

SEGREGATION AND TURNOUT IN URBAN AMERICA

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In recent years there has been a noticeable increase in the attention accorded by scholars to the contextual influences on voting behavior. In part, this increase in scholarly attention is due to the growing overlap between geography and race in contemporary American society.

The close convergence which currently exists between geography and race in America, particularly in urban settings, has been labelled "hypersegregation" by demographers. This term refers to the extreme residential segregation of minorities living in compact spatial areas within U.S. cities.

The phenomenon of hypersegregation has been investigated extensively by Massey and Denton (1989, 1993). These authors have provided compelling evidence of the extent to which hypersegregation characterizes certain urban areas in America. Importantly, Massey and Denton argue that the spatial isolation of minorities in these urban areas has led to their withdrawal from the social and economic life of the surrounding society with deleterious consequences.

Three competing hypotheses could be advanced based on the work of Massey and Denton. Hypothesis #1 is that the extreme residential segregation of minorities in the cities would lead to political demobilization. Hypothesis #2 is the precise opposite -- that the physical isolation of minorities would foster greater political participation. Lastly, hypothesis #3 posits that no relationship exists between residential segregation and voter participation or, if one does exist, it is spuriously related to other factors such as the individual-level attributes of ghetto residents or the economic class composition of the ghetto. This paper presents two case studies which examine the effect of residential segregation of minorities on voter turnout and, in the process, provides an empirical test of the validity of these three hypotheses.

This paper measures the degree of political participation among block/block groups with differing concentrations of minority residents in a medium size

city (Bridgeport, Connecticut) and in a large size city (Baltimore, Maryland). If residential segregation leads to political demobilization (hypothesis #1), we would expect census blocks/block groups populated mainly by minorities to have relatively lower levels of political participation. Conversely, if residential segregation leads to political mobilization (hypothesis #2), we would expect minority blocks/block groups possess higher rates of political participation than blocks/block groups which are racially mixed. Finally, if there is an absence of a relationship between residential segregation and political participation (hypothesis #3), we would expect to find little variation in the turnout rates of blocks/block groups of differing racial composition.

To accomplish this objective, we employ a Geographical Information System (GIS) technique. The first step in utilizing this technique is to obtain the voter record of each individual in a given geographic area listed by his/her address. The GIS technique then permits us to assign an individual's census tract, block group and block number to his/her address via geocoding. We next aggregate this file up to the block/block group level and merge it with block/block group level census data.

Case Study Number 1 -- Bridgeport, Connecticut

The unit of analysis employed in this first case study is the approximately 1100 census blocks in the City of Bridgeport, Connecticut. The City of Bridgeport has the largest population in the State and in many ways is prototypical of medium size cities in the Northeast region of the country. As late as the end of the 1950s, the City was a thriving manufacturing center but with the loss of its industrial base experienced serious economic decline. Like many other cities in the Northeast, its population is racially diverse. The 1990 Census reported a total population of 141,663 inhabitants with 65,694 (46.4%) non-Hispanic whites, 36,438 non-Hispanic blacks (25.7%) and 35,840 (25.3%) residents of Hispanic origin. Bridgeport also ranks among the top ten cities in the country with the highest proportion of residents with incomes below the poverty level.

Data and Method: Bridgeport

A voter file was obtained which included the following data for each of the 61,718 registered voters in the City as of December 1992: name, address, date of birth, gender, party affiliation and federal voting precinct. Added to the voter file was a validated record of whether or not each registrant cast a ballot in the 1992 presidential election.

A Geographical Information System was employed to assign each registered voter's address to its census block. The geocoded voters' records were aggregated up to the block level, the following variables were calculated for each block in the City of Bridgeport: the total number of registrants; the total number of registrants who voted; the average age of registrants and those falling within specific age categories and finally the proportion of registrants enrolled as Democratic, Republican, and Unaffiliated.

At the next step in the process, 1990 census block data were merged with the aggregated block-level voting data. The census block variables which were selected for merging included the following: the racial composition of residents 18 years of age and over (non-Hispanic white, non-Hispanic black, Hispanic origin), percent of housing which is owner occupied, median value of the rent, and the population density of the block.

Bridgeport: A Tripartite Racial City

The City of Bridgeport displays a high degree of residential segregation based on race. The white, black and Hispanic populations tend to live in distinct territorial enclaves within the City. Furthermore, the residential separation of the three major racial groups corresponds strongly with economic status. For example, there is considerable territorial overlap at the tract level between percent owner-occupied housing and proportion of residents who are white.

The tripartite racial nature of Bridgeport is also reflected in the correlations at the block level between racial composition and a set of demographic, spatial and political participation variables (see Table 1).

A strong relationship exists between racial composition and our measure of political participation -- the proportion of individuals 18 years of age and over who voted in 1992. There is a sizable positive correlation at the block level between the percentage of those 18 years of age and over who are non-

Hispanic white and turnout in the 1992 presidential election (.52). Moreover, there is a modest negative correlation between voting in 1992 and percent black (-.20) and a strong inverse correlation between voter turnout and the percent of Hispanic residents (-.53). Since there are distinct areas in Bridgeport where each of the three major racial groups reside, the preceding correlations would suggest high voter turnout in white areas and low voter turnout within black and Hispanic areas of the City. On the surface, then, these data tend to lend support to hypothesis #1 -- that residential segregation leads to political demobilization of minority residents.

Variability in Political Participation Rates of Blocks With Differing Racial Compositions

To examine more precisely the influence of the racial composition of a block on its rate of electoral participation, we conducted a hierarchical multiple regression analysis. In this analysis, our measure of political participation (the proportion of residents 18 years of age and over who voted in 1992 on a given block) served as the dependent variable. The first variable entered into the equation was the percent owner-occupied housing which acted as a control for both the economic status of a block and neighborhood stability. The next variable introduced into the equation was the percent of adult residents on a given block who are non-Hispanic black. Finally, to measure the possible nonlinear effect of race on participation, we entered the square of the percent black on a block into the equation.

The final model explains approximately 54 percent of the variance in the voter turnout among blocks in Bridgeport. The standardized and unstandardized coefficients of the terms in the equation and their associated levels of significance are displayed in Table 2. The results of this analysis indicate that, in addition to the percent owner-occupied housing, both the percent black and its square term make an independent contribution to the proportion of variance explained in voter turnout. A curvilinear model fits the data better than a simple linear model.

The u-shape curve displayed in Graph 1 indicates that, after imposing a control for the economic status of blocks, racially homogenous blocks -- be they all black, white or Hispanic -- possess higher turnout rates than racially mixed blocks. This finding does not support the thesis that racial segregation leads to political demobilization (hypothesis #1). To the contrary, the data point in precisely the opposite

direction -- that residential segregation of minorities appears to promote a higher level of political involvement.

Case Study Number Two -- Baltimore, Maryland

According to the 1990 Census, the City of Baltimore ranks 13th in the country in terms of its population size. Racially-speaking, 59.2 percent of its population is non-Hispanic black and 39.1 percent is non-Hispanic white. Only 1.5 percent of its inhabitants are of Hispanic origin and only 3.2 percent in toto are foreign-born. What is critically important for our research purposes is that on each of five different dimensions of racial segregation, Baltimore exceeds a cutoff point established by Massey and Denton as indicating a "high" level of segregation and thus, according to their own taxonomic scheme, is labelled "hypersegregated" (Massey and Denton, 1993, pp. 75-76).

Data and Method: Baltimore

The methodology utilized in this second case study closely parallels that of the first case study. There are, however, a few important points of differentiation. First, the unit of analysis in the Baltimore study is the 865 census block groups. Geocoded voter records in Baltimore were aggregated up to the block group level and merged with block group census data. Second, the electoral data consisted of a voter history for each individual which included whether or not he/she had participated in the general elections occurring in the years 1990, 1991 and 1992 as well as in the primary elections held in each of these years. Finally, the census data at the block group level included a more refined measure of the economic status of a neighborhood than the percent owner-occupied housing -- the median family income -- and, importantly, the citizenship status of adult residents.

Baltimore: A Biracial City

Like Bridgeport, but to a much more exaggerated degree, Baltimore is a racially segregated city. The stark nature of this segregation is portrayed in Map 1 which thematically shades each of the block groups in Baltimore by the percent black and percent white respectively. Paralleling the case in Bridgeport, there is considerable overlap between the economic status of spatial areas and their racial composition.

The correlation coefficient at the block group level between racial composition and median family income

is $-.35$. The percentage black on a block group is also negatively associated with each of three separate measures of electoral participation: (1) average turnout of eligible electors in the general elections of 1990, 1991, and 1992 ($-.20$); (2) the average turnout of eligible electors in the primary elections of 1990, 1991, and 1992 ($-.11$); and the average turnout of registered voters in the general elections of 1990, 1991, and 1992 ($-.44$). As was true with the Bridgeport study, though, we need to be cautious before reaching any conclusions concerning the relationship between racial segregation and electoral participation based upon zero order correlations. Again, these correlations do not isolate out the effects of economic class nor do they measure any possible nonlinear components in this relationship.

Variability in Political Participation Rates of Block Groups With Differing Racial Compositions

To explore more fully the impact of race on voter participation in Baltimore, we conducted three separate hierarchical regression analyses. In the first analysis, the dependent variable was constructed by averaging the percent of eligible adults (individuals 18 years of age and over who were either born in the United States or were foreign-born naturalized) who voted in the general elections of 1990, 1991, and 1992 on a block group. In the second analysis, the dependent variable was constructed by averaging the percent of eligible adults who voted in the primary elections of 1990, 1991, and 1992 on a block group. In the third analysis, the dependent variable was created by averaging the percent of registered voters who voted in the general elections of 1990, 1991, and 1992 on a block group. In each of these analyses we used the block-level median family income as the control variable for a neighborhood's economic status.

Table 3(a) - (c) shows that each of our measures of turnout is curvilinearly related to percent black living on a block group. Electoral participation is highest among block groups which either have no black residents or have all black residents. While the u-shape of the curves presented in Graph 1 are not nearly as pronounced as was found in the Bridgeport study, the same basic pattern is uncovered here. Once the economic status of a neighborhood is controlled for, racially homogeneous neighborhoods have higher rates of turnout than racially mixed neighborhoods.

Discussion

Massey and Denton have argued that the residential segregation of minority residents living in urban areas in America leads to a withdrawal by these residents from the social and economic life of the surrounding society with adverse consequences. One might hypothesize therefore, that ghetto residents would have demonstrably lower rates of political participation than others in our society.

Yet the results of this paper reveal that once a control for the economic class standing of the blocks/block groups is introduced, the turnout rate of racially homogeneous blocks/block groups -- whatever their particular racial composition might be -- is higher than blocks/block groups which are racially diverse.

The spatial concentration of minority residents can provide a setting which promotes a sense of group solidarity and facilitates the growth of indigenous political organizations which, in turn, may lead to greater political participation. Urban neighborhoods which have mixed racial compositions, on the other hand, may lack the cohesiveness which seems to be an important ingredient in stimulating greater political involvement.

References

Massey, Douglas S. and Nancy A. Denton. 1989. "Hypersegregation in U.S. Metropolitan Areas: Black and Hispanic Segregation Along Five Dimensions." *Demography* 26:373-391.

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Table 1
Correlation Coefficients - Bridgeport Census Blocks

Race	% White	% Black	% Hispanic
Percent Black			-.04
Percent Hispanic	-.73**		
Socio-economic status			
Percent owner-occupied housing	.53**	-.20**	-.56**
Spatial characteristics			
Density - pop/sq.mi.	-.49**	.20**	.49**
Electoral participation			
Percent 18+ years voter in 1992	.52**	-.20**	-.53**
2-tailed significance	* - .01	** - .001	

Table 2

Regression Estimates - Effects of Percent Non-Hispanic Black on Voter Turnout in the 1992 General Election: Block Level Data - Bridgeport, CT

$$VT = b_1 HO + b_2 PB18 + b_3 PB18SQ + a_4$$

$$R^2 = .54$$

Terms	Beta Weight	Unstand. Coeff.	Significance
HO	+ .65	+ .37	.0000
PB18	- .57	- .42	.0000
PB18SQ	- .52	+ .48	.0000
Constant	-	+ .26	

VT = proportion of 18 years of age or older on block - voted 1992 general election
 HO = proportion of owner-occupied housing on block
 PB18 = proportion of 18 years of age and older who are non-Hispanic black on a block
 PB18SQ = PB18 x PB18

Table 3(a)-(c)

Regression Estimates - Effects of Percent Non-Hispanic Black on Voter Turnout - Baltimore, MD

$$3a \text{ VG} = b_1 MDFINC + b_2 PB18 + b_3 B18SQ + a_4$$

$$R^2 = .35$$

Terms	Beta Weight	Unstand. Coeff.	Significance
MDFINC	+ .59	+ .47	.0000
PB18	- .47	- .11	.0018
PB18SQ	+ .49	+ .11	.0013
Constant	-	+ .15	

$$3b \text{ VP} = b_1 MDFINC + b_2 PB18 + b_3 PB18SQ + a_4$$

$$R^2 = .28$$

Terms	Beta Weight	Unstand. Coeff.	Significance
MDFINC	+ .55	+ .34	.0000
PB18	- .59	- .11	.0002
PB18SQ	+ .68	+ .11	.0000
Constant	-	+ .09	

$$3c \text{ TR} = b_1 MDFINC + b_2 PB18 + b_3 PB18SQ + a_4$$

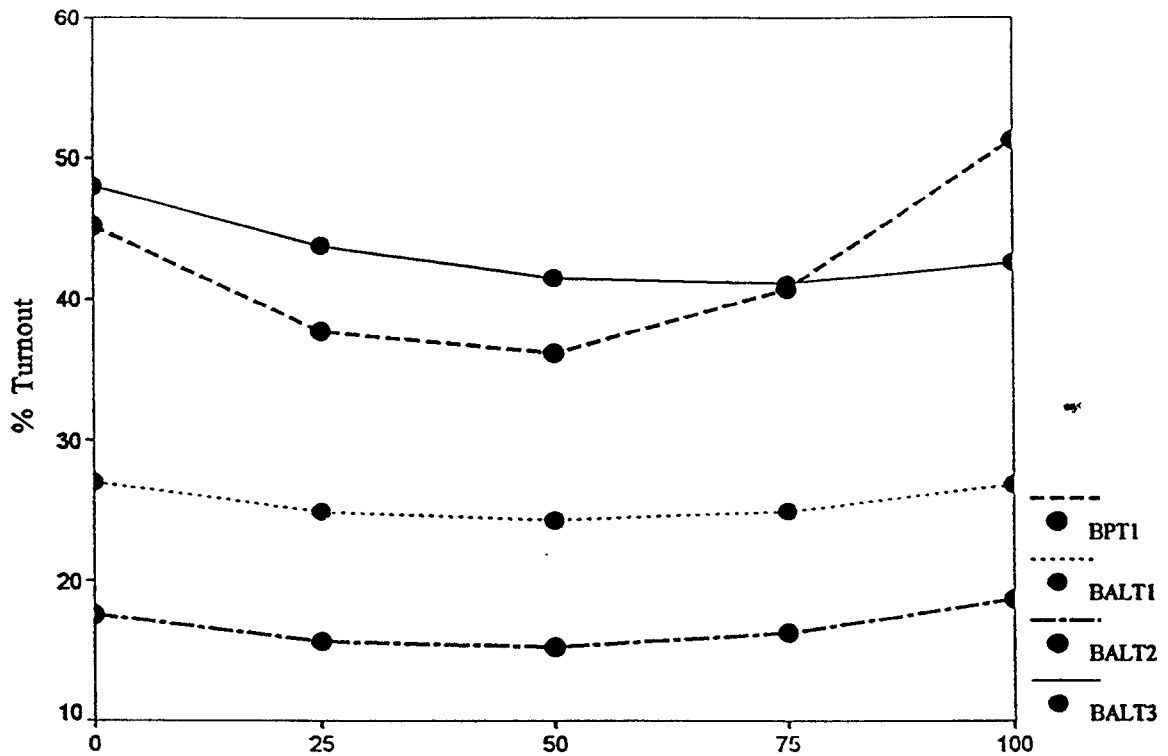
$$R^2 = .43$$

Terms	Beta Weight	Unstand. Coeff.	Significance
MDFINC	+ .49	+ .31	.0000
PB18	-1.14	- .21	.0018
PB18SQ	+ .88	+ .15	.0013
Constant	-	+ .40	

VG = average proportion of individuals 18+ voted in general elections: 90, 91, 92
 VP = average proportion of individuals 18+ voted in primary elections: 90, 91, 92
 TR = average proportion of registered voters voted in the general elections: 90, 91, 92
 MDFINC = median family income
 PB18 = proportion 18+ non-Hispanic black
 PB18SQ = PB18 x PB18

Graph 1

Turnout & Racial Composition of Census Blocks/Block Groups



Census Blocks/Block Groups: % Non-Hispanic Black - 18+

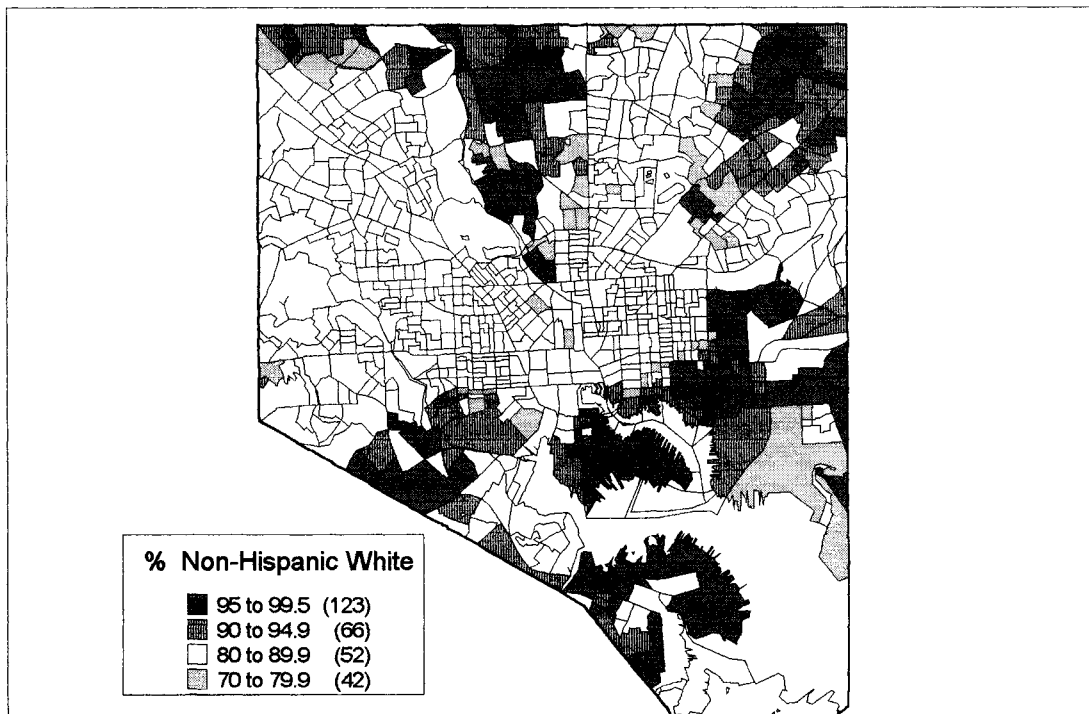
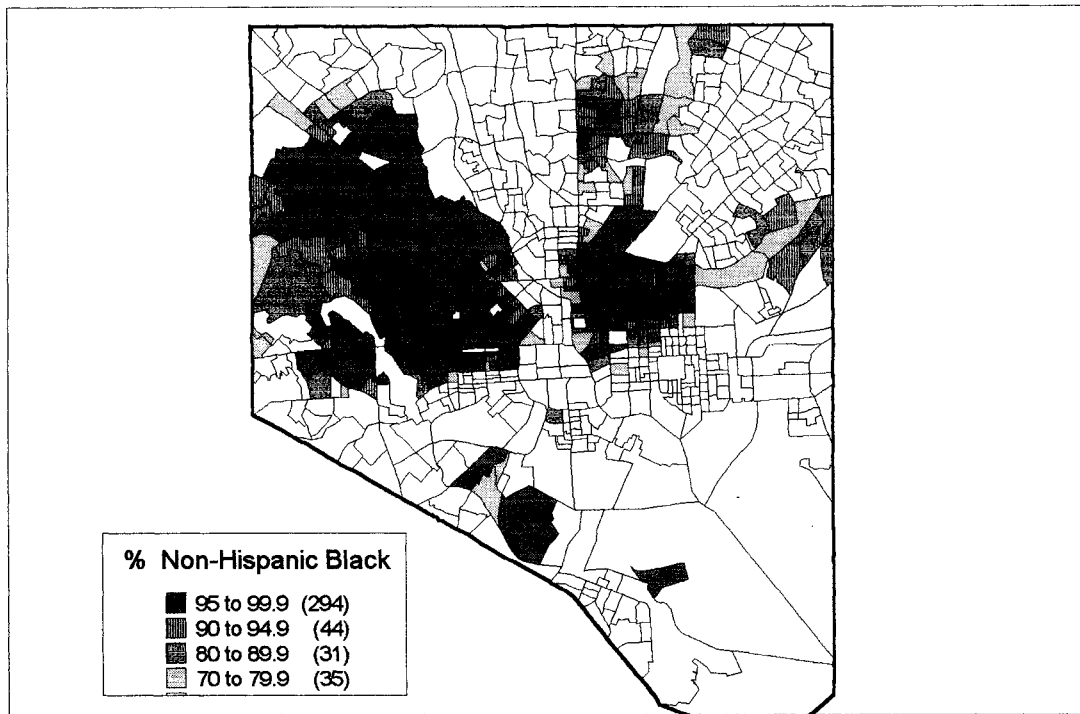
Lines: Bpt1 - 1992 general election: % turnout - 18+ years of age on block

Balt1 - general elections 1990, 1991, 1992: average % turnout - registered voters on block group

Balt2 - general elections 1990, 1991, 1992: average % turnout - 18+ years of age on block group

Balt3 - primary elections 1990, 1991, 1992: average % turnout - 18+ years of age on block group

Map 1 Baltimore, MD - Block Groups



Source: 1990 Census of Population and Housing, File: STF3A