Exploring the Role of Preference and Policy in the Reduction of Racial Residential Segregation.

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Abstract

This paper uses SimSeg, a segregation simulation computer program, to investigate a two fold hypothesis. First we consider if ethnic preferences contribute to racial residential segregation, and second, given these findings, we question if pro-integration public policy has effectively targeted the most appropriate populations. We conclude that ethnic preferences do play a strong role in determining racial residential segregation and that this in turn influences how effective public policy has been in reducing segregation. We argue that public policy would be more effective in reducing segregation if it targeted White households for integration into predominantly Black neighborhoods, in addition to encouraging the movement of Black households into White areas, as is currently the

trend.

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Introduction

A great deal of research has been conducted with the aim of trying to discover the causes of racial inequality in the United States. In *American Apartheid*, Massey and Denton (1993) argue that residential segregation was once at the forefront of explanations for racial inequality but it faded into the background in the 1970s. They argue that over time theoretical explanations for persistent poverty among Blacks, and to a lesser degree Hispanics, centered on culture, racism, economics and welfare. Consequently Massey and Denton label racial residential segregation the "missing link."

Scholars argue that residential segregation produces a number of negative consequences that work to maintain racial inequality. Massey and Denton (1993) argue that residential segregation works to concentrate poverty and institutionalize socially isolated ghetto communities, resulting in the creation and perpetuation of an urban underclass. This is accomplished through a number of mechanisms. Yinger (1995) argues that segregation leads to poor quality schools, which restricts job choices, which in turn increasingly restricts choice of neighborhood residence. Dalton Conley (1999) finds that residential segregation restricts Blacks' chances of owning their own homes – which is the primary way Americans accumulate wealth (Oliver and Shapiro 1995).

Other negative consequences of segregation include elevated rates of mortality (Collins and Williams 1999), crime (Alba, Logan, and Bellair 1994; Massey 2001), joblessness, teenage pregnancy, female-headed households, welfare dependency, and neighborhood abandonment. Residential segregation also decreases the median income of the average family, the median property value in neighborhoods, and lowers test scores (Massey and Denton 1993). Despite these detrimental effects on minority groups, research has found that segregation actually benefits Whites by reducing their exposure to poverty (Massey and Denton 1993; Cutler and Glaesar 1997).

While the scholars mentioned above, and others, have done a great deal to document the existence of racial residential segregation in America, how best to tackle this problem is less agreed upon. As we shall see, for the most part American policies have thus far addressed segregation by encouraging Black-into-White integration, namely encouraging Black households to move into predominantly White areas. However, policy makers have appeared to be more reluctant to encourage White households to move into predominantly Black areas (White-into-Black policy). Why is this? Is this because the results of such policy upon levels of segregation are ineffective, or is it due to the current mind-set of policy makers who put the burden of integration upon the disadvantaged group to make the commitment to integrating?

In this paper, we will be using SimSeg software to examine the role of ethnic preferences in racial residential segregation. Then we will apply what he have learned about ethnic preferences to determine if desegregation policy in a city similar to Philadelphia should target the ethnic preferences of Blacks by moving them into White areas, or Whites' preferences by moving them into Black areas. More specifically, we will use SimSeg to test if there is any evidence to uphold policy trends that put the onus upon minorities, and in particular Black families, to be 'pioneers' into White neighborhoods. We hypothesize that segregation will be more effectively reduced if policy makers target the movement of White households into predominantly Black

neighborhoods, rather than targeting Black households into predominantly White neighborhoods.

The paper proceeds as follows. We will begin by outlining relevant research that has focused on the causes of segregation. Next, we will present the data and methods that we utilized, taking time to summarize the dominant approaches to the measurement of segregation. Finally, we will outline our results and discuss the limitations of our research and ask how ethnic preferences and policy have contributed to patterns of racial residential segregation.

Literature Review

Research that focuses on the causes of residential segregation fall into two broad theoretical perspectives: research that emphasizes the role of race and research that emphasizes the role of class in residential patterns. Research that emphasizes the role of race can further be divided into those that underscore discrimination in the search for housing and lending, and those that highlight the importance of the ethnic preferences of households. We will begin with a review of the literature that emphasizes class as a cause of racial residential segregation.

Economics

In their study of Black/White segregation in Chicago, Cleveland, and Detroit Alba, Logan, and Stults (2000) find that middle-class Blacks are not as segregated from Whites with regards to exposure (P*). However, they also find that middle-class Blacks tend to live with Whites who are less affluent than they are. Similarly St. John and

Clymer (2000) conclude that Blacks' socio-economic status does not buy them the same advantages as Whites' socio-economic status does. Nevertheless they argue, "Even though Blacks of all levels of SES don't live in neighborhoods where most whites of same SES live, high SES Blacks have more opportunity for interaction in their own neighborhoods with high SES whites than low SES Blacks have in their neighborhoods with low SES whites" (St. John and Clymer 2000, p. 701).

In their multi-ethnic study of the Southern California region, Clark and Ware (1997) find that increased income and education decreases residential segregation – especially in suburban areas. In contrast, Massey and Fischer (1999) use nationwide data to compare the dissimilarity and interaction indices of Blacks, Hispanics, and Asians relative to non-Hispanic Whites. They conclude that, "Only in the suburbs do Blacks appear to achieve a relatively high likelihood of contact with Whites, but this reflects their scarce numbers as much as a change in the underlying level of segregation" (Massey and Fischer 1999, p. 325).

Farley (1977) finds that racial residential segregation was substantially greater than socio-economic segregation in both the Black and White communities. He concludes that racial residential segregation does not vary by educational attainment, occupation, or income. Charles (2001a) builds on this research in a multi-ethnic study of Los Angeles where she finds that there is no relationship between socio-economic status and segregation for Blacks and Asians. In fact, it is argued that segregation would be significantly lower if Blacks and Asians were distributed throughout Los Angeles County solely on the basis of socio-economic status. Although the research summarized above is often contradictory, which is usually due to different ways of measuring segregation, the

majority of it supports the conclusion that differences in socio-economic status cannot account for all Black-White residential segregation.

Discrimination

Minority consumers can be the subjects of discrimination in the search to find available housing and/or while trying to qualify for a home mortgage loan. Audits have been used to demonstrate discrimination in the housing market, in which two auditors comparable on all measures except for racial-ethnic background attempt to buy or rent the same apartment or house. If the White auditor is treated more favorably than the minority auditor, discrimination is said to have occurred. As a result of audit based research, Yinger (1995) finds that 5-10% of the time Blacks and Hispanics are denied all information on housing, that minorities have to visit four agents to get the information that Whites receive from three, and that Blacks and Hispanics are less likely to receive follow up calls or hear positive comments about the neighborhoods where they are looking at houses or apartments.

Turner and Wienk (1993) and Yinger (1995) also find that minorities are more likely to be shown housing in neighborhoods with greater minority populations, lower incomes, and lower property values. The authors argue that this is the result of two forms of *steering*. The first form is a result of the treatment of individual homeowners. The second form, which Turner and Wienk (1993) focus on, occurs because housing in integrated and predominantly Black neighborhoods is less likely to be advertised in major metropolitan newspapers. Ross and Yinger (2003) also find that minorities may receive

loans on worse terms that Whites because they accept sub prime loans unaware that they could qualify for prime loans.

Massey and Lundy (2001) argue that previous research may have underestimated the incidence of housing market discrimination because many home seekers are discriminated against before they come face to face with the salesperson. This is because Americans can often decipher the race of a person on the phone based on speech patterns. In their telephone audit study, Massey and Lundy (2001) find that Blacks are less likely to speak to a rental agent, less likely to be told of available housing, more likely to pay application fees, and more likely to have credit issues brought up as a potential problem.

Ethnic Preferences

A great deal of research, beginning with the work of Schelling (1971, 1972), has argued that ethnic preferences are the dominant cause of racial residential segregation. However, scholars who conduct research on ethnic preferences have a variety of different explanations for the existence of these preferences. Some scholars argue that neutral ethnocentrism drives preferences (Clark 1992; Patterson 1997; Thernstrom and Thernstrom 1997). Others adhere to the racial proxy or race-associated hypothesis (Ellen 2000; Harris 2001). Finally, some researchers support the pure race hypothesis (Zubrinsky and Bobo 1996; Charles 2000, 2001a, 2001b, 2003; Emerson, Yancey and Chai 2001; Quillian and Pager 2001; Krysan and Farley 2002). William Clark is probably the most well known advocate of neutral ethnocentrism. In his study of whites, blacks, Asians, and Hispanics in Los Angeles, Clark (1992) finds that all groups prefer co-ethnic neighbors. However, he finds that these preferences are strongest among non-

Hispanic whites. In contrast, both Patterson (1997) and Thernstrom and Thernstrom (1997) assert that Blacks' strong in-group preferences, in spite of Whites increasing prointegration views, contribute to the maintenance of residential segregation. One must question what Whites mean by the term "integration" given that Krysan and Farley (2002) find that Blacks prefer to live in areas that are 50% Black and 50% White while Whites prefer to live in areas where the percentage of African Americans resembles their representation in the overall population (about 12%). Krysan and Farley also probed deeper to discover the reasons behind Blacks' resistance to moving into predominantly White neighborhoods. They conclude that Blacks' "preferences are not driven by solidarity or neutral ethnocentrism but by fears of white hostility" (Krysan and Farley 2002, p. 937). Harris (2001) supports the racial proxy hypothesis and concludes that both Blacks and Whites prefer to live in neighborhoods with smaller numbers of Black residents because they prefer neighborhoods that are perceived to be well off, safe, well maintained, and offer high quality education. Ellen (2000) is also a proponent of the racebased neighborhood-stereotyping hypothesis. However, research by Emerson, Yancey and Chai (2001) and Quillian and Pager (2001) demonstrate that the percentage of Blacks (especially young Black men) in a neighborhood has a negative effect on the perception of neighborhood quality even after controlling for other factors such as crime, property values, and school quality.

As proponents of the pure race hypothesis, Zubrinsky and Bobo (1996) argue that there is a clear racial hierarchy in which White neighborhoods are most favored followed by Asian, Hispanic, and Black neighborhoods. This hierarchy of preference is true for both Whites and minorities. We believe that the available empirical evidence supports

this hypothesis. Consequently, this is the model of ethnic preferences that we utilize in this paper.

Contrary to researchers who argue that Blacks are more likely to have ethnocentric preferences (Patterson 1997; Thernstrom and Thernstrom 1997), Zubrinsky and Bobo (1996) find that Blacks, Hispanics, and Asians would rather not live in exclusively same race neighborhoods. Farley et al. (1978) also find that 25% of white respondents in Detroit would be uncomfortable with one black resident in their neighborhood. In contrast, 38% of black respondents in Detroit would be willing to move into an all-white neighborhood. Research has also demonstrated that concerns about the socio-economic status of prospective neighbors and in-group attachment don't predict ethnic preferences as well as negative racial stereotypes (Bobo and Zubrinsky 1996; Charles 2000). Charles's (2003) analysis of data from the General Social Survey also reveals that racial stereotypes are more correlated with preferences than these other factors regardless of respondent's race of the race of the target group. She finds that as stereotypes become more negative towards out-groups, preferences for those groups decline and in-group preferences increase.

Policy Recommendations

Perhaps the most well known of all segregation literature is that of Massey and Denton (1993), who argue that the endemic inequalities that Blacks have in American society are due to their persistent segregation from White neighborhoods. Massey and Denton's pragmatic policy recommendations, such as funding testing programs to remove discrimination from the housing and financial markets and introducing a housing 'voucher' system, are based upon their assumption that Black households should

integrate into White neighborhoods in order to reduce segregation and thus, reduce inequality. Likewise, Yinger (1995) also adheres to the paradigm that Black-into-White integration is the most efficient way to tackle segregation. Among other recommendations, Yinger advocates a 'Gautreaux-type' program in which low income families are given certificates in order to move into housing other than projects. Yinger admits that "by focusing on public housing tenants or families eligible for Section 8, these programs primarily have served minority households without using race or ethnicity as a selection criteria" (p. 235), and goes on to state that these programs have helped many minority families. Clearly, current thinking places the responsibility of integration upon the minority, not the majority. However, is it really as simple as this? Are there other factors that should be taken into consideration in terms of policy implications of Massey and Denton's (1993) recommendations?

In advocating Black-into-White policy, Massey and Denton (1993) fail to consider how Blacks may feel about integrating into a predominantly white neighborhood. In his book *As Long As They Don't Move Next Door*, Meyer (2000) documents the violence directed towards Blacks who move into White neighborhoods. Unfortunately, Meyer offers little in the way of solid policy recommendations, instead ominously warning that "only when the prospect of integration ceases to be seen as a threat will racial relations in the United States improve" (p. 222). Farley (1996) argues that Black-into-White policy has overlooked costs to Blacks. He found that most Blacks in Detroit were "reluctant to be the first of their race in a White neighborhood" and less than one third of them were willing to risk moving into an all-white neighborhood. One could use these findings to make the case that policy that is aimed at relocating Black

households into predominantly White areas to lessen segregation, does not take into account the emotional and sometimes physical repercussions upon Black households.

Furthermore, as Ellen (2000) documents, some have argued that current Blackinto-White policy is demeaning to minorities, by inferring that "there is something inherently wrong with all-Black communities" and Polikoff (1986) states that this "reinforces the myth of White supremacy and Black inferiority". Ellen (2000) however, does not agree that policy has been based on racial inferiority and points to the positive aspects of integration such as the weakening of stereotypes as reason to continue pursuing anti-segregation policy. Ellen and others have documented so-called "race neutral' policies that generally benefit both Whites and Blacks while promoting integration, which may be used as evidence against the general onus being placed on minorities to integrate, rather than Whites. However, while 'race-neutral' policies by nature do not specifically target race, they can be marketed in such a way to benefit certain groups and often come with a target group in mind, as Yinger (1995) illustrates. Finally, Ellen (2000) is one of the few researchers that has considered the few policies that have targeted White-into-Black integration, such as insurance programs dealing with declining home equity and the advertisement of housing options in Black areas in predominantly White areas. Unlike most, Ellen specifically recommends the simultaneous promotion of Black-into-White with White-into-Black integration. We will now describe the data and methods we utilized to illustrate the role of ethnic preferences in promoting racial residential segregation and to determine the efficacy of moving Blacks into White areas as compared to moving Whites into Black areas.

About SimSeg

The data we use in this paper come from SimSeg Learning Edition Beta 1. SimSeg is a computer simulation program that allows researchers to test hypotheses regarding a variety of explanations that are prevalent in the literature concerning the factors that shape residential segregation in urban areas. The program represents segregation in two ways. First, it depicts segregation through dissimilarity, isolation, clustering, and centralization scores (see the data and methods section for a more detailed discussion of these measures). Since SimSeg only gives information on four of the five dimensions of segregation that Massey and Denton (1993) discuss, hyperseregation is achieved in SimSeg when three of the four scores reach high levels (Fossett and Senft 2004). Second, it illustrates segregation visually by drawing the city landscape where ethnic categories are represented by color and shading represents socio-economic status.

SimSeg is a valuable program because it allows researchers to simulate an experimental design, which is rarely possibly to achieve in the social sciences. It models both structural factors and social processes. Users are able to manipulate structural factors such as the city's size, the vacancy rate, the ethnic mix as well as a variety of economic factors. The researcher can utilize the basic "Scenario" as well as more advanced "Scenario" features. In the second part of our analysis we utilize the advanced version of the software. First we will discuss the basic "Scenario" function in SimSeg. With regard to economic factors, the user chooses the level (very high, high, medium, or low) of area stratification, status inequality, and minority disadvantage. Area stratification refers to the gap between housing values in suburban and inner city areas.

the 90th and 10th percentiles and minority disadvantage is the status gap between Whites and minorities.

The social processes which are modeled by SimSeg include discrimination in housing, ethnic preferences, and level of search effort expended by potential buyers when looking for housing. Discrimination in housing can take on three forms. The first form deals with the percentage of minority attempts to enter predominantly White areas that are "blocked" by Whites. The next form is the extent to which realtors "steer" households towards vacancies where their household's ethnic group is the majority. Finally, the user can adjust the standards to which minority buyers are held to qualify for loans and leases. The researcher can use all three areas to represent multiple forms of discrimination in the scenario or they can just focus on the level of White exclusion of minorities.

There are a variety of choices within the ethnic preferences category. Users can choose the level of White prejudice (high, medium, or low) and whether or not minorities seek assimilation or are indifferent. You can also choose whether all groups avoid, accept, or seek integration. Researches also choose whether or not households consider in-group representation in adjacent neighborhoods. Manipulating economic factors, discrimination in housing, and ethnic preferences in SimSeg generates nine different outcomes, which are represented visually when drawing the city landscape. These include random spatial distribution, socio-economic status zoning, ethnic checker boarding, ethnic clustering, ethnic sectoring and four versions of hyper segregation.

Data & Methods

Measuring Segregation

Massey and Denton (1993) argue that the spatial arrangement of communities are important when thinking about segregation. They identify 5 distinct areas of geographic variation: unevenness, isolation, clustering, concentration, and centralization. The index of dissimilarity (D*) measures a group's evenness (or unevenness) across neighborhoods. The score represents the percentage of the group that would have to move to another neighborhood in order for the group to achieve its representation in the city as a whole. A score of 0 represents an even distribution and a score of 100 represents complete segregation. The index of dissimilarity is the most widely cited segregation index.

The isolation index (P*), which ranges from 0 to 100, measures the percentage of minorities in the ward of the average minority citizen. For example, this measures the extent to which Blacks live in neighborhoods that are predominantly Black. Scores below the group's share of the population indicate under-representation. Scores above the group's share of the population indicate over-representation. A score of 100 indicates that all Blacks live in ghettos. Massey and Fischer (1999) argue that, "Whereas the dissimilarity index measures the extent of what might be called *structural* segregation between two groups, the P* interaction index captures more the *experience* of segregation from the viewpoint of the typical minority member" (pp. 321-322).

The index of residential clustering measures the tendency for Blacks to live in one large area or to be scattered throughout the city. A score of 0 indicates Blacks living in a checkerboard fashion and a score of 100 indicates that Blacks live together in one large enclave. The index of centralization, which ranges from –100 to 100, measures whether or not Blacks live close to the central business district. Negative values indicate outlying

areas, 0 indicates a uniform distribution, and positive values indicate that Blacks live close to the center of the city.

The final segregation index is called the index of concentration, which varies between –100 and 100. A score of 0 means that Blacks and Whites are equally concentrated, negative values mean that Whites occupy the smallest neighborhoods in the city and Blacks occupy the largest. Positive values mean the reverse. According to Massey and Denton (1993), a group is hyper segregated when a group has high levels of segregation on four of the five indices. They argue that index values under 30 indicate low levels of segregation, values between 30 and 60 indicate moderate levels, and values above 60 indicate high levels of segregation. We will now review relevant research that has utilized these indices to investigate the causes of residential segregation and put forth policy recommendations.

Part 1

To examine the role of ethnic preferences in racial residential segregation, we begin with a baseline scenario (Model 1) where economic factors, discrimination, and ethnic preferences are all inactive. We set city size to medium, vacancy to medium (6%), and ethnic mix to 60% White, 20% Hispanic, and 20% Black. Search effort was set to medium and duration of cycles to 30. Economic factors, ethnic preferences, and discrimination remain inactive. The city size and vacancy rate remain set to medium and the ethnic mix and level of search effort also remain the same. We run nine simulations and record the median segregation scores.

Next, we introduce the experimental variables- households' ethnic preferences. Households are assigned a desired level of contact with in-group members and a desired

level with out-group members. In both Model 2 and Model 3, Whites' preference for ingroup contact is high (seek 90%) and they have no preference for out-group contact (seek 0%). Both Blacks and Hispanics seek to assimilate with Whites. Their preference for ingroup contact is medium (seek 50%) and their preference for out-group contact is low (seek 30%). ¹ Model 2 and 3 only differ in whether or not households consider in-group representation in adjacent neighborhoods. In the second specification, Model 2, households do not consider the in-group representation in adjacent neighborhoods. In Model 3, households do consider the ethnic mix of surrounding neighborhoods. It seems likely that in a real world situation potential buyers might inquire about the racial makeup of nearby areas. Once again, we run nine simulations for each model and record the median segregation scores.

Part 2

In this section, we test our hypothesis that policy encouraging migration into Black areas by Whites will produce a larger reduction in segregation than Black migration into White areas. We will experiment with three models in order to ascertain levels of segregation. The three models are: Model Number 4) baseline representation of Philadelphia, Model Number 5) movement of Blacks into White areas and Model Number 6) movement of Whites into Black areas. Please refer to appendices 1-3 for complete details of these models, this section is an overview and highlights specific features of the model that speak to the hypothesis.

¹ These settings are options in SimSeg (Fossett and Senft 2004) that are modeled on variations of preferences reported in multi-ethnic surveys (Bobo and Zubrinsky 1996; Charles 2000; 2001b; 2003; Clark 1992).

Given our working knowledge of racial residential segregation in Philadelphia, we will base our model upon the characteristic of the city.² We have used the more advanced 'Scenario' features in order to more closely control for factors affecting the effectiveness of policy administration. Demographically and geographically the model represents Philadelphia; the area is comparable in size, it reflects the large number of vacant properties that exists and property prices reflect the real life variance.³ Furthermore, we have modeled income levels upon the levels of inequality that are known to exist in Philadelphia, such as levels of high inequality that exist between Whites and Blacks, and the low level of variance among socioeconomic status that exists among racial groups. The number of people searching for a new home at any given time is one quarter and the rate of successful relocation is one fifth of those searching.⁴ We presume that all property seekers, regardless of ethnicity are looking for high quality housing in high status areas that are at the same or higher levels of SES as themselves, and hence, these SimSeg variables SEEKHQH, HPIVONSI, SEEKSESA, SEEKSESN and AVOIDSES are held constant across models 4,5 and 6.

Because the software will not allow more than three ethnic groups, we have had to exclude a small number of other minorities such as Asians. We have defined the model's population as close to the 2000 census as possible, resulting in 47% White, 44% Black and 9% Hispanic. However, this research will concern itself mainly with the Black-White divide which reflects the dominant emphasis in the literature, especially those that deal with policy, such as Meyer (2000), Massey and Denton (1993), Ellen

² Acknowledgements to Emilia Paiva-Turra for sharing basic details of this model; these models show significant changes to racial composition and ethnic preferences from that model.

³ Source: 2004 New York Times Almanac.

⁴ These figures are arbitrary, as we could not find any data on the average numbers of people searching for new homes in Philadelphia, nor those who were successful in their attempts.

(2000) and Yinger (1995). Since we are concentrating on integration, we are going to assume that the demographics and physical characteristics of the city mentioned in this and the above paragraph will not change. Thus, SimSeg variables PB, PW, SESP50, SESIQR, NDWB, ETA2HV, PVACANT, FIXHVAL, NROW and NHOUSES will remain constant across models 4,5 and 6.

In order to test the effectiveness of encouraging one group into another area, we will assume that the fair housing act has been 100% at equalizing the financial and property markets. Hence we have reduced the amount of discriminatory influence from 'institutional barriers' to zero (SimSeg variables: IRBARB, STEERNG, EXAGG and REDLINE). This will remain consistent across models 4,5 and 6. However, given that we want to make this model as realistic as possible, we will not remove White's efficacy of excluding Blacks based on other discriminatory practices, though how big an impact this would have would depend on the racial proportions in a neighborhood. Thus, we have set SimSeg variables DISCB and DPOWER as very high and dependent on the percentage of Whites. Since the literature suggests that Whites are reluctant to integrate with Blacks even at similar SES levels, we have decided to not model ethnic preference upon the status of groups (SimSeg variable IPXSES). All these variables will also remain consistent across models 4,5 and 6.

Where the models diverge are around the ethnic preferences of those migrating. In the basic Model number 4, we have assumed that Philadelphians consider the racial composition of their neighborhood (SimSeg variables ETHAREA, ETHNBN, ETHADJ, ETHDIV). However, making the assumption that whatever fictitious integration policy implemented by whatever fictitious body of people works, then we will alter variables

that address preference for integration for Blacks and Whites in order to ascertain what movement of people has a greater impact on decreasing segregation measurements such as dissimilarity, isolation, clustering and centralization scores. In Model four (the baseline model) we will use Hispanics as a positive ethnic preference for both Blacks and Whites. Then in Model five, where we will simulate Black migration into White areas, we will set Black preferences for assimilation into White areas, rather than Hispanic preferences (SimSeg variable ASSIMB). Finally in Model six we will set White preferences for movement into Black areas, rather than Hispanic (SimSeg variable RANKMIN). Hispanics on the other hand will consistently prefer Whites across models, so SimSeg variable ASSIMH will be held constant.

Minimum in-group contact is an important consideration to the investigation of the effectiveness of policy. Emerson et al (2001) and Zubrinksy and Bobo (1996) have shown in various ways that Whites desire more in-group contact than other ethnic groups. Based on these findings, we have constructed Model four (the baseline model) to reflect the fact that Blacks and Hispanics have a lower need for minimum in-group contact than Whites. The SimSeg variables BIP, HIP and HOP will be held consistent over models 4,5 and 6, as it is presumed that if policy fostering integration will not be hindered by high needs for in-group contact. However, given the emphasis of such researchers as Farley (1996) upon the reluctance of Blacks to enter White neighborhoods for fear of violence and persecution, this variable will be set at a lower rate than Hispanics in Model four (the baseline model). In Model five, where it will be presumed that integration policy had worked effectively to encourage Blacks to migrate to White areas, the minimum SimSeg variable denoting out-group contact (BOP) will be increased.

In the case of Model six (where Whites are integrated into Black areas) we have to presume that integration policy has worked effectively enough to encourage the White population to relocate to Black neighborhoods. Hence, their in-group contact needs will be presumed to have lessened and their out-group preferences have to be increased. So in model six, the SimSeg variable denoting minimum in-group contact (WIP) will be greatly reduced and the SimSeg variable denoting minimum out-group contact (WOP) will be greatly increased.

Model Four (No Policy influence – Philly as is)	Model Six (Successful Policy for Whites to migrate into Black neighborhoods)								
NAT	URE OF OUT -GROUP PREFERENC	CES							
ASSIMB	ASSIMB	ASSIMB							
(Blacks prefer Hispanics)	(Blacks prefer Whites)	(Blacks prefer Hispanics)							
ASSIMH	ASSIMH	ASSIMH							
(Hispanics prefer Whites)	(Hispanics prefer Whites)	(Hispanics prefer Whites)							
RANKMIN	RANKMIN	RANKMIN							
(Whites prefer Hispanics)	(Whites prefer Hispanics)	(Whites prefer Blacks)							
IN -GROUP PREFERENCES									
WIP = 75	WIP = 75	WIP = 50							
(Whites have high in-group	(Whites have high in-group	(Whites have reduced to							
preferences)	preferences)	moderate in-group preferences)							
BIP = 50	BIP = 50	BIP = 50							
(Blacks have moderate in-group preferences)	(Blacks have moderate in-group preferences)	(Blacks have moderate in-group preferences)							
HIP = 50	HIP = 50	HIP = 50							
(Hispanics have moderate in- group preferences)	(Hispanics have moderate in-group preferences)	(Hispanics have moderate in- group preferences)							
	OUT -GROUP PREFERENCES								
WOP = 0	WOP = 0	WOP = 45							
(Whites have extremely low out-	(Whites have extremely low out-group	(Whites have moderate low out-							
group preferences)	preferences	group preferences							
BOP = 30	BOP = 45	BOP = 30							
(Blacks have low out-group	(Blacks have moderate out-group	(Blacks have low out-group							
preferences)	preferences)	preferences)							
BOP = 35	BOP = 35	BOP = 35							

Table 1: A summary of the significant variable differences between the models.

(Hispanics have low out-group	(Hispanics have low out-group	(Hispanics have low out-group
preferences)	preferences)	preferences)

Limitations

SimSeg is a valuable program because of the capabilities listed above; however, the software does have some limitations. First, SimSeg is a simulation program but the scenarios it generates are not as complicated as the real world decisions that contribute to the relocation process. For example, potential home-seekers may be interested in living close to their jobs, community organization, churches, family members, and/or relatives. SimSeg does not allow for these variables to come into play. It would also be helpful if the program could visually represent neighborhood characteristics such as crime rates and the quality of schools, because research has shown that these factors are of vital importance to moving decisions (Ellen 2000).

The program does not allow you to subdivide ethnic preferences among ethnic groups themselves (SimSeg variables ETHAREA, ETHNBN, ETHADJ, ETHDIV) thus, all racial groups consider the racial composition of their area, nearby neighbors, adjacent areas.⁵ This means that you cannot set Blacks as being less concerned with this factor than Whites, which means that one important dynamic in the process of residential segregation is missing; namely the divergent wishes of Black and White home seekers. Also you cannot set housing quality preferences (SEEKHQH, HPICONS1) at different levels for different ethnic groups. This would have been an interesting thing to investigate.

⁵ At least, we could not perform these functions; perhaps it is possible but the help box did not explain this clearly.

SimSeg would also be better suited to illustrate residential segregation patterns if it included Asians and Native Americans and was able to compute a score for the concentration index. Finally, it would have been beneficial to disaggregate Hispanics and Asians, and possibly even Blacks and Whites, into specific *ethnic* groups since research (Charles 2001a) suggests that recent immigrants may have different residential patterns.

Results

Part 1 – Ethnic Preferences

Table 2 illustrates the substantial effect of ethnic preferences on residential segregation. Here we present median segregation scores for the baseline scenario (Model 1), Model 2, and Model 3. Recall that in Model 1 movers have no ethnic preferences. In Model 2, movers consider the racial composition of the neighborhood of interest, and in Model 3, movers consider the racial composition of the neighborhood of interest as well as adjacent neighborhoods. (Economic factors as well as discrimination are in active in all three models.) The median is obtained by running the simulation nine times for each model.

Model Number and Policy Summary→ Segregation Measure↓	Model 1 Median (Baseline) <i>No Ethnic Preference</i>	Model 2 Median Movers consider the racial composition of the neighborhood of interest	Model 3 Median Movers consider the racial composition of the neighborhood of interest as well as adjacent neighborhoods
Dissimilarity			
White-Black	14.8	65.6	66.8
White- Hispanic	15.5	66.1	62.7
Black- Hispanic	19.6	70.5	68.0
Isolation Scores			
White	60.8	75.5	75.7
Black	21.9	50.3	48.0

Table 2: Median Segregation Scores for Models 1, 2 & 3

Hispanic	21.8	50.5	52.2
Centralization Scores			
White	-0.5	-4.9	3.6
Black	1.9	3.1	-3.0
Hispanic	-1.1	-1.7	-2.6
Clustering Scores			
White	59.9	59.3	67.1
Black	20.0	19.3	30.2
Hispanic	20.0	19.4	35.6

<u>Dissimilarity</u>

Median Dissimilarity Scores



Figure 1 –A Graph to Illustrate How Varying Degrees of Preference Affect Dissimilarity

In Model 1, 14.8% of Blacks and 15.5% of Hispanics would have to move in order to achieve an even residential pattern. (We use the unadjusted dissimilarity scores.) This degree of unevenness is considered low by most researchers (Massey and Denton 1993). In contrast, dissimilarity scores when movers consider the racial composition of neighborhoods are high. In Model 2, more than 65% of Whites, Blacks, and Hispanics would have to move to another neighborhood in order to achieve an even distribution. The dissimilarity scores in Model 2 are 50 percentage points higher than the scores in the baseline scenario. In Model 3, home seekers take into account the racial background of the neighborhoods. In this model, Blacks are slightly more segregated from Whites than Hispanics are (compare 66.8 to 62.7). In all three models, Blacks and Hispanics are more

segregated from each other than they are from Whites. (This may be a result of the smaller numbers of each group relative to Whites.)

Isolation



Median Isolation Scores

Figure 2 – A Graph to Illustrate How Varying Degrees of Preference Affect Group Isolation

In Model 1 (no ethnic preferences), we can see that isolation scores closely mirror each group's representation in the city as a whole (reflecting integration). Compare 60% (representation) to 60.8% (isolation score) for Whites. In Model 2 (ethnic preferences confined to the neighborhood of interest), isolation scores are high for Whites and moderate for Blacks and Hispanics. Whites' score is 15.5 percentage points above their representation in the overall population while Blacks and Hispanics' scores are approximately 30 percentage points above their representation. Therefore, in relative terms, Blacks and Hispanics are more isolated than Whites. In Model 3, where home seekers take the racial composition of adjacent neighborhoods into account, Blacks appear to be slightly more isolated than Hispanics (compare 52.2 to 48.0).

Clustering



Median Clustering Scores

Figure 3 – A Graph to Illustrate How Varying Degrees of Preference Affect Group Clustering

In Model 1 clustering scores follow the same pattern as isolation, with all groups' scores being equal to their representation in the city as a whole. In Model 2, as in the baseline scenario, Whites, Blacks, and Hispanics' clustering scores approximate their representation in the overall population. However, in Model 3, the clustering score is moderate for Blacks and Hispanics. Whites and Hispanics' clustering scores are approximately seven and ten percentage points above the representation in the population

as a whole respectively. Blacks' clustering score is 16 percentage points higher than their representation in the city. This indicates that when home seekers consider the racial composition of nearby areas, Blacks and Hispanics are more likely to be compelled to cluster in racially homogenous neighborhoods throughout the city.

Centralization



Median Centralization Scores

Figure 4 – A Graph to Illustrate How Varying Degrees of Preference Affect Groups' Degree of Centralization

Recall that centralization is measured on a scale that ranges from -100 to +100 with negative values indicating lower levels of centralization and positive values indicating higher levels of centralization. In Model 1 (no ethnic preferences), the centralization scores indicate that Whites, Hispanics, and Blacks are approaching a

neutral distribution across the city. Centralization scores cluster around zero indicating an even distribution with Hispanics being slightly further from the center of the city than Whites. In Model 2 (concern for the racial composition of the target neighborhood), Whites appear to be slightly further from the city than Hispanics. Blacks are closer to the center in Models 1 and 2. In Model 3 (preferences regarding the racial composition of the neighborhood of interest and nearby neighborhoods), however, Whites are closest to the center of the city. Blacks appear to be furthest from the center followed by Hispanics. It is important to remember that centralization remains low in all three models. Differences between racial groups are negligible considering the scope of the scale, so such small differences may not represent meaningful differences in "real life."

These results indicate that ethnic preferences do indeed affect racial residential segregation even when all other variables (such as economic factors and level of discrimination) are held constant. These findings also illustrate that as ethnic preferences become more important (moving from Model 1 to Model 3), the level of segregation in the city increases. As we can see, in Model 1, where ethnic preferences are inactive, the segregation scores on all four dimensions are low. The city landscape in Model 1 visually depicts random spatial distribution. Racial/ethnic groups are dispersed throughout the city and each bounded neighborhood is comprised of a variety of different socioeconomic status groups.

In Model 2, where households consider the racial composition of their target neighborhoods but not the racial composition for adjacent neighborhoods, dissimilarity scores and isolation scores are relatively high. In contrast, clustering and centralization scores are relatively low. The graphic representation of the city landscape in Model 2

indicates multi-ethnic checker boarding. Bounded neighborhoods are racially/ethnically homogenous but they do not cluster together to form ghettos.

In Model 3, where movers consider the racial composition of their target neighborhoods as well as adjacent neighborhoods, dissimilarity scores are high and isolation scores are moderate to high. The clustering score is moderate for Blacks and Hispanics and centralization is low in this model. Drawing the city landscape for Model 3 illustrates multi-ethnic clustering. Neighborhoods are racially/ethnically homogenous and cluster together to from ghettos.

The simulations discussed above clearly demonstrate the power of ethnic preferences to affect racial segregation. According to Clark (1992), "The combination of preferences, affordability, and the existing organization of the urban structure makes it unrealistic to expect major changes in residential patterns as a result of legal interventions in the housing markets and policies designed to increase residential integration" (p.463). This suggests that policy makers who are interested in racially integrating neighborhoods should target the ethnic preferences of residents. As Clark (1992) notes, "If integrated housing is to be a reality, however, it must come through changes in preferences as well, especially among Anglos and (to a lesser extent) among Hispanics and Asians" (p.465). In light of these findings that ethnic preferences *do* shape racial residential segregation, the next section will outline and analyze our second hypthesis as to whether policy should target moving Blacks into White areas (changing Blacks' preferences) or moving Whites into Black areas (changing Whites' preferences).

Part 2 – Policy Effectiveness⁶

The three models (4,5 and 6) that were constructed to represent the three types of policy (baseline/no policy, Black-into-White integration and White-into-Black integration) show clear trends in effect upon the levels of segregation in the model representation of the city of Philadelphia. Table 3 details the mean effect that the different types of policy has upon measurements of segregation and shows that generally, both policies have a positive effect at increasing integration. We shall now examine each of these measures more closely to assess how effective Black-into-White versus White-into-Black policy is.

Model Number and Policy Summary→ Segregation Measure↓	Model 4 Mean (Baseline) <i>No Policy</i>	Model 5 Mean Policy encouraging Blacks to relocate to White areas	Model 6 Mean Policy encouraging Whites to relocate to Black areas
Dissimilarity			
White-Black	89.7	86.4	80.7
White- Hispanic	88.2	86.6	57.9
Black- Hispanic	21.1	17.0	31.1
Isolation Scores White Black Hispanic	91.4 79.7 27.0	89.7 76.9 23.6	82.7 77.0 20.4
Centralization Scores			
White	- 51.3	- 52.1	- 60.5
Black	46.3	46.5	59.3
Hispanic	18.4	19.0	18.2
Clustering Scores			
White	63.9	62.4	61.1
Black	59.9	59.2	61.2
Hispanic	13.7	13.6	12.5

Table 3: A table to show the mean effects of three policy models 4, 5 & 6, upon common segregation measures.

⁶ Please see appendix seven, eight and nine for detailed breakdowns of each simulation.

Dissimilarity:

Figure 5: A graph to show the mean effects of three policy models (4, 5 & 6) upon the uneven distribution of racial groups.



From *figure 5*, it is clear that policy which is directed at encouraging both Blacks and Whites to relocate into more integrated areas is somewhat successful in reducing the extent to which Blacks and Whites are unevenly distributed across the city (models 5&6), albeit a small effect. Dissimilarity between). However, this reduction in evenness among Black and Whites is reduced slighty greater when the policy is directed at Whites moving into Black neighborhoods (model 6), rather than Blacks moving into White neighborhoods (model 5), which shows a very small reduction in uneven distribution across the city. Hispanics, on the other hand, see a reduction in the unevenness of their distribution when Blacks are encouraged to move into White areas (model 5), but have a large increase in unevenness when Whites are encouraged to move into Black areas (model 6). Thus, it can be argued that if we are simply trying to reduce Black-White uneven distribution, implementing policy that is aimed at moving Whites into predominantly Black areas will have the largest impact, which comes at the cost of heightening segregation among Hispanics (model 6).

Isolation:



Figure 6: A graph to show the mean effects of three policy models (4, 5 & 6) upon the isolation of racial groups

From *figure 6*, it is evident that policy which is directed at encouraging both Blacks and Whites to relocate into more integrated areas is modestly successful in reducing the extent to which Blacks, Hispanics and Whites are isolated from other racial groups across the city. Because measures of isolation are affected by the size of the racial population, we see that Hispanics have the highest levels of contact with other racial groups. Even so, policy that is aimed at integrating both Black and Whites into integrated neighborhoods reduces this low level of isolation even more (models 5&6). In particular, when Whites are encouraged to relocate into Black neighborhoods, Hispanics and Whites show the lowest levels of isolation. For the Black population, however, while any policy reduces the amount of isolation they experience, it doesn't matter if they are integrated into White populations, or Whites are integrated into Black populations (models 5&6). Thus, it would appear that the best policy for decreasing isolation among all racial groups as a whole is when Whites are targeted to integrate into Black communities (model 6).

Centralization:

Figure 7: A graph to show the mean effects of three policy models (4, 5 & 6) upon the centralization of racial groups.



From *figure* 7, we can see that policy which is directed at encouraging both Blacks and Whites to relocate into more integrated areas has varying success in shifting the racial patterns of centralization near the center of the city. Hispanics show extremely consistent levels of centralization, regardless of the policy being implemented or not (models 4, 5&6). Whereas Whites consistently show a tendency to have "very low" centralization in the city, Blacks consistently show a tendency to have "high" to "very high" centralization in the city. ⁷ When policy encourages Blacks to move into White neighborhoods, there is no change in the centralization of White groups, nor Black groups (model 5). Conversely, when policy is aimed at moving Whites into Black areas, Whites show an increased movement away from the center of the city, and Blacks show an increased movement towards the center of the city. Thus, this finding seems to somewhat question the

⁷ This categorization is based upon the SimSeg centralization index and their recommended interpretations of the index.

previous findings, as while both policies that encourages Blacks and Whites to move into integrated areas reduce dissimilarity and isolation they simultaneously strengthen the trends for Blacks to live in the center city and Whites to live in the suburbs.

Clustering:

Figure 8: A graph to show the mean effects of three policy models (4, 5 & 6) upon the clustering of racial groups.



From *figure 8*, we can see that policy which is directed at encouraging both Blacks and Whites to relocate into more integrated areas has very little effect in changing the degree to which racial groups form clusters or ghettos. White and Black both show consistently elevated levels of clustering, which may be a function of their relative group size and high levels of dissimilarity (see figure one for details on dissimilarity). Hispanics, show lover levels of clustering, again, which may be a function of the group size and low levels of dissimilarity. When policy is aimed at integration Blacks into White neighborhoods, Whites become more minimally more clustered, Blacks become minimally less clustered, and Hispanics see no change in clustering (model 5). When policy is aimed at integration Whites into Black neighborhoods the inverse is true, Whites become more minimally less clustered, Blacks become minimally more clustered and Hispanics become slightly less clustered (model 6). Thus, because the changes in clustering measuring are so small, it is hard to assess if that either policy has any impact upon clustering. However, this is not to say that this is a redundant aspect for policy to target; these outcomes may not be the case in urban settings with different racial proportions.

Discussion

We take our two sets of findings as evidence to confirm our hypothesis that in order to reduce Black-White segregation, policy is more effective if it targets the movement of White households into predominantly Black neighborhoods, than Blacks into predominantly White neighborhoods. However, the magnitude of this effectiveness is small. Our simulations show that the unevenness of Black-White distribution is lessened to a greater extent when White-into-Black policy is implemented, though this is at the cost of heightening segregation among Hispanics. Furthermore, the residential isolation of racial groups is decreased more across all races when Whites are targeted to integrate into Black communities. Less convincing because the changes in clustering are so small is the effect that White-into-Black policy has upon the patterns of clustering. However, clustering is arguably a less important measure of segregation, especially since measures of dissimilarity and isolation still fell despite relatively little change in measures of clustering. Equally, while Whites-into-Black policy strengthens the tendency for Blacks to live in the center city and for Whites to live in the suburbs, this policy still simultaneously reduces levels of dissimilarity and isolation. Thus in conclusion, we would state that for the two most convincing measures of segregation (D and P*), White

into Black policies are the most effective way of fostering integration. By arriving at this conclusion, we do not intend to suggest that desegregation policy should never encourage Blacks to move into White neighborhoods or that policy should not attempt to encourage two-way integration (Black into White in addition to White into Black). Indeed, we feel that the most We are simply arguing that, overall, when comparing the effects of moving Blacks into predominantly White neighborhoods and moving Whites into predominantly Black neighborhoods, the latter is more affective at reducing segregation.

Not only does the White-into-Black policy appear to produce more effective policies would be those that target both groups for integration into diverse neighborhoods.

Not only does the White-into-Black policy appear to produce slightly more effective integration results than the Black-into-White policies, we argue that these policies also come with a whole host of other advantages that cannot be illustrated by the SimSeg software. First, Black families will not have to face the fear of persecution, stereotyping or general unease of being the "first Blacks on the block" as argued by Meyer (2000) and others. Second, in real life, given that the majority of Whites are resistant to the idea of having a Black neighbors (Meyer, 2000), then it makes sense to use well developed policy to initially target those White households who would like, or at least are considering migrating to a integrated neighborhood. If these initial White households were given some incentive to move into predominantly Black areas, this may well persuade other more resistant White households into the area. One such incentive and one that appears to be the main concern for families is guaranteeing them a good education system. In the case of University City, an increasingly integrated area in

Philadelphia, we have seen such a development in the form of a University of Pennsylvania elementary school, which currently has a racially and economically diverse student body.

Policy makers dealing with the integration of Philadelphia's University City have also provided households with home buyers a home grant, to be used to secure a deposit or make home improvements, as long as they personally retain the property for 7 years. Of course, this grant is *race neutral* in the Ellen (2000) sense, but due to the racial composition of The University of Pennsylvania and more specifically, those eligible for the grant (i.e. they are predominantly White), we can see that this is an example of White-into-Black integration. It can well be argued, that in the case of University City, racial integration was not the priority for the policy makers - gentrification was. This is one of the most difficult issues that White-into-Black integration may face. On the one hand, it can be suggested that for the Black households who are witnessing the in migration of White households, the monetary and social capital these households bring with them are a benefit; for example, University City has seen the development of a first class elementary school, the strengthening of the safety and security of the neighborhood, the opening of many new business, and with that new job opportunities, and also the area has seen a sharp rise in property values. On the other hand, one could argue that since Black households are more like to rent, than own property, the property returns for Black households are not as high as it is for other racial groups, and as a result the rent in this area is increased to the point where Blacks are forced to move. For those Black households who do own their property, the subsequent increases upon property tax, may

also oust them from their homes into cheaper properties, which may well be in predominantly Black areas.

Another reason why Black-into-White policy may not work as well as it should is that many studies have shown that when a Black household moves into a predominantly White neighborhood, "White Flight" ensues. For example Lee and Wood (1990) found that racial succession was the most frequent outcome to Blacks migration into a White area. Glazer (1980) states that "only a little prejudice leads to people moving into or out of a neighborhood at such rates as to create high concentrations." If Lee, Wood and Glazer are to be believed, then it can be argued that the reason why Black-into-White policies do not seem to quell segregation is that they do not directly prevent White flight. For example laws that are passed to prevent discriminatory practices by real estate agents, mortgage and loan brokers do not prevent White flight, taken to an extreme, one could argue that by making it easier for Blacks to move into White neighborhoods, this may be encouraging the process of racial succession.

Throughout this paper we have found ourselves returning to the fact that the aim of so-called integration policies is unclear. We wonder if the aim is to simply produce integrated neighborhoods, or whether the underlying impetus of integration policy is to increase equality between racial groups? We would argue that the former is certainly an easier feat to achieve than the latter, but we have faith in the findings that selective targeting of integration policy may address the more difficult, broader problem of inequality. Finally, it is worth noting that comparing these idealized simulation results to the effectiveness of policy is not without it limitations. Firstly, as stated by Yinger (1995) and many others, the enforcement and general commitment to the existing policies has

been far from good. In fact, it is hard to say conclusively that any policy has 'failed' because of who it was directed at (i.e. Black-into-White), as it may be well be a case of poor implementation by the government, lawmakers and not in least, the American public. Policy targeting integration can only work as much as those involved want it to work, but we can definitely make incremental steps into tackling this.

<u>APPENDIX ONE: Specific Details of Baseline Model number 4, Simulating</u> <u>Philadelphia's Racial Residential Patterns, without any policy influences.</u>

Loaded from "C:\PROGRA~1\SimSeg\Scenario\default.scn". Then *** MODIFIED *** interactively via menus.

Scenario Title Line: Default Scenario

Demographic Structure

- PW 47 Percent White in Total Population (5-95)
- PB 44 Percent Black in Total Population (5-95)
- PH 9 Percent Hispanic in Total Population (5-95)
- SESP50 35 Median for Status in Total Population (20-80)
- SESIQR 30 Inter quartile Range of Status Distribution for Total Population (20-35)
- NDWB 40 White-Black Net Difference on Status (-80 80)
- NDWH 25 White-Hispanic Net Difference on Status (-80 80)
- NDHB 15 Hispanic-Black Net Difference on Status (-80 80)

Urban Structure

- NROWS 10 Dimensions of City Neighborhood Grid (5-30)
- NHOUSES 6 Dimensions of Neighborhood Housing Grid (5-15)
- FIXHVAL 1 Housing Values are "Fixed" (0=No 1=Yes)
- PVACANT 6 Percentage of Vacant Housing in City (1-50)
- ETA2HV 60 Percentage of Variation in Housing Values "Explained" by Neighborhood (0-90)

Institutional Factors

- IBARB 0 Extra Percentage that Blacks Pay to Overcome Institutional Barriers (0-50)
- IBARH 0 Extra Percentage that Hispanics Pay to Overcome Institutional Barriers (0-50)
- STEERING 0 Ethnic Steering in Housing Search (0-100)
- EXAGG 0 Agents Exaggerate Client's In-Group Preferences (0-100)
- REDLINE 0 Redline Impact on Minority Areas (0-50)
- DISCB 98 Discrimination Against Black Entry into White Areas (0-100)
- DISCH 98 Discrimination Against Hispanic Entry into White Areas (0-100)
- DTOKEN 0 Discrimination Function Permits Tokens (0=No 1=Yes)
- DPOWER 1 Whites' Power to Exclude is a Function of Percent White in Area (0=No 1=Yes)

Active Preferences

- ETHAREA 1 Compare Area on In-Group presence (0=No 1=Yes)
- ETHNBN 1 Compare Neighbors on In-Group presence (0=No 1=Yes)
- ETHADJ 1 Compare Adjacent Areas on In-Group presence (0=No 1=Yes)
- ETHDIV 1 Compare Area on Out-Group presence (0=No 1=Yes)
- ASSIMB 0 Blacks compare areas on presence of Whites (0=No 1=Yes)
- ASSIMH 1 Hispanics compare areas on presence of Whites (0=No 1=Yes)
- RANKMIN 1 Whites prefer Hispanics over Blacks (0=No 1=Yes)

IPXSES 0 In-Group preference targets may vary by SES (0=No 1=Yes)

- HQHOUSE 1 Seek High Quality Housing (0=No 1=Yes)
- SESAREA 1 Seek High Status Area (0=No 1=Yes)
- SESNBN 1 Seek High Status Neighbors (0=No 1=Yes)
- SESDISP 1 Avoid Extreme SES Disparity (0=No 1=Yes)

Ethnic Preference Targets

- SDPREF 5 Dispersion Factor for In-Group Preferences (0-5)
- WIP 75 Whites' In-Group Preference Target (0-100)
- BIP 50 Blacks' In-Group Preference Target (0-100)
- HIP 50 Hispanics' In-Group Preference Taret (0-100)
- WIP01 * White In-Group Preference Target @ SES=1 (0-100)
- BIP01 * Black In-Group Preference Target @ SES=1 (0-100)
- HIP01 * Hispanic In-Group Preference Target @ SES=1 (0-100)
- WOP 0 Whites' Out-Group Preference Target (0-WIP)
- BOP 30 Blacks' Out-Group Preference Target (0-BIP)
- HOP 35 Hispanics' Out-Group Preference Target (0-HIP)

Main Weights for Ethnic, Housing, and Status Preferences

EWEIGHT100Overall Weight to Ethnic Concerns (0-100)HWEIGHT100Overall Weight to Housing Concerns (0-100)SWEIGHT100Overall Weight to Status Concerns (0-100)

Subweights for Ethnic Preferences

EWEIGHT1 100 Subweight for In-Group Presence in Area (0-100)
EWEIGHT2 0 Subweight for In-Group Presence Among Neighbors (0-100)
EWEIGHT3 50 Subweight for In-Group Presence in Adjacent Areas (0-100)
EWEIGHT4 50 Subweight for Out-Group Presence in Area (0-100)

Subweights for Status Preferences

SWEIGHT1 100 Subweight for Status of Area (0-100) SWEIGHT2 100 Subweight for Status of Neighbors (0-100) SWEIGHT3 50 Subweight for Disparity Between Area Status and Household Status (0-100)

Constants Relating to Status and Housing Preference Targets

SP1CONS1 10 Neighborhood Status Target (% Above Household Status; 0-25)
SP2CONS1 25 Neighborhood Status Limit (% Above Household Status; 0-50)
HP1CONS1 10 Housing Target (% Above Household Status; 0-25)

Search Related Variables

HVLUCK 1 Permit "Luck" in House Qualifying (0=No 1=Yes)
HVCONS1 10 Maximum "Luck" in House Qualifying (% Household Status; 0-40)
NBNRANGE 5 Nearby Neighbor Range (1-8 [yields 8-288 neighbors])
PMOVES 25 Percentage of Households Given Chance to Move in Each Cycle (0-100)
PFORCE 20 Of Households with Chance to Move, Percentage Required to Move (0-100)
NLOOKS 12 Number of Housing Units Examined During Each Search (1-99)
NCYCLES 50 Number of Cycles in Simulation Run (1-250)

<u>APPENDIX TWO: Specific Details of Model 5 Simulating Philadelphia's Racial</u> Residential Patterns, Using Black-into-White Policy

Loaded from "C:\PROGRA~1\SimSeg\Scenario\default.scn". Then *** MODIFIED *** interactively via menus.

Scenario Title Line: Default Scenario

Demographic Structure

- PW 47 Percent White in Total Population (5-95)
- PB 44 Percent Black in Total Population (5-95)
- PH 9 Percent Hispanic in Total Population (5-95)
- SESP50 35 Median for Status in Total Population (20-80)
- SESIQR 30 Inter quartile Range of Status Distribution for Total Population (20-35)
- NDWB 40 White-Black Net Difference on Status (-80 80)
- NDWH 25 White-Hispanic Net Difference on Status (-80 80)
- NDHB 15 Hispanic-Black Net Difference on Status (-80 80)

Urban Structure

- NROWS 10 Dimensions of City Neighborhood Grid (5-30)
- NHOUSES 6 Dimensions of Neighborhood Housing Grid (5-15)
- FIXHVAL 1 Housing Values are "Fixed" (0=No 1=Yes)
- PVACANT 6 Percentage of Vacant Housing in City (1-50)
- ETA2HV 60 Percentage of Variation in Housing Values "Explained" by Neighborhood (0-90)

Institutional Factors

- IBARB 0 Extra Percentage that Blacks Pay to Overcome Institutional Barriers (0-50)
- IBARH 0 Extra Percentage that Hispanics Pay to Overcome Institutional Barriers (0-50)
- STEERING 0 Ethnic Steering in Housing Search (0-100)
- EXAGG 0 Agents Exaggerate Client's In-Group Preferences (0-100)
- REDLINE 0 Redline Impact on Minority Areas (0-50)
- DISCB 98 Discrimination Against Black Entry into White Areas (0-100)
- DISCH 98 Discrimination Against Hispanic Entry into White Areas (0-100)
- DTOKEN 0 Discrimination Function Permits Tokens (0=No 1=Yes)
- DPOWER 1 Whites' Power to Exclude is a Function of Percent White in Area (0=No 1=Yes)

Active Preferences

- ETHAREA 1 Compare Area on In-Group presence (0=No 1=Yes)
- ETHNBN 1 Compare Neighbors on In-Group presence (0=No 1=Yes)
- ETHADJ 1 Compare Adjacent Areas on In-Group presence (0=No 1=Yes)
- ETHDIV 1 Compare Area on Out-Group presence (0=No 1=Yes)
- ASSIMB 1 Blacks compare areas on presence of Whites (0=No 1=Yes)
- ASSIMH 1 Hispanics compare areas on presence of Whites (0=No 1=Yes)
- RANKMIN 1 Whites prefer Hispanics over Blacks (0=No 1=Yes)

IPXSES 0 In-Group preference targets may vary by SES (0=No 1=Yes)

HQHOUSE 1 Seek High Quality Housing (0=No 1=Yes)

- SESAREA 1 Seek High Status Area (0=No 1=Yes)
- SESNBN 1 Seek High Status Neighbors (0=No 1=Yes)
- SESDISP 1 Avoid Extreme SES Disparity (0=No 1=Yes)

Ethnic Preference Targets

- SDPREF 5 Dispersion Factor for In-Group Preferences (0-5)
- WIP 75 Whites' In-Group Preference Target (0-100)
- BIP 50 Blacks' In-Group Preference Target (0-100)
- HIP 50 Hispanics' In-Group Preference Taret (0-100)
- WIP01 * White In-Group Preference Target @ SES=1 (0-100)
- BIP01 * Black In-Group Preference Target @ SES=1 (0-100)
- HIP01 * Hispanic In-Group Preference Target @ SES=1 (0-100)
- WOP 0 Whites' Out-Group Preference Target (0-WIP)
- BOP 45 Blacks' Out-Group Preference Target (0-BIP)
- HOP 35 Hispanics' Out-Group Preference Target (0-HIP)

Main Weights for Ethnic, Housing, and Status Preferences

EWEIGHT100Overall Weight to Ethnic Concerns (0-100)HWEIGHT100Overall Weight to Housing Concerns (0-100)SWEIGHT100Overall Weight to Status Concerns (0-100)

Subweights for Ethnic Preferences

EWEIGHT1 100 Subweight for In-Group Presence in Area (0-100)
EWEIGHT2 0 Subweight for In-Group Presence Among Neighbors (0-100)
EWEIGHT3 50 Subweight for In-Group Presence in Adjacent Areas (0-100)
EWEIGHT4 50 Subweight for Out-Group Presence in Area (0-100)

Subweights for Status Preferences

SWEIGHT1 100 Subweight for Status of Area (0-100) SWEIGHT2 100 Subweight for Status of Neighbors (0-100) SWEIGHT3 50 Subweight for Disparity Between Area Status and Household Status (0-100)

Constants Relating to Status and Housing Preference Targets

SP1CONS1 10 Neighborhood Status Target (% Above Household Status; 0-25)
SP2CONS1 25 Neighborhood Status Limit (% Above Household Status; 0-50)
HP1CONS1 10 Housing Target (% Above Household Status; 0-25)

Search Related Variables

HVLUCK 1 Permit "Luck" in House Qualifying (0=No 1=Yes)
HVCONS1 10 Maximum "Luck" in House Qualifying (% Household Status; 0-40)
NBNRANGE 5 Nearby Neighbor Range (1-8 [yields 8-288 neighbors])
PMOVES 25 Percentage of Households Given Chance to Move in Each Cycle (0-100)
PFORCE 20 Of Households with Chance to Move, Percentage Required to Move (0-100)
NLOOKS 12 Number of Housing Units Examined During Each Search (1-99)
NCYCLES 50 Number of Cycles in Simulation Run (1-250)

<u>APPENDIX THREE: Specific Details of Model 6 Simulating Philadelphia's Racial</u> <u>Residential Patterns, Using White-into-Black Policy</u>

Loaded from "C:\PROGRA~1\SimSeg\Scenario\default.scn". Then *** MODIFIED *** interactively via menus.

Scenario Title Line: Default Scenario

Demographic Structure

- PW 47 Percent White in Total Population (5-95)
- PB 44 Percent Black in Total Population (5-95)
- PH 9 Percent Hispanic in Total Population (5-95)
- SESP50 35 Median for Status in Total Population (20-80)
- SESIQR 30 Inter quartile Range of Status Distribution for Total Population (20-35)
- NDWB 40 White-Black Net Difference on Status (-80 80)
- NDWH 25 White-Hispanic Net Difference on Status (-80 80)
- NDHB 15 Hispanic-Black Net Difference on Status (-80 80)

Urban Structure

- NROWS 10 Dimensions of City Neighborhood Grid (5-30)
- NHOUSES 6 Dimensions of Neighborhood Housing Grid (5-15)
- FIXHVAL 1 Housing Values are "Fixed" (0=No 1=Yes)
- PVACANT 6 Percentage of Vacant Housing in City (1-50)
- ETA2HV 60 Percentage of Variation in Housing Values "Explained" by Neighborhood (0-90)

Institutional Factors

- IBARB 0 Extra Percentage that Blacks Pay to Overcome Institutional Barriers (0-50)
- IBARH 0 Extra Percentage that Hispanics Pay to Overcome Institutional Barriers (0-50)
- STEERING 0 Ethnic Steering in Housing Search (0-100)
- EXAGG 0 Agents Exaggerate Client's In-Group Preferences (0-100)
- REDLINE 0 Redline Impact on Minority Areas (0-50)
- DISCB 98 Discrimination Against Black Entry into White Areas (0-100)
- DISCH 98 Discrimination Against Hispanic Entry into White Areas (0-100)
- DTOKEN 0 Discrimination Function Permits Tokens (0=No 1=Yes)
- DPOWER 1 Whites' Power to Exclude is a Function of Percent White in Area (0=No 1=Yes)

Active Preferences

- ETHAREA 1 Compare Area on In-Group presence (0=No 1=Yes)
- ETHNBN 1 Compare Neighbors on In-Group presence (0=No 1=Yes)
- ETHADJ 1 Compare Adjacent Areas on In-Group presence (0=No 1=Yes)
- ETHDIV 1 Compare Area on Out-Group presence (0=No 1=Yes)
- ASSIMB 0 Blacks compare areas on presence of Whites (0=No 1=Yes)
- ASSIMH 1 Hispanics compare areas on presence of Whites (0=No 1=Yes)
- RANKMIN 0 Whites prefer Hispanics over Blacks (0=No 1=Yes)

IPXSES 0 In-Group preference targets may vary by SES (0=No 1=Yes)

HQHOUSE 1 Seek High Quality Housing (0=No 1=Yes)

- SESAREA 1 Seek High Status Area (0=No 1=Yes)
- SESNBN 1 Seek High Status Neighbors (0=No 1=Yes)
- SESDISP 1 Avoid Extreme SES Disparity (0=No 1=Yes)

Ethnic Preference Targets

- SDPREF 5 Dispersion Factor for In-Group Preferences (0-5)
- WIP 50 Whites' In-Group Preference Target (0-100)
- BIP 50 Blacks' In-Group Preference Target (0-100)
- HIP 50 Hispanics' In-Group Preference Target (0-100)
- WIP01 * White In-Group Preference Target @ SES=1 (0-100)
- BIP01 * Black In-Group Preference Target @ SES=1 (0-100)
- HIP01 * Hispanic In-Group Preference Target @ SES=1 (0-100)
- WOP 45 Whites' Out-Group Preference Target (0-WIP)
- BOP 30 Blacks' Out-Group Preference Target (0-BIP)
- HOP 35 Hispanics' Out-Group Preference Target (0-HIP)

Main Weights for Ethnic, Housing, and Status Preferences

EWEIGHT 100 Overall Weight to Ethnic Concerns (0-100) HWEIGHT 100 Overall Weight to Housing Concerns (0-100) SWEIGHT 100 Overall Weight to Status Concerns (0-100)

Subweights for Ethnic Preferences

EWEIGHT1 100 Subweight for In-Group Presence in Area (0-100)
EWEIGHT2 0 Subweight for In-Group Presence Among Neighbors (0-100)
EWEIGHT3 50 Subweight for In-Group Presence in Adjacent Areas (0-100)
EWEIGHT4 50 Subweight for Out-Group Presence in Area (0-100)

Subweights for Status Preferences

SWEIGHT1 100 Subweight for Status of Area (0-100)SWEIGHT2 100 Subweight for Status of Neighbors (0-100)SWEIGHT3 50 Subweight for Disparity Between Area Status and Household Status (0-100)

Constants Relating to Status and Housing Preference Targets

SP1CONS1 10 Neighborhood Status Target (% Above Household Status; 0-25)
SP2CONS1 25 Neighborhood Status Limit (% Above Household Status; 0-50)
HP1CONS1 10 Housing Target (% Above Household Status; 0-25)

Search Related Variables

HVLUCK 1 Permit "Luck" in House Qualifying (0=No 1=Yes)
HVCONS1 10 Maximum "Luck" in House Qualifying (% Household Status; 0-40)
NBNRANGE 5 Nearby Neighbor Range (1-8 [yields 8-288 neighbors])
PMOVES 25 Percentage of Households Given Chance to Move in Each Cycle (0-100)
PFORCE 20 Of Households with Chance to Move, Percentage Required to Move (0-100)
NLOOKS 12 Number of Housing Units Examined During Each Search (1-99)
NCYCLES 50 Number of Cycles in Simulation Run (1-250)

Run→										
Segregation	1	2	3	4	5	6	7	8	9	Median
Measure↓										
Dissimilarity										
White-Black	15.1	13.6	16.9	15.2	14.5	13.4	14.8	14.8	15.2	14.8
White-										
Hispanic	15.0	13.7	15.5	14.7	16.2	16.4	17.5	15.5	14.5	15.5
Black-										
Hispanic	19.0	18.2	19.6	19.6	20.2	18.5	20.5	20.0	22.5	19.6
Isolation										
Scores										
White	60.8	60.7	60.9	60.8	60.8	60.8	60.9	60.8	60.6	60.8
Black	21.8	21.5	22.1	21.9	21.8	21.3	21.9	21.8	21.9	21.8
Hispanic	21.7	21.5	21.9	21.7	21.9	21.9	22.3	22.0	21.9	21.9
Clustering										
Scores										
White	60.2	60.1	59.9	59.9	60.1	59.9	59.8	59.8	60.1	59.9
Black	19.9	20.0	20.0	19.9	20.0	20.1	20.1	19.9	20.0	20.0
Hispanic	19.8	19.9	20.0	20.0	19.7	20.1	20.0	20.1	19.9	20.0
Centralization										
Scores										
White	3.0	2.1	2.1	-3.3	-1.0	-0.5	-2.6	-0.3	-2.3	-0.5
Black	-6.2	1.9	-0.1	2.2	1.6	2.1	2.5	-0.8	3.4	1.9
Hispanic	3.1	-3.2	-2.3	2.1	-1.1	-1.1	2.2	1.0	-1.3	-1.1

<u>APPENDIX FOUR: Simulation Results for Baseline Model Number 1 (No Ethnic Preference)</u>

Run→										
Segregation	1	2	3	4	5	6	7	8	9	Median
Measure↓										
Dissimilarity										
White-Black	68.3	65.0	64.7	65.2	65.6	67.1	68.0	65.9	65.6	65.6
White-										
Hispanic	66.2	66.1	67.0	66.1	65.4	66.3	63.4	66.4	65.8	66.1
Black-										
Hispanic	68.9	69.8	71.8	69.1	71.9	71.0	70.4	71.6	70.5	70.5
Isolation										
Scores										
White	76.7	75.3	75.5	76.1	75.4	75.8	75.0	75.6	75.3	75.5
Black	52.4	49.3	50.5	49.9	50.9	51.8	51.7	49.9	50.0	50.5
Hispanic	49.7	50.2	52.0	49.8	50.3	50.8	48.0	51.3	50.6	50.3
Clustering										
Scores										
White	58.6	58.7	58.7	57.8	60.0	59.7	59.4	59.3	59.8	59.3
Black	16.1	18.9	19.4	20.6	20.0	20.6	21.9	18.5	18.1	19.4
Hispanic	19.2	19.5	18.9	18.9	18.5	19.3	19.8	22.2	22.0	19.3
Centralization										
Scores										
White						-				
w mite	3.9	9.9	-4.9	-9.2	-2.0	11.0	4.8	-5.6	-6.0	-4.9
Black	3.1	8.9	7.4	-0.3	3.8	11.9	-5.5	0.8	-6.5	3.1
Hispanic	-7.0	- 199	-34	99	-2.8	37	-17	10.5	134	-17

<u>APPENDIX FIVE: Simulation Results for Model Number 2 (Ethnic preferences do not consider adjacent neighborhoods)</u>

Run→										
Segregation	1	2	3	4	5	6	7	8	9	Median
Measure↓										
Dissimilarity										
White-Black	66.3	70.0	65.4	65.8	67.3	67.4	66.8	66.8	66.1	66.8
White-										
Hispanic	63.5	62.0	63.2	60.6	62.7	63.1	62.5	62.8	60.6	62.7
Black-										
Hispanic	67.0	70.1	66.6	68.1	68.0	69.7	70.4	66.8	68.0	68.0
Isolation										
Scores										
White	75.5	76.1	75.7	74.9	75.8	76.0	75.9	75.6	75.4	75.7
Black	51.4	55.2	50.1	51.3	52.7	53.5	52.2	52.1	52.1	52.2
Hispanic	48.0	47.5	47.8	47.6	48.3	49.0	50.1	45.9	48.3	48.0
Clustering										
Scores										
White	67.1	65.5	65.9	65.6	67.2	67.2	71.0	68.0	65.9	67.1
Black	29.8	37.4	37.2	31.8	37.5	33.7	37.8	35.6	31.7	35.6
Hispanic	25.8	29.7	30.2	27.0	32.2	33.2	35.0	30.1	31.4	30.2
Centralization										
Scores										
White	4.9	3.6	-2.1	-4.2	18.0	4.8	9.2	-5.4	-1.2	3.6
Black			-		-				-	
DIACK	-4.3	-1.3	11.6	-3.0	21.9	9.8	9.3	6.9	17.1	-3.0
Hispanic					-	-	-			
Inspanie	-2.1	-7.5	13.6	6.8	11.4	21.0	26.0	-2.6	23.6	-2.6

<u>APPENDIX SIX: Simulation Results for Model Number 3 (Ethnic preferences do consider adjacent neighborhoods)</u>

Run#→										
Segregation	1	2	3	4	5	6	7	8	9	Mean
Measure↓										
Dissimilarity										
White-Black	89.0	88.0	89.3	88.6	91.8	87.3	91.9	89.8	91.2	89.7
White- Hispanic	88.2	87.1	88.1	88.9	87.9	87.6	90.5	87.2	88.5	88.2
Black- Hispanic	23.7	13.0	23.9	20.9	24.3	29.2	19.3	16.5	19.4	21.1
Isolation										
Scores										
White	91.0	90.8	91.4	91.0	92.3	89.9	92.9	91.6	92.1	91.4
Black	79.7	77.3	78.8	78.9	82.0	79.2	82.0	79.1	80.7	79. 7
Hispanic	27.1	22.0	26.2	27.3	28.7	31.6	29.9	23.1	26.9	27.0
Centralization										
Scores										
White	- 50.4	- 49.9	- 55.5	- 52.9	- 48.2	- 51.6	- 49.0	- 51.3	- 53.3	- 51.3
Black	44.1	45.4	49.3	48.9	43.2	46.5	45.2	46.6	47.7	46.3
Hispanic	21.6	16.4	21.4	17.2	19.2	17.7	16.3	16.0	19.9	18.4
Clustering										
Scores										
White	63.7	58.2	65.6	66.0	66.7	62.4	64.1	58.9	69.2	63.9
Black	60.7	55.9	59.9	60.4	62.7	57.9	59.7	57.6	64.3	59.9
Hispanic	11.2	12.4	15.7	14.9	14.6	15.5	15.2	11.0	13.1	13.7

<u>APPENDIX SEVEN: Simulation Results of Baseline Model Number 4 - Philadelphia's</u> <u>Racial Residential Patterns, without any policy influences.</u>

<u>APPENDIX EIGHT: Simulation Results of Model Number 5 - The Effects of Black-into-</u> <u>White Policies</u>

Run#→										
Segregation	1	2	3	4	5	6	7	8	9	Mean
Measure↓										
Dissimilarity										
White-Black	88.2	84.6	84.6	88.0	90.5	84.7	85.1	86.0	85.5	86.4
White-	86.5	85.6	88.1	83.7	80.8	88 2	86.8	83.1	87.5	86.6
Hispanic	80.5	85.0	00.1	05.7	09.0	00.2	80.8	65.1	07.5	00.0
Black-	16.3	26.0	18/	18.0	13.8	17.6	16.0	17.0	16.0	17.0
Hispanic	10.5	20.0	10.4	10.9	13.8	17.0	10.9	17.0	10.9	17.0
Isolation										
Scores										
White	90.5	88.4	88.9	90.3	92.2	89.1	89.1	89.0	89.2	89.7
Black	78.4	76.4	75.2	78.0	78.8	75.3	75.7	77.7	76.4	76.9
Hispanic	23.4	25.8	24.7	21.9	22.8	23.5	23.4	22.7	24.0	23.6
Centralization										
Scores										
White	-	-	-	-	-	-	-	-	-	52.1
winte	51.4	54.6	52.4	51.8	48.2	51.9	52.1	54.3	52.3	-32.1
Black	44.7	48.1	47.5	46.4	43.4	45.3	46.6	50.2	46.2	46.5
Hispanic	22.2	21.7	16.9	22.3	17.1	17.8	17.4	17.1	18.6	19.0
Clustering										
Scores										
White	63.5	60.1	63.8	61.3	62.4	64.3	59.7	60.9	66.0	62.4
Black	60.9	58.3	60.2	59.0	58.0	59.3	56.6	60.1	60.2	59.2
Hispanic	12.2	12.1	14.8	14.5	14.7	14.5	12.7	10.4	16.2	13.6

<u>APPENDIX NINE: Simulation of the Effects of Model Number 6 - Policies that Directs</u> <u>White Households into Black Neighborhoods has upon Philadelphia's Racial Residential</u> <u>Patterns.</u>

Run#→			_	_	_		_	_		
Segregation	1	2	3	4	5	6	7	8	9	Mean
Measure↓										
Dissimilarity										
White-Black	81.1	82.1	78.5	81.7	78.4	77.5	83.2	82.6	80.8	80.7
White-	571	62.1	55.2	57.0	52.6	510	627	50.2	50 2	57.0
Hispanic	37.1	05.1	55.5	37.0	33.0	34.8	02.7	39.5	38.5	57.9
Black-	20 (20.0	12 (24.2	27.2	22.4	20.0	41.2	22.7	21.1
Hispanic	28.0	29.8	42.6	24.3	27.3	32.4	20.9	41.3	32.7	31.1
Isolation										
Scores										
White	82.5	84.2	81.3	83.6	80.9	80.2	85.1	83.7	82.4	82.7
Black	76.9	77.5	77.1	77.3	75.2	75.3	77.9	79.1	76.7	77.0
Hispanic	18.5	20.9	26.6	18.3	16.8	19.3	16.7	27.2	19.0	20.4
Centralization										
Scores										
White	-	-	-	-	-	-	-	-	-	-
white	60.4	61.4	57.4	59.4	60.8	63.2	62.0	59.6	60.5	60.5
Black	61.1	59.4	54.4	57.7	61.1	62.6	61.5	56.6	59.7	59.3
Hispanic	13.9	19.2	20.7	17.3	13.2	20.6	16.3	23.6	18.7	18.2
Clustering										
Scores										
White	64.5	61.7	57.7	60.6	61.0	60.6	62.8	61.1	59.5	61.1
Black	63.9	61.6	58.1	60.6	60.8	61.1	64.0	61.9	61.1	61.2
Hispanic	12.1	11.5	15.2	12.1	11.1	12.0	11.2	14.0	12.7	12.5

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