, T represents the total population counts for whites (W) and blacks (B). Terms P and Q are the city-wide group proportions for whites and blacks, where P= W/T and Q= B/T. "t_i" represents area population counts for whites (w_i) and blacks (b_i). Within the second parenthesis, "i" value is an index for residential areas (e.g., census tract), and $p_i = w_i/t_i$ is proportion white for the area. Under even distribution all $p_i = P$, the term $\Sigma t_i|p_i - P|$ goes to zero, and D goes to zero, its minimum value indicating no segregation. Conversely, under maximum segregation, p_i is either 0 (for all-black areas) or 1 (for all-white areas), the term $\Sigma t_i|p_i - P|$ goes to its maximum possible value (which is TPQ), where D goes to 1. In general, dissimilarity scores below 30 are considered low, scores 30-60 are moderate and those higher than 60 high (Massey and Denton 1993).

*Calculating Residential Exposure through P**

To examine the degree to which white-black and black interclass contact varies over time I use P*. P* represents the residential segregation dimension of exposure (or contact) that

measures the extent to which groups must physically confront one another by virtue of sharing a residential area (Lieberson 1980; Massey and Denton 1993). This is important concept because a minority group can be evenly distributed in neighborhoods (e.g., evenness), yet at the same time experience little exposure to whites (Blau 1977; Massey and Denton 1993). Since Wilson's prediction relate more to exposure than evenness, it is appropriate to include both measures in the analysis. Empirically similar to D, a P* score can range from 0.0 to 1.0, where 0 represents no exposure and 1 represents complete exposure. P* is computed as:

$$_{x}P_{y} = \sum_{i=1}^{n} \left[\left(\frac{x_i}{X} \right) * \left(\frac{y_i}{t_i} \right) \right]$$

Where:

X is the total number of members of a group X in the city,

x_i is the number of group X in the given neighborhood,

y_i is the number of group Y in the neighborhood

t_i is the total two group population of the neighborhood.

Aggregate-Level Analysis

Table 5 presents segregation trends between working-, middle-, and upper-class whites and blacks across 20 metropolitan areas over time. Figure 2 illustrates weighted averages (by city size) of residential segregation between working-, middle-, and upper-class whites and blacks in 1960 and 2000. Overall, there are two prevailing findings in Table 5 and Figure 2. First, majority of the 20 MSAs point to a decrease in white-black residential segregation by all income groups over time with the exception of Birmingham (+2.6), New Orleans (+2.1) and Cleveland (+0.4) (Table 5). Cities with the largest decrease in white-black residential segregation by income are highlighted. In Charlotte, residential segregation between middle-class blacks and whites decline from 85.2 to 51.6 points from 1960 to 2000. This means that in

1960, approximately 85 percent of middle class blacks (or whites) in an average city would have to move in order to achieve even distribution with middle class whites (or blacks). In 2000, the dissimilarity score of 51.6 in Charlotte signals that on average, middle-class blacks (or whites) are moderately dispersed across the city. While in a significant sense, working- , middle- and upper-class blacks are moderate to highly segregated from same-income whites, results support Logan and Stults (2011) research that white-black segregation is steadily declining over time. Second, based on overall weighted means across all areas by income groups from 1960 to 2000, findings reveal that on average the largest declines in segregation occur among upper-class blacks and whites (Figure 2).

[Table 5]

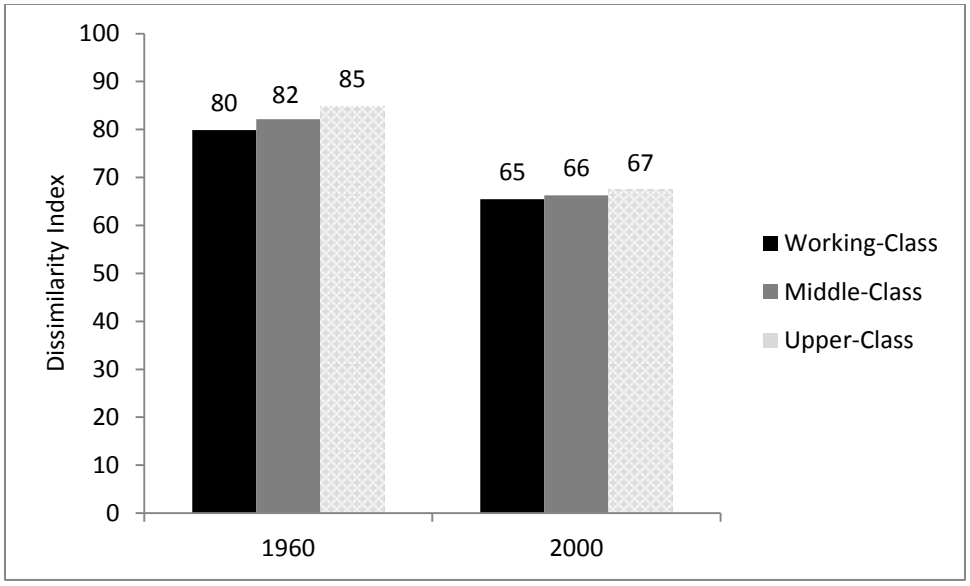

Figure 2 Residential Segregation between Working-, Middle-, and Upper-Class Blacks and Whites, 1960 and 2000 (Weighted Average).

Table 6 presents 1960 and 2000 black interclass segregation results on five metropolitan areas: Chicago, IL; Atlanta, GA; Charleston, SC; Pittsburgh, PA; and New Orleans, LA. To review, I hypothesized that over time, working-, middle-, and upper-class blacks experience

more residential segregation from poor blacks. The results show higher levels of black interclass segregation across all income groups from 1960 to 2000. For instance, pair-wise comparisons of income group 4 by group 2 in Charleston show a 16.1 point increase in residential segregation from 1960 to 2000.

[Table 6]

Focusing on pair-wise groups in Table 6, one could argue that residential segregation between poor and non-poor blacks would be incrementally higher between households in the highest and lowest income distribution (e.g., group 1 by group 5) compared to other pair-wise comparisons (e.g., group 1 by group 3). There are several cases per city that support this notion, (e.g., Atlanta) however; there is a lack of a distinctive pattern across all 5 MSAs to make this claim. Segregation dynamics (i.e., social, historical, ecological, and occupational) may lead to city variations. Overall, the results suggest that as black family income increases, working-, middle-, and upper-class blacks are more segregated from poor blacks over time.

Table 7 reflect segregation trends of working-, middle- and upper-class whites and blacks the same 5 MSAs in 1960 and 2000. Unlike Table 5, Table 7 presents segregation scores of whites by all income categories (group 1-5) and working-, middle-, and upper-class blacks (group3-5). In other words, Table 7 shows pair-wise comparisons of whites and middle-, working- and upper-class blacks when matched and unmatched by income. In addition, Table 7 includes pair-wise comparison of all whites by black income categories in both periods. As previously stated, I hypothesized that middle- and upper-class blacks experience lower levels of segregation from whites over time. With the exception of New Orleans, white-black segregation decreases across all income groups over time. In several pair-wise comparisons, including matched and unmatched by income, white-black segregation reduces by 20+ points over time. Results suggest that working-, middle-, and upper-income blacks are more evenly distributed in

a city in comparison to previous decades. This finding partially supports my hypothesis and somewhat challenges Massey and Denton (1993) argument of whites and blacks not living in the same neighborhood when matched and unmatched on income. In Table 7, results indicate that over time, white-black dissimilarity scores decline from high to moderately low (e.g., Atlanta, Charleston) per Massey and Denton's (1993) designations. Yet, further investigation with P* is needed because lower levels of uneven distribution does not necessarily equate to more neighborhood contact to whites.

[Table 7]

Moving beyond my hypothesis, *per se*, I want to examine if more affluent blacks experience lower levels of segregation from all whites compared to other blacks by income. In other words, are upper-class blacks less segregated from all whites in comparison to working- and middle-class blacks? If so, how do segregation scores vary across time? In Table 7, 1960 dissimilarity scores between upper-class blacks and all whites tend to be higher compared to working- and middle-class blacks. In contrast, 2000 dissimilarity scores reflect a steady incremental drop in segregation scores between upper-class blacks and all whites compared to other blacks by income.

Table 8 present findings on white-black and black interclass residential contact by middle- and upper-class blacks by whites in 1960 and 2000. The motivation to exclude working-class blacks from this analysis is to determine if the saliency of race in residential outcomes reduces among those that are higher on the income distribution ($50,000+). To review, P* measures the amount residential exposure blacks have to whites and vice versa. By incorporating income categories into the analysis I am able to examine varying neighborhood concentration of whites and blacks by unmatched and matched income levels over time. Focusing on white-black residential contact by white income categories, the table shows over

time, middle- and upper-class blacks experience more residential exposure to whites across all five MSAs. For example, residential contact between whites (by all income categories) and upper-class blacks in Charleston increased by double-digits from 1960 (3.6, 4.8, 8.4, 9.6, and 9.2) to 2000 (8.5, 11.2, 12.4, 14.3, and 14.3). A score of 14.3 means that typically an upper-class black family lives in a neighborhood where on average, 14.3 percent of their neighbors are members of the white upper-class. While the exposure scores are low in magnitude and may appear trivial, the impact of income for blacks is clearer by examining residential exposure of middle- and upper-class blacks by all whites. For instance, controlling for white income, residential contact between upper-class blacks and whites in Charleston increased from 37.2 in 1960 to 60.6 in 2000. The results suggest that as black family income increases, they experience more exposure to white households of matched and unmatched incomes over time. This finding lends additional support to my hypothesis middle- and upper-class blacks experience more contact to whites over time.

[Table 8]

In addition to white-black exposure, Table 8 reports black interclass exposure scores in 5 MSAs in 1960 and 2000. In all 5 MSAs, middle- and upper-class blacks experience less contact to less affluent blacks (group 1-3) over time. Pair-wise comparisons of all blacks by middle- and upper-class blacks' supports this finding---15+ point decline in residential exposure in several MSAs from 1960 to 2000. Relatedly, residential contact of middle- and upper-class with blacks of the same income level varies by city over time. Overall, results indicate middle- and upper-class blacks are living in more economically stratified neighborhoods compared to previous decades. Moreover, in several cities, middle- and upper-class blacks live in neighborhoods with, on average, greater proportion whites (matched and unmatched by income) than blacks (matched and unmatched by income).

Conclusions

In this paper I sought to examine whether Wilson's black out-migration hypothesis occurred over time. Key components of Wilson's prediction are (1) middle- and upper-class blacks are experiencing less residential segregation (and more contact) to whites over time, (2) working- and middle-class blacks have more residential segregation (and less contact) to poor blacks over time, and (3) working- and middle-class blacks are residing in higher income neighborhoods over time. In this paper, I tested component 1 at the individual and aggregate level and component 2 at the aggregate level.

At the individual-level, I tested whether the role of income improves percent white contact for blacks in 1960 and 2000. Through standardization and decomposition procedures, I manipulated predicted outcomes to test how the group's average residential attainment would change and assess the separate contributions that the differences in income and rate of return have on overall group contact. Findings in both time periods reveal that percent contact with whites improves as black income increases. Moreover, the role the income in residential contact is more prevalent in 2000 than 1960. These results align with Wilson's prediction that income has an increasing role in black life chances and support research signaling that previous racial barriers to neighborhood entry are more malleable than previous decades (see Alba, Logan, Stults 2000; Spivak, Bass, and St. John 2011; Adelman 2004:2005; Spivak and Monnat 2013). Even though the magnitude of income in the role of percent white contact is much lower than race in both periods, research should not dismiss its growing impact on black residential outcomes.

At the aggregate-level, I examined (1) if affluent blacks experience less segregation (more contact) to whites and (2) if affluent blacks experience more segregation (less contact) to

poor blacks over time. To test Wilson's prediction at the city-level, I conducted white-black and black interclass city-wide segregation and contact analysis grouped by income quintiles.

Regarding the first component, findings suggest that working-, middle- , and upper-class blacks do in fact appear to experience more neighborhood integration with whites over time. However, segregation results for working-, middle-, and upper-class blacks by whites (controlling for income) suggest that as black households reach the top income quintile, they are unable to convert capital gains into much lower segregation to whites compared to non-poor co-ethnics over time. Nevertheless, results support Wilson's statement that over time, middle-class blacks are moving from the inner-city to neighborhoods within the metropolitan area, "including white neighborhoods" (2009:34). Moreover, the analysis here support findings of prior literature by showing that black households experience higher levels of integration as their income increase, yet race is still the most prevalent factor that contributes segregation (Alba, Logan, Stults 2000; Spivak, Bass, and St. John 2011; Adelman 2004:2005; Spivak and Monnat 2013). Even though Wilson predicted class has important implications for black mobility, Wilson himself acknowledges the saliency of race in residential outcomes:

> When I speak of the declining significance of race, I am neither ignoring the legacy of previous discrimination nor am I arguing that racial discrimination no longer exist. I am referring to the relative role race plays in determining black life chances in the modern industrial period—in other words, the changing impact of race in the economic sector and, in particular, the changing importance of race versus class for mobility opportunities (Wilson1978:167).

Early and recent research show a large majority of middle- and upper-class blacks not living in neighborhoods with their white economic peers (Malega and Stallings 2015; Massey and Fischer 1999; Pattillo-Mccoy 2000a, 2000b). Wilson prediction's solely focuses on improved neighborhood integration—a notion that is supported in the analysis. While this study does not precisely ascertain Wilson's definition of "better" neighborhoods, future research should continue to address Wilson's predictions via neighborhood characteristics (e.g.,

resources/amenities, land characteristics, and structural characteristics) of whites and blacks by income. Specifically, investigate how neighborhood characteristics change over time. To my knowledge, few researchers (that examine neighborhood characteristics) have attempted to use data before 1970 due to race/ethnicity issue that was previously raised. Applying the methodological race adjustment used in this study can eliminate these issues.

For the second component, results are consistent with Wilson's prediction that working-, middle-, and upper-class black are less likely to co-reside with poor blacks over time. The use of dissimilarity and P* measures demonstrate greater segregation and less residential contact between poor and non-poor co-ethics over time. By magnitude, segregation between highest and lowest income distribution range for blacks is not greater compared to other pair-wise comparisons. Overall, segregation and exposure results align with Wilson's sentiment that "today's black middle-class professional no longer tend to live in ghetto neighborhoods…" (1987:7). In addition, a finding that supports Alba, Logan, and Stults' (2000) result that middle-class blacks live with more whites than with poor blacks.

The final component, ascertaining whether working-, middle- and upper-class blacks live in higher income neighborhoods has yet to be completed. Future iterations of this paper will include this component.

Table 1 Standardization Analysis for Dissimilarity Index, 1960

	Predicted Group Mean on D				
Comparison	New Orleans	Chicago	Pittsburgh	Charleston	Atlanta
Black Group Means & Black Rates of Return	18.68	4.79	13.60	15.88	14.13
White Group Means & Black Rates of Return	20.65	6.10	14.08	18.60	11.12
Black Group Means & White Rates of Return	80.97	94.21	84.58	74.07	90.70
White Group Means & White Rates of Return	85.13	95.56	87.05	78.98	92.86

Table 2 Standardization Analysis for Dissimilarity Index, 2000

	Predicted Group Mean on D				
Comparison	New Orleans	Chicago	Pittsburgh	Charleston	Atlanta
Black Group Means & Black Rates of Return	18.08	11.50	17.77	31.08	22.49
White Group Means & Black Rates of Return	20.13	13.79	21.01	36.09	25.10
Black Group Means & White Rates of Return	84.51	88.77	84.30	70.97	82.34
White Group Means & White Rates of Return	86.34	90.87	86.33	75.25	85.24

Table 3 Components Analysis for Dissimilarity Index, 1960

	Contribution to Index Score				
Components	New Orleans	Chicago	Pittsburgh	Charleston	Atlanta
Rates of Return by Group Membership (intercept)	60.12	89.33	67.83	56.78	71.64
Mean Component	1.97	1.31	0.49	2.72	-3.01
Rates of Return Component(slope)	2.17	0.09	3.15	1.41	4.93
Interaction/Joint Impact	2.19	0.05	1.99	2.18	5.16
Total Difference	66.45	90.78	73.46	63.09	78.72

Table 4 Components Analysis for Dissimilarity Index, 2000

	Contribution to Index Score				
Components	New Orleans	Chicago	Pittsburgh	Charleston	Atlanta
Rates of Return by Group Membership (intercept)	66.76	77.65	68.73	41.00	59.03
Mean Component	2.05	2.28	3.24	5.00	2.61
Rates of Return Component(slope)	-0.33	-0.37	-2.21	-1.12	0.82
Interaction/Joint Impact	-0.21	-0.19	-1.20	-0.72	0.29
Total Difference	68.27	79.37	68.56	44.16	62.75

Table 5 Trends in Segregation (D) between Working- (Group3) , Middle- (Group 4) and Upper-Class (Group5) Whites and Blacks Families in 20 U.S. Metropolitan Areas, 1960 and 2000*

	1960			2000			1960 to 2000		
	Group 3	Group 4	Group 5	Group 3	Group 4	Group 5	% CH of Group 3	% CH of Group 4	% CH of Group 5
Metropolitan Areas									
Atlanta GA	**80.9**	**85.5**	**89.3**	**60.6**	**62.2**	**61.7**	**-20.3**	**-23.3**	**-27.6**
Detroit, MI	89.6	91.0	91.7	85.0	86.7	87.3	-4.6	-4.3	-4.4
Memphis, TN	75.6	79.5	85.9	63.0	65.2	65.4	-12.6	-14.3	-20.5
Birmingham, AL	64.5	68.0	74.1	67.1	66.7	71.2	+2.6	-1.3	-2.9
Charleston, SC	**61.3**	**65.0**	**69.7**	**38.7**	**39.9**	**46.8**	**-22.6**	**-25.1**	**-22.9**
New Orleans, LA	65.1	71.3	74.3	67.2	67.0	69.9	+2.1	-4.3	-4.4
Chicago, IL	90.6	91.2	90.3	78.4	78.7	78.4	-12.2	-12.5	-11.9
Pittsburgh, PA	76.1	79.0	83.5	68.7	68.2	71.0	-7.4	-10.8	-12.5
St. Louis, MO	88.1	88.2	88.9	72.3	74.3	72.1	-15.8	-13.9	-16.8
Baltimore, MD	83.8	86.0	84.0	66.9	65.5	63.5	-16.9	-20.5	-20.5
Charlotte ,NC	**80.9**	**85.2**	**89.9**	**51.0**	**51.6**	**56.9**	**-29.9**	**-33.6**	**-33.0**
Jacksonville, FL	**78.0**	**80.5**	**84.4**	**50.8**	**53.0**	**57.5**	**-27.2**	**-27.5**	**-26.9**
Indianapolis, IN	83.6	85.5	87.5	71.3	72.7	70.7	-12.3	-12.8	-16.8
Norfolk, VA	**79.1**	**81.1**	**82.2**	**44.7**	**44.9**	**50.8**	**-34.4**	**-36.2**	**-31.4**
Washington, DC	82.4	84.3	83.9	63.6	64.9	67.6	-18.8	-19.4	-16.3
Cleveland, OH	91.3	92.2	93.3	77.9	78.6	78.3	-12.4	-14.3	+0.4
Youngstown, OH	77.5	81.4	87.7	71.0	72.4	70.0	-6.5	-9.0	-17.7
Milwaukee, WI	90.2	90.3	90.4	82.7	82.0	80.3	-7.5	-8.3	-10.3
Philadelphia, PA	81.4	81.7	82.0	75.3	75.2	72.2	-6.1	-6.5	-9.2
Nashville, TN	**81.3**	**85.9**	**90.0**	**53.1**	**55.9**	**56.1**	**-28.2**	**-30.0**	**-33.9**

Table 6 Trends in Segregation (D) of Poor Black Families (Group 1)- to- Upper-Class (Group 5) Black Families in 5 MSAs, 1960 and 2000

	1960			2000		
	Group 3	Group 4	Group 5	Group 3	Group 4	Group 5
Atlanta, GA						
Group 1	28.6	37.5	48.2	36.3	44.9	52.5
Group 2	16.6	25.0	32.2	17.5	28.5	39.3
Chicago, IL						
Group 1	27.7	33.7	40.6	34.5	42.5	48.5
Group 2	14.3	20.8	28.1	19.6	28.3	36.0
Charleston, SC						
Group 1	23.6	36.3	29.1	26.1	29.3	31.8
Group 2	11.9	6.4	26.6	14.7	22.5	25.6
New Orleans, LA						
Group 1	26.5	32.2	41.5	29.2	39.6	47.9
Group 2	15.3	23.6	32.6	16.9	28.1	37.4
Pittsburgh, PA						
Group 1	31.1	36.0	44.3	34.9	40.7	50.3
Group 2	22.1	30.3	38.3	25.5	32.1	42.7

Table 7 Trends in Segregation (D) of Poor (Group 1) –to-Upper-Income (Group 5) Whites by Working (Group 3) -to-Upper-Income (Group 5) Blacks in 5 MSAs, 1960 and 2000

	1960						2000					
	All Whites (*White Ref.)*	Group 1	Group 2	Group 3	Group 4	Group 5	All Whites	Group 1	Group 2	Group 3	Group 4	Group 5
Atlanta, GA												
Group 3 (*Black Ref.)*	80.9	78.2	78.9	80.9	82.7	85.6	62.5	57.5	58.5	60.6	65.4	72.7
Group 4	84.1	81.2	81.9	83.9	85.5	86.7	60.0	57.3	57.0	58.0	62.2	68.8
Group 5	86.0	84.2	84.4	85.8	87.3	89.3	55.5	58.0	57.1	55.6	56.7	61.7
Chicago, IL												
Group 3	90.0	87.5	89.2	90.6	91.2	92.2	78.4	75.2	76.6	78.4	80.4	83.4
Group 4	90.0	87.5	89.1	90.5	91.2	92.3	77.4	75.7	76.2	77.2	78.7	81.3
Group 5	88.2	85.9	87.5	88.9	89.4	90.3	75.9	75.5	76.0	76.5	77.1	78.4
Charleston, SC												
Group 3	62.7	55.4	58.6	61.3	65.4	68.9	40.1	35.5	34.9	38.7	43.6	51.8
Group 4	63.1	58.2	60.8	62.0	65.0	70.1	37.1	34.3	34.3	37.4	39.9	48.5
Group 5	67.3	64.4	65.9	66.9	67.5	69.7	38.1	38.8	37.4	39.6	40.1	46.8
New Orleans, LA												
Group 3	66.1	62.5	62.1	65.1	68.9	73.3	67.6	64.0	66.2	67.2	68.7	73.3
Group 4	68.7	64.7	65.4	67.3	71.3	75.0	66.4	65.1	65.7	66.5	67.0	70.7
Group 5	67.3	63.6	64.4	65.2	69.8	74.3	67.2	67.1	67.6	67.9	67.7	69.9
Pittsburgh, PA												
Group 3	76.2	72.7	74.2	76.1	78.3	81.2	68.8	64.8	67.1	68.7	71.3	75.8
Group 4	77.0	74.3	75.1	76.9	79.0	81.9	66.1	64.4	65.3	66.0	68.2	72.4
Group 5	80.8	79.6	80.0	81.0	82.2	83.5	67.7	68.4	68.6	68.8	68.9	71.0

Table 8 White-Black and Black Interclass Exposure (P*) by Middle- and Upper-Income Blacks in 5 MSAs, 1960 & 2000

	White-Black Exposure (*White Ref.)*						Black Interclass Exposure					
	All Whites	Group 1	Group 2	Group 3	Group 4	Group 5	All Blacks	Group 1	Group 2	Group 3	Group 4	Group 5
Atlanta 1960												
Group 4 (*Black Ref.)*	23.6	4.5	5.4	5.5	4.7	3.5	76.4	29.8	23.5	12.1	7.4	3.7
Group 5	20.9	3.7	4.5	4.9	4.4	3.3	77.1	29.5	23.9	12.6	8.2	4.9
Atlanta 2000												
Group 4	40.7	7.1	8.1	8.8	8.8	7.9	59.3	14.0	14.1	12.9	11.5	6.8
Group 5	44.1	6.7	7.6	8.8	9.9	11.2	55.9	12.6	12.4	11.7	11.1	8.1
Chicago 1960												
Group 4	19.5	4.8	4.4	3.8	2.5	3.9	80.5	32.6	19.3	12.3	7.9	8.4
Group 5	21.8	5.1	4.8	4.2	2.9	4.8	78.2	29.6	18.6	12.2	7.8	9.9
Chicago 2000												
Group 4	29.4	5.5	6.0	6.1	6.2	5.7	70.7	21.3	16.6	13.9	11.8	7.5
Group 5	33.7	5.4	6.1	6.6	7.3	8.4	66.4	19.1	14.7	12.8	11.1	8.5
Charleston 1960												
Group 4	36.7	4.0	6.8	8.8	8.9	8.2	63.3	25.9	19.2	10.8	5.3	2.1
Group 5	37.2	3.6	6.4	8.4	9.6	9.2	62.8	26.6	18.4	10.5	4.9	2.4
Charleston 2000												
Group 4	60.0	8.6	11.7	12.7	13.8	13.2	40.0	14.6	9.3	7.3	5.5	3.3
Group 5	60.6	8.5	11.2	12.4	14.3	14.3	39.4	14.1	9.3	7.1	4.9	3.9
New Orleans 1960												
Group 4	36.0	5.4	7.1	8.5	8.0	7.0	64.0	22.3	18.9	12.3	7.0	3.6
Group 5	40.1	5.6	7.4	9.5	9.2	8.4	59.9	20.6	17.4	11.5	6.5	3.9
New Orleans 2000												
Group 4	33.2	4.7	6.1	6.9	7.9	7.7	66.9	18.1	15.7	13.9	11.8	7.2
Group 5	35.3	4.6	6.1	7.0	8.4	9.3	64.8	16.3	14.5	13.5	11.8	8.6
Pittsburgh 1960												
Group 4	54.0	12.5	12.6	11.2	9.7	8.0	46.0	19.0	11.6	7.3	5.4	2.8
Group 5	53.7	12.0	12.0	10.8	10.0	8.9	46.3	18.9	11.5	7.3	5.2	3.5
Pittsburgh 2000												
Group 4	58.6	13.1	12.7	12.1	11.0	9.7	41.4	14.8	9.8	7.3	5.9	3.8
Group 5	60.8	12.0	12.2	12.0	12.1	12.5	39.2	13.2	9.0	6.9	5.5	4.6

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