THE WESTERN STATES:

Profound Diversity but Severe Segregation for Latino Students

by
John Kucsera and Greg Flaxman

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EXECUTIVE SUMMARY

The U.S. Western region and its public schools are in the midst of its largest racial and economic transformation, as the area witnesses a shrinking white majority, a surging Latino minority, and a growing class of poor. These groups, along with blacks and Asian, more often than not attend very different and segregated schools both in educational opportunity and student body diversity. With its growing diversity potentially exemplifying our nation's future demography, the West is an ideal region to determine how demographic transformation and segregation of our public schools can affect the rest of the nation if social and civil rights policy continues in their stagnant state.

According to data from the National Center for Education Statistics, as the proportion of white students drops and the percentage of Latinos rises, whites in the Western region are attending more diverse schools than whites across other regions. Yet, the interracial contact between white and Latino students is declining more than ever before, as more and more Latinos attend schools with 10% or fewer white classmates. To exacerbate this growing segregation, and without taking into account the full effect of the recent recession, two out of three students in a typical Latino student's school are poor, often a clear indicator of an impoverished setting that lacks educational opportunities and morale often found in low poverty schools. A similar story emerges for black students in the West, as many attend impoverished schools with mostly Latino peers.

In the following report, we present an in-depth exploration of these Western trends that are merely summarized in the corresponding larger report, *E Pluribus… Separated*. Major findings in the West are highlighted below.

The Surge of Latinos and Asians

- The West is the most diverse region in the country. Latino students account for nearly the same share (39.9%) of the region's enrollment as white students (41.9%).
- In 2009, both Asian and Latino students have nearly grown two-fold in regional proportionate size since 1980.
- New Mexico had the highest proportion of Latino students, followed by the state of California.

Deepening Segregation for Latino Students

- Concentration trends for Latino students became substantially more severe than for black students around 1991, likely reflecting both the massive growth of many Latino communities and the fact that most desegregation plans did not expressly include Latino students. The share of Latino students attending intensely

segregated minority schools has increased steadily over the past four decades; presently, three out of four Latino students in the West attend schools with less than 10% of white classmates.

- Exposure to white students for the average Latino has decreased dramatically over the last four decades for every Western state. In Nevada, the average Latino attended school with 84% of white classmates in 1970, compared to 29% in 2009.

Decreasing Black Exposure to White Students

- Black exposure to white students has declined across the Western region over the last twenty years, while exposure to Latino students has steadily increased.
- The share of Black students attending majority-minority schools has increased since 1980; in 2009, nearly four out of five black students in the West attend schools with less than 50% of white classmates.

Double Segregation by Race and Poverty

- Though poverty has dramatically increased in the region since 1991, students of different racial backgrounds are not exposed equally to existing poverty. The typical Latino student, followed by black student, goes to a school with much higher concentrations of poor students than the typical white or Asian student.
- Across nearly all of the highest-enrolling metropolitan areas in the region, Latino students experience the highest levels of exposure to poverty. In the Los Angeles metropolitan area, the average Latino student attends a school where nearly 75% of students are poor; the average white student attends a school where only about a fourth are poor.

Population change is fundamental

- The driving force behind increasing segregation in the West is the growth of the proportion of Latino students coupled with the continuing lack of desegregation plans. Twenty years ago, just before the Supreme Court began to roll back desegregation standards, 62% of Latino or white students in the West would have needed to attend schools with a greater proportion of the other racial group in order to achieve perfect integration. Today, that same percentage of students would have to do the same.
- At the metropolitan level, over half of the highest student-populated metros experienced higher white-Latino than white-black segregation, as measured by the dissimilarity index, a measure of the randomness of distribution of two populations among schools.
- Substantial Latino-white dissimilarity was found in the Los Angeles metro and surrounding area of Oxnard, as well as Salinas, CA. For example, 69% of Latino or white students in Los Angeles metropolitan area would need to attend schools

> with a greater proportion of the other racial group in order to achieve perfect integration in 2009.

With race and poverty at the center of educational inequality, these findings suggest that integration efforts are clearly needed for a region that is demographically transforming but resegregating, especially for the typical Latino student who will soon be the poster child of the West and the nation. As such, we offer several region-specific recommendations to reverse the trends presented in this brief, including the creation of comprehensible and transparent interdistrict and school-choice policies, support of high-quality magnet schools, and the enforcement of local housing policies, such as density regulations and inclusionary zones.

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The West is the largest geographical region in the United States, encompassing 11 states, nearly half of the nation's land area, and a fourth of public students. It has been a primary destination for both domestic and international generations and its population has rapidly grown. Its southern region, consisting of Arizona, California, Nevada, and New Mexico, is home to the first predominantly non-white period of immigration in U.S. history—a migration that is rapidly transforming American society. As the South has been considered home for blacks in this country, the southern West – with much of the land once belonging to Mexico—is considered the "old country" for most Latinos. Now the nation's largest minority population, Latinos, particularly Mexican natives, have dramatically transformed the demography of the region. Yet, as their numbers have surged, Latinos have become deeply isolated from whites and concentrated in schools of severe poverty across the West.

Social norms and policy have significantly influenced residential and school segregation across the region. The formation of black and Latino communities in urban areas includes a history of pervasive discrimination, and in many communities this discrimination was very overt. In the early 20th century, theories of racial superiority were very widely shared in America. By the 1920s, Congress embraced an openly racist immigration law, and the Supreme Court accepted restrictive covenants using the power of state courts to prevent any sales of real estate in communities to minority residents. In fact, policies against the sale of federally-insured housing to minorities were written into the basic procedures of federal programs, creating much of the groundwork for the segregated development of suburbia after World War II.[1] Federal fair housing law was not enacted until 1968 and the Department of Housing and Urban Development (HUD) did not receive significant enforcement authority against housing discrimination until 1988.

Some scholars and advocates argue that contemporary residential segregation is largely caused by nonracial socioeconomic and demographic factors, while others conclude that segregation is still driven by racial processes including prejudice and housing market discrimination.[2] Whether residential segregation is caused by past or current discrimination, economics, preferences, or a combination of all four, the consequences are substantial. School segregation, with its impact on schooling quality, is one such consequence.

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[1] Kimble, J. (2007). Insuring inequality: The role of the Federal Housing Administration in the urban ghettoization of African Americans. *Law & Social Inquiry, 32*(2), 399-434.

[2] Iceland, J., & Nelson, K. A. (2008). Hispanic segregation in metropolitan America: Exploring the multiple forms of spatial assimilation. *American Sociological Review, 73*, 741-765; Charles C. Z. (2003). The Dynamics of Racial Residential Segregation. *Annual Review of Sociology, 29*,167-207; Logan J. R., Alba, R. D. (1993). Locational Returns to Human Capital: Minority Access to Suburban Community Resources. *Demography. 30*:243-268.

Nearly sixty years of social science research indicates that separate schooling remains extremely unequal. Less experienced teachers, a lower level of classroom competition, and a poorer curriculum are commonly found in racially and socioeconomically isolated schools.[3] Integrated schools, on the other hand, lead to a number of benefits for students of color, such as greater academic achievement and later earnings and physical health.[4] White students also benefit from such desegregated educational contexts, such as stereotype reduction, an increase in critical thinking skills, and less intergroup anxiety.[5]

One of the first western federal cases to detail the harms of school segregation for minority (particularly Latino) students and repeal school segregation practices was the l946 *Mendez v. Westminster* case in California, which challenged the refusal to admit Mexican American students to an all white school. In *Gonzales v. Sheeley* (1951), a similar lawsuit was filed and won in Arizona, where Mexican American students were segregated from white schools, with local educators citing their "language handicap." Though they never came to the Supreme Court, both cases were important forerunners to *Brown v. Board of Education* (1954).

Brown focused on state laws mandating segregation of black students in the 17 states with segregation laws and, together with the l964 Civil Rights Act and further Court decisions, produced desegregation progress for black students from 1964 to 1988. The 1973 *Keyes* decision extended desegregation requirements outside the South. It held that black and Latino students suffer from similar discrimination in treatment when compared to white students and have similar desegregation rights, but it was limited by the l974 *Milliken* decision, which excluded the suburbs from desegregation plans, and was never seriously enforced in the West. Three Supreme Court cases in the 1990s significantly

[3] Clotfelter, C., Ladd, H., & Vigdor, J. (2005). Who teaches whom? Race and the distribution of novice teachers, *Economics of Education Review, 24*(4), 377-92; Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: A descriptive analysis. *Educational Evaluation and Policy Analysis, 24*(1): 37-62; Borman, G., & Dowling, M. (2010). *Schools and inequality: A multilevel analysis of Coleman's equality of educational opportunity data. Teachers College Record, 112*(5), 1201-1246; Rumberger, R. W., & Palardy, G. J. (2005). Does segregation still matter? The impact of student composition on academic achievement in high school. *Teachers College Record, 107*(9), 1999-2045.

[4] Hoschild, J., & Scrovronick, N. *The American dream and the public schools*. New York: Oxford University Press; Johnson, R. C., & Schoeni, R. (2011). The influence of early-life events on human capital, health status, and labor market outcomes over the life course. *The B.E. Journal of Economic Analysis & Policy Advances, 11*(3), 1-55.

[5] Schofield, J. (1995). Review of research on school desegregation's impact on elementary and secondary school students. In J. A. Banks and C. A. M. Banks (Eds.), *Handbook of multicultural education* (pp. 597–616). New York: Macmillan Publishing; Pettigrew, T. & Tropp, L. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*(5), 751-783; Ready, D. & Silander, M. (2011). School racial and ethnic composition and young children's cognitive development: Isolating family, neighborhood and school influences. In E. Frankenberg & E. DeBray (Eds.), *Integrating schools in a changing society: New policies and legal options for a multiracial generation* (pp. 91-113). Chapel Hill, NC: UNC Press; Killen, M., Crystal, D. & Ruck, M (2007). The social developmental benefits of intergroup contact among children and adolescents. In E. Frankenberg & G. Orfield (Eds.), *Lessons in integration: Realizing the promise of racial diversity in American schools* (pp. 31-56). Charlottesville, VA: University of Virginia Press.

interrupted desegregation progress and subsequently influenced the resegregation of public schools by relaxing desegregation standards (*Board of Education of Oklahoma City v. Dowell,* 1991; *Freeman v. Pitts,* 1992; *Missouri v. Jenkins,* 1995). In 2007, more than 50 years after the Supreme Court ruled in *Brown* (1954) that schools could not use race to desegregate students, the *Parents Involved* decision holds that school districts may neither assign nor deny students to schools solely on the basis of race, even if the intent is to achieve racial integration. Virtually all voluntary desegregation plans for decades before that 2007 decision, prohibited student transfers that increased segregation and fostered those that improved integration. Since the 2007 decision, these plans have been struck down and school districts that wish to pursue integration must seek indirect race-neutral measures, such as multi-factor or socioeconomic assignment plans. With the increase in diversity across the region (and nation), the persistence of residential segregation, and the courts hindering efforts to prevent the continued trend of separate and unequal schooling systems, school segregation and its inequitable effects are persisting or deepening.

An increase in racial and ethnic diversity could help foster residential and school integration. However, racial and ethnic growth can only encourage such efforts with direction and management from policy and planning. Without such stipulations, demographic change can provoke further segregation and its ill conditions for all racial groups – not just minorities. With its growing diversity potentially exemplifying our nation's future demography, the West is an ideal region to determine how demographic transformation can affect the rest of the nation if social and civil rights policy continue in their stagnant state.

In this report, we explore enrollment, segregation, and poverty concentration patterns of public school students in the Western region in detail. Near the end, we provide specific policy recommendations based on these regional patterns to actively spur integration efforts forward for the next, multiracial generation of students.

Findings show that whites in the region attend more diverse schools than whites elsewhere and, given the large concentrations of Asians and American Indians in the West, schools are likely to have more than two racial groups. In addition, the West has experienced a substantial decline in the proportion of white students due to the remarkable growth of the Latino population. The analysis also indicates a general increase in Latino enrollment in hypersegregated schools (where 90-100% of the student body are minorities), as well as a general decline in Latino exposure rates to whites. The proportion of students living in poverty has soared and segregation has produced extreme exposure to poor students for the average Latino student. For black students, many in the West often find themselves attending impoverished schools with mostly Latino peers. All of these findings suggest that integration efforts are clearly needed for a region that is demographically transforming but resegregating, especially for the typical Latino student who will soon be the poster child of the West and the nation.

Enrollment

In the 2009-2010 school year, public school enrollment in the West consisted of nearly a quarter of the total school enrollment in the United States (see Table 1). Over a third of total Latino, Asian, and American Indian students in the United States are in the Western region. Within the region, two of five students were either white or Latino in the 2009-2010 school year.

Table 1: *Public School Enrollment in the Western Region and Nation*

	Population	Percentage					
		White	Black	Asian	Latino	AI	Mixed
West							
1970-1971	*	77.9%	6.3%	1.6%	13.0%	1.1%	*
1980-1981	*	68.0%	6.8%	4.4%	19.0%	1.8%	*
1991-1992	8,753,028	58.2%	6.3%	7.4%	25.9%	2.0%	*
2001-2002	10,677,691	49.4%	6.5%	8.0%	34.0%	2.1%	*
2009-2010	11,091,725	41.9%	5.8%	8.2%	39.9%	1.9%	1.9%
Nation							
1970-1971	*	79.1%	15.0%	0.5%	5.1%	0.4%	*
1980-1981	*	73.2%	16.1%	1.9%	8.0%	0.8%	*
1991-1992	41,859,267	66.1%	16.2%	3.5%	11.6%	1.0%	*
2001-2002	47,349,170	59.7%	16.8%	4.3%	17.9%	1.3%	*
2009-2010	48,307,844	53.7%	16.5%	5.0%	22.8%	1.3%	0.7%

Note: AI=American Indian.

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data. Data prior to 1991 obtained from the analysis of the Office of Civil Rights data in Orfield, G. (1983). Public School Desegregation in the United States, 1968-1980. Washington, D.C.: Joint Center for Political Studies.

Since 1970, the proportion of white students in the West decreased considerably (more than a third decline – the largest across regions), while the share of Latino students increased over the years. The Latino immigrant population mostly includes poorly educated migrants who often located in segregated areas, contrasting with the dominant Asian pattern of educated immigrants living in integrated areas. If first grade enrollment is any prediction of the future, the Latinos will soon surpass whites in student enrollment (see Table 2).

Table 2: *First Grade Public School Enrollment by Region and Nation in 2009-2010*

	White	Black	Asian	Latino	AI
Alaska	51.0%	3.5%	6.0%	6.2%	23.7%
Border	64.4%	19.5%	3.1%	8.3%	3.9%
Hawaii	21.6%	2.3%	70.9%	4.5%	0.6%
Midwest	67.3%	14.0%	3.3%	11.2%	1.0%
Northeast	59.8%	14.5%	6.5%	17.4%	0.3%
South	44.8%	24.6%	3.1%	25.4%	0.5%
West	39.8%	5.3%	7.8%	41.7%	1.8%
Nation	51.1%	15.7%	5.1%	24.6%	1.3%

Note: AI = American Indian

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data.

In the West, California leads the region in terms of highest total enrollment, highest proportion Asian, and lowest proportion of white students (Table 3). New Mexico holds the highest proportion of Latino students, followed by California. Nevada and Montana maintain the highest proportion of black and American Indian students.

Table 3*: Public School Enrollment in 2009-2010 for Western States*

	2009-2010 Population	Percentage				
		White	Black	Asian	Latino	AI
Arizona	1,060,453	44.3%	5.9%	3.1%	41.2%	5.4%
California	5,976,613	27.1%	6.7%	11.3%	50.3%	0.7%
Colorado	815,050	60.8%	5.9%	3.7%	28.4%	1.1%
Idaho	271,190	80.5%	1.2%	1.8%	14.9%	1.6%
Montana	141,693	83.1%	1.1%	1.2%	2.8%	11.8%
Nevada	422,957	41.5%	11.3%	8.2%	37.6%	1.5%
New Mexico	327,362	25.5%	2.1%	1.3%	60.0%	10.3%
Oregon	528,365	70.0%	2.8%	4.8%	20.4%	2.0%
Utah	507,752	79.3%	1.5%	3.3%	14.5%	1.4%
Washington	953,343	65.7%	5.8%	9.3%	16.8%	2.5%
Wyoming	86,947	81.5%	1.2%	0.8%	12.0%	3.2%
Total Region	11,091,725	41.9%	5.8%	8.2%	39.9%	1.9%

Note: AI=American Indian.

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data and Local Education Agency Universe Survey Data

The great majority of Americans live in metropolitan areas, so understanding the differences among and within such areas are very important. Beginning in 2003, the Census Bureau defines metropolitan areas as a Core Based Statistical Area, which is a collective term for both metropolitan and micropolitan areas. According to the Bureau, a metropolitan area contains a core urban area of 50,000 or more in population, and a micropolitan area contains an urban core of at least 10,000 (but less than 50,000). Each

metropolitan or micropolitan area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core.

With the metropolitan areas of the West, 13 of the 25 highest enrolling areas are within the state of California, and those 13 comprise 89% of the total state enrollment and 48% of the total Western region enrollment (Table 4). There are vast open spaces in the West but its students are highly concentrated. In most of these California areas, about a third of the students are white but the share is significantly lower in the greater Los Angeles area and the agriculturally rich Central Valley.

Table 4*: Public School Enrollment in 2009-2010 for the Top 25 Highest Enrolling Core Based Statistical Areas (CBSAs) in the West*

	2009-2010 Population	Percentage				
		White	Black	Asian	Latino	AI
Los Angeles-Long Beach-Santa Ana, CA	1,998,388	19.2%	6.8%	11.7%	59.4%	0.3%
Riverside-San Bernardino-Ontario, CA	812,419	23.3%	8.4%	4.7%	59.2%	0.5%
Phoenix-Mesa-Scottsdale, AZ	723,776	46.0%	7.1%	3.7%	40.5%	2.7%
San Francisco-Oakland-Fremont, CA	541,476	29.8%	10.3%	22.7%	30.2%	0.4%
San Diego-Carlsbad-San Marcos, CA	482,555	34.9%	6.2%	10.1%	43.8%	0.7%
Seattle-Tacoma-Bellevue, WA	454,493	61.4%	9.6%	14.9%	12.4%	1.7%
Denver-Aurora, CO	419,909	55.7%	7.9%	4.6%	30.8%	0.9%
Sacramento--Arden-Arcade--Roseville, CA	346,584	44.0%	10.0%	13.0%	25.0%	0.9%
Portland-Vancouver-Beaverton, OR-WA	313,007	69.1%	4.4%	7.7%	17.8%	1.0%
Las Vegas-Paradise, NV	302,425	34.2%	14.5%	9.5%	41.1%	0.7%
San Jose-Sunnyvale-Santa Clara, CA	269,310	23.1%	2.7%	30.4%	37.0%	0.4%
Salt Lake City, UT	191,940	71.4%	2.1%	5.3%	20.1%	1.1%
Fresno, CA	185,276	21.8%	6.3%	11.2%	58.3%	0.8%
Bakersfield, CA	169,310	27.1%	6.1%	3.7%	59.9%	0.7%
Tucson, AZ	144,753	38.5%	5.4%	2.9%	49.4%	3.9%
Oxnard-Thousand Oaks-Ventura, CA	138,264	37.9%	1.9%	6.5%	51.7%	0.5%
Albuquerque, NM	134,623	24.8%	2.3%	1.8%	63.8%	5.4%
Stockton, CA	130,888	25.1%	9.4%	16.5%	37.5%	1.7%
Colorado Springs, CO	110,503	66.5%	9.9%	4.2%	18.1%	1.4%
Boise City-Nampa, ID	109,618	78.6%	1.5%	2.5%	16.6%	0.7%
Provo-Orem, UT	106,830	85.2%	0.8%	2.5%	10.8%	0.7%
Ogden-Clearfield, UT	104,467	82.4%	1.7%	2.5%	12.8%	0.7%
Modesto, CA	101,687	33.3%	3.3%	5.1%	50.3%	0.7%
Visalia-Porterville, CA	93,806	21.6%	1.8%	3.0%	71.2%	1.2%
Salinas, CA	68,804	17.0%	2.5%	5.0%	72.9%	0.4%
CBSA Total	8,455,111	36.5%	7.0%	9.9%	43.1%	1.0%

Note: AI=American Indian.

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data and Local Education Agency Universe Survey Data

Segregation

A wealth of research has documented that students of color experience a wider range of disadvantages than their white counterparts due to residential and school segregation. Youth of color generally attend schools in lower-income neighborhoods that lack the resources and rigor of schools in more affluent neighborhoods.[6] These schools are more likely than schools in more affluent communities to experience high teacher turnover, high percentage of uncredentialed teachers, shortages of basic materials, fewer counselors, overcrowding, and facilities in greater need of repair, just to name a handful.[7]

Further, blacks and Latinos who succeed economically—in spite of most experiencing poor, unsafe, segregated communities with inferior schooling and lack of access to quality employment—generally live in segregated and often less-valued communities, affecting socioeconomic conditions and mobility for their next generation.[8] As a result, segregation becomes the fulcrum of a vicious cycle for many nonwhite families.

The costs of segregation to white students have received much less attention but are also very high and will increase in the future. Studies have shown that whites attending racially integrated schools experience a variety of benefits, such as cross-racial understanding, reduction of racial prejudice, enhanced confidence about living and working in multiracial settings, and an increase of critical thinking.[9] Numerous studies indicate that school desegregation or resegregation has little or no measurable impact on the test scores of white students. White students growing up in the West are already a minority in their age group, and experience in multiracial settings will increasingly become valuable in this region as they age.

Segregation denotes the degree to which groups are isolated from each other. In the field of sociology, segregation is a statistical rather than a legal concept and can be measured in a variety of ways. An early and frequently used measurement, often called the dissimilarity index, compared the actual pattern of distribution to what it would be if the

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[6] Carroll, S., Krop, C., Arkes, J., Morrison, P., & Flanagan, A. (2005). *California's K-12 public schools: How are they doing?* Santa Monica, CA: RAND Corporation; Orfield, G., Siegel-Hawley, G., & Kucsera, J. (2011). Divided we fail: Segregation and inequality in the southland's schools. Los Angeles, CA: Civil Rights Project/Proyecto Derechos Civiles.

[7] Ibid; Orfield, G., Siegel-Hawley, G., & Kucsera, J. (2011). Divide we fail: Segregation and inequality in the southland's schools. Los Angeles, CA: Civil Rights Project/Proyecto Derechos Civiles.

[8] Roscigno, V.J. (2007). The face of discrimination: How race and gender impact work and home lives. Lanham, MD: Rowman & Littlefield; Rugh, J.S., & Massey, D.S. (2010). Racial segregation and the American foreclosure crisis. *American Sociological Review, 75*, 629-651; Turner, M.A., & Ross, S.L. (2005). How racial discrimination affects the search for housing. In X. de Souza Briggs (Ed.), *The Geography of Opportunity: Race and Housing Choice in Metropolitan America* (pp. 81-100). Washington, DC: Brookings Inst. Press; Zhao, B., Ondrich, J., & Yinger, J. (2006). Why do real estate brokers continue to discriminate? Evidence from the 2000 Housing Discrimination Study. *Journal of Urban Economics, 59*, 394–419.

[9] See Orfield, G., Frankenburg, E., & Garces, L. M. (2007). Statement of American Social Scientists of Research on School Desegregation to the U.S. Supreme Court in Parents v. Seattle School District and Meredith v. Jefferson County. *The Urban Review, 40*(1), 96-136.

populations were distributed randomly by race. If a community was, for example, 35% black and 65% white, and if each Census tract mirrored these same proportions, then that community would earn a perfect score of zero using the dissimilarity measure. At the other extreme, the score would be 1 if all of the tracts were either all white or all black, reflecting the maximum possible segregation. This index permits easy comparison of the level of dissimilarity between any two groups across different communities or states. Over time, it helps in examining the tendency for more or less segregation on this dimension.

The dissimilarity index, does, however, have some important limits. If applied to a city of 90% black residents, for example, it would show low levels of segregation for those living in an 80-100% black community inside that city. However, a community of half or more white residents within this city would appear to be far more segregated, something inconsistent with the common use for the tool. Since dissimilarity scores can be very sensitive to the local population numbers and can easily produce findings that are misleading, we only measure randomness within large units, such as metropolitan areas or states, where it can refer to the overall structure of the society, than to smaller units.

In terms of degree, a score of .70 to 1.00 on the dissimilarity index generally indicates extreme segregation, .60 to .80 indicates high, .30 to .60 indicates moderate, and .00 to .30 indicates low segregation.[10] Also, a change of .10 points on the measure generally represents a significant change in segregation levels over time.[11]

Another very commonly used statistic is the exposure index. The basic idea of this statistic is to report the average contact between different groups, for example, in all the neighborhoods in a city, or all the schools in a school district. This is computed by looking at, for example, the percent of Latino students in the school for the average white student in a school district and finding the average of all these results. This measure might conclude, for example, that the average white student in a city attends a school with 35% Latino students. That average is a rough measure of the potential contact between these groups of students. Like the dissimilarity index, it can show us change over time.

Since parents, teachers, and researchers are much more interested in the experience of students and the actual composition of schools than in randomness, it is a very important measure. Like the dissimilarity index, however, school racial composition is included in the statistic and thus, this index can be affected by group size. For example, the above finding that the average white student in a city attends a school with 35% Latino students would have two different meanings if the district had a small (e.g., 10%) or large (90%) proportion of Latinos in the district.

We will report both the dissimilarity and exposure indices across racial groups, as well as the concentration of black and Latino students in minority schools, and exposure to poor

[10] Reardon, S. F., & Yun, J. T. (2002-2003). Integrating neighborhoods, segregating schools: The retreat from school desegregation in the south, 1990-2000. *North Carolina Law Review, 81*, 1563-1596.
[11] Ibid.

students (see Appendix for further details). Each measure tells us something important but also has very significant limitations.

Evenness: A Measure of Spatial Distribution

Segregation across all races in the Western region, particularly between white-black and white-Latino students, is considerably high (see Table 5), although somewhat lower than national segregation levels. In addition, dissimilarity has not significantly changed since the 1991-1992 school year. This means that most of the increase in segregation in the West is the result of changing proportions of students from the different racial and ethnic groups, not from the randomness of their distribution. For Western metropolitan areas, the highest dissimilarity scores are found within the diverse state of California. In the Los Angeles metropolitan area, segregation is nearing extreme levels (Table 6). Fully 65% (*D*=.65) of black or white students would need to attend schools with a greater proportion of the racial group in order to be perfectly integrated with white students across this metro area. The San Francisco metropolitan area also has a high degree of segregation between white and black students. For Latino and white students, the largest dissimilarity scores are found in the Los Angeles metro and surrounding area of Oxnard, as well as Salinas, CA.

Table 5*: Dissimilarity of Students in Public Schools by Western Region and Nation*

	Dissimilarity Index					
	White Black	**White Asian**	**White Latino**	**Black Asian**	**Black Latino**	**Asian Latino**
West						
1991-1992	0.65	0.58	0.62	0.53	0.56	0.57
2001-2002	0.64	0.57	0.63	0.52	0.52	0.59
2009-2010	0.62	0.57	0.62	0.53	0.50	0.59
Nation						
1991-1992	0.69	*	0.75	*	0.75	*
2001-2002	0.69	*	0.72	*	0.71	*
2009-2010	0.67	0.60	0.69	0.69	0.67	0.63

Note: * Less than one-twentieth of a racial enrollment.
Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data

Table 6*: Dissimilarity of Students in Public Schools, 2009-10, Top 25 Highest Enrolling CBSAs in the West*

	Dissimilarity Index					
	White Black	**White Asian**	**White Latino**	**Black Asian**	**Black Latino**	**Asian Latino**
Los Angeles-Long Beach-Santa Ana, CA	0.68	0.52	0.69	0.68	0.55	0.62
Riverside-San Bernardino-Ontario, CA	0.46	0.38	0.46	0.44	0.33	0.47
Phoenix-Mesa-Scottsdale, AZ	0.45	0.30	0.57	0.38	0.32	0.52
San Francisco-Oakland-Fremont, CA	0.66	0.55	0.58	0.57	0.43	0.55
San Diego-Carlsbad-San Marcos, CA	0.55	0.48	0.51	0.46	0.41	0.52
Seattle-Tacoma-Bellevue, WA	0.50	0.37	0.40	0.35	0.34	0.33
Denver-Aurora, CO	0.63	0.32	0.59	0.51	0.50	0.49
Sacramento--Arden-Arcade--Roseville, CA	0.59	0.52	0.46	0.33	0.34	0.39
Portland-Vancouver-Beaverton, OR-WA	0.50	0.39	0.40	0.38	0.44	0.42
Las Vegas-Paradise, NV	0.37	0.28	0.49	0.36	0.31	0.44
San Jose-Sunnyvale-Santa Clara, CA	0.47	0.52	0.54	0.45	0.39	0.55
Salt Lake City, UT	0.40	0.39	0.50	0.24	0.28	0.24
Fresno, CA	0.55	0.45	0.53	0.38	0.44	0.39
Bakersfield, CA	0.52	0.47	0.59	0.50	0.42	0.50
Tucson, AZ	0.40	0.29	0.52	0.36	0.38	0.50
Oxnard-Thousand Oaks-Ventura, CA	0.42	0.28	0.61	0.35	0.36	0.50
Albuquerque, NM	0.35	0.31	0.39	0.37	0.32	0.47
Stockton, CA	0.51	0.48	0.45	0.25	0.37	0.45
Colorado Springs, CO	0.41	0.23	0.35	0.35	0.19	0.33
Boise City-Nampa, ID	0.33	0.30	0.42	0.28	0.51	0.54
Provo-Orem, UT	0.24	0.27	0.38	0.28	0.35	0.32
Ogden-Clearfield, UT	0.34	0.24	0.46	0.29	0.28	0.41
Modesto, CA	0.32	0.31	0.34	0.27	0.35	0.31
Visalia-Porterville, CA	0.36	0.36	0.42	0.44	0.46	0.38
Salinas, CA	0.51	0.42	0.63	0.26	0.52	0.49

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Public Elementary/Secondary School Universe Survey Data

Exposure: A Measure of Interracial Contact

Interracial contact is one of the most effective ways to reduce racial stereotypes, discrimination, and other forms of conflict between two racial groups, particularly when the contact is properly managed.[12] Across the West, exposure to white students has generally decreased in correlation with declining white and rising Latino and Asian proportion of public school enrollment (Table 7). However, white students continue to attend schools that are majority white; Asian students have the second highest exposure rate to white students across racial groups.

Table 7: *Exposure Rates to White Students in Public Schools across the Western Region and Nation*

	% White	White Exposure to White	Black Exposure to White	Asian Exposure to White	Latino Exposure to White
West					
1991-1992	58.2%	75.0%	34.6%	43.3%	31.9%
2001-2002	49.4%	70.1%	30.3%	38.6%	26.1%
2009-2010	41.9%	64.6%	28.3%	33.7%	22.8%
National					
1991-1992	66.1%	82.6%	34.9%	*	31.2%
2001-2002	59.7%	79.3%	30.7%	*	26.4%
2009-2010	53.7%	74.9%	29.2%	42.3%	25.2%

Note: * Less than one-twentieth of a racial enrollment.
Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data

These patterns have also continued throughout the years since 1970. Table 8 presents the percentage of whites students in a school for a typical Latino student. As the percentages indicate, exposure to white students for the average Latino has decreased dramatically over the years for every Western state.

[12] Allport, G. (1954). *The nature of prejudice*. Cambridge: Addison-Wesley; Pettigrew, T. & Tropp, L. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*(5), 751-783.

Table 8*: Percentage of White Students in School of a Typical Latino Student, West*

	Year				
	1970	**1980**	**1991**	**2001**	**2009**
Arizona	45.5%	43.5%	41.3%	31.7%	27.0%
California	54.5%	35.9%	26.9%	20.2%	16.5%
Colorado	56.8%	59.0%	55.5%	45.0%	40.7%
Idaho	*	*		73.8%	69.0%
Montana	*	*	*	*	*
Nevada	83.7%	75.3%	63.0%	39.9%	29.2%
New Mexico	36.9%	32.6%	32.4%	26.7%	21.0%
Oregon	*	*	79.2%	65.7%	55.9%
Utah	*	*	*	68.6%	61.2%
Washington	*	*	61.4%	52.4%	44.9%
Wyoming	75.3%	82.8%	83.0%	81.9%	75.1%

Note: * Less than one-twentieth of racial enrollment

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data. Data prior to 1991 obtained from the analysis of the Office of Civil Rights data in Orfield, G. (1983). Public School Desegregation in the United States, 1968-1980. Washington, D.C.: Joint Center for Political Studies.

In a region where 42% of the student population in 2009 was white, the average black student attended school with only 28% whites (Table 9). Similar to national patterns, the typical black student in the West attends a school with three times the number of black students than the black share of the region. In contrast to the national findings, the highest group of students in the average black student's school in the West is Latinos rather than other black students. This exposure to Latino classmates for black students has also increased over the least 20 years.

Table 9: *Black Exposure Rates in Public Schools across the Western Region and Nation*

	% Black	**Black Exposure to White**	**Black Exposure to Black**	**Black Exposure to Asian**	**Black Exposure to Latino**
West					
2009-2010	5.8%	28.3%	17.7%	9.5%	41.1%
2001-2002	6.5%	30.3%	22.1%	10.2%	36.4%
1991-1992	6.3%	34.6%	25.3%	10.4%	28.8%
National					
2009-2010	16.5%	29.2%	50.5%	3.4%	15.8%
2001-2002	16.8%	30.7%	54.0%	*	11.8%
1991-1992	16.2%	34.9%	54.1%	*	8.2%

Note: * Less than one-twentieth of a racial enrollment.

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data

Concentration: Black and Latino Students in Segregated Minority Schools of the West

Another way to explore segregation patterns is to investigate the racial proportion in majority-minority schools (50-89% of the student body are students of color) and intensely segregated schools (90-100% of the student body are students of color). Such schools, especially intensely segregated schools, are nearly always associated with stark gaps in educational opportunity.[13] As presented in Table 10, three out of four Latino students in the West are enrolled in an intensely segregated school, where school safety, college preparatory curricula, and certified and experienced teachers are rare.[14] This figure presents a considerably stark contrast to levels in 1968 and 1980– the beginning and end of most federally enforced, desegregation efforts.

[13] Carroll, S., Krop, C., Arkes, J., Morrison, P., & Flanagan, A. (2005). Orfield, G., Siegel-Hawley, G., & Kucsera, J. (2011).

[14] Orfield, G., Siegel-Hawley, G., Kucsera, J. (2011). *Divided we fail: Segregation and inequality in the southland's schools*. Los Angeles: The Civil Rights Project.

Table 10: *Percentage of Racial Group in Minority Schools across Western Region and Nation*

	Percentage of Racial Group in: 1968		Percentage of Racial Group in: 1980		Percentage of Racial Group in: 1991		Percentage of Racial Group in: 2001		Percentage of Racial Group in: 2009	
	50-100% Minority School	**90-100% Minority School**	**50-100% Minority School**	**90-100% Minority School**	**50-100% Minority School**	**90-100% Minority School**	**50-100% Minority School**	**90-100% Minority School**	**50-100% Minority School**	**90-100% Minority School**
West										
Latino	42.4%	63.5%	11.7%	18.5%	64.0%	68.3%	72.8%	73.4%	83.7%	75.2%
Black	72.2%	66.8%	50.8%	33.7%	52.7%	14.8%	62.1%	11.2%	78.1%	7.5%
National										
Latino	54.8%	68.1%	23.1%	28.8%	67.1%	40.4%	73.1%	49.5%	79.5%	54.7%
Black	76.6%	64.3%	62.9%	33.2%	62.3%	50.5%	67.9%	40.7%	74.1%	35.0%

Note: * Less than one-twentieth of a racial enrollment. Minority school represents black, Latino, American Indian, and Asian students.
Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data. Data prior to 1991 obtained from the analysis of the Office of Civil Rights data in Orfield, G. (1983). Public School Desegregation in the United States, 1968-1980. Washington, D.C.: Joint Center for Political Studies.

Double Segregation by Race and Poverty

Beyond studies describing the psychological and social harm of separating children by race—research that shaped the outcome of the *Brown* decision—a vast amount of social science evidence documents the restricted educational opportunities associated with concentrated student poverty.[15] Child poverty, along with deeply intertwined parent education levels, remains incredibly influential in determining student achievement and educational attainment.[16] High poverty schools are linked to a host of limiting conditions. These include high rates of faculty and staff turnover, which consistently reinforces a cycle of less-experienced and less-qualified teachers, in addition to fewer material resources and challenging course offerings. Schools with large concentrations of impoverished students are also much more likely to be "dropout factories," educational settings that graduate fewer than 50% of their students.[17] So when concentrations of minority students are closely overlaid with profound pockets of student poverty, the racial composition of the classroom begins to matter very much indeed. This "double segregation," where students are isolated by both race and class, is visible across the Western region.

Half of the public school students in the Western region are poor (Table 11). Poverty has dramatically increased since 1991, and these numbers may only worsen once future data captures the full effect of the recent recession. In three states, California, New Mexico, and Oregon, the majority of students in 2009-2010 were poor (Table 12).

[15] Orfield, G. & Lee, C. (2005). *Why Segregation Matters: Poverty and Educational Inequality*. Cambridge: Harvard Civil Rights Project. Available at: http://bsdweb.bsdvt.org/district/EquityExcellence/Research/Why_Segreg_Matters.pdf. Linn, R. L. & Welner, K.G., Eds. (2007). Race-Conscious Policies for Assigning Students to Schools: Social Science Research and the Supreme Court Cases. Washington, DC: National Academy of Education. Wells, A. S. and Crain R. L. (1994). Perpetuation theory and the long-term effects of school desegregation. *Review of Educational Research*, 6, 531-555.

[16] Brooks-Gunn, J. and Duncan, G. The Effects of Poverty on Children. *The Future of Children* 7(2), Children and Poverty (Summer - Autumn, 1997), pp. 55-71.

[17] Balfantz, R. & Letgers, N. (2004). "Locating the Dropout Crisis: Which High Schools Produce the Nation's Dropouts?" In Orfield, G. (Ed.) Dropouts in America. Cambridge: Harvard Education Press, pp. 57-84.

Table 11: *Percentage of Poor Students in the Western Region and Nation*

	Population	Percentage Poor
West		
1991-1992	8,737,053	27.1%
2001-2002	10,677,691	38.6%
2009-2010	11,091,725	50.6%
Nation		
1991-1992	38,566,752	23.1%
2001-2002	47,630,340	37.9%
2009-2010	48,307,844	46.5%

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data and Local Education Agency Universe Survey Data

Table 12*: Percentage of Poor Students in 2009-2010 for Western States*

	2009-2010 Population	Percentage Poor
Arizona	1,060,453	46.5%
California	5,976,613	55.0%
Colorado	815,050	38.4%
Idaho	271,190	42.9%
Montana	141,693	39.6%
Nevada	422,957	42.5%
New Mexico	327,362	65.7%
Oregon	528,365	51.1%
Utah	507,752	46.6%
Washington	953,343	44.0%
Wyoming	86,947	35.0%
Total Region	11,091,725	50.6%

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data and Local Education Agency Universe Survey Data

Students from different racial backgrounds, however, experience very different exposure to poor students (see Table 13). Across the region, the average white student attends a school with a much smaller proportion of poor students than the average black or Latino student. There is also a substantial correlation between enrollment of poor students and black students, and a high correlation between enrollment of poor students and Latino students (Table 14). The relationship between a poor student and a white student on the other hand is considerably smaller. In fact, a negative correlation between enrollment of white and poor students existed in 1991-92 and 2001-02. The average Latino student attends a school where more than two-thirds of classmates are poor. In the Los Angeles metropolitan area (see Table 15), the average Latino student attends a school where nearly 75% of students are poor, however, the average white student attends a school

with only about a fourth poor students. A similar pattern, although not as extreme, is found across the 25 highest enrollment metropolitan areas.

Table 13*: Student Exposure Rates to Poor Students in Public Schools across the Western Region and Nation*

	Poor Share of School Enrollment	White Exposure to Poor Students	Black Exposure to Poor Students	Asian Exposure to Poor Students	Latino Exposure to Poor Students
West					
1991-1992	27.1%	16.9%	39.5%	31.7%	44.3%
2001-2002	38.6%	25.9%	48.7%	36.5%	55.7%
2009-2010	50.6%	37.3%	59.1%	42.6%	67.4%
National					
1991-1992	23.1%	14.1%	31.5%	23.2%	39.3%
2001-2002	37.9%	27.0%	56.5%	12.0%	12.7%
2009-2010	46.5%	37.0%	61.5%	36.2%	61.4%

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data

Table 14*: Relationship between Poverty and Race of Students in Public Schools: the West and the Nation*

	White Students	Asian Students	Black Students	Latino Students	White or Asian Students	Black or Latino Students
West						
1991-1992	-0.14	0.29	0.39	0.84	-0.03	0.86
2001-2002	-0.07	0.23	0.44	0.90	0.02	0.91
2009-2010	0.03	0.22	0.48	0.91	0.10	0.92
National						
1991-1992	-0.11	0.20	0.48	0.69	-0.06	0.82
2001-2002	-0.07	0.22	0.52	0.72	-0.01	0.86
2009-2010	0.07	0.18	0.53	0.71	0.11	0.85

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data

Table 15: Student Exposure Rates to Poor Students in Public Schools in 2009-2010 for the Top 25 Highest Enrolling CBSAs in the West

	% Poor	White to Poor	Black to Poor	Asian to Poor	Latino to Poor
Los Angeles-Long Beach-Santa Ana, CA	59.8%	27.9%	66.5%	42.0%	73.7%
Riverside-San Bernardino-Ontario, CA	59.9%	47.6%	63.0%	44.3%	66.9%
Phoenix-Mesa-Scottsdale, AZ	44.2%	29.5%	48.4%	31.4%	60.8%
San Francisco-Oakland-Fremont, CA	39.7%	21.3%	56.3%	35.0%	56.9%
San Diego-Carlsbad-San Marcos, CA	48.4%	32.3%	59.6%	40.3%	61.7%
Seattle-Tacoma-Bellevue, WA	37.6%	31.4%	53.4%	40.3%	51.6%
Denver-Aurora, CO	38.5%	23.7%	52.9%	32.0%	62.5%
Sacramento--Arden-Arcade--Roseville, CA	46.1%	34.8%	61.9%	51.8%	59.3%
Portland-Vancouver-Beaverton, OR-WA	44.2%	40.0%	59.0%	44.6%	56.7%
Las Vegas-Paradise, NV	44.0%	32.4%	45.3%	35.6%	55.2%
San Jose-Sunnyvale-Santa Clara, CA	37.5%	23.2%	40.1%	27.3%	54.6%
Salt Lake City, UT	49.4%	40.9%	64.7%	60.7%	74.4%
Fresno, CA	67.5%	46.7%	71.7%	66.3%	75.3%
Bakersfield, CA	67.0%	49.9%	69.3%	58.1%	76.1%
Tucson, AZ	44.1%	28.8%	45.1%	29.0%	55.6%
Oxnard-Thousand Oaks-Ventura, CA	43.7%	26.0%	43.8%	31.1%	58.6%
Albuquerque, NM	59.1%	43.0%	57.5%	44.1%	65.2%
Stockton, CA	58.4%	47.2%	62.2%	57.9%	64.1%
Colorado Springs, CO	34.0%	28.5%	46.0%	29.9%	48.0%
Boise City-Nampa, ID	39.7%	36.7%	43.6%	36.6%	54.0%
Provo-Orem, UT	40.1%	38.1%	41.6%	41.1%	54.8%
Ogden-Clearfield, UT	42.3%	37.7%	54.8%	43.3%	69.1%
Modesto, CA	61.1%	52.3%	59.4%	58.5%	67.6%
Visalia-Porterville, CA	74.0%	60.5%	67.6%	67.8%	78.6%
Salinas, CA	64.3%	35.4%	57.6%	52.9%	72.8%

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Data

Discussion

The West is undergoing a dramatic demographic transformation. With whites becoming a consistently shrinking group, and Latinos and Asians growing in substantial proportion, it is important to reflect on where we are, where we are headed, and how we can improve the present and future. This look at the changing school population and segregation is, of course, only one important piece of the puzzle that is linked to others, such as education, health, and employment opportunities and outcomes.

To begin with the positives: the potential for achieving both academic and human relation benefits of student diversity is increasing in the West. There has clearly been an increased openness as white isolation rates have decreased. The level of black segregation, as measured by white-black dissimilarity, long seen as an almost intractable problem, has declined along with the decreasing percentage of black students in hypersegregated schools. Meanwhile, however, most black students are ending up as a smaller minority in largely Latino schools.

As for the challenges: as desegregation efforts have largely ended, often under court orders to terminate programs and forbid race-conscious choice plans, most serious segregation issues were never addressed. Segregation is spreading into the suburbs, and we continue to face segregated and even hypersegregated schools in the West that offer separate and unequal schooling for the majority of today's youth. This inequity prevents the benefits of integrated schooling from reaching all students. For young Latinos in particular, the situation is disheartening. The West has experienced a general increase in Latino enrollment in hypersegregated schools, as well as a rise in the extreme exposure to poor students for the average Latino. We also found a general decline in exposure rates to white students for Latinos, as well as to all other racial groups. Within metropolitan areas, we find that the majority of this segregation is occurring between rather than within school districts. For example, in Seattle and Sacramento metropolitan areas, over 90% of the segregation occurred between rather than within school districts.

Interdistrict and school-choice policies that are easily comprehensible, transparent, widely distributed to marginalized populations, and leveraged in a way that promote rather than detract racial diversity are clearly needed. School-choice policy without plans to maintain diversity often increases stratification, and this trend is evident in many of the growing number of segregated charter schools. Yet, with appropriate civil rights policies, choice can have the opposite impact.

High-quality magnet schools can be particularly effective in integrating suburban and urban schools systems, and attracting white students from neighboring suburbs. The U.S. Department of Education could create an urban magnet school initiative that grants additional funding to urban school districts for the purpose of developing sufficient resources for, and transportation to, magnet school programs.

School policy is also housing policy. As such, local fair housing organizations should monitor land use and zoning decisions, such as density regulations[18] or inclusionary zones - where real estate developers set aside for low-income families a portion of the homes built in a new community with strong schools. Minneapolis, for example, has an interdistrict school transfer program that also offers participating families with low-cost housing in the suburban communities where their children attend school. Poor children in public housing who attend such strong or low-poverty schools have been found to catch up to their non-poor district mates over the course of elementary school, and substantially slash the achievement gap.[19]

Can we have separate and equal schools? The answer has been historically, and continues to be, a quite demoralizing "no." As the West continues to serve as the demographic bellwether for our nation, the disadvantaged schooling for historically marginalized black and Latino students becomes even more destructive to the economic and social health of our country. Now the question is: what are we going to do about it?

[18] Rothwell, J., & Massey, D. S. (2009). The effect of density zoning on racial segregation in U.S. urban areas. *Urban Affairs Review, 44*(6), 779-806.
[19] Schwartz, H. (2010). *Housing policy is school policy: Economically integrative housing promotes academic success in Montgomery County*, Maryland. New York: The Century Foundation.

Appendix: Data Sources and Methodology

Data

The education data in this study consisted of 1991-1992, 2001-2002, 2006-2007, and 2009-2010 Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey and Local Education Agency data files. We obtained data prior to 1991 from Orfield (1983), who analyzed 1968-1969, 1970-1971, and 1980-1981 education data files from the Office of Civil Rights. Only open and regular schools were included in the study.

Geography

National estimates reflect all 50 U.S. states, outlying territories, Department of Defense (overseas and domestic), and the Bureau of Indian Affairs. For regional, state, and metropolitan analyses, we only explored 48 U.S. states; we excluded Hawaii and Alaska, outlying territories, and oversea agencies due to their unique ethnic compositions and/or distance from other states and regions.

The states and region used for analysis in this report include the following:

- **West**: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

For 2009-2010 school year data, we used the current list of core based statistical areas (CBSA) defined by the Office of Management and Budget. For metropolitan patterns over time, we used the historical metropolitan statistical area (MSA) definitions (1999) as the metropolitan area base. We then matched and aggregated enrollment counts for these historical metropolitan area definitions with the current definitions of core based statistical areas (2009) using the 1999 MSA to 2003 CBSA crosswalk to make these areas geographically comparable over time. Some metropolitan areas (e.g., San Francisco) appeared to differ from the general pattern of higher enrollment counts over time, suggesting errors in the crosswalk, a decline in or migration of public student enrollment, or some other issue. We have notated these errors throughout the report where identified.

Data Analysis

We measured segregation patterns using the index of dissimilarity (*D*) and the exposure index (*P**). *D* measures how evenly race/ethnic population groups are distributed among census tracts or schools compared with their larger geographic area. This index does not depend on the race/ethnic composition of the population, but on how evenly population groups are distributed among schools or tracts. The index ranges from 0 to 1, with a value of 0 indicating perfect integration (the racial/ethnic proportions are identical in all schools or tracts) and a value of 1 indicating complete segregation (each school or tract is monoracial).

D is calculated through the following algebraic formula:

/

- where *n* is the number of schools or smaller area units,
- is the number of the first racial group of students in the school or smaller area *i*,
- is the total number of the first racial group of students in the larger geographical area of study,
- is the number of the second racial group of students in the school or smaller area *i*,
- is the total number of the second racial group of students in the larger geographical area of study.

The exposure index, *P**, measures the racial/ethnic composition of a school or tract for the average member of a given racial group. Exposure of a group to itself is called the index of isolation, while exposure of one group to other groups is called the index of exposure. Both indices range from 0 to 1, higher values on the index of exposure but lower values for isolation indicate greater integration. The indices of isolation and exposure are calculated, respectively, as:

and

- where *n* is the number of schools or smaller area units,
- is the number of the first racial group of students in the school or smaller area *i*,
- is the total number of the first racial group of students in the larger geographical area,
- is the number of the second racial group of students in the school or smaller area *i*,
- is the total number of students in the school or smaller area *i*,

For exposure and dissimilarity measures, we excluded any results with less than 5% of the relative minority group, as this could bias segregation indices.

Missing or Incomplete Data

Because compliance with NCES reporting is voluntary for state education agencies, statewide gaps in the reporting of student racial composition occur on an annual basis. To address this limitation, we obtained student membership, racial composition, and free reduced status from the nearest data file year these variables were available. Below we present the missing or incomplete data by year and state, and how we attempted to address each limitation.

Data Limitation	Data Solution
2009-2010: • New York: Incomplete free reduced lunch (FRL)	**2008-2009:** • New York: FRL analyses (enrollment and exposure) only
2006-2007: • Nevada: Missing FRL	**2007-2008:** • Nevada: FRL analyses only
2001-2002: • Arizona: Missing FRL • Connecticut: Missing FRL • Wyoming: Missing FRL • Tennessee: Missing racial composition and FRL	**2002-2003:** • Arizona: FRL analyses only • Connecticut: FRL analyses only • Wyoming: FRL analyses only **1998-1999:** • Tennessee: racial composition o still missing FRL o state is missing all membership data from 1999 to 2005
1991-1992: • Alabama: Missing FRL • Arizona: Missing FRL • Kentucky: Missing FRL • Massachusetts: Missing FRL • New York: Missing FRL • Pennsylvania: Missing FRL • Georgia: Missing racial composition • Idaho: Missing racial composition Maine: Missing racial composition and FRL • South Dakota: Missing racial composition and FRL • Tennessee: Missing racial composition and FRL • Virginia: Missing racial composition and FRL	**1990-1991:** • Tennessee**:** racial composition **1992-1993:** • South Dakota: racial composition • Virginia: racial composition **1993-1994:** • Georgia: racial composition • Maine: racial composition **Other:** • Did not explore FRL data for this year • Idaho is missing racial composition data from 1989 to 1999 and thus excluded from this year

In addition, on May 16, 2012, the Commissioner of Education Statistics announced that NCES is currently identifying and resolving several instances of misreported data in the 2009-2010 data file. After the analysis is complete and corrections are confirmed, NCES will release an updated version of the 2009-2010 data files. Near the time of this report publication, these updated data files were still not released. As such, the 2009-2010 data file used in this study may contain misreported data.