# CHANGING PATTERNS OF URBAN SCHOOL DESEGREGATION

## A Comparative Analysis

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Twenty years have elapsed since the Supreme Court, in Brown 1 and 2 (1954; 1955) ordered school districts in the South to desegregate. During that time not only have enormous changes come about among southern states, but the whole de jure and de facto distinction has blurred so that many northern school districts now find themselves under court order to desegregate. As would be expected given the obvious far-reaching consequences of such change, social scientists have found the school desegregation process of special interest. Growing attention, for example, is being paid to why desegregation has had greater success in some places than in others. No doubt the impact of the federal government has been of immense importance. But federal power has limits; it may be more effective under certain conditions or in certain areas than in others. Even with federal pressure, other forces undoubtedly contribute to the effectiveness or lack thereof of the implementation of school desegregation policies. The analysis to follow attempts to unravel the various forces contributing to the recent changes in

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school desegregation patterns among a large group of northern and southern cities.

Early case studies of desegregation emphasized the primacy of the local school board in responding to demands for the end of racial separatism in the public schools (Crain and Street, 1966; Crain, et al., 1968). Much of this literature has been concerned with why some school boards capitulate more readily than others to the demands of civil rights groups. Crain and Vanecko (1968), for example, have argued that the most crucial determinant among northern cities is the extent to which the school system is reformed or political. Nonpolitical boards were more likely to acquiesce since, according to the authors, they tended to be more responsive to the influence of local civic elites who prize order and stability.[1] Dye's (1968) analysis of the effects of reformed municipal government structures on efforts to desegregate schools, however, raises questions concerning whether insulated officials are more receptive to minority overtures. In northern cities he found that political system variables failed to withstand controls for socioeconomic differences. But in the South this was not the case; more political forms of government—mayor governments and partisan elections—were independently associated with lower levels of segregation (Dye, 1968: 159-163). Karnig (1975), on the other hand, determined that local government reforms tended to diminish the influence of policy demands by civil rights groups. Despite these discrepancies it is intuitively appealing to believe that greater political insulation for local officials may create an environment in which it is possible for them to resist mass pressure antithetical to black demands. Given the conflicting findings it seems appropriate to include in the analysis to follow measures of both school board insulation and municipal governmental reform. In addition it would seem desirable to assess the impact on desegregation where cities directly operate the school system as opposed to the independent school district arrangement. While little evidence exists to support a position one way or another, perhaps the more politicized city-operated systems might be more likely to reflect mass sentiments generally

less supportive of changes in the racial status quo. The result is less school desegregation.

The effects of social and economic forces have been of particular concern to those undertaking systematic comparative research on school desegregation. A number of important influences have been identified, although certain findings either conflict, give greater weight to some conditions over others, or apply in only one region. In particular, the following socio-economic and demographic characteristics have been found to have adverse consequences for levels of desegregation in public schools:

(1) large proportion of black pupils in public schools (Dye, 1968; Farley, 1975);

(2) low levels of community ethnicity (Dye, 1968; Kirby, Harris, Crain, and Rossell, 1973);

(3) large status differentials between blacks and whites (Vanfossen, 1968; Prothro, 1972);

(4) large school districts (Giles, 1975; Farley, 1975);

(5) residential segregation (Farley, 1975).

Certain studies of residential segregation and minority discrimination have developed explicit models incorporating certain of the above variables in a causal fashion. In particular the work of Marshall and Jiobu (1975) tested a racial segregation model predicated on theoretical assumptions developed from an ecological perspective. This approach, drawing on the work of Park (1967) and Lieberson (1963), viewed residential segregation as the spatial expression of intergroup variations in status. Through a variety of means, groups with high status are generally able to avoid extensive contact with lower-status groups. Lieberson (1963) found that intergroup segregation levels varied closely with certain status measures such as education and country of origin. Others (Duncan and Duncan, 1955) have confirmed this status avoidance phenomenon, which leads to the general expectation that racial segregation, whether

by residence or in schools, may be causally linked to black-white status differentials. In fact, Marshall and Jiobu (1975) found this to be true in their analysis of residential segregation among 149 large urban places.

Blalock (1967) has argued that status factors alone are not sufficient to account for discrimination, that economic self-interest is also a major cause of minority discrimination and, by implication, minority segregation. Thus he introduced the notion of competition for scarce resources as a condition contributing to racial discrimination and separation. It follows that the larger the relative size of the minority, the more that group will be seen as a threat to the dominant group. In Blalock's words, "As the minority percentage increases, therefore, we would expect to find increasing discriminatory behavior" (Blalock, 1967: 148).

The hypothetical explanation of the influence of ethnicity on racial segregation was considered in the work of Kirby, Harris, Crain, and Rossell (1973). While recognizing that blue-collar ethnics are popularly stereotyped as being the backbone of the white backlash, they nonetheless found that cities with larger ethnic concentrations apparently select political leaders who opt for concessions to black demands. Dye (1968: 156) also observed that school segregation levels were lower in cities with sizable white working-class ethnic subpopulations but was unable to offer any rationale for the relationship. Apparently it has something to do with a more traditional political style that responds to a variety of special interests including minority needs. It may be that a measure reflecting the existence of an ethnic subpopulation is acting as a surrogate for a political setting often associated with certain older eastern cities in which the existence of interest groups, patronage, bargaining, and coalition formation creates a political system from which blacks are not totally excluded. While not sufficient in itself to totally break down segregation barriers, this older-style political climate may contribute to lower overall levels of racial separation in the public school systems.

The more students found within a school district, the more difficult it should be to successfully implement desegregation policies. The reasons are primarily practical. The logistics of desegregating are clearly more demanding and complex where large numbers of students must be shifted around perhaps over a wide geographic area. Finally, since the social and racial composition of schools has historically reflected neighborhood characteristics, it would be expected that school segregation levels would be associated with the extent of racial separation among neighborhoods within the community. Farley's (1975) research confirmed this expectation: school segregation in 1967 reflected neighborhood segregation.

The local political climate may also operate to inhibit the process of desegregation. This might occur where considerable political support has appeared in recent years for candidates widely known to be unsympathetic to black causes. Although this particular political climate may not operate apart from other socioeconomic and demographic forces, it seems potentially valuable to represent this phenomenon separately. So in the analysis to follow we will include a variable to represent a potentially hostile local political climate operationalized as percentage vote for Wallace for president in 1968. No argument is made here that support for Wallace is solely racial in origin, only that such a measure seems to be the most satisfactory way of tapping an underlying political orientation that may make school desegregation more difficult to achieve.

In the foregoing discussion it was mentioned that local elites who value stability and order may affect the desegregation process. Another way of assessing the potential impact of local elites is by the use of a more direct measure of the distribution of power within a community. Such an index is the MPO ratio (persons employed in managerial, proprietary, and official occupations) developed by Hawley (1963) and subsequently employed in other studies of community power using an ecological approach (Lincoln, 1976). The hypothesis consistent with the discussion of reformed governments and insulated

school boards is that the greater the centralized power, the more desegregation should exist.[2]

Finally we come to a consideration of the impact of federal policy on the desegregation process. Several recent studies (Rodgers, 1974-1975; Farley, 1975; Giles, 1975; Rodgers and Bullock, 1976) have demonstrated the importance of federal action in dismantling separate school systems primarily, of course, in the South. In fact, the federal impact should be the most crucial factor contributing to changes in segregation levels among southern communities. Any consideration of this federal commitment must nonetheless take into account the various influences discussed above that may operate to inhibit or facilitate the process of school desegregation.

In sum, our analysis begins with a test of the two theories that revolve around the importance of the minority population in the school desegregation process. First, we expect more desegregation to occur where black-white status differentials are minimal. Second, in those school districts where a lower percentage of the school population is black, the desegregation process should occur more rapidly. To these two fundamental hypotheses, we add several additional expectations concerning the nature of the community and the political system in which the school system is located. Cities with larger ethnic populations should experience less difficulty in desegregating, while those with more residential segregation and larger school districts should encounter more problems. With respect to political characteristics, we hypothesize that the more independent or insular school boards and more reformed municipal governments will be associated with greater school desegregation. School systems operated directly by city governments might also have less segregation, and communities with more centralized power structures may reflect less segregated school systems. Those communities with large Wallace-supporting populations should prove more resistant. Finally, where the federal government has more actively intervened the positive impact on desegregation should be considerable, especially in the South.

## DATA AND METHODS

This study is based on a systematic comparison of 194 cities in the United States with a population of at least 50,000 (in 1960 and 1970) in which at least 3% of the students in the school district were black. The basic unit of analysis is the local public school district responsible for servicing the cities in this population.[3] The data on racial enrollment for the respective city school districts are taken from the U.S. Department of Health, Education, and Welfare *Directory of Racial and Ethnic Enrollment in Public Schools in Selected Districts* (1970 and 1974), and are based on national surveys taken in 1968 and 1972.

The dependent variables are the levels of public school desegregation (both elementary and secondary) in each city for 1968 and 1972,[4] as well as the relative extent of change over the four-year period. School desegregation can be measured in several ways. The U.S. Office of Civil Rights offers several calculations for the states based on the percentage of black students attending majority white schools. Calculations of this sort, however, do not take into account the difficulties encountered in desegregating school systems with a large proportion of minority students. An index of dissimilarity (often called the Taeuber index) can also be used to measure school desegregation. This index is based on the number of students who would need to be transferred to other schools so that every school would have exactly equal racial composition. Kirby, Harris, Crain, and Rossell (1973: 183) have argued that this measure does not take into account what is politically and logistically feasible for a school system to achieve and therefore is not policy oriented. They recommend instead a desegregation index that is more sensitive to the demographic characteristics of a particular city. This measure takes into account the number of black students who would have to be reassigned from predominantly black schools to create a 70/30 white-to-black ratio. A school system would be desegregated when there were either (1) no longer any predominantly black schools to supply black students for pre-

dominantly white schools, or (2) no longer any predominantly white schools to receive additional black students. Operationally, this index of desegregation is defined as the ratio of students already in desegregated schools to those who could (within the 70/30 ratio) be enrolled in desegregated schools.[5] This index was selected for use in the analysis to follow.

The 70/30 racial composition, however, requires further comment. Kirby, Harris, Crain, and Rossell (1973) are quick to point out that that ratio is not sacrosanct, that in fact it represents a conservative figure chosen to minimize potential objections from school administrators, educators, and white leaders. The key notion here is the creation of a desegregation measure that reflects, to some extent, community acceptability. They further argue that there is no reason to reassign students who are already attending desegregated schools or to thinly disperse black students across a number of white schools merely to increase the number of whites benefiting from desegregation. The 30% black figure apparently is more than an arbitrary one, however. Recent research by Giles, Cataldo, and Gatlin (1975) suggests that once a school reaches a 30% black threshold, the rate of withdrawal or rejection by white parents increases significantly. Although the authors disclaim the discovery of a tipping point, they nonetheless suggest that "maintaining racial balances in all schools at less than 30% would seem to be a worthwhile policy objective from the standpoint of minimizing (white) rejection" (Giles, Cataldo, and Gatlin, 1976: vi-vii). Without belaboring the dispute over the existence of a tipping point, others (Meyerson and Banfield, 1955; Hansen, 1968) have found evidence that past a certain threshold (around 30% black) whites tend to leave very quickly. In short, while the Department of Health, Education, and Welfare (HEW) and the courts may develop various school desegregation plans that avoid an exact ratio of whites to blacks, we believe the 70/30 desegregation index represents a realistic empirical measure that considers the social and political constraints existing in many cities.

Desegregation change, the third dependent variable, is operationalized as the standardized residual when 1972 desegre-

gation is regressed on 1968 desegregation levels for each school district within the region. This measure considers change relative to the 1968 base but is independent of values at $t_1$. The residualized scores indicate for a particular case whether the amount of change from $t_1$ to $t_2$ was greater or less than that which would have been predicted using least squares procedures. This method of measuring change appears especially useful as opposed to the customary percentage change approach where there is considerable variation in the initial values to $t_1$ (see Van Meter, 1974). In effect, the residualized change measure indicates the extent to which desegregation levels in a given school district exceeded or lagged behind other districts in the region.

Consistent with the earlier discussion of potentially significant factors affecting the desegregation process the following socioeconomic and political measures will be used as independent variables:

### SOCIOECONOMIC

(1) *Black/white status differential*—Measured as the percent of blacks in the labor force in white collar occupations divided by the percent of whites in the labor force in white collar occupations. The smaller the ratio the greater the relative black status disadvantage.

(2) *Residential segregation*—Measured as the index of dissimilarity between the distribution of white and nonwhite households among city blocks; the Taeuber index (taken from Sorenson, Taeuber, and Hollingsworth, 1975).[6]

(3) *Community ethnicity*—Measured as the percent of the city population of foreign stock (U.S. Bureau of the Census, 1972).

### FEDERAL GOVERNMENT

*Federal penetration activity*—A summary index of the number of times a city school district has been the subject of a distinctive type of federal pressure or assistance directly related to school desegregation. Covering the period 1954 to 1972, this score sums the following categories of federal activity for each district: court order; Department of Justice lawsuit; HEW citation for noncom-

pliance with the 1964 Civil Rights Act (CRA); Department of Justice assistance under Title X of the 1964 CRA; HEW assistance under Title IV of the 1964 CRA; and assistance under the Emergency School Assistance Program 1 and 2. The measure thus ranges from zero to six.[7]

**COMMUNITY**

(1) *Community power centralization*—This is the ratio of persons employed in managerial, proprietary, and official occupations (MPO) to the total labor force. This MPO ratio thus indicates the concentrations of key power figures within a city. The lower the ratio, the greater the power concentration within the community.

(2) *Political climate*—Measured as the proportion of the popular vote for president in 1968 for George C. Wallace (Scammon, 1970).

(3) *City government reform*—The extent to which the city government has implemented one or more of the institutional devices associated with the municipal reform movement, constructed by adding: manager-council government; nonpartisan elections for council; and percentage of council elected at-large.

(4) *City-operated schools*—A dichotomous measure to reflect whether or not the school system is included within the budget of the municipality (U.S. Bureau of the Census, 1972).

**SCHOOL DISTRICT**

(1) *School board insulation*—Measured as the extent to which the local school board had certain structural arrangements which would tend to assure or engender freedom of action from direct community pressure derived by summing the following characteristics for each city board: appointed; nonpartisan elections if not appointed; board term in excess of four years; meetings scheduled more than twice a month; board composed of less than seven members; and compensation for board service (from Educational Research Service, 1972).[8] Range 0-5.

(2) *School district size*—The natural log transformation of total students' enrollment in 1968.

(3) *Relative black enrollment*—The proportion of district enrollment that was black in 1968.

Multiple regression is employed to establish the extent to which the set of independent variables predict desegregation levels in urban districts in 1968 and 1972, as well as desegregation change during the period. Because public school desegregation has commonly been considered a separate process in northern and southern regions—based on the de facto and de jure distinctions—we have applied our analytic techniques to cities in these regions separately.[9] Further, because of the unavoidable imprecision with which several of our variables have been operationalized, the rather limited time frame within which racial enrollment data were available, and the general restrictions of the linear model on which we depend, this analysis should be considered as exploratory rather than definitive.

## FINDINGS

Prior to evaluating the multivariate analysis, an inspection of the simple relationships involved should prove useful. Table 1 presents the means, standard deviations, and simple correlations between independent and dependent variables for northern and southern cities. First, Table 1 shows that only a modest change in mean desegregation levels occurred in the North between 1968 and 1972; and the two variables are strongly correlated (.84). This merely confirms what is now common knowledge that most of the change in urban desegregation took place primarily in the South. At the same time it is important to note that there was substantial variation within northern cities as to desegregation change, and while not as large as for the South, this variation about the regional mean was not inconsequential (S.D. = 9.6). The change among southern cities is reflected by the large increase in mean desegregation levels, from 46.7 in 1968 to 79.7 four years later, and by the low correlation between the two measures (.31). Not only are the mean desegregation levels substantial and almost identical for the two regions by 1972 (79.6 in the North and 79.7 in the South), the standard deviations are also strikingly similar (17.9 and 18.0).

## TABLE 1
## Means, Standard Deviations, and Simple Correlations for Independent and Dependent Variables, Northern and Southern Cities

| | North (N=114) | | | | | South (N=80) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Independent Variable | $\bar{X}$ | SD | 1968 Deseg.[a] | 1972 Deseg.[b] | Deseg. Change[c] | $\bar{X}$ | SD | 1968 Deseg.[d] | 1972 Deseg.[e] | Deseg. Change[f] |
| SOCIOECONOMIC | | | | | | | | | | |
| Occ. Diff., Blk/White | .50 | .20 | .26 | .16 | -.10 | .34 | .17 | .29 | -.13 | -.23 |
| Res. Segregation | 81.20 | 7.11 | -.54 | -.34 | .18 | 90.14 | 5.05 | -.63 | .05 | .22 |
| Ethnicity (%) | 22.40 | 11.33 | .33 | .24 | -.08 | 6.91 | 7.36 | .24 | .01 | -.06 |
| FEDERAL GOVERNMENT | | | | | | | | | | |
| Federal Penetration | .59 | .95 | -.13 | .10 | .39 | 2.94 | 1.28 | -.54 | .10 | .29 |
| COMMUNITY | | | | | | | | | | |
| Power Centralization | 6.83 | 2.03 | .23 | .27 | .13 | 8.68 | 1.75 | .03 | .36 | .37 |
| Wallace Support (%) | 8.84 | 5.53 | -.17 | -.12 | .04 | 26.65 | 14.74 | -.56 | -.08 | .10 |
| Reformism | 1.53 | 1.05 | .01 | .05 | .09 | 2.13 | .90 | .09 | .44 | .44 |
| City-Operated Schools | .24 | .43 | .10 | .04 | -.08 | .19 | .39 | .07 | -.28 | -.32 |
| SCHOOL DISTRICT | | | | | | | | | | |
| Board Insulation | 2.09 | .99 | .08 | .14 | .15 | 2.11 | .86 | .04 | -.14 | -.15 |
| District Size | 10.37 | .93 | -.46 | -.43 | -.08 | 10.57 | .83 | -.23 | -.46 | -.41 |
| Black Enrollment (%) | 24.34 | 17.71 | -.37 | -.47 | -.30 | 31.47 | 17.94 | -.29 | -.43 | -.36 |

a. X = 75.55, SD = 19.98; b. X = 79.59, SD = 17.94; c. X = .00, SD = 9.62; d. X = 46.67, SD = 24.25; e. X = 79.66, SD = 18.00; f. X = .00, SD = 17.05.

To what extent is the emerging closeness in regional averages for school desegregation also reflected in the basic relationships extant for salient independent variables? In 1968, desegregation levels among northern cities were most closely associated (negatively) with residential segregation (–.54), district size (–.46), and the relative black presence (–.37), and related positively to community ethnicity (.33). These relationships essentially held four years later suggesting the generally static nature of the desegregation process in the North during the period. Stronger correlations were obtained among the southern cities for 1968, especially with regard to residential segregation (–.63) and Wallace support (–.56). Clearly, de facto housing patterns as a barrier to school integration are not limited to northern cities. What is most surprising was the quite modest correlation in 1968 between southern desegregation and district size (–.23) as well as percent black (–.29). By 1972, however, the strength of the negative relationship between desegregation and district size and relative black presence had increased. At the same time the previously strong negative association between desegregation and residential segregation virtually disappeared (.05). The reverse was true for city government reformism in this region; previously unrelated to desegregation (.09), by 1972 it was one of the stronger correlates (.44). Community power centralization also grew in strength during the period (from a .03 correlation to .36). Taken separately these shifts in simple correlations must be considered with great caution, but collectively they indicate the considerable upheaval surrounding the desegregation process for this region, especially as compared with the stability apparent in basic relationships among northern cities for the same time period.

Table 1 also yields information concerning the impact of the federal government during the period. There was, on the average, more federal penetration among southern than northern cities. And, as the negative correlation coefficients for the 1968 desegregation levels in both regions show, more segregated communities attracted the greatest federal attention in both regions. These negative coefficients indicate that as late as 1968, the actual

impact of federal activity had yet to be reflected in desegregation statistics. That is why, later, this variable is used only to explain 1972 levels and change during the period. In fact, a very modest simple relationship was found between federal penetration and 1972 desegregation levels in either region. This surprising result was partially offset by the somewhat stronger correlation between penetration and change during the period. The weak association between federal activity and desegregation levels will be closely scrutinized in the multivariate analysis to follow. Among northern cities federal penetration was the strongest covariate (positive) with desegregation increases, while the relative black presence had the strongest negative effect. No other variables appear to be related at any comparable level to the change measure in the North. In the South, as was true generally for the other two dependent variables, a more complex network of basic relationships emerges with respect to desegregation change. Particularly notable as negative correlates were district size and percent black, while city-run schools also registered as a moderately negative factor. Even stronger as correlates of increasing desegregation were dispersion of community power and city government reform. In short, change in desegregation between 1968 and 1972 among southern cities reflects a complexity far beyond that apparent in the North, and bears considerable attention later.

In summary, the simple relationships shown in Table 1 clearly indicate that implementation of desegregation policy is region specific. In the North the relationships were reasonably consistent over time, with desegregation levels in either year being negatively related to residential segregation, district size, and percent black. Desegregation change in these northern cities followed still another simple pattern of relationships. Increases in desegregation covaried positively with federal penetration and negatively with relative black presence. In spite of the narrowing regional difference between mean levels of public school desegregation, the simple relationships among variables for southern cities reflected the state of flux that characterized the region during this period. Not only did the strength of most correlations

change during the four years, but the correlates themselves shifted, i.e., variables unrelated to 1968 levels proved important for 1972 and vice versa. For example, Wallace support evidenced a quite strong negative association with initial southern desegregation but was unrelated or weakly correlated with 1972 levels and change (.05 and .22 respectively). The next task is to systematically attempt to gauge the cumulative explanatory power of the set of independent variables and to discern the relative important of each within the explanatory system. For that we turn to a consideration of the appropriate regression equations for each region.

Table 2 presents the results of regression equations for northern school desegregation during the period. The b value (partial regression coefficient), the Beta weight (standardized partial regression coefficient), t ratio (ratio of b to its standard error), and the coefficient of multiple determination ($R^2$ or percent of explained variance) are provided. The predictive power of the model is rather strong for both 1968 and 1972, explaining respectively around 64% and 61% of the variance in desegregation levels for northern communities. The regression equation, however, is somewhat less powerful in accounting for desegregation change during the period,[10] falling to an $R^2$ of .48. Clearly two factors stand out in the prediction of initial northern desegregation—residential segregation (with a strong Beta of −.73) and the relative presence of black students (Beta −.52). Obviously these forces posed serious barriers to public school desegregation in the North, as had been earlier hypothesized.

The predictive model for the 1972 desegregation level shows better balance among independent variables in their impact upon the dependent variable. Federal activity exerted a reasonably strong positive influence on desegregation at this time (Beta .31). As predicted, cities that had been subject to more federal activity were more likely to have higher desegregation levels by 1972. The only other positive effect of any magnitude for 1972 was school board insulation (Beta .29) where, consistent with our expectations, communities with more insulated boards reflected higher desegregation levels. Arraying themselves as

**TABLE 2**
**Partial Regression Coefficients and T-ratios for Northern School Desegregation Measures, 1968, 1972, and Change Ratio**

| | 1968 | | | 1972 | | | Change | | |
|---|---|---|---|---|---|---|---|---|---|
| NORTH (114) | b | β | t-ratio[a] | b | β | t-ratio[a] | b | β | t-ratio[a] |
| SOCIOECONOMIC | | | | | | | | | |
| Occ. Diff. | 10.71 | .11 | 1.5 | 3.34 | .04 | .5 | -5.26 | -.11 | 1.2 |
| Res. Seg. | -2.06 | -.73 | 6.8 | -1.06 | -.42 | 3.7 | .39 | .29 | 2.2 |
| Ethnicity | .17 | .10 | 1.1 | -.13 | -.08 | .9 | -.27 | -.31 | 2.9 |
| FEDERAL GOVERNMENT | | | | | | | | | |
| Federal Pen. | - | - | - | 5.91 | .31 | 4.5 | 5.65 | .56 | 7.0 |
| COMMUNITY | | | | | | | | | |
| Power Cen. | .50 | .05 | .7 | -.31 | -.03 | .4 | -.66 | -.14 | 1.5 |
| Wallace | .42 | .12 | 1.7 | -.19 | .06 | .8 | -.11 | -.06 | .7 |
| Reformism | -1.78 | -.09 | 1.4 | -1.18 | -.07 | 1.0 | .17 | .08 | .2 |
| City-Op. | -7.98 | -.17 | 2.0 | 1.74 | .04 | .5 | 7.27 | .32 | 3.1 |
| SCHOOL DISTRICT | | | | | | | | | |
| Bd. Insul. | .66 | .03 | .4 | 5.32 | .29 | 3.5 | 4.66 | .48 | 5.0 |
| Dis. Size | -.51 | -.02 | .2 | -5.96 | -.31 | 2.9 | -4.95 | -.47 | 3.9 |
| % Black | -.59 | -.52 | 6.2 | -.64 | -.63 | 7.1 | -.20 | -.38 | 3.7 |
| $R^2$ | | .64 | | | .61 | | | .48 | |

a. T-ratio of 1.98 would be significant at the .05 level (two-tailed test).

quite strong negative factors in 1972 were residential segregation, district size, and percent black—as hypothesized. It is worth noting that, as the b coefficients for 1968 and 1972 show, the actual impact of these forces shifted somewhat: residential segregation had about half its original negative effect; district size had dramatically increased in its impact; and percent black grew somewhat stronger. In 1972, urban desegregation in the North was basically unaffected by the remaining independent variables.

An interesting combination of forces account for variation in desegregation change among northern communities over the

four year period. As had been suggested earlier, federal penetration was a strong positive influence on the growth of desegregation during the period (Beta .56), while district size and percent black proved to be particularly strong negative forces (Betas –.47 and –.38, respectively). The emergence of other variables as explanatory factors is especially striking, however. The presence of ethnic subpopulations inhibited desegregation increases in this region (Beta –.31) as did, to a lesser extent, status differences and power dispersion. Surprisingly, gains in desegregation proved possible even in the face of high residential segregation, as shown by the positive Beta between change and that variable (Beta .29). This suggests that the concentration of blacks may well serve as the basis for demands and political activities that can provide effective impetus to change, especially in conjunction with federal pressure. School district characteristics also proved rather important in their impact on northern change. City-operated schools evidenced relatively higher levels of desegregation between 1968 and 1972 (Beta .32), as did districts with more insulated boards. This apparent contradiction may be best understood in conjunction with the positive effect of residential segregation on the dependent variable. It appears that where larger concentrations of blacks are found, desegregation demands may be more successful in city-run districts, especially when this happens in tandem with federal activity. But in order for even a northern school board to accede to this pressure, members may need to be shielded from the anticipated white hostility and volatile political climate that may follow acquiescence.

In Table 3 the regression equations are presented for southern school desegregation. The predictive power of the model is very strong for 1968 desegregation but appreciably lower for 1972 levels and for change. Given what has already been observed as a very fluid period for desegregation implementation characterized by considerable shifts in relationships, this alteration in explanatory power is not altogether surprising. In 1968, southern desegregation could best be explained by two effects: residential segregation (Beta –1.03) and the relative black presence in the

**TABLE 3**
**Partial Regression Coefficients and T-ratios for Southern School Desegregation Measures, 1968, 1972, and Change Ratio**

| | 1968 | | | 1972 | | | Change | | |
|---|---|---|---|---|---|---|---|---|---|
| SOUTH (80) | b | β | t-ratio[a] | b | β | t-ratio[a] | b | β | t-ratio[a] |
| SOCIOECONOMIC | | | | | | | | | |
| Occ. Diff. | -7.96 | -.05 | .8 | 15.59 | .14 | 1.2 | 8.54 | .14 | 1.3 |
| Res. Seg. | -4.98 | -1.03 | 10.1 | .60 | .17 | 1.0 | .68 | .35 | 2.1 |
| Ethnicity | -.92 | -.28 | 3.4 | .43 | .18 | 1.3 | .25 | .19 | 1.4 |
| FEDERAL GOVERNMENT | | | | | | | | | |
| Fed. Pen. | - | - | - | 3.38 | .24 | 2.2 | 2.59 | .33 | 3.1 |
| COMMUNITY | | | | | | | | | |
| Power Cen. | -1.58 | -.11 | 1.6 | 2.44 | .24 | 2.1 | 1.43 | .25 | 2.2 |
| Wallace | -.32 | -.19 | 2.5 | -.31 | -.26 | 2.0 | -.13 | -.18 | 1.5 |
| Reformism | 7.16 | .26 | 3.8 | 2.37 | .12 | 1.0 | .67 | .06 | .5 |
| City-Op. | 2.33 | .04 | .6 | -8.10 | -.18 | 1.8 | -4.93 | -.20 | 2.0 |
| SCHOOL DISTRICT | | | | | | | | | |
| Bd. Insul. | -1.42 | -.05 | .8 | -.26 | -.01 | .1 | -.30 | -.03 | .3 |
| Dis. Size | 10.53 | .36 | 3.8 | -13.06 | -.60 | 3.9 | -7.85 | -.65 | 4.3 |
| % Black | -.23 | -.69 | 7.9 | -0.05 | -.05 | .3 | .04 | .07 | .5 |
| $R^2$ | | .82 | | | .52 | | | .53 | |

a. T-ratio of 1.99 would be significant at the .05 level (two-tailed test).

school district (-.69). It is also noteworthy, as reflected in the b coefficients, that residential segregation had twice the impact on school desegregation levels that year for southern as compared to northern cities (northern b -2.06; southern b -4.98). Obviously, housing segregation had more influence on school segregation patterns in the urban South than in the North despite the common assumption to the contrary based on de facto/de jure distinctions. Other variables also had discernible predictive power for desegregation in the South, such as the modest negative effect of community ethnicity (-.28) and positive effect

of city government reform (.26). The positive influence of district size in 1968 was somewhat strong (Beta .36) and unanticipated. We can only speculate that larger districts, especially the county-consolidated districts of Georgia and Florida, were particularly susceptible to early federal pressure.

By 1972, as noted in the previous discussion, relationships in the South began to shift reflecting, of course, the heavy desegregation change occurring in this region during the four year period. As had happened in the North, southern cities were more likely to have relatively higher desegregation levels at the end of the period if they were subject to more federal penetration (Beta .24), although the relationship is not as strong as had been expected. The effect of federal activity actually proved stronger, as shown by the respective b coefficients, in the North than in the South. This, we suspect, reflects the rather general application of federal pressure to southern communities, especially in small town and rural areas, somewhat diffusing its direct impact in many urban districts. In the North, on the other hand, this activity was limited to a fewer number of cities and was perhaps the more effective for its concentration. School district size had begun to exert a powerful negative effect on desegregation (Beta –.60) by 1972. Percent black, on the other hand, was of almost no consequence (Beta –.05), while residential segregation actually reflected a positive value (Beta .17). The power centralization measure displayed a somewhat stronger standardized coefficient (.24) for the later period indicating that less centralization was more conducive to desegregation. Support for Wallace had about the same effect (moderately negative) in both years.

When changes in desegregation levels for southern districts are analyzed virtually the same set of relationships appear as existed for the 1972 cross-sectional model. Federal pressure and district size are the two most powerful predictors of change. In both instances, however, comparison of the b values for the two equations (1972 and change) indicates that the two variables are less important for desegregation change than the static analysis. It is also worth noting that residential segrega-

tion appears somewhat more important in explaining change than for the 1972 analysis with a positive value (Beta .35). The "favorable" impact of residential segregation is probably best understood by assuming that the effects of other forces were so powerful, especially federal penetration, that school desegregation took place in spite of segregated housing patterns. There is no evidence to suggest that residential areas have become any less segregated in the South (Sorenson, Taeuber, and Hollingsworth, 1975). Occupational differences between blacks and whites were of little consequence in the South for any of the three analyses, while ethnicity registered as of some moment only in the 1968 period. Finally, it should be mentioned that considerably less variance can be explained for the 1972 and the change model (.52 and .53 respectively) than was true for 1968. Obviously, the dislocations occurring in this region in the past few years have been so extensive as to make prediction much more hazardous.[11]

## CONCLUSION

School segregation in urban areas has not remained static largely because of the considerable policy impetus provided by the federal government, especially in the South. The way in which policies get implemented will vary, of course, depending on a number of conditions and constraints peculiar to various areas and locales. A systematic attempt to sort out these various influences on the process of school desegregation has been the goal of this paper. Drawing on minority group theory and the findings of previous desegregation research, a series of hypotheses were tested using multiple regression techniques for 194 cities of 50,000 population and over. The cities were divided by region (North/South), and separate equations were estimated for levels of school desegregation in 1968, 1972, and for a desegregation change measure. The results, in terms of explained variance, were reasonably good.

Although the effects of different variables were neither constant over time nor similar for the two regions, the basic

relationships contributing to desegregation levels among northern and southern urban school districts can be briefly summarized. In the North, school desegregation came about primarily as a result of federal government pressure in communities where the local school board could acquiesce without fear of political reprisal. Cities with segregated housing patterns, large school districts, and larger proportions of black students proved most resistant. Black-white status differentials apparently have no direct impact on levels of school desegregation. Conceivably this measure, which has attractive theoretical dimensions, may operate indirectly to affect desegregation, but the techniques employed here do not permit us to test that possibility.

Recent patterns of school desegregation were complex and more difficult to explain among southern communities. The impact of the federal government was important in producing greater desegregation but not as much as had been expected. School district size emerged as the most important negative effect, while the influence of percentage black students diminished enormously from 1968. More centralized communities evidenced lower levels of segregation although the insulated school board measure was inconsequential. It seems possible that school board independence was of lesser import in southern cities because such far-reaching decisions were not really left in their hands. In a very real sense, southern desegregation engulfed the whole community, the effect of which might well have enhanced the role of the civic elite. Again, the status differential theory proved of little value in explaining levels of southern desegregation.

Obviously, the school desegregation process is affected by substantially different forces in the two regions. It is difficult to argue that federal pressure has been less successful in producing substantial desegregation change in the South than in the North. Obviously, far-reaching changes took place among southern school districts, while only extremely modest improvement was recorded in the North. This contrasting development was not a chance occurrence. The federal government, over a four-year period, brought about an upheaval of such social

magnitude that it is genuinely surprising more turmoil and bloodshed were not produced. It has been long in the making, of course, but the change was drastic and sudden when it finally came. The important point for our analysis, however, is that federal persuasion was more efficacious in some places than in others. By 1972, a relatively large black student body proved to be no barrier to effective southern urban desegregation. District size, on the other hand, had become a problem in both regions. Apparently the sheer logistical difficulties of moving students proves vexing regardless of other conditions.

Where the brunt of federal efforts have been less obvious, as in most northern districts, the natural obstacles to desegregation remain strong—the relative black presence and housing segregation. The progress that has been achieved has apparently depended heavily on the willingness of a relatively independent school board to act regardless of public sentiment. The white backlash also began to be felt over the four-year period in the North, if one is willing to accept the ethnicity variable as a surrogate for those effects. In all, and not surprisingly, northern urban school segregation, even in 1972, roughly paralleled that found in the South four years earlier. It remains to be seen as to whether the federal impact will eventually produce changes in northern districts comparable to those that resulted from such efforts in the South. And unless the Supreme Court reverses itself with regard to combining districts within the same metropolitan area for desegregation purposes, white flight may change everything in the years ahead. But that is a different story.

## NOTES

1. A later study by Kirby, Harris, Crain, and Rossell (1973) reported that the racial ideology of school board members had no effect on school desegregation policies in northern cities.

2. A similar argument concerning the impact of centralization was made by Crain and Rosenthal (1967) who found that greater citizen participation in school decisions leads to intraschool board conflict and low board cohesion. This, in turn, produces less school desegregation.

3. The original group of cities numbered 203. Close scrutiny revealed, however, that eight of these cities had separate elementary and secondary districts during the period studied. These were eliminated for sake of comparability along with Compton, California, which underwent extensive consolidation between 1968 and 1972.

4. Most recent desegregation studies have analyzed only elementary school data. See Dye (1968); Farley and Taeuber (1974); and Farley (1975).

5. The formula for the desegregation index may be expressed as:

$$D = \frac{W_I + B_I}{W_I + B_I + W_{dI} + B_{dI}}$$

Where:

$W_I$ = Number of white students now in schools less than 95% white

$B_I$ = Number of black students now in schools 50% or more white

$W_{dI}$ = Number of additional white students who could be in schools less than 95% white

$B_{dI}$ = Number of additional blacks who could be in schools over 50% white

The computational formulae for determining additional student totals ($W_{dI}$ and $B_{dI}$) may be expressed as:

$W_{dI}$ = (7/3 $B_s$) or $W_s$ (whichever is smaller)

$B_{dI}$ = (3/7 $W_T$ - $B_I$) or $B_I$ (whichever is smaller)

Where:

$W_s$ = Number of whites in schools 95% or more white

$B_s$ = Number of blacks in schools 50% or more black

$W_T$ = Total number of white students

$B_I$ = Number of black students now in schools 50% or more white

As a result of this scoring procedure the theoretical range of values would be:

00.0 = No desegregation effort—none of the eligible students have been moved.

100.0 = Total desegregation effort—all eligible students have been moved.

6. Considerable missing data exist for this measure so that N = 59 for the North and N = 47 for the South.

7. This measure is taken from the U.S. Commission on Civil Rights (1973) and Department of Health, Education, and Welfare, Office of Education, Program Services Branch, Bureau of Equal Educational Opportunity; unpublished data made available by Ms. Rosalie Spence. Rodgers and Bullock (1976) have recently shown desegregation occurred more rapidly as federal intervention became more coercive. Thus a variation on the coding scheme for federal penetration described above was created. Using the same types of federal activity as our base, we weighted those that were more coercive in

nature and summed all activities into a single, weighted, penetration score. The weighted federal penetration score allocated 1 point for uncoercive activities (Department of Justice, Title X assistance and HEW Title IV assistance), 1.5 points for Department of Justice lawsuit, 2 points for the Emergency School Assistance Program (ESAP) assistance (since a school had to be under a court order to be eligible), 2.5 points for a federal court order, and 3 points for HEW citation for noncompliance with Title IV (since the threat of loss of all federal funds was involved). Thus the theoretical range of the weighted penetration score was 0 to 11. When this measure was substituted for the unweighted federal penetration variable in the regression analyses, we obtained results that were far less satisfactory. In both North and South, for all dependent variables, the weighted federal penetration measure proved a less powerful desegregation predictor. Accordingly, in the analysis that follows only the original unweighted federal penetration measure has been used.

8. Missing data for this measure produce the following N's: North = 58; South = 49.

9. The South, for our purposes, includes the eleven states of the Confederacy and the six border states (Delaware, Kentucky, Maryland, Missouri, Oklahoma, and West Virginia) that had laws requiring separate school systems at the time of the 1954 Brown decision.

10. Lower levels of explained variance are characteristic of efforts to account for change where regression equations do not include variables representing similar values for an earlier time period. A dramatic example of this can be found in Asher and Van Meter (1973: 39-41).

11. A point worth considering in interpreting the regression results is the potential confounding influence of possible shifts in the racial composition of the school district as a whole. Conceivably the differences in the desegregation index between 1968 and 1972 are essentially nothing more than an artifact of simple demographic shifts, rather than implementation of desegregation policy. Whether or not actual changes in racial balance are the product of demographics rather than policy does not alter the empirical validity of our desegregation measures, however. Our principal concern is with measuring the variation among cities as to relative black isolation over time and not with measuring the desegregation activities of school boards per se. Nonetheless, in order to clarify the nature of change, as well as to more clearly understand the validity of the regression model constructed to explain that change, we need to assess the extent to which changes in urban desegregation were (or were not) essentially an artifact of shifts in district racial enrollment composition.

The potential confounding influence of changes in district racial composition may best be investigated through the creation of measures of changing white and black enrollment, adding these to the predictive equations, and assessing the extent to which their inclusion affects our results.

Racial enrollment composition change was operationalized as the standardized residual of 1972 white (or black) enrollment as predicted through regression by 1968 white (or black) enrollment for each school district. This measurement procedure is identical to that used to define desegregation change earlier. Since there are two possible dimensions to racial enrollment, the absolute as well as the relative size of the student population involved, two different change measures were constructed for each race. Thus, we developed measures for white enrollment (natural log) change, white enrollment (%) change, black enrollment (natural log) change, and black enrollment (%) change. These

measures were then separately added to our predictive equations for 1972, as well as for desegregation change.

The addition of each of the racial composition change measures to the original regression models did not have substantial impact in either region. In every equation the addition of a racial composition change variable added less than 3% to explained variance in the desegregation measure being predicted, and in most cases the gain was only about 1%. Moreover, the magnitude of the original regression coefficients (b) and the standardized regression coefficients (B) was not seriously affected. In our judgment the potential confounding effect of changing racial enrollment composition on desegregation change was not actually realized. Desegregation change is more than simply a demographic artifact.

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