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School Segregation in Jefferson County And Seattle: The Impact Of the Parents Involved Ruling And District Actions

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SCHOOL SEGREGATION IN JEFFERSON COUNTY AND SEATTLE: THE IMPACT OF THE *PARENTS INVOLVED* RULING AND DISTRICT ACTIONS

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ABSTRACT

This paper focuses on the two districts directly involved in the *Parents Involved in Community Schools v. Seattle School District No. 1 (PICS)* (2007) with regard to how their desegregation plans and levels of segregation changed over time. The study emphasizes how segregation levels changed in response to changes in the plans and, in particular, to the Supreme Court ruling in *PICS*. The results differed greatly between the two districts. The voluntary desegregation plan in Jefferson County, Kentucky, proved far more effective than its Seattle counterpart in terms of maintaining a relatively low level of segregation prior to the *PICS* ruling. Jefferson County also remained more committed to desegregation than Seattle over the timeframe of the study. For these reasons, the *PICS* decision had a greater impact in Jefferson County because the ruling abolished a successful desegregation plan, leading to increased segregation. By contrast, prior modifications of the Seattle desegregation plan had rendered it ineffective, which led to increased segregation prior to *PICS*. The ruling itself had little effect in Seattle because increased segregation already had occurred in that district.

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I. INTRODUCTION

The United States has struggled for decades with reducing the disparities in educational outcomes between White students and students of color, with some narrowing of the gap over time.[1] One approach to increasing educational opportunities for students involved desegregating public schools in order to educate Black and White students in the same setting[2] Educating students in the same school offered the promise of decreasing educational disparities, at least to the extent that such disparities resulted from differences in school quality.

Desegregation evolved from being a legal remedy to a political option chosen voluntarily by some school districts over the decades following the *Brown v. Board of Education* decisions.[3] After years of delay, the federal courts required many school districts to desegregate their schools.[4] This process continued for several years, but eventually the courts began making it easier for school districts to be declared unitary and started releasing districts from mandatory desegregation decrees.[5] Some districts decided to adopt voluntary desegregation plans in an effort to maintain the diversity and/or provide more high quality educational options.[6]

The Supreme Court placed new restrictions on the ability of districts to implement voluntary desegregation plans when it decided the case *Parents Involved in Community Schools v. Seattle School District No. 1 (PICS)*.[7] The court held that

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[1] David Grissmer, Ann Flanagan, & Stephanie Williamson, *Why Did the Black-White Test Score Gap Narrow in the 1970s and 1980s?*, *in* THE BLACK-WHITE TEST SCORE GAP 182, 182 (Christopher Jencks & Meredith Phillips eds., 1998); Katherine Magnuson & Jane Waldfogel, *Introduction*, *in* STEADY GAINS AND STALLED PROGRESS: INEQUALITY AND THE BLACK-WHITE TEST SCORE GAP 1, 3 (Katherine Magnuson & Jane Waldfogel eds., 2008).

[2] Gary Orfield, *Toward an Integrated Future*, *in* DISMANTLING DESEGREGATION: THE QUIET REVERSAL OF BROWN V. BOARD OF EDUCATION 331, 346 (Gary Orfield & Susan E. Eaton eds., 1996).

[3] Brown v. Bd. of Educ., 347 U.S. 483 (1954); Brown v. Bd. of Educ., 349 U.S. 294 (1955).

[4] Gary Orfield, *Turning Back to Segregation*, *in* DISMANTLING DESEGREGATION: THE QUIET REVERSAL OF BROWN V. BOARD OF EDUCATION 1, 7 (Gary Orfield & Susan E. Eaton eds., 1996).

[5] *Id.* at 19-21.

[6] Danielle Holley-Walker, *After Unitary Status: Examining Voluntary Integration Strategies for Southern School Districts*, 88 N.C. L. REV. 877, 892 (2010); Derek W. Black, *In Defense of Voluntary Desegregation: All Things Are Not Equal*, 44 WAKE FOREST L. REV. 107, 112 (2009).

[7] 551 U.S. 701 (2007).

school districts could not consider the race of individual students in any such plan.[8] The court divided sharply over the extent to which race could be used in schools, with four Justices being opposed to the use of race by schools,[9] four Justices willing to uphold plans that considered the race of individual students,[10] and Justice Kennedy willing to permit schools to consider the composite race of areas within the district, but not the race of individual students.[11] In response to the ruling, school districts have utilized various options, including revising their voluntary desegregation plans to consider factors such as socioeconomic status and/or the overall racial/ethnic composition of neighborhoods in crafting school enrollment plans.[12]

This paper examines the impact of voluntary desegregation plans and the *PICS* ruling on school segregation levels in the two school districts directly involved in the case: Jefferson County (Louisville), Kentucky, and Seattle, Washington. These districts' desegregation plans evolved through various permutations, both prior to *PICS* and in response to the ruling. This study analyzes the impact of these policy actions.

Of particular interest is the unique opportunity to test Rosenberg's hypothesis that Supreme Court rulings have relatively little impact on public policy and that the important decisions are made by others, such as legislators.[13] One of Rosenberg's key arguments consisted of the claim that civil rights activists and politicians did more to advance the cause of school desegregation than the Supreme Court.[14] It seems reasonable that the parties on whom the courts can have the strongest impact are those involved in a given case. Therefore, this study investigated the impact of the *PICS* ruling on the parties to the case in order to understand the impact of the ruling on these districts.

Specifically, the paper addresses the following issues:

1. What types of voluntary desegregation plans were implemented in each district from 1987 through 2012?
2. How did the various voluntary desegregation plan impact school segregation in each district, with an emphasis on changes occurring after the *PICS* decision?

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[8] *Id.* at 721-22. Voluntary desegregation plans do not fall under either of the two compelling state interests accepted by the Supreme Court: remedying past segregation and diversity in higher education.

[9] *Id.* at 708-09.

[10] *Id.* at 803 (Breyer, J. dissenting).

[11] *Id.* at 782 (Kennedy, J. concurring).

[12] Abbie Coffee & Erica Frankenberg, *Two Years after the* PICS *Decision: Districts' Integration Efforts in a Changing Climate*, UCLA: The Civil Rights Project, 2 (2009), *available at* http://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/districts-integration-efforts-in-a-changing-climate-two-years-after-the-pics-decision/coffee-2-years-after-pics-2009.pdf.

[13] GERALD N. ROSENBERG, THE HOLLOW HOPE: CAN COURTS BRING ABOUT SOCIAL CHANGE? 35 (2d ed. 2008).

[14] *Id.* at 70-71.

The data related to these questions offers insight into some additional issues, as well. Therefore, the Discussion section of the article considers issues such as the differing impact of the *PICS* decision on segregation in the two districts, the relationship between school choice and segregation, and how "White return" (White students coming back to a district after the elimination of a desegregation plan) can impact school segregation.

This paper contains four main sections. The first section discusses the desegregation plans implemented in the two districts, emphasizing the 1987-2012 timeframe of the study. The second section provides an overview of the quantitative methods of measuring school segregation used in this article. The third section presents the empirical results of the study. The final section discusses the implications of the results.

II. DESEGREGATION PLANS IN THE PICS SCHOOL SYSTEMS

This section offers a brief history of the evolution of desegregation plans in Jefferson County and Seattle prior to the *PICS* ruling. The desegregation plans implemented by the districts prior to and after the *PICS* ruling strongly impacted the effect of the ruling on the two school systems. As will be discussed below, the two districts took very different approaches to voluntary desegregation, causing the impact of the ruling to differ between the two districts, as will be discussed in the Results section.

A. Jefferson County

The federal courts determined in 1973 that the Jefferson County school district ran a legally segregated school system.[15] The school system was placed under a desegregation decree in 1975, which lasted until 2000, when the school system was declared to have attained unitary status.[16] The district adopted a voluntary desegregation plan in 2001,[17] which the Supreme Court ruled unconstitutional in 2007.

As in many southern school districts, the countywide nature of the school system presents Jefferson County with a feasible opportunity to desegregate schools because the district contains both a metropolitan core and a largely White suburban area.[18] Schools in the district would be segregated if the attendance zones were determined by residence, since the district contains high levels of residential segregation.[19] A desegregation plan that crosses the boundaries of the core and the suburbs holds the potential to reduce the level of school segregation in the district.

The court imposed desegregation plan initially assigned students to schools based on the first letter of their last name and the grade level.[20] The plan required each school to enroll 12%–40% Black students at the elementary level and 12.5%–35%

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[15] *PICS*, 551 U.S. at 715.

[16] *Id.*

[17] *Id.* at 716.

[18] Brief for Respondent Jefferson Cnty., at 3-4, *PICS*, 551 U.S. 701 (No. 05-915) [hereinafter Jefferson County Brief].

[19] *Id.* at 3.

[20] *Id.* at 11.

Black students in middle schools and high schools.[21] The structure of the decree made it likely that a student would not be able to attend the same school over the course of his/her time in elementary, middle, or high school.[22]

The Jefferson County School Board modified the original decree three times prior to 2000 under the erroneous belief that it had been released from court oversight.[23] In 1984, the plan was changed to permit, among other things, students to attend only one middle school and one high school during their years at those levels and to establish Black student ranges at all schools within +/- 10% of the county average.[24] The 1991 changes extended the guarantee of attending one school to the elementary school level, established a Black student range of 15%–50% at the elementary school level, and a range of +/- 15% for middle and high schools.[25] The final modification in 1996 changed the racial guidelines to 15%–50% Black students at all schools.[26] The impact on school segregation of the second and third changes will be discussed in the Results section, but at a first glance these two changes widened the acceptable range for Black students, which would be expected to increase the segregation of schools. The court released the district from oversight in 2000, but ruled that magnet schools could not be subject to the racial guidelines because of the specific harm caused by being denied admission to the only school in the district that offered a given magnet program.[27]

The voluntary desegregation plan enacted by Jefferson County in 2001 utilized a variety of options to maintain a diverse student body in all schools, including modifying school attendance boundaries, creating school clusters designed to reduce segregation, mandatory acceptance of transfer requests that would reduce segregation, and a variety of guidelines based on race.[28] Each school in Jefferson County served a certain geographical area; that school would be the "resides" school for any child living within that area.[29] Children were automatically admitted to the "resides" school.[30]

Students possessed other options in addition to their "resides" school. At the elementary level, schools were grouped into clusters.[31] Students had the option of requesting admission into any two of the other schools in the same cluster as their "resides" school.[32] Moreover, the district offered magnet schools and other optional

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[21] *Id.* at 11-12 n.12.

[22] *Id.*

[23] *Id.* at 12.

[24] *Id.* at 12 n.13.

[25] *Id.*

[26] *Id.*

[27] *Id.* at 13.

[28] *Id.* at 4-5.

[29] *Id.* at 5.

[30] *Id.*

[31] McFarland v. Jefferson Cnty. Public Schs., 330 F. Supp. 2d 834, 844 (W.D. Ky. 2004).

[32] *Id.*

programs at several schools at elementary, middle, and high schools. Students could request entry into two of these programs, as well.[33] Therefore, an elementary student could seek admission to five schools (resides school, two cluster schools, and two optional program schools), while older students could seek admission into three schools (resides school and two optional program schools).[34]

The racial guidelines required that each school (other than those prohibited by the court to be involved in the plan) contained 15%–50% Black students, with those figures being based on the fact that the district served 34% Black students in 2003-04.[35] Students would not be assigned to a school outside of the range unless such assignment would move the school closer to or into the range.[36] The same racial guidelines applied with regard to requests for a student to transfer to another school.[37]

In response to *PICS*, Jefferson County created a revised voluntary desegregation plan that considers a variety of factors beyond the race of the student.[38] The plan divided the district into two areas based on "the percentage of minority students in the elementary resides area, the median household income per household member in the elementary resides area, and the educational attainment of adults age 25 and over in the elementary resides area."[39] A mid-range goal consists of having 15%–50% of the students in each school come from Area A (high minority, low median income, low adult educational attainment).[40] The district essentially changed from a plan focused on the race of individual students to one based on the demographics of the various areas within the district, thereby following one of the suggestions made by Justice Kennedy in his *PICS* opinion.[41]

B. Seattle

Seattle differs from Jefferson County in important ways. As in most areas outside of the south, the Seattle area contains several school districts, making a county-wide desegregation plan more difficult to produce given the *Milliken*[42] ruling. The area covered in the Seattle school district possesses clear patterns of residential segregation, from the predominantly White northern part of the city to the southern area that includes more students of color.[43]

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[33] Jefferson County Brief, *supra* note 18, at 6.

[34] *Id.*

[35] *Id.* at 4-5.

[36] PICS v. Seattle Sch. Dist. No. 1, 551 U.S. 701, 716 (2007).

[37] *Id.* at 717.

[38] Jefferson County Public Schools, *It's Unanimous! School Board Votes to Approve New Student Assignment Plan* (2008), *available at* http://www.jefferson.k12.ky.us/News/Archive/spotlight/assignment.pdf (last visited June 9, 2014).

[39] *Id.* at 1.

[40] *Id.*

[41] *PICS*, 551 U.S. at 789 (Kennedy, J. concurring).

[42] Milliken v. Bradley, 418 U.S. 717 (1974).

[43] Brief for Respondents Seattle School District No. 1, at 1-2, *PICS*, 551 U.S. 701 (No. 05-908) [hereinafter Seattle Brief].

The Seattle school district never came under a desegregation order, but adopted a series of voluntary plans, starting in 1963.[44] The district operated three separate plans during the period 1987-2007 (the start of this study through the *PICS* decision). The first such plan was called the "Seattle Plan." The Seattle Plan, which was enacted in 1977,[45] mandated attendance zones designed to overcome residential segregation in the city.[46] The attendance zones were drawn primarily along north-south lines, so as to incorporate largely White areas of northern Seattle and largely non-White areas of southern Seattle into the same attendance zone.[47] One year later, a state initiative banning the Seattle Plan was enacted, but the U.S. Supreme Court ruled in 1982 that the initiative was unconstitutional, which permitted the Seattle Plan to remain in effect.[48]

The Seattle Plan was modified in 1988 to a plan called "Controlled Choice," which involved creating clusters of schools located in predominantly White and predominantly non-White areas.[49] The district adopted this plan in order to inject choice into the system and for cost reasons.[50] Students were allowed to choose any school within the cluster.[51]

The Open Choice plan adjudicated before the Supreme Court in *PICS* was passed in 1996, with implementation in elementary schools in 1998 and in middle and high schools the following year.[52] The five goals for the plan included two directly related to diversity: maximize the diversity at each school and minimize race-based assignments, goals that operate in opposition to each other in the context of a segregated housing stock.[53] At the high school level, the Open Choice plan eliminated the attendance zones and permitted students to apply for admission to any of the ten high schools in the district.[54] Each student could list a first option, a second option, etc., for their high school.[55] Students were admitted to their first-choice school unless too many students chose that school.[56] The district applied a series of "tiebreakers" to determine admission to such over-requested schools. Race, which was part of the proximity tiebreaker, was ranked as the second tiebreaker (the first

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[44] Parents Involved in Community Schools (PICS) v. Seattle School District No. 1, 426 F.3d 1162, 1167 (9th Cir. 2005).

[45] Seattle Brief, *supra* note 43, at 3.

[46] *Id.* at 4.

[47] *Id.*

[48] *Id.*

[49] *Id.* at 5.

[50] *Id.*

[51] *Id.*

[52] *Id.* at 5-6.

[53] *Id.* at 5.

[54] *Id.* at 6.

[55] *Id.*

[56] PICS v. Seattle School District No. 1, 426 F.3d 1162, 1169 (9th Cir. 2005).

being having siblings at the school).[57] Seattle schools served roughly 40% White students during the relevant time period, so the race criteria for each oversubscribed school involved the consideration of whether the student would move the school closer to having 25%–55% White students (30%–50% in the first two years).[58] The district placed a moratorium on the use of the racial tiebreaker in 2002, during the course of the *PICS* litigation.[59] The use of race as a tiebreaker, followed by the elimination of that tiebreaker, would be expected to increase segregation in the district.

Immediately following the PICS decision, Seattle employed a choice-based system that evolved from, and retained most elements of, the previous system.[60] The major changes to the plan involved the final elimination of the racial tiebreaker and the provision of an address-based "default" school for those students who were not admitted to one of their three schools of choice.[61] This system largely continued the course of the previous five years.

Seattle began the long-term process of transitioning away from the choice system prior to the release of the *PICS* ruling.[62] The district initially hoped to have a new system in place by 2008,[63] but implementation took far longer. The district settled on a plan that greatly reduced the level of choice and focused on sending students to schools closer to their homes.[64] The district implemented the plan in phases, with the first phase starting in the 2010-11 school year (Seattle Public Schools, 2009).[65] The first phase involves placing incoming kindergarten, sixth-grade, and ninth-grade students in neighborhood schools, while leaving students in other grades in their previous schools (Proposed, 2009).[66] The plan implies that the district will focus on transitioning students during the entry year of each of the three school levels.

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[57] Seattle Brief, *supra* note 43, at 6.

[58] *PICS*, 426 F.3d at 1169-70.

[59] Alex Fryer, *Seattle Plans New System for Student Assignment*, THE SEATTLE TIMES, May 23, 2007, http://seattletimes.nwsource.com/html/localnews/2003718452_assignment23.html.

[60] Emily Heffter, *Student-Assignment Plan Passed Behind Closed Doors*, THE SEATTLE TIMES, June 21, 2007, http://seattletimes.nwsource.com/html/localnews/2003756523_assignment21m.html.

[61] *Id.*

[62] Fryer, *supra* note 59.

[63] *Id.*

[64] *Proposed Assignment Plan Gives Seattle Public Schools Needed Predictability*, THE SEATTLE TIMES, Oct. 11, 2009, http://seattletimes.nwsource.com/html/editorials/2010035172_edit12skuls.html.

[65] SEATTLE PUBLIC SCHOOLS, STUDENT ASSIGNMENT PLAN (2009), *available at* http://www.seattleschools.org/modules/groups/homepagefiles/cms/1583136/File/Departmental%20Content/enrollment%20planning/New%20Student%20Assignment%20Plan.pdf?sessionid=2c39ef56ce27142d4142d85428cc0c16.

[66] *Id.* at 1.

III. QUANTITATIVE METHODS

The quantitative methodology for the study applied commonly used desegregation measures to district student counts, by school and by race/ethnicity, for each of the two districts over the period 1987-2012. The quantitative methods will be discussed below.

A. Data

The quantitative data were obtained from the Common Core of Data (CCD) published by the National Center for Educational Statistics (NCES) for the years 1987-88 through 2011-12, the final year for which the NCES published CCD data at the time of data collection.[67] The data for the years 1987-88 through 2007-08 were downloaded using the Build a Table (BAT) function, [68] while subsequent data were downloaded using the newer Elementary/Secondary Information System (ELSI).[69] These data consisted of pupil counts by race and ethnicity for every school in Indiana, Kentucky, and Washington for the years covered in this study.[70] The data for districts other than Jefferson County and Seattle were eliminated from the data files used for this study, yielding attendance files by race and ethnicity for each district for each year covered in the study.

B. Segregation Measures

Numerous methods can be used to measure levels of segregation in public schools.[71] These measures can be divided into several categories,[72] two of which are of importance for this study: those that estimate how closely the demographics of each school in a district match the demographics of the district as a whole, and those that describe how exposed students from one racial group are to students from

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[67] NAT'L CTR. FOR EDUC. STATISTICS, COMMON CORE OF DATA, *available at* http://nces.ed.gov/ccd/search.asp (last visited June 6, 2014).

[68] NAT'L CTR. FOR EDUC. STATISTICS, BUILD A TABLE, *available at* http://nces.ed.gov/ccd/bat/ (last visited June 6, 2014).

[69] NAT'L CTR. FOR EDUC. STATISTICS, ELEMENTARY/SECONDARY INFORMATION SYSTEM, *available at* http://nces.ed.gov/ccd/elsi/ (last visited June 6, 2014).

[70] The BAT and ELSI functions require data to be downloaded by state. Kentucky and Washington are the states in which Jefferson County and Seattle reside. Data for Indiana were downloaded because part of the Louisville Core Based Statistical Area (CBSA) extends into Indiana; these data were needed for a separate study of how the voluntary desegregation plans in the respective school districts related to the demographics and attendance plans in the CBSA as a whole.

[71] Charles T. Clotfelter, *Public School Segregation in Metropolitan Areas*, 75 LAND ECON. 487, 490 (1999); David M. Frankel & Oscar Volij, *Measuring School Segregation*, 146 J. ECON. THEORY 1, 2 (2011).

These indices also can be used to measure segregation in other contexts, such as residential segregation, but I am describing them in the context of schools.

[72] Douglas S. Massey & Nancy A. Denton, *The Dimensions of Residential Segregation*, 67 SOCIAL FORCES 281, 283 (1988).

another group or to students from their own group.[73] The choice of which segregation measure to use has been the subject of disagreements over the years[74] and, at times, can lead to different conclusions.[75] Despite these issues, positive correlations exist between the results of both types of measures.[76]

The analytical approach taken for this study uses both types of measures, with the results of the calculations synthesized to yield a more in-depth understanding of segregation in the districts than could be obtained by limiting the choice to just one type of measure. The segregation measures used in this study have been used in other studies of school segregation: the Dissimilarity Index, the Exposure Index, and the Isolation Index.[77] This section described each of these measures.

1. Dissimilarity Index

The Dissimilarity Index falls within the category of segregation measures that compare the demographics of each individual school to the demographics of the district as a whole.[78] Most commonly used with two racial/ethnic groups, it also can be generalized for multiple group comparisons.[79] In that case, the formula is:

$$\text{Dissimilarity Index} = \frac{1}{2} \frac{\left(\sum_{i=1}^{n} \sum_{j=1}^{m} t_i \times \left| g_{ij} - P_j \right|\right)}{\sum_{j=1}^{m} T \times P_j \times (1 - P_j)}$$

where,
g_{ij} = the percentage of students from group j at school i,
P_j = the percentage of students in the district from group j,
t_i = the total number of students at school i, and
T = the total number of students in the district.[80]

The equation can be understood as follows. For each school, the numerator calculates the difference between the percentage of students attending the school from each racial/ethnic category and the percentage of students from each group in the district. Those differences are multiplied by the number of students in the school

[73] Sean F. Reardon et al., *Brown Fades: The End of Court-Ordered School Desegregation and the Resegregation of American Public Schools*, 31 J. POL'Y ANALYSIS & MGMT. 876, 883 (2012).

[74] David R. James & Karl E. Taeuber, *Measures of Segregation*, 15 SOCIOLOGICAL METHODOLOGY 1, 2 (1985).

[75] Ricardo Mora & Javier Ruiz-Castillo, *Entropy-Based Segregation Indices*, 41 SOCIOLOGICAL METHODOLOGY 159, 160 (2011).

[76] Massey & Denton, *supra* note 72, at 301.

[77] Reardon et al., s*upra* note 73.

[78] *Id.*

[79] Sean F. Reardon & Glenn Firebaugh, *Measures of Multigroup Segregation*, 32 SOCIOLOGICAL METHODOLOGY 33, 35 (2002).

[80] Rick Grannis, *Segregation Indices and Their Functional Inputs*, 32 SOCIOLOGICAL METHODOLOGY 69, 72 (2002).

to convert the percentage difference into differences between the number of students from each group at the school, and the number of students from each group who would be at the school if the demographics of each school matched those of the district. By way of example, assume a school with 1,000 students, 100 of whom are Asian. If the district demographics contain 15% Asian students, the school would have 150 Asian students if its demographics matched those of the district. The difference between the actual and predicted number of Asian students would be 50, in this example.

The numerator repeats this calculation for every racial/ethnic group at every school then adds together the results. The sum is multiplied by 1/2 to correct for the fact that a school that has "too many" students from one or more groups will have the same number "too few" students from the remaining group(s). In the end, the numerator informs us how far the district's schools are from matching the district's demographics.

The denominator computes how far from the "ideal" enrollment the district would be given the maximum possible degree of segregation; i.e., where every school was a one-race school. Using the above numbers, a 1,000-student school that served only Asian students in a district with 15% Asian students would have 850 more Asian students (1,000 minus 150) than it would have if the demographics of the school matched those of the district. Thus, the Dissimilarity Index expresses a ratio of the actual segregation divided by the maximum possible segregation of the district. The values of the Dissimilarity Index range from 0 (where the demographics of each school perfectly matches the demographics of the district) to 1 (where the district operates all one-race schools).

2. Exposure Index

The Exposure Index measures the exposure of the average student from Group Y to students from Group Z.[81] Specifically, the formula computes the weighted average of the percentage of students at each school from Group Z, where the number of students from Group Y is the weight.[82] The Exposure Index typically is used to measure the exposure of Black or Hispanic students to White students. In this study, however, the Exposure Index was calculated for every group in the NCES data (e.g., Asian exposure to Hispanic students, etc.). The formula for the Exposure Index is:

$$\text{Exposure Index} = \sum_{i=1}^{n}((y_i/Y) * (z_i/t_i)),$$

where,
y_i = the number of students from racial group y at school i,
Y = the number of students from racial group y in the district,
z_i = the number of students from racial group z at school i, and
t_i = the total enrollment of school i.[83]

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[81] Clotfelter, *supra* note 71.

[82] Clark McCauley, Mary Plummer, Sophia Moskalenko, & J. Toby Mordkoff, *The Exposure Index: A Measure of Intergroup Contact*, 7 PEACE & CONFLICT: J. PEACE PSYCHOL. 321, 324 (2001).

[83] *Id.*

Isolation Index. The Isolation Index calculates isolation of the average student from Group Y.[84] This measure of isolation is mathematically identical to the exposure of the average student from Group Y to members of Group Y.[85] The formula for the Isolation Index is:

$$\text{Isolation Index} = \sum_{i=1}^{n}((y_i/Y) * (y_i/t_i)),$$

where:
y_i = the number of students from racial group y at school i,
Y = the number of students from racial group y in the state, and
t_i = the total enrollment of school i.[86]

These indices also possess a relatively straightforward interpretation,[87] informing us about the average experiences of students in schools in terms of their exposure to, and isolation from, other groups in the school.[88] Generally, the ideal value of, for example, the Exposure Index of Blacks to Whites, would be equal to the percentage of Whites in the district.

3. Policy Importance of Changes in Index Values

Before moving to the results, it is important to note that changes in the values of the indices will be at least as important as the values themselves in interpreting the impact of the *PICS* ruling (as well as district initiated changes) on school segregation. A simple example can show why this is the case. Assume a large school district with neighborhood schools and high levels of residential segregation. The Dissimilarity Index would be high,[89] as would the Isolation Index for each group,[90] while the Exposure Indices would be low.[91] If the district enacted an effective voluntary desegregation plan, the demographics at individual schools would more

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[84] *Id.* at 325.

[85] *Id.* at 324-25. The average exposure of students from one racial/ethnic group to students of another group is called an Exposure Index; the average exposure of students from a racial/ethnic group to students from the same group is called an Isolation Index. Mathematically, each of these is a weighted average calculated in the same manner, such that the Isolation Index also could be regarded as an Exposure Index for the average exposure of students from a given group to students from the same group.

[86] *Id.* at 325.

[87] Massey & Denton, *supra* note 72, at 308.

[88] *Id.* at 287.

[89] This would occur because the demographics of the various schools generally would not match the demographics of the district due to residential segregation.

[90] Students from the various racial/ethnic groups would be isolated due to the residential segregation that implies that they would be living mainly near students from their own racial/ethnic background.

[91] Students from different racial/ethnic groups would be exposed to one another at lower levels due to the residential segregation that implies that students from a given racial/ethnic background generally would not be living near students from different racial/ethnic backgrounds.

closely match those of the district, resulting in a lower Dissimilarity Index, a lower Isolation Index, and higher Exposure Indices.

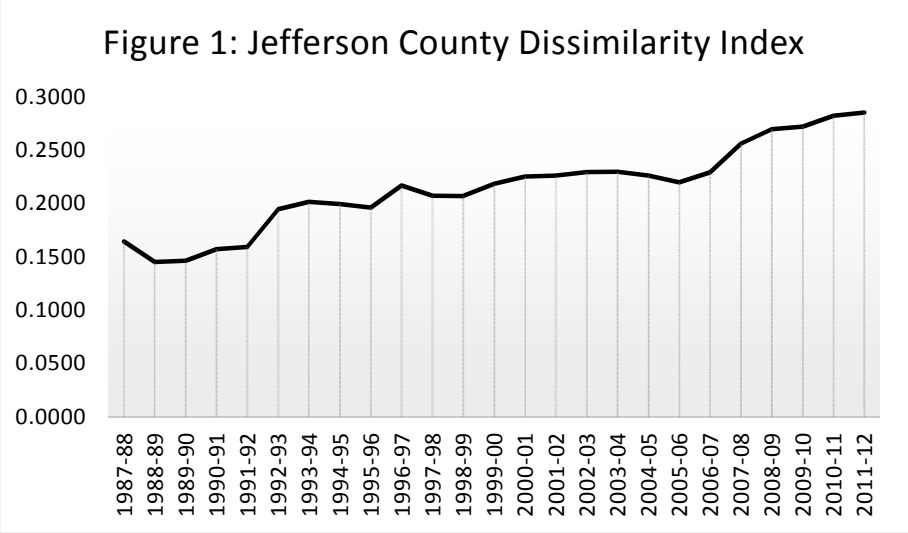
One would expect to see the opposite changes if the Supreme Court's ruling in *PICS* invalidated an effective desegregation plan and pushed districts toward neighborhood schools. Therefore, examining changes related to the Supreme Court's ruling will be an important part of the analysis.

IV. RESULTS

The impact of the voluntary desegregation plans was analyzed using the indices discussed in the Methods section. The emphasis in the analysis is on changes in the indices.

A. Jefferson County

The Jefferson County school district had a fairly consistent Dissimilarity Index prior to the *PICS* ruling, with the exception of a couple of rapid changes. As seen in Figure 1, the Dissimilarity Index for Jefferson County stayed at roughly 0.15 for the first few years of the study. It increased to about 0.20 from 1991 to 1993, the first two years of the second change to the voluntary desegregation plan in Jefferson County, which widened the acceptable range of Black students at each school. The index leveled out again until 1996-97, when it rose to 0.22, which coincided with the third change to the desegregation plan. Both of these increases are consistent with what should occur given the widening of the racial band in the high schools. Thereafter, the value of the Dissimilarity Index increased very gradually through the declaration of unitary status in 2000 until the *PICS* ruling. The declaration of unitary status had little impact on segregation in the district because the voluntary plan was identical to the plan used under the court order.[92]



[92] Though not a Supreme Court decision, the lack of change at this stage also shows how little impact court rulings have at times. The court permitting a district to change its plan had no effect when the district chose not to change the plan.

The value of the Dissimilarity Index jumped again after the PICS ruling in 2007, rising from 0.23 to 0.29 in the five years after the decision. A close look at the figure indicates that a rapid jump occurred in the first two years after the PICS ruling, followed by the resumption of the type of gradual increase seen prior to the ruling This result is consistent with what would be expected given the modifications to the Jefferson County plan.

The Exposure and Isolation Index results complement the Dissimilarity Index figures. Figure 2 shows the percentage of White students in Jefferson County and the exposures of Black students and White students to White students.[93] The exposure of both Black and White students to White students and the percentage of White students in Jefferson County stayed nearly constant from the late 1980s into the early 1990s, and declined at fairly consistent rates from that time until the PICS ruling. As with the Dissimilarity Index, the PICS ruling applied a jolt to the system. The level of White isolation actually increased briefly, while the exposure of Blacks to Whites decreased somewhat more rapidly after the ruling.

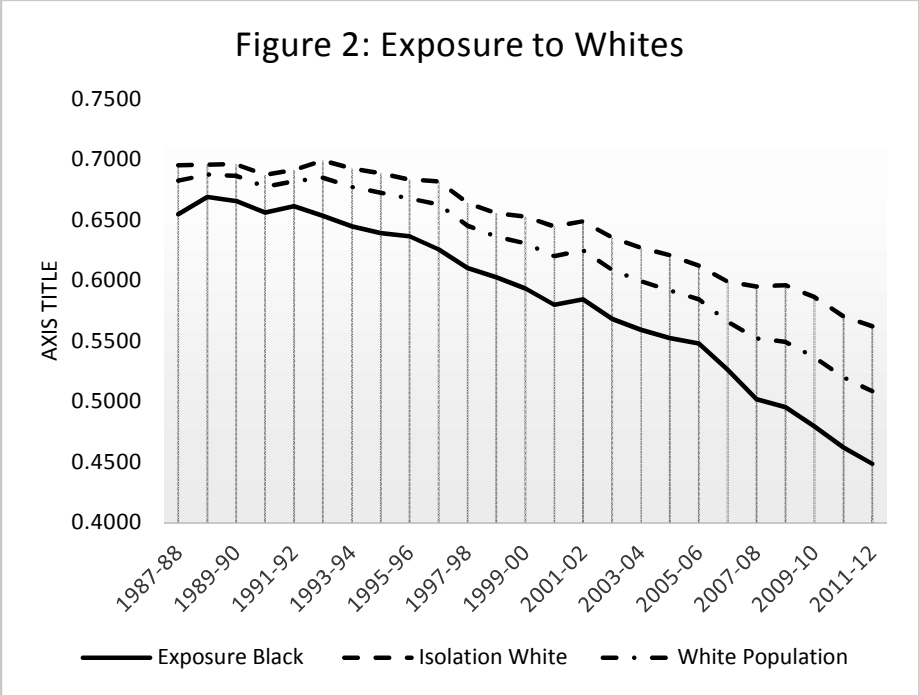
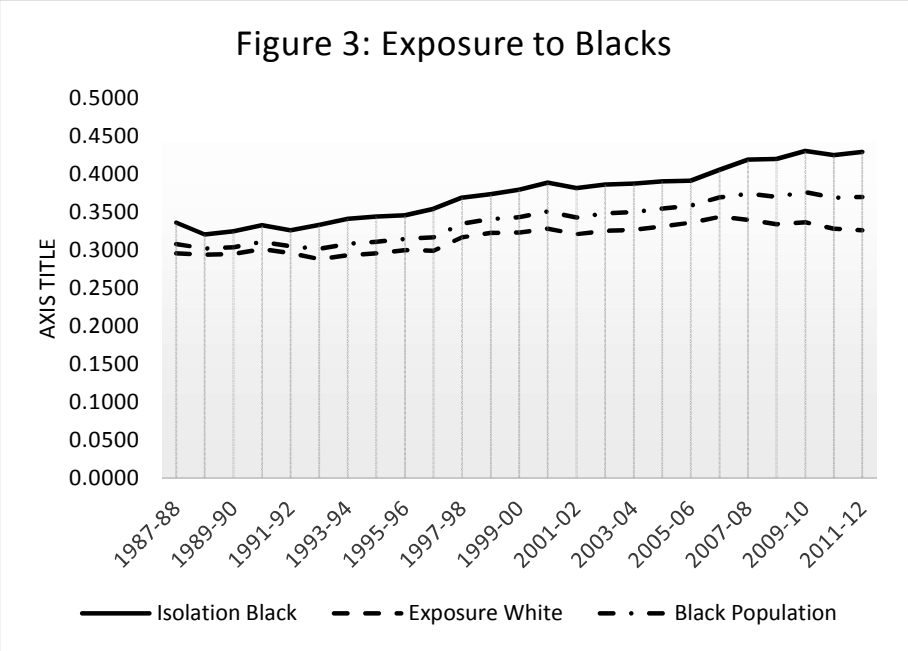


Figure 3 shows the percentage of Black students in Jefferson County and the exposures of Black students and White students to Black students. The exposure of both Black and White students to Black students and the percentage of Black students in Jefferson County stayed nearly constant from the late 1980s into the early

[93] These indices were computed for all permutations of the various racial/ethnic groups. These results only report the findings for Black and White students because they were the only groups to comprise at least 10% of the student body at any time during the study. When the results are presented for Seattle, they also will include Asian and Hispanic students, who were present in far greater numbers in Seattle.

1990s, and increased at fairly constant rates from that time until the PICS ruling. As with the other indices, the PICS ruling applied a jolt to the system. The level of White exposure to Blacks decreased after the PICS ruling, even though the percentage of Black students continued to rise. Black isolation jumped for a couple of years before returning to a slower rate of increase.



Together, these measures indicate that segregation in Jefferson County increased rapidly in the two years after the PICS ruling before settling back to more normal rates of change. The three measures of segregation tell similar stories with regard to the impact of the PICS ruling in Jefferson County. In addition to findings related to the segregation indices, Figures 2 and 3 also show that the PICS ruling had little to no impact on population changes in the district. The percentage of White students in Jefferson County continued to decline, while the percentage of Black students increased.

B. Seattle

The Dissimilarity Index for Seattle decreased over the first few years of the study, coinciding with the early years of the Controlled Choice Plan, reaching a low of 0.22 in 1991-92. Over the next decade, the Dissimilarity Index rose steadily to a value of 0.35. The most rapid period of growth was the four-year period starting in 1997-98, as can be seen in Figure 4, which coincides with the change from Controlled Choice to Open Choice. The rate of increase began to slow down in 2002, at the same time that the moratorium was placed on the use of the racial tiebreaker, which suggests that the tiebreaker had little impact in terms of desegregating the district. The value of the Dissimilarity Index continued to increase thereafter, though

at a much lower rate. The PICS ruling appears to have had no appreciable impact on the Dissimilarity Index in Seattle.[94]

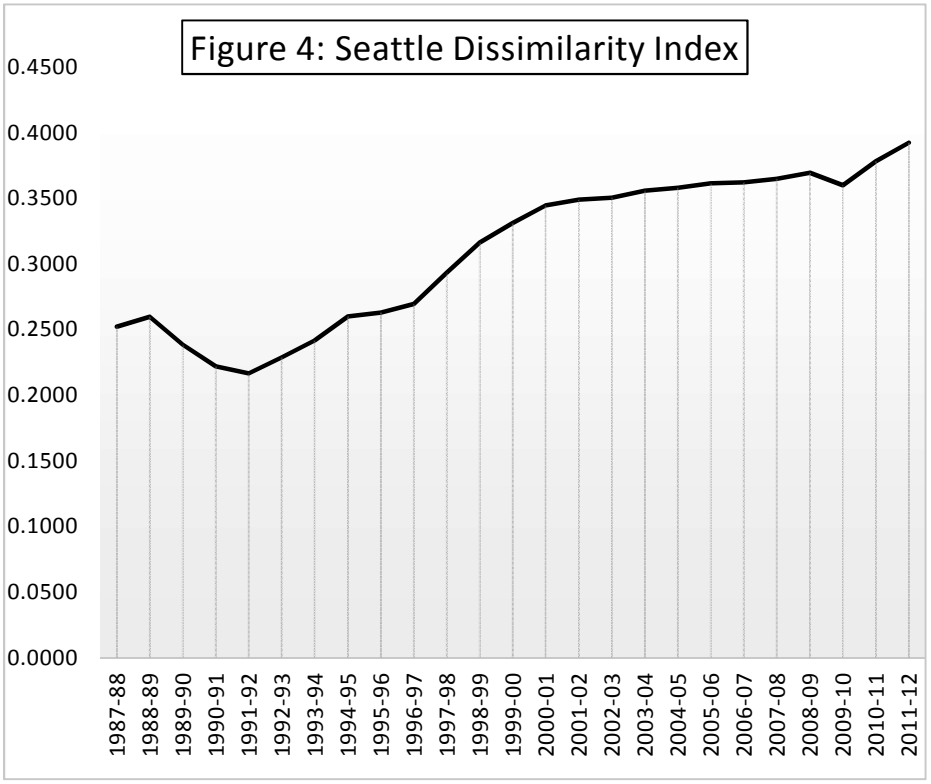
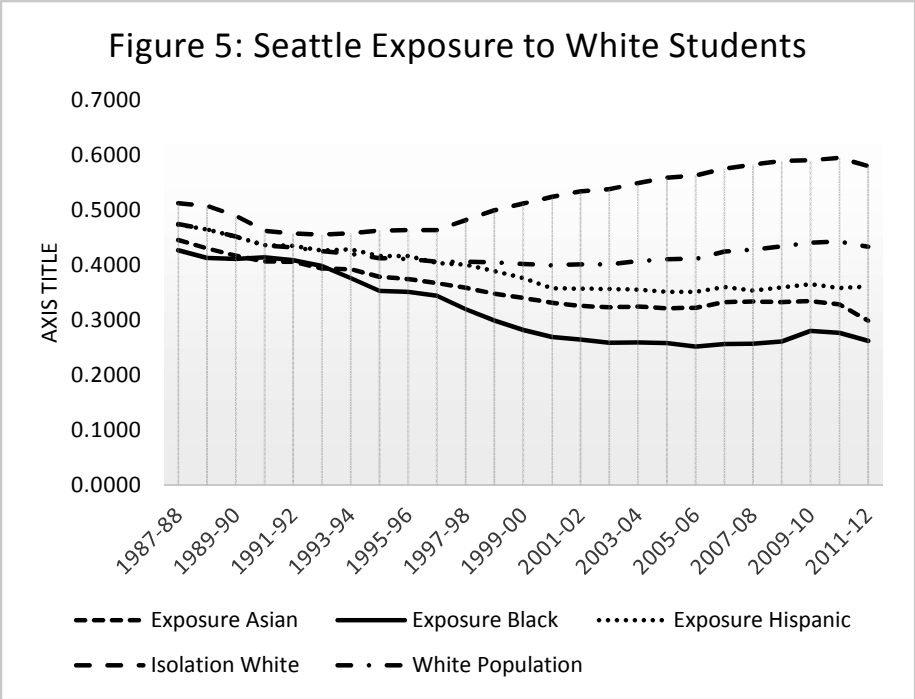


Figure 5 provides further insight into the increase in segregation in the Seattle school district over time. An important reason for the increase appears to be the increased isolation of White students since the mid-1990s. In 1992-93, White students comprised 42.5% of the students in Seattle, while the White Isolation Index was just 3% higher than that figure (45.5%). The White population in the schools declined slightly over the following seven years, leveled off for several years, and eventually rose to a peak of 44.2% in 2010-11. During the same time period, the White Isolation Index increased to a high of 59.5%, also in 2010-11. Thus, the White population increased by about 2% at the same time as the White Isolation Index skyrocketed by 14%. It is interesting to note that the increase in the level of White isolation and the return of White students to the district both occurred at approximately the same time as the Open Choice plan was implemented.

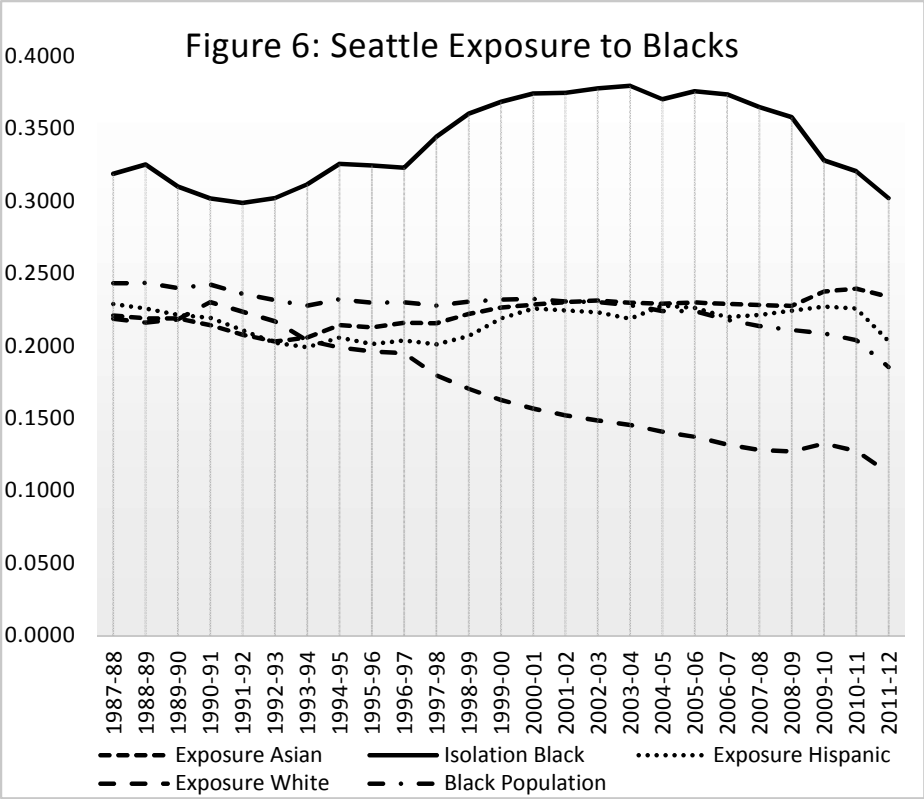
[94] It is too soon to tell whether the brief dip followed by the rapid rise over the last couple of years is a random data fluctuation or some sort of new trend.



The figure also shows that students from other racial/ethnic backgrounds became less exposed to White students at around the same time. This is most noticeable for Black students (for reasons discussed below), but also for Asian and Hispanic students. Finally, no apparent changes in any of these patterns occurred at the time of the *PICS* ruling, which implies that the PICS ruling had no apparent impact on the exposure to White students in Seattle.

Figure 6 shows the exposure results for Black students, who are an interesting group to analyze because their percentage of the district population remained nearly constant throughout the study. Black students were more isolated than Whites at the beginning of the study, became far more isolated during the time of the Open Choice plan, and have become less isolated since 2004. Blacks were less isolated in 2012 than in 1988, which is very different from the results for Whites.

The exposure of other groups to Blacks shows some interesting results. White students became far less exposed to Black students during the Open Choice plan, a trend which continued through 2012. Asian and Hispanic students were exposed to Black students at roughly the same rate as that of Black students in the population over the entirety of the study, and even became exposed at a higher-than-expected level around 2004. As with White students, the PICS ruling had no apparent impact on the exposure to Black students in Seattle.



These data show that the Seattle voluntary desegregation plans failed to hold school segregation to a level lower than that of neighborhood schools once the Open Choice plan was enacted. The plans prior to Open Choice appeared to be somewhat effective, but Open Choice and plans subsequent to it failed with regard to the goal of desegregating the schools.[95] The data also show that segregation increased in Seattle primarily because White students grew far more isolated over time, thereby not enabling each of the other groups to be exposed adequately to White students.

V. DISCUSSION

The study of the Jefferson County and Seattle segregation patterns over the past quarter century yield a variety of interesting insights. This section synthesizes together some of those points.

A. The Impact of PICS

The impact of the *PICS* ruling proved dependent on the type of voluntary desegregation plan employed by the district and, therefore, differed between the two districts studied. Jefferson County displayed precisely the pattern that would be expected from an effective plan. The data show that, prior to PICS, the Dissimilarity Index remained reasonably steady and the exposure of students to children from

[95] It is possible that this may have been one of the goals of these plans. It also is plausible that desegregation may have become a lower priority over time.

various racial/ethnic groups remained fairly close to what one would expect in desegregated schools. The data also show that the schools grew more segregated in the years subsequent to the *PICS* ruling. Thus, Jefferson County modeled the expectation of what should occur when a court invalidates an effective plan: The court's ruling seemed to lead to greater segregation.

The data for Seattle show a very different result, one that would be expected for an ineffective voluntary desegregation plan. The Dissimilarity Index in Seattle increased only slightly since the *PICS* ruling, while the rate of increase remained unchanged. The ruling appeared to have had little impact on the level of exposure to students of various backgrounds. One might argue that this result could be attributed to Seattle voluntarily ceasing to use the racial tiebreaker in 2002, but Figures 4–6 show that this decision had very little effect on school segregation. The rapid increase in segregation in Seattle that occurred upon adoption of the Open Choice plan had slowed before the district stopped using the racial tiebreaker. Unlike in Jefferson County, the data show that neither the abandonment of the racial tiebreaker nor the *PICS* ruling played much of a role in impacting school segregation in Seattle. The driving factors in Seattle appear to have been the Open Choice plan.

B. The Impact of School Choice on Voluntary Desegregation Plans

Any desegregation plan purports to alter school demographics such that schools become less segregated than the neighborhoods in which the schools are located. Voluntary plans incorporate an element of local control which leaves the plan subject to local pressures via lobbying, elections, etc. The changing nature of political forces leaves such plans vulnerable to being revoked, as in Wake County, North Carolina,[96] or gradually weakened over time, as occurred in Seattle.

One popular recent development has been the increase of school choices offered to families. The evidence to date strongly suggests that such choice tends to increase the segregation in schools. Charter schools have been shown to lead to increased levels of segregation in schools.[97] The increase in segregation is particularly troubling for students of color, because students who attend segregated, high poverty schools tend to attain lower levels of academic achievement than students of color who attend more integrated schools.[98]

This study provides further evidence for the proposition that increased choice relates to increased segregation. The districts analyzed in this study present a stark contrast with regard to choice. Jefferson County created a desegregation plan that incorporated choices in addition to the "resides school," but would not permit choices that increased segregation out of the acceptable range. This plan largely eliminated resegregation prior to *PICS*, even after the district was declared unitary.

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[96] Thomas Goldsmith, *Rewriting School Policy Proves Sticky*, NEWS OBSERVER.COM, Apr. 15, 2010, http://www.newsobserver.com/2010/04/15/437623/rewriting-school-policy-proves.html.

[97] E. Frankenberg, G. Siegel-Hawley, & J. Wang, *Choice Without Equity: Charter School Segregation*, 19 EDUC. POL'Y ANALYSIS ARCHIVES 1 (2011); W. J. Glenn, *A Quantitative Analysis of the Increase in Public School Segregation in Delaware: 1989-2006*, 46 URBAN EDUC. 719 (2011).

[98] E.A. Hanushek, J.F. Kain, & S.G. Rivkin, *New Evidence About* Brown v. Board of Education*: The Complex Effects of School Racial Composition on Achievement*, 27 J. LAB. ECON. 349 (2009); S. Southworth, *Examining the Effects of School Composition on North Carolina Student Achievement Over Time*, 18 EDUC. POL'Y ANALYSIS ARCHIVES 29 (2011).

Conversely, Seattle's various desegregation plans failed to rein in the growth of school segregation. Segregation increased rapidly during the final years of the Controlled Choice plan and the initial years of the Open Choice plan. The data suggest that under the Open Choice plan Seattle schools reached, or at least closely approached, the level of segregation that would have been present without a voluntary desegregation plan. The first piece of evidence supporting this claim is the fact that the moratorium on the racial tiebreaker and the subsequent influx of White students back into the district did not adversely affect the segregation level to any substantial degree. In addition, the return to neighborhood schools does not appear to have changed the trajectory of slightly increasing segregation on which Seattle schools have been for nearly a decade. The efforts of Seattle school officials to begin crafting a new attendance plan prior to the announcement of the *PICS* ruling shows how the commitment to desegregation already had waned in the district.

C. White Flight and Return

Seattle schools experienced White flight during the first decade covered in this study. The phenomenon ceased shortly after the time of the adoption of the Open Choice plan, when the percentage of White students in the district flattened out. White isolation increased rapidly during the period in which the percentage of White students held steady. The percentage of White students started growing shortly after the elimination of the racial tiebreaker; this increase is being called "White return" for purposes of this study.

The effects of White return are very interesting to explore. The level of segregation increased only marginally during White return, at a slower rate than prior to White return. The exposure of students from other groups to White students stayed at a fairly constant level over this time period, after having had dropped for over a decade. Seattle's rate of increasing school segregation apparently slowed not because of policies designed to produce less segregation, but because of policies designed to encourage White families to return to the district. Another explanation could be that these events occurred simultaneously: White students returned to the district once the level of segregation became high enough for their families to be comfortable. These data cannot distinguish between these explanations conclusively.

White return has not proven to be a panacea, however. The percentage of White students in the district in 2011-12 almost exactly matched that of 1990-91: 43.3% and 43.5%, respectively. The return of White students failed to return school segregation levels to the nearly historic lows for Seattle of 1990-91. Compared to 1990-91, the schools possessed far more segregation in 2011-12, as shown by the increase in Dissimilarity Index values from 0.22 to 0.39 and White Isolation values from 0.46 to 0.58. White students also became less exposed to students from other groups; for example, the exposure of White students to Black students decreased from 0.23 to 0.11.

In sum, White students now are far more isolated and far less exposed to students of other racial/ethnic backgrounds than two decades ago, despite their percentage of the district's students being almost identical. Thus, White return may have helped slow the rate of increase in segregation, but has not reversed the segregation introduced into the system over the preceding decade. It remains to be seen how the transition to neighborhood schools will impact White return and school segregation in Seattle.

Jefferson County has not experienced White return. The percentage of White students in the district has declined consistently since the early 1990s, while the

district slowly grew more segregated. It will be important to monitor these data over the coming years to evaluate the effectiveness of the new Jefferson County plan in terms of maintaining integrated schools.

VI. CONCLUSIONS

This study yielded two primary conclusions. First, the longitudinal analysis of the attendance data for these districts shows that the various iterations of the voluntary desegregation plans differed greatly in terms of their effectiveness in preventing increased segregation. The Jefferson County plans maintained a fairly consistent, and far lower, level of school segregation than Seattle. Segregation in Seattle increased rapidly during the time period in which the district implemented choice programs.

Second, the impact of the *PICS* decision depended on the type of plan that existed prior to the decision. Seattle had already experienced increased segregation that may have reached or approached the level commensurate with that of neighborhood schools. Thus, *PICS* had little impact on school segregation in that district. In contrast, the striking down of the Jefferson County plan has led to increased segregation. The increased segregation in Jefferson County since PICS is not surprising, because a new plan no longer based on the individual characteristics of students seems unlikely to be as effective as the earlier plan, which took such characteristics into account.