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School Segregation in Metropolitan Regions, 1970–2000: The Impacts of Policy Choices on Public Education¹

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It has been argued that the effects of the desegregation of public schools from the late 1960s onward were limited and short-lived, in part because of white flight from desegregating districts and in part because legal decisions in the 1990s released many districts from court orders. Data presented here for 1970–2000 show that small increases in segregation *between* districts were outweighed by larger declines *within* districts. Progress was interrupted but not reversed after 1990. Desegregation was not limited to districts and metropolitan regions where enforcement actions required it, and factors such as private schooling, district size, and inclusion of both city and suburban areas within district boundaries had stronger effects than individual court mandates.

Few court decisions have affected American society as deeply as the mandate to desegregate public schools issued in the 1954 case *Brown v. Board of Education*. A common view in the 1950s was that “you can’t force

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integration.” The experience of the last 50 years provides a test of that view. How has school segregation changed during this period? Where has there been progress, and how has change been shaped by policy choices about how public education is organized in different parts of the country? This study provides an updated evaluation of how court orders and federal intervention affected segregation within school districts in the post-*Brown* period, arguing that a “regime of desegregation” was established in the period from 1970 to 2000, under which actual desegregation progress did not depend directly on mandates.

Although most scholars have focused on the policies of individual school districts and on court decisions that have been implemented at the district level (e.g., Orfield and Monfort 1992), this study treats school segregation as a metropolis-wide phenomenon. A large share of overall segregation, possibly more than half, is attributable to racial disparities between districts (Rivkin 1994; Clotfelter 1999; Reardon, Yun, and Eitle 2000). Accounting for segregation between districts is critical for assessments of the effectiveness of desegregation policies, because desegregation cannot increase interracial contact if it motivates white families to abandon racially mixed school districts. Many analysts from the 1960s to the present have viewed white flight as the Achilles heel of desegregation plans. The impact of desegregation depends not only on whether children who live in the same school district attend the same schools, which is what the court system generally has held to be the constitutional question, but also on whether black and white children have similar opportunities overall in the metropolis. It is at the metropolitan level that one can ask whether mandated desegregation has spurred white flight, resulting in increased between-district segregation.

THE PERSISTENT EFFECTS OF COURT-ORDERED DESEGREGATION

There is considerable disagreement over whether court action in itself can be an effective tool for the implementation of public policy. An example from outside the realm of public schools is the outcome of the New Jersey Supreme Court’s decision in *Southern Burlington County NAACP v. Mount Laurel Township*, which required an equitable distribution of low-income housing among communities in the state. Two decades after the initial decision, scholars published opposing accounts of the impact. Haar (1996) argued that a courageous and skillful court had changed the behaviors of local governments, resulting in considerable construction of new affordable housing. Kirp, Dwyer, and Rosenthal (1995) concluded, to the contrary, that the court had overreached its power and had pro-

voked a legislative response that seriously undercut its effectiveness. Only in unusual conditions and through the enlistment of powerful allies, they concluded, can judicial activism be successful.

These conditions were present in the sphere of school desegregation. The combination of Supreme Court decisions, highly visible public battles over their implementation, and the commitment of the federal government to enforce court actions created a national climate in which desegregation orders could be effective (Rosenberg 1991). We provide evidence that these conditions may have created an impetus for desegregation even in the absence of court or federal mandates in individual jurisdictions. This is a phenomenon that organizational sociologists have expressed in the concept of “institutional isomorphism” (Meyer and Rowan 1977; DiMaggio and Powell 1983). They argue that bureaucratic organizations tend to become more similar to one another in structure and behavior under influence from the state and the professions. This similarity results from a combination of coercion (reflecting rules institutionalized by the state), mimetic processes (through which models are explicitly copied or unintentionally diffused), and normative pressures (attributable especially to the force of professional standards and acculturation).

Edelman (1990) applied this concept to the effects of the changing legal environment on the governance rights of employees in private corporations, and we believe the same rationale is relevant to public schools. Edelman (p. 1402) argued that, in combination with the direct effect of laws on employee rights, “the civil rights movement and the mandates of the 1960s created a normative environment in which legitimacy was conditioned on fair governance.” He believed that, if legal mandates attain organizational legitimacy, the diffusion of policy changes can become a self-perpetuating process—as others adopt a new policy, societal expectations shift, and the cost of nonconformity rises. In that event, “even in the absence of any legal rules that directly mandate such change” (p. 1403) employers may adopt the new policy. And once the organizational processes underpinning institutional isomorphism are in play, diffusion may continue even if enforcement ceases or there is a loss of public support (Edelman 1990, p. 1436; see also Edelman and Suchman 1997; Dobbin and Sutton 1998).

School researchers from the 1970s (Coleman, Kelly, and Moore 1975) to the present (Reber 2005) have judged that mandated desegregation is effective in those school districts where sufficient force is brought to bear on school authorities. The evidence from individual districts seems strong indeed. Welch and Light (1987) identified nearly 50 major districts where desegregation orders were implemented from 1968 to 1984 and where the “index of dissimilarity” between white and minority students declined by

as much as 75 points.² The corollary, however, could be that desegregation policies would wither away without external pressure. This is the perspective reflected in Orfield and Yun's (1999) report on the effects of "resegregation decisions"—a series of court decisions and changes in the political climate in the 1990s that freed many districts from desegregation orders. This perspective is also supported by research on trends in segregation after the dismissal of court orders among large school districts in the 1990s (Clotfelter, Ladd, and Vigdor 2005; Lutz 2005).

We take a different position, suggesting that (1) the adoption of desegregation policies diffused widely after 1970 to encompass parts of the country where there was never much risk of court action, and (2) because desegregation was so strongly legitimated in the decades after the *Brown* decision, court mandates were no longer a necessary condition for race-conscious district policies in the 1990s, when these mandates were being withdrawn. We will argue that school patterns observed in 1970 represented a "regime of segregation" that was replaced by 1990 and 2000 by a very different "regime of desegregation."

Certainly, desegregation occurred in districts where it was not required by court or federal enforcement actions. Rossell and Armor (1996) reported that many desegregation plans were voluntary, though perhaps often defensive, and in the long term these were about as effective as mandatory plans. In an earlier study of all school districts with more than 5% black enrollment, we (Logan and Oakley 2004) found that the reductions in segregation from 1970 to 2000 were actually larger in districts that were not required to desegregate. But although these findings are suggestive, it is unwise to pay attention only to school districts themselves. The processes that resulted in mandated desegregation in one district could not have been fully contained within its boundaries. At the metropolitan level, as noted above, desegregation could be self-defeating. Or it could have a reinforcing effect: change in one district could induce change in its neighbors' behavior. Within a metropolitan area where even one segregation case was successfully pursued by the plaintiffs, other districts were effectively put on notice that they were at risk of court action. In addition, such cases may have raised attention to the racial composition

² We use the index of dissimilarity to measure segregation. This index measures the extent to which two groups—in this case, blacks and whites—attend a particular school. The index ranges from 0 to 100, giving the percentage of children in one group who would have to attend a different school to achieve racial balance such that every school replicated the group composition of the city. A value of 60 or above is considered very high. For example, a "D score" of 60 for black-white segregation would mean that 60% of either group must move to a different school for the two groups to be equally distributed. Values of 40 to 50 are usually considered to represent moderate levels of segregation, while values of 30 or less are considered low.

of schools throughout the area. These considerations argue for analysis at the level of the metropolis even when one's primary interest is changes within individual districts.

In this policy realm, there are examples of coercive, mimetic, and normative processes that could have led to increasing similarities in district behavior over time, with a regional or even national scope. Federal and state education agencies, as well as courts, sought to impose policy standards. Decisions about race relations were highly publicized in the years after the *Brown* decision, and school district administrators and elected officials had many opportunities to observe events in other districts and to become aware of the costs and benefits of alternative approaches. There were also shifts over time in professional standards, as administrators' support for racially separate schools, which was considered legitimate at one time, became suspect in another era. Very likely, success in managing desegregation became a qualification for a superintendent's or principal's upward mobility in much of the country. For these reasons, we expect to find not only some early effects of external mandates on levels of segregation but also a diffusion of policy shifts to areas with no mandates and evidence that gains from desegregation persisted through the 1990s.

School Desegregation and White Flight

Studies of school segregation are complicated by the fact that court orders to desegregate were targeted to individual school districts (even when all districts in a geographic area were subject to similar orders), but much segregation arises between districts. School districts are dynamically interrelated. We need to know, in cases where one large district implemented a desegregation plan, what happened to segregation within neighboring districts or how shifting white enrollments across districts affected region-wide segregation. Recently, several studies have examined trends at the metropolitan level (James 1989; Lankford and Wyckoff 1997; Clotfelter 1999, 2001; Reardon et al. 2000; Reardon and Yun 2001). But there have been no studies of the effects of court-ordered desegregation at this level.

The substantive importance of a metropolitan scope was recognized early in the history of desegregation. In 1974, plaintiffs in the case of *Milliken v. Bradley* argued that the Detroit school district could not be successfully desegregated unless all public schools in the entire metropolitan area were subject to a common desegregation order. But the U.S. Supreme Court ruled against this argument, setting a precedent that subsequently prevented most desegregation plans from extending beyond district boundaries.

One major concern of researchers in the 1970s and 1980s was that court action would cause white families to leave desegregating districts, thereby

undercutting the potential for interracial contact (Clotfelter 2004b). Metropolitan areas typically comprise many school districts within reasonable commuting distance of one another, making "white flight" a viable option for families that oppose integration. White families may also simply withdraw from public schools. Several studies have analyzed whether and by how much the implementation of mandatory desegregation plans in a given district reduced the enrollment of whites in that district. In a study of large urban school districts, Coleman et al. (1975) concluded that school desegregation accelerated the exodus of white students from urban schools.

These findings were challenged by other studies (Mercer and Scout 1974; Farley 1975; Pettigrew and Green 1976; Rossell 1976). The assessment of school desegregation and white flight is complicated by other demographic and economic conditions that may reinforce population redistribution (Taeuber and Wilson 1978; Henderson 2002). Frey (1979) pointed out that white out-migration from large central cities to the suburbs began prior to desegregation efforts. His model suggests that white city dwellers are "pulled" to the suburbs by the allure of new and improved housing stock, lower taxes, higher quality services, and the movement of jobs outside the central city, rather than being pushed by racial considerations (see also Henderson 2002). But the preponderance of evidence now suggests that school desegregation is a push factor for whites. For example, Rossell and Armor (1996) found that while the average percentage decline in white enrollment between 1968 and 1991 for districts in their sample that never had a desegregation plan was about 3%, it was much steeper for districts that currently or formerly had a plan. The main disagreements among scholars are over the duration of this effect.

Rossell (1978) controlled for long-term demographic and economic changes, including middle-class suburbanization and the declining white birth rate, in her analysis of the effect of school desegregation on white enrollment change. Her findings showed that implementation of school desegregation caused significant decreases in white enrollment. However, she also found that the effect was short-term. Once a desegregation plan became institutionalized, it appeared to have an integrating effect, except for city school districts that were more than 35% black (see also Rivkin 1994).

Farley, Richards, and Wurdock (1980) found that desegregation within a school district in a given year was significantly associated with a loss of whites in that year. Specifically, a district where the segregation level declined by 25 points on the index of dissimilarity could anticipate losing one-and-a-half to two times as many white students as it would if there were no desegregation. This study also indicated that declines in white enrollments leveled off quickly. Similarly, Wilson (1985) found that the

greatest declines in white enrollment occurred during the year in which the largest increase in interracial contact occurred—the year of plan implementation. Other scholars, however (Giles 1978; Welch and Light 1987; Smock and Wilson 1991), have reported that drops in white enrollment were more permanent.

The implication of these results is that court mandates may reduce segregation *within* some districts at the expense of increasing segregation *between* districts in metropolitan areas. However, this question has not been directly addressed before now, and the net effects of mandated desegregation have not previously been studied at the metropolitan level.

The Organization of School Systems

Other aspects of school organization that may affect how people respond to desegregation policies, whether mandated or voluntary, must be taken into account. Some researchers have speculated that the cost of exit from a school district is contingent on how schools are organized in a metropolitan area. The boundaries of districts—their size and whether they span across the central city limits—can add a geographic constraint to white flight. Rossell and Armor (1996) reported that county-wide school districts exhibited less of a decrease in white enrollment than central city school districts. Clotfelter (2001) found that the larger the districts in a metropolis, the lesser the likelihood of white flight. Especially in the South, he argued, the large size of districts meant that whites were less likely to have the option to move to a nearby white suburb (Clotfelter 2004a). Reardon et al. (2000) showed that the largest component of change in metropolitan segregation in the period 1989–95 was attributable to an increasing disparity between city and suburban school districts. But when both city and suburban schools are joined in the same school district, as is common in the South and West, white parents have limited options.

Private schools are another form of exit that has received much attention. Andrews's (2002) study of white resistance to desegregation efforts in Mississippi found an emergent system of segregationist private academies with white enrollments increasing dramatically between 1968 and 1970. Nevin and Bills (1976) and Clotfelter (1976) documented the creation of such academies throughout the South in response to court orders. James (1989) found that segregation was higher in districts with a larger share of students in private schools. But the opposite effect is also possible: where a larger share of students attend private schools, white parents may feel that they have a smaller stake in public school segregation, and thus opposition to integration may be less likely to result in white flight across district lines.

Regional Differences

Here and in our descriptive analysis, we use the regional categorization developed by Orfield and Monfort (1992; see also Clotfelter 2004*b*), dividing the country into five regions: South, Border, Northeast, Midwest, and West. "South" refers to the 11 states of the Confederacy, and "Border" includes the six slave states that stayed with the Union. We also treat the District of Columbia as a Border state. Hawaii and Alaska are excluded from the analysis. Appendix A shows the regional breakdown of the states.

Because the organization of schools is governed by state laws and local decisions, it is natural to expect regional differences in any dimension of public education. The combination of residential segregation and the racially conscious placement of schools and configuration of attendance boundaries sustained school segregation in the Northeast and West, while Jim Crow legislation required separate schools for blacks and whites in many southern states. In addition, actions by courts and federal authorities were strongly targeted to the South. Figure 1 shows the cumulative percentage of black elementary school students covered by a desegregation plan mandated by court orders or federal actions between 1950 and 1986 (with the first case in 1954 and no new cases after 1986; data sources are explained in the following section). The percentage rises to above 70% by the late 1980s, but there are sharp differences between different parts of the country. The first surge of mandates was in Border states, quickly surpassed by the South. The Northeast lagged behind, finally reaching just over 60%, while the Midwest had many cases in the 1970s, bringing it nearly to the level of the South and Border states. In the West, there was little action prior to the 1970s, and the share of black students in districts covered by such mandates has never reached 40%.

There were likely also regional differences in how school authorities responded to these mandates. The image of a governor barring the door to black students is southern, as is the phenomenon of private white academies created in the wake of court orders. But it is also widely believed that southern school districts, having come under greater pressure to desegregate, responded more fully to the new regime (Orfield 1983). In the descriptive analysis below, we provide tabulations of segregation levels for the five major regions. In the multivariate analysis, we simplify these categories to a two-region contrast between North and South.

DATA AND CREATION OF MEASURES

We analyze segregation at the metropolis level between black and white children in public elementary schools, using enrollment data for 1970, 1990, and 2000. In addition, we draw on a new national inventory of

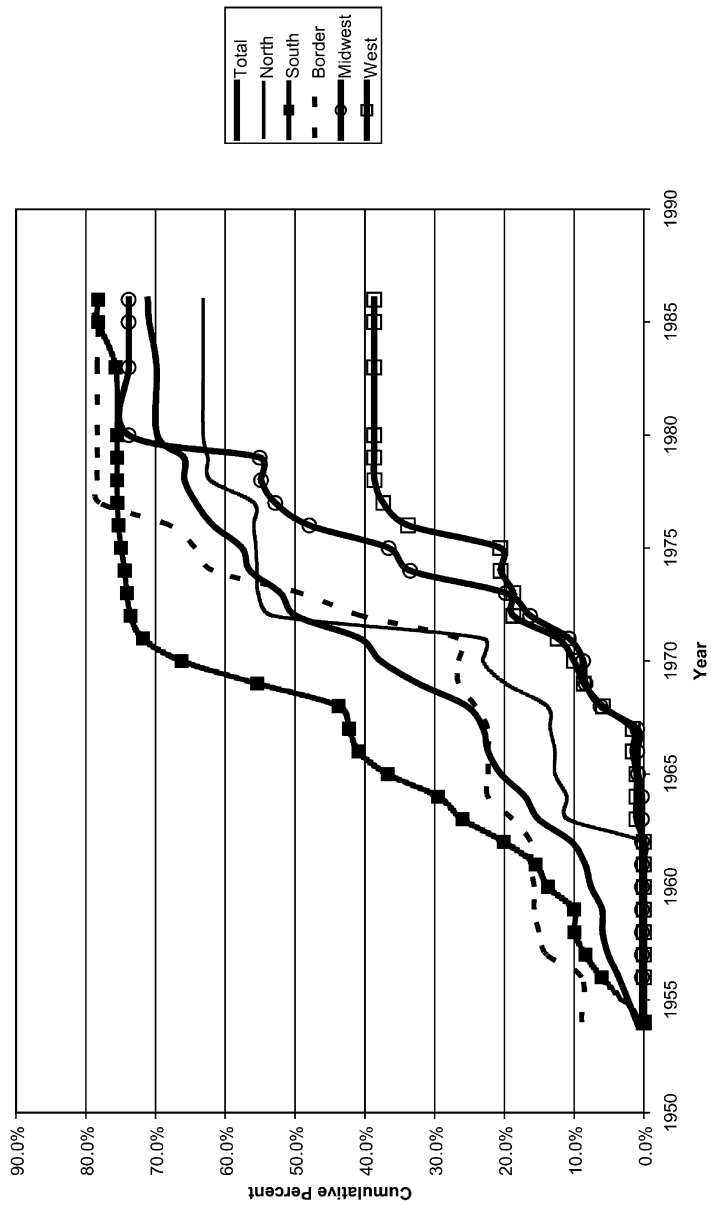


FIG. 1.—Percentage of black children covered by a desegregation plan, by region

court actions over desegregation. We focus our analysis on the elementary student universe because primary schools are more likely to be located at the neighborhood level (Logan 2002).

We begin by examining trends in school segregation between 1970 and 2000. We then present a series of multivariate regression equations predicting school segregation for each decade at the metropolitan level, distinguishing predictors of within-district, between-district, and overall metropolitan segregation.

School Data Sources

School enrollment data for this study were culled from two sources: data for elementary school district enrollment and segregation tabulated for the 1968–71 school years, and National Center for Education Statistics (NCES) Common Core of Data for elementary school enrollment by race, covering the more recent school years.

The Common Core of Data (CCD) is collected annually by the NCES. NCES is the federal entity responsible for collecting data on all public schools in the United States. For 1989–99, our metropolitan sample includes 42,531 schools with a total of 18.1 million elementary students. For 1999–2000, the sample of 49,367 schools enrolled a total of 21.2 million elementary students. The enrollment data for each school are broken down by grade, and approximately 10% of the schools in the NCES database comprise both elementary and nonelementary grades. Therefore, we selected elementary grades rather than elementary schools for our analysis. In every school, we counted the number of students in prekindergarten through grade 6. We included prekindergarten students in part because the 1968–71 data source does not separate them out and in part because they are counted in the reported racial composition of each school. Because, for most schools, we knew the racial composition of the school as a whole, not of any particular grade, we have to assume that the elementary children in a school that also included nonelementary grades had the same racial composition as the school overall.

Compliance with NCES reporting is voluntary for state education agencies. Thus, there are some statewide gaps in the reporting of student racial composition. Student racial composition was not reported for Idaho for any year between 1989 and 1999. Therefore, we omitted Idaho from our analysis. In 1989, schools in the following states did not report student racial composition: Georgia, Maine, Missouri, Montana, South Dakota, Virginia, and Wyoming. In 1999, schools in Tennessee did not report student racial composition. For all of these states, we merged the student membership and racial composition data from the next year in which these data were available. Specifically, for the 1989–90 school year we

used 1990–91 data for Montana and Wyoming; 1991–92 data for Missouri; 1992–93 data for South Dakota and Virginia; and 1993–94 data for Georgia and Maine. For the 1999–2000 school year, we used 1998–99 data for Tennessee.

School enrollment data from the late 1960s are drawn from Franklin Wilson and Karl Taeuber's desegregation study data file (for findings, see Wilson [1985]). These data were originally obtained from the Office of Civil Rights (OCR) of the U.S. Department of Health and Human Services. For every year between 1968 and 1976, OCR produced a data file containing school enrollment figures broken down by race and segregation indexes for a large sample of the nation's school districts. For those districts that were not surveyed in 1968, we substituted data from either of the two subsequent years (1969–70 or 1970–71). The coverage for this early period ultimately includes 37,895 schools with a total enrollment of 19.4 million students.

We have selected only schools identified as "elementary" in the data file. However, an unknown number of these schools include other grades, and probably a majority of middle, or junior high, schools (including grades 7 and 8) are classified as elementary schools. This introduces a possibility of bias if segregation of students in these upper grades is different from that in other grades (e.g., if middle schools are more racially diverse because they draw from a larger catchment area). We tested for such bias by calculating segregation scores for school districts and for metropolitan regions using the 1989–90 data, comparing results for prekindergarten–grade 6 versus prekindergarten–grade 8. At the district level, the average value of the index of dissimilarity is about 2 points lower when the upper grades are included, but the correlation between the two measures is .981. At the metropolitan level, which is the focus of this study, the average value is less than 1 point lower when the upper grades are included, and the correlation between the two measures is .999. We conclude that there is no bias from our selection of schools.

For convenience in the following text and tables, "1970" refers to one of the years in the 1968–71 period, "1990" refers to the 1989–90 school year, and "2000" refers to the 1999–2000 school year. NCES files categorize students as non-Hispanic white, non-Hispanic black, Hispanic, Asian, Native American, and other. The Wilson/Taeuber file categorizes students as non-Hispanic white, non-Hispanic black, Hispanic, and other. In the following text, the terms *white* and *black* refer only to non-Hispanic students. Because the *Brown v. Board of Education* decision and its implementation primarily dealt with black students, this study focuses mainly on white-black segregation.

Measuring Metropolitan School Segregation

To ensure comparability over time, we have applied consistent definitions of metropolitan regions from the year 2000. We assigned individual schools in 1990 and 2000 to metropolitan regions based on the zip code in which they were located. Because school-level data are not available for 1970, these assignments were made on the basis of the zip code of the school district office.

For each time period, we predict black-white school segregation for the entire metropolitan area, as well as within and between districts. Rivkin (1994) and Reardon et al. (2000) have made similar distinctions, decomposing the Gini coefficient or an entropy measure of segregation into *between* and *within* components. The data necessary to compute these measures are not available for 1970. In this study these are measured with the index of dissimilarity, with a different method for each level of analysis.

Within-district segregation is the weighted average value of the index of dissimilarity within all districts in the metropolitan region. Here, the school is the smallest unit. Each school district's D values are weighted by the number of black students in the district. Hence, the within-district measure is equivalent to the level of segregation in the school district of the average black student.

Between-district segregation is measured by the index of dissimilarity, using the school district as the smallest unit, as though each district were a single school.

Overall metropolitan segregation is measured by the index of dissimilarity, using the school as the smallest unit and ignoring the existence of school districts (as though, as is true in some Southern states, all schools in a metropolitan area were in the same school district). Dissimilarity indexes can be calculated exactly only from the original school-level data. Because these figures are no longer available for 1968–71, the metropolitan dissimilarity indexes for that period are estimates based on simulations of data for individual schools. These estimates were developed through models in which every district was assumed to have only two schools: a school in which one racial/ethnic group is overrepresented, and a school in which it is underrepresented. This procedure is described in detail in appendix B.

Predictors of School Segregation

Our predictors of school segregation are of three types: (1) institutional arrangements, (2) demographic and economic factors, and (3) geographic region. Institutional variables reflect how schooling is organized in the

metropolitan region. The key indicator is the prevalence of mandated desegregation in the metropolitan region. This variable is based on original research; we created it by compiling a desegregation case inventory from multiple sources. These include case dockets and bibliographies for desegregation court orders from the Department of Justice, NAACP Legal Defense Fund, and the U.S. Department of Education. Other published sources are Wise (1977), Jones (1979), and Welch and Light (1987). Every case has been checked against legal databases, including Westlaw, to confirm the name of the case, the school districts involved, whether the case actually covered the issue of school segregation, whether there was a court-ordered desegregation plan, the year of the initial court order, and the year the order was rescinded (if ever).

In addition to school districts covered by formal court mandates, we also treat as “under a desegregation order” those districts that implemented desegregation plans in response to pressure from the U.S. Department of Health, Education, and Welfare (HEW). Our analysis incorporates partial information on those plans, based on lists compiled by HEW for the years 1977 and 1978 (NIE 1977, 1978). The total case inventory includes 358 court cases, which resulted in desegregation plans involving 850 school districts as defendants, plus 207 HEW actions involving 207 school districts since 1978.

The measure of the prevalence of mandates is the percentage of students of all races in the metropolis who were in districts that were covered by a plan in the year in question (1970, 1990, or 2000). Other institutional variables include the extent to which districts cross city-suburb lines, average district size, and percentage of elementary schoolchildren in private schools. Because the boundary between central city and suburban districts is believed to be an important factor in desegregation efforts, it is also important to identify areas where many students are in schools that span this boundary. We use definitions of central cities from the year 2000 and consider a district to cross the city-suburb line if it contains at least one school in the city and the suburbs each.³ This variable is not available for 1970 because we do not have school-level data for that year.

Average district size is defined as the number of elementary students divided by the number of districts in a metropolitan area. We interpret

³ By this definition, cross-district enrollment through desegregation plans is not counted. Such cases are rare, but include Wilmington, Del., where a formal interdistrict desegregation plan including the central city and suburban districts was implemented in the 1980s after the *Evans v. Buchanan* decision. In Wilmington, 59% of the elementary school population attends districts that cross city-suburban lines. Several other notable interdistrict remedies have been implemented on a voluntary basis with varying success in metropolitan areas including Indianapolis, St. Louis, and Little Rock (Hankin 1989).

size as a constraint on between-district segregation, but expect more within-district segregation in areas with larger districts.

The percentage of children in private schools is taken from the decennial census, which includes children in kindergarten through grade 12.⁴ We interpret private school attendance as an alternative to desegregated public schools for white children whose parents resist integration.

Demographic and economic variables include the geographic distribution, size, and respective family backgrounds of white and black populations. Because school segregation stems partly from the system of neighborhood-based attendance policies, a likely predictor is residential segregation between whites and blacks (Denton 1996; Clotfelter 2004*b*). Rivkin (1994) and Reardon and Yun (2001) associated residential segregation primarily with between-district segregation, because district policies can negate its effects within districts. Residential segregation is measured with the index of dissimilarity, which captures how evenly members of racial groups are distributed across census tracts. The 1990 and 2000 index values were calculated using tract-level data for non-Hispanic whites and non-Hispanic blacks for constant 2000 metropolitan boundaries. The 1970 values were calculated by Cutler, Glaeser, and Vigdor (1999) for metropolitan regions with a black population of 1,000 or more. Of the original 211 metropolitan regions included in this data source, we were able to match only 171 to regions that had approximately comparable boundaries in 2000. For this reason, the sample size for the 1970 multivariate analysis is smaller than that for 1990 and 2000. To check whether selection bias in the 1970 sample affects the results, we have also reestimated the 1990 and 2000 models using only cases available for 1970 (generally the larger metropolitan regions). There are no differences in the pattern of effects of mandated desegregation, regardless of whether cases are weighted by student enrollment.

We treat the size of the minority population and the income disparity between whites and blacks as control variables. Residential segregation has consistently been shown to be higher in areas with larger minority populations. James (1989) found residential segregation to have an effect on school segregation, and this is also our finding for most models in tables 4–6 (shown below). Our measure of group size is the percentage of black students in the total public elementary school enrollment in the metropolitan region, which is drawn from the same sources as the school segregation data. The income gap between whites and blacks in the metropolitan region is a possible indicator of social differences that might be a motive for greater school segregation (James 1989), and in most models

⁴ The census data for 2000 were extracted from summary files 1 and 3; for 1990, summary tape files 1 and 4; and for 1970, summary tape file 4C.

we find that it has a positive effect. We use the ratio of white to black household incomes for the entire metropolitan area (using means in 1970 and medians in 1990 and 2000), scaled to a value of 100 if white incomes are equal to black incomes and values greater than 100 when white incomes exceed those of blacks.

The final variable is geographic region. In descriptive analyses, we use the regional categorization illustrated in appendix A. Subsequently, where we test for effects of other variables conditional on regional location, we simplify region to a South (combining Southern and Border states) versus non-South dichotomy.

TRENDS, 1970–2000

We begin by describing trends in school segregation over time. Our descriptive tables report the average levels of segregation in metropolitan areas in 1970, 1990, and 2000. These are weighted averages; the weight is the size of black elementary enrollment in each year. Very similar results were found in unweighted tables. Use of these weights allows us to determine whether segregation declined as experienced by the average black student and whether desegregation of the districts where they were enrolled was counterbalanced by increasing disparities between districts. These questions are less meaningful in metropolitan areas with very few black students.

Areas are classified by geographic region and prevalence of mandated desegregation in the year 2000 (divided into areas with no court orders, those with 1%–49% of children covered by court orders by 2000, and those with over 49% covered by 2000). In the descriptive tables (but not in the multivariate analysis) we assign metropolitan regions to the 2000 category of prevalence so that changes in average values over time will not be affected by shifts of metropolitan areas across categories.

Generally, 1970 can be treated as a baseline year prior to effective implementation of desegregation plans. Some plans had been implemented by this time (Clotfelter 2004*b*). For example, the Providence, Rhode Island, city school district implemented a plan in 1967 under pressure from HEW, and by 1970 the segregation level in its schools was only 31. A contrasting example is the Birmingham, Alabama, city school district that had been ordered to desegregate in 1963. Segregation in its schools was still at a level of 94 in 1970. However, as seen above in figure 1, most orders were in place prior to 1990, and any impact would be expected to have appeared by that time.

Table 1 shows that overall metropolitan levels of segregation were generally high across all regions in 1970. The national average was over 80. Regional variation is evident but not great, with only a 12-point difference between the Northeast (where segregation was lowest) and the Midwest (where it was highest). By 1990 average segregation was much lower—about 64—and it had declined by more than 10 points in all regions except the Northeast. It rose slightly between 1990 and 2000.

We interpret the desegregation that occurred between 1970 and 1990 as a consequence of the shift in the national legal and policy environment that had been sparked by the *Brown v. Board of Education* decision of 1954 (though with substantial time lag). There is evidence that this was a global effect, not contingent on whether desegregation plans had been mandated in particular places. Note that segregation declined by nearly 20 points nationally even in metropolitan areas where no school district ever faced a desegregation order (and it continued to decline even in the 1990s). Only in the West, where desegregation orders were scarce, is there any indication that mandates may have made a difference. In the North, metropolitan areas with more mandates experienced a rise in segregation during the period 1970–90, while segregation declined in other areas. But generally, desegregation took place to a similar extent in metropolitan areas with no mandated plans as in those where more than half of black children were enrolled in districts with mandates.

Patterns of within-district and between-district segregation are presented in tables 2 and 3. Some metropolitan areas have been omitted from these analyses because most or all students in those areas were enrolled in a single large district (the threshold for exclusion is 90% enrollment in a single district). The average within-district segregation level (again weighted by the number of black students enrolled in the district) was almost as high as the overall metropolitan level in 1970, and it declined even more sharply over the subsequent two decades. Between-district segregation was lower than either of these in 1970; districts tended to be more racially diverse than individual schools. But between-district segregation did increase moderately after 1970.

How are these contrasting trends associated with mandated segregation, which in almost every instance was limited to within-district remedies? Did within-district segregation decline more in areas with more widespread mandates? Was increasing between-district segregation a response to court-ordered desegregation plans in some districts of the metropolis? There is little support for these conjectures here. As a national average, within-district segregation declined by 27 points in the period 1970–90 in metropolitan areas with no court-mandated plans, compared to 30 points in areas with substantial enforcement activity. In the West, where there

School Segregation

TABLE 1
AVERAGE LEVELS OF METROPOLITAN SCHOOL SEGREGATION BY REGION

PREVALENCE OF DESEGREGATION MANDATES	1970		1990		2000	
	<i>D</i>	SD	<i>D</i>	SD	<i>D</i>	SD
South:						
No court orders	70.9	15.0	37.3	11.4	40.8	8.9
1%–49% of children under order	82.0	8.0	57.9	11.2	61.0	10.6
>49% of children under order	86.4	8.0	54.5	13.2	57.6	12.8
Overall	84.8	8.8	55.2	13.0	58.3	12.5
Border:						
No court orders	63.6	13.7	52.4	14.7	42.1	14.5
1%–49% of children under order	89.5	2.1	61.8	.8	60.1	2.9
>49% of children under order	80.1	6.2	65.5	11.7	66.5	9.2
Overall	80.2	7.6	64.0	12.5	64.6	10.8
Northeast:						
No court orders	70.1	10.6	65.1	10.5	64.2	9.3
1%–49% of children under order	76.1	5.4	73.7	7.1	73.5	6.5
>49% of children under order	72.3	1.8	79.5	2.4	80.0	3.0
Overall	74.4	5.2	75.2	7.1	74.9	7.2
Midwest:						
No court orders	74.1	8.4	58.9	8.6	58.1	10.8
1%–49% of children under order	87.3	5.4	79.6	8.0	80.3	7.7
>49% of children under order	86.1	6.9	62.3	11.4	66.5	7.7
Overall	86.7	6.2	74.6	12.0	76.0	11.0
West:						
No court orders	62.7	7.9	49.9	8.2	48.5	10.8
1%–49% of children under order	76.6	7.2	59.0	10.3	57.8	9.1
>49% of children under order	91.0	3.0	65.9	9.7	62.8	8.3
Overall	82.2	10.8	60.1	11.1	58.1	10.1
All regions:						
No court orders	68.2	12.2	50.8	14.6	45.7	13.5
1%–49% of children under order	82.4	7.9	69.0	13.4	70.0	12.5
>49% of children under order	83.9	8.6	60.9	14.5	63.0	13.3
Overall	82.6	8.9	64.2	14.8	65.7	13.7

was the least risk of court action, within-district segregation declined by 18 points in areas with no mandated plans, compared to 22 points in areas with the most enforcement. Only in the Midwest is there an indication that mandates made a difference, but even where there were no court orders there was a decline of 30 points in this region.

Turning to between-district segregation, the increase nationally was less

TABLE 2
AVERAGE LEVELS OF WITHIN-DISTRICT SEGREGATION BY REGION

PREVALENCE OF DESEGREGATION MANDATES	1970		1900		2000	
	<i>D</i>	SD	<i>D</i>	SD	<i>D</i>	SD
South:						
No court orders	70.5	8.2	31.2	10.9	37.9	7.6
1%–49% of children under order	69.8	8.9	46.8	13.1	47.8	10.9
>49% of children under order	86.9	9.2	46.1	14.1	48.1	12.3
Overall	85.0	8.5	46.2	13.8	48.0	11.8
Border:						
No court orders	60.6	13.7	38.6	12.7	35.1	15.2
1%–49% of children under order	85.6	.2	45.7	4.1	45.2	2.9
>49% of children under order	75.9	8.6	58.7	13.9	58.5	13.0
Overall	76.1	9.3	56.4	14.6	56.0	14.0
Northeast:						
No court orders	51.9	11.2	26.5	9.3	23.9	7.6
1%–49% of children under order	65.6	10.8	45.5	16.3	42.3	12.5
>49% of children under order	69.4	3.0	76.9	4.6	74.8	7.5
Overall	65.3	11.3	55.4	21.5	51.3	20.8
Midwest:						
No court orders	65.7	13.4	36.1	13.4	33.2	12.5
1%–49% of children under order	82.7	8.1	55.0	18.2	57.4	13.9
>49% of children under order	82.6	7.0	34.1	11.3	39.7	10.8
Overall	82.3	8.4	49.1	19.1	52.0	15.7
West:						
No court orders	47.8	12.8	30.2	8.5	30.4	6.0
1%–49% of children under order	66.4	9.1	38.2	10.6	37.4	9.8
>49% of children under order	85.7	2.7	53.7	8.1	51.6	6.5
Overall	73.8	14.3	42.6	12.7	41.3	11.4
All regions:						
No court orders	57.3	14.5	30.0	12.2	28.9	10.0
1%–49% of children under order	77.0	12.0	48.6	16.4	48.8	14.0
>49% of children under order	81.9	9.4	51.4	16.2	52.6	15.2
Overall	78.5	12.4	49.0	17.3	49.5	15.4

NOTE.—Only areas in which the largest school district enrolled less than 90% of all students are included.

than 2 points in the absence of mandates, 4 points in metropolises with less than 50% of children in districts with mandates, and 6 points in areas with the most extensive mandates. These are small differences, and in the Border states the increase in between-district segregation was found only in areas with fewer mandates.

TABLE 3
AVERAGE LEVELS OF BETWEEN-DISTRICT SEGREGATION BY REGION

PREVALENCE OF DESEGREGATION MANDATES	1970		1990		2000	
	<i>D</i>	SD	<i>D</i>	SD	<i>D</i>	SD
South:						
No court orders	20.7	10.9	32.3	13.3	30.9	10.7
1%–49% of children under order	28.8	16.2	49.0	11.6	49.9	12.4
>49% of children under order	22.7	14.5	37.4	17.3	41.5	16.7
Overall	26.8	16.4	46.2	16.4	44.7	15.7
Border:						
No court orders	20.9	15.9	32.2	11.4	21.2	11.0
1%–49% of children under order	41.4	14.0	53.8	4	55.0	3.8
>49% of children under order	67.0	9.7	58.8	10.6	56.0	8.2
Overall	63.6	14.5	56.6	12.9	54.1	11.1
Northeast:						
No court orders	62.7	14.5	62.5	12.2	62.2	10.4
1%–49% of children under order	68.8	6.4	71.3	6.9	71.4	6.7
>49% of children under order	31.0	11.0	33.5	9.8	39.4	8.3
Overall	54.8	20.0	56.4	19.8	59.6	16.5
Midwest:						
No court orders	44.6	16.1	34.8	17.4	35.9	18.6
1%–49% of children under order	68.2	7.5	76.4	9.1	76.9	8.3
>49% of children under order	59.5	18.9	59.6	12.2	64.1	11.9
Overall	65.7	12.4	71.3	13.2	72.7	12.1
West:						
No court orders	46.9	16.5	40.8	11.8	39.9	12.6
1%–49% of children under order	62.3	13.8	53.4	12.4	51.6	10.8
>49% of children under order	53.6	4.1	50.4	11.2	44.3	12.2
Overall	56.9	11.9	50.5	12.6	47.4	12.4
All regions:						
No court orders	44.0	22.1	45.5	17.3	46.5	18.3
1%–49% of children under order	59.5	17.7	63.8	15.8	64.2	15.6
>49% of children under order	38.0	22.7	43.8	17.7	46.5	16.2
Overall	48.6	23.0	53.6	19.6	55.3	18.2

NOTE.—Only areas in which the largest school district enrolled less than 90% of all children are included.

MULTIVARIATE MODELS

The descriptive tables (1–3) portray strong national trends: sharp reductions in overall and within-district segregation during the period 1970–90 that were halted but not much reversed after 1990, as well as smaller countervailing increases in between-district segregation. Surprisingly, the pattern of change does not seem to vary greatly across regions of the country or to depend on the extent of mandated desegregation in each metropolitan area.

We now estimate multivariate cross-section models evaluating the ef-

fects of region and of legal mandates in the context of other predictors of segregation. Our key hypothesis is that a regime of desegregation emerged after 1970, with the consequence of an overall decline in segregation that should be revealed in the intercepts of the multivariate models. Despite the initial descriptive results, previous literature on the effects of mandates at the level of individual districts leads us to expect some negative effect of mandates on overall and within-district segregation by 1990. And there might also be a positive effect by 1990 (perhaps declining by 2000) of mandates on between-district segregation caused by white flight. As we shall see, the results are not as simple as these expectations.

We have also investigated models of change over time, but these introduce problems that we have not yet been able to solve: the smaller sample size for the key variable of residential segregation in 1970, the question of modeling the reciprocal effects of within-district and between-district segregation and whether these are simultaneous or lagged, the appropriate lag period, and the lack of data for time points between 1970 and 1990, which prevents evaluation of a lag of less than 20 years. In interpreting results, we are mindful of the fact that cross-sectional models do not establish the order of causation among independent and dependent variables. At some points we refer to preliminary findings from longitudinal analysis to test our interpretation of cross-sectional results. These are lag models, not reported in the tables,⁵ in which segregation at time 2 is predicted by segregation at time 1 plus other predictors measured at time 1. But our primary evidence is from repeated cross-sections. We are assuming that enough time elapsed between 1970 (when enforcement of desegregation orders had barely started) and 1990 (when most plans had been in effect for several years) for the pattern of relationship to move toward a new equilibrium. This assumption is consistent with the large change in segregation measures between 1970 and 1990 and with the subsequent stability, shown in the descriptive tables, and also with the substantial changes in effects of key predictors of overall metropolitan segregation between 1970 and 1990 and with the subsequent stability in these coefficients (shown in table 4 below).

Many of the predictor variables are significantly intercorrelated, and it is unclear in some cases whether mandated desegregation should be viewed as more of a cause or a consequence of another predictor. However, these correlations have little impact on the estimated effects of mandated desegregation, because the bivariate correlations of mandates with levels of school segregation (in each year and for each dimension of metropolitan

⁵ Lag models not shown in this article can be obtained from the first author.

School Segregation

TABLE 4
EFFECTS OF PREDICTOR VARIABLES ON OVERALL METROPOLITAN SCHOOL
SEGREGATION

Variable	1970	1990	2000
% children in districts with desegregation orders .....	.051** (.017)	-.088*** (.017)	-.074*** (.013)
Black-white residential segregation .....	.579*** (.043)	.938*** (.042)	.913*** (.032)
% children in private schools	-.500*** (.083)	-.188 (.100)	-.299** (.087)
Average district size in metropolitan area (in thousands) .....	.052 (.030)	.104*** (.019)	.037** (.011)
% children in districts crossing city-suburb lines		-.145*** (.015)	-.101** (.011)
Southern/Border state	-6.934*** (1.574)	-2.551* (1.211)	-1.112 (.882)
% black children .....	.292*** (.055)	.138** (.043)	.089** (.030)
White-to-black income ratio .....	.170*** (.028)	.000 (.017)	.094*** (.018)
Constant	9.955 (5.710)	7.145* (3.317)	-1.691 (2.817)
Adjusted R^2 .....	.606	.832	.881
N of cases	196	329	327

NOTE.—Numbers in parentheses are standard errors.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

segregation) are in the same direction as the effects estimated with controls.

In the following models, the number of cases on which standard errors are calculated equals the number of metropolitan regions studied in that year. Yet the metropolitan regions have been weighted relative to one another according to their number of black students in the given year. As in other recent studies of segregation (e.g., Logan, Stults, and Farley 2004), we wish to count more heavily the experience of metropolitan regions with larger numbers of students. However, we have also conducted these analyses with unweighted data, and we find that the pattern of effects of the key predictor—mandated desegregation—is not influenced by weighting. The variable *%children in districts with desegregation orders* is based on orders that had already taken effect prior to the year being modeled (significance levels are determined by two-tailed tests; cor-

relation matrices and means and standard deviations of all variables are available from the first author on request).

Models are presented for overall metropolitan school segregation (table 4), average within-district segregation (table 5), and between-district segregation (table 6). Coefficient estimates for %black and white/black income inequality are listed in the tables only for reference.

Mandated Desegregation

Our primary interest is in the effects of institutional variables, particularly the prevalence of mandated desegregation. Table 4 shows, as anticipated, that mandates did not reduce segregation in 1970; the relationship is positive and significant. A significant negative effect appears in both 1990 and 2000. A standard interpretation for the 1970 relationship would be that court orders may have been issued by 1970, and they may have been targeted to highly segregated metropolitan regions, but they had not yet been fully implemented; their effects would appear in subsequent years. This may well be the case at the level of individual school districts, and this is a question that needs to be addressed in future studies with district-level data. But surprisingly, tables 5 and 6 reveal that at the metropolitan level mandates did not have a salutary effect on the average within-district segregation, where court orders directly reached district policies. Their effect is rather seen on segregation *between* districts, where the coefficients are negative and significant in both 1990 and 2000. Segregation within districts was actually higher in metropolitan areas where larger shares of children were in districts with desegregation mandates (statistically significant in 1970 and 2000; just below the .05 level of significance in 1990).

These results raise two questions. First, why would court orders be associated with higher within-district segregation? We do not believe that this is because mandates caused segregation to rise. In a lag model (not shown here) where the 1990 level of within-district segregation was predicted by its 1970 level, the level of mandates in the metropolis had no significant effect (nor did it in a similar 1990–2000 lag model). A plausible answer is that causality runs in the other direction. That is, in each decade, mandates were targeted at more segregated districts within more segregated metropolitan areas. In this case, however, there is still a quandary. Once sanctions were in place, prior studies show that segregation within targeted districts certainly was reduced. In that case, why would average within-district segregation remain high in areas with more widespread mandates? One possibility is that every decade, more districts were added as targets that were located in those metropolitan regions that continued to have higher average within-district segregation. We believe this is part of the answer. To test this hypothesis will require analysis of which in-

School Segregation

TABLE 5
EFFECTS OF PREDICTOR VARIABLES ON METROPOLITAN SCHOOL SEGREGATION
WITHIN DISTRICTS

Variable	1970	1990	2000
% children in districts with desegregation orders .....	.056* (.024)	.052 (.038)	.066* (.030)
Black-white residential segregation .....	.664*** (.059)	.934*** (.087)	.861*** (.066)
% children in private schools	-.548*** (.116)	.037 (.202)	-.206 (.178)
Average district size in metropolitan area (in thousands) .....	.000 (.093)	.365** (.137)	.466*** (.088)
% children in districts crossing city-suburb lines		-.085** (.032)	-.042 (.026)
Southern/Border state	-3.087 (2.355)	4.311 (2.617)	2.039 (1.917)
% black children .....	.511***	.316** (.091)	.164* (.065)
White-to-black income ratio .....	.139** (.078)	-.117** (.036)	.057 (.039)
Constant	-1.418 (8.099)	-9.042 (6.788)	-25.030*** (6.051)
Adjusted R^2 .....	.593	.533	.636
N of cases	186	302	299

NOTE.—Only areas in which the largest school district enrolled less than 90% of students are included. Numbers in parentheses are standard errors.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

dividual districts were targeted for enforcement activity after 1970 and whether segregation in the rest of the metropolis had an independent effect on this targeting.

Another part of the answer is what was happening in other districts and other metropolitan regions, places without desegregation mandates. As the earlier tables show, segregation within districts was also declining between 1970 and 1990 in metropolitan areas with no mandates. We believe that within-district segregation may have been declining in metropolitan areas with fewer court mandates even faster than in the non-targeted districts in areas with more mandates. (Again, to test this hypothesis will require analyses at the district level.) In other words, sharp declines in segregation within targeted districts (which we hypothesize but have not demonstrated) may have been counterbalanced at the metropolitan level by smaller than average declines in neighboring districts.

TABLE 6
EFFECTS OF PREDICTOR VARIABLES ON METROPOLITAN SCHOOL SEGREGATION
BETWEEN DISTRICTS

Variable	1970	1990	2000
% children in districts with desegregation orders	-.002 (.053)	-.369*** (.033)	-.274*** (.029)
Black-white residential segregation	1.011*** (.131)	1.011*** (.076)	.940*** (.065)
% children in private schools .....	.592* (.257)	-.154 (.176)	-.259 (.175)
Average district size in metropolitan area (in thousands)	-.637** (.207)	-.344** (.119)	-.450*** (.086)
% children in districts crossing city-suburb lines		-.176*** (.028)	-.156*** (.026)
Southern/Border state	4.281 (5.227)	5.148* (2.278)	3.463 (1.885)
% black children .....	.102 (.174)	.122 (.079)	.146* (.064)
White-to-black income ratio	-.508*** (.093)	.110** (.031)	.118** (.039)
Constant	47.493** (17.977)	-13.657* (5.910)	-7.820 (5.951)
Adjusted R^2 .....	.546	.723	.75
N of cases	186	302	299

NOTE.—Only areas in which the largest school district enrolled less than 90% of all children are included. Numbers in parentheses are standard errors.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

This is not the direct effect that we anticipated. It does not show a diffusion effect within the metropolis from districts with court orders to surrounding districts. If our interpretation is correct, it shows that the whole pattern of enforcement of new constitutional law across the United States had a system-wide impact on nontargeted districts, even in metropolitan areas where no policy change was specifically required.

A second question is why between-district segregation was lower in metropolitan areas with more desegregation mandates in both 1990 and 2000. On the basis of our own expectations and previous literature, we anticipated that between-district segregation would be higher, especially in these later years, reflecting the phenomenon of white flight from inner-city schools that were becoming more integrated. Indeed, our earlier tables showed that between-district segregation did increase generally in this period. Again, our exploratory lag models suggested that mandates did

not cause segregation to fall. Mandates had no significant effect on between-district segregation in 1990, controlling for the segregation level in 1970 (nor was there an effect in a 1990–2000 lag model). We suggest an alternative explanation, that between-district segregation responded not to *mandated* desegregation (and to what we assume was the attendant publicity and public discussion) but to *actual* desegregation within districts in the region. If school systems were being desegregated more in the absence of court orders, metropolitan areas where this was occurring are the places where white flight would be expected. Lag models offered some support for this interpretation. Although average within-district segregation in 1970 did not affect change in between-district segregation in the 1970–1990 period, it had a significant positive effect on change in between-district segregation from 1970 to 1990.

We reiterate that this is not the finding that would fit most comfortably within the existing theoretical framework. These data indicate for the first time that school desegregation was not limited to districts where it was explicitly required, and that white flight (assuming that white flight is the source of growing between-district disparities) was actually smaller in metropolitan areas where enforcement was most targeted. If so, our understanding of the regional and national impacts of the desegregation movement initiated in court decisions has been distorted by the focus up to now on the individual school districts that were subject to judicial or executive-branch sanctions.

School District Organization and the Private School Alternative

We examine three variables that reflect the institutional structure of schooling in metropolitan areas: the relative balance between public and private schools, the average size of school districts, and the extension of school districts across the city/suburb boundary. These are all “policy” variables, because they are subject to change by executive, legislative, or court action. Indeed, issues concerning district mergers, charter schools, and public support of private schools are becoming more common than issues of compliance with court-ordered desegregation. These aspects of school organization were expected primarily to be associated with white flight, as reflected in between-school segregation. We expected the option of flight across district lines to be less appealing where private schools are more common, and also to be more difficult where districts cover larger areas and where more children are in districts that include both city and suburban locations. We review the evidence for each of these policy variables in turn.

We find first that metropolitan areas with a higher share of children enrolled in private schools had lower levels of segregation (see table 4).

This is consistent with the view that private schools functioned as an alternative for students who would otherwise have sought public schools not under a desegregation plan. However, it is hard to identify the source of this outcome. In 1970, the effect is negative for within-district segregation and positive for segregation between districts. Assuming whites were more likely to choose private schools, this finding is consistent with the idea that whites chose private schools in 1970 to avoid attending public schools that were at risk of desegregation at that time, rather than attending majority-white public schools in the same district. It is also possible that private schooling was stimulated by plans for desegregation even before 1970, especially in those Southern metropolises where desegregation was already being implemented in 1970 and the flight to “white academies” was already being observed (Nevin and Bills 1976; Clotfelter 2004a). Such choices would indirectly increase the disparity in public school populations between these districts and others in the metropolitan area by diminishing the share of white students in the former. But in 1990 and 2000 there are not significant effects on either of these dimensions of segregation.

Second, metropolitan areas with districts of larger average size (i.e., number of students) had higher levels of segregation in all three years (significant in 1990 and 2000). This result is due to higher segregation within school districts (for 1990 and 2000 in table 5), despite lower interdistrict disparities (for all years in table 6). Third, where a larger share of students are in districts that cross the central city/suburban boundary, segregation is lower on all measures in 1990 and 2000 (this variable is unavailable for 1970).

Residential Segregation

Metropolitan areas where whites and blacks are more segregated into separate neighborhoods do not necessarily also have higher school segregation. For example, under the system of de jure segregation in the South, many districts historically maintained separate schools for whites and blacks regardless of where they lived. In 1970, we find a substantial positive association between metropolitan residential segregation and both total and within-district school segregation, but this effect becomes much larger in 1990 and 2000. With the collapse of de jure policies, residential segregation became an even more important determinant. However, this observation does not hold for between-district segregation (shown in table 6). Residential segregation had powerful impacts on disparities between districts even in 1970. The creation of district boundaries has always been a mechanism for translating residential patterns into the composition of schools.

Region

Controlling for other factors, overall metropolitan segregation is 7 points lower in the South than in other parts of the country in 1970, and still nearly 3 points lower in 1990. However, this net regional difference is no longer significant by 2000. This overall effect masks other associations within and between districts. In the within-district analysis, the South has slightly lower segregation in 1970 and higher in 1990 and 2000, but none of these coefficients is significant. Between-district segregation, on the other hand, is 3–5 points higher in the South in these three years (though this difference is only statistically significant in 1990).

We also tested for interaction effects, anticipating that some variables might be more significant in the South and others might be more pertinent elsewhere. We found no clear pattern, however. On the whole, it is surprising that there are such minor variations by region, given the great differences prior to the period of desegregation.

DISCUSSION AND CONCLUSION

Metropolitan school segregation declined sharply between 1970 and 1990, and the magnitude of this decline was about the same regardless of the extent of externally mandated desegregation in a given area. Further, segregation rebounded only slightly in the 1990s.

The gains were concentrated in shifts within school districts, which is where enforcement actions have almost always been targeted. There was nearly a 40% fall in segregation at this level. But these gains were partly counterbalanced by increasing between-district segregation that occurred especially between 1970 and 1990. This rise is surprising, because levels of residential segregation were falling moderately in many parts of the country at the same time (in our sample of metropolitan areas, the average was 79 in 1970, 68 in 1990, and 65 in 2000). The trends are consistent with the interpretation that in this era when black-white separation in schools could no longer be taken for granted, white families with children were systematically selecting homes in school districts with smaller minority populations. We have not measured white flight directly, but we infer it from rising between-district disparities. White flight was of sufficient magnitude to limit gains from desegregation but not to nullify them.

The cross-sectional multivariate analyses provide numerous clues about the sources of these trends. This is the first study to incorporate a measure of prevalence of court- or federally mandated desegregation at the metropolitan level, and the findings are clear. Although there were court orders in place prior to the 1968–69 school year (the date of most of our initial school data) and some districts had already implemented deseg-

regation policies, no overall impact of mandates on levels of segregation within school districts was apparent by this time. In 1990 and 2000 a significant negative effect appeared.

It is well known that the impact of court mandates was delayed (see Clotfelter [2004*b*, pp. 48–57] for a review of pre-1970 change). The greatest surprise in these results is that mandates were consistently associated with higher segregation within districts but lower segregation between districts within a metropolis. To propose an explanation of this pattern, we have had to refer back to the bivariate relationships shown in tables 1–3.

One might have intuitively expected desegregation to occur only where it was required. Our observation is that it was much more widespread. We are not arguing that court orders were not important. To the contrary, our interpretation is that the combination of court decisions, the threat of lawsuits, and aggressive enforcement action by the federal government and some state education agencies was mostly responsible for the changes that were implemented during the period 1970–90. We offer new evidence that by 1990 districts were conforming to this national policy climate even in metropolitan areas where few districts were involved in a court case. And by 2000, the lower levels of within-district segregation that had been achieved in most metropolitan areas were being protected regardless of external mandates. We view this as support for the hypothesis that desegregation had become legitimated in the decades following the *Brown* decision and that race-conscious policies could now be sustained by routine organization-environment dynamics.

Hence, we suggest as a tentative conclusion that within-district segregation was higher in metropolitan areas with more widespread desegregation mandates because segregation itself invited judicial or executive-branch action. And even as individual districts that were under mandates experienced declines in segregation, the rest of the nation was desegregating to the same extent or more. To test this view more directly will require estimation of multilevel and longitudinal models in which the district rather than the metropolis is the basic unit of analysis.

Though the focus of most policy discussions has been on mandates stemming from the *Brown v. Board of Education* decision, other institutional factors seem to be at least equally important. We tie these together with the notion of shifting “regimes” affecting segregation in the United States in the post-*Brown* era. A regime is a coherent set of interrelated processes that can account for how segregation appears and what phenomena it is related to in a given time and place. For example, South African apartheid was a regime in this sense, as was the South’s *de jure* system of separate schools (tied to other Jim Crow practices) in the mid-20th century. Sampson and Morenoff (2004) used the concept of “regimes of racial segregation” in a similar way to compare causal dynamics of

homicide in Chicago's black and white neighborhoods. We distinguish between a segregation regime that was still in force as late as 1970 and a desegregation regime that emerged in the next two decades.

The segregation regime represents the situation at the time when the system of separate black and white schools in the South and Border states was first under challenge. Some court orders were in effect, but their impacts at the metropolitan level were slight. Segregation within school districts was still based on racial identification of schools as well as on residential segregation. Private schools had already appeared as an alternative to public schools in areas where public schools were less segregated, with the paradoxical effect of reducing segregation within school districts by draining white students from them.

The desegregation regime dismantled the prior system, and school segregation became more closely tied to residential patterns than before. Reductions in segregation within school districts were generalized across the country, not contingent on the extent of external mandates in a given metropolitan area. Many school districts, especially in the South, encompassed entire counties and crossed city-suburb lines. Private schooling reduced white flight across district lines, and white flight was obstructed in areas where school districts covered larger geographic areas and areas that included both city and suburbs. Despite the publicity surrounding white academies, segregation at the metropolitan level had little relation to the share of children in private schools.

This typology is a generalization, and considerable refinement would be required in order to apply it to any individual metropolitan region, North or South. It is consistent with our analysis of trends in average segregation levels and the multivariate models, and we intend it as an interpretation of those results. Where it presumes a specific direction of causality in the cross-sectional analyses, we emphasize that such causality has not been established. What is clear is that (1) the changes in school desegregation were substantial but (by policy design) limited to within-district shifts, and they stalled after 1990, and (2) desegregation policies diffused quickly and persistently throughout the nation.

APPENDIX A

Breakdown of States by Region

South	Midwest
Alabama	Illinois
Arkansas	Indiana
Florida	Iowa
Georgia	Kansas
Louisiana	Michigan
Mississippi	Minnesota
North Carolina	Nebraska
South Carolina	North Dakota
Tennessee	Ohio
Texas	South Dakota
Virginia	Wisconsin
Border	West
Delaware	Arizona
District of Columbia	California
Kentucky	Colorado
Maryland	Idaho
Missouri	Montana
Oklahoma	Nevada
West Virginia	New Mexico
Northeast	Oregon
Connecticut	Utah
Maine	Washington
Massachusetts	Wyoming
New Hampshire	
New Jersey	
New York	
Pennsylvania	
Rhode Island	
Vermont	

APPENDIX B

Estimation of Metropolitan Segregation for 1970

The Wilson/Taeuber data set includes the racial composition of enrollment and measures of segregation between schools at the level of school districts.

These data can be used directly to calculate the average within-district segregation and the total between-district segregation in a metropolitan area. However, to measure *overall* metropolitan segregation exactly (using the school as the smallest unit and ignoring the existence of school districts) would require data on every individual school.

Because such data are unavailable for 1970, we have developed estimates of metropolitan segregation that take advantage of what is known. For every district we simulate a scenario in which the district is assumed to have only two schools: a school in which one racial/ethnic group is overrepresented, and a school in which that group is underrepresented. This is a reasonable assumption, because calculation of the index of dissimilarity for any district could be conducted in either of two ways that lead to the same result.

In the first approach, one computes, for every school, the degree to which one group is overrepresented or underrepresented as compared to another group. Then the absolute values of these amounts are summed and divided by two. This is the standard formula.

In the second approach, one combines the enrollments for all schools in which a group is overrepresented and computes the degree to which the group is overrepresented in this aggregate as compared to another group. One then combines the enrollments for all schools in which a group is underrepresented, and computes the degree to which the group is underrepresented in this aggregate. The absolute values of these two amounts should be equal, and they should be the same as the index of dissimilarity calculated in the more usual way.

Our approach is to simulate, for every school district, how many black and white students would be enrolled in each of the district's two schools, if there really were only two schools—one where blacks were overrepresented and one where they were underrepresented. We then compute metropolitan-level segregation indexes from these simulated school-level data.

The simulation is based on two pieces of information. One is the total size of each group in the district, expressed as $black_T$ and $white_T$. The other is the value of the index of dissimilarity (D) for the two groups in this district. The problem is to estimate black and white enrollment ($black_i$ and $white_i$) in each school in a way that is consistent with these data. In fact, there are multiple solutions to this simulation because the size of each school is not indeterminate. We use an estimate that is approximately midway among these possible solutions, in which we assume that the first school includes *at least* half of the total district black population, plus an additional number that is larger in proportion to the extent of segregation in the district. We also assume that the first school includes *no more than*

half of the total district white population, less an additional number that is larger in proportion to the extent of segregation in the district:

$$\text{black}_i = [.5 + (D/200)] \times \text{black}_T$$

$$\text{white}_i = [.5 - (D/200)] \times \text{white}_T.$$

The numbers of black and white students in the simulated second school are simply the remainders ($\text{black}_T - \text{black}_i$; $\text{white}_T - \text{white}_i$). The value of D for the metropolitan region is then calculated directly from the simulated enrollments in all school districts.

We tested the reliability of these estimates using real data from 1989–90 and 1999–2000. The average “simulated” value of D across all metropolitan regions was equal to the actual value of D . In most cases it was within one point of the actual D , and in very few cases was it off by more than 3 points. This reliability stems partly from the fact that segregation *between* districts is such an important component of metropolitan segregation. This component is precisely captured in the district-level data. Variations in how each group is allocated between two schools—as long as they preserve the district’s dissimilarity index—have little impact on the calculation of the metropolitan value.

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