Designing Democratic Government

Making Institutions Work

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Editors

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Chapter 8

Gerrymanders as Trade-Offs: The Coevolution of Social Scientific and Legal Approaches to Racial Redistricting

David L. Epstein and Sharyn O'Halloran

Following the 2000 census, the state of Georgia redrew its fifty-six state Senate districts to comply with the one person, one vote rule.[1] At the time, Democrats held majorities in both chambers of the state legislature. The governor, Roy Barnes, was a Democrat as well, and he led the charge to construct a districting plan that would advantage his party in the upcoming 2002 elections, hoping to preserve Democratic control in the face of an expected Republican surge.

The key to his plan was to "unpack" many of the heavily Democratic districts and distribute loyal Democratic voters to surrounding districts. In particular, black voters were reallocated away from districts with either especially high or low levels of black voting-age population (BVAP) in order to create more districts in the 25 to 40 percent BVAP range, so-called "influence districts." This meant that some districts with black populations above 55 percent or even 60 percent were brought down close to the 50 percent mark. However, the total number of districts with BVAPs above 50 percent rose from twelve to thirteen.

As required by section 5 of the 1965 Voting Rights Act (VRA),[2] Georgia submitted its plan directly to the D.C. District Court for preclearance,[3] and the Justice Department indicated its intention to interpose objections to Senate districts 2, 12, and 26, whose BVAPs were slated to fall from 60.6 percent to 50.3 percent, 55.4 percent to 50.7 percent, and 62.5 percent to 50.8 percent, respectively. The state submitted evidence showing that the point of

equal opportunity—the level of BVAP at which a minority-preferred candidate has a 50 percent probability of winning—was 44.3 percent, and argued that each of these districts should therefore still offer black candidates a healthy chance of gaining office. The DOJ contended that the lower levels of BVAP in the redrawn districts would result in minority-supported candidates' having a more difficult time winning election, and so the state had not met its burden of proving that the proposed plan would not harm black voters.

The district court agreed with the DOJ and refused to preclear the plan. Georgia appealed, and the Supreme Court, in the case *Georgia v. Ashcroft*,[4] ruled that the district court had not taken sufficiently into account the state's avowed objective of increasing "substantive representation," the degree of influence that minority voters have on policy outcomes, even at a possible cost to "descriptive representation," the number of minority candidates elected to office.[5] In its decision, the Court relied heavily on the testimony of black state legislators, including John Lewis, a civil rights leader and U.S. representative, who supported the plan as an attempt to maintain Democratic control of state government.[6]

The reaction to *Georgia v. Ashcroft* was swift and heated. Pamela Karlan (2004) denounced the decision as a first step toward "gutting" Section 5 preclearance. Others claimed that it "greatly weakened the enforcement provisions of section 5" (see Benson 2004, 488–9). An ACLU official's reaction was that "the danger . . . is that it may allow states to turn black and other minority voters into second-class voters, who can influence the election of white candidates but cannot elect candidates of their own race" (Rhonda Cook, "Redistricting Rules Ease," *Atlanta Journal-Constitution*, June 27, 2003, quoting Laughlin McDonald).

Others viewed the decision more favorably: Henry Louis Gates wrote that "[descriptive representation] came at the cost of substantive representation—the likelihood that lawmakers, taken as a whole, would represent the group's substantive interests. Blacks were winning battles but losing the war as conservative Republicans beat white moderate Democrats" (Henry Louis Gates, "When Candidates Pick Voters," *New York Times*, September 23, 2004, A27).

Despite these deep conflicts, a conventional wisdom is forming on some key points of interpretation:

- In *Ashcroft*, the Court abandoned a previous, "relatively mechanical," test for section 5 compliance that was based on the election of minority legislators alone.[7]
- It did so in favor of an amorphous concept of "substantive representation" that will be difficult to administer.

- Consequently, under this new standard states would essentially be free to enact any redistricting plan that they choose.

In this chapter we take issue with all three of these propositions. First, we argue, along with Richard H. Pildes (2002), that tests for retrogression (the precept that a new law could not make minorities worse off than they had been before) based on issues of descriptive representation alone are becoming increasingly arbitrary in light of changed political conditions, including increased white crossover voting and the rise of the Republican Party in the South. Thus, even without the complicating factor of substantive representation, a new test for section 5 compliance with regard to descriptive representation is now needed. Indeed, we argue that one of the less-discussed but crucial features of *Ashcroft* is that it recognized this tension and ruled that the DOJ's previous, district-by-district, approach to assessing retrogression in descriptive representation should be replaced by a more fluid statewide standard, in which losses in one part of the state could be offset by gains elsewhere.

Second, we argue that substantive representation need not be viewed as "fuzzy" or difficult to measure. Consistent with our previous work (see Cameron, Epstein and O'Halloran 1996; Epstein and O'Halloran 1999a, 1999b) and recent advances in the statistical analysis of roll-call data, we define what we call a member's Minority Support Score as the degree of concordance between that member's voting record and the voting records of minority legislators. These scores can then be used to prospectively assess the likely impact of competing redistricting plans, or to compare a given plan to the status quo baseline.

Third, we show that our suggested standard would not give states complete discretion in their redistricting decisions: there are redistricting plans that would violate *Ashcroft*, even with the increased latitude it offers states. In addition, since redistricting in the current political environment usually involves trade-offs between substantive and descriptive representation, we propose that states, in order to obtain preclearance, must present evidence that the trade-offs embodied in their redistricting plans have significant support within the minority community.

This conflict over redistricting and preclearance could not have come at a more pivotal moment, since section 5 of the Voting Rights Act was renewed in 2006 with a provision that specifically aims to overturn *Georgia v. Ashcroft*. This has spawned a burgeoning debate over the link between race and representation, with some applauding these changes and others believing that giving states flexibility when redistricting is crucial to maintaining the effectiveness of the VRA as a whole, and the constitutionality of section 5 in particular (see Hasen 2005; Persily 2007; Epstein and O'Halloran 2007).

GEORGIA V. ASHCROFT AND RETROGRESSION

The Voting Rights Act has two major provisions, sections 2 and 5. Section 2 outlaws any voting arrangements that have in the past diluted the votes of minorities, giving them "less opportunity than other members of the electorate to participate in the political process and elect representatives of their choice."[8] The classic example of a dilutive practice is at-large elections for a city council in which all voters can cast a ballot for each council position. By this method a white majority of, say, 60 percent can capture 100 percent of the council seats, thus locking minority voters out of power altogether. Section 2 is permanent, is applicable nationwide, and is relatively uncontroversial; under its aegis, for instance, many at-large voting systems have been changed to geographically defined districts.[9]

Section 5, on the other hand, addresses the anticipated, rather than historical, impact of voting practices. By the 1960s, the history of pursuing equal voting rights in the South offered nothing but frustration: as soon as one method of disenfranchisement—such as the grandfather clause or the white primary—was ruled unconstitutional after arduous decades of litigation, southern states would simply switch to a different method, such as poll taxes or literacy tests.[10] The VRA combated this history of discrimination in a two-step process: section 4 swept away all "tests and devices" that could limit minorities' ability to vote, and section 5 required "covered" jurisdictions—included most southern states and their subjurisdictions—to submit any proposed changes in voting practices to the Justice Department or D.C. District Court for preclearance, without which the changes could not legally go into effect.[11]

By transferring the burden of proof away from those challenging discriminatory state actions and onto the states themselves, section 5 was a crucial element in the fight to provide minority voters with real access to the ballot box in the South for the first time since Reconstruction. Such prior restraint on state actions, though, is unique in U.S. law, and so section 5 has always been limited in its geographic scope and has been considered temporary, not permanent. After relatively short renewal periods of five years, in 1965 and 1970, and seven years in 1975, section 5 was extended for a full twenty-five years in 1982, and again in 2006.

In its original incarnation, Section 5 stated that a change in voting practices submitted for preclearance should be allowed to take effect if it "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."[12] Thus, states had to prove that their proposed changes neither were based on a discriminatory purpose nor would they have a discriminatory effect.

The standard for judging discriminatory effect was defined early on to be

"retrogression": a new law could not make minorities worse off than they had been before.[13] Thus the effects test became an "anti-backsliding" provision; it would be violated, for instance, by a municipality's attempting to change from a district-based system back to at-large elections.

The requirements for determining discriminatory purpose, on the other hand, had received less judicial scrutiny, and a number of submissions were denied preclearance during the 1980s on the basis of the intent standard, even when no retrogression was apparent. In *Busbee v. Smith*,[14] for example, a Georgia congressional redistricting plan was denied preclearance even though it was actually "ameliorative," rather than retrogressive—it made things better rather than worse. The plan increased the black voting-age population in the Fifth Congressional District—located in Atlanta, which had previously elected Andrew Young to Congress—from 39 percent to 57 percent, yet there was evidence that the district was designed specifically to avoid giving black voters effective control over election outcomes.[15] In *City of Pleasant Grove v. United States*,[16] the Alabama city of Pleasant Grove was enjoined from annexing surrounding white suburbs but not black suburbs, even though Pleasant Grove had no black residents at all at the time. Here, the fact that suburbs with minority residents were consistently excluded from the redrawn city limits was taken by the Department of Justice to be evidence of discriminatory intent.[17] And the well-known *Shaw v. Reno* case was launched when the DOJ objected to North Carolina's original redistricting plan on the basis of discriminatory intent, even though the plan maintained the previous number of majority-minority districts.[18]

But the courts began narrowing the scope of the intent standard during the 1990s. In *Reno v. Bossier Parish School Board*,[19] the Court ruled that a section 2 violation was not sufficient to establish discriminatory intent under section 5. And then, in a later iteration of the same case, the Court ruled that the effect and intent standards were in fact one and the same; the only relevant discriminatory intent for section 5 preclearance, the Court ruled, was retrogressive intent.[20]

Section 5 preclearance has thus come to mean retrogression and nothing else, under both the intent and effect standards. This rule may be easily implementable in many policy areas—the change of a voting system or the annexation of surrounding suburbs, for instance—but the exact meaning of "retrogression" in the context of redistricting has always been a bit unclear. After all, voters excluded from one district do not simply disappear; they are reallocated to surrounding districts, where they have the potential to influence the selection of a different representative. What, then, does it mean for a districting plan to retrogress in comparison with the preexisting baseline plan.

Leaving aside for the moment the complicating issue of substantive repre-

sentation, we focus first on the steps for determining whether a districting plan is retrogressive on grounds of descriptive representation alone. This determination requires three steps: specifying a standard by which to measure the electability of minority-preferred candidates; applying this standard to both the baseline and the proposed districting plans; and translating this analysis into a conclusion about retrogression. We term these calculations a "retrogression assessment procedure."

PRE-*GEORGIA V. ASHCROFT* PRECLEARANCE

Let us begin by dissecting the body of argumentation surrounding the Justice Department's pre–*Georgia v. Ashcroft* criteria for approving a redistricting plan. Up until the *Georgia v. Ashcroft* decision, the DOJ had measured retrogressive effect with respect to issues of descriptive representation alone:

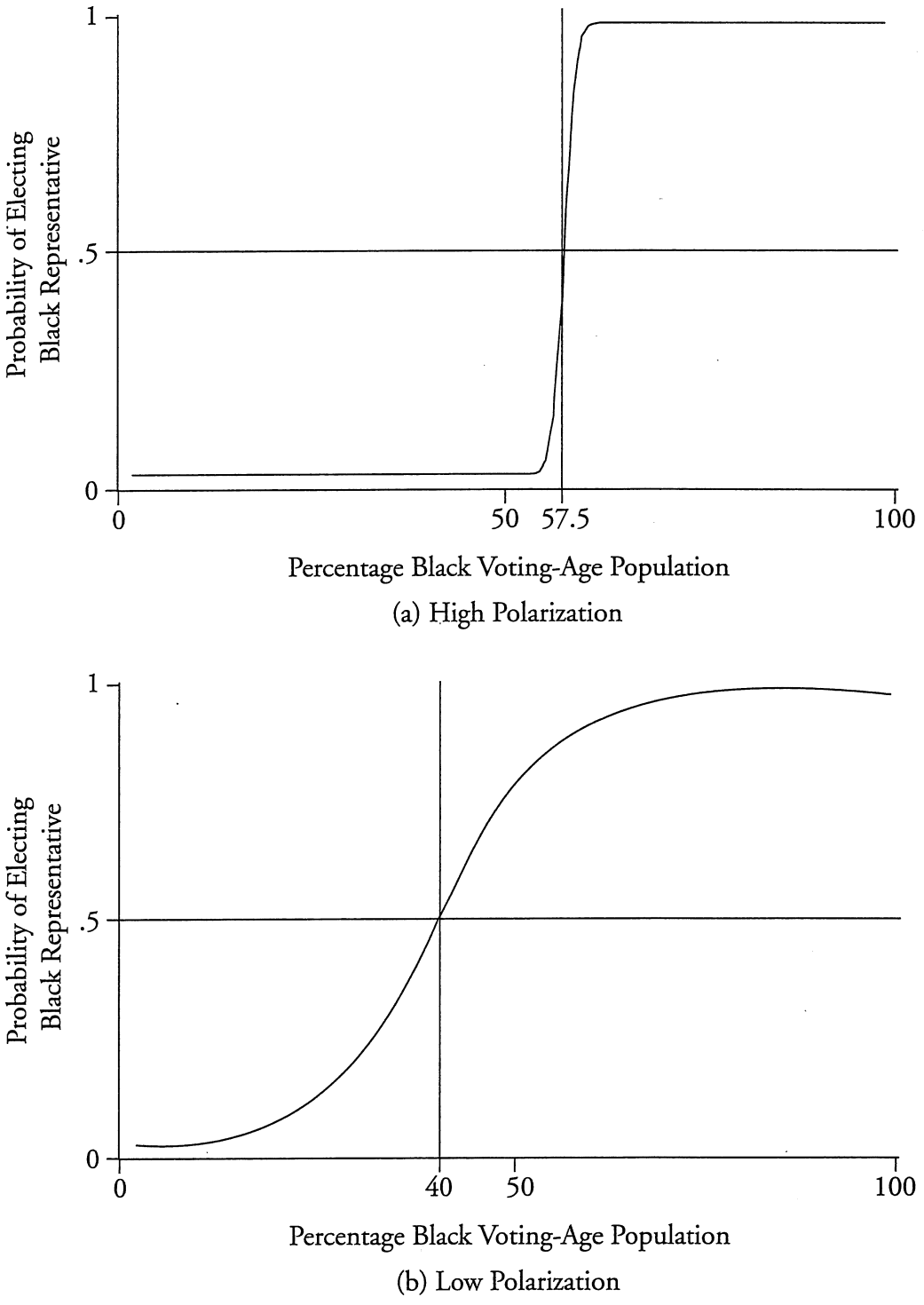
> A proposed plan is retrogressive under the Section 5 "effect prong" if its net effect would be to reduce minority voters' "effective exercise of the electoral franchise" when compared to the benchmark plan. The effective exercise of the electoral franchise usually is assessed in redistricting submissions in terms of the opportunity for minority voters to elect candidates of their choice.[21]

To implement this electability-based standard for determining retrogression, with reference to the three steps in a retrogression assessment procedure outlined, the DOJ's approach was to use historic patterns of voting rates and electoral outcomes to determine a crucial threshold necessary for minority voters to have effective control over elections.[22] Call this level of BVAP P*.[23] Then calculate the number of districts with BVAPs at or above P* in the baseline and proposed plans; call these N_b and N_p, respectively. The proposed plan is retrogressive if $N_b < N_p$, and nonretrogressive otherwise.[24]

This algorithm is indeed simple, even mechanical, once P* is determined, but it clearly rests on the assumption that P* does in fact exist; that is, that there is some BVAP threshold below which minority-supported candidates have very little chance of gaining office and above which they are practically certain to win. This would be the case if, for instance, voting is highly polarized, with few ballots cast by white voters for minority candidates and vice versa.

Figure 8.1a illustrates this polarized scenario with sample data, graphing the probability of electing a minority-supported representative as a function of percentage black voting-age population. The key threshold P* as drawn in the figure is 57.5 percent BVAP: below this point minorities have almost no chance of controlling an election, whereas above it they are nearly assured of

FIGURE 8.1 PROBABILITY OF ELECTING CANDIDATE OF CHOICE AND PERCENTAGE OF BLACK VOTING-AGE POPULATION



Source: Authors' compilation.

such control.[25] In this example, 57.5 percent BVAP also serves as the "point of equal opportunity," the point at which minority-supported candidates have a fifty-fifty chance of winning. Thus minority control, electability, and equal opportunity coincide perfectly.

Note that this worldview admits of no gray areas or trade-offs across districts: it would not be possible, for instance, to shift minority voters in such a way as to decrease the probability of electing a minority candidate from 85 percent to 75 percent in district x, but raising the probability from 35 percent to 50 percent in district y. The distinction between districts with and without minority electoral control is, so to speak, black and white, and there is no question but that a representative elected from such a district is in fact a candidate of choice of the minority community.

A MENAGERIE OF DISTRICTS

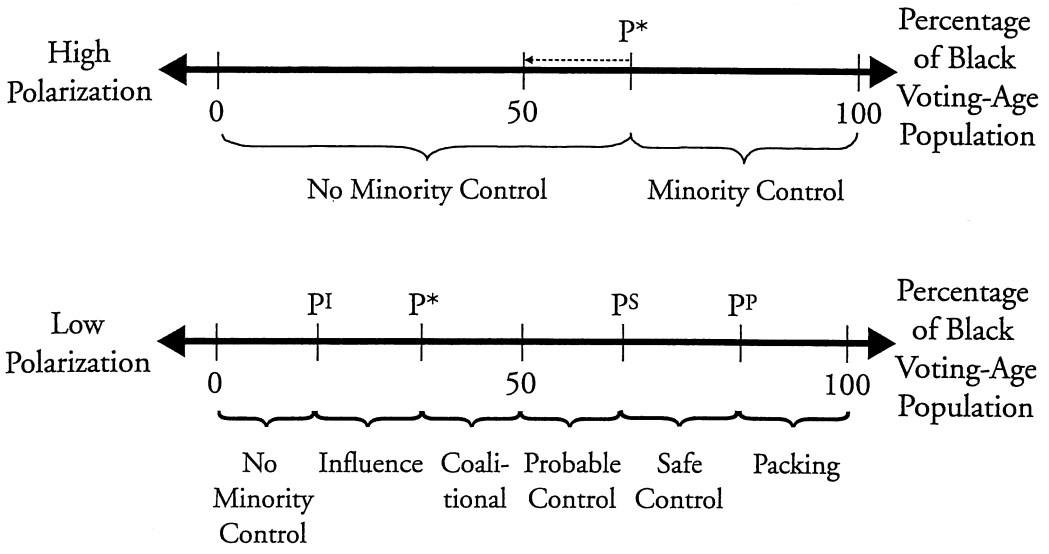
But when polarization in the electorate is reduced, this neat binary division of districts begins to break down, and the single-threshold approach to retrogression becomes more arbitrary. Consider, for instance, the situation depicted in Figure 8.1b. Here the probability of electing minority-preferred candidates rises continuously with changes in district BVAP, rather than abruptly. The figure also illustrates the possibility that when white crossover voting reaches a significant level, the point of equal opportunity could fall below 50 percent BVAP: in this illustration, it occurs at 40 percent.[26]

This scenario complicates the electability calculus enormously. The top and bottom halves of Figure 8.2 illustrate the key cut points in worlds with high and low polarization, respectively. In the high polarization example, the point of equal opportunity, labeled P*, divides districts with and without minority control. As long as P*—which was 57.5 percent in figure 8.1a—remains above 50 percent, there is no conflict between electability and control.

The lower half of the figure, though, illustrates a situation where P* slips below 50 percent. For districts with BVAPs under P*, minority control is less likely, although if the situation illustrated in figure 8.1b holds, electability will not suddenly plunge to 0. This creates a range of districts between P* and 50 percent that Pildes (2002) calls coalitional districts. Here, it is relatively likely that minority-supported candidates will be elected, but they must rely on white crossover voting to do so. In this case, it might be argued, minority voters lack the degree of control they had with majority-minority districts, since their preferred candidate may have to accommodate the preferences of non-minority voters to some extent in order to gain office.

The situation becomes even more complicated with the Justice Department's introduction of the category "safe minority districts" in *Georgia v.*

FIGURE 8.2 KEY POINTS AND DISTRICT TYPES



Source: Authors' compilation.

Ashcroft. Although they never defined this term precisely, it would seem to indicate a point at which the probability of a minority candidate's attaining office is considerably greater than 50 percent. In particular, they argue that the redistricting plan for the Georgia state senate at issue in *Georgia v. Ashcroft* was retrogressive because it reduced the number of these safe districts. And since the three districts that they objected to all had BVAPs just above 50 percent, we can assume that the "safety point," labeled P^S in the figure, is considerably above the 50 percent mark.[27] Note that this introduces two more district categories: those between 50 percent and the safety point, and those above the safety point. In the figure we label the former the region of probable minority control and the latter the region of safe control.

We also include the point P^I to indicate the boundary-of-influence districts, districts in which "a minority group has enough political heft to exert influence on the choice of candidate though not enough to determine that choice."[28] For concreteness, we propose to define this boundary as the point of "partisan equal opportunity": the level of BVAP at which a candidate of the party supported by minority voters has an equal chance of winning the election.[29] A final division is suggested by the DOJ's statement in *Guidance Concerning Redistricting* that they will reject plans in which "minorities are overconcentrated in one or more jurisdictions"—that is, packing. The point over

which districts are packed is labeled P^P in the figure, bringing the total number of possible district types up to six.

Such a menagerie of choices immediately raises difficult questions about trade-offs. How many coalitional districts does one need to outweigh one safely controlled district? Perhaps some combination of coalitional and probable-control districts may outweigh one safe district? Or perhaps, as the DOJ argued, there is no combination of other district types that could possibly offset the loss of even one safe district. The latter position implies a "ratchet effect" in safe districts: their number can be increased from one decade to the next, but never decreased.

Overall, then, the low-polarization state of the world plays havoc with the DOJ's current retrogression assessment procedure. It is hard to specify a consistent, nonarbitrary standard by which to measure electability; it is therefore difficult if not impossible to apply any such standard to the baseline and proposed plans; and it follows that retrogression will be similarly difficult to assess. Note that this objection applies even when the DOJ identifies districts in each category by investigating qualitative, location-specific factors rather than relying solely on numeric cutoff points.

THE NEED FOR NEW STANDARDS

We have argued that the DOJ's current method of assessing retrogression in electability—counting the number of districts above a key minority-control threshold—works well when voting is polarized and poorly otherwise. Which of these two possibilities is most descriptive of current conditions?

The answer is that the assumption of polarized voting both in the public and in Congress accurately described the reality of southern politics up until sometime in the 1980s. Since then, though, a large body of social science research points to the conclusion that voting in the South is much less polarized than it has been at any time since Reconstruction. The evidence for decreased polarization is admirably adduced in Pildes (2002). To wit:

1. Blacks now register and vote at similar levels as do white voters.
2. Roughly one-third of all white voters will cross over to vote for black candidates in general elections, whereas almost all black voters vote for black candidates.
3. These trends have caused the BVAP necessary to elect a black candidate to fall from about 65 percent in the 1980s to around 40 percent now.

Thus, polarized voting, while not completely eliminated, has been reduced considerably, at the same time that black participation has increased. We add

to this two more facts: the resurgence of the Republican Party in the South (see Lublin 2003) and the subsequent emergence of a trade-off between descriptive and substantive representation (see Epstein and O'Halloran 2006). Put together, these trends imply that there are now good reasons why the minority community might want to reduce the concentration of black voters in districts with the highest levels of BVAP: these concentrated-minority districts are, on the whole, no longer needed to elect minority-preferred candidates to office, and the consequences of fewer minority voters in surrounding districts—which is the election of Republicans, who in general do not support the same policy goals as minority voters—have become more serious. Hence Georgia's strategy following the 2000 census made sense politically in this changed electoral environment.

Those who express the view that the *Beer v. United States* retrogression test would have been easy to implement in this new environment of decreased electoral polarization and increased crossover voting are, we argue, looking for the on-off switch in a room where all the lights are on dimmers. The DOJ's district-by-district test for retrogression is now obsolete and, even absent concerns about substantive representation, would have to be replaced. And given the concomitant rise in Republicanism, the question is no longer how to force states to create more majority-minority districts but how to regulate the reduction of minority voters in formerly concentrated districts in the name of increasing substantive representation.

IMPLEMENTING *GEORGIA V. ASHCROFT*

Enter *Georgia v. Ashcroft*, the Court's initial foray into the realm of districting and substantive representation. The first issue to tackle was the Court's previous emphasis on descriptive representation as both an indicator of section 2 dilution and a measure of section 5 retrogression under the theory that an "effective" vote is one that aids in the election of a minority-preferred representative.[30]

Despite its importance in determining the extent of minority-voting strength, the Court noted, descriptive representation has never been the sole metric by which to judge retrogression. The 1982 amendments to section 2 stated, "The extent to which members of a protected class have been elected to office . . . is one circumstance which may be considered: Provided, That nothing in this section establishes a right to have members of a protected class elected in numbers equal to their proportion in the population."[31] The Court had stated, "No single statistic provides courts with a shortcut to determine whether" a voting change retrogresses from the benchmark.[32] Justice O'Connor's concurrence in *Thornburg v. Gingles* also leaves open the possibility that an effective vote might accomplish other goals than the election of minority

representatives: "Is the 'voting strength' of a racial group to be assessed solely with reference to its prospects for electoral success, or should courts look at other avenues of political influence open to the racial group?"[33]

On this groundwork, the *Georgia v. Ashcroft* court made explicit the notion that legislatures may legitimately pursue substantive representation as their goal in redistricting: "In order to maximize the electoral success of a minority group, a State may choose to create a certain number of 'safe' districts, in which it is highly likely that minority voters will be able to elect the candidate of their choice. Alternatively, a State may choose to create a greater number of districts in which it is likely—although perhaps not quite as likely as under the benchmark plan—that minority voters will be able to elect candidates of their choice."[34]

In his dissent in *Georgia v. Ashcroft*, Justice David Souter sharply questions the administrability of the majority decision, declaring it "simply not functional in the political and judicial worlds."[35] He asserts that "it is very hard to see anything left of the standard of nonretrogression" and wonders what an effective test would look like:

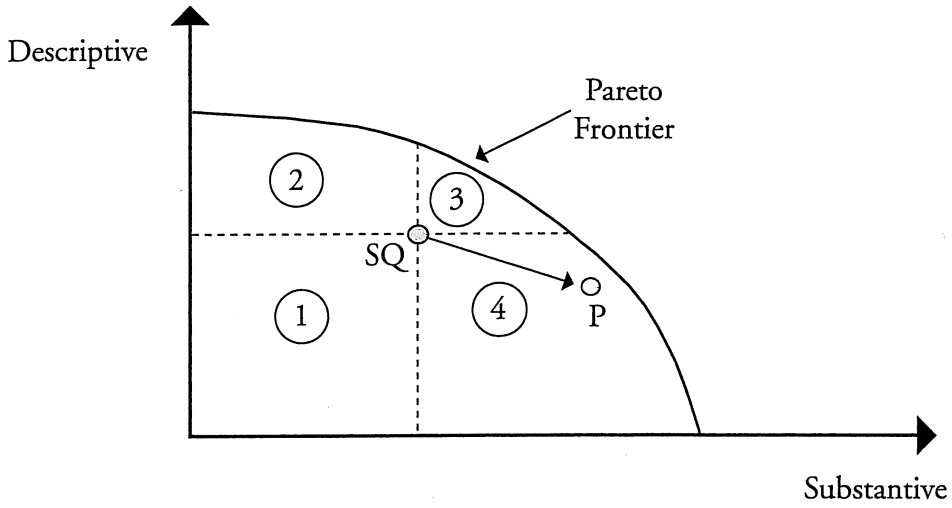
> Is the test purely ad hominem, looking merely to the apparent sentiments of incumbents who might run in the new districts? Would it be enough for a State to show that an incumbent had previously promised to consider minority interests before voting on legislative measures? Whatever one looks to, however, how does one put a value on influence that falls short of decisive influence through coalition? Nondecisive influence is worth less than majority-minority control, but how much less? Would two influence districts offset the loss of one majority-minority district? Would it take three? Or four?[36]

We agree that *Georgia v. Ashcroft* would be meaningless, or worse, without consistent, administrable measures of substantive representation. But we also emphasized earlier that those who claim *Georgia v. Ashcroft* abandoned a previous set of clear, electability-based standards for preclearance do not understand the full force of Pildes (2002). Even had the court kept preclearance within the ambit of descriptive representation alone, it would still have had to create a new standard.

LIFE ON THE (PARETO) FRONTIER

To understand the relation between descriptive and substantive representation and the *Georgia v. Ashcroft* decision, figure 8.3 shows a two-dimensional graph, with substantive representation on the horizontal axis and descriptive representation on the vertical axis. The degree of substantive and descriptive

FIGURE 8.3 PARETO FRONTIER OF DESCRIPTIVE AND SUBSTANTIVE REPRESENTATION



Pre-*Ashcroft:* Areas 2 and 3 were permissible → proposal P is retrogressive
Post-*Ashcroft:* Areas 2, 3, and 4 are permissible → P is nonretrogressive

Source: Authors' compilation.

representation associated with a particular districting plan, then, corresponds to a point on the graph.

Assuming, as argued earlier, that a trade-off between these two objectives exists, there will be a "Pareto frontier," a term borrowed from economics to describe the maximum possible combination of each type of representation. Starting from any point on the frontier, that is, there is no other achievable point that is better in both dimensions. In other words, any increase in one quantity necessarily requires a decrease in the other.

There are, of course, points inside the frontier, one of which is labeled "SQ" in the figure, indicating that it is the status quo state of affairs. The lines drawn through SQ, parallel to the horizontal and vertical axes, divide the Pareto region into four quadrants. Moves from SQ to region 3 improve both substantive and descriptive representation and are termed "Pareto improving." Conversely, movements into quadrant 1 are worse in each dimension. And regions 2 and 4 represent improvements in one dimension at the cost of decreases in the other. For example, the point labeled P in the figure, representing a proposed change from the status quo to region 4, would increase substantive representation at the cost of descriptive representation.

It is tempting to conclude that jurisdictions should be required to move to the Pareto frontier whenever possible, but we reject such a strong interpretation of the diagram. First of all, the exact districting schemes needed to move to the frontier could violate other traditional redistricting criteria such as compactness and regard for preexisting political subdivisions. Second, while theoretically attractive, there may be some points on the Pareto frontier that may be regarded as normatively suspect. The point that maximizes descriptive representation, for example, might give minority voters a share of legislative seats greater than their population proportion.[37] Similarly, the point that maximizes substantive representation might well result in electing no minorities at all to office; this outcome would undoubtedly represent a major step backward in minority voting rights, whatever positive policy implications it might have.

Note that when voting in both the electorate and legislature is polarized, increases (and decreases) in substantive and descriptive representation go hand in hand—that is, when only candidates elected in minority-controlled elections will represent minority policy interests, only districting plans that increase descriptive representation can increase substantive representation. With reference to the figure, this scenario would translate into the statement that regions 2 and 4 do not exist, so the only possible moves are into regions 1 and 3. But, as explained above, current research shows that these trade-offs do now exist; in fact, the redistricting plan passed by the Georgia state legislature was intended to be a move into region 4.

How do these regions translate into decision rules regarding retrogression and preclearance? In a regime where retrogression is measured by changes in descriptive representation alone, the only question is whether the proposed plan lies above or below the status quo on the vertical axis. Moves from SQ to regions 2 or 3, that is, would be permissible, whereas moves to regions 1 and 4 would be retrogressive.

Georgia v. Ashcroft, however, declared that legislatures can enact plans that they expect to increase substantive representation, even at a possible small cost to descriptive representation. In our framework, the *Georgia v. Ashcroft* decision can be simply summarized as allowing moves to region 4 as well as regions 2 and 3, leaving only the Pareto inferior moves to region 1 as retrogressive.

It is important to immediately circumscribe this interpretation of *Georgia v. Ashcroft*. First, the plan enacted by the Georgia state legislature received strong support from the minority representatives, and, as noted, the Court gave significant weight to this fact in its decision. A similar plan passed, for instance, by a Republican majority over the objections of black legislators would probably not receive such a favorable evaluation, nor should it. We therefore propose that in order to obtain preclearance, states must present ev-

idence that the trade-offs embodied in their redistricting plans have significant support within the minority community.

Second, the Court did not attempt to set limits on the scope of such moves, and it would probably not look favorably on changes like those noted earlier that would significantly increase substantive representation but deny any minority legislators a reasonable chance to win office. *Georgia v. Ashcroft* should simply be read as announcing that region 4 is not ex ante out of consideration when a redistricting plan is being mapped.

In taking this view of the *Georgia v. Ashcroft* decision we part ways with Samuel Issacharoff (2004), who claims that the Court "substituted a highly nuanced totality-of-the-circumstances approach for the relatively rigid *Beer* retrogression test." To the contrary, we view *Georgia v. Ashcroft* as simply extending the set of criteria that can be applied to determine retrogression. This assumes that descriptive and substantive representation can be measured in an objective fashion, the topic to which we now turn.

MEASURING DESCRIPTIVE REPRESENTATION

One aspect of the *Georgia v. Ashcroft* decision that has so far received less attention is that it abandoned the previous district-by-district method of comparing two districting plans described earlier in favor of a method that explicitly allows for trade-offs across districts:

> While the District Court acknowledged the importance of assessing the statewide plan as a whole, the court focused too narrowly on proposed Senate Districts 2, 12, and 26. It did not examine the increases in the black voting age population that occurred in many of the other districts. Second, the District Court did not explore in any meaningful depth any other factor beyond the comparative ability of black voters in the majority-minority districts to elect a candidate of their choice.[38]

Notice that the opinion chides the district court for failing to take trade-offs into account before it adds that they should consider issues of substantive representation as well. The implication is that a determination of retrogression should allow for increases in electability in one district to be able to offset losses in another. This is a task for which the previous different-types-of-districts methodology, described earlier, is inherently unsuited, for it involves potential trade-offs among district categories that will be hard to define. Further, it lumps together into a single category districts that may have very different characteristics: in the example of figure 8.1b, for instance, a district with a BVAP of 40.1 percent would be treated the same as a district with 49.9 percent BVAP.

The cleanest way to escape the menagerie of district types, and to allow for the interdistrict trade-offs that the Supreme Court now mandates, is simply to estimate the probability that each district in a given redistricting plan will elect a minority-supported candidate to office. For each district in each plan, that is, one can assign a probability between 0 and 1 that a candidate of choice (CoC) of the minority community will be elected to office, and then use this information to assess retrogression.

To provide a more detailed description, recall that a retrogression assessment procedure has three steps: specifying a standard by which to measure the electability of minority-preferred candidates; applying this standard to both the baseline and proposed districting plans; and translating this determination of electability into a conclusion about retrogression. We tackle each step in turn.

The process starts by selecting the set of elections to be analyzed. One strategy is to use elections only to the institution being challenged; in assessing electability to a state senate, for instance, one could use all senate elections for the previous ten years. This method has the advantage of being limited to the body being studied, but for statistical reliability it may require using elections that are rather distant in time from the current period. The second alternative is to analyze a number of related elections—for instance, elections to the state house, the state senate, and possibly Congress as well. This approach can shorten the time period studied but departs from the ideal of using only elections to the challenged body.

Next, for each election in the data set, one determines whether or not a candidate of choice was elected. Defining the term "candidate of choice" may not in fact be straightforward. We know one definition that we *cannot* use, which is simply the race of the winning candidate. Judicial interpretations of the VRA have been scrupulous to avoid equating a minority community's "candidate of choice" with a candidate from that particular minority community or racial background. In theory, the Supreme Court has said, minority voters may well prefer non-minority representatives, and to assume otherwise is to do an injustice to their freedom to choose their preferred candidate. Justice Brennan argued this point emphatically in *Thornburg v. Gingles*, stating, "It is the status of the candidate as the chosen representative of a particular group, not the race of the candidate that is important."[39]

In previous work we have suggested that a minority officeholder be deemed a candidate of choice absent evidence of strong opposition from within the minority community. Furthermore, a CoC can be a non-minority candidate if he or she is elected from a majority-minority district, and he or she received support from minority voters in obtaining office.[40] This definition of a CoC includes all minority officeholders, as long as minority voters supported that

candidate in each election. It would exclude candidates such as U.S. Representatives Gary Franks (R-Conn.) and J. C. Watts (R-Okla.), since these minority office-holders won office without the support of minority voters.

Our approach also excludes non-minority candidates who win election with minority support from non-majority-minority districts—for instance, a white Democrat winning with minority support in a 10 percent black district—on the grounds that the minority community may jointly prefer to elect a minority candidate, but such a candidate may have been deterred from running by the scant chance of success. It does allow for a non-minority candidate to be classified as a CoC, but only if the candidate won office from a majority-minority district *and* had minority support. Thus our definition may constitute a somewhat conservative measure, so as to remain consistent with the Court's rulings regarding candidate characteristics and their classification as a CoC.

Once the candidates of choice have been determined, each election is said to have an outcome of 1 if a CoC was elected, and 0 otherwise. We can then use standard statistical techniques, called probit analyses, to produce curves like those drawn in figure 8.1, which show the probability that a candidate of choice will be elected as the BVAP changes from 0 to 100 percent.[41] We can then associate a number representing the probability of electing a CoC with each district in each plan—the preexisting baseline plan, the state's proposed plan, and any alternative plans. The sum of these probabilities gives the expected number of CoCs elected for each plan.[42] A drop in this score from the baseline to the proposed plan would indicate retrogression in descriptive representation. This is the most direct method of assessing whether decreased minority control in one district is offset by gains elsewhere.

As an example of the calculations outlined in this section, consider a city with 30 percent minority population and five city council districts. Further assume that the probability of electing a CoC is given by the probit graph in figure 8.1b. The city is drawing up a redistricting plan in which the current set of districts, whose BVAPs are given in the second column of table 8.1, would be changed to a new set of districts, given in the fourth column. The idea is to take 10 percent of the black voters out of both districts 4 and 5 and reallocate them to district 3, thus bringing its BVAP up from 20 percent to 40 percent. Assume also that districts 4 and 5 elect a candidate of choice to office in the baseline plan.

The table indicates the probability of electing a CoC from each district in each plan. As shown, the increased probability of electing a CoC in district 3 more than makes up for the losses in districts 4 and 5, so from the viewpoint of expected CoCs elected, the proposed plan is nonretrogressive.

TABLE 8.1 EXPECTED NUMBER OF CANDIDATES OF CHOICE (CoC's) ELECTED FOR BASELINE AND PROPOSED DISTRICTING PLANS[a]

	Baseline Plan		Proposed Plan	
District	BVAP	P(CoC Elected)	BVAP	P(CoC Elected)
1	0	0.00	0	0.00
2	10	0.01	10	0.01
3	20	0.06	40	0.50
4	60	0.94	50	0.79
5	60	0.94	50	0.79
Expected CoC's		1.96		2.10

Source: Authors' compilation.

[a] Sample data for a city with five council seats and 30 percent black voting-age population (BVAP). Probabilities are derived from probit graph in figure 8.1.

MEASURING SUBSTANTIVE REPRESENTATION

To the question of how to define substantive representation, we propose the same measure developed in our earlier work (see Cameron, Epstein and O'Halloran 1996; Epstein and O'Halloran 1999a)—namely, the percentage of times that a given legislator votes in concert with the majority of the minority representatives, which, as introduced above, we call a member's Minority Support Score.

Social scientists have developed sophisticated methodologies in the past decade for inferring legislative preferences from legislators' roll-call voting patterns (see Poole and Rosenthal 1985; Clinton, Jackman, and Rivers 2004; Poole 2005), and these measures have subsequently been used in dozens of essays in leading journals. These measures are used not because they are assumed to capture the totality of legislators' actions—after all, constituency service, committee work, and behind-the-scenes maneuvering are at least as important as final roll-call votes—but because roll-call voting behavior has been shown to be highly correlated with these other measures of representation in various contexts, making it an appropriate summary measure of substantive representation.

The object of this analysis, then, is to estimate the relation between a district's composition and its representative's roll-call voting behavior. Notice that this is consistent with the view of representation implicit in previous discussions of the Voting Rights Act and section 5 preclearance: candidates of

choice are important not for their race or ethnicity but because they will represent the minority group's concerns in the legislature.[43]

The idea behind our measure of substantive representation is to use the votes of minority legislators themselves to measure how well other representatives take minority views into account, rather than to rely on measures such as a "Democratic Performance Index" or interest-group-generated support scores. It is also important to use a measure directly related to policy outcomes, as opposed to, for instance, bill sponsorship and cosponsorship, which may be regarded as "signals" to other legislators but do not have direct policy impact.

To determine the extent of substantive representation in the baseline plan, one proceeds as follows:

1. List all non-unanimous recorded roll-call votes cast in the relevant body for a "reasonable" time period, one that provides sufficient data for valid statistical inference, yet reflects current voting patterns as closely as possible.[44]
2. For each roll call, calculate whether the majority of black representatives voted aye or nay.
3. Use this information to score each legislator for each roll call, assigning them a score of 1 if they voted with the black majority, 0 if they voted in opposition, and a missing value if they didn't vote.
4. Average these scores by district and year to obtain that legislator's Minority Support Score.[45]
5. Calculate the median of all support scores as a summary measure of substantive representation.[46]

To translate these findings into predictions about the extent of substantive representation in proposed districting plans, divide legislators into a small number of groups with similar scores in each group and distinct behavior across groups. This will usually involve dividing legislators by race and party: Republicans, white Democrats, and black Democrats.[47] For each group, calculate the relation between the district BVAP and the legislator's Minority Support Score through regression analysis. Often a simple linear regression will suffice, but each group should be checked for important nonlinearities and these patterns, if they exist, should be captured in a parametric form. This yields the expected substantive representation as a function of BVAP for each group.

It is now straightforward to combine these measures of descriptive and substantive representation to produce the expected overall level of substantive

representation. For any given level of BVAP, we can estimate the probability that a Republican, white Democrat, or black Democrat will be elected, and for each of these types we can estimate the rate at which they will vote for minority-supported issues. The overall expected level of substantive representation is the product of these two quantities.

Assume, for example, that a 40 percent BVAP district has a 10 percent chance of electing a Republican, a 50 percent chance of electing a white Democrat, and a 40 percent chance of electing a black Democrat. Further assume that a Republican elected from a 40 percent black district is expected to have a black support score of 40, a white Democrat from such a district is expected to have a support score of 90, and a black Democrat has an expected support score of 100. Then the overall expected support from such a district is (0.1*40)+ (0.5*40)+ (0.4*100) = 89. For a districting plan, one averages up these numbers district by district to obtain total substantive representation, and these summary statistics can be compared across plans.

One might wish to add other considerations to this calculation, including, for instance, the probability that one party or another controls a majority of the legislature. Such considerations, though, would violate our reading of the "black box" approach to section 5 preclearance implied by *Presley v. Etowah County*.[48] Under *Presley*, actions taken inside the legislature do not fall under section 5 preclearance, and the organizing role played by majority parties would fall into this category.[49]

OBJECTIONS TO THE USE OF SUBSTANTIVE REPRESENTATION

It is our contention that this measure of expected substantive representation is in fact identical to the mental model being used by advocates of safe minority districts. They, too, imagine a world where each legislator is assigned a number between 0 and 100, indicating the degree to which he or she will work to pursue minority policy goals. It is just, we contend, that these advocates believe that the only numbers that will appear in practice are either 0 or 100 (or thereabouts), and that the only way to assure oneself of a high-type representative is to ensure that minorities control the electoral process.

Even presented with evidence that non-minority representatives can have fairly high Minority Support Scores, these advocates might counter that such scores are not a true measure of their degree of support, since there are many other behind-the-scenes services performed by candidates of choice but not by these "impostors," including constituency relations and working to put important minority issues on the legislative agenda (see, for instance, chapter 7 in this volume, by Lublin and Segura). Further, they might also argue that these intermediary-type representatives do not provide secure representation—as

Karlan (2004) notes, they may switch parties or abandon the minority voters who helped them get elected in the first place—so it would be folly to let go of two or three birds in the hand for the prospect of six or even eight fly-by-night birds in the bush. They advise states to heed the first rule of wing walking: Don't let go of what you've got hold of until you have hold of something else.

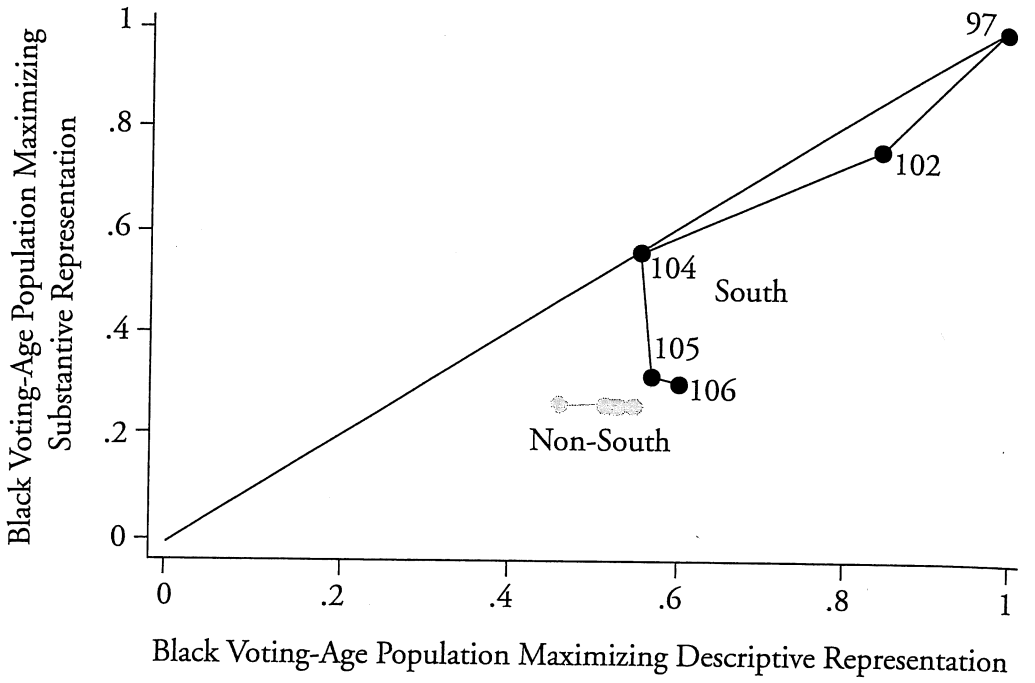
These are all valid concerns, but they do have their limits. If risk aversion is so high that no compromises of descriptive representation are ever allowed, then the system will literally never change to one based more on coalition building and fluid bargaining. We view possible trade-offs between descriptive and substantive representation, and the risks inherent in moving from one to the other, as the epitome of political choices, rightfully made by voters through their elected representatives, and not to be imposed from above by a possibly overbearing federal administration.

THE EMERGENCE OF A PARETO FRONTIER

As a practical matter, does the Pareto frontier exist? Or can districting plans simultaneously maximize both descriptive and substantive representation? We have discussed this question (see Epstein and O'Halloran 2006) and summarize the results here. Using the techniques just described, we calculated optimal concentrations of black voters to maximize both descriptive and substantive representation for a state with an overall BVAP of 25 percent; the results are given in figure 8.4. Each point in the graph represents a region and Congress. The horizontal axis gives the BVAP that maximizes descriptive representation (the expected number of black candidates elected to office), and the vertical axis, the BVAP that maximizes substantive representation (the average Minority Support Score). Also shown is a forty-five-degree line. If there were no descriptive versus substantive trade-off, then points would fall on this line, indicating that the same concentration of minority voters maximizes both objective functions. Points that fall below this line indicate that one would concentrate black voters more heavily to maximize the number of black representatives elected to office, as opposed to maximizing legislative support in Congress.

Beginning with non-southern states, the recipe to maximize substantive representation has always been to spread black voters out evenly across all districts; hence, all these points lie on the 25 percent mark on the vertical axis. Maximizing descriptive representation always entails greater concentrations of black voters, the exact number ranging between 40 percent and 60 percent. The story is much the same if we look only at eastern states, except that descriptive representation was maximized at higher levels of BVAP (from about 50 percent to 70 percent, depending on the Congress), owing to the fact that a number of liberal white Democrats still represented heavily black districts in the East throughout the period.

FIGURE 8.4 OPTIMAL DISTRICTS



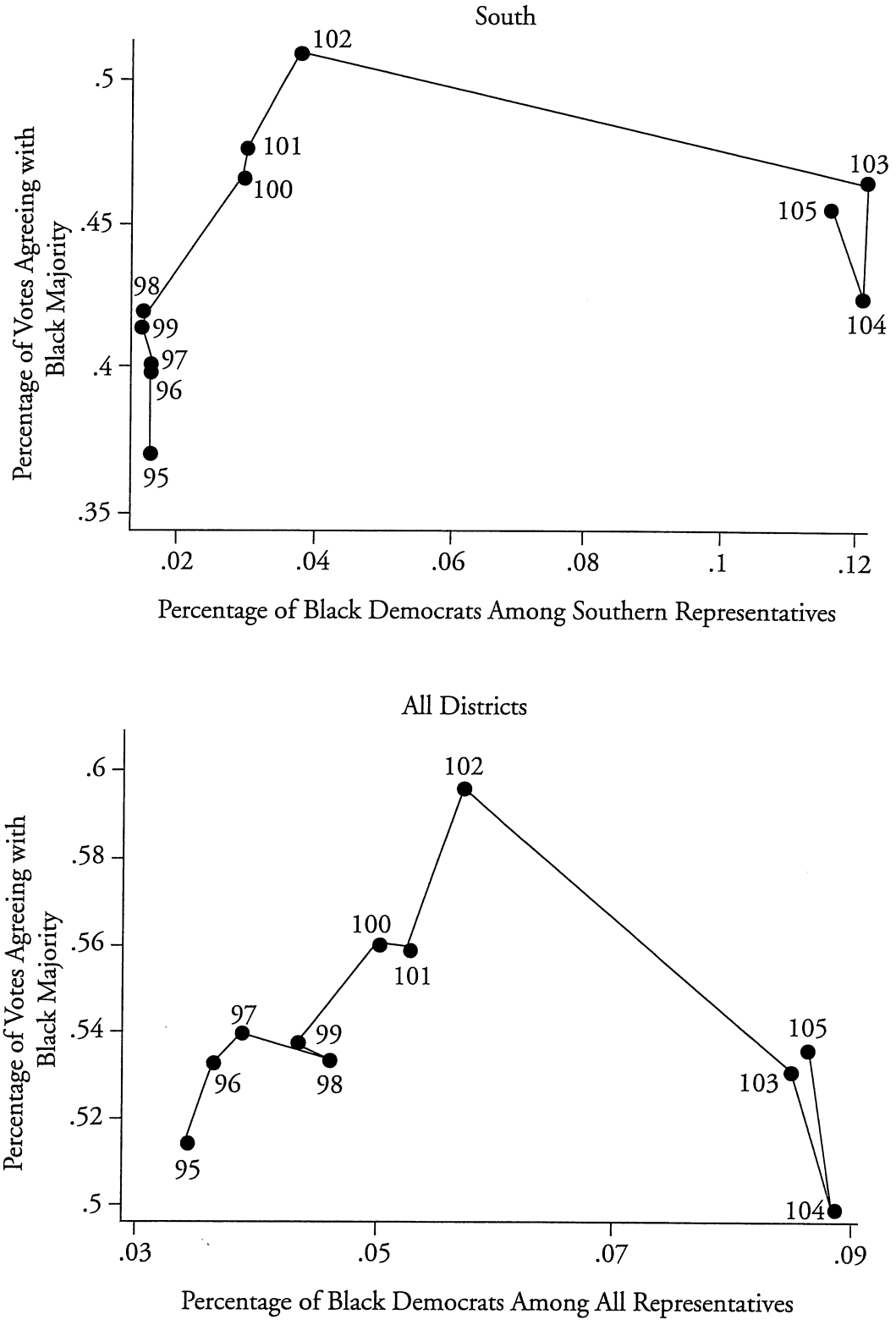
Source: Authors' compilation.

The most interesting result comes with the southern districts. Up until the 104th Congress (1995 to 1996), the maximization points fall almost exactly on the forty-five-degree line, indicating that the same districting strategies maximized both substantive and descriptive representation. The degree of concentration did change over time, from nearly 100 percent in the mid-1970s to about 58 percent in the mid-1990s, but the two numbers tracked each other almost exactly.

Now, however, substantive representation is maximized by constructing districts with only about 33 percent BVAP, while descriptive representation is still maximized at about 57 percent. Thus, a sharp difference between the two objectives has emerged in the past decade, resulting mainly from increased Republican success in southern congressional races.

This discussion implies that a Pareto frontier has indeed emerged. Whereas before, gains in substantive and descriptive representation went hand in hand, now an increase in one should come at the cost of some decrease in the other. We examine this possibility by simply graphing the actual levels of descriptive and substantive representation for both the South and the nation as a whole during our sample period. The results are given in figure 8.5.

FIGURE 8.5 EMERGENCE OF THE PARETO FRONTIER IN THE SOUTH AND FOR ALL DISTRICTS



Source: Authors' compilation.

As indicated, a frontier does seem to be emerging at both the regional and national levels. Up until the 102nd Congress (1991–92), blacks made solid gains in both types of representation in almost every election. But since that time, gains in descriptive representation have come at the expense of substantive representation. It is important to note, by the way, that the first Congress for which this is apparent is the 103rd, which immediately followed the 1990s redistricting but preceded Newt Gingrich's Republican Revolution in the run-up to the 1994 midterm elections. These figures, then, give much direct evidence in favor of the proposition that we are now living in a world of trade-offs.

APPLICATION: GEORGIA STATE SENATE

We apply these techniques to the analysis of the districting plan at issue in the *Georgia v. Ashcroft* case: Georgia's original plan for its state senate. We evaluate the plan both with respect to descriptive and substantive representation, and then summarize its status with respect to the *Georgia v. Ashcroft* standard.

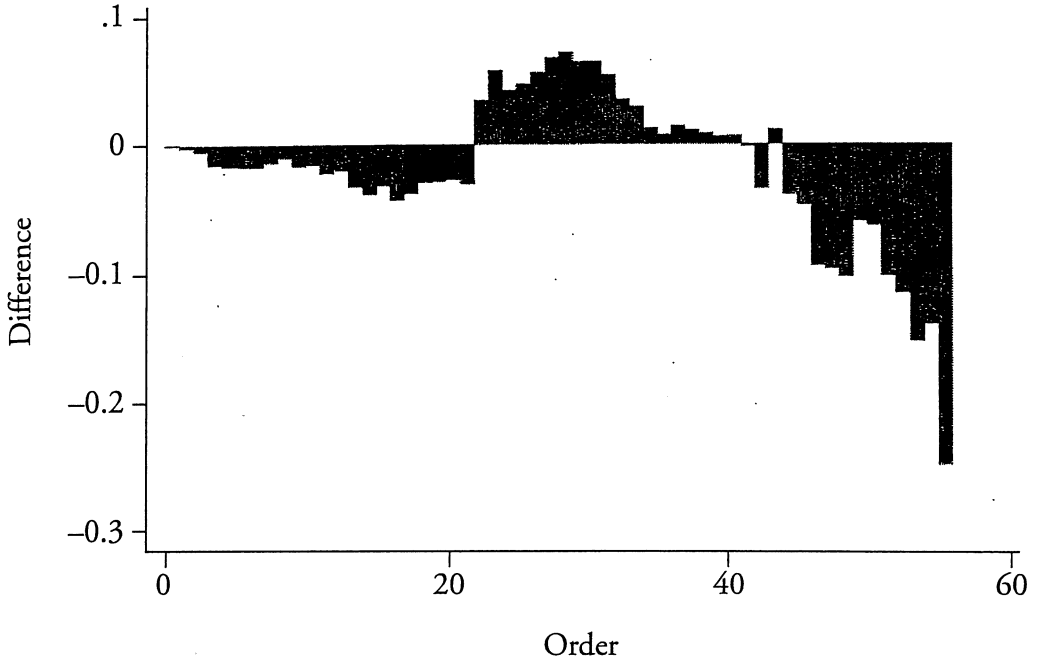
DESCRIPTIVE REPRESENTATION

A summary of Georgia's proposed state senate plan compared with the baseline 1997 plan is given in figure 8.6. This shows the result of taking the BVAPs in each plan, ordering them from greatest to least, and taking the differences between corresponding entries. The graph clearly shows a reallocation of minority voters from the upper and lower ends of the spectrum toward the middle, or influence district region.

To estimate the relationship between the percentage of black voters and electoral outcomes, we analyzed all 1,258 elections to the U.S. House and the Georgia state legislature between 1991 and 2001. Of these, 1,235 were regular elections to the eleven U.S. House seats, 180 Georgia house seats, and 56 Senate seats in years 1992, 1994, 1996, 1998, and 2000, whereas the other twenty-three were special elections to fill vacancies. We combined the results from all the races into a single analysis; all legislative elections occur every two years, and voting patterns on legislative races are generally similar from one body to another. For each election, we noted the race and party of the winner, and whether an incumbent participated in the election. In addition, the BVAP of the district at the time of the election was recorded.

The results are shown in figure 8.7, which gives the probability of electing different types of representatives—Republicans, white Democrats, and black Democrats—as a function of district BVAP. As shown, the point of equal opportunity for electing a black Democrat is under 50 percent BVAP, and the chances of electing a white Democrat peak at just over 25 percent BVAP.

FIGURE 8.6 DIFFERENCES IN BLACK VOTING-AGE POPULATION BETWEEN PROPOSED AND BASELINE PLANS



Source: Authors' compilation.

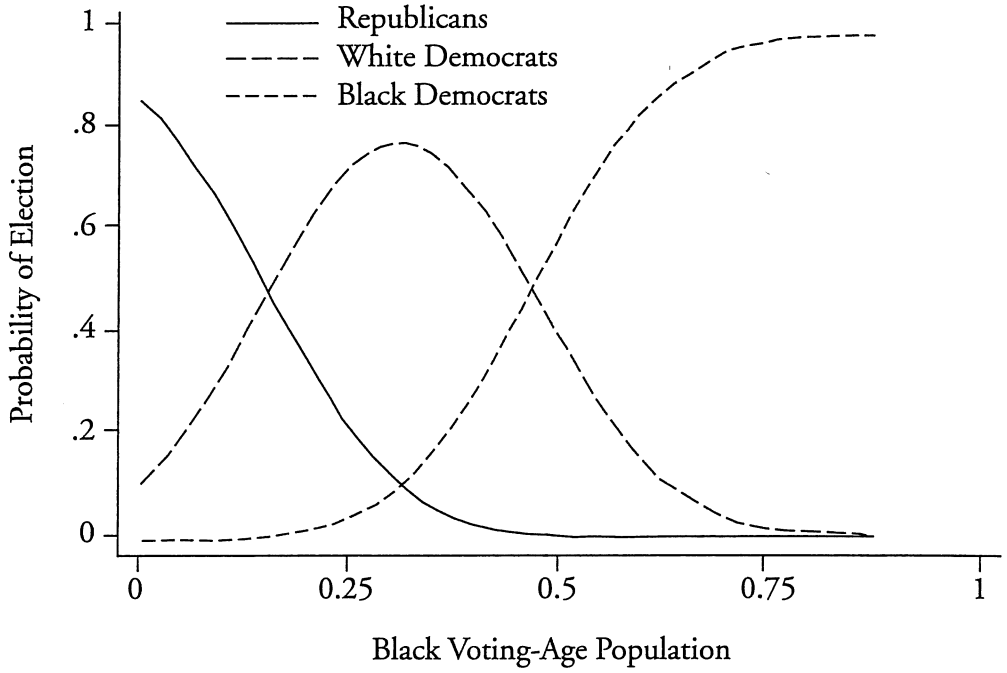
SUBSTANTIVE REPRESENTATION

We now compare expected overall minority policy influence in the 2001 plan to that in the baseline plan. Since the 2001 plan increased the number of influence districts, we investigate the likelihood that candidates elected without decisive minority support would be willing to take the minority's interests into account, rather than simply assume that non-CoC white Democrats will represent minority interests.

For the substantive representation calculations, we began with all 892 non-unanimous recorded roll-call votes cast in the state senate between 1999 and 2002 reported on the senate's website. We then calculated for each roll call whether the majority of black representatives voted aye or nay and scored all the senators for each roll call, assigning them a score of 1 if they voted with the black majority, 0 if they voted in opposition, and a missing value if they didn't vote. Finally, we averaged these scores by district and year to get each legislator's Minority Support Score.

The results are shown in figure 8.8, which provides the scores for each of

FIGURE 8.7 PROBABILITY OF ELECTING A REPUBLICAN, WHITE DEMOCRAT, AND BLACK DEMOCRAT, GEORGIA LEGISLATIVE ELECTION, 1991 TO 2002



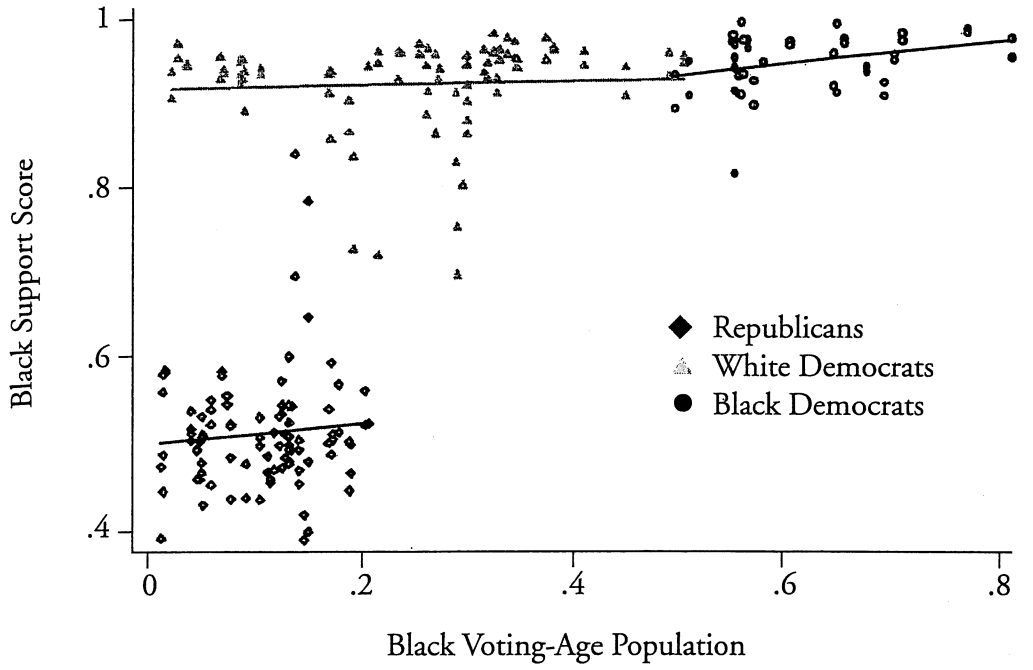
Source: Authors' compilation.

the three types of representatives and a summary linear regression line for each group. The average support score for Republicans was 50.2 percent; for white Democrats, 92.0 percent; and for black Democrats, 94.6 percent. Thus, although white Democrats do not always vote in favor of minority-supported positions on roll calls, they do so far more often than do Republicans.

Thus we can estimate the relationship between district characteristics and support for minorities in roll-call votes. In fact, these results allow us to calculate the implied trade-off between majority-minority and influence districts. For instance, the expected Minority Support Score for a 50 percent BVAP district is about 90 percent, whereas for a 25 percent district it is about 50 percent. By this measure, roughly two influence districts would on average compensate for the loss of one majority-minority district.

Furthermore, blacks form legislative coalitions with Republicans far less often than they do with their white Democrat counterparts. In only tweleve

FIGURE 8.8 BLACK SUPPORT SCORES FOR REPUBLICAN, WHITE DEMOCRATIC, AND BLACK DEMOCRATIC LEGISLATORS FROM GEORGIA



Source: Authors' compilation.

votes out of 892 in the sample did a majority of black representatives and Republicans vote in one direction against a majority of white Democrats, as opposed to 297 votes where a majority of white and black Democrats voted together against Republicans.

COMPARISON OF PLANS

We now compare the baseline, interim. and proposed plans in terms of both descriptive and substantive representation.[50] First one can count the number of majority-minority, coalitional, and influence districts in each plan. The results of this analysis are shown in table 8.2: the proposed plan had thirteen majority-minority districts as opposed to twelve in the baseline plan; no coalitional districts as opposed to one in the baseline plan; and seventeen influence districts, as opposed to twelve in the baseline plan. If one takes the 1990 census data as the baseline, the results are even more pronounced: five more influence districts and three more majority-minority districts. Thus, the pro-

TABLE 8.2 COMPARISON OF ALTERNATIVE PLANS BY THE EXPECTED NUMBER OF INFLUENCE, COALITION, AND MAJORITY-MINORITY DISTRICTS CREATED, AND EXPECTED CANDIDATES OF CHOICE

Plan	Influence	Coalition	Majority-Minority	E(CoC)
Baseline (1990 Census)	12	1	10	11.2
Baseline (2000 Census)	12	1	12	13.6
Proposed	17	0	13	12.5
Interim (2002)	17	0	13	12.9

Source: Authors' compilation.

posed plan had both more majority-minority and more influence districts than did the baseline plan. The total number of expected candidates of choice elected did fall, though, from 13.6 to 12.5.[51]

We can now use the relation between BVAP and support scores shown in figure 8.8 to estimate which plan would yield the highest average and median support scores. The method employed uses smoothing splines to approximate the nonlinear curve shown in the figure, and then uses the resulting parametric function to score each district in the baseline and proposed plans.

The results in table 8.3 show that the proposed plan has an average support score of 66.6 percent, as opposed to 62.3 percent in the baseline plan as of the 2000 census, 59.0 percent in the baseline plan as of the 1990 census, and 65.9 percent in the interim plan, for an increase of 6.3 percent. When looking at medians, the increase is even more dramatic: 75.9 percent in the proposed plan, as compared with 50.2 percent in the baseline, for an increase of 51.2 percent.

Taken as a whole, these results show that Georgia's state senate redistricting plan did trade off a slight decrease in descriptive representation for an in-

TABLE 8.3 MEAN AND MEDIAN SUPPORT SCORE, FOR EACH DISTRICTING PLAN (PERCENTAGE)

Plan	Mean	Median
Baseline (1990 Census)	59.0	46.1
Baseline (2000 Census)	62.3	50.2
Proposed	66.6	75.9
Interim (2002)	65.9	69.2

Source: Authors' compilation.

crease in substantive representation. In terms of figure 8.3, they attempted to move into region 4. As the plan did have the overwhelming support of the minority representatives, it should have been able to obtain preclearance under the Court's *Georgia v. Ashcroft* standard.

CONCLUSION

The renewal of section 5 of the Voting Rights Act maintained the tension among competing standards for measuring retrogression. Changes in voting patterns—decreased polarization and the Republican resurgence in the South—have made the current retrogression assessment procedure all but obsolete. The inherent tensions created by the DOJ's insistence on majority-minority districts at any expense were laid bare in the *Georgia v. Ashcroft* case: Why would the federal government know better than minority voters themselves how best to advance minority interests in the political sphere.

The question is how to implement new, reasonable standards. In this chapter we have offered new measures of substantive and descriptive representation that do not rely on the classification of districts into separate and unequal types. Rather, they measure directly the number of candidates of choice that a given plan is expected to elect to office, and the subsequent degree of support for minority-favored policies in the legislature. Moreover, these measures are intertwined: the electoral outcomes of a districting plan are both the measure of descriptive representation and one component of calculating substantive representation.

What do our results imply for the current divisions within the voting rights community, between those who favor and those who oppose the *Georgia v. Ashcroft* ruling? Although the two sides are sometime characterized as being pro– and anti–substantive representation, we do not accept this neat division. Most advocates of restricting section 5 review to electability issues alone—that is, the critics of *Georgia v. Ashcroft*—do so not just because they value descriptive representation per se, but because they believe that the election of minority representatives is the surest, least risky way to ensure minority voters of substantive representation. And those on the other side are not blind to the advantages of descriptive representation; they just worry that other concerns should also be able to influence legislators' redistricting decisions.

If we are correct, then the points of disagreement between the two camps are more quantifiable than much of the previous debate would suggest. In order for the renewed section 5 to pass strict scrutiny from the Supreme Court—and to ensure that it addresses the voting rights problems of today, rather than those of forty years ago—a body of evidence needs to be built up in the next

few years that examines these issues of representation in the depth that they deserve.

NOTES

1. See *Baker v. Carr*, 369 U.S. 186 (1962); *Lucas v. The Forty-Fourth General Assembly of the State of Colorado*, 377 U.S. 713 (1964); *Reynolds v. Sims*, 377 U.S. 533 (1964).
2. Voting Rights Act, 42 U.S.C. §1973 (2000). The Voting Rights Act is codified in whole in sections 1973 to 1973aa-6.
3. Although states have the option under the VRA of submitting proposed changes in state or local law to the Justice Department or the D.C. District Court, the usual practice is to submit plans to the Justice Department first.
4. *Georgia v. Ashcroft*, 539 U.S. 461 (2003).
5. "The [district] court did not consider any factor beyond black voters' comparative ability to elect a candidate of their choice. It improperly rejected other evidence that the legislators representing the benchmark majority-minority districts support the plan; that the plan maintains those representatives' legislative influence; and that Georgia affirmatively decided that the best way to maximize black voting strength was to adopt a plan that 'unpacked' the high concentration of minority voters in the majority-minority districts" (idem at 463).
6. "Congressman Lewis testified that 'giving real power to black voters comes from the kind of redistricting efforts the State of Georgia has made,' and that the Senate plan 'will give real meaning to voting for African Americans' because 'you have a greater chance of putting in office people that are going to be responsive'" (*Ashcroft* at 466). The Court also noted that forty-four out of the forty-five black state legislators voted for the plan.
7. Samuel Issacharoff (2004), for example, claims that previous Supreme Court decisions had "narrowed section 5 to questions that could be addressed through relatively mechanical assessments of voting practices. For example, the Beer retrogression test made it easy to decide that a districting arrangement in a town with a twenty-percent black population that yielded one forty-five-percent black district (out of five) should not be precleared if the prior arrangement had afforded one district that was sixty-five-percent black."
8. The Voting Rights Act is codified at 42 U.S.C. §1973a (2000).
9. See Chandler Davidson and Bernard Grofman (1994) for a comprehensive account of how changes fostered by the aggressive application of section 2 greatly increased black officeholding in the South.

10. See *Guinn v. United States*, 238 U.S. 347 (1915), which invalidated an Oklahoma statute (a grandfathered clause) denying registration to anyone who could not vote as of January 1, 1866, or anyone lineally descended from such a person, and *Nixon v. Herndon*, 273 U.S. 536 (1927), *Smith v. Allwright*, 321 U.S. 649 (1944), and *Terry v. Adams*, 345 U.S. 461 (1953), which outlawed the restriction of participation in primaries, or their functional equivalents, to white voters only. See also J. Morgan Kousser (2006) for a history of these techniques.
11. Section 5 coverage was defined to include any state or political jurisdiction that had a test or device in operation as of November 1, 1964, and in which less than half the voting-age population voted in the 1964 presidential election. This definition included the entire states of Alabama, Georgia, Louisiana, Mississippi, South Carolina and Virginia, and certain counties of North Carolina. The current list of covered states and subdivisions is available at http://www.usdoj.gov/crt/voting/sec5/covered.htm.
12. Voting Rights Act, 42 U.S.C. §1973c (2000).
13. The term "retrogression" was introduced in *Beer v. United States*, 425 U.S. 130 141 (1976). *City of Lockhart v. United States*, 460 U.S. 125, 135 (1983), permitting a change that simply perpetuated the existing situation because "although there may have been no improvement in their voting strength, there has been no retrogression either."
14. *Busbee v. Smith*, 549 F. Supp. 494 (D.D.C. 1982), aff'd mem., 459 U.S. 1166 (1983).
15. The DOJ judged that even a BVAP of 57 percent would result in black voters' making up less than half of the total turnout.
16. *City of Pleasant Grove v. United States*, 479 U.S. 462 (1987).
17. The court was forced into considerable legal gymnastics to uphold the DOJ's ruling here, as there were no actual minority voters residing in the city to suffer harm as a result of the proposed annexation.
18. *Shaw v. Reno*, 509 U.S. 630 (1993). See the objection letter sent from John Dunne, assistant attorney general for the Civil Rights Division of the DOJ, to the North Carolina secretary of state, dated December 18, 1991.
19. *Reno v. Bossier Parish School Board*, 520 U.S. 471 (1997) (called *Bossier Parish I*).
20. Why, the Court asked, should we worry about laws enacted with discretionary intent if they don't actually impair the ability of minorities to effectively participate in the political process and are bit dilutive?
21. *Federal Register* 2001.This is consistent with the Court's declaration in *Bush v. Vera*, 517 U.S. 952, 983 (1996), that nonretrogression "mandates that the minority's opportunity to elect representatives of

its choice not be diminished, directly or indirectly, by the State's actions."

22. These thresholds are often summarized as a single percentage of minority residents. At first the rule of thumb was 65 percent total black population. More recently, the informal standard has been 50 percent BVAP, termed "majority-minority." The DOJ has consistently maintained, though, that its criteria for assessing electability are much more nuanced than any single-number approach. See, for instance, *Federal Register* 2001: "Although comparison of the census population of districts in the benchmark and proposed plans is the important starting point of any retrogression analysis, our review and analysis will be greatly facilitated by inclusion of additional demographic and election data in the submission."
23. For ease of discussion, we will refer mainly to BVAPs and black voters in this and the following sections. It should be understood that these arguments apply equally to Hispanic voters or any other community of interest protected by the VRA. We will along the way make special note of provisions that depend on there being a single, rather than multiple, community of interest.
24. It has been claimed that in the 1990s, the DOJ followed a "max-min" policy, maximizing the number of minority-controlled districts in each state. Call the maximum number of possible majority-minority districts N_{max}; then under this standard a plan should be denied preclearance unless $N_p = N_{max}$. This was, in fact, the opinion of the Court in *Shaw v. Reno*, idem at 924–25 ("Instead of grounding its objections on evidence of a discriminatory purpose, it would appear the Government was driven by its policy of maximizing majority-black districts"). The Court noted that the Justice Department "disavows having had that policy," and that it "seems to concede its impropriety," but the majority opinion nevertheless relied on "the District Court's well-documented factual finding," implying that a min-max strategy was in fact being used (idem at 924–25). (The District Court opinion is found at 864 F. Supp. 1354 [S.D. Ga. 1994].) Others have argued strongly that no such standard has ever been in effect (see, for instance, McCrary, Seaman, and Vallely 2006).
25. This number will be above 50 percent to the degree that black levels of citizen VAP registration, turnout, roll-on (actually casting a vote), or co-ethnic voting are lower than the corresponding levels for white voters.
26. The shallow slope of the curve reflects the fact that the white crossover voting is more variable.
27. Pildes (2002), writing prior to the DOJ's objections to Georgia's pro-

posed plan, conflates the categories of majority-minority and safe districts. The DOJ clearly considers them to be distinct.

28. *Barnett v. City of Chicago*, 141 F.3d 699, 703 (7th Cir. 1998) (opinion by Posner, J.), certiorari denied (1998).
29. This is consistent with Karlan's (2004) definition of influence districts as those in which "white candidates defeat black preferred candidates in the Democratic primary but in which the Democratic candidate wins the general election."
30. In practice, this has been implemented by "creating racially 'safe boroughs.'" *United States v. Dallas County Comm'n*, 850 F.2d 1433, 1444 (CA11 1988) (Hill, J., concurring), cert. denied, 490 U.S. 1030 (1989). See also *Holder v. Hall*, 512 U.S. 874, 895–903 (Thomas, J., concurring) (stating that the Court has tacitly selected the number of elected officials as its indicator of electoral strength).
31. This disclaimer was essential to the compromise that resulted in passage of the amendment. See S. Rep. No. 97-417, 193–94 (1982) (additional views of Sen. Dole).
32. *Johnson v. De Grandy*, 512 U.S. 997, 1020–21.
33. *Thornburg v. Gingles*, 478 U.S. 30, 88–89.
34. Idem at 468. Internal citations omitted.
35. Idem at 474.
36. Idem at 489.
37. In first-past-the-post elections, a minority group that constitutes x percent of the population could theoretically control up to 2x percent of the legislature.
38. Idem *Georgia v. Ashcroft* at 465.
39. *Thornburg v. Gingles*, 478 U.S. 30, 37 (1986).
40. For a fuller explanation, see David Epstein and Sharyn O'Halloran (1999a).
41. The logit and probit models are the two most commonly used estimators for qualitative dependent variables. Probit analysis was used to estimate the 44.3 percentage points of equal opportunity in *Georgia v. Ashcroft*. The details of this procedure, as well as analysis of the statistical advantages of probit estimation over ecological regression, are given in Epstein and O'Halloran (1999a).
42. If the probability of electing a CoC in district d of plan p is π^p_d, then the overall score for plan p is $\Pi^P = \Sigma_d \pi^p_d$.
43. This relationship also lies at the heart of discussions of coalitional and influence districts, although not always in a consistent manner. For instance, worries about coalitional districts can be based on a median-voter theory of representation. If the voter at the 50th percentile of the distribution is non-minority, the representative will be forced by elec-

toral concerns to move her policies in a more conservative direction, thus reducing minority influence. Once understood in this light, concerns about coalition districts become understandable on substantive rather than descriptive representation grounds. (For these concerns to be valid, one must assume that minority voters are homogeneous and uniformly more liberal than any of the non-minority voters in the district. To the degree that there is some mixing of preferences at the liberal end of the scale, such concerns become less pressing.) Influence districts, on the other hand, are based on the somewhat contradictory notion that representatives who rely on a large block of voters for reelection once in the legislature must take these voters' concerns into consideration. Under a median-voter argument, of course, this is not the case: black voters are unlikely to cast their ballots for Republican candidates anyway, and so representatives will aim their policy positions at the center of the preference distribution. Small groups in a district may have significant influence, though, if politics consists of more than a single left–right continuum. There may be particular issues that a small group cares deeply about but that are less important to the majority. If minority voters can organize themselves and lobby their representatives on this discrete set of issues, they may wield considerable influence in these issue domains.

44. In practice, a period of two to five years is usually sufficient. This stage of the analysis has been made much more convenient by the practice in many states of posting roll-call votes on the internet in machine-readable form.
45. One could use a weighted average here, with the weights equal to the degree of unanimity among black representatives on a given roll call. This variation usually has only marginal impact on the substantive results.
46. When evaluating an entire legislative body, the median is the appropriate statistic. See Duncan Black (1953). When evaluating a congressional delegation, though, the mean support score may be used as well, since the median of one state's delegation will in general not be the same as the overall median in Congress.
47. Black Republicans usually do not form a distinctive group in these calculations, as their voting patterns closely mirror those of their Republican colleagues. Where significant, regional variations can be added to the analysis as well.
48. *Presley v. Etowah County*, 502 U.S. 491 (1992).
49. As noted by Karlan (2004), the Court's reference in *Georgia v. Ashcroft* to the value of maintaining committee chairmanships comes dangerously close to transgressing into the legislative sphere and away from a

minority groups' right to cast an effective vote. Of course, one could argue that roll-call votes happen "inside the legislature" as well. But we use them to indicate the strength of relationships between constituents and their representative, which the Court relies on heavily when evaluating redistricting plans, rather than legislature-specific variables such as partisan control or rules for the passage of legislation.

50. The interim plan was passed by the state legislature after the original plan was denied preclearance and was in effect for the 2002 senate elections.

51. Part of this drop was inevitable, given the fact that as of the 2000 census the existing senate districts were malapportioned in blacks' favor. The average BVAP in the baseline senate districts was in fact 29.7 percent, even though blacks made up only 27.6 percent of the statewide population.

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