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Municipal Underbounding: Annexation and Racial Exclusion in Small Southern Towns*

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Abstract This paper examines patterns of annexation, including municipal ''underbounding,'' in nonmetropolitan towns in the South; that is, whether blacks living adjacent to municipalities are systematically excluded from incorporation. Annexation—or the lack of annexation—can be a political tool used by municipal leaders to exclude disadvantaged or low-income populations, including minorities, from voting in local elections and from receiving access to public utilities and other community services. To address this question, we use Tiger files, GIS, and other geographically disaggregated data from the Summary Files of the 1990 and 2000 decennial censuses. Overall, 22.6 percent of the fringe areas ''at risk'' of annexation in our study communities was African American, while 20.7 percent of the areas that were actually annexed during the 1990s was African American. However, communities with large black populations at the fringe were significantly less likely than other communities to annex at all—either black or white population. Largely white communities that faced a ''black threat''—which we defined in instances where the county ''percent black'' was higher than the place ''percent black''—were also less likely to annex black populations during the 1990s. Finally, predominately white communities were much less likely to annex black populations, even when we controlled for the size of the black fringe population at risk of annexation. Such results provide evidence of racial exclusion in small southern towns.

The population size and racial composition of small towns in rural America are heavily influenced by legal decisions to annex or incorporate peripheral territory and population (Aiken 1985; Klaff and Fuguitt 1978). Annexation—or the lack of annexation—can therefore be a political tool used by municipal leaders to exclude

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disadvantaged or low-income populations, including minorities, from voting in local elections and from receiving access to public utilities and other community services (Austin 1999; Hagman 1976). Such exclusionary practices are often part of a larger political repertoire that includes discriminatory zoning ordinances, land-use regulations, and local investment strategies that prevent rural minorities and other disadvantaged populations from full participation in local governance. A large urban research literature sometimes provides a rather hopeful view of declining racial residential segregation and accelerated minority suburbanization in America's largest cities (Logan, Stults, and Farley 2004; Wilkes and Iceland 2004). But recent urban trends also can distract us from seeking to understand patterns of minority population concentration and segregation in isolated rural areas, such as the ''Black Belt'' crescent of the Old Plantation South (Beale 2004; Lichter, Fuguitt, and Heaton 1985). Subtle and less visible micro-level political and economic processes often insure the continuing separation of African Americans from whites in American society (Fischer et al. 2004; Massey and Hajnal 1995).

Indeed, the political geography of small towns has been a neglected topic of racial and demographic change in America (Johnson et al 2004; Purcell 2001), especially in the South where blacks often reside at the outskirts of local municipalities (Aiken 1985). In this paper, we examine recent patterns of annexation and racial exclusion (i.e., a practice that Aiken [1987] calls municipal ''underbounding''[1]) in rural communities in the American South, i.e., whether the black population living at the fringe of rural municipalities is systematically excluded from incorporation. Specifically, our goals are: (1) to document the racial composition of the population annexed (and not annexed) in small southern towns over the 1990 to 2000 period, and (2) to identify various local demographic, economic, and legal factors associated with racially-selective annexation and racial exclusion. To accomplish our objectives, we use Tiger files, GIS, and other geographically-disaggregated data from the Summary Files of the 1990 and 2000 decennial censuses.

[1] We recognize that our use of the term ''underbounding'' is a linguistic infelicity. It has normative connotations, i.e., it suggests that there is an appropriate or optimal amount of annexation, which we cannot adequately address or validate with the estimates presented in this paper. We nevertheless use this term because it is a recognized concept in the geographic literature (e.g., Aiken 1987; Johnson et al. 2004) which refers to racially-selective annexation and racial exclusion from municipalities.

Racial Exclusion in Small Towns: Case Studies

Twenty years ago, Aiken (1985) documented the historical shift of American blacks away from their rural roots in the Antebellum South to large industrial cities in the North during the period of the ''great migration,'' and the corresponding decline in nucleated settlement patterns linked to slavery (e.g., ''Negro villages'' or ''quarters'' on plantations). He also identified a third emerging pattern: the new concentration of southern blacks in rural hamlets, places often within view of former plantation sites and the homes of their ancestors during the era of slavery (see also Lichter at al. 1985). He documented the growth of unplanned and planned housing subdivisions— intended for sale to blacks only—that has led to the re-emergence of concentrated rural settlement patterns, and to a ''new freedom'' in which rural blacks could exercise local political power and some institutional control over their destinies (Aiken 1985:403). His guardedly optimistic view was that the ''new settlement pattern of rural blacks both reflects the dark past and points to a better future''(Aiken 1985:403).

Two years later, Aiken (1987) was considerably more sanguine about recent demographic change and the micro-scale nucleation of American blacks in the rural South. In his study of the Yazoo Delta of Mississippi, he found that about 20 percent of blacks in the region lived within one mile of one of the region's 57 municipalities. Twenty-two of these municipalities had populations at the fringe that were at least one-half the size of their own population; in 20 of these municipalities (over 90%), the black percentage in the fringe exceeded the black percentage in the municipality. Whereas in large northern cities, blacks were heavily concentrated in the central city (i.e., the ''hole of the donut'') through processes of white flight, racial steering, discriminatory lending practices, and limited economic opportunity (Massey and Hajnal 1995), the reverse is apparently true in small towns in the Delta. Much of the growth at the fringe was due to the construction of federally sponsored public housing and new housing encouraged by low-interest housing loans (through HUD and FHA). Once in place, white-controlled municipal governments selectively annexed areas with largely white populations, or refused to annex new black residential areas, which has served to perpetuate the continuing concentration of blacks at the municipal fringes, while increasing racial residential segregation (Aiken 1990).

Annexation of predominately black fringe territory may unsettle the racial balance of power within local municipalities or may prove too costly for communities to provide essential public services (e.g., water and sewer hookups). Aiken (1987:577) suggests that predominately white small towns that ''underbound'' their populations are ''the

region's last bastions of an old white political order.'' Aiken further speculates, but without empirical evidence, that racial exclusion (through selective annexation) in the Yazoo Delta is representative of the Old Plantation South that extends in a crescent from the Mississippi Delta to the Piedmont area in North Carolina and Virginia. But, alas, we are not aware of any new or systematic studies that substantiate or refute Aiken's rather pessimistic generalizations regarding racial relations and political geography in America's small southern towns.

A more recent case study of a small North Carolina community by Johnson and his colleagues (2004), however, provides additional evidence of discriminatory intent on the part of local public officials to exclude black fringe neighborhoods from incorporation into the municipality. They suggest that vestiges of Jim Crow are part of the daily social and political life of small southern towns. Many local municipalities are controlled by ''white elites'' that largely serve their own narrow social, political, and economic interests, which typically do not include the incorporation of black residents that potentially dilute their power or local political influence. Black exclusion and white economic interests thus converge around issues of commercial and residential zoning, racial gerrymandering through selective annexation, and the provision or denial of public services in fringe neighborhoods with a large black or poor population. Johnson et al. (2004) conclude that racial residential segregation ''has been perpetuated by government policies and decisions, thus institutionalizing separate and unequal political power and disparate social, health and economic conditions, a system of local apartheid'' (p. 104).

The Present Study

Case studies of ''underbounding'' in the Yazoo Delta (Aiken 1987) and in a single small town in central North Carolina (Johnson et al. 2004) provide provocative evidence of local political practices of discrimination and spatial-economic processes that effectively exclude rural blacks from community governance and public services. Indeed, nearly five decades of research on the ''visibility-discrimination'' hypothesis has consistently shown that racial subordination and inequality are exacerbated whenever the minority population is large, visible, and potentially threatening to whites (e.g., Albrecht, Albrecht, and Murguia 2005; Beggs, Villemez, and Arnold 1997; Blalock 1956; Brown and Fuguitt 1972; Glenn 1964). There is much less agreement about the causes of this statistical association. The most common view is that black population growth heightens competition for jobs and political power and putatively threatens white dominance and local economic and political hegemony. This theoretical

view is implicit in previous empirical work on annexation and racial underbounding (Aiken 1985; Johnson et al. 2004). Others argue that blacks do not directly compete with whites for most jobs, but instead, are highly segregated within internal labor markets. For blacks, competition with each other has the putative effect of driving down wages while exacerbating racial inequality. This downward spiral in economic status may in turn reinforce negative racial stereotypes and black avoidance. Alternatively, Fossett and Seibert (1997) suggest that increasing numbers may translate into growing black political power. Because overall population growth typically occurs at the periphery of local municipalities (e.g., Klaff and Fuguitt 1978), one way to potentially deny local political power to blacks is to prevent their incorporation into municipalities in the first place.

To be sure, some small towns go to extraordinary lengths to disenfranchise blacks or limit their involvement in local community affairs (Falk and Rankin 1992;Tomaskovic-Devey and Roscigno 1996). Our goals here are to provide baseline information that addresses several straightforward empirical questions. Specifically, how widespread is the problem of racially-selective annexation in small towns in the nonmetropolitan South, if it exits at all? How can evidence of systematic ''underbounding'' be demonstrated empirically? What community or fringe characteristics (e.g., its racial composition) are associated with municipal annexation? How is racially-based annexation distinguished or separated from annexation for other reasons (economic or community fiscal reasons)?

This paper provides the first systematic analysis of racially-based annexation, or municipal underbounding, across nonmetropolitan towns and communities (n = 1,992) in the ''Old South.'' The Old South, as we have defined it here, includes the states of Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Arkansas. Previous studies of annexation (of mostly white suburbs) have focused primarily on metropolitan central cities. Here, because of our interest in unique patterns of geographic incorporation of rural blacks at the peripheries of small towns, we limit our analysis to the South, where the large majority of rural and small town African Americans reside (Cromartie and Beale 1996).[2] We make use of new spatial techniques using GIS software that allows us to examine the racial composition of fringe areas that were annexed or not over the 1990s, and to show systematic variation in the annexation of fringe

[2] Data from the Census Bureau's American Factfinder indicates that 4,767,860 African Americans resided in nonmetropolitan areas in 2000. Of these, 4,286,595, or 89.9 percent resided in the nonmetro South.

areas by demographic and economic characteristics of annexing or non-annexing communities (e.g., percent white or previous growth).

Methods

Data

A major strength of our paper is the use of GIS-based methodology to identify the annexed and non-annexed territory in nonmetropolitan towns in the eight southern states defined above. We start with the identification of census-defined places (towns, villages, and cities) for each of the states. A total of 3,586 places are identified. Of these, 2,248 are located in nonmetropolitan areas (defined in 2000). Next, we identify all the census blocks that fall within places, as well as all the blocks contiguous to the place boundaries (most areas ''at risk'' of being annexed are contiguous to the place). Census blocks are used because they perfectly delineate the place boundaries and the population that can be annexed by a place. In contrast, other geographic units, such as census block groups and census tracts, are not ideal for addressing the issue of annexation because they cross administrative boundaries, and they may include both annexed and non-annexed territory and population. In other words, these geographic units make up areas that are often not coterminous with place boundaries or fringe territory that is annexed.

Annexed territory is identified as census blocks located within 2000 place boundaries that were not within the 1990 place boundaries. This is accomplished by overlaying 1990 place administrative boundaries with the 2000 place boundaries. Non-annexed territory is defined as blocks that did not fall within the 2000 place boundaries but that were physically contiguous to the 1990 place boundaries. Fringe areas ''at-risk'' of annexation include all blocks contiguous to the 1990 place boundaries.[3] An illustrative map is provided in Figure 1, which

[3] Contiguous blocks are a rather narrow definition of blocks ''at risk'' of annexation. A good argument could be made for defining ''at risk'' blocks as also including blocks that are contiguous to blocks that are contiguous to places. Whether non-contiguous blocks are ''at risk'' of annexation, however, is conditional on whether blocks contiguous to places actually became annexed (i.e., in most states, it is difficult to hopscotch a contiguous block to annex the non-contiguous block without first annexing the contiguous block). In any event, the likelihood of spatial autocorrelation means that contiguous and non-contiguous blocks will share similar demographic compositions (e.g., percent black). The composition of the contiguous block provides a proxy for the larger fringe population ''at risk.'' In fact, in some analysis of the contiguous and non-contiguous blocks that were actually annexed during the 1990s, the black percentage—our key variable—was 19 percent in the contiguous blocks and 17 percent in non-contiguous blocks.

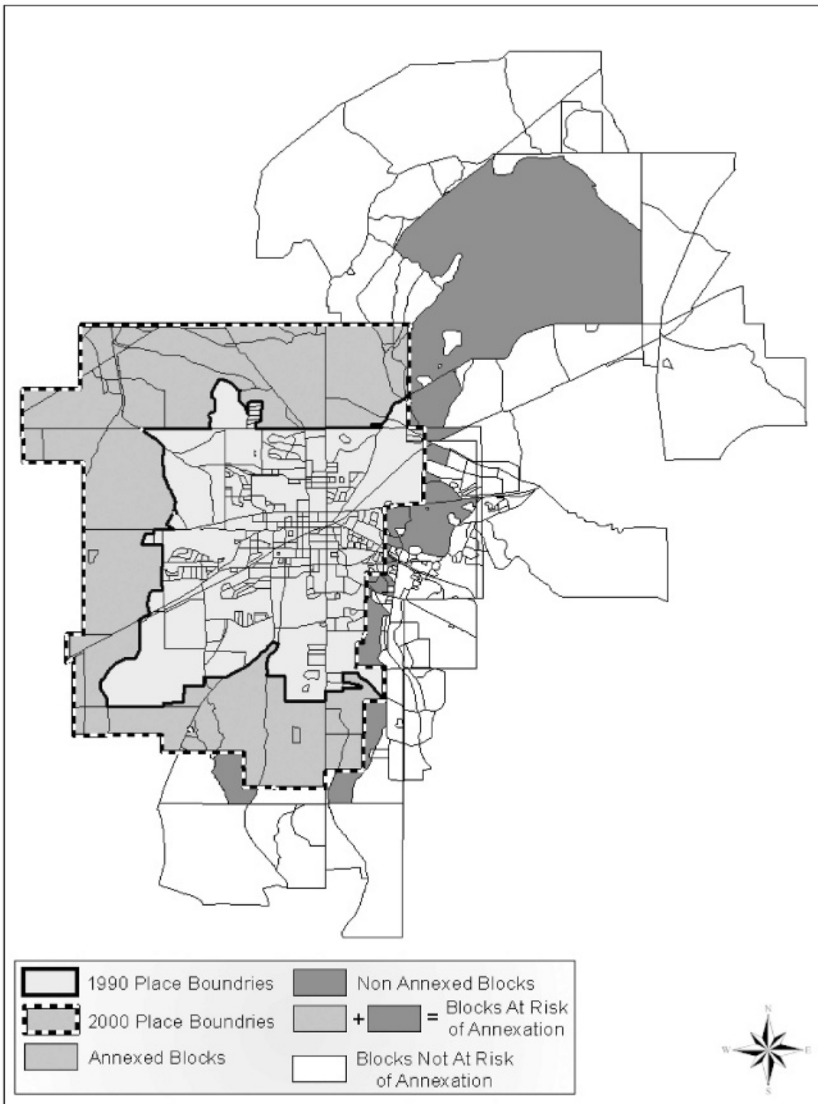

Figure 1. Differences in Place Boundaries: Annexed and Non-annexed Blocks, 1990–2000

separates each place into four parts: (1) area within the 1990 place boundaries; (2) area within 2000 place boundaries; (3) contiguous blocks at-risk of annexation, but not annexed between 1990 and 2000; and (4) annexed blocks.

Each of the census blocks within the annexed and non-annexed territories is given a place identification code. Information on annexed and non-annexed fringe territories (e.g., race-disaggregated population counts) is then generated by summing data across blocks with common geographic identification codes. This is a data-intensive exercise that reveals a total of 746 southern nonmetropolitan places annexed populated blocks during the 1990s. This represents about 33 percent of all nonmetropolitan places in the eight states that define the Old South.

Measurement

Our guiding hypothesis is that the black composition of the area ‘‘at risk’’ of annexation is negatively associated with annexation. Using data from the 1990 and 2000 censuses we calculate the number and percentage of black persons in each block of the annexed area. Initial results indicate that the black population is not disproportionately excluded from the annexation process. Between 1990 and 2000, these southern nonmetro towns annexed 263,675 people (or 353 persons per place), of which 70,166 were African American.

Whether fringe territory is annexed or not obviously depends on characteristics other than racial composition. Annexation also depends on characteristics of the places that seek to annex territory or population that is adjacent to their communities (i.e., the area ‘‘at risk’’ of annexation). These characteristics can be demographic (e.g., population pressures through growth) or they can be social or political (e.g., legal constraints on annexation or other requirements of the state) (see Carr and Feiock 2001). In our analysis, we examine the effects of several observed place characteristics. Previous research, for example, suggests that annexation of black populations in adjacent territory depends on the racial composition of the place itself. For each place, we therefore calculate the *percent white*, which we hypothesize to be negatively associated with the annexation of fringe black population. We also control for the effects of unobserved state characteristics (e.g., unobserved differences in legal requirements regarding annexation) by including state dummy variables (i.e., one for each state, less one). The expansion of municipal government boundaries are subject to state regulation. According to Carr and Feiock (2001:460), ‘‘[s]tate constraints on the ability of local governments to alter their borders are collective choice rules that bound the powers of local

governments because they delineate what local actions are permitted, required, or forbidden.''[4]

We also expect that annexation is a community response to population pressure. Population pressure is measured by *population density*, *population size*, and *population growth rates*, which we expect to be positively associated with annexation.[5] It is unclear, however, whether annexation will be selective of fringe territory that has a racial mix that mimics the racial composition of the annexing place. We expect that affluent communities will be less likely to annex surrounding territories, where the population may be less likely to contribute positively on balance to the tax base of the community. It may also be the case that affluent ''suburbs'' at the fringe are less likely to seek consolidation and more likely to resist attempts by municipalities to annex. We therefore expect that *median family income* will be negatively associated with annexation of fringe black population. Finally, if the black population residing in a particular community is impoverished (i.e., it has a high rate of poverty), then local community leaders may stereotype other black populations at the fringe and exclude them from annexation. Our analysis examines the effect of *percent of blacks in poverty* on the annexation of fringe black population.

Whether adjacent territory is annexed or not also depends on its racial and economic composition. Unfortunately, Census Summary File 1 includes only a few 100 percent Census items at the block level that are suitable for our purpose; sample items on income or education are not available at the block level in the summary files. We are limited to *percent black* and two additional socioeconomic control variables: *age dependency ratio* and *percent owner-occupied housing*. Age dependency is measured by the sum of the population aged 0–15 and 65 or more (i.e., the dependent population) divided by the population aged 16–64 (i.e., the population of labor force age or the ''productive'' population). Fringe territory with high dependency ratios may also be in greater need of public services (e.g., including schools), while failing to contribute commensurately to local tax rolls. We expect that such

[4] It is beyond the scope of this study to identify the specific state rules that most strongly influence the annexation process (see Facer 2006). However, by controlling for ''state'' effects, we provide stronger causal evidence that any observed effects of racial composition at the periphery of municipalities are not simply an artifact of state-to-state variations in regulatory policy or other related unobserved characteristics of places. See Yang and Jargowsky (2006) for discussion of this approach.

[5] For example, population density was 323 persons per square mile on average in places that annexed during the 1990s compared with 220 persons per square mile for those places that did not annex. Population pressure is clearly a significant factor in redrawing place boundaries.

Table 1. Descriptive Statistics for Places Annexing and Not Annexing Territory between 1990 and 2000

Variables	Not Annexing (N=1,246)		Annexing (N=746)	
	Mean	SD	Mean	SD
Place Characteristics in 1990				
Race				
Percent Black	28.37	27.07	26.15	23.32
Percent White	70.68	27.00	72.24	23.68
Population				
Population Density	219.61	209.49	322.84	231.87
Population Size	1,251	2,542	4,023	5,673
Population Rate of Change, 1980–1990	21.68	298.62	51.22	450.53
Median Family Income in 1,000s	22.85	6.87	24.08	5.86
Percent of Blacks in Poverty	41.17	24.37	39.92	20.23
Area at Risk of Annexation in 1990				
Percent Black	30.45	29.32	23.56	27.87
Percent Owner-Occupied Housing	68.68	12.93	68.82	10.73
Dependency Ratio	0.68	0.18	0.66	0.18

fringe areas are less likely to be annexed for these reasons. At the same time, areas with a high percentage of owner-occupied housing may be viewed as attractive areas for incorporation; they are more likely than areas with a high percentage of renters to contribute to the local property tax base. Table 1 provides descriptive statistics from the 1990 census on these predictor variables of 1990–2000 annexation patterns. These data show that nonmetro places that did not annex during the 1990s had higher black percentages in periphery areas ''at risk'' of annexation than did annexing places (30.4% vs. 23.6%).[6]

We begin below by describing the racial composition of peripheral areas that have been annexed or not during the 1990s. This addresses the basic question of whether blacks, on average, are being incorporated or excluded from local governance and access to community services. Next, we explain whether the racial composition of ''at risk'' territory (i.e., the ''black threat'') is associated with annexation; i.e., whether blacks are being systematically excluded from incorporation when they represent a large share of the fringe population. Our multivariate analysis then endeavors to separate the effects of race (both in the fringe territory ''at risk'' of annexation and

[6] Such bivariate evidence does not provide *prima facie* evidence of racial discrimination. As we describe later, this may simply reflect racial differences more broadly (i.e., in the county, say) between places that annexed and those that did not over the 1990s.

Table 2. Racial Composition of Places that Annexed Territory, 2000

	Total Black in Annexed Territory	% Black in Annexed Territory	% Black in Non-Annexed Territory	% Black At Risk of Annexation	% of Places with Higher % Black in Non-Annexed Territory
Aggregate	70,166	26.61	20.73	22.56	–
Place Mean	94.06	22.35	22.16	23.56	47.32
State Means					
Alabama	40.69	17.04	17.44	18.58	39.05
Arkansas	21.30	8.58	7.67	8.50	39.37
Georgia	94.85	25.05	24.69	26.04	49.32
Louisiana	90.93	32.65	30.36	32.52	49.18
Mississippi	199.83	30.70	29.38	33.47	54.55
North Carolina	148.44	23.90	23.38	24.38	51.02
South Carolina	105.70	38.93	43.36	44.05	53.19
Virginia	80.60	16.05	17.88	18.73	51.11

the municipality) from effects of other factors, including socioeconomic composition, which is measured by the dependency ratio and the owner-occupied housing rates.

Findings

Racial Composition of Annexed Territory

We begin by asking a straightforward question: What is the racial composition of the fringe areas annexed by the 746 communities that annexed population during the 1990s. The results in Table 2 indicate that African Americans represented 26.6 percent of the total annexed population. The average percent black in the annexed territory of all 746 small towns was 22.4 percent, and ranged from a low of 8.6 percent in Arkansas to 38.9 percent in South Carolina. Viewed in the aggregate, our initial results provide little evidence that blacks have been excluded from the annexation process in small towns in the Old South.

At the same time, it is difficult to interpret these results without knowledge of the population ''at risk'' of annexation. If the black population at the fringe is 40 percent of the total fringe population, then the 26.6 percent black that was actually annexed would suggest that blacks have not participated proportionately to the annexation process. For our purposes, we define the population ''at risk'' of incorporation as the sum of: (1) the population (in 2000) that was annexed during the 1990s, and (2) the 2000 population in non-annexed blocks that are contiguous to the 1990 place boundaries. In

the aggregate, our results indicate that 22.6 percent of the population ''at risk'' of incorporation was African American—a figure less than the black percentage in the areas that were actually annexed (compare columns 4 and 2, Table 2). Moreover, the percentage black was *lower* in the non-annexed territory than in the annexed territory (20.7% vs. 26.6%). Slightly over 47 percent of the 746 places annexed fringe territory with higher percentage of blacks than in the non-annexed territory. The substantive conclusion is clear: There is little evidence—at least based on these initial analyses—that blacks living in fringe neighborhoods are being *systematically* excluded from incorporation into local rural municipalities in the South. Indeed, as we show below, racial exclusion may be more idiosyncratic or nuanced in its expression.

Benign Explanations for Black Exclusion

To be sure, our initial empirical estimates give caution to the strong conclusions of Aiken (1987, 1990) and Johnson et al. (2004) regarding racial exclusion in small town America. Two possibilities may account for our apparently anomalous findings. First, it may be that white populations at the fringe are resisting annexation by small municipalities that have significant percentages of blacks in the community or for other reasons (not yet known). If so, this would offset the involuntary exclusion of blacks from largely white small towns, while masking evidence of overt racial exclusion. The other possibility is that some rural communities avoid annexation altogether if the fringe areas include high percentages of blacks or if they cannot legally justify the incorporation of some white fringe areas while at the same time excluding black fringe areas (due to enforcement of Voting Rights Acts). By selectively focusing on places that annexed population during the 1990s, our previous analyses cannot address these alternative explanations for our unexpected results.

To address this issue, we first compare the racial composition of places that did not annex during the 1990s with the racial composition of their fringe areas. Are ''white'' fringe areas resisting incorporation? The results reported in Table 3 show that the aggregate percent black in non-annexing places was 29.4 percent in 1990. The percent black in the fringe was slightly higher at 33.3 percent. Whether such differences are substantively significant or not is a matter of interpretation, but, at a minimum they provide little evidence of ''resistance'' by predominately white fringe populations to incorporation by places with large black populations. The state-to-state differences also provide meaningful results. On a percentage basis, the largest differences in

Table 3. Percent Black in Places and Surrounding Territory for Places Undergoing No Annexation

	% Black in Places in 1990	% Black in 1990 in Territory At-Risk of Annexation
Aggregate	29.41	33.34
Place Means	28.37	30.45
State Means		
Alabama	29.09	31.78
Arkansas	16.95	12.34
Georgia	34.62	30.34
Louisiana	29.99	29.26
Mississippi	42.49	49.73
North Carolina	25.73	32.35
South Carolina	38.73	48.14
Virginia	12.21	19.82

racial composition between place and fringe were in Virginia (38%), North Carolina (21%), and South Carolina (20%). Such results are consistent with the argument that small towns with disproportionately large African American fringe populations (compared to the core place) are less likely to annex at all.

We also compare annexing (n = 746) and non-annexing (n = 1,246) places with respect to the racial composition of fringe areas ''at risk'' of annexation.[7] The question is whether the communities with larger black populations in the fringe are less likely to annex any population.

Our results suggest that even though places that annexed had a slightly higher white percentage (72.2%) than those that did not (70.7%), the non-annexing communities had fringe populations with significantly higher black percentages (30.4% vs. 23.6%) (see descriptive statistics in Table 1). One interpretation is that these non-annexing communities are avoiding incorporation because a disproportionately high percentage of the fringe is African American. At the same time, it is difficult to argue that discrimination or racial exclusion is a motivation, absent the elimination of other explanations, especially economic ones.

Fringe populations may represent an economic or political threat to large white communities, but only if the fringe is comprised of high percentages of blacks. Many ''white'' communities are nested within larger white regions; in these instances, the black ''threat'' is small and

[7] We are restricted to using 2000 data for this comparison. Determining the annexed population required the use of the blocks defined in 2000, which match the 2000 place boundaries. Because block boundaries can change over time, we were unable to provide 1990 data for these 2000 blocks.

race is unlikely to be a major factor in local decision making about whether to annex a fringe neighborhood or not (see Beggs et al. 1997). The implication is that white communities may exclude blacks only when the threat is real. As an indirect measure of black ''threat,'' we identified 85 southern communities (that actually annexed in the 1990s) in which the percent white in the community was higher than the percent white in the surrounding county. For these 85 places, the mean percent black was only 13.5, compared with nearly 28 percent in the remaining 661 places.

Our hypothesis is that these communities are more likely to show large differences in the percent black in the fringe areas that they annexed and in the fringe area not annexed. The results of this analysis are reported in Table 4, and are consistent with our hypothesis. In ''black threat'' communities—those with comparatively high percentages of blacks at the fringe—the percentage blacks in the annexed areas was 30 percent lower than in fringe areas that were excluded from annexation (17% vs. 23%). In contrast, the annexed population in the other communities revealed higher percentages of blacks than in the fringe areas they did not annex.

Racial Exclusion at the Fringe: Multivariate Analysis

Race may be statistically associated with annexation, but establishing a racial motivation is difficult, if not impossible, with only highly-aggregated census data. It is not possible to establish that local officials conspired to exclude racial minorities because of racial bigotry or because minority inclusion would affect municipal voting patterns or community expenditures for services (sewage and water, schools and busing). Many non-racial explanations are plausible and must first be eliminated. For example, a common explanation is that largely black areas are sometimes excluded on the basis of rational municipal planning (Johnson et al. 2004). That is, black neighborhoods may be poor or underdeveloped areas, and it simply is not cost-effective or fiscally feasible for municipalities to expand services to these areas. Even if race is a factor in the annexation process, is it because blacks are being actively excluded by white municipalities, or rather that blacks in fringe neighborhoods are resisting annexation? Or is it because white neighborhoods are more effective in mobilizing for incorporation? White fringe communities also may resist annexation and, therefore, might dilute any statistical evidence found here of racial bias in annexation. Indeed, affluent suburban communities or exurban areas of major U.S. cities are sometimes viewed as ''cash cows'' that will

Table 4. Characteristics of Places with High Percentage White in High Percentage Black Counties

Variable	High Black County, High White Place (N=85)		Other (N=661)	
	Mean	SD	Mean	SD
Place Characteristics				
Race				
Percent Black	13.47	8.38	27.78	24.12
Percent White	85.35	8.42	70.55	24.48
Population				
Population Density	294.55	249.84	326.47	229.41
Population Size	2,519	4,304	4,217	5,800
Population Rate of Change, 1980–1990	19.65	181.81	55.30	474.19
Median Family Income in 1,000's	27.60	6.60	23.63	5.61
Percent of Blacks in Poverty	42.26	24.35	39.59	19.58
Annexed Territory Characteristics				
Population	235	435	369	854
Percent Black	17.03	22.02	23.03	30.26
Percent White	79.66	23.22	73.14	30.87
Housing Units	90.35	169.07	150.03	348.45
Percent Owner-Occupied Housing	70.95	20.07	66.40	24.44
Percent Renter-Occupied Housing	19.76	16.96	23.94	23.23
Percent Vacant Housing	9.30	10.75	9.66	10.73
Dependency Ratio	0.99	2.52	0.76	0.62
Non-Annexed Territory Characteristics				
Population	558	819	814	1,114
Percent Black	24.32	19.52	21.88	23.85
Percent White	73.02	20.07	74.89	24.04
Housing Units	223.79	294.27	339.95	429.00
Percent Owner-Occupied Housing	71.27	11.86	69.89	10.52
Percent Renter-Occupied Housing	17.78	11.05	18.48	8.81
Percent Vacant Housing	10.95	6.44	11.63	7.66
Dependency Ratio	0.65	0.16	0.65	0.17

enhance municipal revenues through city property or sales taxes. White resistance in these instances may be based on characteristics of the municipality—its poverty rate or racial composition.

Data limitations prevent us from addressing each of these issues in the current paper, but we can shed partial light on the question of separating the effects of race on annexation from the effects of socioeconomic status. If race rather than socioeconomic status is

Table 5. Logistic Regression of Annexation of Fringe Territory by Places: Effects of Place and Fringe Characteristics

Variable	Model 1 B	Model 1 SE	Model 2 B	Model 2 SE
Constant	−7.222**	.759	−9.245**	.870
Place Characteristics				
Percent White	.002	.004	.007†	.004
Population Density	.000	.000	.001†	.000
Population Size (Log of Total Persons in 1990)	.789**	.061	.811**	.064
Population Rate of Change, 1980–1990	.000†	.000	.000	.000
Median Family Income	.032*	.013	.034*	.014
Percent of Blacks in Poverty	.002	.003	.002	.003
At-Risk Territory Characteristics				
Percent Owner Occupied	.008	.005	.010†	.006
Percent Black	−.006*	.003	−.003	.003
Dependency Ratio	−.369	.347	−.335	.364
State (Virginia as ref.)				
Alabama	–	–	1.311**	.305
Arkansas	–	–	1.295**	.302
Georgia	–	–	1.532**	.275
Louisiana	–	–	1.179**	.314
Mississippi	–	–	.761*	.311
North Carolina	–	–	1.696**	.271
South Carolina	–	–	.837**	.311
Chi-square	*369.209***		*427.072***	
−2 Log Likelihood	*1701.878*		*1644.014*	

**p<.01; *p<.05; †p<.10.

a factor that systematically excludes black fringe neighborhoods from annexation, then it is imperative that we evaluate whether both rich and poor black neighborhoods are excluded while both rich and poor white communities are more likely to be annexed. If this is the case, then stronger claims regarding racial exclusion are justified. But if black and white fringe areas with similar socioeconomic status or other characteristics are being excluded (or included) than this argues against strictly racial explanations.

Models of annexation. The first phase of our multivariate analysis involves the question of whether annexation is a function of the characteristics of the fringe area ‘‘at risk’’ of annexation, in particular its racial composition and the characteristics of the municipality ‘‘at risk’’ of annexing this fringe area. Earlier we showed that places were less likely to annex if the fringe population had comparatively high percentages of African Americans living there. In Table 5, model 1, the

''effect'' of percent black (b = $-.006$; $p < .05$) on annexation (or not) holds even after controlling for key demographic and economic characteristics of the annexing place, and for other demographic and socioeconomic characteristics of the fringe area (i.e., percent owner-occupied housing and age-dependency ratio). Such modest statistical evidence, although hardly compelling (because of the lack of strong SES controls for the fringe blocks), are nevertheless consistent with the main substantive conclusions of Aiken (1987) and Johnson et al. (2004). However, when we control for unobserved state effects in model 2 (Table 5), the effect of percent black in the fringe becomes statistically insignificant. At a minimum, these mixed results provide a rather weak basis for either fully accepting or eliminating racial explanations for place-to-place differences in the likelihood of annexing fringe territory and its population.

Models of racial composition in the annexed fringe. We now turn to the 746 places that annexed population during the 1990s and examine the characteristics, including racial composition, of the fringe blocks that were actually annexed. An initial important point is that a sizeable percentage of places during the 1990s do not have any black population within its boundaries. Indeed, 124, or 16.6 percent, of these nonmetro places annexed fringe territory that contained no black population. These entirely white communities also typically had populations ''at risk'' of annexation that were largely white. On average, 2.3 percent of the fringe population ''at risk'' of annexation was black, well below the overall mean percentage across all of the places (i.e., 23.6% reported in Table 2).

What explains annexation of black fringe areas? For the 622 racially-diverse places that annexed population, the results of our regression analysis of the percent black (in 2000) in the annexed area are reported in model 1 of Table 6. These results provide few unequivocal results. Places facing population pressure—as measured by population size or population growth (during the 1980s)—were less likely to annex territories with black population. Income of the place and black poverty rates had little association with the black percentage annexed during the 1990s. It also is the case that there is significant variation in the annexation of the black population. Municipalities in Virginia were substantially more likely than other municipalities in other states to annex black population. Additional research will be required to better understand the reasons—legal and otherwise—that might account for these unusually prominent variations from state to state.

The key finding in this analysis is the statistically significant negative effect of ''percent white'' on annexation of fringe territory with high percentages of blacks, a result that is consistent with arguments

Table 6. OLS Regression of Place Characteristics on Percent Black in Annexed Territory (N=622)

Variable	Model 1		Model 2	
	B	SE	B	SE
Intercept	131.822**	10.042	46.358**	10.903
Place Characteristics				
Percent White	−.745**	.055	−.166**	.065
Population Density	.001	.006	−.003	.005
Population Size (Log of Total Persons in 1990)	−4.041**	.957	−.592	.879
Population Rate of Change, 1980–1990	−.004†	.002	−.003	.002
Median Family Income	−.269	.234	−.482	.206
Percent of Blacks in Poverty	.053	.052	−.018	.046
Annexed Territory Characteristics				
Percent Owner-Occupied Housing	−.249**	.041	−.196**	.036
Dependency Ratio	4.195*	1.880	2.952†	1.651
At-Risk Territory Characteristics				
Percent Blacks at Risk of Annexation	–	–	.750**	.056
State (Virginia as ref.)				
Alabama	−6.025	5.162	−1.541	4.539
Arkansas	−12.589*	5.055	−1.607	4.510
Georgia	−7.866†	4.614	−.961	4.080
Louisiana	−8.024	5.349	−2.309	4.711
Mississippi	−4.341	5.508	−1.746	4.834
North Carolina	−4.588	4.434	1.114	3.912
South Carolina	−1.372	5.348	−1.753	4.690
R^2	*40.4*		*54.2*	

**p<.01; *p<.05; †p<.10.

claiming racially-motivated annexation. The large and significant effect (−.745) suggests that white communities are substantially less likely to annex black fringe areas than are more racially diverse communities. This result is clearly consistent with the results on the likelihood of annexation reported in Table 5. At the same time, our weak controls for fringe socioeconomic characteristics make strong conclusions about race effects inappropriate. We do not know whether this large place effect of racial composition reflects racial bias. For example, it may be the case that white communities also tend to have white fringe areas (i.e., that the black population ‘‘at risk’’ of annexation is comparatively small).

To address this question, model 2 (Table 6) includes a control variable for the black population ‘‘at risk’’ of annexation. The question is whether predominately white communities are less likely than racially diverse populations to annex black populations when each has similar-

sized black population percentages at the fringe. A large effect of ''percent white'' in this instance would provide considerably more compelling evidence of the significance of race in the annexation process. Indeed, the results from this model suggest that the ''percent white'' continues to have a statistically significant (albeit greatly reduced) effect on the percentage black of the area annexed, even when the black population ''at risk'' of annexation is taken into account or controlled. This provides additional evidence of black exclusion from ''white'' communities.[8] On the other hand, a large part of the explanation for why black fringe populations are less likely to be annexed by white communities is located in the very small black populations typically ''at risk'' of annexation by these communities. Simply put, most largely white communities are surrounded by largely white fringe neighborhoods.

Discussion and Conclusion

Racial gerrymandering of community boundaries historically has been used as a political weapon to exclude racial minorities and the poor from full membership in local civic life (Aiken 1987; Johnson et al. 2004). In this paper, our goal has been to evaluate the extent that rural blacks at the fringes of small towns in the South have been excluded through racially selective (and biased) annexation practices. Unlike metropolitan areas—with predominately black central cities and white suburbs—the racial residential pattern in many small towns in the South has exhibited a decidedly different pattern. Rural blacks often reside at the peripheries of small towns where they lack access to public services (e.g., sewer and water) and are denied a voice in community affairs (Aiken 1987; 1990). Is a large and visible black fringe population threatening to predominately white southern small towns, as predicted by the ''visibility-discrimination'' hypothesis (Blalock 1956) and that is manifested in the practice of municipal underbounding? Johnson et al. (2004), in their study of a small town in North Carolina, characterize racially-selective annexation as a kind of racial apartheid that effectively keeps the races separated while reinforcing racial inequality in the quality of life.

[8] In some additional analysis, we estimated similar models using a weighted regression technique in which we gave proportionate weight to larger municipalities rather than weighting each place equally. These alternative models revealed only marginally significant effects (at the .10 level) for the ''percent white.'' The substantive implication is that black exclusion may be occurring more frequently in the least populated rural communities (where they are given equal treatment to larger places in the analyses presented in Table 6).

Our study represents the first systematic attempt to examine whether the practice of racial exclusion through selective annexation (i.e., so-called ''underbounding'') is systematic or widespread across nonmetro communities in the Old South. Contrary to our expectations based on previous research (Aiken 1987; Johnson et al. 2004), our results do not reveal a simple or straightforward story of widespread racial exclusion in the South. Indeed, our initial analyses suggested that small towns in the South were as likely to annex black population as white population. In the aggregate, our results indicated that 22.6 percent of the fringe areas ''at risk'' of annexation in our study communities was African American, while 20.7 percent of the area that was actually annexed during the 1990s was African American. This small difference hardly suggests widespread or systematic discrimination of rural blacks through the annexation process.[9] One interpretation is that our results provide indirect evidence that Civil Rights legislation has been successful in removing the most blatant forms of anti-black discrimination, including the elimination of racially-motivated annexation practices that maintain white voting majorities and ensure that blacks are politically underrepresented in local municipal elections (see Forest 2001), and discriminatory land use policies that restrict economic development in black communities at the peripheries of municipalities (Nelson, Sanchez, and Dawkins 2004).[10]

But, as our subsequent analyses revealed, these broad-gauged statistics depicting annexation in southern communities can hide substantial variation in patterns of racial exclusion through annexation. Indeed, our results suggest three key findings in this regard. First, communities with large black populations at the fringe were significantly less likely than other communities to annex at all—either black or white population. This was the case even when we controlled for key place and fringe characteristics. However, because the 1990 and 2000 Censuses include only a limited number of suitable socioeconomic variables for our models, we can provide only tentative conclusions

[9] Other demographic research (Cromartie and Beale 1996; Lichter and Heaton 1986) suggests that the 1970s were marked by substantial dispersion of the southern nonmetropolitan white population into the rural countryside, while black growth was confined largely to small towns. This general pattern of white dispersion and black concentration in small town is seemingly at odds with a metaphor of whites barricading the boundaries of their communities from a black population invasion.

[10] Our data cannot evaluate this assertion empirically, but it is true that under the Voting Rights Act, areas cannot annex in ways that would dilute minority voting strength. Direct oversight by the United States Department of Justice or even the threat of oversight may promote more racially balanced annexation generally, and may account for the limited effects of racial composition on annexation observed here.

concerning whether ''exclusion'' is primarily class- or race-based. Second, white communities that faced a ''black threat''—which we defined in instances where the county ''percent black'' was higher than the place ''percent black''—were less likely to annex black population during the 1990s. Such a result is consistent with previous studies that have emphasized racial exclusion (Aiken 1987; Johnson et al. 2004). Finally, our multivariate analysis showed that predominately white communities were much less likely to annex black populations, even when we controlled for the size of the black fringe population ''at risk'' of annexation.

In the end, our results are consistent with the conclusion that racial exclusion through annexation is perhaps less widespread than it has been portrayed in previous studies by Aiken (1987, 1990) and Johnson et al. (2004). As we have shown here, racially-based annexation is idiosyncratic in ways that are difficult to detect with secondary data alone. Indeed, our demographic approach using data for the 1990 and 2000 U.S. Census Bureau cannot speak unambiguously to issues of racial motivation among community elites. Nor can we eliminate all possible non-racial explanations that may explain our results; for example, our analyses included (as controls) only a limited number of socioeconomic characteristics of places and the surrounding fringe areas. Our results are nevertheless suggestive of continuing racial exclusion in some parts of the rural South, and provide a point of departure for additional research that addresses questions about racially-motivated municipal underbounding and racial segregation in America's small towns.

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