The public controversy surrounding recent government proposals for supporting private schools through tuition tax credits has prompted an interest in studying the impact of private schooling on racial segregation in education. This report examines the degree of black-white segregation in the Catholic schools in the Chicago and Cleveland metropolitan areas with a view to finding out whether the Catholic schools do or do not promote racial segregation. Elementary schools were found to be highly segregated, but Catholic high schools were less segregated than the public high schools were when traditional nearest-school student assignments were used. The accounting model used in the Coleman, Hoffer, and Kilgore study of the issue was analyzed, and after an examination of both sides of the argument, it is tentatively concluded that the accounting model researchers were overly optimistic and that the data from the present study gives little reason to believe with them that the impact of the private schools is simply benign. At the same time there is insufficient data to support what may be the more likely conclusion: namely, that private schools further school segregation under certain conditions and encourage integration under others. (AA)
PRIVATE SCHOOLS AND BLACK-WHITE SEGREGATION: EVIDENCE FROM TWO BIG CITIES

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Abstract

The public controversy surrounding recent proposals to support private schools through tuition tax credits has prompted an interest in the impact of private schooling on racial segregation in education. The first section of this paper examines the degree of black-white segregation in the Catholic schools of two large metropolitan areas. In the second part, the accounting model used by Coleman, Hoffer and Kilgore to answer the question of whether the presence of private schools competing with public schools has created more or less segregation will be critically analyzed. The accounting model used to measure the segregative impact of private schools appears to be in error, and Catholic schools have created racial segregation in American education.
The public controversy surrounding recent proposals to support private schools through tuition tax credits has prompted an interest in the impact of private schooling on racial segregation in education. Coleman, Hoffer and Kilgore's report (1981) and book (1982) divide this issue into four questions:

1. Do private schools enroll more or fewer minority students than do public schools?

2. Are the minorities presently attending private schools more racially segregated or integrated than minorities attending public schools?

3. Has the presence of private schools competing with public schools created more or less segregation?

4. If some form of private school subsidy were enacted, would the accelerated transfer of whites and minorities to private schools increase or decrease segregation in education?

Using the 1980 data from the High School and Beyond survey of high school sophomores and seniors, they concluded that although minorities are underrepresented in private schools (question 1) they are also highly desegregated there (question 2). Using a simple accounting model, they conclude that the presence of private schools in the United States has not increased the segregation of black students in American education (question 3). Question 4 requires an exercise in predictive modeling, and is hence the most dif-
difficult; their answer is equivocal.

In the first section of this paper we will examine the degree of black-white segregation in the Catholic schools of two large metropolitan areas. In both areas, the elementary schools are highly segregated—as segregated as the public schools ever were. The Catholic high schools are less segregated than the public high schools were when traditional nearest-school student assignments were used. In the second part we will critically analyze the accounting model used by Coleman, Hoffer and Kilgore to answer question 3. We conclude that the accounting model used to measure the segregative impact of private schools on the combined public + private system of schools is in error. It appears that Catholic schools, which are the majority of private schools in the U.S., have created racial segregation in American education. It is very difficult to predict how a subsidy for parents sending their children to private schools would affect racial segregation but there is no compelling reason to think that a subsidy would reverse the present pattern in which the transfer of students to private schools appears to have increased racial segregation.

Racial Segregation in Private Schools

Coleman, Hoffer, and Kilgore used data for 84 randomly sampled Catholic high schools and 27 randomly sampled non-Catholic high schools to compute indices of segregation. They find that segregation of blacks from (non-Hispanic)
whites is lower in either group of private schools than it is in public schools. (In this paper, "whites" always means "Non-Hispanic whites"). For Hispanics, the pattern is murdier; they seem less segregated in Catholic schools, more segregated in other private schools.

The index they used is often called the "exposure index", $E_{bw}$, and is simply the mean, computed across all students of one race, of the percentage of their school which is made up of opposite-race students. If there were no internal segregation within high schools, the mean percentage of students who are black in the average white student's high school could be thought of as the probability that the student sitting next to any white student is black (with a parallel interpretation for the exposure of black students to whites). The index ranges from a low of 0 to a maximum of the percentage of students of the opposite race in the set of schools as a whole. (Under conditions of perfect racial integration, a school district which was 30% black would have each of its schools 30% black, and $E_{bw}$, the mean percentage of black students in the high schools attended by white students, would be .30. If the district was perfectly segregated, each white would be in a school with no blacks, and the mean percent black of the schools attended by whites would be 0.) The index can be standardized by dividing by the percentage of the entire universe of students which is of the opposite race, and subtracting this from 1.0. This yields an index which ranges from 0 when
schools all have the same racial compositions to 100 when they are totally segregated. The formula for the indices are:

\[
\begin{align*}
E_{bw} &= \frac{\sum_{i=1}^{n} W_i b_i}{\sum_{i=1}^{n} W_i} \\
S_{bw} &= 1 - \frac{E_{bw}}{b}
\end{align*}
\]

Where \(i\) = number of whites in the \(i\)th school, \(b_i\) the percentage black of the \(i\)th school, and \(b\) the percentage black of the entire universe (usually a school district).

The indices can be used to measure the segregation of any two groups from each other -- for example, whites from non-whites, non-whites from whites, blacks from hispanics, blacks from whites, etc. \(E_{bw}\), the percent white of the average black's school is not the same as \(E_{bw}\), the percent black of the average white's school, but when the index is standardized the indices of segregation of whites from blacks and of blacks from whites are identical: \(S_{bw} = S_{wb}\).

Using the exposure index, Coleman, Hoffer and Kilgore found that private high schools were less segregated than public high schools: the standardized indices measuring segregation of blacks from whites were public schools .49,
Catholic schools .31 and other private schools .21.<1>

Whites in private schools attend schools with a smaller proportion of black students than do whites in public schools; 7% of the average public school white student's classmates are black, compared to 4% for a white in a Catholic school and 2% for a white in an other private school), simply because there are fewer blacks in private schools: 14% of the students in public school are black, compared to 6% in Catholic schools and 3% in other private schools. Standardization controls for this, and the standardized index indicates that those blacks who are present in private schools are more evenly distributed across the schools than are blacks in public schools.

One criticism (Page and Keith, 1981) argued for an index which took the small number of blacks in private schools into consideration, and standardized the indices of white exposure to blacks, Ebw, of both public and private schools by using the percentage black of all U.S. high schools, both public and private. Since the percentage black is lower in private schools, private schools appear more segregated than public schools when this standardized index is used.

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<1> Taeuber and James (1982) note that of several indices available, this index, which they call the variance ratio index and we call the standardized exposure index, is most sensitive to the racial mix of the schools. They compute a dissimilarity index (discussed below) and find segregation levels of public and private schools to be more similar: public .70, private .63.
Whether one agrees with the criticism is a matter of values. There is no particularly compelling reason for using either standardized index; standardized indices are commonly used, but only because it is appropriate for evaluating the degree to which a school district deviates from a norm of all schools having identical racial composition, a measure that is useful in assessing the success of school desegregation plans, or for analyzing factors associated with segregation in particular school districts. In these cases the number of students of each race is taken as given; but a private school system's minority enrollment is not fixed by exogenous factors. It can recruit more or accept fewer minorities if it wishes. How should one evaluate a private school system which desegregates its minority students, but has very few? Using the unstandardized index, we find whites in private schools have fewer Black schoolmates, and are in that sense more segregated. Blacks have more white schoolmates in private schools and are in that sense less segregated there. Which way to look at the problem is mostly a matter of taste.

Sampling error is never an issue in single district segregation studies, since the entire school district is used, rather than a sample. But with a national sample containing only 84 Catholic and 27 non-Catholic private schools, we should be wary of sampling error. In the report version Coleman, Hoffer, Kilgore, (1981) suggest that the high index of segregation for Hispanics in non-Catholic
schools may be due to sampling error, and note that 64 percent of the Hispanics in non-Catholic private schools are in a single school. It may well be that a larger sample would show something different. But this is, of course, also possible for the sample of Blacks in non-Catholic schools or the samples of Blacks and Hispanics in Catholic schools. Sampling-error statistics are not presented for the segregation indices, so it is impossible to say what the confidence interval around each of these figures is. However it may well be very high. If the sample of Catholic schools had contained two all-black schools instead of the one that appears to be in the sample, the index of segregation for Catholic schools would increase by approximately .10. Sampling error affects not only the segregation indices but estimates of the number of minority students in private schools. If it is a sampling fluke that caused 64 percent of all the Hispanic students in non-Catholic private schools to be in a single predominantly Hispanic school, then that same sampling fluke may have given us an extremely high mis-estimate of the total number of Hispanics located in non-Catholic private schools.

Coleman, Hoffer and Kilgore's analysis of school segregation is unusual in another way; the indices are computed for the entire nation rather than for particular school districts. In all previous research, segregation indices have been computed separately for individual school districts and not for very large units, such as the entire United States.
One problem with a national segregation index is that it is impossible to separate the index into that amount contributed by segregative policies and practices in individual school systems and the amount of segregation which arises because Blacks and whites are distributed differently across regions and city types. If many Blacks live in New York City and very few live in the Pacific Northwest, a high segregation index will arise regardless of local public school desegregation policies. Similarly, if private schools tend to be concentrated in areas which range widely in their racial mix, the index would have a very large value even if the private schools in each area worked hard to desegregate. Conversely, if the areas where private high schools are located tend to be more homogenous in racial mix than the United States as a whole, then it would be possible for a lower segregation index to exist without private schools exerting much effort to desegregate.

The segregation of private schools in individual communities is of scholarly interest because private schools normally use a different geographic attendance rule than do public schools. Public schools almost always assign students on the basis of geographic attendance zones; a student at a certain address must attend a certain school. Normally a school draws all its students from a single geographic zone surrounding the school. This is sometimes called "nearest school" or "neighborhood school" assignment, even though attendance zones are normally drawn to accommodate school
needs and student safety, not to conform to natural urban neighborhoods, and do not send all students to their nearest school.

In desegregated school districts, schools also have a geographic assignment policy, but often with two non-adjacent geographic zones, one in a minority neighborhood and the other in a majority neighborhood, sending students to the same school. Recently school districts have begun experimenting with voluntary desegregation plans in which students are allowed to attend schools without geographic restriction. In contrast, Catholic high schools almost always have no geographic restrictions; schools select students on other criteria, not according to where they live. What impact does this have on racial segregation?

Are private school systems more or less segregated than public systems? We are unlikely to find a definitive answer to this question soon. No doubt the degree of racial segregation in private school systems will vary with the size and the racial and religious mix of the community being served, the school assignment policies used by the private school systems, and the school assignment policy used by the public schools with which the private schools compete for students.

The Data for Two Large Cities

While data on the racial composition of some private
schools are available, they are not assembled into a single compendium as is the case with data on public schools in the United States.<1> However, we have obtained data from two large Northern metropolitan places: Chicago and Cuyahoga County (Cleveland).<2> Table 1 presents the data for these school districts. For comparison purposes we have also included the data on level of segregation for the public schools. Table 1 analyzes only data for desegregation of Blacks from non-Hispanic whites. Introducing Hispanics and other minorities into the computation complicates the problem greatly, because in some cities Hispanics are racially segregated residually much more than in other cases; in some cities they disproportionately use private schools. In general, the segregation of whites from all other minorities is considerably lower than the segregation of whites from Blacks only (see Farley, 1981). We used 1968 data for the public schools in order to be certain that we were calculating indices for the schools when they adhered to a strict "nearest-school" policy. Beginning in the early 1970s both

<1> Since 1967, the United States Government has recently published on computer files and bound volumes the racial composition of all schools in all but the smallest school districts. The first of these was "Directory of Public Schools in the United States with enrollment and staff by race, 1967: National Center for Education Statistics, U.S. Government Printing Office, 1969. Volumes are readily available only for even numbered years after that.

<2>The data for Chicago was provided by Joe T. Darden, Urban Affairs Programs, Michigan State University; the data for Cleveland were provided by Richard Obermanns of the Cuyahoga Plan of Cleveland, a group concerned with housing segregation issues.
Table 1: Segregation in Public and Private School Systems in Two Large Metropolitan Areas

<table>
<thead>
<tr>
<th></th>
<th>Chicago</th>
<th>Cleveland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Enrollment</td>
<td>437,343</td>
<td>31,988</td>
</tr>
<tr>
<td>% black</td>
<td>55.3%</td>
<td>27.9%</td>
</tr>
<tr>
<td>% other minority</td>
<td>10.1%</td>
<td>19.9%</td>
</tr>
<tr>
<td>3-W dissimilarity index, d</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>% black of average whites' school, Ebw</td>
<td>6.0%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Standardized index, Sbw</td>
<td>.90</td>
<td>.92</td>
</tr>
<tr>
<td>% of all black students who are in schools less than 50% black</td>
<td>2.3%</td>
<td>4.9%</td>
</tr>
<tr>
<td>% of all white students who are in schools less than 50% white</td>
<td>4.4%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

High School:

<table>
<thead>
<tr>
<th></th>
<th>Chicago</th>
<th>Cleveland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Enrollment</td>
<td>136,719</td>
<td>33,880</td>
</tr>
<tr>
<td>% black</td>
<td>46.0%</td>
<td>16.9%</td>
</tr>
<tr>
<td>% other minority</td>
<td>7.2%</td>
<td>13.4%</td>
</tr>
<tr>
<td>3-W dissimilarity index, d</td>
<td>80</td>
<td>73</td>
</tr>
<tr>
<td>% black of average whites' school, Ebw</td>
<td>14.0%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Standardized index, Sbw</td>
<td>.72</td>
<td>.63</td>
</tr>
<tr>
<td>% of all blacks who are in schools less than 50% black</td>
<td>9.5%</td>
<td>31%</td>
</tr>
<tr>
<td>% of all whites who are in schools less than 50% white</td>
<td>9.2%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>
public school districts allowed at least small amounts of desegregation to occur, and Cleveland now has an extensive desegregation plan in place.

The table uses three indices of desegregation. Table 1 shows the exposure index $E_{bw}$ (the percentage Black of the average white's school), and the standardized index, $S_{bw}$. It also shows the other commonly used index, the index of dissimilarity, which is based upon the sum across all schools of the difference (in absolute numbers) between the number of whites and the number of Blacks in each school building. Specifically the formula is ...

$$D_{bw} = 100 \sum_{i=1}^{n} \frac{B_i - W_i}{B \cdot W}$$

Where $B_i$ and $W_i$ are the number of Blacks and whites in the $i$th school and $B$ and $W$ the number of Blacks and whites in the total district.

The dissimilarity index ranges from 0 (perfect desegregation) to 100, (meaning perfect segregation). The dissimilarity index can be interpreted as the percentage of students of either race who would have to be relocated in order that every school in the district have the same racial mix. Both indices are calculated using only the whites and blacks in the school. Hispanics and other minority students are removed from the computation entirely; a school with 2 blacks, 3 whites and a hundred members of other minority
groups is treated as a school whose total enrollment is only 5 students. We think this is the simplest way to compare segregation of whites from blacks, since other minority groups often serve as a kind of buffer group which is more integrated with both Blacks and whites than Blacks and whites are with each other. Thus the more non-black minorities present, the higher the apparent amount of integration of (non-Hispanic) whites with others and the higher the integration of Blacks with non-blacks, even though whites and Blacks may remain highly segregated from each other.

Table 1 shows that the two Catholic school systems differ from their counterpart public systems and also from each other. Both systems are smaller than the public schools, have proportionately fewer Blacks but more non-black minorities. The dissimilarity index shows the elementary schools highly segregated. The Chicago public schools in 1968 were as highly segregated as any system in the North. It and other highly segregated public schools have all desegregated to at least a small degree; this means that the Chicago Archdiocese may be the most segregated elementary school system, public or private, in the U.S. Cleveland’s public and Catholic elementary schools are also highly segregated, their dissimilarity indices both being .90. It is not surprising that Chicago and Cleveland have similar levels of segregation; the cities were demographically quite similar until the recent wave of Hispanic immigrants came to Chicago but not Cleveland.
The exposure indices show the same pattern. In Chicago Catholic schools, the average white child is in an elementary school which is only 3.9% black; for Cleveland the figure is 2.1%. The standardized index for Cleveland is only .79 because the Cleveland Catholic schools are only 10% black.

The last two rows of the top panel indicate the extent of segregation in another way; they show that in Chicago Catholic schools, only 4.9% of Black students are in predominantly white schools and only 1.5% of whites are in predominantly Black schools. In 1968 the Chicago public schools had fewer Blacks in predominantly white schools (2.3%) and more whites in predominantly Black schools (4.4%). This partly reflects the fact that the public schools had fewer predominantly white schools and more predominantly Black ones; but it also reflects the rigid geographic school assignment policies then in use in the public schools, wherein Black students were not allowed to transfer to predominantly white schools but white students were also not allowed to flee from predominantly Black schools. The pattern in Cleveland's Catholic schools is the same but more pronounced; 16.8% of Blacks but only .6% of whites are in schools where they are in the minority.

Catholic high schools are less segregated than public schools. Both the dissimilarity and exposure indices show this. The last two lines of the table show why this is
true. In Chicago, 31% of all blacks in Catholic high schools are in predominantly white schools. Older than elementary school students, high school students are apparently more willing to embark on long bus rides to get to a school in a white area. Only 1.9% of whites in Chicago Catholic schools go to predominantly Black high schools. The data for Cleveland are more striking because all 18 Catholic high schools in Cuyohoga County are predominantly white. This yields an extraordinarily low standardized exposure index. The dissimilarity index is rather high, because this index is sensitive to a maldistribution of Blacks within these schools; blacks are concentrated in 9 of the 18 schools, although there are not enough Blacks to make a majority in any of these schools.

One would have expected the Catholic elementary schools to show less segregation than the public schools because the absolute number of Black students enrolled is smaller. In cities with a high level of residential segregation, the amount of desegregation which occurs under a neighborhood school policy is basically a function of the relative size of the boundary zone between Blacks and whites (where integrated neighborhood schools might appear) compared to the size of the Black residential area. At the extreme, if the Black population is not large enough to fill one public elementary school, the public school serving this area under a neighborhood school policy would necessarily have to have an
FIGURE 1: LEVEL OF SEGREGATION
BY NUMBER OF BLACK STUDENTS IN DISTRICT,
FOR 72 CITIES USING NEAREST-SCHOOL ASSIGNMENT

TOTAL BLACK ENROLLMENT
attendance zone large enough to include some whites and result in the school being integrated. At the other extreme where there are very large Black residential areas, as is the case of these cities, the number of Black students living on the boundary of the Black residential area and thus likely to attend integrated schools with whites under a neighborhood school policy is small relative to the total Black school age population. If Catholic schools serve a small black population they can only do so by providing elementary schools which serve extremely large areas; even with a large black residential area, if attendance in Catholic schools occurs with relatively low density, then the areas served by each Catholic elementary school might be very large and could easily go outside the Black residential area to include whites as well. Figure 1 shows the data from public schools supporting the hypothesis that districts with small Black populations are less segregated. In that figure we have plotted the 1968 exposure indices (for elementary and secondary schools combined) for the 72 largest northern public school districts plotted against the (natural log of) total black enrollment in the school districts. Generally, the fewer blacks in a district, the lower the level of segregation in 1968, when nearly all these public school systems used a simple neighborhood school policy. We have shown this by fitting an s-shaped curve to the 1968 data. An s-curve is appropriate since there are both floor and ceiling effects in the standardized
exposure index. We have identified the Chicago and Cleveland public schools in the figure; they both show very high levels of segregation. We have also shown, in the upper center and upper right, the data points for the Catholic schools of Chicago and Cleveland. The Catholic systems, with smaller black enrollments seem inexplicably segregated. Perhaps this model of segregation as a function of Black enrollment is not applicable to private school systems, but it does intuitively seem there should be less segregation in a school system with fewer minorities. The relatively low level of high school segregation is more than offset by the high level of elementary school segregation in the two Catholic school systems; it looks like these Catholic systems have more segregation than would appear in a typical public school system using a neighborhood school policy. Such a neighborhood school assignment policy has, with few exceptions, been judged illegal in nearly every city. Tauber and James (1982) show data indicating Boston's Catholic schools much more segregated than the court-desegregated Boston public schools.

We also see in Figure 1 that public districts are likely to have reduced their level of segregation in the decade from 1968 to 1978. A second curve has been drawn to show the relationship of Black population size to the 1978 standardized exposure index and this curve is much lower for districts with few Black students.
The 1978 curve is furthest below the 1968 curve in the middle of the figure; districts in the left region would benefit little from desegregation since their indexes were already low in 1968, while districts with very large Black populations are unlikely to desegregate.

One explanation for the high level of elementary school segregation in these Catholic elementary schools and the much lower level of segregation at the high school level is that both Catholic school districts do not use a neighborhood attendance boundary system. Most public schools in the era before desegregation assigned students to their nearest school under a strict geographic rule—exceptions were made on a case-by-case basis but generally discouraged. Private school systems typically do not use these kinds of attendance boundary rules. At the high school level this results in a decrease in segregation to the extent that Black students are willing to travel (sometimes long) distances in order to attend predominantly white high schools. For example, in Chicago there are twelve Catholic high schools where Blacks outnumber whites; but 1746 Blacks chose not to attend them, instead traveling to one of 30 predominantly white high schools; there are only two high schools in the Chicago city limits which do not enroll any Blacks at all.

However, an unrestricted free choice system works to further segregation in an important way. Just as Blacks are
free to travel to predominantly white schools, so are whites free to avoid predominantly Black schools. In Cleveland only 226 of Cleveland's 36000 non-Hispanic white elementary parochial school students attend predominantly Black schools. By comparison, there were nearly 7000 whites in predominantly Black public schools. At the elementary school level, parents are much less willing to have their children travel long distances and this is reflected in a much higher level of segregation there. In Chicago there are 95 Catholic elementary schools which are predominantly white and enroll fewer than 10 Black students--most of them having none. At the same time, freedom of choice does mean that whites are free to avoid predominantly Black schools, and they do. Thus the free enrollment policy of the Catholic schools seems to result in a pattern where there is less segregation at the high school level than there would be under a standard "neighborhood" policy of assigning students on the basis of home residence to a nearer school; but at the same time there appears to be more segregation at the elementary school level than would result from a neighborhood school plan.

Private schools are not permitted to discriminate in their pupil-assignment policy, but, there has never been an effort to require parochial school systems to adhere to the desegregation policies which are normally required of public school systems. Certainly no public school system as large as either of these private school systems and with as small
a number of Black students could expect to avoid being required to desegregate by a court.

The degree of segregation by race in private schools should vary greatly from one city to another across the United States. We see that in these data in the difference between Cleveland and Chicago. Cleveland, for whatever reason, does not have a predominantly Black high school. Consequently, its level of segregation in its high schools is much lower. By extension, we should expect to find a large number of cities where the public schools have predominantly Black public schools and there is no predominantly Black parochial elementary or high school. This leads us to predict that there are certain cities in the U.S. where the Catholic schools may be less segregated than the public schools. This might occur in some cities which have relatively small total pupil enrollments and large proportions of Black students in schools. East Chicago, Gary, Oakland, Trenton, Newark and Hartford are examples of cities which might fit this description. All of them are relatively small but have such a large Black proportion of the schools that their schools are highly segregated and it may be that one or more of these cities has parochial schools which are less segregated than the public schools.

Table 2 shows the degree of segregation of Hispanics from non-Hispanic whites in Chicago and Cleveland. Table 2 has the same format as Table 1, but we do not show 1968 public
Table 2: Hispanic Segregation in Chicago and Cuyahoga County Catholic Schools

<table>
<thead>
<tr>
<th></th>
<th>Chicago</th>
<th>Cuyahoga County</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary Schools:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissimilarity Index</td>
<td>68%</td>
<td>60%</td>
</tr>
<tr>
<td>% Hispanic of Schools attended by average non-Hispanic whites</td>
<td>11.9%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Standardized Exposure Index</td>
<td>49</td>
<td>14</td>
</tr>
<tr>
<td>% Hispanics in Predominantly non-Hispanic White Schools</td>
<td>43.7%</td>
<td>100%</td>
</tr>
<tr>
<td>% of non-Hispanic Whites in predominantly Hispanic Schools</td>
<td>3.9%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>High Schools:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissimilarity Index</td>
<td>44</td>
<td>38</td>
</tr>
<tr>
<td>% Hispanic of Schools attended by average non-Hispanic Whites</td>
<td>11.1%</td>
<td>1.6</td>
</tr>
<tr>
<td>Standardized exposure Index</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td>% Hispanics who attend Predominantly non-Hispanic White Schools</td>
<td>72.0%</td>
<td>100%</td>
</tr>
<tr>
<td>% non-Hispanic Whites who attend Predominantly Hispanic Schools</td>
<td>1.3%</td>
<td>0%</td>
</tr>
</tbody>
</table>
school data for comparison, since much migration of Hispanics to these cities occurred after 1968. The segregation levels in both cities are high at the elementary level, lower for high schools. For comparison, Farley (1981) computes for Chicago a combined elementary and high school Hispanic vs. non-Hispanic white dissimilarity index of 65 and a standardized exposure index of 50 for 1978.

**White Flight to Private Schools**

Private schools can also affect the amount of racial segregation in education by providing havens for whites fleeing from desegregated schools. If whites transfer from schools which have larger numbers of Blacks to schools with fewer blacks, the amount of segregation will increase.

Discussions of white flight to private schools have usually been concerned with flight from newly desegregated public school systems. There seems to be a general consensus that white flight does occur in many cases when public schools are desegregated. White flight is especially likely to occur when whites are reassigned from their own neighborhood school, and when the schools that they are assigned to have large Black populations or are in Black neighborhoods (Rossell, 1981). In one analysis of the Boston school desegregation plan, Rossell and Ross (1979) concluded that over half of the flight from public schools by whites after desegregation was to private schools. The Appendix of their report lists a number of parochial and other private schools
whose enrollment increased markedly after desegregation; the types of schools range widely, seeming to include all types of private schools. In a second analysis of Boston, Taylor and Stinchecomb (1977) found that the families who moved from Boston were more tolerant of school desegregation than the white families who remained behind, suggesting that most of the families who moved to the suburbs were the young, well educated, upwardly mobile families who would have still moved to the suburbs if there had been no desegregation plan. This supports the idea that much racially motivated change in enrollment came about because of movement to private schools, not residential relocation. Orfield (1978) draws the same conclusion in analyzing the early stages of the Los Angeles desegregation plan—he found no softening of the central city housing market but a considerable effort underway to establish new private schools. Another case which provides evidence that private schools are used to escape desegregation comes from Jacksonville where Giles (1977) finds a drop in white enrollment for those particular grades where white students are reassigned to schools in Black neighborhoods. In the Jacksonville plan this only occurs in certain middle school grades. For those grades the white enrollment is considerably lower than it is for the grades before and after that. This again suggests that private schools are used, since families who moved out of the school district would be lost permanently and there would be no increase in public school attendance among
whites in the upper grades (the school district in this case covers the entire quite large Duval County; it would be quite inconvenient for families who work in the Jacksonville area to move beyond the county boundaries to escape desegregation).

None of these studies provide us with a reasonable estimate of how much movement to private schools has occurred because of desegregation nationally. Boston is probably not typical of other cities; nearly a third of Boston's whites attended private schools before desegregation began; less than a dozen large cities in the United States had a higher proportion of their white population in private school (Becker, 1978). Boston schools also experienced more controversy and violence than nearly any other city involved in desegregation. Thus it seems safe to conclude that there is a considerable amount of flight from newly desegregated public schools to private schools in a number of different school districts, but there is no data to permit us to estimate what proportion of all white flight is to private schools or the total number of students who moved from public to private schools because of desegregation.

There is also racially-motivated white flight from segregated school systems as well. If, as Rossell argues, whites flee the public schools to avoid having their children attend predominantly Black schools, then in many cities with segregated schools there will be flight from the schools in
changing neighborhoods where the public school is predominantly Black under a neighborhood school policy. Becker (1978) analyzes growth in private school enrollment for the decade of the 1960s, when there was almost no desegregation of Northern school districts. He found that the larger the Black enrollment in the public schools, the larger the growth of the private schools serving that city. This is in fact the single best predictor in his multiple regression equation estimating growth in private school enrollment from a number of demographic factors.

Of the 52 largest cities studied, the city with the largest increase in the percentage of white students in private school was Washington, DC: 37% of its whites were in private school in 1959 and 46% in 1969.

Coleman, Hoffer and Kilgore construct an accounting model which leads them to conclude that the existence of private schools does not increase racial segregation in American education. However, their model is based on an erroneous assumption and it seems likely that the conclusion of the model is wrong. However, their model does provide a useful framework with which to analyze the issues. They argue that one can analyze the role of private schools by asking a question, "What would happen if all private schools were closed and the students presently enrolled in them were returned to public schools?" If private schools have had a
Table 3: Application of the Coleman-Hoffer-Kilgore Accounting Model to the Chicago Public High Schools

<table>
<thead>
<tr>
<th>Racial Mix*</th>
<th>Before Closing Catholic Schools</th>
<th>After Closing Catholic Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of School</td>
<td>Number of Whites</td>
</tr>
<tr>
<td>0-3% black</td>
<td>20</td>
<td>31380</td>
</tr>
<tr>
<td>5-20% black</td>
<td>12</td>
<td>19050</td>
</tr>
<tr>
<td>20-50% black</td>
<td>7</td>
<td>6602</td>
</tr>
<tr>
<td>50-80% black</td>
<td>10</td>
<td>6624</td>
</tr>
<tr>
<td>80-95% black</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>95-100% black</td>
<td>23</td>
<td>280</td>
</tr>
<tr>
<td>TOTAL</td>
<td>72</td>
<td>63936</td>
</tr>
</tbody>
</table>

white + black total 126,941 6495

*Non-black minorities excluded.
seggregating influence in America, then closing them and reassigning all the students to public schools should result in a lower index of segregation. They conduct a "thought experiment" which does exactly this, and conclude that if private schools were closed the public schools would be no more racially integrated than the present mix of public and private schools are—hence the private schools do not have a segregating influence. Unfortunately, there is a serious error in their hypothetical model.<3> They assume that when private schools are closed, the white and Black students in them will be dispersed into the existing public school system, with each public school gaining an increase in white and Black enrollment proportional to its present white and Black enrollment. (E.g., Each school would increase its 10th grade white enrollment by 7.6% of its present white enrollment, and increase its Black enrollment by 2.6% of its present Black enrollment. Such a model may seem reasonable at first glance, but a hypothetical example, using Chicago's 1968 public high school data, shown in Table 3, immediately reveals the problem. The students should be returned to the schools that they would attend if the private schools did not exist. Yet this model assumes that all white schools gain a 7.6% enrollment, and this means that students left these public schools or chose not to attend them in a manner which is completely uncorrelated with the racial composition

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<3> This argument has also been presented by Taeuber (1982) and Crain (1981)
of the schools. This means, first, that only 4859 whites would be sent to these schools, even though there were 23,634 whites enrolled in Catholic schools in 1980. Second, it means that nearly all whites in Catholic schools are assumed to live in areas served by predominantly white schools; for example, that only 21 Catholic school whites lived in areas served by Chicago's 23 high schools which were 95% or more black. This runs exactly contrary to all the research on white flight, which indicates that whites are more likely to withdraw to attend private schools if they are assigned to schools with large numbers of Black students. In other words, this model assumes that there was no "white flight" from public schools to private schools because of race. Of course, if there were no white flight for racial reasons, then there is no reason to assume that the movement from public schools to private schools created segregation. We do not know the extent of white flight. Perhaps in the larger scheme of things the white flight in Boston, Los Angeles and Jacksonville is a negligible drop in the bucket, and the Coleman, Hoffer and Kilgore model is a sensible approximation of the real world. But we do not know this and there is certainly no reason to assume something which runs directly contrary to the existing evidence.

The other problem with the model is that it is based exclusively on high school data. If Cleveland and Chicago are representative of other cities, then there is a good deal more segregation at the elementary level in private
schools than at the high school level. Much of the movement in those cities from public schools to private schools consisted of Blacks leaving segregated public schools to attend segregated private schools, and whites leaving a mixture of segregated and integrated schools to attend schools which are overwhelmingly white.

The Other Side of the Argument: What Private Schools May Be Doing To Help Desegregation.

The role of private schools in racial segregation in American education is not simply one-sided. There are three ways in which private schools may work to help integrate American schools or at least help integrate the neighborhoods these schools serve. First, Rossell (1983) has shown that the white flight which occurs after desegregation tends to be of limited duration. By approximately the fourth year of a desegregation plan the rate of white loss is, according to some models, actually less than would have occurred had there been no desegregation. We suspect that one of the reasons for this is that many families withdraw their children not by moving to the suburbs but by entering them in private schools while remaining in the city. These families are likely to return their children to public schools after they have witnessed a few years of desegregation. Had there been no private schools at least some of these families would have moved to the suburbs, and in doing so would have made it impossible for their children to later return to the
desegregated public schools of the central city. If whites must flee from desegregation it is clearly preferable for them to remain in the city sending their children to private schools than for them to move to the suburbs. (At the same time, we should note that many families would leave their children in the public school and not move to the suburbs if no private schools existed.)

The same argument applies to white flight from segregated systems. In segregated school systems it is often the case that a changing neighborhood is served by an all-black elementary school long before the neighborhood itself loses its last white family. This is not because blacks have larger families than whites, but because the whites in older changing neighborhoods are often themselves older, with children who have finished school. Thus a number of homes occupied by whites will have relatively few children of school age, and some of those will have have always attended parochial schools for non-racial reasons. In contrast Black families moving into the area often move there in order to locate a good public school for their children. For this reason a neighborhood may be racially mixed but have a school which is overwhelmingly Black and hence unacceptable to many white families. In this situation a private school alternative may enable some families to remain living in their integrated neighborhood rather than moving out and hurrying the process of "tipping".
It is however possible for public schools to provide the same sort of opportunity. In some urban areas, racially balanced magnet schools serve as alternatives to the neighborhood school for white families in integrated neighborhoods where the local school is overwhelmingly black. Of course a segregated school system can stabilize integrated neighborhoods by adopting a full-blown desegregation plan which guarantees that residents of neighborhoods in transition will be served by an integrated public school for the indefinite future. Cities whose public school systems are desegregated do find their integrated neighborhoods considerably more stable and are experiencing a growth in residential integration as a result. (See Pearce, Crain, and Farley, 1984, and Pearce, 1980.) In the absence of public school desegregation, a private school system may serve to slow neighborhood change by providing a "haven" for white school children whose parents would move out otherwise.

It is also the case that sometimes a predominantly private school system provides an opportunity for voluntary integration for some Black students. In cities like Chicago and Cleveland, the Catholic school system serves as a last resort for families concerned about what they see as low quality of education and serious discipline problems in inner city public schools. If there were no private schools there would be more whites in the public schools in Chicago, but the Chicago public schools still might not be racially desegregated. Many Black students would be trapped in inner
city public schools without a reasonable alternative. Whether the transfer of minority students from public schools to private schools creates desegregation for them or not depends of course on whether the private school systems are segregated. In the two large cities we have studied, where private elementary school systems are highly segregated there is not much chance that a minority student enrolling in private school will be attending a desegregated school. At the high school level in Cleveland, where there are no predominantly black or predominantly Hispanic high schools, minorities in private schools will be desegregated. For cities like Hartford, whose public schools are segregated but have no predominantly Black Catholic elementary school, the presence of Parochial schools can play either a segregating or a desegregating role, depending on whether the number of Blacks entering the private school system is larger or smaller than the number of whites using the private school system to escape attending integrated schools in Hartford.

The public schools in large cities with large Black school enrollments can provide an alternative to segregated education for these students; in the St. Louis metropolitan area a large number of Black students assigned to segregated schools in St. Louis City are taking advantage of the opportunity to transfer to white suburban public schools under a Federal court order. Milwaukee and Indianapolis are two other cities where inner city Black students are permitted
to attend suburban schools. In Cleveland and Chicago a very large number of segregated Black students could be desegregated if they were allowed to attend suburban school systems. Unfortunately these cities do not permit transfer across district lines.

Private schools are a two-edged sword, encouraging racial integration of the public schools and of central city neighborhoods (and providing desegregated education for some Black students) at the same time that they serve as havens for white flight which destabilizes both segregated and desegregated central city school systems and creates segregated public schools. We do not have all of the data necessary to make a balancing of these competing processes, although the data we have presented thus far seem to indicate that the parochial schools cause more segregation than they prevent.

The Educational Effects of Attending Desegregated Private Schools

Coleman, Hoffer and Kilgore and also Greeley (1982) talk about the educational benefits of parochial schools to minority students. Both refer to the idea that the parochial school is a "common school," better able to serve the needs of a wide range of students than is the public school system. Greeley makes this argument explicit, saying that the Catholic schools have had a tradition of educating immigrants entering the United States and therefore are
almost instinctively oriented toward providing avenues for upward mobility of persons not yet in the mainstream of the society. It is clearly the case that the Black students in private schools in the High School and Beyond sample score much higher on standard achievement tests than do Blacks attending public school. There is no way, however, to be sure that the common school hypothesis is correct. There are two alternative arguments. First is that private schools are highly selective and only admit brighter minority students; the second argument is that private schools are educationally superior for minority students than are public schools because they are in many cases racially integrated. Research on public schools has indicated that Black students attending desegregated public schools score higher on achievement tests as a result of that desegregation. In Cleveland and Chicago black students who transfer from public schools to private schools are not very likely to receive a desegregated education, at least at the elementary school level, so we don't think that there is much chance of an educational benefit being derived because of desegregation in these cities. No doubt there are a large number of smaller cities where Black students can leave segregated inner city schools to attend predominantly white Catholic schools, and here there would be good reason to expect their education to improve because of desegregation.

A recent review of the literature on desegregation and minority achievement seems to yield convincing evidence that
minority students in desegregated schools score higher on standard achievement tests than they would if they were in segregated schools. Previous research had been inconclusive on this, but the latest review (Crain and Mahard, 1983) identifies a factor which explains reasonably well why previous research often found conflicting results. Most studies of desegregation analyze the test scores of Black students who attended segregated schools through second or third grade and then transferred to desegregated schools and were tested shortly thereafter. In fact, this is a very unrepresentative situation, since nearly all desegregation plans in the United States begin in kindergarten and first grade and nearly all the desegregated students in upper elementary school would have attended desegregated schools throughout their educational career. (The reason why there are so many studies done of students who have transferred from segregated to desegregated schools is because so many studies are done during the first year or two of desegregation, and researchers do not attempt to study the achievement of students in first and second grade because tests administered to students in the upper elementary grades are more reliable).

The Crain and Mahard review identified 23 studies that compared students who had been desegregated from first grade to Black students in segregated schools or to Black students in the same grade in the same school district before desegregation. The authors of these studies analyzed 45
samples of students involved in 19 desegregation plans. Of the 45 studies, 40 show positive effects and for those for which a size of effect could be estimated, desegregation appeared to raise achievement by a quarter of a standard deviation—the equivalent of 25 points on the SAT verbal or quantitative score.\textsuperscript{3}

Thus in some cities a private school system provides an opportunity for desegregation and improved education which is not otherwise available. Even this can be viewed as a two-edged sword, however, because it amounts to a kind of tracking in which the children from highly motivated families are allowed to segregate themselves into schools which in many cases are selective, excluding students with academic or behavior problems. The public schools thus become a sort of bottom track, and evidence from studies of tracked schools indicate that students in the lower tracks learn less than they would if they were in heterogeneously grouped rooms. Thus the operation of two school systems may function to make inner-city low-income schools worse than they

\textsuperscript{3} In 1982, a Reagan-influenced National Institute of Education organized a panel of mainly conservative experts to rebut this review. The panelists concluded that desegregation did raise achievement but that the effects were much smaller than those found by Crain and Mahard. None of the panelists elected to test the hypothesis that the effects would be stronger for students desegregated in kindergarten or first grade. They arrived at a committee decision to disregard those studies on the grounds that it is methodologically too difficult to study students who are desegregated in kindergarten or first grade and that 21 of the 23 studies analyzed by Crain and Mahard were methodologically too weak to be evaluated (National Institute of Education, 1984).
would otherwise be. (For a discussion of the public-private schools as a "tracked" educational system, see McPartland and McDill, 1982.)

Conclusions

The optimistic conclusions drawn by Coleman, Hoffer and Kilgore do not seem to be supported by the data from the two large metropolitan areas studied here. From these data there is little reason to believe that the impact of private schools is simply benign. At the same time we do not believe enough data is available to draw the more complicated conclusion which is probably the correct one: namely that private schools further the segregation of schools under certain conditions and encourage racial integration of either schools or residential neighborhoods in others.
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