This School's Gone Downhill: Racial Change and Perceived School Quality

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Abstract

This research questions the extent to which residents' perceptions of declining school quality in the past five years are tied to measurable indicators of this decline, such as rising school poverty, decreasing test scores, and rising incidences of school violence, and the extent to which they may be related to racial change in schools. We use unique data from the 2003-2004 Philadelphia Area Study that link neighborhood residents with their closest elementary, middle, and secondary schools. We find that even when controlling for the current characteristics of residents' schools, and changes in poverty, standardized test scores, and rates of violent incidents over five years, a greater than 2 point increase in the percentage of a school that is Black over the five year period affects the likelihood of saying school quality has decreased.

Researchers of residential segregation have long observed that as neighborhoods integrate, White residents' perceptions of the quality of life in their neighborhoods become more negative (Ellen 2000; Frey 1979; Krysan 2002a). For instance, Whites in integrating neighborhoods report higher rates of crime than do those in stable, racially homogenous neighborhoods (Chiricos et al. 2001; Krysan 2002b; Quillian and Pager 2001). While some suggest that indeed residents of integrating neighborhoods experience a declining quality of life due to a vicious cycle in which relatively wealthier Whites flee neighborhoods taking financial resources with them (Harris 1999), others debate the extent to which residents' perceptions differ from neighborhood realities (Chiricos, McEntire, and Gerts 2001; Krysan 2002b; Quillian and Pager 2001). Do the conditions of neighborhoods deteriorate as they integrate or do White residents perceive they do as a result of stereotypes and prejudgments of Blacks and other minorities?

One important measure of quality of life in a neighborhood is the condition of its public schools. Those who study residential segregation note that White families with school-age children are most likely to want to avoid integrating neighborhoods (Emerson, Yancey, and Chai 2001; Harris 1999). Families who are unable to leave public schools for private or magnet

schools may decide to flee neighborhoods based on a perceived decline in the quality of the public schools (Krysan 2002a). It is possible that as wealthier White neighborhood residents flee to more homogenously White neighborhoods, they take financial resources with them. Schools with fewer resources may experience declining quality of instruction, which is manifested in lower test scores and more behavioral problems among students. It is unclear, though, the extent to which schools actually experience declining quality as their racial profile changes. Neighborhood residents' judgments of school quality may not be based on objective indicators of declining quality, like rising school poverty, declining test scores, and increasing incidents of school violence, but rather on the changing racial composition of the neighborhood schools. Saporito (2003), for instance, finds that White children are more likely to leave schools for magnet or private schools as the proportion of Blacks in a school increases. This same effect is not found among Black students. He suggests that White parents may judge schools with higher proportions of Blacks to be of low quality, whether or not the schools are observed to have lower test scores or per pupil spending.

In this paper, we explore the extent to which residents' perceptions of declining school quality are based on measurable indicators of such a decline, such as rising school poverty, decreasing test scores relative to other area schools, and increasing incidences of school crime, and the extent to which they are based on the change in the proportion of Blacks enrolled in the neighborhood schools over the past five years. We also explore whether the response to racial change varies by race of the resident. We do so using a unique data set that matches neighborhood residents to their nearest elementary, middle, and secondary schools in order to crudely approximate school feeder areas.

The vast majority of literature on White flight from schools is based on school enrollment data and does not include any indicators of people's actual attitudes toward schools experiencing racial change. Research on reactions to racial change often focuses on how neighborhood residential integration impacts reactions to schools in general (Ellen 2000; Krysan 2002a). While this is worthwhile, it is unclear exactly what residents are reacting to since the research often lacks any actual measures of school quality. Therefore, it is difficult to determine if residents are responding to a real decline in school quality, or whether they are in fact inferring declining quality from the changing racial composition. Our data allow us to investigate whether lowered perceptions of school quality are attributable to the changing racial composition of schools while controlling for some school quality measures. Our results indicate that even after accounting for the current characteristics of schools, and changes in poverty, test scores relative to other schools, and violent incidents in schools, an increase of more than two percentage points in the proportion of Black students affects residents' perceptions of declining quality in their neighborhood schools.

Preferences, Prejudice, or Rational Decision-making? Why Residential Segregation Persists

Valuable insights about reactions to schools experiencing racial change may be found in research on racial residential segregation. The processes through which neighborhoods become segregated may be similar to those of schools, and segregation by neighborhood and by school are both consequential for life outcomes. Researchers have long recognized the Whites and Blacks, and to some extent, other minorities, occupy geographically distinct neighborhoods (e.g. Massey and Denton 1993; Taeuber and Taeuber 1965). This residential segregation has consequences for life chances in that access to affordable grocery stores, health services, child

care, community and leisure activities, high quality education, and other public services are all embedded within neighborhoods (Jargowski 1997; Massey and Denton 1993; Swanstrom, Dreier, and Mollenkopf, 2002; Wilson 1987). The physical conditions of neighborhoods vary, as do their rates of crime (Shaw and McKay 1942). One's neighbors may be important sources of social capital in that they provide supervision and support for children (Zhou and Bankston 1999), provide information about employment (Elliot 1999; Wilson 1996), or simply act as role models (Wilson 1987).

Because neighborhoods affect life chances, the causes of racial residential segregation are crucial to explore. Residential segregation by race can occur through several mechanisms. While the difference in socioeconomic status among Whites and Blacks is one obvious mechanism leading to residential segregation (Wilson 1987), research weighing the independent contributions of race and income on segregation levels shows that although the importance of income is growing, race explains a greater proportion of segregation than class (Adelman 2005; Farley 2005; Fischer 2003). Thus, while economic differences partially explain residential segregation between races, clearly there are other factors affecting the uneven distribution of racial groups across neighborhoods.

Two other mechanisms have been proposed to explain how race impacts segregation. First, institutions and their policies can prevent racial integration. Prior to the 1968 Fair Housing Act, local laws existed prohibiting Blacks and other minorities from moving to White neighborhoods. Banks discriminated in granting loans and mortgages, and real estate brokers "red-lined" particular areas where Blacks were not shown houses. Even after these practices were recognized and determined illegal by the 1968 *Jones v. Mayer* Supreme Court decision, researchers continue to find evidence that Blacks are treated differently by banks and other

lending agencies, and by realtors (Galster 1990; Goering and Wink 1996; Massey and Denton 1993; Shlay 1989; Squires 1994; Yinger 1995). Because Blacks are constrained from moving into predominantly White areas, residential segregation persists.

Current levels of residential segregation may also exist due to individual preferences. Even as discriminatory behavior in the housing market decreases, discrepant neighborhood racial composition preferences among Whites and Blacks lead individuals to make housing decisions that perpetuate residential segregation (Charles 2000; Emerson, Yancey and Chai 2001; Farley, Steeh, Jackson, Krysan, and Reeves 1994; Krysan 2002a; Krysan and Farley 2002; Quillian 2002). Racial residential preferences are argued to derive from three main sources: in-group preferences, racial prejudice/out-group hostility, or perceived status differences.

According to the "in-group preferences" hypothesis, both Blacks and Whites have a strong preference for a significant proportion of co-ethnics in their neighborhoods, although these preferences vary by race (Clark 1986, 1991). Whites are more comfortable living with others who they perceive are like them. Though Blacks, too, may have this preference, it is stronger among Whites. Krysan and Farley (2002) find that Blacks are willing to tolerate far higher proportions of Whites than Whites are willing to tolerate of Blacks. They further find that it is not a preference for living near other Blacks but rather fear of out-group hostility that motivates Blacks' preferences.

"In-group" preferences do not explain why Whites hold preferences for their own racial group more strongly than do Blacks nor why Whites react most strongly to neighborhoods composed of Blacks as compared to Hispanics and Asians (Emerson, Yancey, and Chai 2001). Researchers argue that it is Whites' attitudes towards minorities, particularly Blacks, which accounts for their preferences to live with other Whites. Whites increasingly disagree that

Whites have a right to keep Blacks out of their neighborhoods (Schuman, Steeh, and Bobo 1985); however, Whites may still prefer not to live with Blacks and other minorities themselves. Some argue that this is because Whites hold unfavorable views of Blacks and other minorities. Bobo and Zubrinsky (1996) label this the "prejudice" hypothesis. According to this hypothesis, prejudice could refer to out-group hostility toward members of all minority groups or the degree of hostility may fluctuate according to the social distance Whites perceive between themselves and a particular minority group. Under the second version of this hypothesis, Whites would least prefer Black neighbors because historically in the U.S. the social distance between Whites and Blacks has been perceived to be the greatest.

Other researchers suggest that Whites perceive socioeconomic differences between themselves and other racial groups, and that Whites worry that the quality of their neighborhood services and the value of their homes will decline as those with lower socioeconomic standing move in (Clark 1992; Galster 1989). Whites say that as Blacks and other minorities move in crime will go up, schools will be worse, and property values will decline (Farley, Steeh et al. 1994; Krysan 2002a). Some researchers (Harris 1999, 2001; Taub, Taylor, and Dunham 1984) argue that White preferences for more segregated neighborhoods have less to do with racial composition per se, but are more attributable to the unfavorable perceptions of structural characteristics that often accompany integration. Harris (1999) tests this "racial proxy hypothesis" using a hedonic price analysis and argues that "housing in neighborhoods with a high percentage of black residents is less valuable not because of an aversion to blacks per se, but rather because people prefer affluent, well-educated neighbors, and those traits are more common among whites than blacks" (476). However, Emerson, Yancey, and Chai (2001) find in a factorial experiment that even when public services, school quality, and housing values are

held constant, Whites prefer to buy houses in neighborhoods with proportionately fewer Blacks, though not Asians or Hispanics. Similarly, Crowder (2000) finds that the racial composition of neighborhoods influences the likelihood of moving out of a neighborhood, net of the neighborhood social and economic conditions. Race, then, may play an independent role in the housing choices of Whites, above and beyond the relationship between racial integration and neighborhood services.

While it is instructive to consider whether or not race remains an important factor in neighborhood choice after perceptions of housing values and quality of neighborhood services are accounted for, teasing preferences apart in this way may underestimate the role of racial attitudes on housing preferences. Krysan (2002a) distinguishes between "racial reasons" for White flight and "race-associated reasons" for White flight. "Racial reasons" for White flight involve direct antipathy or hostility toward members of another race resulting from negative stereotypes. Whites do not want to live around Blacks because they distrust them or are uncomfortable around them, because they do not want to be in the minority, or because their status position is threatened by an influx of Blacks into a neighborhood. "Race-associated" reasons for wanting to flee integrated neighborhoods include worries that public services will degenerate, crime will go up, and property values will decline. Krysan (2002a) maintains that race-associated reasons for White flight are not often empirically distinct from racial reasons because the prejudices of Whites may inform their perceptions that services will decline, whether or not they actually do. Whites may perceive that crime has or will go up as Black residents move in, even if the crime rate does not increase (Quillian and Pager 2001). Whites may perceive that housing values will decrease when Black residents move in, whether they do immediately or not. Indeed, Whites may use an increase in the presence of Blacks as an

indicator of whether their neighborhood quality and housing values will increase or decrease, whether or not other "objective" indicators of such changes may be present (Wolf 1963). The perception that this will occur may, in fact, lead it to occur – Whites who perceive their property values will decrease may move out of neighborhoods in large proportions thus causing the property values to decrease.

It is on this process that we focus. However, we concentrate on one crucial and visible neighborhood public service: public schools. Our research involves schools that experience racial change rather than neighborhoods.[1] To what extent do neighborhood residents perceive a decline in schools as their racial composition changes? To what degree can objective measures of this decline like decreasing school test scores relative to other schools, increasing school poverty, and rates of school violence account for this perception?

Racial Composition of Schools and "White Flight"

School quality is an important factor in people's residential location decisions (Barrow 2002; Holme 2002). Parents may undergo extensive searches to find houses in neighborhoods that feed into high quality local schools. Families may choose smaller homes and longer commutes to work in order to send their children to such schools. Even for residents without children, the quality of the local schools influences demand for housing in their neighborhoods, and, consequently, property values.

Researchers are just beginning to investigate how parents search for schools when deciding on a place to live, and little work has been done considering how parents judge the

[1] Neighborhood and school racial change often accompany each other. For example, because school feeder areas are comprised of neighborhoods, as neighborhoods integrate so do schools. However, Orfield and Lee (2006) point out that school racial profiles change more rapidly than do neighborhoods' because those who have more recently moved into neighborhoods are often younger adults with children, while those residents least likely to move are those who are older who have finished raising children. It is for this reason that we measure school rather than neighborhood racial change.

quality of those schools. Research on school quality has been approached in two distinct ways in the research literature. The first concerns the educational qualities that people desire in their "ideal" schools. Research may ask about qualities of schools that parents would choose if they indeed had that choice (Henig 1995). In these studies, safety and academic quality are frequently cited as important qualities of ideal schools (Henig 1995; Lee, Croninger, and Smith 1996; Schneider, Marschall, and Roch, 1999). The second category of research infers the qualities that parents consider important from the educational choices that people have already made. Economists suggest that a neighborhood high school's SAT scores indicate quality to parents because high schools' average SAT scores are positively associated with purchase prices across comparable homes (Barrow 2002).

While school quality is often not explicitly considered, there is a substantial body of research investigating how the racial composition of schools is tied to schooling decisions. Beginning with research examining the consequences of mandatory school desegregation, researchers have examined the extent to which the racial composition of schools affects Whites' attendance patterns. They generally find that as public schools integrate, White enrollment decreases (Bankston and Caldas 2000; Clark 1987; Clotfelter 1976; Coleman, Kelly, and Moore 1975; Farley, Richards, and Wurdock 1980; Giles 1978; Giles, Cataldo, and Gatlin 1975; Hess and Leal 2001; Smock and Wilson 1991; Wrinkle, Stewart, and Polinard 1999). Whites originally had two main options for avoiding integrating public schools. They could either move to more racially homogenous neighborhoods that have similarly homogenous public schools, or, they could avoid the public school system and instead utilize private schools. Another more recent option is to utilize public school choice programs to avoid neighborhood based schools.

In the past few years, as the clamor for affordable alternatives to public schooling has grown stronger, research has shown that the proportion of Black students in public schools significantly impacts White enrollments in private, charter, and magnet schools, even when controlling for actual measures of school quality such as graduation rates, test scores, safety, and student teacher ratios (Bankston and Caldas 2000; Fairlie and Resch 2002; Hess and Leal 2001; Renzulli and Evans 2005; Saporito 2003; Wrinkle, Stewart, and Polinard 1999). In exploring the choices families have already made about schooling, Saporito (2003) suggests that racial composition may be a proxy indicator for lower quality schools. He finds that Whites are more likely to send children to private or magnet schools as the proportion of Blacks in their neighborhood feeder schools increases. Similarly, Renzulli and Evans (2005) find that Whites are more likely to flee public schools for charter schools the greater the degree of school integration they face in their districts. Fairlie (2002) suggests that this flight may not be confined to Whites, but may also extend to Latino families. He finds that Latino students are also more likely to leave public schools for private schools the greater the percentage of Blacks in their neighborhood public schools. Studies such as these cause concern for educators and policy-makers who had hoped that "choice" programs such as magnet and charter schools, "schools within schools," and voucher programs would serve to integrate schools.

Though these studies infer racial motivations from parents' choices, they leave unspecified parents' reasons for leaving schools. They can determine neither whether these schooling decisions are due to parents' perceptions of the quality of these public schools, nor can they gauge the extent to which schooling decisions are due to the racial composition of schools or to the academic quality or safety of the specific schools their children would be attending (except Saporito 2003). Further, the students studied thus far may decide not to enter particular

schools, perhaps making decisions not to attend particular middle or high schools based on their racial composition, at important educational transitions. However, we do not know how racial change and the processes that accompany it may influence residents' perceptions of the quality of a particular school or schools.

Here we borrow terms from the research on residential segregation (Harris 1999, 2001; Krysan 2002a) to explore the connection between the changing racial composition of schools and perceptions of school quality. We suggest two hypotheses:

Racial proxy hypothesis (H1a): There will be no association between school racial change and residents' reports of declining school quality once changes in poverty, standardized scores on reading proficiency tests, and school safety are held constant. Residents' reactions to neighborhood schools are due to other processes that accompany the racial change experienced by these schools that may result in declining quality.

Race reasons hypothesis (H1b): A significant association between school racial change and residents' reports of declining school quality will remain after holding changes in poverty, test scores, and school safety constant because residents use the change in the proportion of Blacks in a school as an indicator of quality.

It is also possible that neighborhood residents judge a school's future and past not according to whether the school's profile has changed or not, but rather by its current academic quality, safety, poverty level of the students, and racial composition. Researchers have found that neighborhood residents often predict a decline in property values and services based on a neighborhood's current racial composition (Crowder 2000; Ellen 2000). It seems possible, then, that an observer could assess the downward trajectory of a school based on the current characteristics of that school, rather than on changes in those characteristics over the past five

years. Schools that experience the most rapid change in the percentage of the student body that is Black may be those schools with high failing rates on standardized reading tests, high student poverty, more violent incidents per student, and a larger percentage of Blacks currently. As researchers find that accounting for both current neighborhood conditions and change in those conditions over time influences the propensity to move out of neighborhoods (Crowder 2000; Lee, Oropesa, and Kanan 1994), so might neighbors' assessments of schools depend on both current conditions and change in those conditions. This leads to another set of hypotheses:

Racial proxy hypothesis (H2a): School racial change is no longer related to perceptions of declining school quality once the current conditions of schools are taken into account.

Race reasons hypothesis (H2b): Neighborhood residents are more likely to perceive declining school quality in schools that experience an increase in the proportion of Black students, even controlling for current school conditions.

Different Reactions to Racial Change by Race of the Respondent

Saporito (2003) finds that Whites are more likely to flee public schools for private or magnet schools as the proportion of Blacks in local public schools increases, but the same is not true for Blacks. There are two possible explanations for this effect. The first is that Blacks do not use racial change as an indicator of declining quality of public services to the same extent that Whites do. Indeed, Quillian and Pager (2001) find suggestive evidence that Blacks do not perceive higher rates of crime in integrated neighborhoods to the same degree as Whites do. However, it is also possible that Blacks perceive the same decline in services or quality, but are less able to act on this perception. Blacks may lack the wealth and resources to move out of neighborhoods or send children to private schools (Oliver and Shapiro 1997). In cities in which minorities predominate, magnet schools' racial designations may favor Whites. Further, Whites

may feel more empowered to use political connections to influence their children's admissions to such schools. Blacks may then perceive declining quality in schools that is similar to that seen by Whites, but are less able to escape the declining schools than are Whites.

To judge between these two competing explanations for White, but not Black, flight from racially changing public schools, we test whether or not Blacks are as likely to perceive declining school quality as Whites are when schools experience an increasing proportion of Blacks. We do so using an interaction between the race of the respondent and the average percentage change in Black racial composition of neighborhood schools. This suggests our third set of hypotheses: Racial reaction to integration (H3a): Blacks will be less likely than Whites to judge that school quality has decreased as schools experience an increase in the proportion of Black students. Shared reaction to integration (H3b): There will be no difference in the effect of school racial change on perceptions of declining school quality between Whites and Blacks.

In sum, there are two potential processes that characterize how school quality, and its perception, may be related to school racial change. First, students may desire to leave (or never enter) schools that have experienced declining quality, and Whites have more resources to act on this desire. In this instance, declining quality of schools precedes school racial change. Or, it could be that Whites perceive that schools experiencing racial change will experience declining quality as Black representation grows, whether or not there are immediate indicators of this declining quality. Whites may then leave these schools, taking financial and other resources with them. Non-Black minorities may also flee schools in response to increasing proportions of Black students. This causes a decline in the quality of schools that experience an increase in the representation of Black students. Under this scenario, racial change precedes declining school quality. If the first process predominates, then respondents' perceptions of racially changing

schools may be a result of observations of their current conditions and/or they may reflect changes that have accompanied racial change over the past five years. If there is little to no relationship between school racial change and perceptions of declining quality once these characteristics are taken into account, this supports the notion that residents' perceptions of school quality are due to the "race-proxy" characteristics identified by Harris (1999). If a significant influence remains after controlling for these characteristics, it may be that racial change itself indicates declining school quality to residents.

It is also possible that we are unable to capture those aspects of schools that are associated with declining school quality and an increasing proportion of Black students with our measures. There is a possibility that important variables are omitted, thus models are misspecified, and that, with better predictors, we could capture why racial change influences perceptions of school quality (Quillian and Pager 2001; Harris 1999). While we aware of this limitation, we believe that the measures we choose to include –standardized test scores, school safety, and school poverty – are indeed some of the most important indicators of school quality to neighborhood residents.

Data and Methods

The main source of data for this study is the Philadelphia Area Survey (PAS). The PAS is a telephone survey of heads of households in the Philadelphia Metropolitan region. The survey was administered in two waves, first in 2003 then again in 2004, with approximately 1,000 respondents each year. The sample was selected through random digit dial technology and is representative of all households in the region with a residential telephone number. The survey was approximately 35 minutes in length and respondents were paid $10 for their participation. The survey has a 36% response rate and preliminary analysis of the respondents indicates that

they do not differ significantly in median income and educational attainment from the population of the region. The responses were weighted to account for slight differences between the sample and the general population. Because initially Philadelphia residents were over-represented, applying these weights decreased the overall sample size to 1,901. We then excluded respondents who did not answer the school quality question, those with missing address information, and those for whom school information was incomplete. The overall weighted N of the sample is 1,560.

The survey has 10 sections that deal with respondents' opinions of different aspects of community life in the Philadelphia region. Among the topics covered are residential history, public services and transportation, crime and safety, community participation, schools, taxation, residential mobility, employment, and demographics of the respondent. We use a question from the education section of the survey as the primary dependent variable in this analysis. The question asks "Within the past five years, do you think the quality of public schools in your community has increased, decreased, or stayed the same?" This dependent variable is measured with three categories: increase in quality, decrease in quality, or quality stayed the same.

Our main independent variable is school racial change. Most research on reactions to school racial change are often forced to rely on district level data (Bankston and Caldas 2000; Renzulli and Evans 2005), or infer school racial composition based on measures at the neighborhood or census tract level (Ellen 2000; Krysan 2002a; for an exception, see Saporito 2003). This is because individual school feeder areas change frequently and are often not widely accessible. However, both of these methods are problematic. Districts can comprise many elementary schools and even secondary schools especially in large urban school districts. These individual schools may differ widely in terms of racial and economic composition, based on the

demographic characteristics of the neighborhoods from which they draw. Demographic changes in an entire school district may not accurately reflect changes in the racial composition of individual schools, which may better correspond to residents' perceptions of school quality. Similarly, a census tract is often a poor approximation of a school feeder area. Further, residential racial composition of school-aged children may be a poor substitute for school composition due to enrollment in private schools and other schools of choice. In an attempt to more closely match individuals with the schools in their immediate area, we match individuals with the elementary, middle, and high school that is geographically closest to their residence. These schools may not always be the assigned public school given the often confusingly drawn school feeder boundaries, but they give us a better approximation of what an individual considers to be his or her local schools. We believe this method will allow us to better capture changes in school racial composition that are seen and experienced by individual residents.

All of the respondents to the survey were asked to provide the address of the house in which they live. If respondents were reluctant to provide an address, they were asked to give the nearest major intersection. Using a Geographic Information System (GIS) each respondent was mapped and matched to the school districts in which they reside. More detailed matching identified the closest elementary, middle, and high schools to residents. Data from those schools were linked to each respondent. Specifically, we were able to link the proportion of a school that was Black in the 1999-2000 school year, and then in 2003-2004, to determine the extent to which a school had experienced racial change over approximately the past five years.

There are two main reasons that we use change in the percentage Black, rather than change in the percentage non-White, as our main independent variable. The first is that researchers have found that White, Hispanic, and Asian respondents react to Black neighbors

more strongly than other racial groups in research on respondents' residential preferences, though these reactions vary regionally (Charles 2000; Emerson, Yancey, and Chai 2001; Krysan 2002a; Zubrinsky and Bobo 1996). Research on school integration also shows that non-White minorities may flee schools as Black representation increases (Fairlie 2002). Residents in neighborhoods may react most strongly to increasing proportions of Black schoolchildren. Second, in the Philadelphia metropolitan region, Black-White segregation has been the most common pattern. The proportions of Hispanics and Asians residing in the metropolitan region remain below other comparably large urban areas, and residential segregation of Asians or Hispanics is less stark (Metropolitan Philadelphia Indicators Project 2005).

We capture the average change in the percentage of Blacks in the closest elementary, middle, and high schools using three categories: (0) the school experienced little to no change in the percentage Black, which we define as from 0 to 2 percentage point increase in Black representation; (1) the school experienced a greater than 2 point increase in the percentage of students who are Black; and (2) the school experienced a decline in Black representation. We separate the categories in this way because the third category of schools, those that saw a decline in Black representation, encompasses varied and interesting cases. The percentage of students who are Black in a school could decline for two main reasons. First, Black students may be replaced by White students in a school. This may occur in neighborhoods or suburbs that are experiencing revitalization or gentrification or in schools that institute "school within a school" magnet type programs, for instance. This type of school integration may indicate processes that could lead to residents' perceptions of school quality increasing. Another reason the percentage of Black students may decline is because other minority student representation is increasing. In the city of Philadelphia and its environs, increasing Hispanic, and, to some extent, Asian

representation leads to a declining proportion of Black students. In our sample, about 50% of the cases in which Black representation declined were due to an influx of White students, and 50% were due to a greater proportion of other minorities. It is unclear how increasing proportions of non-Black minorities might influence perceptions of school quality.

In addition to changes in the percentage of a school that is Black, we include other changes in schools over time. Because parents cite academic quality and safety as two of the most important characteristics in schools (Henig 1995; Lee, Croninger, and Smith 1996; Schneider, Marschall, and Roch 1999), we include changes in the standardized scores of reading tests from 1999-2003, and changes in the number of violent incidents reported per 1,000 students from 1999-2003, averaged over the closest elementary, middle, and high school to the respondent. We match school test scores from 1999 and 2003 to data on residents. These test scores were standardized using z-scores from the distribution of raw test scores in the region. Because Pennsylvania and New Jersey schools use different tests, z-scores were calculated separately for each state. Standardized test scores were then averaged for the nearest elementary, middle, and high schools. We then calculated the difference in standardized test scores from 1999 to 2003, as one indicator of declining quality relative to other area schools. We use Z-scores to account for changes in the tests used within states over the five year period, and to account for the use of different tests across states. Further, we contend that residents may judge school quality in comparison to other area schools. Because Saporito and Sahoni (2006) suggest that White parents are also more likely to flee school poverty, we include a change in the percentage of a school that receives free or reduced price from the school years1999-2000 to 2003-2004.

To account not only for the changes that schools have experienced in the past four to five years, but also their current conditions, we create an index that includes a measure of the percentage of students receiving free or reduced price lunch, the current percentage Black, reading test Z-scores, and the number of violent incidents per 1,000 students in 2003, all averaged over the three closest elementary, middle, and high schools. All of the index components are standardized and weighted equally. Although these four variables measure distinct characteristics, we created an index because these four variables were correlated at 0.80 or higher. The high correlation of these variables confirms what others studying urban schools have found: that disadvantage tends to be concentrated in high poverty schools with large percentages of Black schoolchildren (Saporito and Sahoni 2006).

A factor analysis indicated that all four variables loaded on a single factor. Cronbach's alpha for this index is 0.907. We characterize this index as a measure of school distress. The higher the score of the index, the more likely the school is to be plagued by problems of poverty, safety, and, perhaps consequently, academic quality.

Finally, we control for a number of important demographic characteristics. We use questions from the demographic sections to capture a respondent's race, gender, area of residence, education, family income, the presence of children in the household, and whether the respondent owns or rents his or her home. Research generally finds that respondent who are younger, more educated, and female are the most tolerant of residential integration (Bobo and Zubrinsky 1996; Farley, Fielding, and Krysan 1997; Krysan 2002a). Those who are more tolerant of schools experiencing racial change may share similar demographic profiles. Age is considered continuously. Race is measured as (0) Black; (1) White, and (2) Other. We include a measure of whether the household includes children under the age of 18, as the presence of such

children may heighten sensitivity to and awareness of school quality (Harris 1999; Krysan 2002a). Education is measured as whether the respondent has a bachelor's degree or more, or not, and income is measured dichotomously as (0) under $40,000 or (1) $40,000 or more. Those who live in the city versus the surrounding suburbs are captured with a dummy variable, as are homeowners versus renters.

Descriptive and Multivariate Results

Table 1 describes the sample. Overall, a third of the sample believes that school quality in their neighborhood has increased, while a little less than a quarter of the sample believes that school quality has decreased. The average age of the sample is almost 49 years old. There are more males than females, at 62% compared to 38%. About 74% of the sample is White, almost 20% Black, and 5% some other race. Less than half, 43% of the sample, has children under 18 in the household. A little over 35% of the sample has bachelor's degrees or more, and about 56% have family incomes of over $40,000. Two-thirds of the sample lives in the suburbs and almost three quarters own their own home.

(Table 1 about here.)

Respondents' neighborhood schools are also described in Table 1. Currently, respondents' closest schools have 33% Black students on average. About 34% of the neighborhood school children on average receive free or reduced price lunch, and a little less than a quarter of students in neighborhood schools fail state reading tests. Schools average about 18 reported violent incidents per 1,000 students per year. In the past five years, almost 40% of schools experienced little to no change in the proportion of the school that is Black, nearly 30% saw declining proportions of Black students, and a little over 30% saw an increase in Black representation of more than 2 percentage points. Schools saw an increase in students on free or

reduced price lunch of about 2 percentage points on average, while the percentage of students failing reading tests declined by about 7 points on average. Rates of reported violent incidents increased by 0.6 over the five year period.

Table 2 presents the characteristics of those most likely to say that school quality has changed over the past five years. Slightly younger respondents, on average, reported declining school quality, with a mean of almost 48 years old. More Whites perceive an increase in quality, while Blacks and other minorities were more likely than Whites to report a decline. Women are slightly more likely to see declining quality, while those who have children under 18 in the household see increasing quality more often than those without them. More educated respondents, those with a BA or higher, are more likely to report no change in school quality within five years as compared to those with less than a BA. These respondents are also less likely to report a decrease in school quality. Families that make less than $40,000 are most likely to report declining quality of schools, while wealthier respondents are more likely to report an increase in school quality. Suburban residents are far more likely than urban dwellers to perceive increasing school quality, while urban residents are more likely to report declining quality. Differences between those who own their homes and those who rent are small, with home-owners slightly more likely to report increasing school quality.

(Table 2 about here.)

Our main independent variable, whether schools have experienced a declining, stable, or increasing representation of Blacks over the past five years, is associated with residents' assessments of school quality. Almost 40% of those who were associated with stable schools reported increasing school quality, compared to 27% associated with schools that saw an increase of more than 2 percentage points in Black representation. Nearly 32% of those who saw

an increasing representation of Blacks in their neighborhood schools report declining school quality, compared to 16% who experienced stability in schools and to 24% associated with schools that experienced a decline in Black representation either because White or other minority representation grew.

Table 2 also shows that residents are responsive to the current conditions of schools and changes in those conditions over the past five years. For example, respondents are more likely to perceive increasing quality in schools that have the lowest percentage of Blacks. Those who report increasing school quality are associated with schools that have 25% Blacks on average, while those that see declining school quality have an average of 49% Blacks in their neighborhood schools. Those who report declining school quality are in schools with proportionately more students who fail standardized tests, with a mean of 34% failing such state exams. Respondents who report increased school quality are associated with schools with 19% of failing students on average, and those who see no difference in school quality are associated with schools with a 22% failure rate. When we use standardized test scores, we see that respondents who report declining school quality are linked to schools that had reading test scores 0.4 standard deviations below the regional mean However, school quality, when gauged by unstandardized failing rates, has increased over that past five years across all types of schools. Across all schools in our sample, the percentage failing reading tests has declined by 6.7 percentage points. This change has actually been larger in schools where neighborhood residents perceive declining quality. Among the schools that residents report are declining, the percentage failing these tests has decreased by 7.3 percentage points over the past five years. Despite this, average standardized test scores have experienced little to no change over the last several years.

Another important indicator of school quality for parents is safety. Here we look at how violent incidents reported in a school (per 1,000 students) influence neighborhood residents' judgments of changing school quality. Schools that are associated with decreasing school quality have a much higher rate of violent incidents per thousand students at 25.6, compared to 13.8 in schools where people perceive increasing quality. Schools where people perceive declining quality have also seen a greater increase in these incidents over the past five years, at 5.2 more incidents on average, compared to a decline of 1.6 incidents among schools where people perceive increasing quality. Neighbors may also be responding to the current or changing poverty profile of schools. Neighbors who say school quality has increased are associated with schools that have 28% of children who receive free or reduced price lunch, as compared to 49% for those who say that school quality has declined. Those who say that school quality has declined also saw a 3.5 percentage point increase in poverty in their schools over the past five years compared to a 1.7 percentage point increase in schools where residents perceived increasing quality. When we combine the current characteristics, the percentage in poverty, standardized reading test scores, and violent incidents per 1,000 students, into an index of school distress, we see that those who report declining school quality score higher on this index, with a mean score of 0.51 compared to -0.09 and -0.23 among those who see stable or increasing quality.

In Table 3, we describe schools experiencing racial change to explore if residents' perceptions match the conditions of these schools. Schools with increasing proportions of Black students are associated with both higher unstandardized rates of failing reading tests currently, and have more negative standardized test scores, on average. Those neighborhood schools that experience a decrease in Black representation have a mean failure rate of 26.7%, and those that

experience an increase in Black representation of more than 2 percentage points have a mean failure rate of 30.5%. This compares to a failure rate of only 16.8% among schools that experienced a change of 0-2 percentage points. As we saw in Table 2, the percentage of students failing tests has been decreasing across all schools, and, schools with increasing proportions of Blacks generally experience larger changes in the percentage failing standardized tests over the five year period. Schools with a 0-2 percentage point change in the share of Blacks in the school see failing rates decline by about 5.4 percentage points over the five year period, while the declines among schools with more than a 2 percentage point increase in Blacks see a decline of 6.2 percentage points. Schools with decreasing percentages of Blacks see more rapidly falling failure rates, with an average decline of 8.9 percentage points. When we look at the Z-scores of reading tests, schools that have decreasing percentages of Blacks experience small improvements in their position relative to other schools, while the position of schools with increasing percentages of Black students falls slightly. Schools that experience little racial change have standardized test scores that remain rather stable.

(Table 3 about here.)

School safety appears to be worse in racially changing schools currently and school violence has increased over the five year period. The average rate of violent incidents is higher in schools that have seen a greater than 2 percentage point increase in Black representation, with a rate of 23.3 incidents per 1,000 children, compared to 12.8 in schools with an increase in Black representation of 2 percentage points or less. More rapidly changing schools have also seen an increase in violent incidents with an average increase of 2.4 incidents per 1,000 in schools, compared to a 0.3 decrease in schools with little to no change. School poverty is also greatest in schools with increasing proportions of Blacks and has increased over the five year period more

in these schools. Schools with little or no change in Black representation have a poverty rate of 24% compared to 43% in schools that saw larger racial changes. Schools with a rapidly increasing proportion of Blacks also saw an increase in poverty of 2.5 percentage points compared to only 1.7 in racially stable schools. Again, when we use a current measure school distress, we see that schools experiencing growth in Black representation score highest on this index. So, schools that see the greatest increase in Black representation are those that, in general, already have high proportions of Black students, have higher failure rates than less rapidly changing schools, and have higher rates of violent incidents. The rate of violent incidents appears to be increasing in schools that experience growing proportions of Blacks. While the unstandardized failure rate on reading test scores has decreased in schools with increasing Black representation in the past five years, the standardized measure shows that the relative position of these schools is slipping compared to more stable schools.

The bivariate descriptive relationships show an association between the change in the percentage of a school that is Black and perceptions of declining school quality, supporting the racial reasons hypothesis that residents may use the change in the percentage of a school that is Black over time as an indicator of declining school quality. However, the bivariate results also show that these schools are more likely to have high poverty, high failure rates on standardized tests, and high rates of violence compared to schools that are not rapidly changing. Schools with increasing proportions of Blacks are also more likely to experience increasing rates of violence and increasing poverty on average, supporting the notion that neighborhood residents judge schools according to other processes that accompany racial change as the racial proxy hypothesis suggests. To determine whether or not the association between racially changing schools and the perception of declining quality is due primarily to changes in the racial composition of the

school, or rather to schools' current profiles and/or changes in those profiles over the past five years, we conduct multinomial multivariate logistic regression analyses.

In these regression models, our dependent variable is whether school quality has increased, decreased, or stayed the same. "Stayed the same" is the excluded category. Model 1 of Table 4 includes only individual-level demographic characteristics and our main variable of interest, change in Black representation. Here we see that change in Black representation has a non-significant, negative influence on reporting increased school quality, but a significant and positive influence on reporting that school quality has declined. Neighborhood residents whose schools have seen an over 2 percentage point increase in Black representation are about 1.6 times more likely to say that school quality has declined.[2] The only other variable in this model that significantly influences a respondent's perception that school quality has declined is whether or not she/he lives in the city. City dwellers are over two times more likely to perceive that school quality has declined than are those who live in the suburbs. When we compare those who believe school quality has increased to those who report it stayed the same, we see that residents with children under 18 in the household are significantly more likely to believe school quality has increased, while those with a BA or higher and those who live in the city are significantly less likely to report it increased versus stayed the same.[3]

(Table 4 about here.)

In Model 2, we add the index of the current conditions of the school because neighborhood residents may judge whether or not a school has or will experience increasing or

[2] We tested for quadratic and other non-linear effects for the continuous measure of change in the percentage of a school that is Black. The most powerful specification of this variable was whether or not schools had experienced a change in Black representation of more than two percentage points.

[3] We did not account for clustering in our models because our data are drawn from simple random samples. Residents are not embedded within particular schools. Very few residents share the same average school characteristics like standardized test scores and rates of violent incidents.

declining quality according to how the school currently appears. These characteristics make no difference in perceptions of increasing school quality. However, respondents are more likely to report *declining* school quality in schools that report a higher level of distress according to the index. When we account for this measure of the current characteristics of residents' local schools, the coefficient for schools that experience more than a 2 percentage point increase in Black representation decreases by a small amount, though respondents are still over 1.5 times more likely to say that school quality has decreased, and this differences remains significant at the 0.05 level. No individual demographic characteristics are significantly associated with perceptions of declining school quality in this model. [4]

In Model 3, we include three indicators of school changes over the past five years, changes in the percentage of students receiving free or reduced price lunch, changes in violent incidents per 1,000 students, and changes in schools' reading test Z-scores. In Tables 2 and 3, we reported both the actual average percentage in the closest elementary, middle, and high schools that failed standardized reading tests and the average of the schools' reading test Z-scores. According to the unstandardized measure, the percentage failing standardized reading tests had decreased, on average, across all schools during the five-year period. In the multivariate models here, we use only the Z-scores that compare schools to other schools in the region. Even using this measure, we see that an increase or decrease in test scores relative to other area schools over the five-year period does not significantly influence the perception that school quality has declined. Changes in the rate of violent incidents in a school also do not significantly influence respondents' perceptions of declining quality nor do changes in the

[4] We explored whether or not there were "threshold effects" (Crowder 2001) by including interactions between the current level of Black representation and change in Black representation. Increasing Black representation may only matter for residents' perceptions of quality up to a certain threshold level of integration, for instance. None of these interactions were a significant improvement over the model that did not include them.

poverty profile of neighborhood schools. The coefficient for schools that have experienced more than a 2 percentage point increase in Black representation experiences little decline in this model. Even after accounting for the current characteristics of schools and indicators of changing quality, such as changes in poverty, reading test scores relative to other schools in the region, and the rate of violent incidents, residents whose neighborhood schools have experienced increasing Black representation are still 1.5 times more likely to perceive declining school quality.

In the final model, Model 4, we add an interaction term between Black respondents and the decreasing or increasing average representation of Black students in neighborhood schools. The coefficients do not achieve significance and the model fit does not improve with the addition of this interaction term. This suggests that Blacks and Whites similarly judge schools with a greater than 2 percentage point change in Black representation to be decreasing in quality. Model 3 is preferred to Model 4. Reactions to increasing Black representation appear to be shared by Whites and Blacks.

The results from Models 1- 3 show that the current conditions of schools account for only a modest amount of the association between increasing Black representation in local schools and perceptions of decreasing school quality among neighborhood residents. Changes in standardized reading test scores, violent incidents, and school poverty over the past five years appear to explain little more of this association. This suggests that the racial proxy hypothesis does not completely account for why neighborhood residents judge schools experiencing racial change to be declining in quality. Neighborhood residents may simply infer declining quality from an increasing proportion of Blacks in schools, whether or not "objective" indicators of this

decline are present. This supports the "racial reasons" hypothesis for why residents perceive integrating schools to be declining in quality.

To present these results in a more succinct fashion, we graph the predicted probabilities of saying that school quality has declined across different levels of "school distress" according to our index, and changes in Black representation over the past five years. We substitute the means of the other variables in our models to calculate these probabilities. The general pattern is that the higher the level of distress, the more likely a resident is to say that the quality of his or her neighborhood schools has decreased. For example, residents in schools with a low level of distress, defined as two standard deviations below the mean, who have experienced a 0-2 percentage point increase in Black representation are 14% likely to say that they have experienced declining school quality. Those in schools with a high level of distress, who are two standard deviations above the mean, and have experienced a minimal increase in Black representation are 60% likely to say that school quality has declined.

The change in Black representation over the past five years also has an effect on the likelihood of saying that school quality has decreased, above and beyond the current level of school distress. Among schools that currently have a low level of distress, i.e. two standard deviations below the mean, the predicted likelihood of a resident saying school quality has decreased goes from 14% if the school experienced no appreciable increase in Black representation over the past five years to 21% if the school experienced an increase of over 2 percentage points in Black representation. If schools were characterized by declining Black representation, residents are 16% likely to say that school quality has decreased – somewhere between stable and increasing Black representation. This is likely because Black representation may have declined either because White representation has increased or because non-Black

minority representation has increased. As another example, residents associated with schools that have high distress, two standard deviations above the mean, are 60% likely to say that school quality has declined if there has been no appreciable increase in Black representation over the past five years and 70% likely to say it has decreased if the increase in Black representation is more than 2 percentage points.

Conclusion

Segregation in schools in the United States is a persistent problem and indeed has been increasing over the past decade (Orfield and Lee 2006; Reardon, Yun, and Eitle 2000). Some policy-makers argue that increasing choice in schooling options will lead to decreasing segregation of schools (Coons 1981; Hassel 1998; Nathan 1989; Young and Clinchy 1992), but most research thus far shows that increasing public school choice does not lead to decreasing racial segregation (Saporito 2003; Renzulli and Evans 2005). While researchers have described patterns of segregation that occur once alternatives to public schools are made available, this research goes one step further to answer the question of why school segregation may be so persistent. We find that as schools experience changes in Black representation of over 2 percentage points during a four- to five-year period, neighborhood residents are more likely to perceive that the quality of their schools has declined, despite the current conditions of the schools and in spite of the changes in school poverty, standardized test scores, and school safety in the past four to five years. While racial change may be an indicator of related, observable changes in school quality as the "racial proxy" hypothesis suggest, our results imply that residents may judge declining school quality according to the racial change itself, independent of other indicators of changing quality. This supports the "racial reasons" hypothesis we borrow from the residential segregation literature. Residents who perceive that local school quality has

decreased may be more likely to seek alternative schools for their own children. While perceptions of declining school quality are similar for both White and Black respondents, indicating a "shared" not "racial" reaction to racial change, to the extent that Whites and non-Black minorities are better able to access public school alternatives, school segregation will increase.

Another concern is that White flight, not only from schools, but also from neighborhoods, may increase as residents worry about declining school quality. Attitudes toward schools may not necessarily translate to behaviors that result in flight from neighborhoods (Schuman and Johnson 1976; Lee, Oropesa, and Kanan 1994), and, generally, school quality appears to provide only limited motivation for people to move from their neighborhoods compared to other factors in general (Lee and Guest 1983; Herting and Guest 1985). However, school quality may be a more salient factor for those in integrating neighborhoods. Krysan (2002a) found that when discussing neighborhood desirability, Whites often pointed to sub-standard schools as an important factor leading to a poor rating. This was particularly true of Whites that lived in transitional or integrated neighborhoods. If Whites disproportionately flee neighborhoods because of dissatisfaction with public schools that have higher concentrations of Blacks, racial segregation in neighborhoods may be exacerbated. And, since neighborhood residential segregation is currently the main reason for school racial segregation, school segregation is exacerbated through this process, as well.

Though the purpose of this paper is not to determine the effectiveness of school choice programs in reducing racial segregation, our results suggest that because changing Black representation appears to be related to perceptions of the trajectory of school quality, increasing school choice may only exacerbate school segregation. Families may seek to avoid those

schools with increasing proportions of Blacks, seeking less diverse alternatives. Research has shown that White families are better able to access these alternatives. Because of this, desegregation programs that actively promote integration, rather than rely on the preferences of families, may be the most successful. To the extent that family preferences for schools, perceptions of quality, and, consequently, school choices are related to race, school integration through the market-style mechanisms of many school choice programs may be difficult to achieve.

References

Adelman, Robert M. 2005. "The Roles of Race, Class, and Residential Preferences in the Neighborhood Racial Composition of Middle-Class Blacks and Whites." *Social Science Quarterly* 86(1):209-28.

Bankston, Carl L. III, and Stephen J. Caldas. 2000. "White Enrollment in Nonpublic Schools, Public School Racial Composition, and Student Performance." *The Sociological Quarterly* 41(4):539-550.

Barrow, Lisa. 2002. "School Choice Through Relocation: Evidence from the Washington D.C. Area." *Journal of Public Economics* 86:155-189.

Bobo, Lawrence and Camille Zubrinsky. 1996. "Attitudes Toward Residential Integration: Perceived Status Differences, Mere In-Group Preference, or Racial Prejudice?" *Social Forces* 74(3):883-909.

Charles, Camille Z. 2000. "Neighborhood Racial-Composition Preferences: Evidence from a Multiethnic Metropolis." *Social Problems* 47(3):379-407.

Chiricos, Ted, Ranee McEntire, and Marc Gerts. 2001. "Perceived Racial and Ethnic Composition of Neighborhood and Perceived Risk of Crime." *Social Problems* 48(3):322-340.

Clark, William A.V. 1986. "Residential Segregation in American Cities: A Review and Interpretation." *Population Research and Policy Review* 5(2):95-127.

_____1987. "School Desegregation and White Flight: A Reexamination and Case Study." *Social Science Research* 16(3):211-228.

_____1991. "Residential Preferences and Neighborhood Residential Segregation: A Test of the Schelling Segregation Model." *Demography* 28(1):1-19.

_____1992. "Residential Preferences and Residential Choices in a Multiethnic Context." *Demography* 29(3):451-66.

Clotfelter, Charles T. 1976. "The Detroit Decision and 'White Flight.'" *The Journal of Legal Studies* 5(1): 99-112.

Coleman, James, Sara Kelly and John Moore. 1975. "Trends in School Segregation." Working Paper No. 722-03-01. Washington, D.C.: Urban Institute.

Coons, John. 1981. "Making Schools Public." In Edward Gaffney Jr. (ed.) *Private Schools and the Public Good* (p. 91-105). Notre Dame, IN: Notre Dame University Press.

Crowder, Kyle. 2000. “The Racial Context of White Mobility: An Individual-Level Assessment of the White Flight Hypothesis.” *Social Science Research* 29(2):223-257.

_____2001. "Racial Stratification in the Actuation of Mobility Expectations: Microlevel Impacts of Racially Restrictive Housing Markets." *Social Forces* 79(4):1377-96.

Ellen, Ingrid G. 2000. “Race-based Neighborhood Projection: A Proposed Framework for Understanding New Data on Racial Integration.” *Urban Studies* 37(9):1513-1533.

Elliot, James. 1999. “Social Isolation and Labor Market Insulation: Network and Neighborhood Effects on Less-Educated Urban Workers.” *Sociological Quarterly* 40(2): 199-216.

Emerson, Michael O., George Yancey, and Karen J. Chai. 2001. “Does Race Matter in Residential Segregation? Exploring the Preferences of White Americans.” *American Sociological Review* 66(6):922-935.

Fairlie, Robert W. 2002. “Private Schools and "Latino Flight" from Black School Children.” *Demography* 39(4):655-674.

Fairlie, Robert and Alexander Resch. 2002. “Is There ‘White Flight’ into Private Schools? Evidence from the National Educational Longitudinal Study.” *Review of Economics and Statistics* 84(1): 21-33.

Farley, John E. 2005. "Race, Not Class: Explaining Racial Housing Segregation in the St. Louis Metropolitan Area, 2000." *Sociological Focus* 38(2):133-50.

Farley, Reynolds, Elaine Fielding, and Maria Krysan. 1997. “The Residential Preferences of Blacks and Whites: A Four Metropolis Analysis.” *Housing Policy Debate* 8(4):763-800.

Farley, Reynolds, Toni Richards, and Clarence Wurdock. 1980. "School Desegregation and White Flight: An Investigation of Competing Models and their Discrepant Findings." *Sociology of Education* 53(3):123-39.

Farley, Reynolds, Charlotte Steeh, Tara Jackson, Maria Krysan, and Keith Reeves. 1994. "Stereotypes and Segregation: Neighborhoods in the Detroit Area." *American Journal of Sociology* 100(3):750-80.

Fischer, Mary J. 2003. “The Relative Importance of Income and Race in Determining Residential Outcomes in U.S. Urban Areas, 1970-2000.” *Urban Affairs Review* 38(5):669-696.

Frey, William. 1979. “Central City White Flight: Racial and Nonracial Causes” *American Sociological Review* 44(3):425-448.

Galster, George. 1989. "Residential Segregation in American Cities: A Further Response to Clark." *Population Research and Policy Review* 8(2):181-92.

_____1990. “Racial Steering by Real Estate Agents: Mechanisms and Motives.” *Review of Black Political Economy* 19(1):39-63.

Giles, Micheal W. 1978. "White Enrollment Stability and School Desegregation: A Two-Level Analysis." *American Sociological Review* 43(6):848-64.

Giles, Michael W., Everett F. Cataldo, and Douglas S. Gatlin. 1975. "White Flight and Percent Black: The Tipping Point Re-Examined." *Social Science Quarterly* 56(1):85-92.

Goering, John and Ron Wink. 1996. *Mortgage Lending, Racial Discrimination, and Federal Policy*.Washington D.C.: Urban Institute Press.

Harris, David. 1999. “’Properties Values Drop When Blacks Move in Because…’ Racial and Socioeconomic Determinants of Neighborhood Desirability.” *American Sociological Review* 64(3):461-479.

_____2001. “Why Are Whites and Blacks Averse to Black Neighbors?” *Social Science Research* 30(1):100-117.

Hassel, Bruce. 1998. “The Case for Charter Schools.” In Paul Peterson and Bruce Hassel (eds.) *Learning from School Choice* (p. 33-51). Washington DC: Brookings Institution Press.

Henig, Jeffrey R. 1995. “Race and Choice in Montgomery County, Maryland, Magnet Schools.” *Teachers College Record* 96 (4):729-735.

Herting, Jerald R. and Avery Guest 1985. "Components of Satisfaction with Local Areas in the Metropolis" *Sociological Quarterly* 26(1): 91-115.

Hess, Frederick and David Leal. 2001. “Quality, Race, and the Urban Education Marketplace.” *Urban Affairs Review* 37(2):249-266.

Holme, Jennifer J. 2002. “Buying Homes, Buying Schools: School Choice and the Social Construction of School Quality.” *Harvard Educational Review* 72(2):177-205.

Jargowsky, Paul. 1997. *Poverty and Place: Ghettos, Barrios, and the American City*. New York: Russell Sage Foundation.

Krysan, Maria. 2002a. “Whites Who Say They’d Flee: Who are They and Why Would They Leave?” *Demography* 39(4):675-696.

_____2002b. “Community Undesirability in Black and White: Examining Racial Residential Preferences through Community Perceptions.” *Social Problems* 49(4):521-543.

Krysan, Maria, and Reynolds Farley. 2002. “The Residential Preferences Of Blacks: Do They Explain Persistent Segregation?” *Social Forces* 80(3):937-980.

Lee, Barrett and Avery Guest. 1983. "Determinants of Neighborhood Satisfaction: A Metropolitan-Level Analysis." *Sociological Quarterly* 24(2):287-303.

Lee, Barrett A., R. Salvador Oropesa, and James W. Kanan. 1994. "Neighborhood Context and Residential Mobility." *Demography* 31(3):249-270.

Lee, Valerie, Robert Croninger, and Julia Smith. 1996. "Equity and Choice in Detroit." In Bruce Fuller and Richard Elmore (eds.) *Who Chooses, Who Loses: Culture, Institutions, and the Unequal Effects of School Choice* (p. 70-91). New York: Teacher's College Press.

Massey, Douglas and Nancy Denton. 1993. *American Apartheid*. Cambridge, MA: Harvard University Press.

Metropolitan Philadelphia Indicators Project. 2005. *Where We Stand: Community Indicators for Metropolitan Philadelphia.* Annual report of the Metropolitan Philadelphia Indicators Project.

Nathan, Joe. (ed.) 1989. *Public Schools by Choice: Expanding Opportunities for Parents, Students, and Teachers.* Bloomington, IN: Meyer-Stone.

Oliver, Melvin L. and Thomas M. Shapiro. 1997. *Black Wealth/White Wealth: A New Perspective on Racial Inequality.* New York: Routledge.

Orfield, Gary and Chungmei Lee. 2006. "Racial Transformation and the Changing Nature of Segregation." The Civil Rights Project: Harvard University.

Quillian, Lincoln. 2002. "Why Is Black-White Residential Segregation So Persistent?: Evidence On Three Theories From Migration Data." *Social Science Research* 31(2):197-229.

Quillian, Lincoln and Devah Pager. 2001. "Black Neighbors, Higher Crime? The Role of Racial Stereotypes in Evaluations of Neighborhood Crime." *American Journal of Sociology* 107(3):717-767.

Reardon, Sean F., John T. Yun, and Tamela McNulty Eitle. 2000. "The Changing Structure of School Segregation: Measurement and Evidence of Multiracial Metropolitan-Area School Segregation, 1989-1995." *Demography* 37(3):351-64.

Renzulli, Linda and Lorraine Evans. 2005. "School Choice, Charter Schools, and White Flight." *Social Problems* 52(3):398-418.

Saporito, Salvatore. 2003. "Private Choices, Public Consequences: Magnet School Choice and Segregation by Race and Poverty." *Social Problems* 50(2):181-203.

Saporito, Salvatore and Deenesh Sohoni. 2006. "Mapping Educational Inequality: Concentrations of Poverty among Poor and Minority Students in Public Schools." Unpublished manuscript.

Schneider, Mark, Melissa A. Marschall, and Chrsitine Roch. 1999 "Heuristics, Low Information Rationality, and Choosing Public Goods: Broken Windows as Shortcuts to Information about School Performance." *Urban Affairs Review* 34(5):729-41.

Schuman, Howard and Michael P. Johnson. 1976. "Attitudes and Behavior." *Annual Review of Sociology* 2:161-207.

Schuman, Howard, Charlotte Steeh, and Lawrence Bobo. 1985. *Racial Attitudes in America: Trends and Interpretations*. Cambridge, MA: Harvard University Press.

Shaw Clifford R. and Henry D. McKay. 1942. *Juvenile Delinquency and Urban Areas*. Chicago: University of Chicago Press.

Shlay, Anne B. 1989. "Financing Community: Methods for Assessing Residential Credit Disparities, Market Barriers, and Institutional Reinvestment Performance in the Metropolis." *Journal of Urban Economic Affairs* 11(3):201-223.

Smock, Pamela J and Franklin D. Wilson. 1991. "Desegregation and the Stability of White Enrollments: A School-Level Analysis, 1968-84." *Sociology of Education* 64(4):278-292.

Squires, Gregory D. 1994. *Capital and Communities in Black and White: The Intersection of Race, Class, and Uneven Development.* Albany: State University of New York Press.

Swanstrom, Todd, Peter Dreier, and John Mollenkopf. 2002. "Economic Inequality and Public Policy: The Power of Place." *City and Community* 1(4):349-372.

Taeuber, Karl and Alma Taeuber 1965. *Negroes in Cities.* Chicago: Aldine.

Taub, Richard P., D. Garth Taylor, and Jan D. Dunham. 1984. *Paths of Neighborhood Change: Race and Crime in Urban America.* Chicago: The University of Chicago Press.

Wilson, William Julius 1996. *When Work Disappears.* New York: Vintage Press.

_____1987 *The Truly Disadvantaged.* Chicago: University of Chicago Press.

Wolf, E. 1963. "The Tipping-Point in Racially Changing Neighborhoods." *Journal of the American Institute of Planners* 29:217-22.

Wrinkle, Robert D., Joseph Stewart, Jr. and J.L. Polinard. 1999. "Public School Quality, Private Schools, and Race." *American Journal of Political Science* 43(4):1248-1253.

Yinger, John. 1995. *Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination*. New York: Russell Sage Foundation.

Young, Thomas and Evans Clinchy. 1992. *Choice in Public Education*. New York: Teacher's College Press.

Zhou, Min and Carl L. Bankston, III. 1999. *Growing Up American: How Vietnamese Children Adapt to Life in the United States.* New York: Russell Sage Foundation.

Zubrinsky, Camille L. and Lawrence Bobo. 1996. "Prismatic Metropolis: Race and Residential Segregation in the City of the Angels." *Social Science Research* 25(4):335-374.

Table 1. Univariate Descriptives

	Means/ Percent	N
Dependent Variable		
Perceptions of school quality in last five years…		
Increased	33.2%	518
Decreased	22.9	358
Stayed the same	43.9	684
Individual Characteristics		
Age*	48.8	1509
(s.d.)	(16.2)	
Gender		
Male	61.8%	964
Female	38.2	596
Race		
White	73.8	1150
Black	19.7	307
Other	5.2	81
Missing	1.3	21
Children under 18		
Yes	42.9	670
No	57.1	890
Educational attainment		
Less than college	64.9	1011
BA or more	35.1	547
Income		
Less than $40K	32.2	502
$40K or more	55.5	865
Missing	12.3	192
Locale		
City	33.3	519
Suburb	66.7	1041
Home ownership		
Rent	26.6	415
Own	73.4	1145
Local School Characteristics		
School conditions for 2003-2004 school year		
Percent Black*	32.5	1560
(s.d.)	(33.9)	
Percent receiving free/reduced lunch*	34.3	1560
(s.d.)	(31.9)	
Percent failing reading exam*	23.9	1518
(s.d.)	(19.6)	
Standardized reading score*	0.1	1518
(s.d.)	(0.8)	
Violent incidents per 1000 students*	17.6	1560
(s.d.)	(19.6)	
Changes between 1999-2000 and 2003-2004 school year		

Change in percent Black		
Less than 0%	29.8%	465
0-2%	39.7	619
Greater than 2%	30.5	476
Percent receiving free/reduced lunch*	2.1	1560
(s.d.)	(7.7)	
Percent failing reading exam*	-6.7	1518
(s.d.)	(7.7)	
Standardized reading score*	-0.01	1518
(s.d.)	(0.31)	
Violent incidents per 1000 students*	0.6	1560
(s.d.)	(17.8)	

SOURCE: Philadelphia Area Study 2002-2003, NCES Common Core of Data, NJ Department of Education, PA Department of Education

* These variables are means, not percentages as reported in the rest of the table.

Table 2. Local School and Individual Characteristics by Perceptions of School Quality

	Perceptions of School Quality			
	Increased	Decreased	Stayed the Same	Total (N)
Total	33.2%	22.9%	43.9%	1560
Individual Characteristics				
Age*	48.5	47.8	49.5	1509
(s.d.)	(16.0)	(15.7)	(16.7)	
Gender				
Male	32.2%	20.8%	45.5%	963
Female	33.7	26.5	41.3	596
Race				
White	34.7	19.6	45.7	1150
Black	28.3	34.2	37.5	307
Other	33.3	25.9	40.7	81
Missing	19.0	33.3	47.6	21
Children under 18				
Yes	37.5	21.2	41.3	670
No	30.0	24.3	45.7	890
Educational attainment				
Less than college	33.8	24.6	41.5	1011
BA or more	32.0	19.7	48.3	547
Income				
Less than $40K	31.6	24.8	43.6	502
$40K or more	34.5	21.4	44.2	865
Missing	30.7	21.9	47.4	192
Locale				
City	22.4	38.2	39.5	519
Suburb	38.6	15.4	46.0	1041
Home ownership				
Rent	31.8	25.3	42.9	415
Own	33.7	22.1	44.2	1145
Local School Characteristics				
Racial Change				
Change in percent Black				
Less than 0%	31.0%	23.7%	45.4%	465
0-2%	39.7	15.8	44.4	619
Greater than 2%	26.9	31.5	41.6	476
School conditions for 2003-2004 school year				
Percent Black*	25.0	48.5	29.8	1560
(s.d.)	(30.3)	(35.6)	(32.9)	
Percent receiving free/reduced lunch*	27.5	49.4	31.6	1560
(s.d.)	(29.4)	(32.1)	(31.2)	
Percent failing reading exam*	19.1	33.8	22.2	1518
(s.d.)	(17.8)	(19.2)	(19.4)	
Standardized reading score*	0.2	-0.4	0.2	1518
(s.d.)	(0.8)	(0.8)	(0.9)	
Violent incidents per 1000	13.8	25.6	16.3	1560

students*				
(s.d.)	(16.1)	(23.2)	(18.7)	
School distress index*	-0.23	0.51	-0.09	1560
(s.d.)	(0.90)	(1.00)	(0.98)	
Changes between 1999-2000 and 2003-2004 school year				
Percent receiving free/reduced lunch*	1.7	3.5	1.7	1560
(s.d.)	(6.7)	(9.3)	(7.5)	
Percent failing reading exam*	-6.4	-7.3	-6.5	1518
(s.d.)	(7.9)	(7.9)	(7.5)	
Standardized reading score*	-0.01	0.00	-0.01	1518
(s.d.)	(0.32)	(0.33)	(0.29)	
Violent incidents per 1000 students*	-1.6	5.2	-0.2	1560
(s.d.)	(16.2)	(19.5)	(17.6)	

SOURCE: Philadelphia Area Study 2002-2003, NCES Common Core of Data, NJ Department of Education, PA Department of Education

* These variables are means, not percentages as reported in the rest of the table.

Table 3. Local School Characteristics by Racial Change

	Change in Proportion Black			
	Decrease (<0%)	0-2% Increase	Greater than 2% Increase	Total (N)
Total	29.8%	39.7%	30.5%	1560
Local School Characteristics				
School conditions for 2003-2004 school year				
Percent Black	40.0	21.1	39.9	1560
(s.d.)	(40.9)	(31.7)	(23.4)	
Percent receiving free/reduced lunch	40.1	23.5	42.8	1560
(s.d.)	(36.2)	(29.6)	(25.9)	
Percent failing reading exam	26.7	16.8	30.5	1518
(s.d.)	(22.4)	(17.3)	(16.5)	
Standardized reading score	0.01	0.38	-0.31	1518
(s.d.)	(0.98)	(0.75)	(0.66)	
Violent incidents per 1000 students	18.1	12.8	23.3	1560
(s.d.)	(17.7)	(15.5)	(24.0)	
School distress index	0.1	-0.4	0.3	1560
(s.d.)	(1.1)	(0.9)	(0.8)	
Changes between 1999-2000 and 2003-2004 school year				
Percent receiving free/reduced lunch	2.3	1.7	2.5	1560
(s.d.)	(10.9)	(5.7)	(6.2)	
Percent failing reading exam	-8.9	-5.4	-6.2	1518
(s.d.)	(9.5)	(6.8)	(6.4)	
Standardized reading score	0.06	-0.01	-0.07	1518
(s.d.)	(0.32)	(0.29)	(0.31)	
Violent incidents per 1000 students	-0.2	-0.3	2.4	1560
(s.d.)	(17.6)	(15.8)	(20.1)	

SOURCE: NCES Common Core of Data, NJ Department of Education, PA Department of Education

Table 4. Multinomial Logistic Regression of Predicted Perceptions of Change in Local School Quality

	Model 1		Model 2		Model 3		Model 4	
Decrease v. Stay the Same	b	SE	b	SE	b	SE	b	SE
Intercept	-0.677	0.388	-0.797*	0.394	-0.804*	0.348	-0.790^{+}	0.457
Individual characteristics								
Age[a]	-0.008	0.005	-0.008	0.005	-0.008	0.005	-0.007	0.005
Male	0.247^{+}	0.142	0.243^{+}	0.144	0.245^{+}	0.144	0.250^{+}	0.144
Race (reference=Black) [a]								
White	-0.310^{+}	0.187	0.089	0.215	0.085	0.217	0.064	0.341
Other	-0.273	0.323	-0.051	0.330	-0.046	0.331	-0.072	0.420
Kids under 18	-0.186	0.154	-0.143	0.155	-0.143	0.155	-0.142	0.155
Bachelor's degree or higher	-0.202	0.155	-0.155	0.157	-0.155	0.157	-0.158	0.158
Income $40K or more[a]	0.150	0.171	0.246	0.173	0.249	0.173	0.248	0.173
Homeowner	-0.056	0.165	-0.058	0.166	-0.060	0.167	-0.060	0.167
City	0.849***	0.158	0.117	0.235	0.159	0.258	0.165	0.261
Racial Change (Reference=0-2%)								
Black change <0%	0.189	0.174	0.114	0.178	0.107	0.179	0.141	0.212
Black change >2%	0.499**	0.170	0.432*	0.172	0.417*	0.175	0.388^{+}	0.200
School Baseline								
School distress index[a]			0.532***	0.132	0.534***	0.138	0.546***	0.139
School Change								
Change in reading scores[a]					-0.033	0.237	-0.034	0.237
Change in percent poor					0.001	0.009	0.001	0.009
Change in violence					-0.002	0.005	-0.002	0.005
Interactions								
Black*Change >2							0.140	0.431
Black*Change <0							-0.197	0.395
Increase v. Stay the Same								
Intercept	0.149	0.353	0.187	0.354	0.182	0.357	0.168	0.410
Individual characteristics								
Age[a]	-0.001	0.004	-0.001	0.004	-0.001	0.004	-0.001	0.004
Male	0.030	0.126	0.041	0.127	0.035	0.127	0.048	0.127
Race (reference=Black) [a]								
White	-0.122	0.184	-0.185	0.209	-0.166	0.211	-0.163	0.299
Other	0.017	0.301	-0.024	0.310	-0.017	0.310	-0.034	0.377
Kids under 18	0.304*	0.134	0.306*	0.135	0.306*	0.135	0.310*	0.135
Bachelor's degree or higher	-0.266*	0.132	-0.282*	0.133	-0.286*	0.133	-0.293*	0.133
Income $40K or more[a]	-0.065	0.153	-0.059	0.155	-0.054	0.155	-0.056	0.155
Homeowner	-0.041	0.148	-0.039	0.149	-0.043	0.149	-0.040	0.149
City	-0.433**	0.158	-0.420^{+}	0.241	-0.325^{+}	0.443	-0.414	0.262
Racial Change (Reference=0-2)								

Black change <0	-0.216	0.142	-0.187	0.144	-0.195	0.145	-0.106	0.159
Black change >2	-0.264^{+}	0.149	-0.212	0.154	-0.198	0.156	-0.298^{+}	0.174
School Baselines								
School distress[a]			-0.052	0.133	-0.053	0.138	-0.022	0.139
School change								
Change in reading scores[a]					0.182	0.201	0.179	0.201
Change in percent poor					0.002	0.010	0.003	0.010
Change in violence					0.000	0.004	0.000	0.004
Interactions								
Black*Change >2							0.393	0.407
Black*Change <0							-0.500	0.381
-2 Log Likelihood	2993.848		3131.770		3130.481		3125.857	
Model Chi-Square/df	160.148/28		189.793/32		191.082/38		195.705/42	
Adjusted R^2 (Nagelkerke)	0.111		0.130		0.131		0.134	
N	1560		1560		1560		1560	

$^{+}$ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

[a] Missing cases were replaced with mean values, and dummy variables identifying missing cases were included in the analysis to prevent listwise missing deletion. Results for missing values are not substantively meaningful, so they are not presented here. They are available upon request.

SOURCE: Philadelphia Area Survey 2002-2003

Figure 1. Predicted Probabilities of Perceptions of Declining School Quality