

STRATEGIC ANNEXATION UNDER THE VOTING RIGHTS ACT: RACIAL DIMENSIONS OF ANNEXATION PRACTICES

Amanda K. Baumle*
Mark Fossett**
Warren Waren***

In July 2006, President Bush signed the reauthorization of the Voting Rights Act of 1965, following heated congressional debates concerning the relevance and efficacy of the Act. Given the reauthorization, with few revisions, of the Act's preexisting provisions, we examine in this article whether its provisions have been effective in curtailing discriminatory voting rights practices. Specifically, we consider whether cities are able to circumvent the intent of the Act and engage in annexation practices that produce undesirable consequences for minority voting rights. We then employ empirical analyses to assess whether there is evidence that minority vote dilution is, in fact, occurring as a consequence of annexations. We examine whether the minority population is reduced, in the long term, as a consequence of annexation. In addition, we examine whether the racial and ethnic composition of land parcels appear to affect the odds of annexation. Our findings provide mixed evidence concerning the efficacy of the current provisions of the Voting Rights Act in discouraging annexations that are likely to dilute minority voting.

* Assistant Professor of Sociology, University of Houston. Ph.D., Texas A&M University, 2005; J.D., University of Texas, 2000; B.A., Southwestern University, 1997.

** Professor, Department of Sociology, Texas A&M University. Ph.D., University of Texas at Austin, 1983.

*** Ph.D. Candidate, Department of Sociology, Texas A&M University.

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I. INTRODUCTION

Racial minority populations in the United States have often been denied the fundamental civil right of voting or have been subject to actions that curtailed their ability to exercise this right in a meaningful way. The Voting Rights Act of 1965 was enacted to protect minority voting rights and included provisions aimed at addressing a variety of practices that historically adversely affected minority voting. In 2007, key provisions of this Act were set to expire, prompting congressional debates regarding its reauthorization. Concerns were raised that the historical voting discrimination that the Voting Rights Act was meant to redress has been remedied; renewal of the Act, consequently, would be unwarranted. Ultimately, the renewal legislation passed the House and the Senate, and President Bush signed the reauthorization of the Voting Rights Act in July 2006.¹ Given the reauthorization, with few revisions, of the Act's preexisting provisions, we examine in this article whether its provisions have been effective in curtailing discriminatory voting rights practices. Specifically, we consider whether cities are able to circumvent the intent of the Act and engage in annexation practices that produce undesirable consequences for minority voting rights.

Although much attention has been paid to the implications of the Voting Rights Act for redistricting and changes to voting procedures, very little scholarly debate has ensued from its provisions on annexation. State and local legislation permit cities to enlarge their boundaries via the annexation of parcels of outlying property.² Annexations are changes that have the potential to affect voting and are, consequently, subject to review under the Act.³ Annexation can potentially affect voting in two ways. First, annexations result in changes in the boundary lines of a city, enlarging the number of eligible voters inside the city and leaving other voters outside. In this way, a city can include non-minorities, or exclude minorities, from voting by virtue of its decisions concerning which parcels to annex. Second, annexations dilute the weight of the votes of individuals who were within the city boundaries prior to annexation. As a result, if the territory being annexed is populated largely by non-minorities, the annexation will result in the dilution of minority votes. Cities are required under the Voting Rights Act, therefore, to obtain preclearance from the federal government to ensure that the proposed annexation "neither has the purpose nor will have the effect of denying or abridging the right to vote on account of race or color."⁴

The purpose of preclearance is to provide a review process of all proposed annexations in order to prevent negative impacts on minority voting power. The current preclearance review process, however, does not

1. Fannie Lou Hamer, Rosa Parks, and Coretta Scott King Voting Rights Act Reauthorization and Amendments Act of 2006. Pub. L. No. 109-246, 120 Stat. 577 (2006) [hereinafter Voting Rights Reauthorization].

2. See, e.g., TEX. [LOC. GOV'T] CODE ANN. § 43 (2007).

3. Perkins v. Matthews, 400 U.S. 379, 388-89 (1971) ("Changing boundary lines by annexations which enlarge the city's number of eligible voters constitutes the change of a 'standard, practice, or procedure with respect to voting.'").

4. See Voting Rights Reauthorization, *supra* note 1.

guarantee the achievement of this end. Rather, there are stages during which there is the potential for cities to, intentionally or unintentionally, circumvent the purpose of the Act. Whether cities actually take advantage of these opportunities to evade the Act's restrictions, however, is unclear.

In this article, we attempt to gauge this problem by undertaking a policy-oriented analysis of the manner in which the Voting Rights Act affects annexation outcomes. We first examine the basic provisions, law, and enforcement practices of the Voting Rights Act as related to annexation. This analysis highlights the opportunities to avoid the law, as well as substantive and methodological challenges that its enforcers face. Our review leads us to the conclusion that annexation's long-term impact on minority voting may not be adequately addressed under current law and enforcement practice.

Although current law and enforcement might allow for the *opportunity* to circumvent the Act, we also wish to explore whether there is evidence that minority vote dilution is, in fact, occurring as a consequence of annexations. To this end, we examine annexation patterns in selected cities in the northern and western portions of the exurban fringe of the rapidly growing Houston, Texas metropolitan region. We attempt to assess whether these annexations affect the ethnic mix of the voting-age populations in the cities in a way that has the potential to diminish minority voting strength. Further, we consider the question of whether the annexation of territory and population is influenced by the ethnic demographic mix of the areas in the potential annexation regions surrounding the cities. Our findings provide mixed evidence concerning the efficacy of the current provisions of the Voting Rights Act in discouraging annexations that are likely to dilute minority voting.

II. EVALUATION OF ANNEXATION PATTERNS UNDER THE VOTING RIGHTS ACT

The Voting Rights Act was enacted in 1965 by Congress with the purpose of protecting the voting rights of minority citizens in the United States; specifically, the Act prohibits racial or language discrimination in the voting process.⁵ Implementation of the Voting Rights Act has been linked with a significant increase in black voting and, consequently, black political power.⁶ In the first seven years after the Act was implemented, the number of black individuals registered to vote in the South increased by one million.⁷ The efficacy of the Voting Rights Act in increasing minority votes has been attributed in part to its provision of broad administrative powers and remedies to the federal government, rather than relying on government-initiated litigation to enforce voting rights. Through the Act, the federal government has been able to closely monitor voting rights compliance, require jurisdictions to obtain preclearance for changes

5. Voting Rights Act of 1965, Pub. L. No. 89-110, 79 Stat. 445 (codified as amended at 42 U.S.C. §§ 1971, 1973 to 1973bb-1 (1994)).

6. Lorn S. Foster, *Section 5 of the Voting Rights Act: Implementation of an Administrative Remedy*, 16 PUBLIUS 17 (1986); Gayle Binion, *The Implementation of Section 5 of the 1965 Voting Rights Act: A Retrospective on the Role of the Courts*, 32 W. POL. Q. 154 (1979).

7. See Binion, *supra* note 6, at 155.

in voting procedures and practices, and apply administrative remedies for violations.

There are several general provisions contained in the Act that regulate voting practices throughout the country, as well as special provisions that are applicable only to certain states and jurisdictions that have been identified as having a history of discrimination. Of the special provisions, Section 5 is one of the most significant due to its role in ensuring the ongoing protection of minority voting rights. Section 5 requires all covered jurisdictions to submit changes in the voting procedure, redistricting changes, and annexation for preclearance prior to implementation. Section 5 provides, in part, “whenever a State or political subdivision . . . shall enact or seek to administer any voting qualification or prerequisite to voting, or standard, practice, or procedure with respect to voting different from that in force or effect,” the state or subdivision should seek action in the D.C. District Court or submit a letter to the Attorney General to determine whether “such qualification, prerequisite, standard, practice, or procedure does not have the purpose and will not have the effect of denying or abridging the right to vote on account of race or color.”⁸

Following the enactment of Section 5 as part of the original Voting Rights Act of 1965, the courts began to interpret what constitutes a change in “voting qualification or prerequisite to voting, or standard, practice, or procedure.” Generally, Section 5 requires states or jurisdictions to seek preclearance for changes that constitute redistricting, changes in the electoral system, and annexations of new territory.⁹ Within this article, we focus on the manner in which cities comply with, or avoid, Section 5 preclearance procedures with respect to *annexations*. We first provide a background of annexation and preclearance procedures, describing the manner in which territories are annexed and reviewed under Section 5. We then engage in an analysis of the limitations inherent in Section 5, raising policy concerns suggested by the current preclearance procedure. This analysis sets the stage for our empirical analysis of annexation in the Houston exurban fringe, in which we examine whether cities appear to take advantage of the observed limitations of Section 5.

III. ANNEXATIONS AND PRECLEARANCE PROCEDURE UNDER SECTION 5

A. *Applying for Preclearance of Annexations Under Section 5*

Although preclearance focuses on the effect of annexations on minority voting rights, cities may opt to annex a territory for a variety of reasons beyond the political. Annexations have economic effects for both the city and for those residing within the annexed parcels. Through annexation, a city expands its potential tax base and, thereby, increases revenue for costs associated with the city’s infrastructure.¹⁰ Further, a city might annex an area in order to play a role in planning the growth of the terri-

8. 42 U.S.C. § 1973c(a) (2006).

9. See 28 C.F.R. § 51.13 (1987).

10. Robert D. Thomas & Richard W. Murray, *Applying the Voting Rights Act in Houston: Federal Intervention or Local Political Determination?*, 16 PUBLIUS 81, 91 (1986); Note, *The Right to Vote in Municipal Annexations*, 88 HARV. L. REV. 1571, 1573 (1975).

tory; this growth, then, could have a positive effect on the city's economic structure. For those living in annexed areas, annexation generally requires the municipality to provide utilities to all of those within its boundaries.¹¹ Consequently, access to city services imbues economic benefits for residents of acquired parcels. These economic benefits, in addition to potential political benefits, serve as powerful motivators for annexing new lands.

As a result of the benefits of annexation to both the city and the residents of a territory, there are generally two parties¹² who initiate annexation: owners of the property, or a municipality.¹³ In Conroe, Texas, for example, the city's Home Rule Charter specifies that annexations can be instigated either by: (1) petition by a majority of residents of the territory and, thereafter, approved by City Council ordinance; or (2) through ordinance by the City Council, with or without consent of the territory's inhabitants.¹⁴ Once the annexation has been approved, but prior to its implementation, the jurisdiction must submit a letter specifying the voting change in order to obtain preclearance from the Attorney General.¹⁵

Once the Attorney General receives a submission for preclearance, he or she has sixty days during which to make an objection to the proposed annexation.¹⁶ In reaching this decision, the Attorney General relies upon the same standard that would be applicable in a judicial determination under Section 5: "whether the submitted change has the purpose or will have the effect of denying or abridging the right to vote on account of race, color, or membership in a language minority group."¹⁷ This basic standard has developed through legal precedent into a multifaceted test, with different implications for varying types of voting changes, as well as for different jurisdictions.

B. *What Constitutes a Discriminatory Annexation?*

In determining whether preclearance should be denied in annexation cases, the test employed by both the Attorney General and the D.C. District Court is two-pronged: the decision maker must determine whether the annexation has either the *purpose* or the *effect* of denying or abridging

11. See Note, *The Right to Vote*, *supra* note 10, at 1573.

12. See Daren Waite, *Annexation and the Voting Rights Act*, 28 How. L.J. 565 (1985). It is important to note that annexation procedures are determined, in part, by both state and municipal statutes. Thus, although the federal preclearance procedure is applicable to all jurisdictions, the manner in which annexation can occur and/or the territories subject to annexation can vary. Consequently, annexation can be achieved by property owners or the city via a number of methods, including municipal ordinances or resolutions, or petitions or referendums by property owners. Further, annexation is sometimes initiated at the county or state levels, such as by county boards, courts, or state commissions.

13. See *id.*

14. CONROE HOME RULE CHARTER, pt. 1.03-1.04 (1965).

15. 28 C.F.R. §§ 51.20-51.23 (1987).

16. 28 C.F.R. § 51.9 (1987).

17. 28 C.F.R. § 51.52 (1987) (citing *South Carolina v. Katzenbach*, 383 U.S. 301, 328, 335 (1966)). This test has been modified in the 2006 Amendment to the Voting Rights Act, to now permit a voting change if it "neither has the purpose nor will have the effect" of abridging the right to vote. See *supra* note 1.

minorities' right to vote.¹⁸ The purpose prong of the test in annexation cases has focused on assessing whether there exists "objectively verifiable, legitimate reasons for the annexation."¹⁹ It is therefore very important to articulate the apolitical motivations behind the annexation in the submission for preclearance. Simply articulating a nondiscriminatory reason for annexation will not suffice, however, as the articulated reason will be subject to scrutiny by the decision maker.²⁰ In addition, the decision maker will consider whether objections to the annexation have been raised concerning a possible discriminatory motivation, as well as whether there is a history of discriminatory annexation in the city.²¹

The decision maker can also choose to object to the proposed annexation on the basis that it will have the *effect*, regardless of purpose, of abridging or denying the right to vote for minorities. As will be discussed later, the effects test under Section 5 has been interpreted in a different manner for annexation cases than for cases dealing with preclearance requests for redistricting or voting procedure changes. In annexation cases, the decision maker might find annexation to be discriminatory under Section 5 if it decreases the city's minority population percentage. The percentage of the minority population both before and after annexation must, therefore, be assessed in evaluating the annexation. Even if the annexation results in a reduction in the minority population percentage, however, the decision maker might approve an annexation if the city can either show that the annexation will only have a small impact on the minority population percentage, or if the city's minority population, even if smaller in percentage, still will enjoy representation reasonably commensurate with its voting strength after the annexation.²² The most common

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18. Annexation case law saw the majority of its development in the 1970s and 1980s, as reflected by the decisions cited herein. All of these decisions have been Shephardized to affirm that they reflect current law.
 19. Hiroshi Motomura, *Preclearance Under Section 5 of the Voting Rights Act*, 61 N.C. L. REV. 189, 225 (1983) (quoting *City of Richmond v. United States*, 422 U.S. 358, 375 (1975)). See also 28 C.F.R. § 51.57 (1987).
 20. See, e.g., *City of Pleasant Grove v. United States*, 479 U.S. 462 (1987). In *Pleasant Grove*, for example, the city sought judgment from the court that its annexations did not have a discriminatory purpose, and articulated economic motivations for electing to annex white areas and refusing to annex black areas. The Court questioned the proffered reason, noting that the justification for failing to annex the black territories was submitted after the fact, and the calculations representing economic costs of annexations did not reflect the fact that the city was already providing services to the black territories for free and that the city would obtain tax revenue through annexation. Thus, in evaluating the articulated reason for annexation, the decision maker is likely to compare the characteristics of proposed territories to those territories in which annexations were undesirable. Further, economic motivations will be carefully scrutinized for discriminatory purpose.
 21. See, e.g., *City of Port Arthur, Texas v. United States*, 459 U.S. 159 (1982). In the *City of Port Arthur*, the District Court determined that the voting plan proposed to redress the effects of annexation did not appear to have a discriminatory purpose, but the two prior proposed plans were adopted with the purpose of stymieing a victory for a black candidate. The Supreme Court held that prior findings of discriminatory purpose could be indicative of discriminatory purpose in the case at hand and, as a result, bear upon the final decision.
 22. Richard L. Engstrom, *The Voting Rights Act: Disfranchisement, Dilution, and Alternative Election Systems*, 27 PS: POL. SCI. & POL. 685 (1994). See also Motomura, *supra* note 19.

way of achieving commensurate representation is by requiring a shift in voting procedure from at-large elections to single-member district elections.²³ Notably, however, conversions to single-member districts are not the only remedy for minority vote dilution; rather, some municipalities have resolved this issue by modifying the voting rules of multimember districts in a manner which tends to result in the election of minority candidates.²⁴

This effects test, therefore, permits annexations to occur even when the annexation results in a decrease in the minority population percentage in the city. Although this result can be detrimental to minority voting power, courts have reasoned that such annexations must be allowed, as cities might need to annex suburbs or other territories that are largely white. Minority voting power is nonetheless protected, however, through “negotiations” employed by the jurisdiction or the decision maker in altering voting procedures from at-large elections to single-member district elections.²⁵ The Supreme Court’s rationale in allowing such exchanges to occur – i.e., annexations for voting changes – appears to be that “[c]ities may need to annex white suburbs for non-racist reasons . . . that could potentially benefit the minority population; section 5 should not prevent annexation if minorities are fairly represented after the change.”²⁶

IV. ANNEXATIONS UNDER SECTION 5: LEGAL AND POLICY CHALLENGES

Section 5 has been heralded as an important provision of the Voting Rights Act due to its ability to provide ongoing monitoring of voting changes. Nonetheless, many aspects of its implementation are problematic for those seeking to protect minority voting rights. These legal and policy challenges include: (1) potential manipulation of preclearance outcomes through strategic timing of submissions; (2) lack of a consistent effects test for the entirety of Section 5, and lack of a consistent test to be applied throughout the Voting Rights Act; (3) jurisdictions’ failure to ad-

23. See *City of Petersburg v. United States*, 354 F. Supp. 1021 (D.D.C. 1972), *aff’d mem.*, 410 U.S. 962 (1973); *City of Richmond v. United States*, 422 U.S. 358 (1975); and *City of Port Arthur*, 459 U.S. 159. In *City of Richmond v. U.S.*, the annexation of a largely white area resulted in a reduction of the black population in the city from 52% to 42%. The city submitted a plan for preclearance to replace the preexisting system of at-large elections with a single-member district plan. Under this plan, blacks would be in a substantial majority in four of the nine council member districts. The Court held that if the single district system fairly reflected the post-annexation voting strength of the black community, then preclearance should be granted. The Court reasoned that black voting “power in the new city [would not be] undervalued” with such a plan in place, nor would blacks be underrepresented on the council; as a result, the annexation could not deny or abridge the right to vote on the basis of race. *City of Richmond*, 422 U.S. at 371.

24. See Engstrom, *supra* note 22. See also Richard L. Engstrom, *Modified Multi-Seat Election Systems as Remedies for Minority Vote Dilution*, 21 STETSON L. REV. 743 (1992); Lani Guinier, *The Representation of Minority Interests: The Question of Single-Member Districts*, 14 CARDOZO L. REV. 1135 (1993).

25. See *City of Port Arthur*, 459 U.S. 159; *City of Richmond*, 422 U.S. 358; *City of Rome v. United States*, 446 U.S. 156 (1980).

26. Mark Haddad, *Getting Results Under Section 5 of the Voting Rights Act*, 94 YALE L.J. 139, 148 (1984).

here to the requirement to seek preclearance for voting changes; and (4) challenges faced by the decision maker in obtaining, using, and interpreting demographic data in rendering preclearance determinations. Given the recent reauthorization of Section 5 largely in its preexisting format, questions concerning the efficacy of the Section's provisions are likely to persist. As a result, the legal and policy issues explored in this article and demonstrated in the case study have relevance for the administrative and judicial application of Section 5 in the coming years.

A. *"Unprecleared" Annexations Are Reviewed in a Cumulative Fashion*

When cities apply for preclearance of an annexation, they must include in their application all annexations that have not previously received preclearance, or must make a statement that all previous annexations have been submitted for review.²⁷ This results in multiple annexations being reviewed in a cumulative fashion.²⁸ The purpose behind this process is to prevent the possibility that delays in submitting annexations for preclearance will be made due to a discriminatory purpose. Cities will not be permitted to "wait out" the preclearance requirement; they will be required to submit the annexations for preclearance if they are discovered and the annexations will then be considered together.²⁹

In *City of Rome*,³⁰ the city failed to obtain preclearance for a number of annexations and the subsequent delay in review resulted in the Court considering the cumulative effect of the annexations. The Court not only reviewed the annexations cumulatively, but applied the most current population data in doing so. Such a practice can result in annexations that might have passed at an earlier stage facing objections when the effects of multiple annexations are considered in a cumulative fashion. For example, acquisition of small parcels of land inhabited largely by white individuals might not result in a significant enough change to have been denied preclearance if the parcels had been considered individually, and at the time they were originally annexed. If the parcels are considered cumulatively, however, their effects might be great enough to trigger an objection to preclearance.

Although this policy can perhaps serve to encourage prompt preclearance application, as well as to capture the cumulative effects of annexations that were not properly precleared, there are dangers in considering the effects of preclearance of multiple annexations in a cumulative fashion. Cities might choose to engage in strategic preclearance planning in order to mask the cumulative discriminatory effects of their annexations. For instance, cities could submit parcels individually, rather than together, so as to dilute the effect of each acquisition. In addition, delaying the submission of annexations for preclearance could result in ultimately masking discriminatory effects of earlier annexations for cities. For example, if a city annexed a territory which would likely trigger a

27. 28 C.F.R. § 51.61(b) (1987), citing *City of Pleasant Grove v. United States*, 479 U.S. 462 (1987).

28. 28 C.F.R. § 51.28(c) (1987).

29. Motomura, *supra* note 19.

30. *City of Rome v. United States*, 446 U.S. 156 (1980).

Section 5 objection, the city might choose not to file for preclearance at that time. At some later point, however, the city could include the annexation on a new preclearance application, to be considered cumulatively with other annexations. If the other annexations diluted the discriminatory effect of the earlier annexation and/or population changes had occurred in the city during the intervening time period which increased the minority population, the annexation might pass preclearance at that later date. In the intervening period, however, minorities would have experienced some degree of vote dilution due to the earlier annexation. As discussed in the section on enforcement, a city's failure to initially obtain preclearance would be in violation of the Act. There is, however, evidence that cities often fail to submit their annexations for preclearance.³¹

Policy concerns surrounding cumulative annexation will be explored further in the discussion of the Houston exurban fringe case study. Clearly, the possibility for strategic action exists, and the policy of cumulative consideration of annexations can serve as both a remedy for such action, and a motivator.

B. Lack of Cohesive Effects Test Within the Voting Rights Act

When annexations are submitted for preclearance, the decision maker can object if the annexation has either the purpose or the effect of abridging or denying minority voting rights. As previously set forth, the effects test for annexations involves a two-step process of determining: (1) whether the annexation will result in a reduction in the minority population percentage; and (2) if a reduction occurs, whether minority voting strength can be preserved through a shift in voting procedure, such as from at-large elections to single-member district elections. In submissions for preclearance involving voting changes other than annexations, however, a different test applies, while yet another effects test applies in other sections of the Voting Rights Act. The lack of a cohesive effects test within Section 5 itself, as well as within the Act as a whole, is problematic from both a legal and policy standpoint.

When preclearance is sought on matters *other than annexation*, the decision maker applies a retrogression test to assess the effects of the voting change. The retrogression test, first set forth in *Beer v. United States*,³² prohibits only those voting changes that would have a retrogressive effect on preexisting minority voting strength, or reduces the capability of minority voters to elect a candidate of their choice. Essentially, retrogression demands that the decision maker engage in a comparison of the jurisdiction's new voting plan with its previous plan in order to assess changes in the population size and voting-age population; the existing plan is used as a "benchmark against which the 'effect' of voting change[] is measured."³³

31. Victor Andres Rodriguez, *Section 5 of the Voting Rights Act of 1965 After Boerne: The Beginning of the End of Preclearance?*, 91 CAL. L. REV. 769, 808 (2003).

32. *Beer v. United States*, 425 U.S. 130 (1976).

33. Alaina C. Beverly, *Lowering the Preclearance Hurdle: Reno v. Bossier Parish School Board*, 120 S. Ct. 866 (2000), 5 MICH. J. RACE & L. 695, 707 (2000).

After the decision in *Beer*, the retrogression standard was reaffirmed and elaborated upon in *City of Lockhart v. United States*.³⁴ The existing municipal voting procedures in Lockhart, Texas appeared to discriminate against black residents, and the proposed changes in the voting procedures would likely perpetuate such discrimination. The Supreme Court, however, determined that the procedures should be granted preclearance under Section 5 because they were not retrogressive. Even though the procedures did nothing to alleviate race discrimination, the proposed changes did not exacerbate vote dilution. This holding by the Court effectively rendered the retrogression test applied in Section 5 cases inconsistent with the purposes of the Voting Rights Act: Voting changes can be precleared that perpetuate, rather than alleviate, discriminatory practices.

Section 2 is one of the general provisions of the Voting Rights Act, and allows any citizen anywhere in the country to bring suit to challenge an existing discriminatory voting practice. The effects test applied under Section 2 differs from the retrogression test applied under Section 5, generating further inconsistency within the Act. Under Section 2, Congress has required,³⁵ and the courts have applied,³⁶ a results test which simply looks for the presence or absence of racial vote dilution. Rather than using the existing plan as the benchmark against which the effect of the change is measured, as is done in retrogression, “[t]he benchmark of the results test is voting strength roughly proportionate to the size of the minority group.”³⁷ The results test guarantees equality of opportunity for minorities to elect their candidate of choice, rather than exact proportionate representation. Nonetheless, the results test is far more in keeping with the principles embodied in the Voting Rights Act – to eliminate voting discrimination against minorities and to ensure minority voting representation.

The manner in which preclearance for *annexations* has been handled under Section 5 highlights the challenges to applying the retrogression test. The courts and the Attorney General have not applied the retrogression test to annexation applications for preclearance, opting instead for a test imposing criteria more like those of Section 2. In *City of Port Arthur v. United States*,³⁸ the D.C. District Court distinguished voting procedure changes from boundary enlargements, contending that procedure changes affect an unchanged population, whereas boundary enlargements add citizens and, therefore, can have an important impact on proportional representation.

As a result, the test that has been previously set forth for annexations was developed, whereby a city is permitted to annex a territory even if there is a retrogressive effect, as long as the city agrees to abandon its at-large voting system in favor of a districting system that fairly represents post-annexation minority voting strength. The focus in annexation preclearance, then, has been on ensuring proportional representation in

34. *City of Lockhart v. United States*, 460 U.S. 125 (1983).

35. 42 U.S.C. § 1973 (1982).

36. *See, e.g., Thornburg v. Gingles*, 478 U.S. 30, 50–51 (1986).

37. Haddad, *supra* note 26, at 146.

38. 459 U.S. 159 (1982).

annexations that result in a retrogressive effect. In this respect, the annexation effects test is similar to that of Section 2 when applied to situations where cities are seeking preclearance of territories which will result in retrogressive effects; specifically, the annexation test permits the annexation to occur, but requires minority voting strength to be ensured. When such a test is applied, there will be no conflicts between a Section 2 and Section 5 outcome. Thus, when annexations are the subject of the preclearance determination and the annexation will have a retrogressive effect, many of the concerns regarding the Section 5 effects test are resolved.

When there is no retrogressive effect in the proposed annexation, however, the same outcome occurs in the annexation case as in any other Section 5 preclearance case. The decision maker will first examine demographic information to determine whether the proposed annexation reduced the minority population percentage in the city. If the minority population percentage is not reduced by the proposed annexation (i.e., there is no retrogressive effect), then the annexation will be precleared. As a result, if earlier discriminatory annexation practices have resulted in negative effects on minority voting rights, the retrogression test will not prohibit annexation of a new territory that perpetuates and/or does nothing to alleviate the effects of discrimination. Cities could, then, opt to selectively annex parcels of land that would result in maintaining the status quo. Such a practice would pass muster under Section 5, as long as minority populations were made no worse off than they were before. The purpose of the Voting Rights Act would be circumvented, however, by this practice. Further, jurisdictions are aware of the lowered standard for preclearance and it is possible that it is through a careful navigation of this standard that jurisdictions are achieving preclearance of plans that would not have passed muster under earlier, more strict interpretations of the Section 5 effects test.³⁹

These problems would be alleviated if the Section 2 results test was adopted for Section 5 preclearance determinations. Using the Section 2 test throughout the Act would be advantageous for consistency purposes, as well as for reducing the role of Section 5 in maintaining, rather than eliminating, voting discrimination.⁴⁰ If the results test were in place, annexations would be treated the same whether they had retrogressive effects or not. Rather, the test would be whether the minority group in the post-annexation city would have voting strength roughly proportionate to the size of the minority group. Such an approach would be more in keeping with the original intent of the Voting Rights Act, unlike the current Section 5 test, which could perpetuate discriminatory voting practices.

39. U.S. COMMISSION ON CIVIL RIGHTS, REAUTHORIZATION OF THE TEMPORARY PROVISIONS OF THE VOTING RIGHTS ACT: AN EXAMINATION OF THE ACT'S SECTION 5 PRECLEARANCE PROVISION (U.S. Commission on Civil Rights 2006).

40. See Haddad, *supra* note 26.

C. Lack of Enforcement of Preclearance Under Section 5

After the Voting Rights Act was implemented in 1965, there was a delay before Section 5 came into full use. For the first six years, Section 5 was largely unused due primarily to the fact that the types of voting changes that fell under its scope had yet to be clearly delineated by the Supreme Court.⁴¹ Southern jurisdictions were reluctant to interpret the law broadly to cover their voting changes and were hesitant to submit their changes to federal jurisdiction. As a result, the courts have been forced to play an important role in ensuring compliance with Section 5. Even after the Supreme Court ruled in *Perkins v. Matthews*⁴² that annexations fell under the scope of Section 5, cities continued to fail to submit their annexations for preclearance.⁴³ As a result, some litigation concerning Section 5 involves suits addressing whether preclearance was in fact required.⁴⁴

Jurisdictions that do submit their voting changes (including annexations) for preclearance, however, rarely receive objections from the Attorney General.⁴⁵ Between 1975 and 1984, as well as in the decade between 1985 and 1994, the Department of Justice (DOJ) filed approximately 400 objections to preclearance applications.⁴⁶ From 1995 to 2005, however, this number dropped to only 87 objections.⁴⁷ Some attribute this decline to jurisdictions becoming increasingly aware of their obligations under the Voting Rights Act;⁴⁸ others suggest that jurisdictions have learned how to navigate the law's requirements;⁴⁹ others observe that the administrative process of the DOJ limits review time and encourages approvals;⁵⁰ and still others note that recent legal decisions have collapsed retrogression and discriminatory intent⁵¹ and reduced the likelihood that the DOJ will deny preclearance.⁵²

In order to facilitate the implementation of Section 5, Ball et al.⁵³ observe that the Attorney General and courts have engaged in a series of compromises with cities. These compromises involve exchanging approval on questionable annexations for an alteration in annexation boundaries to incorporate additional black residential areas, or changes in voting procedures from at-large elections to districting systems.⁵⁴ Simi-

41. Gayle Binion, *The Implementation of Section 5 of the 1965 Voting Rights Act: A Retrospective on the Role of the Courts*, 32 W. POL. Q. 154, 154–73 (1979).

42. *Perkins v. Matthews*, 400 U.S. 379 (1971).

43. Rodriguez, *supra* note 31, at 769.

44. See, e.g., *Lopez v. Monterey County*, 525 U.S. 266 (1999).

45. See U.S. COMMISSION ON CIVIL RIGHTS, *supra* note 39.

46. See *id.*; Engstrom, *supra* note 22; Foster, *supra* note 6, at 17.

47. See U.S. COMMISSION ON CIVIL RIGHTS, *supra* note 39.

48. *Id.*

49. *Id.*

50. See Foster, *supra* note 6.

51. *Reno v. Bossier Parish Sch. Bd.*, 528 U.S. 320 (2000).

52. See U.S. COMMISSION ON CIVIL RIGHTS, *supra* note 39.

53. HOWARD BALL ET AL., *COMPROMISED COMPLIANCE: IMPLEMENTATION OF THE 1965 VOTING RIGHTS ACT* (1982).

54. See *id.*

larly, Binion⁵⁵ notes that the Attorney General engaged in bargaining with cities to obtain political gains for minorities. For instance, when McComb, Mississippi sought to annex property in 1973, the Attorney General suspected racially motivated annexations.⁵⁶ The Attorney General agreed to allow the annexation if McComb would alter its boundaries to incorporate other properties, which resulted in a more favorable racial balance in the city.⁵⁷

Binion casts these deals as “bargains” that seek political gains for minorities.⁵⁸ Ball et al.,⁵⁹ on the other hand, argue that they are instead “compromises” by the Attorney General whereby the cities are often obtaining the advantage, since the purpose of the Voting Rights Act should require cities to adhere to higher standards in the first place. Instead, Section 5 has been enforced so that “efficient operation of the submission process [is] the primary goal and the implementation of nondiscriminatory changes the secondary goal,” resulting in the ratification of “changes in electoral procedures that do not violate retrogression, but also do not foster full or effective minority participation.”⁶⁰

There is the possibility that Section 5 could only be successfully implemented through a lowering of standards – that these compromises were necessary in order to encourage the voluntary application of voting changes for preclearance.⁶¹ If this is the case, then perhaps the decision concerning the mode to encourage compliance with Section 5 can explain, in part, the differences in the effects tests used in Section 2 and Section 5: the Section 5 test might be less stringent in order to encourage voluntary compliance with the preclearance submission process. Although this might have proven effective in increasing preclearance submissions, the ultimate goal of Section 5 is misplaced along the way. As a result, perhaps the proper method of achieving compliance should be reconsidered in order to realign the procedure of Section 5 with its purpose. Rather than voluntary compliance achieved through negotiation tactics, more coercive tactics, such as litigation or termination of federal or state funds, might be necessary in order to achieve compliance.

D. *Problems with Demographic Data*

Yet another challenge in the legal analysis of preclearance submissions under Section 5 concerns the difficulties in obtaining and interpreting accurate demographic data. In preclearance submissions concerning annexations, the Attorney General has requested that cities include demographic information in the application in order to aid in the determination process.⁶² The demographic information should include the total

55. See Binion, *supra* note 41, at 161.

56. *Id.*

57. *Id.*

58. *Id.*

59. See BALL ET AL., *supra* note 53.

60. *Id.* at 200.

61. See *id.*

62. Procedures for Administering Section 5 of the Voting Rights Act, 28 C.F.R. § 51.28 (1965).

and voting-age population of the area before and after the change, broken down by race and language group. In addition, in January 2001 the departing Assistant Attorney General in the Civil Rights Division issued a guidance memorandum concerning the application of Section 5 which indicated that the examination of a preclearance submission will include the review of estimates of future population composition by race and language group. Even if the present demographics indicate no retrogression, if estimates of future population indicate a likelihood of retrogression, then preclearance can be denied.⁶³ For instance, if the development of a property after annexation is likely to result in an alteration in the racial composition of the property, then the decision maker may take such demographic changes into consideration in rendering a determination. This consideration may be especially relevant for situations in which cities systematically annex lightly settled territory that lies within the predictable growth path of future suburban development and population growth that is likely to be disproportionately white. In such cases the retrogressive impact considered narrowly at time of annexation might be seen as slight, but the long-term consequences might be much greater.

When the Attorney General has considered demographic data, he or she has often objected to annexations even when the resulting reduction in the minority population percentage would be very small. In annexations in cities in Georgia, the Attorney General objected to annexations that would reduce the black population by only about 1%.⁶⁴ In a Houston, Texas annexation, the Attorney General objected where the black population percentage would be reduced by 1.2% and, in another annexation, where the Mexican-American representation in the population would be reduced by 1.5%.⁶⁵ As a result, very small demographic differences can sometimes trigger objections, emphasizing the importance of accurate demographic information.

At other times, however, reductions of a few percentage points would be viewed as insignificant or *de minimis*. The determination of whether an objection should be made depends not simply on the size of the decrease in the minority population percentage. The demographic information must also be viewed in light of the majority-minority balance as evidenced in recent elections. When the minority group and white population are approximately equal in size, small changes in racial or ethnic balance often result in objections. In *City of Petersburg v. United States*, for instance, an annexation resulted in a reversal of the racial composition of the city, rendering the change significant.⁶⁶ The ultimate focus is on whether the annexation will affect minority voters' ability to elect the candidate of their choice; in some elections, a few additional white voters

63. 28 C.F.R. § 51.28 (1965); see also *City of Pleasant Grove v. United States*, 479 U.S. 462 (1987).

64. See Motomura, *supra* note 19, at 222.

65. *Id.*

66. See *City of Petersburg v. United States*, 354 F. Supp. 1021 (D.D.C. 1972), *aff'd mem.*, 410 U.S. 962 (1973).

might affect the outcome.⁶⁷ As a result, small changes can be important for some cases, whereas they will have less of an impact for others.

These nuances demonstrate the important role that demographic data play in rendering decisions in Section 5 preclearance cases. Unfortunately, however, obtaining accurate population data is often very difficult. In *City of Port Arthur v. U.S.*,⁶⁸ for instance, the parties relied on data from the 1980 census to present pre-annexation and post-annexation percentages for the city for 1977 and 1978.⁶⁹ The 1980 data were the most current data available; however, reliance on such numbers is problematic in that the population is likely to have changed in the intervening years. The demographic processes of fertility, mortality, and migration, primarily, are bound to have exacted an effect on the city's population over the course of three years. Most importantly, using data from the period after the annexations were approved to measure the pre-annexation percentages of the city's population is problematic in that news of the passing of the annexation could have affected the composition of the annexed area. For instance, if a rural area comprised largely of minorities was annexed by the city for commercial development, residential dwellers might move out of the area and commercial businesses might move into the area during the period when the annexation is under review with the Attorney General. By the time the census is taken, the population of the proposed area could have altered, perhaps dramatically.

In addition to the challenges posed by obtaining timely population data, the city must also obtain data relevant to the voting-age population if the minority population percentage is reduced by the annexation. Although the Attorney General requests data on the voting-age population, these numbers are not sufficient when it comes to examining the effects of annexations on Latino populations, as many of these individuals may not be citizens and, therefore, may not be able to vote. The census collects data on Latinos, but there is an undercount of Latinos⁷⁰ and it is difficult to determine the actual size of the Latino population that is eligible to vote. Likewise, it may be difficult to determine the number of Black voting-age residents that are eligible to vote, since Blacks are disproportionately convicted of felonies,⁷¹ and many states disenfranchise convicted felons.⁷² In addition, even when it comes to citizen populations, there is some question as to whether the voting-age population should be used to

67. See Motomura, *supra* note 19, at 223.

68. See *City of Port Arthur, Texas v. United States*, 459 U.S. 159, 162 n.3 (1982).

69. See also W.A.V. Clark, *Evaluating Boundary Changes for Discriminatory Effect*, in DEMOGRAPHICS: A CASEBOOK FOR BUSINESS AND GOVERNMENT 70-88 (Hallie J. Kintner, Thomas W. Merrick, Peter A. Morrison & Paul R. Voss eds., 1997).

70. Manuel de la Puente, *The Census Undercount of the Hispanic Population*, 3 LATINO STUD. J. 1 (1992).

71. John R. Cosgrove, *Four New Arguments Against the Constitutionality of Felony Disenfranchisement*, 26 THOMAS JEFFERSON L.R. 158 (Spring 2004) (noting that ex-felon disenfranchisement reduces black voting power as most ex-felons are Blacks).

72. *Id.* at 164 ("Because of the disproportionate number of blacks convicted of a felony, black voting power has been drastically reduced in the fourteen states with ex-felon disenfranchisement, making it difficult for blacks in these states to elect representatives of their choice."). Latinos also experience disproportionately higher rates of disenfranchisement than the general population. See *id.* n.27.

assess dilution of voting strength, or whether numbers of registered voters should be analyzed. If the purpose is to determine the power of minority populations to elect a candidate of their choice, then it could be more important to examine registered voters to determine voting strength than voting-age populations. This argument holds even more weight if one considers that discriminatory voting practices perhaps affect the numbers of registered voters for minority populations. Obtaining accurate data on registered voters, however, once again becomes problematic. The challenges posed by using demographic data to evaluate voting changes are highlighted further in the empirical analysis below.

V. EMPIRICAL ANALYSIS: ANNEXATION IN THE EXURBAN FRINGE OF HOUSTON, TEXAS

The previous discussion calls attention to the fact that, in its current form, Section 5 of the Voting Rights Act carries with it a number of legal and policy concerns which can bear upon minority voting rights when cities expand their boundaries through annexation. It is unclear, however, whether cities take advantage of the potential loopholes when making annexation decisions.

We explore this issue, empirically, in case studies of annexation patterns between 1990 and 2000 in selected cities in the exurban⁷³ fringe of Houston, Texas. Houston is the fourth largest city in the nation, and contains a large minority presence; the 2005 American Community Survey revealed that the city has a Hispanic majority (42%), as well as a large black population (23.54%).⁷⁴ In addition to the racial diversity of the city, the state of Texas also has a history of having its actions challenged under the Voting Rights Act, with the litigation going to the Supreme Court.⁷⁵ This is attributable in part to the size of the state, its large minority populations, and its established history of litigating over voting rights issues.⁷⁶ Consequently, a finding of voter dilution and annexation in the Houston fringe is, perhaps, significant in the context of more general annexation enforcement.

Through these case studies, we seek to shed light on two basic questions raised in the foregoing policy analysis. The first is whether annexation in these areas has had a cumulative impact on the minority voting population. The second is whether the likelihood of the territory and population being annexed is associated with the *current* and *future* ethnic mix of the population in areas “at risk” of annexation. Through these analyses, we hope to examine, albeit indirectly, the manner in which Section 5 affects annexation choices.

73. AUGUSTE C. SPECTORSKY, *THE EXURBANITES* (1955). The term “exurbia”, coined by Auguste Sectorsky, is generally used to refer to semi-rural areas with low population density that are located beyond the suburbs of a city.

74. U.S. Census, http://factfinder.census.gov/servlet/DatasetMainPageServlet?_lang=en&_ts=224075012453&_ds_name=ACS_2005_EST_G00_&_program=ACS (last visited Mar. 24, 2008).

75. *See, e.g., City of Port Arthur, Texas v. United States*, 459 U.S. 159, 162 n.3 (1982); *City of Lockhart v. United States*, 460 U.S. 125 (1983).

76. *See* Thomas & Murray, *supra* note 10.

It is important to emphasize that these analyses can measure only whether there is a retrogressive effect as a consequence of annexation – the first stage in assessing whether minority voting power has been diluted. As previously noted, an annexation that results in a retrogressive effect will still be permitted, if the city agrees to abandon its at-large voting system in favor of a districting system that fairly represents post-annexation minority voting strength. It is notable that in Conroe, Texas, the city maintains an at-large voting system; further, city officials of Conroe are all white. Consequently, any retrogressive effect observed via this analysis would suggest the potential need for movement to a districting system – something that Conroe has yet to do.

A. *Cases*

The featured case in our analysis is the city of Conroe, which is located approximately 40 miles north of Houston, Texas. We provide an in-depth discussion of the data analysis for this city because it serves well to illustrate the issues of interest in our paper. In addition, we also conducted empirical analyses for several other cities in the northern and northwestern regions of the Houston metropolitan area, including: Brenham, Hempstead, Madisonville, and Navasota. In the interest of brevity, we do not report the full results from the analyses of these four cities; rather, we make note of these results only as they tend to support or conflict with the results from the Conroe analysis.

We chose this set of cities based on several considerations. First, they are situated in the outer regions of the exurban fringe of the rapidly growing Houston metropolitan area and are generally growing and annexing territory themselves. In addition, population growth in the areas surrounding these cities is fueled in part by suburban and exurban development strongly associated with population growth that is disproportionately white and middle class. These cities also have substantial minority populations including, in most cases, both Black and Latino minority groups. Further, the Black and Latino minority populations in these cities tend to be represented at substantially higher levels within the cities rather than the urban fringe surrounding the cities. Notably, the history of the region has long been characterized as disadvantageous to minorities, most notably reflected in their depressed socioeconomic status (e.g., education, occupation, income, etc.) and in the dearth of political power and minorities in office. Finally, the cities we selected are spatially separated from other cities and thus can, in principle, annex territory in any direction.

This combination of characteristics makes it likely that annexation patterns for the cities will have considerable potential to dilute minority voting strength, generating an attractive forum for examining the policy issues raised by the Voting Rights Act. Cities seeking to grow and increase their tax base will be likely to annex population in the urban fringe, especially middle class populations that in most cases are overwhelmingly white. Systematic annexation of territory from an urban fringe where the population has a lower minority percentage than the annexing city has the potential to dilute minority voting strength. The

pattern of annexation of territory and population may be shaped not only by factors such as physical proximity, but also by variation in the representation of minority groups in the populations of different areas within the urban fringe surrounding the city.

B. *Time Frame*

We focus on the period 1990-2000, a span of a decade. We chose this focus for substantive and practical reasons. As a practical matter, these dates bracket years for which census data are available and can be used to assess minority population presence. Substantively, we believe it is important to consider the impact of annexation over longer spans of time. Annexation is an on-going process. In many cities it is a regular occurrence that in short time spans (e.g., a single year) tends to involve a limited number of acts, each of which concerns relatively small parcels of land and population. Individually, these small-scale annexation acts rarely have the capacity to impact minority voting strength in a city. This may also be true when a series of such acts clustered together in a short-time frame (e.g., a year) are considered together. However, it is possible that the cumulative effect of annexation over a longer period of time would have a more substantial effect. Given the Act's consideration of annexation in a cumulative fashion, there is the potential for long-term strategic planning which can be examined, albeit indirectly, through an analysis of long-term annexation.

The long-term consequences may reflect not only the aggregation of small effects, but also other effects that might not be evident at all in a narrow examination of annexation of single parcels of land divorced from context. For example, as suggested by the Court in *City of Pleasant Grove*,⁷⁷ cities might annex unpopulated or lightly populated territory surrounding predominantly white, middle class residential areas, on the assumption that such areas have a high potential to "capture" *future population growth* of white, middle class families. This kind of exurban development is common in the outer reaches of the Houston metropolitan region. Indeed, it is a major factor in the population dynamics of our study region and it is highly plausible to hypothesize that cities are cognizant of this development, can anticipate the growth paths of such development, and might seek to annex strategically to capture this anticipated population growth. Review of the impact on minority strength could suggest minimal or even no impact *at the time of the annexation*. But, future population growth in the area could have significant impact on minority voting strength. This possibility is explicitly recognized as a basis for disapproving annexations.⁷⁸ It may be difficult to divine racial "intent" in such situations, but using longer time frames for analysis can reveal this kind of racial *consequence*, a separate and distinct consideration. Thus, our analysis can shed light on the question of whether future population trends in fact had an adverse effect on the minority population that was not recognized at the time of annexation review.

77. See *City of Pleasant Grove v. United States*, 479 U.S. 462, 471 (1987).

78. *Id.* at 472.

VI. DATA, MEASURES, AND METHODS

We obtain the data for our analyses from the “redistricting” data files for the 2000 U.S. Census of Population; specifically the PL-94 file prepared by the Census for use in reapportionment and redistricting. The tabulations available in this file provide distributions of the population by race and voting-age for a variety of geographies. For the purposes of placing population within political boundaries (i.e., city boundaries in 1990 and 2000), we draw on block-level data, the smallest geography in census files for which racial tabulations are available. We assess population composition by city boundary and annexation status using 2000 population data and block definitions.⁷⁹

A. *Racial Classification*

We examine racial distributions for three major groups – White, Black, and Latino. We place individuals in these categories on the basis of their responses to the census questions on race and Latino status. Specifically, White includes all persons giving a single race response of “White” and a response as “Not Latino,” and Black includes all persons giving a single race response of “Black” and a response of “Not Latino.” Latinos include all persons giving a response of “Latino” and may be of any race. The 2000 census provides respondents the option of providing a racial response involving two or more racial categories (e.g., “Black and White”). Among Non-Latinos, we *excluded* persons who gave a multi-racial response to the race question.⁸⁰ Table 1 provides data on the percentage of

79. There are pros and cons in the election of 2000 block-level data. In its favor, we avoid methodological problems associated with changing racial categories and block boundaries between the 1990 and 2000 censuses. Block definitions are subject to change between 1990 and 2000. Between the two, block definitions for 2000 are more attractive because they are generally more detailed. Applying decade-specific boundaries to 1990 and 2000 population data creates the possibility that changes in population distributions are attributable in part to changing block definitions. In addition, creating comparable racial categories using 1990 and 2000 census tabulations for race requires adopting procedures for classifying persons giving multi-racial responses to the race question in 2000 to achieve comparability with 1990 data since the 1990 census did not provide for multi-racial responses. This poses problems relative to the guidelines for working with multi-racial responses in assessing questions related to minority voting rights. Multi-race responses that include minority responses are to be treated as minority responses, but conversion schemes that follow this guideline may not be appropriate for matching 1990 census categories because persons giving single-race responses do not always give the minority response. This would mean that 2000 data would tend to show an artifactual increase in minority percentages over 1990 and an artifactual reduction in proportion Non-Latino White. At this time, there is no recognized “best” procedure for dealing with the dilemma of simultaneously making racial data from 1990 and 2000 comparable and obtaining racial distributions appropriate for assessing questions relating to minority voting rights under guidelines for using multi-race data. In light of this, we limit our analysis to the 2000 population data.

80. The multi-race response implemented in 2000 was not in place when the Voting Rights Act was enacted into law. Guidelines for using multi-race data in analyses evaluating compliance with the provisions of the Voting Rights Act indicate that persons listing *any* racial minority status as a component of a multi-race response should be counted as a racial minority. For example, any person giving a multi-race

respondents giving single and multiple racial responses for the population in Conroe, Texas and its surrounding environs; these data are also reported, separately, for the voting-age population. For the Non-Latino population, the overwhelming majority gave a single-race response; in Conroe, Texas, 98.9% of the total population and 99.2% of the voting-age population gave a single-race response.

TABLE 1. PERCENT OF POPULATION REPORTING SINGLE RACE AND MULTIPLE RACES BY HISPANIC ETHNICITY AND AGE, CONROE, TEXAS, 2000.

	Total	Non-Hispanic	Hispanic
Total Population			
Single Race	97.4	98.9	93.3
Multiple Race	2.6	1.1	6.7
Voting-age Population			
Single Race	97.9	99.2	93.6
Multiple Race	2.1	0.8	6.4

Our presumption is that focusing on Whites provides an effective basis for assessing demographic distributions relevant to the Voting Rights Act. Our approach should allow us to determine how minority voting strength – defined in general terms – has been affected by annexation. However, there are limitations to our approach. It is less precise in identifying how annexation affects specific minority populations. We speculate that our results for Blacks and Latinos are likely to hold up under alternative approaches because we are already using an expansive definition for Latinos, and because Blacks in our study area give primarily single-race responses. Still, the possibility remains that more could be learned by assessing the minority data in alternative ways.

response that included the response “Black” as one of the races claimed, might be classified as “Black.” The possibility also exists that persons giving multi-racial responses may give multiple minority responses. Available guidelines indicate that analyses should be performed separately for each minority population based on an inclusive definition.

This poses a dilemma for our analysis. Using multiple definitions for minority groups would require repeating all aspects of our analysis several times to explore the consequences of using different definitions. To simplify the analysis, we have adopted the strategy of focusing our attention on the population counts for Non-Latinos who give a White *only* response to the race question. The evaluation guidelines are clear in specifying that multi-race responses that include minority responses are to be treated as minority responses. This places the overwhelming majority of Non-Latino Whites who give a multi-racial response in a minority category. Focusing on Non-Latino Whites who give a single-race response serves well in identifying the non-minority population. For convenience we refer to this population simply as Whites. We also report population data for Blacks and Latinos. As noted earlier, the data for Blacks is also based on Non-Latinos who give a single-race response. Latinos are identified based on any race. Using this approach prevents the combination of White, Black, and Latino from exceeding 100%.

B. *City Boundaries and Geographic Classification*

The PL-94 file provides city classifications for 1990 and 2000, and the Census Bureau distributes boundary definition files (i.e., “shape” files developed for use with GIS software such as ArcGIS) for these classifications. The Census Bureau also distributes boundary definition files for census blocks, with the boundaries specified mathematically as polygons. GIS software provides the capability of working with polygons to determine statuses such as intersection, adjacency, and so on.

We classified census blocks as “inside” the 1990 city boundary if the census block was located wholly or partially within the 1990 census boundary definition for the city (i.e., if the polygon for the block intersected with the polygon for the city we classified it as “inside”). We used the ArcGIS program to implement this classification and all other polygon-based classifications described below. In like manner, we classified census blocks as “inside” the 2000 city boundary if the census boundary definition for the block was located wholly or partially within the 2000 census boundary definition for the city. We compared the resulting population counts against maps and population counts provided to us by Conroe city planning staff. Our population counts exactly matched those provided by city planning staff.⁸¹

We created three additional classifications for blocks. First, we established a one-mile buffer zone around the 1990 city boundary and classified any block that was wholly or partially inside this buffer zone *and* was nowhere inside the 1990 city boundary as being inside the “buffer zone.”⁸² We used ArcGIS to implement both the buffer zone and the classification. Second, we established a second buffer zone of two-tenths of a mile immediately surrounding the 1990 city boundary. We designated the one-mile buffer zone to identify blocks and population that presumably would be “at risk” for annexation over the period 1990-2000 based on physical proximity to the 1990 city boundary. We use the two-tenths of a mile buffer zone to distinguish between proximity within the buffer zone.

Finally, we classified a block as “annexed” if it was not in the 1990 city boundary but was in the 2000 city boundary. Annexation status as measured here reflects cumulative annexation over a 10-year period. It does not register individual acts of annexation. Individual acts of annexation are numerous and they typically involve parcels of land that are small compared to census blocks. Thus, individual annexation parcels rarely correspond directly to census block definitions. However, when annexed parcels are aggregated over time, they often subsume census

81. We matched their results exactly when we assigned blocks on the basis of centroids being inside or outside of the polygon for the city. Ultimately, we assigned blocks on the basis of polygon intersection rather than centroid location as this approach produces a more sensible buffer zone around the city. The results remain very similar.

82. We select a one mile buffer zone based on Texas annexation practices, which permit cities in Texas to annex only within their extraterritorial jurisdiction. TEX. [LOC. GOV'T] CODE ANN. § 42 (2007). The size of the extraterritorial zone is determined by the size of the city; in the case of Conroe in 1990, a one mile extraterritorial zone was warranted. TEX. [LOC. GOV'T] CODE ANN. § 42.021 (2007).

blocks and so block level data can readily speak to the consequences of annexation.

The 1990 and 2000 city boundaries are depicted in Figures 1 and 2, respectively. The figures are maps depicting census blocks based on census block and boundary definitions used in the 2000 census. The cumulative annexation occurring between 1990 and 2000 is summarized in Table 2. One can see that almost all annexed blocks are located in the one-mile buffer zone.⁸³ Second, a large portion of, but not all, annexed territory involved blocks that were in the two-tenths of a mile buffer zone. In most cases these blocks were either themselves contiguous to the 1990 city boundary or else were part of a collection of contiguous blocks that was contiguous to the 1990 city boundary. Third, most blocks located in the one-mile buffer zone (69.5%) were not annexed. Fourth, annexed blocks represented approximately 10% of blocks in the city as delimited in 2000. These initial observations suggest that geographic proximity plays an important role in annexation decisions, although it is certainly not the sole determinant of annexation.

TABLE 2. CLASSIFICATION OF BLOCKS, CONROE, TEXAS

	Count	Percent
Blocks Inside 1990 City Boundary	662	—
Blocks Overlapping 1.0-Mile Buffer Zone	249	100.0
Annexed Between 1990-2000	76	30.5
Not Annexed	173	69.5
Blocks Overlapping 0.2 Mile Buffer Zone	117	100.0
Annexed Between 1990-2000	55	47.0
Not Annexed	62	53.0
Blocks Overlapping 2000 City Boundary	738	100.0
Blocks Overlapping 1990 City Boundary	662	89.7
Blocks Annexed Between 1990-2000	76	10.3

VII. RESULTS OF EMPIRICAL ANALYSIS

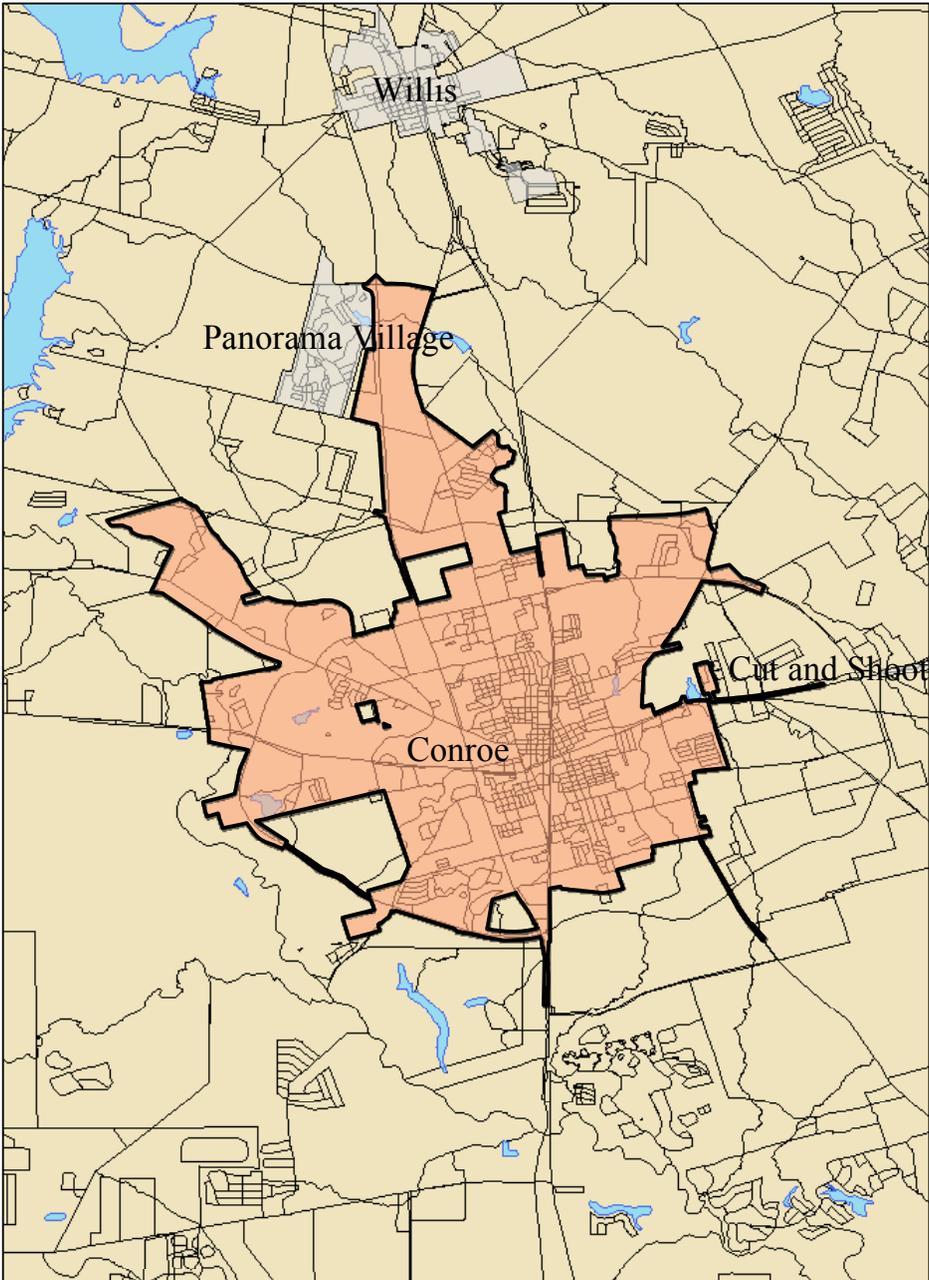
A. *Tabulation and Mapping*

The impact of annexation on minority voting populations is assessed via two procedures. First, we examine ethnic distributions of the city and its annexed areas over time. Second, we examine the effect of ethnic composition on the likelihood of annexation for territory and population.

Table 3 presents data relevant to the first analysis. Comparison of the ethnic mix of the 2000 population data aggregated on the basis of 1990 and 2000 city boundaries shows that the population within the 2000 city

83. For Conroe, Texas, only three annexed blocks did not intersect with the one-mile buffer zone. All other annexed blocks were located wholly or partially within the buffer zone. The population of persons found in blocks located outside the buffer zone was very small. In the other cities considered in our study, all annexed blocks intersected with the one-mile buffer zone.

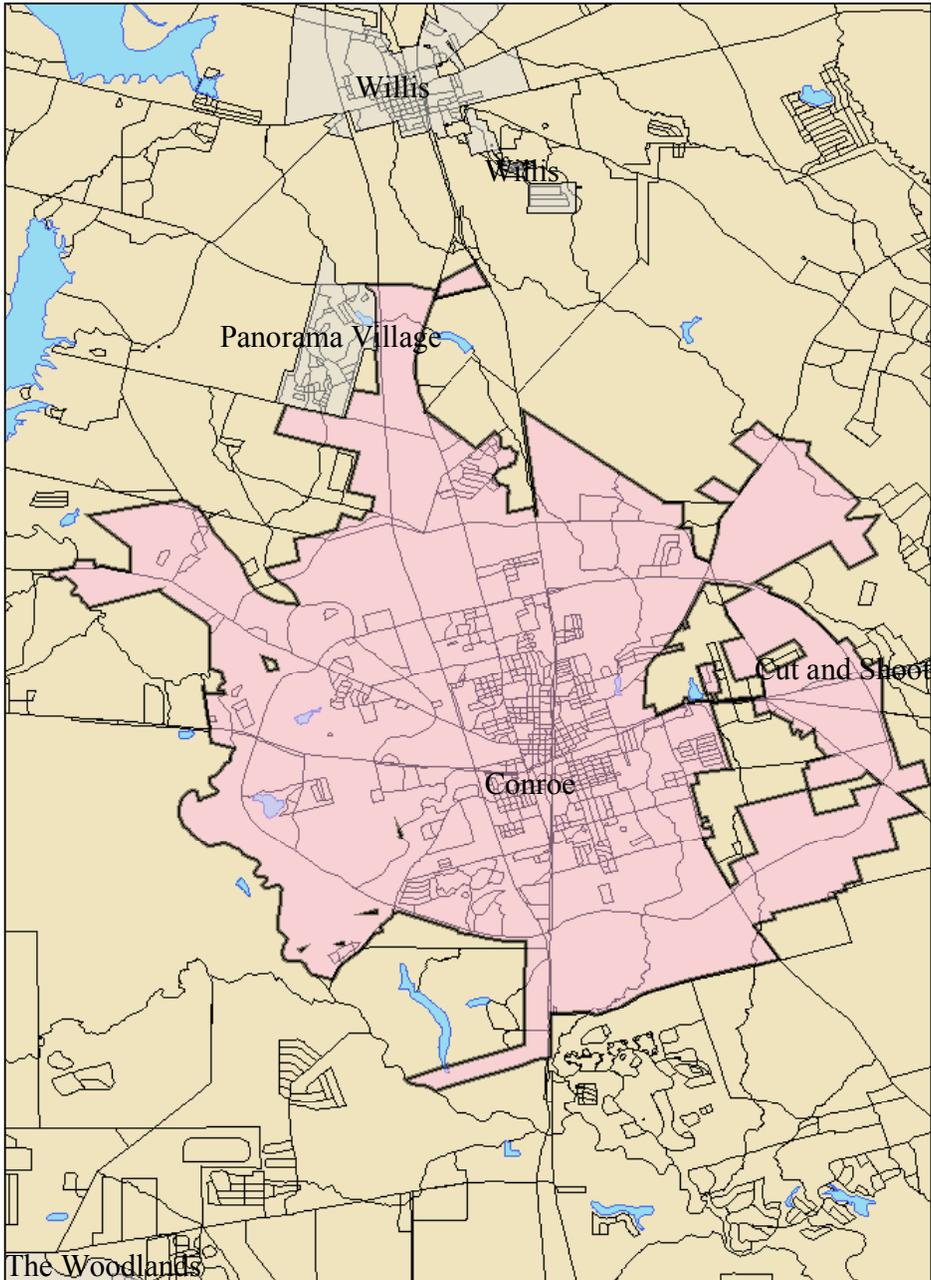
FIGURE 1. CONROE CITY BOUNDARY 1990



Note: City boundaries are from the 1990 Census of Population. Block boundaries are from the 2000 Census of Population.

boundaries has lower minority percentages and a higher White percentage than the population within the 1990 city boundaries. For the total data set, there was a 2% increase in saturation of Whites from the 1990 city boundaries to the 2000 city boundaries (from 54.6% to 56.6%). The reverse is true for Black and Latino groups, which declined by 0.5% and 1.7%, respectively. An almost identical pattern is observed for the voting-age

FIGURE 2. CONROE CITY BOUNDARY 2000



Note: City boundaries and block boundaries are from the 2000 Census of Population.

population:⁸⁴ the number of voting-age Whites increased by 2.0%, the number of voting-age Blacks decreased by 0.5%, and the number of voting-age Latinos decreased by 1.6%.

84. Voting-age population is employed due to the Attorney General's request that this information be provided in order to assess the effects of annexation on minority voting strength. As previously noted in our policy discussion, we are cognizant of the fact that other measures – such as registered voters – would perhaps be the "best" measure of the desired population.

TABLE 3. POPULATION DISTRIBUTIONS IN 2000 BY CITY BOUNDARIES FOR 1990 AND 2000, ANNEXATION 1990-2000, RACE, AND AGE, CONROE, TEXAS

	Total Population			Voting-age Population				
	Total	Percentages by Race		Total	Percentages by Race			
		Whites	Blacks		Hispanics	Whites	Blacks	Hispanics
1990 City Boundary	35,331	54.6	11.1	32.8	25,436	59.5	10.2	28.8
One-Mile Buffer Zone	11,244	83.4	2.9	11.7	8,348	85.9	2.5	9.7
Portion Annexed by 2000	3,482	77.5	5.8	13.5	2,679	80.2	5.0	11.7
Portion Not Annexed	7,162	86.1	1.5	11.0	5,669	88.6	1.3	8.7
One-Fifth Mile Buffer Zone	5,350	80.3	4.5	13.0	4,055	82.7	3.8	11.3
Portion Annexed by 2000	3,388	77.5	5.7	13.6	2,604	80.2	4.9	11.9
Portion Not Annexed	1,962	85.1	2.3	12.1	1,451	87.3	1.7	10.2
2000 City Boundary	38,813	56.6	10.6	31.1	28,115	61.5	9.7	27.2
Difference 2000-1990	3,482	2.0	-0.5	-1.7	2,679	2.0	-0.5	-1.6

Note: Population counts are aggregated from census blocks whose boundaries overlap with city boundaries or zones.

Based on this analysis, there was a retrogressive effect of cumulative annexation between 1990 and 2000, given that the relative size of the minority voting-age population base was reduced. The combined percentage of the Black and Latino voting-age population was 39.0% using the 1990 boundaries and 36.9% using the 2000 boundaries. The 2.1% decrease represents an approximate 6% lower level of the combined percentages of Black and Latino voting-age individuals.⁸⁵ Significantly, the patterns for Black and Latino populations considered separately are quite similar; each makes up a larger proportion of the city population in 1990 than in 2000.

The basis for this pattern is readily evident in Table 3. The population in the one-mile buffer zone — the territory that was most “at risk” for annexation between 1990 and 2000 — is overwhelmingly “White” compared to the population residing in the 1990 city boundary. The voting-age population residing in the one-mile buffer zone is 85.9% White, some 26.4 percentage points higher than the White population within the 1990 city boundary — 59.5%. When the area in the buffer zone is classified based on whether it was annexed or not, the percentages are similar. The population residing in the annexed portion of the buffer zone and the population residing in the remainder of the buffer zone are much more “White” than the population residing within the 1990 city boundaries.

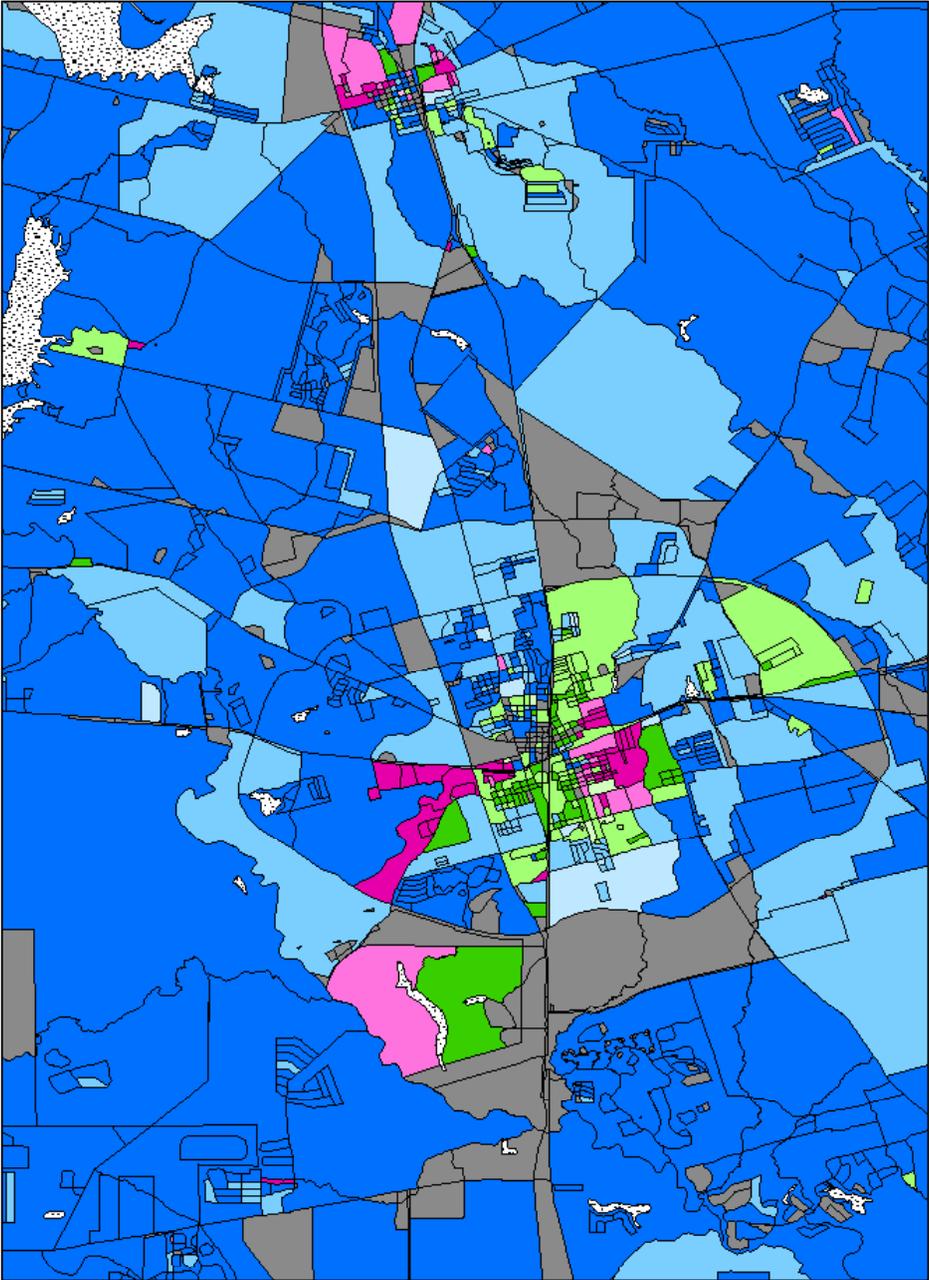
The driving force in the pattern is the fact that areas lying outside the 1990 city boundary are much more likely to be predominantly White than areas inside the 1990 city boundary. This is highlighted in Figure 3, which presents a map depicting the representation of Whites, Blacks, and Latinos in the populations of Conroe’s census blocks. Figure 3 shows that blocks outside of Conroe’s central city (recognizable in the map by higher density block grid pattern in the center of the city) are predominantly White, while blocks with predominantly Black or predominantly Latino populations are more likely to be found in the city’s interior neighborhoods.

Figure 3, however, may mask the pattern of white population predominance in the outlying blocks. This is because Figure 3 shows a few outlying blocks with majority Black and/or Latino presence. In many cases, however, the areas have a larger visual impact in the map than actual demographic impact. That is, they involve relatively large areas with very small populations; this pattern is depicted in the population densities reflected in Figure 4.

The disparity between the proportion of minorities in the city and in the buffer zone obviously drives the results in Table 3, but two factors mute the impact of annexation on minority voting-age population. The first is that the population residing in annexed areas represents only about 10.3% of the population residing in the 2000 city boundaries. The second is that, compared to blocks in the buffer zone that were not annexed, blocks in the buffer zone that were annexed actually have a *lower*

85. This should be seen as an approximation. Technically, the Latino population may include persons who are Black, but the percentage is very small (e.g., for the Conroe voting-age population it is six-tenths of 1%).

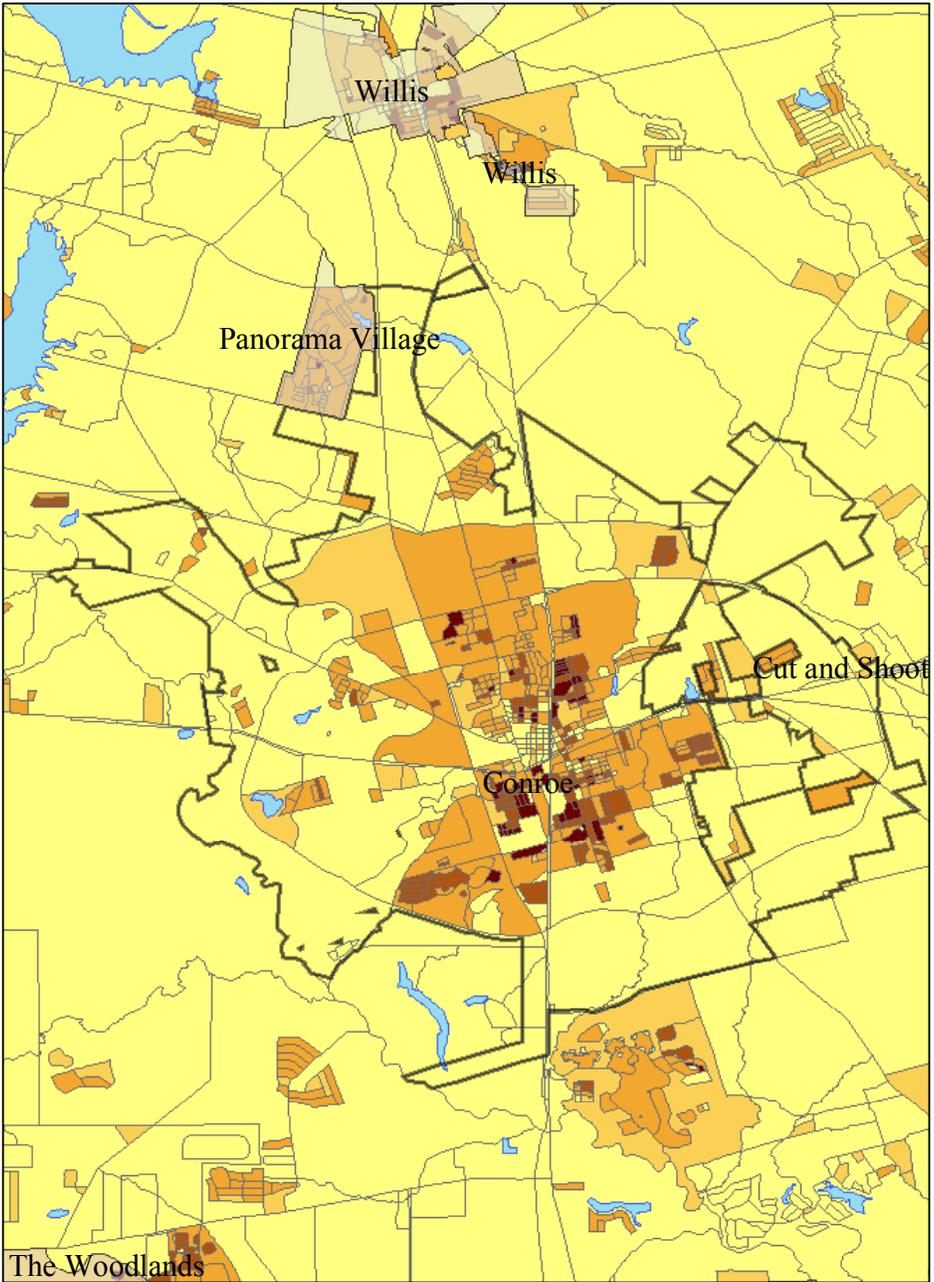
FIGURE 3. CONROE RACIAL DISTRIBUTION 2000



Note: Block boundaries and population data are from 2000 Census of Population. Blue, Magenta, and Green signify White, Black, and Latino pluralities, respectively. Darker shades signify higher group percentages (e.g., 50% & 80%). Gray areas depict unpopulated areas (e.g., parks, government property, commercial property, etc.) (color copy on file with authors).

White percentage; Whites make up 80.2% of the population in annexed blocks compared to 88.6% of the population in blocks not annexed. Nevertheless, limiting the pool to the voting-age population of the annexed

FIGURE 4. CONROE POPULATION DENSITY 2000



Note: City boundary, block boundaries and population data are from 2000 Census of Population. Darker shades signify higher population density.

territory increases the percentage of Whites by 2.0% and decreases the proportion of the minority voters: Blacks by 0.5% and Latinos by 1.6%.⁸⁶

86. In our analyses of the four other cities in the Houston exurban fringe, we found that all four cities had very few voting-age persons residing in annexed blocks in 2000. The largest number was 100 in Brenham which compares with a total of 2,679 for Conroe. Accordingly, changes in percent White for the voting-age population are small in all of these cities.

In sum, the data analysis in this section suggests that annexations cumulated over a 10-year period have generated a retrogressive effect that could, in turn, dilute minority voting strength. Given the demographic situation, this would appear to be an unsurprising result of steady city expansion via annexation over a long period of time. The areas lying beyond the city's borders are predominantly White and including these areas via any systematic pattern of annexing is, all else equal, likely to dilute minority voting strength. The only apparent way to minimize this is to minimize annexation. Given the absence of significant minority presence in the outlying areas, there is little opportunity to minimize the impact on minority voting by selective annexation. As the analysis in Table 3 demonstrates, the annexed areas actually had a *greater* minority representation than non-annexed areas (which might reflect a systematic effort to preserve a somewhat balanced minority population), but nevertheless, the minority percentage in annexed areas was much lower than the minority percentage in the city. The implications of these findings for policy concerns are addressed in further detail in our concluding remarks.

B. Correlates of Area and Population Annexation

In addition to examining the degree of retrogression, we also explored whether the data suggested any connection between annexation and minority ethnic representation. We were interested in whether predominantly White areas were more likely to be annexed, and in whether property owned by White individuals was more likely to be annexed.

The first analysis we performed was a logistic regression analysis of the relationship between area ethnic mix and the likelihood of a block being annexed between 1990 and 2000. The analysis takes all blocks in the one-mile buffer zone around the city's 1990 boundaries and estimates a logistic regression assessing whether or not the block would be annexed between 1990 and 2000. The first analysis we report is a zero-order analysis which estimates the effect of a population being predominantly White on annexation. The second analysis we report includes three control variables to help assess whether the zero-order finding is robust when alternative predictors of annexation are considered. These include proximity based on overlap with the two-tenths of a mile buffer zone, population density, and a dummy variable for unpopulated. To the extent that the alternative predictors change the effect of predominance of Whites in the area, it becomes evident that race may be intertwined with other factors in a city's decision to annex nearby areas.

The results of the analyses are summarized in Table 4. The block-level analyses indicate that blocks with greater White representation in either total population or voting-age population were *less likely to be annexed*. Specifically, every 1% increase in percentage of Whites reduces the odds of the area being annexed by about 2%, all else being equal; this effect is statistically significant at the 0.01 level. The block-level analyses also show that proximity plays a significant role in annexation; blocks that are in the two-tenths of a mile portion of the buffer zone are much more likely to be annexed than other areas.

TABLE 4. LOGISTIC REGRESSION ANALYSES OF ANNEXATION FOR BLOCKS AND PERSONS, CONROE, TEXAS.

	Logit Coefficient	Odds Multiplier	Probability
Analyses Predicting Annexation for Blocks ¹ : Block Percent White Only			
Percent White (for Populated Blocks)	-0.006	0.994	0.049
Analyses Predicting Annexation for Blocks ¹ : Block Percent White and Controls			
Percent White (for Populated Blocks)	-0.017	0.983	0.020
Block Overlaps with 0.2 Mile Buffer Zone	1.642	5.165	0.000
Ln Population Density of Block	-0.036	0.965	0.764
Dummy Variable for Unpopulated Block	-1.072	0.342	0.258
Analyses Predicting Annexation for Total Persons: Block Percent White Only			
Percent White in Person's Block	-0.037	0.964	0.000
Analyses Predicting Annexation for Total Persons: Block Percent White and Controls			
Percent White in Person's Block	-0.031	0.969	0.000
Block Overlaps with 0.2 Mile Buffer Zone	5.238	188.293	0.000
Ln Population Density of Person's Block	0.694	2.002	0.000
Analyses Predicting Annexation for Voting-age Persons: Block Percent White Only			
Percent White in Person's Block	-0.040	0.961	0.000
Analyses Predicting Annexation for Voting-age Persons: Block Percent White & Controls			
Percent White in Person's Block	-0.029	0.971	0.000
Block Overlaps with 0.2 Mile Buffer Zone	5.129	168.848	0.000
Ln Population Density of Block	0.726	2.067	0.000

¹ In block-level analyses, percent White for the block is coded 0 for unpopulated blocks. A dummy variable (i.e., coded 0,1) for unpopulated block is coded separately and included to capture the effect of unpopulated areas.

Table 4 also presents analyses conducted using persons as units of analysis; analyses were conducted separately for total population and voting-age population. The results are largely consistent with the block-level results just reviewed. Among persons residing in buffer zone blocks, those residing in areas with greater White representation in either total population or voting-age population were less likely to be in areas that were annexed between 1990 and 2000. For every percentage point increase in White representation, the odds that a person residing in the buffer zone will be annexed are reduced by about 4%. The effect is statistically significant at the 0.01 level.

In sum, these analyses confirm in more detail the pattern that was documented earlier in Table 3. Namely, while both the annexed and non-annexed portions of the buffer zone have a higher White representation in the population than the area within the 1990 boundaries, the annexed portion of the buffer zone has lower White representation than the non-annexed portion of the buffer zone. These findings were reflected, as well, in our analyses examining the cities of Brenham, Hempstead, Madisonville, and Navasota. For blocks in the one-mile buffer zone, those that were disproportionately White were no more likely to be annexed than other blocks. For voting-age persons residing in areas in the buffer zone,

those residing in disproportionately White areas were less likely to reside in annexed areas.⁸⁷

The pattern could suggest that minority areas and minority population were actively identified in the annexation process to try and ensure compliance with review under the Voting Rights Act. The difference between the relationship with and without controls suggests that non-racial factors, like proximity, may play a role in annexation of more diverse areas. For example, areas closer to the city boundaries were both more likely to be annexed and more likely to contain minority representation similar to that seen in the city. But the pattern of results is also consistent with the notion that reviews of annexation serve their intended function of protecting minority voting rights.

Nonetheless, the cumulative effect of annexation over a long period of time indicates that minority voting strength was in fact diluted despite the voting rights reviews. This provides preliminary evidence to support our conjecture that the narrow scope of the evaluation of the impact of annexation on minority voting strength may fail to protect minority voting rights. The possibilities here include both the cumulative impact of steady, incremental annexation over a long period of time and the possibility that annexation tends to pick up lightly settled areas that lie in the path of future white population growth.

VIII. SOME LIMITATIONS OF THE PRESENT ANALYSIS

The findings from our empirical analysis must be considered in light of the limitations of the data and methods we have used. One obvious limitation is that the population data we used in our analyses were for a single point in time, namely 2000, but the questions we are addressing concern the impact of annexation on changes in minority voting strength. We have noted the significant difficulties of performing longitudinal analysis; census race tabulations and block definitions change in non-trivial ways over time. Future investigators may want to tackle these problems and see if longitudinal analysis confirms the patterns we have detected or yields different results. One possibility for pursuing this kind of analysis is to examine population patterns in 1990 and 2000 for blocks whose boundaries are unchanging over time.⁸⁸ The problem with this strategy, however, is that area boundaries at the block level change considerably from one census to the next and boundary changes are particularly common in areas where annexation is likely to take place. Consequently, over time, demographic analysis may be feasible only for a subset of blocks that is not generally representative of blocks located in regions where annexation activity is concentrated.

In addition, our multivariate analyses of the impact of area ethnic composition on the likelihood that area and population will be annexed

87. The one exception to this pattern is the person-level analysis for Brenham with control variables. Here the effect of percent White on annexation is positive, but very small.

88. Alternatively, areas that can be made comparable for two percent in time by aggregating areas at one or both percent in time.

uses a relatively simple model specification. Annexation is likely to be structured by other factors including, for example, proximity to major highways. Thus, while we found no evidence that White population presence promoted annexation within the one-mile buffer zone around the 1990 city boundary, it is possible that racial effects would be seen in models that included additional control variables. Future investigators may wish to explore this question.

Also, we only examined Houston and surrounding cities, noting that this area has a history of controversial voting rights activity and possibly a history of racial discrimination. It is possible that in other areas race plays a more varied role in annexation decisions as it interplays with other location-specific factors. For example, water shortage in California or Nevada may cause annexation in the direction of a particular water source or potential irrigation development. Thus, future analyses would benefit from sampling varied regions throughout the country to compare annexation patterns.

Finally, and as we explore in greater depth below, these analyses are only able to assess whether there has been a reduction in minority voting population within a city's boundaries over a period of time, as well as whether blocks with a greater percent White are more likely to be annexed. These analyses provide some measure of the effects of cumulative annexation, as well as a possible assessment of the role of race and ethnicity in influencing the selection of blocks for annexation. They do not, however, reveal whether minority voting strength was reduced, and cannot definitively answer whether the effect of cumulative annexation is one that is intended.

IX. DISCUSSION AND CONCLUSION

Despite concerns that the renewal of Section 5 of the Voting Rights Act would be found unwarranted and/or unconstitutional,⁸⁹ the Act was renewed with only minor modifications. The efficacy of the Act's provisions has been subject to scrutiny, but relatively little scholarly attention has been paid to its effects on annexation. Further, empirical analyses attempting to measure the Act's efficacy are relatively absent from the literature. In this article, we have sought to fill this gap in two ways. First, we have examined the manner in which the Act's provisions offer opportunities for circumventing its intent during the annexation process. Second, we have employed an empirical analysis to assess the degree to which there is evidence that cities do, in fact, take advantage of such opportunities. Our empirical results suggest that considerations of minority population size might play little role in the choice of parcels for annexation, except in accord with the Act's purpose, since more diverse areas are more likely to be annexed than predominantly White areas. Nonetheless, the concerns we raise in our policy analysis might be merited.

An examination of annexation in the Houston exurban fringe suggests that outlying areas with disproportionate white population representa-

89. See Rodriguez, *supra* note 31, at 798-802 (discussing the Supreme Court's decisions to uphold the constitutionality of Section 5).

tion are less likely to be annexed. This suggests that undesirable racial considerations might play little or no effect in selecting parcels for annexation. Rather, proximity to the city's preexisting borders could play a more important role; our logistic regression analyses suggest the importance of proximity in annexation. Given that the population both within and outside of the city's borders has a larger proportion of minorities, the annexation of disproportionately White populations is less likely. Strategic annexation aimed at diluting minority voting power, therefore, seems less likely.

Nonetheless, our empirical analyses do suggest that cumulative annexation can result in a reduction in the proportion of the aggregate minority populations. In the case of Conroe, areas outside of the city were considerably more White than those inside of the city; consequently, there was essentially no way to avoid a "whitening" of the city over the long term if annexation was to occur. The Supreme Court has previously taken into account that cities might need to annex White areas for non-racist reasons. This contributed to the development of the effects test for annexations, which permits annexations that produce a retrogressive effect if cities then employ a means to maintain proportionate minority voting representation, e.g., moving from at-large to single-member districts.⁹⁰ We noted earlier that Conroe has not taken this particular action. Although the reduction in minority voting representation is relatively small — 2% — there is nonetheless a reduction that occurs over the long-term that translates into a reduction in minority voting strength if no remedial measures are taken. The inconsistency of effects tests within the Act can contribute to such a result.

In addition, our findings from the empirical analysis support some of the policy concerns we raise regarding the cumulative effects of annexation. Although individual annexations might have little effect on the proportion of minorities in a city, cumulative annexations could produce notable changes in the population. Without appropriate measures to maintain proportionate minority voting strength, voter dilution will occur. This we believe is a cause for concern that warrants greater attention, especially in light of the recent debates concerning reauthorization of the Voting Rights Act. Critics of reauthorization argued that the special provisions of the Voting Rights Act, such as Section 5, were no longer warranted. Our findings, however, suggest that future study must be directed towards investigating the manner in which cities engage in annexation to determine whether preclearance procedures should be more cognizant of the possibilities of the long-term effects of annexation.

Finally, and of particular relevance for this analysis, the difficulty in obtaining accurate data regarding the population as a whole and/or the voting-age population proves to be quite problematic, given that preclearance decisions rely heavily on the demonstration of population changes to establish discrimination. The U.S. Census Bureau's American

90. See generally *City of Port Arthur, Texas v. United States*, 459 U.S. 159 (1982); *City of Rome v. United States*, 446 U.S. 156 (1980); *City of Richmond v. United States*, 422 U.S. 358 (1975).

Community Survey (ACS), which began in 2000 to sample the U.S. population annually, will ultimately assist in alleviating some of these issues over the long term. The ACS, however, does not yet provide optimal estimates of population characteristics for subparts of cities, which limits its utility in annexation studies. Further, an estimate of the voting-age population is difficult to assess, particularly for the Latino and Black populations; this problem will persist, despite the additional data provided by the ACS. Perhaps as a result of these data challenges, there have been few attempts to quantitatively assess the impact of annexations in a systematic manner. The analyses contained within this article, therefore, can perhaps provide some insight into both the methodological and policy gaps within this area of the law.

