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The Significance of Segregation in the 21st Century

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Researchers have vigorously debated the significance of the reductions in residential segregation by race that U.S. metropolitan areas have experienced. While some argue that we have witnessed the "end of the segregated century" (Vigdor and Glaeser 2012; Vigdor 2013), others highlight the persistence of high levels of segregation in many areas (e.g., Logan 2013). There has been far less debate about the relationship between segregation and access to opportunity in the 21st century. Yet such exploration is critical to a richer understanding of the significance of segregation.

Almost two decades ago, David Cutler and Edward Glaeser (1997) found that in 1990 a one-standard-deviation reduction in levels of residential segregation would eliminate one-third of the gap between whites and blacks in high school graduation rates, earnings, rates of single motherhood, and the likelihood of being simultaneously out of work and out of school. Cutler and Glaeser (1997) also found that only one-third of the effects of segregation could be explained by exposure to less educated neighbors, distance from jobs, or parental background. Analyzing data from 1940 through 1980, however, William Collins and Robert Margo (2000) subsequently found that some of the negative socioeconomic effects of segregation identified by Cutler and Glaeser (1997) were actually a relatively recent development. For instance, Collins and Margo (2000) identified no significant relationship between segregation and the likelihood of employment or single motherhood between 1940 and 1970. These findings suggest that some of the negative effects of black–white residential segregation emerged primarily with the economic restructuring and dramatic neighborhood change of the 1970s (Wilson 1996). Together, these results indicate that the effects of segregation vary over time in relation to broader social, economic, and political developments.

There are at least three key questions to explore about the effects of segregation in the 21st century. First, does segregation continue to constrain economic and social mobility for minority groups? Second, are the effects similar for the two largest non-white groups in the United States, African Americans and Latinos, despite their different historical experiences of segregation? Third, and perhaps most importantly, how does segregation

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TABLE 1. Estimation of the Effect of Metropolitan Area Segregation on Individual Outcomes

Dependent variable:	College graduation (1)	Not idle (2)	Professional occupation (3)	Log earnings (4)
Black-white DI 1990	0.022	0.001	0.030	0.054
	(0.036)	(0.021)	(0.027)	(0.098)
Black-white DI 2000	0.091	0.014	0.074	0.033
	(0.040)**	(0.020)	(0.032)**	(0.100)
Black-white DI 2010	0.236	0.049	0.125	0.088
	(0.045)**	(0.018)***	(0.034)***	(0.088)
Black-white DI 1990 × black	0.185	0.166	0.072	0.463
	(0.044)***	(0.028)***	(0.029)**	(0.102)***
Black-white DI 2000 × black	0.213	0.163	0.086	0.370
	(0.051)***	(0.029)***	(0.034)***	(0.114)***
Black-white DI 2010 × black	0.277	0.100	0.148	0.411
	(0.061)***	(0.036)***	(0.041)***	(0.119)***
Observations	1,560,958	1,560,958	1,560,958	1,436,969
Number of CBSAs	204	204	204	204
R2	0.084	0.044	0.047	0.145
Latino-white DI 1990	0.041	0.033	0.025	0.226
	(0.032)	(0.013)**	(0.022)	(0.080)***
Latino-white DI 2000	0.036	0.053	0.037	0.235
	(0.049)	(0.016)***	(0.032)	(0.091)***
Latino-white DI 2010	0.179	0.089	0.099	0.175
	(0.064)***	(0.018)***	(0.041)**	(0.099)*
Latino-white DI 1990 × Latino	0.243	0.179	0.173	0.671
	(0.051)***	(0.025)***	(0.033)***	(0.114)***
Latino-white DI 2000 × Latino	0.275	0.195	0.177	0.591
	(0.057)***	(0.025)***	(0.037)***	(0.127)***
Latino-white DI 2010 × Latino	0.362	0.141	0.224	0.639
	(0.060)***	(0.026)***	(0.039)***	(0.140)***
Observations	1,522,096	1,522,096	1,522,096	1,402,104
Number of CBSAs	207	207	207	207
R2	0.084	0.051	0.044	0.136

Notes: Coefficients are reported with robust standard errors in parenthesis, which are clustered by Core Based Statistical Area (CBSA). ***, **, and * indicate significance at the 1, 5, and 10 percent levels. In the top (bottom) panel, the sample is restricted to native-born whites and blacks (Latinos) between 25 and 30 years of age. Individuals who lived in another CBSA five years ago (or one year ago in 2010) are excluded. All specifications have a constant term, a female indicator variable, age, and census region-year indicator variables. The top panel includes a black indicator variable while the bottom panel includes ancestry-group Latino indicator variables. Additional CBSA controls include log population, log median household income and shares of population that are black, Latino, Asian, over 65 years, under 15 years, unemployed, working in manufacturing, in poverty status, and with college degree. These controls are also interacted with a black or Latino indicator variable accordingly. di stands for dissimilarity index.

matter in the 21st century? In other words, what are the mechanisms through which racial or ethnic segregation contribute to inequality? We take each of these questions in turn.

In recent work, we showed that higher levels of segregation continue to be associated with wide disparities by race in socio-economic outcomes (Steil et al. 2015). Here, we focus on changes over time in those relationships. Specifically, Table 1 presents results from ordinary least squares regressions of four individual educational and labor market outcomes in 1990, 2000, and 2010 on contemporaneous levels of metropolitan area segregation in those three years (as measured by the dissimilarity index). In the first panel,

the sample is restricted to native-born whites and blacks between the ages of 25 and 30. We consider four outcomes: college graduation; not being idle (or, being either in school or the labor force); professional occupation; and log earnings. In addition to segregation measures, all regressions also include individual controls for age and gender, census region year indicator variables as well as a set of CBSA control variables, which include log population, log median household income, poverty rate, and the shares of the population that are black, Hispanic, Asian, over 65 years, under 15 years, unemployed, working in manufacturing, and college-educated. In order to ensure that we capture people who have lived in the metropolitan area for a substantial period of time, we exclude individuals from the 1990 and 2000 samples who lived in another CBSA five years ago and exclude those who lived in another CBSA one year ago from the 2010 sample.

The first three rows show the coefficient on the black–white dissimilarity index in each of these three years. The next three rows show the coefficient on the interaction between the dissimilarity index and a black indicator variable. Because the sample is restricted to only whites and blacks, the coefficient on the dissimilarity index can be interpreted as the association between black–white segregation and educational and labor market outcomes for young white adults. The coefficient on the interaction between the dissimilarity index and the black indicator variable reveals any difference in the association between segregation and outcomes for black young adults as compared to whites. Differences in the magnitude of these coefficients for different years reveal any changes in the association between segregation and individual outcomes over time.

For all four outcomes and for all three points in time, higher levels of segregation are associated with wider black–white disparities in outcomes. The effects of black–white segregation do not appear to be diminishing. Indeed, for college graduation and professional employment, the association between black–white segregation and the black–white gap in outcomes was larger in 2010 than it was in 1990.

Our second question concerns the far less-studied effects of Latino–white segregation. There are reasons to believe that segregation would affect Latinos differently than it affects African Americans. On the one hand, Latino segregation might constrain Latinos to neighborhoods with low levels of average human capital to an even greater degree than black–white segregation constrains African Americans to such neighborhoods, given the relatively low mean level of educational attainment among Latinos. On the other hand, largely Latino neighborhoods tend to have higher employment levels than largely black neighborhoods, and they may offer enclave economies that facilitate entrepreneurialism and access to jobs (Portes and Shafer 2007). Further, predominantly Latino neighborhoods typically have lower violent crime levels than largely black neighborhoods (De la Roca et al. 2014) and may not have suffered the same level of disinvestment as many predominantly black neighborhoods (Small and McDermott 2006; Wilson 1996).

The second panel of Table 1, which shows the key coefficients from ordinary least squares regressions of each of the four individual outcomes on Latino–white levels of segregation, offers some insights. Once again, we see that segregation is associated with larger minority-white gaps in outcomes in each year. With the exception of idleness, the associations were at least as large in 2010 as they were in 1990. And notably, the overall associations between segregation and Latino–white gaps in outcomes are generally larger than those between segregation and black–white gaps.

In short, segregation appears to be consistently associated with worse outcomes relative to whites for both African Americans and Latinos. The associations between

TABLE 2. Characteristics of Neighborhoods by Black-White Metropolitan Area Segregation

		Whites				Blacks			
		Low (1)	Moderate (2)	High (3)	Very high (4)	Low (5)	Moderate (6)	High (7)	Very high (8)
Exposure to college-educated neighbors	1990	22.1%	22.3%	25.1%	24.0%	15.5%	14.1%	16.6%	12.9%
	2000	27.5%	25.9%	29.0%	30.5%	19.0%	17.5%	20.3%	16.9%
	2010	31.0%	30.3%	31.0%	36.7%	23.6%	21.7%	22.8%	22.1%
Exposure to employed professionals	1990	29.1%	29.5%	31.5%	31.6%	22.7%	20.8%	23.0%	20.4%
	2000	32.9%	32.4%	34.8%	36.5%	25.0%	24.4%	26.8%	23.7%
	2010	36.1%	36.1%	36.3%	41.0%	28.9%	27.6%	27.2%	27.4%
Exposure to poverty	1990	10.7%	10.2%	8.9%	7.8%	17.3%	21.0%	20.8%	25.2%
	2000	9.6%	9.9%	8.4%	7.7%	15.7%	17.6%	17.3%	21.5%
	2010	11.1%	11.0%	10.4%	8.8%	16.4%	17.7%	19.1%	20.5%

Notes: Data are obtained from Neighborhood Change Database. Units of analysis are census tracts as in 2010. The fraction of neighbors with college degree is calculated for the population of 25 years of age and over. The fraction of neighbors employed in professional occupations is expressed as a percentage of the civilian labor force.

segregation and wider racial gaps for both groups are large, robust to other specifications, and if anything, have increased over time. Interestingly, it appears that these increases are driven by a growing association between segregation and *positive* outcomes for whites. While these associations may be spurious—areas with higher segregation may also offer more robust labor markets opportunities—it is notable that they have grown over time. In 1990, black–white segregation appears to be largely unrelated to outcomes for young white adults, while Latino–white segregation is related only to not being idle and log earnings for whites, and the associations are modest. By 2010, black–white segregation is positively associated with the probability that a white resident has graduated from college, is not idle, and works in a professional occupation, while Latino–white segregation is positively associated with all four outcomes for whites.

Over time, in other words, it appears that segregation may not only undermine outcomes for minority groups but also enhance them for whites. Our final inquiry concerns the mechanisms that drive these associations and their changes over time. Here the evidence is less clear. One driver appears to be disparities in neighborhood conditions. Segregation continues to create unequal neighborhoods. The black and Latino residents of more segregated areas live in more disadvantaged neighborhoods than black and Latino residents of less segregated areas, while the white residents of more segregated areas appear to live in more prosperous neighborhoods than other whites.

Table 2 divides metropolitan areas into four quartiles based on black–white segregation levels (very high, high, moderate, and low) and shows the average characteristics of the neighborhoods lived in by blacks and whites in these different groups of metropolitan areas in 1990, 2000, and 2010. Table 3 shows the analogous table for Latino–white segregation. The two tables reveal that in all three years, the average black or Latino resident of a highly segregated metropolitan area lived in a neighborhood with higher poverty rates and fewer college-educated and professional adults than the average black or Latino resident of a low segregation metropolitan area. Meanwhile, the average white resident of a highly segregated metropolitan area lived in more advantaged neighborhoods than the average white resident of a metropolitan area with low levels of segregation.

While these overall patterns remain consistent, we see significant changes in the magnitude of these relationships over time. For blacks, we see convergence over time in

TABLE 3. Characteristics of Neighborhoods by Latino-White Metropolitan Area Segregation

		Whites				Latinos			
		Low (1)	Moderate (2)	High (3)	Very high (4)	Low (5)	Moderate (6)	High (7)	Very high (8)
Exposure to college-educated neighbors	1990	21.1%	20.9%	24.0%	25.9%	20.4%	18.4%	16.3%	14.0%
	2000	24.2%	26.8%	27.4%	32.3%	21.4%	17.8%	16.8%	16.9%
	2010	27.8%	29.7%	31.2%	37.6%	22.6%	21.1%	19.2%	21.6%
Exposure to employed professionals	1990	28.3%	28.8%	31.0%	32.8%	27.2%	25.2%	23.2%	20.3%
	2000	30.9%	32.9%	33.7%	37.7%	27.4%	24.5%	23.7%	22.8%
	2010	33.9%	35.4%	36.7%	41.5%	28.6%	27.2%	25.1%	25.5%
Exposure to poverty	1990	10.4%	9.9%	8.7%	7.7%	11.7%	12.8%	19.5%	20.6%
	2000	9.9%	9.2%	8.4%	7.6%	12.8%	19.0%	18.7%	18.9%
	2010	11.6%	11.3%	10.2%	8.7%	15.3%	17.1%	19.5%	17.9%

Notes: Data are obtained from Neighborhood Change Database. Units of analysis are census tracts as in 2010. The fraction of neighbors with college degree is calculated for the population of 25 years of age and over. The fraction of neighbors employed in professional occupations is expressed as a percentage of the civilian labor force.

neighborhood conditions between high and low segregation metropolitan areas. For all four groups of metropolitan areas, the average African-American individual lived in a neighborhood in 2010 with lower poverty, a larger percentage of professional and college-educated neighbors than the average African-American individual in 1990. But the changes were larger for black residents of the most segregated metropolitan areas and, as a result, the differences in the poverty rates, percentage professional, and percentage with college of the neighborhood lived in by the average black resident of a high versus low segregation metropolitan area have decreased over time. We see similar convergence for Latinos. In fact, the average Latino resident of a low segregation metropolitan area in 2010 actually lived in a higher poverty neighborhood than the average Latino resident of a low segregation metropolitan area two decades earlier. In other words, while conditions were generally improving for Latinos living in the most segregated metropolitan areas, they were remaining relatively steady or even deteriorating for Latinos living in the least segregated metropolitan areas.

We see noteworthy changes in the neighborhood environments of whites as well. The average white individual lived in a neighborhood with more college-educated and professional neighbors in 2010 than she did in 1990. While these changes occurred in all types of metropolitan areas between 1990 and 2010, they were larger for whites living in the most segregated metropolitan areas. In other words, segregation appears to be associated with greater levels of neighborhood advantage for whites over time.

We are thus left with a puzzle: Why does it seem that segregation is now conferring benefits for whites? It may be that high-skilled job opportunities have simply grown more in the most segregated metropolitan areas. But part of the story also appears to be that whites in more segregated metropolitan areas are now more likely to live in neighborhoods with very high socioeconomic status, perhaps as a result of the growth in income inequality and the increase in the residential isolation of high-income households that occurred in the last century (Reardon and Bischoff 2011). Or perhaps new mechanisms have evolved (such as gated communities or homeowners' associations) that allow whites living in more segregated communities to hoard more resources and enjoy richer sets of services through exclusion or privatization (Tilly 1998). Finally, perhaps the answer

lies in job networks. Exploring the intersection of neighborhood and network aspects of job search, Bayer et al. (2008) find that residing on the same city block increases the probability of working together by one-third, and the effects are stronger when individuals share social and demographic characteristics. It is possible that such social networks are even stronger in rapidly growing and high-paying sectors such as high-skilled services or high-technology industries that are largely dominated by whites. Thus, whites that live in communities with other whites may enjoy greater access to opportunities in the sectors that have expanded significantly in the past two decades. The story of contemporary segregation is not a simple one, and more research is needed to understand its effects. But it is clear that segregation still matters in the 21st century.

REFERENCES

Bayer, Patrick, Stephen L. Ross, and Giorgio Topa. 2008. "Place of Work and Place of Residence: Informal Hiring Networks and Labor Market Outcomes." *Journal of Political Economy* 116(6): 1150–96.

Collins, William J, and Robert A Margo. 2000. "Residential Segregation and Socioeconomic Outcomes: When Did Ghettos Go Bad?" *Economics Letters* 69(2): 239–43.

Cutler, David M., and Edward L. Glaeser. 1997. "Are Ghettos Good or Bad?" *The Quarterly Journal of Economics* 112(3): 827–72.

De la Roca, Jorge, Ingrid Gould Ellen, and Katherine M. O'Regan. 2014. "Race and Neighborhoods in the 21st Century: What Does Segregation Mean Today?" *Regional Science and Urban Economics*, SI: Tribute to John Quigley, 47(July 2014): 138–51.

Logan, John R. 2013. "The Persistence of Segregation in the 21st Century Metropolis." *City & Community* 12(2): 160–68.

Portes, Alejandro, and Steven Shafer. 2007. "Revisiting the Enclave Hypothesis: Miami Twenty-Five Years Later." *Research in the Sociology of Organizations* 25: 157–90

Reardon, Sean, and Kendra Bischoff. 2011. "Income Inequality and Income Segregation." *American Journal of Sociology* 116(4): 1092–153.

Small, Mario L., and Monica McDermott. 2006. "The Presence of Organizational Resources in Poor Urban Neighborhoods: An Analysis of Average and Contextual Effects." *Social Forces* 84(3): 1697–724.

Steil, Justin, Jorge De la Roca, and Ingrid Gould Ellen. 2015. "Desvinculado y Desigual Is Segregation Harmful to Latinos?" *The Annals of the American Academy of Political and Social Science* 660(1): 57–76.

Tilly, Charles. 1998. *Durable Inequality*. Berkeley, CA: University of California Press.

Vigdor, Jacob. 2013. "Weighing and Measuring the Decline in Residential Segregation." *City & Community* 12(2): 169–77.

Vigdor, Jacob, and Edward Glaeser. 2012. "The End of the Segregated Century: Racial Separation in America's Neighborhoods, 1890–2010." *Manhattan Institute*. Accessed November 29, 2015. https://www.manhattan-institute.org/html/end-segregated-century-racial-separation-americas-neighborhoods-1890-2010-5848.html.

Wilson, William J. 1996. *When Work Disappears: The World of the New Urban Poor*. New York: Knopf.