CONTROVERSIES IN MINORITY VOTING

The Voting Rights Act in Perspective

BERNARD GROFMAN
CHANDLER DAVIDSON
Editors

The Brookings Institution
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Expert Witness Testimony and the Evolution of Voting Rights Case Law

BERNARD GROFMAN

TESTIMONY FROM SOCIAL SCIENTISTS on the concept of vote dilution and the elements from which it is made has played a major role in shaping the way the provisions of the Voting Rights Act of 1965 and its amendments have been interpreted by courts and by the Department of Justice. The focus of this chapter is on the role of the expert witness in the evolution of voting rights case law and on criteria for evaluating such testimony in the light of conflicts among experts testifying for opposing sides. Initially, courts looked to the seven factors of what has been called the "totality of circumstances" test for voting rights violations. Then in *Thornburg* v. *Gingles* (1986) the Supreme Court provided a set of sufficient (and, in certain contexts, necessary) conditions for when a multimember or at-large election plan would be held to have diluted minority voting strength under the strictures of section 2. I pay particular attention to issues of definition and measurement involving one of the three prongs of the *Thornburg* test—whether a pattern of racially polarized voting exists—which has become the linchpin of many voting rights cases and the subject of great dispute. As an expert witness for black plaintiffs in *Thornburg* v. *Gingles,* I write about these matters from both a professional and a personal perspective.

Once, the test for the existence of vote dilution rested on factors such as a history of state-sanctioned discriminatory practices, the existence of racially polarized voting, the use of electoral practices that enhanced the opportunity for discrimination against a minority group, the exclusion of minorities from any slating process, lingering effects of past discrim-

This research was partially supported by NSF grant SES 88-09392 to Chandler Davidson and me and draws on earlier work supported by NSF grant SES 81-07754, as well as on my testimony in numerous voting rights cases in the past decade, including *Gingles* v. *Edmisten,* 590 F.Supp. 345 (E.D.N.C. 1984), heard *sub nom Thornburg* v. *Gingles* 478 U.S. 30 (1986). Part of this paper is an update of material contained in Grofman, Migalski, and Noviello 1985. I am indebted to many helpful conversations with attorneys and other expert witnesses over the years. Bibliographic assistance on this paper was provided by Dorothy Gormick. The original inspiration was Cotrell 1981, and I have especially benefited from the discussion of racial bloc voting in McCrary 1990.

ination that may have affected the ability of minorities to participate effectively in the political process, the presence of racial campaign appeals, and the record of minority electoral success.[1] These factors, generally referred to as *Zimmer* factors, were the basis of the constitutional test for vote dilution used by lower courts from 1973 when, in *White* v. *Regester,* the Supreme Court first struck down a multimember district plan as an unconstitutional denial of equal protection, until 1980 when, in *City of Mobile* v. *Bolden,* the Court imposed a requirement that discriminatory purpose be shown.[2] After the extension of the Voting Rights Act in 1982, the seven totality of circumstances factors formed the basis of virtually all court decisions under the amended section 2 language, until in 1986 the Supreme Court in *Thornburg* v. *Gingles* provided a new and simplified three-pronged test. Even after *Thornburg* the factors of the totality of circumstances test that were not incorporated into the three prongs of the *Thornburg* test remained of some subsidiary importance.

With respect to establishing these factors, the testimony of social scientists has been indispensable. In vote dilution cases, experts for opposing sides have squared off against one another, sometimes one on one, sometimes in conflicts resembling tag-team wrestling on late-night television.[3] In some voting rights cases, the outcome of the litigation has been decided largely by the credibility of expert witness testimony as to the factors in the totality of circumstances or *Thornburg* tests. However, most of the disputes among experts have dealt with only one of the seven factors listed above, measurement of racially polarized voting. Assessing the extent of racially polarized voting is arguably now the most important of the empirical questions investigated in the course of an inquiry into vote dilution, at least in the context of challenges to multimember or at-large elections.[4]

1. See the discussion in Grofman, Migalski, and Noviello 1985; McDonald in this volume.

2. Before 1982, the factors were derived from *Zimmer* v. *McKeithen,* 485 F.2d 1297 (5th Cir. 1973) (en banc) aff'd on other grounds *sub nom East Carroll Parish School Board* v. *Marshall,* 424 U.S. 636 (1976); see also *White* v. *Regester,* 412 U.S. 766 (1973); *City of Mobile* v. *Bolden,* 246 U.S. 55 (1980), *remanded.*

3. As in *Garza* v. *Los Angeles County Board of Supervisors* (D. Cal. 1990), 90 C.D.O.S. 8138 (9th Cir. 1990), *cert. denied* January 1990.

4. Courts have generally used "racial bloc voting" synonymously with "racially polarized voting." I will do so here. Testimony by historians as to discriminatory purpose underlying a statute or plan has also played an important role in voting rights litigation.

Although racially polarized voting was not mentioned in either *White* v. *Regester* or *Zimmer* v. *McKeithen,* by the mid-1970s it was an important evidentiary element in challenges to at-large elections and other districting schemes based on the Fourteenth Amendment.[5] Moreover, in *Beer* v. *United States,* the 1976 case that developed the nonretrogression test applied to cases arising under section 5 of the Voting Rights Act, the Supreme Court projected outcomes in a proposed plan based on the assumption that voting was racially polarized, where that term was used synonymously with whites voting for white candidates and blacks voting for black candidates.[6] Indeed, even before *White* v. *Regester,* testimony about racially polarized voting played a prominent role in some vote dilution cases before lower courts.[7]

Although a Senate report in 1982 treated racially polarized voting as only one of the seven primary factors that could be used to prove vote dilution, with no single factor or even any particular combination of factors being either necessary or sufficient to prove a violation, in a number of cases alleging racial gerrymandering or submergence of minority voting strength brought under the new 1982 language of section 2 of the act, proof of racially polarized voting was assigned much greater weight than other factors.[8] For example, in *United States* v. *Marengo County*

For example, it is often forgotten that, after *City of Mobile* v. *Bolden,* the lower court's reconsideration of the case on remand led it to find intentional vote dilution even though essentially no blacks were voting at the time the at-large plan was adopted. But historical evidence showed that the plan's proponents saw its at-large election feature as a safeguard against a later time when blacks might possess an effective franchise. Although the section 2 effects standard has minimized the importance of a showing of intentional discrimination, evidence about intent is still put forward by plaintiffs in a number of cases. Indeed, in *Garza* v. *Los Angeles County Board of Supervisors,* a historian gave extensive testimony showing a pattern of discrimination against Hispanics by reconstructing four decades of evidence about the redistricting options that were chosen as compared to those that were rejected. Basing its decision on this testimony, the district court found discriminatory purpose as well as discriminatory effects of racial gerrymandering.

5. See *Lipscomb* v. *Wise,* 399 F.Supp. 782 (N.D. Texas 1975); *Wallace* v. *House,* 515 F.2d 619 (5th Cir. 1975); *Kirksey* v. *Board of Supervisors of Hinds County,* 554 F.2d 139 (1977). See also other references in McCrary 1990.

6. *Beer* v. *United States,* 425 U.S. 130 at 142 (1976).

7. For example, in *City of Petersburg* v. *United States,* a 1972 annexation case, the district court found "a dramatic polarization of the races in Petersburg with respect to voting" and presented a chart showing votes for white and black city council candidates in the heavily white and heavily black areas of the city (354 F.Supp. 1021 at 1025–26).

8. Senate 1982b.

Commissioners racially polarized voting was identified as "the keystone of a dilution case."[9] But the apogee of the importance of considerations of racial vote dilution was yet to come.

In *Thornburg* v. *Gingles* (1986) the Supreme Court identified a requisite level of racial bloc voting as one of the basic factors under the 1982 language of section 2 for proving minority vote dilution in an at-large or multimember district system. According to Justice William Brennan, who delivered the opinion of the Court, "The purpose of inquiring into the existence of racially polarized voting is twofold: to ascertain whether minority group members constitute a politically cohesive unit and to determine whether whites vote sufficiently as a bloc usually to defeat the minority's preferred candidates." Each of these two inquiries forms one of the elements of what has come to be called the *Thornburg* three-pronged test. The third key element of proof in the *Thornburg* section 2 test is the requirement that the minority group be shown to be "sufficiently large and geographically compact to constitute a majority in a single-member district."[10]

Thornburg is a landmark case that continues to define how the 1982 amended language of section 2 of the act is to be interpreted. The Supreme Court has so far refused to hear cases disputing the proper interpretation of the *Thornburg* three-pronged test that have been brought to it on appeal. The *Thornburg* test has affected the outcomes of scores of voting rights cases. Virtually all challenges to election practices as racially discriminatory are now brought under either section 2 or section 5 of the act. The chief purpose of this chapter is to analyze from the perspective of social science the dispute over the issues involved in making the concept of vote dilution usable; it focuses on the elements of the *Thornburg* test, especially racially polarized voting.

Factors Relevant to the Totality of Circumstances Test

The seven typical factors that may be used to establish a violation of section 2 that were identified in the 1982 Senate report are listed below.[11]

Factor 1. The extent of any history of official discrimination in the

9. *United States* v. *Marengo County Commissioners*, 731 F.2d 1546 (11th Cir. 1984).

10. *Thornburg* v. *Gingles*, 478 U.S. 30 at 56, 50 (1986). Heard in the lower court *sub nom Gingles* v. *Edmisten*, 590 F.Supp. 345 (1984), *aff'd in part rev in part sub nom, Thornburg* v. *Gingles*.

11. Senate 1982b, 28–29. The report identifies two additional factors that in some cases have had probative value: "whether there is a significant lack of responsiveness on

state or political subdivision that touched the right of the members of the minority group to register, to vote, or otherwise to participate in the democratic process.

Factor 2. The extent to which voting in the elections of the state or political subdivision is racially polarized.

Factor 3. The extent to which the state or political subdivision has used unusually large election districts, majority vote requirements, anti-single-shot provisions, or other voting practices or procedures that may enhance the opportunity for discrimination against the minority group.

Factor 4. The extent to which, if there is candidate slating, the members of the minority group have been denied access to that process.

Factor 5. The extent to which members of the minority group in the state or political subdivision bear the effects of discrimination in education, employment, health, and other matters that hinder their ability to participate effectively in the political process.

Factor 6. The extent to which political campaigns have been characterized by overt or subtle racial appeals.

Factor 7. The extent to which members of the minority group have been elected to public office in the jurisdiction.

I now turn to proposed operationalizations of five of the seven factors in the totality of circumstances test. Discussion of two of the seven—factor 2, the extent of racially polarized voting, and factor 7, the extent of minority electoral success—I reserve until later, when I analyze the *Thornburg* three-pronged test of which they are an integral part.

At minimum, as I have argued elsewhere, there are four criteria that any particular concept must satisfy if it is to be of use to courts.[12]

—The definition of variables must be unambiguously operationalizable in an objective fashion.

—The necessary data can be generated within the time frame

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the part of elected officials to the particularized needs of the members of the minority group," and "whether the policy underlying the state or political subdivision's use of such voting qualification, prerequisite to voting, or standard, practice or procedure is tenuous." But the report makes clear that "unresponsiveness is not an essential part of plaintiff's case" and that "even a consistently applied practice premised on a racially neutral policy would not negate a plaintiff's showing through other factors that the challenged practice denies minorities fair access to the process" (127, notes 116, 117). I shall neglect these factors in my discussion because they seem to have had little practical importance in any of the section 2 litigation since the 1982 amendments.

12. Grofman, Migalski, and Noviello 1985, 201, with a slight change in wording.

of a court case and without imposing unreasonable burdens on the litigants.

—The definitions and their operationalization can be explained clearly and simply to lawyers.

—There is a prima facie link between terms as defined by the social scientist and the ways in which statutory or constitutional language has been (or might reasonably be) interpreted by the courts.

For each of the five factors discussed below I provide information bearing on how well the proposed operationalization fares under each of the first three criteria of the above test. Since all are factors identified by the Senate report as directly relevant to determining compliance with section 2 of the Voting Rights Act, and the operationalizations described below are based in large part on what types of evidence courts have found persuasive, we may take for granted that the fourth criterion above is satisfied.

Of course, the four criteria for evaluating operationalizations of the social science concepts I have identified are far from the whole story. Even for a concept to which social science expertise is clearly legally applicable, when one looks at what social scientists actually rely on to reach their conclusions, one must still distinguish good social science from sloppy social science.[13] Also, for some concepts there may be alternative plausible operationalizations, choice among which has important substantive implications. Nonetheless, for each of the various factors that courts and expert witnesses have proposed or relied on in evaluating compliance with the Voting Rights Act of 1965 as amended, asking whether that factor can be operationalized in a way that satisfies the above four criteria is a useful beginning.

Factor 1. History of Official Discrimination

Proving a history of official discrimination is in most cases not difficult. The social science expertise that is most relevant is, of course, that of the historian. In most southern states a statewide history of official discrimination against blacks can readily be established from standard sources by any competent historian; the same is true in the Southwest for Hispan-

13. One must also distinguish honest social science from the performance of hired guns who deliberately distort their testimony in the interests of the side on which they are testifying.

ics or native Americans.[14] It is useful, however, to take the history as close to the present as possible. Because de jure segregation will have ended some time ago, this can be done in part by tracing official positions or legal resistance to various race-related situations that have resulted in court-imposed solutions, such as affirmative action hiring for police and fire departments, simplified procedures for voter registration in the minority community, school busing, denial of preclearance under section 5, location of public housing, and so forth. Evidence of statewide policies of discrimination, while often sufficient, has frequently been supplemented with evidence specific to a given polity—segregated private clubs and other forms of social segregation participated in by local political officials, for example, or segregated housing patterns buttressed by red lining, or historical use of restrictive covenants. Of particular relevance is evidence on barriers to voting participation and registration (for example, few bilingual registrars, few minority poll watchers and election officials, or polling precincts located disproportionally in white Anglo areas). Some of this data can be established from polling maps, property deeds, litigation dockets, court records, and census data, but some can be introduced only through the testimony of knowledgeable local citizens.[15]

Factor 3. Election Practices that Increase the Likelihood of Vote Dilution

Federal courts have repeatedly accepted the claim that majority vote requirements, anti-single-shot voting rules (or ones that, for multimember district elections, specify numbered places or staggered elections or both), and unusually large multimember districts are practices that make the

14. For official discrimination against blacks, see, for example, Kousser 1974. Extensive evidence about discrimination against Hispanics in California is reviewed in the first appellate decision in *Gomez* v. *City of Watsonville,* 863 F.2d 1407 (9th Cir. 1988), *cert. denied* (1989). A New Mexico constitutional provision adopted in 1912 that was used to deny native Americans the right to vote in state elections until a successful challenge was brought in federal court in 1948 illustrates their treatment in the Southwest (Garcia and Hain 1981, 171).

15. In section 2 cases, as in other civil rights litigation, hard data that is comprehensive in scope, if available, is to be preferred to personal reports, which can too easily be dismissed as idiosyncratic or biased. However, testimony by those with direct experience of local politics can be important in providing flesh and substance to the rather bloodless and abstract reports commonly provided by social scientists and in reminding the court that judicial decisions will affect the lives of real people.

dilution of minority voting strength more likely.[16] The existence or past use of majority runoff requirements, numbered places, or staggered elections is clearly a matter of record; but the meaning of "unusually large election district" is not so clear. In testimony in *Gingles* v. *Edmisten* the reference was to the number of representatives elected from a particular multimember district. That number, eight, was compared to the average number of legislators per district in the North Carolina legislature as well as to the average number of legislators per district in the state houses and the state senates in each state as of 1980, but that testimony was not discussed in the opinion.[17] In *Garza* v. *Los Angeles County Board of Supervisors,* in which a single-member-district plan was challenged, testimony by plaintiffs' experts had to do with the population in each of the supervisorial districts; at roughly 1.7 million persons per district, each was at least as populous as any of the sixteen smallest states and twice the size of any other county supervisorial district in the country. The Court specifically acknowledged that the small size of the board of supervisors (five) that led to the creation of such populous districts—in which the costs of running a successful campaign are huge—could make it harder for minority candidates to compete successfully, given the limited financial resources of the minority community. Also potentially relevant to a claim that a particular district was unusually large would be data on the sheer physical size of the district and the transportation difficulties in gaining access to its remotest parts or data on the number of different media serving the district.

Factor 4. Candidate Slating Process

In many jurisdictions there is no formal slating process (especially for nonpartisan elections), although groups of candidates may band together to run as an informal slate. In other jurisdictions, party organizations

16. For definitions of these terms, see Davidson in this volume. In section 2 cases involving at-large elections, showing that such practices exist or have been used has generally been all that is needed; the causal link between such practices and minority vote dilution in the particular case at issue need not be demonstrated. However, in challenges to majority runoffs, evidence that minority candidates who were plurality (but not majority) winners of an election were more frequently defeated in a subsequent runoff than was true for plurality winners who were not minority members is likely to be necessary. Whether (in conjunction with racially polarized voting and perhaps other elements of the totality of the circumstances test) such evidence is also legally sufficient remains an open question (Grofman, Handley, and Niemi, forthcoming).

17. The data are reproduced in Grofman, Migalski, and Noviello 1985, table 2.

may designate certain candidates as having official endorsement, even though the actual nomination may take place in a party primary. In still other jurisdictions, most commonly ones with a nonpartisan ballot, business and civic groups may endorse slates. In expert witness testimony in *United States* v. *City of Augusta,* a case settled out of court, it was argued that the endorsement of the major newspaper in the city was a type of slating process.[18]

If there is a slating process, and slated candidates are more likely to win than nonendorsed candidates, the number of minority candidates who are interviewed or nominated by it is, of course, the single most important piece of information bearing on the fairness of the process. However, of almost equal importance is information on the composition of the slating group itself. For example, in *Alonzo* v. *Jones,* a successful section 2 challenge in 1983 to at-large city council elections in Corpus Christi, Texas, the district court judge noted in his finding of facts that, although Mexican-American candidates had been slated and successful in their election campaigns, all who won had done so by "being members of a slate basically assembled by Anglo . . . leaders."[19]

Factor 5. Lingering Effects of Discrimination

Lower levels of education, employment, income, health, and longevity have been taken by courts to be indicators of the extent to which minority group members bear the burden of previous discrimination. Such data are published at the county level and for at least the larger cities in each state and can be obtained from census tapes for any desired unit of aggregation. Customarily, sociologists or demographers present such data as a routine part of section 2 litigation. The data are rarely subject to dispute.

Lower levels of minority voter registration and election turnout relative to the eligible population have also been taken as indicators of lingering effects of discrimination. For the handful of states where registration or sign-in data are available by race, the basic facts on comparative levels of minority and nonminority registration or turnout are readily available. However, because of inadequacies in recordkeeping or systematic biases in purging the rolls of deadwood, such data may be suspect. In *Push* v.

18. *United States* v. *City of Augusta* (S.D. Ga., 1987), settled out of court.

19. Indeed, slate-endorsed Hispanic candidates, in winning, defeated non-slate-endorsed Hispanic candidates who had greater support from the Hispanic community. *Alonzo* v. *Jones,* No. C-81-227 (S.D. Texas, February 3, 1983).

Allain Mississippi registration information was held to provide an inaccurate picture of relative rates of black and white registration in the state.[20] For states, and for other jurisdictions large enough to be reasonably coterminous with standard metropolitan areas (SMAs), the current population surveys of the census permit an estimate of registration rates and turnout in federal elections of eligible voters by race and by Spanish origin. In *Push* v. *Allain* the accuracy of that data for Mississippi was challenged because of claimed differential misreporting of registration by whites and blacks, but there were factors idiosyncratic to Mississippi involved as well. In *Garza* v. *Los Angeles County Board of Supervisors,* current population survey data for Los Angeles County were accepted by the court as a check on the accuracy of the county's own population projections. For cases involving Hispanics, a matchup of registrar lists with the census list of Spanish surnames has been accepted by courts as a proxy for Spanish-origin registration.[21] Although the accuracy of that matchup was subject to extensive challenge in *Garza,* the court accepted testimony by a demographer on its general accuracy that was based on a detailed look at type I and type II error rates at the census tract level in Los Angeles County.

For jurisdictions (or smaller units such as districts) where data of the above sorts are unavailable, estimates of registration and turnout by race or Spanish origin can be generated by combining census, registration, and election data and making use of the ecological and homogeneous precinct analysis techniques that have become standard in the analysis of racially polarized voting.[22]

Factor 6. Racial Campaign Appeals

It would appear that a racial campaign appeal, like pornography, is in the category of "I know it when I see it." The only two definitions in court cases or the social science literature I have been able to locate are ones offered by two sociologists, Paul Luebke and Jerry Himelstein. Luebke's definition, offered as testimony in *Gingles* v. *Edmisten,* is that racial appeals occur in a campaign if one candidate calls attention to the race of his opponent or his opponent's supporters, or if media covering a

20. *Mississippi State Chapter, Operation PUSH* v. *Allain,* 674 F. Supp. 1245 (N.D. Miss. 1987).

21. For example, in *Gomez* v. *City of Watsonville* (1988).

22. Grofman, Migalski, and Noviello 1985.

campaign disproportionally call attention to the race of one candidate or of that candidate's supporters. I believe that Luebke's definition satisfies the fourfold usefulness test presented earlier. It is clear and is as unambiguously operationalizable as one can hope, given the inherent fuzziness of the term. One instance of a racial campaign appeal that fits the definition perfectly would be when a white candidate uses a picture of his black opponent in his own campaign material. Except as a notice to white voters of his opponent's race, no candidate would give such free photographic publicity. Luebke provided such an example from the 1982 Michaux-Valentine Democratic congressional primary in North Carolina in his testimony in *Gingles*.[23]

Himelstein has shown how themes identified as racist in earlier historical contexts are still being invoked during political campaigns in the South in sanitized forms that avoid overt references to race by using code words and other concealed messages that appeal to lingering feelings of white antiblack sentiment. As Himelstein points out (in remarks directed to Mississippi politics but applicable in the South and elsewhere), "overt appeals to segregationist sentiments are no longer practiced by politicians who expect to win. . . . Black voter strength and perhaps some degree of cultural change in the etiquette of race relations seems to have sanitized the language of political rhetoric. However, segregationist sentiments and political action continue among a large portion of the white population. . . . In a society so recently and so dominantly obsessed with race . . . one important way political leaders have walked the line between divergent audiences is through the use of code words," also known as racial telegraphing.

> A code word . . . is a word or phrase which communicates a well understood but implicit meaning to part of a public audience while preserving for the speaker deniability of that meaning by reference to its denotative explicit meaning. As for example, in 1968 presidential candidate Hubert Humphrey accused his Republican opponents of using the phrase "law and order" as a code word for repression of blacks in reaction to riots in black ghettoes. Another presidential campaign example is Jimmy Carter's

23. Other Luebke illustrations included the use by Senator Jesse Helms's reelection campaign committee of a picture of Jesse Jackson, identifying him as a Hunt supporter in a 1983 advertisement attacking Governor Hunt of North Carolina (Helms's probable opponent), and a Helms reelection campaign committee ad accusing Hunt of using taxpayer funds to register black voters.

> 1976 awkward attempt to pacify residents in a Polish neighborhood who were worried about desegregation in housing. He endorsed the preservation of "ethnic purity" in residential patterns. But blacks quickly identified this phase as a code word for segregation, and Carter spent some time trying to explain it away. Code words are intended as rhetorical winks, and if they are too easily detected they lose their deniability and thus their effectiveness.[24]

Luebke's definition of racial appeal is easier to measure objectively than Himelstein's definition of code words. As Himelstein notes, "identification of code words is an enterprise akin to the interpretation of symbols in literary criticism."[25] For code words, such identification requires careful sociological and historical analysis. Nonetheless, because overt racial appeals may be absent, testimony about more subtle and covert forms of racial appeal such as the use of code words and of themes associated with white supremacy and antiblack sentiment may be required if this element of the totality of circumstances test is to be proved. Luebke presented such testimony in *Gingles*, and the trial court gave it considerable credibility. For example, in the Michaux-Valentine runoff primary, one advertisement accused Valentine's black opponent of "planning on bussing his supporters" to the polls—with "bussing" emphasized—and attacked the bloc vote in the previous election. According to Luebke terms like "bussing" and "bloc vote" were used to trigger white fears.[26]

The *Thornburg* Three-Pronged Test

Since the mid-1970s virtually no vote dilution case has lacked an analysis of racial vote dilution by one or more witnesses expert in social science. And almost invariably there has been conflicting testimony by experts, usually political scientists or sociologists, but also historians and, more recently, economists and statisticians. Bloc voting has been too important to cases of voting rights violations for plaintiffs not to give evidence as to its presence, and proof of racially polarized voting has made defeat too likely for defendant jurisdictions not to hire their own

24. Himelstein 1983, 155–56. For the previous quotation see p. 155.

25. Himelstein 1983, 157.

26. Also see Luebke 1990, 118. It does not appear that anything beyond the mere existence of racial appeals needs to be demonstrated. In particular, the effectiveness of the racial appeals need not be shown. If voting is racially polarized, that fact provides indirect support for the probable impact of any observed racial appeals.

experts to seek to rebut the claims of the plaintiffs' experts. In addition to statistical disputes about the accuracy of estimated levels of polarization, fundamental questions of definition have been at issue.

Defining Racial Bloc Voting in Thornburg

Much of the expert witness testimony in voting rights cases, especially that offered between 1982 and 1986 when it became clear that proving racial bloc voting was critical but the Supreme Court had not yet provided solid guidelines to lower courts as to how the term was to be defined and the conditions measured, could be seen as part of an ongoing struggle to control the legal meaning to be attached to the term "racially polarized voting." The outcome of that struggle would have critical consequences for whether plaintiffs or defendants were to prevail in voting rights litigation.

There were three not necessarily mutually exclusive choices open to the courts.

First, they could focus on the correlation coefficient obtained when the support rate for minority candidates was regressed against the minority percentage in the voting precinct. Experts in some cases had done just that, treating correlation levels of .7 or so as prima facie evidence of polarization. Some experts who made use of the correlational approach also testified about the statistical significance of the evidence for polarization, with *t* statistics and similar measures being offered in evidence.

Second, courts could focus on the difference between the levels of support for minority candidates from minority voters and the support those candidates were receiving from nonminority voters to see if the nature of the differences was important. If courts took this tack, the obvious next question was what level of differences in support proved polarization. Many experts proposed to look at the sum of "own race" voting—the percentage of minority voters who voted for the minority candidate added to the percentage of nonminority voters who voted for the nonminority candidate. Some experts for plaintiffs argued that an own-race voting percentage that summed greater than 160 percent was evidence of strong polarization; others proposed lower figures, arguing for example that, in American politics, landslide proportions meant a 60–40 split, and thus a cutoff of 120 percent was appropriate. In my testimony in *Gingles* v. *Edmisten,* I proposed that *substantively significant* racially polarized voting be defined as that which occurs when the candidate or set of candidates chosen by voters of one race differs from

the candidate or candidates chosen by voters of the other race. In contrast, some experts for the defendants argued that unless the own-race voting percentage exceeded 180 percent, voting should not be considered polarized.

Third, courts could require that experts look at more than just the simple pattern of observed election results to try to determine whether racial animus was driving the choices of nonminority voters. There were two ways that witnesses for plaintiffs proposed this be done. One was to require evidence for indicators of racial backlash such as racial campaign appeals or especially high levels of majority turnout in elections involving minority candidates. Essentially this approach was accepted by a federal district court in *Collins* v. *City of Norfolk*. The second approach involved using multivariate methods to determine whether race made an independent contribution to explaining patterns of voting once other factors such as newspaper endorsements, incumbency, campaign spending, socioeconomic characteristics of the voters, and so forth were controlled. This approach was argued for by a court of appeals judge in an obiter dictum in his concurring opinion in *Jones* v. *City of Lubbock* and accepted by a federal district court in *McCord* v. *City of Fort Lauderdale*.[27]

In *Thornburg* the Supreme Court chose the commonsense idea that racially polarized voting reflected the differences in the voting behavior of groups that had characterized the early cases, including *Beer* v. *United States*. The approach to racially polarized voting taken in *Thornburg*, however, reflected the Court's unique synthesis of the expert witness testimony in *Gingles* v. *Edmisten* (which in turn drew on the approaches using data and statistical methodology) and the analytical framework for understanding vote dilution presented in a 1982 law review article by James Blacksher and Lawrence Menefee that the Court found highly persuasive.[28]

In *Thornburg* the Court codified the definition of racially polarized voting that was henceforth to govern vote dilution cases by accepting the definition offered by the plaintiffs' expert witness in that case (me), a definition also adopted by the lower court, that voting was polarized when there is "'a consistent relationship between race of the voter and the way in which the voter votes,' or to put it differently, where 'black voters and white voters vote differently.'" *Thornburg* asserted that racial

27. *Collins* v. *City of Norfolk*, 883 F.2d 1232 (4th Cir. 1989); *Jones* v. *City of Lubbock*, 730 F.2d 233 (5th Cir. 1989); *McCord* v. *City of Fort Lauderdale*, 83-6182-CIV-NCR (S.D. Fla. 1985), remanded 1986 (settled out of court).

28. Blacksher and Menefee 1982.

polarization can be established in terms of observed correlations between the racial composition of election districts and candidate choices in those units, at least insofar as a correlation between the race of the voter and the way in which the voter votes implies differences in the voting behavior of minority and nonminority voters.[29]

But for the Supreme Court, as for the lower court, the inquiry into racial polarization did not stop with a finding that voting was racially polarized. The Court also accepted the distinction between the existence of racial polarization per se and the nature of that polarization being of practical or legal significance. In particular, the Court recognized that racially polarized voting was neither a necessary nor a sufficient condition for minority electoral loss.[30] It held that for racially polarized voting to rise to the level of legal significance it must be shown, on the one hand, that "the white majority votes sufficiently as a bloc" to enable it in the absence of special circumstances "usually to defeat the minority's preferred candidate." On the other hand, the minority group must be shown to be "politically cohesive"; that a "significant number of minority group members usually vote for the same candidates is one way of proving the political cohesiveness necessary to a vote dilution claim."[31]

In *Thornburg* the inquiry into polarization was thus effectively bifurcated. The first part was the judgment of whether polarization existed. The second part was whether it was legally significant. Moreover, this second inquiry was itself bifurcated. It required two "discrete inquiries," the first into minority voting practices, the second into white voting practices.[32]

29. *Thornburg* v. *Gingles,* 478 U.S. at 53, note 21; and at 62–63.

30. For example, on the one hand, a minority group's candidate might win even if voting was racially polarized as long as the minority population was large enough (given the relative levels of minority and nonminority crossover for the candidate of the other group) to elect its candidate of choice; and on the other hand, the lack of success of minority candidates could occur in the absence of racially polarized voting.

31. *Thornburg* v. *Gingles,* 478 U.S. at 51, 56. The inquiry into racially polarized voting was thus a multipart inquiry. In principle, therefore, situations could occur in which racially polarized voting existed and the evidence of polarization was of statistical significance *but not* of legal significance.

32. 478 U.S. at 56. The Court stated that "the usual predictability of the majority's success distinguishes structural dilution from the mere loss of an occasional election." Thus the Court did not accept "substantive significance" (as I had defined that term in my *Gingles* testimony and in Grofman, Migalski, and Noviello 1985) as being synonymous with legal significance. Rather, substantive significance, as I had defined that term, was found necessary but not sufficient for the evidence for a pattern of racial bloc voting to rise to the level of legal significance, since without it there could not be either minority political cohesion or minority losses that could be attributed to the lack of support for minority candidates given by nonminority members.

Of course, in expert witness testimony at trial, the two halves of racial bloc voting are often presented together.

In *Thornburg* Justice Brennan also decisively rejected the claim, made by the defendant jurisdiction and supported by the United States as amicus curiae, that race must be shown to be the "primary determinant of voting behavior" for voting to be found to be racially polarized. He specifically rejected approaches to racially polarized voting of the sort that had been accepted by lower courts in the *Norfolk* and *Fort Lauderdale* cases. His opinion asserted that "the legal concept of racially polarized voting incorporates neither causation nor intent. It means simply that the race of voters correlates with the selection of a certain candidate or candidates, that is, it refers to the situation where different races (or minority language groups) vote in blocs for different candidates."[33]

The *Thornburg* opinion provided considerable additional legitimacy to the use of homogeneous precinct and ecological regression as appropriate techniques to estimate the levels of white and black support for particular candidates in the absence of reliable survey data for the elections under analysis. Justice Brennan repeated the lower court's characterization of these as standard techniques for the analysis of racially polarized voting and then added references to published articles by social scientists—Richard Engstrom and Michael McDonald and Bernard Grofman, Michael Migalski, and Nicholas Noviello—that also so characterize them.[34] And in judging the statistical significance of the correlation coefficients obtained in regressions of support levels for minority candidates versus the percentage of minority residents in the voting precinct, the Court accepted the accuracy of the conclusion that had been offered in my testimony in *Gingles* that the data "reflected positive relationships and that the correla-

33. 478 U.S. at 62. The quoted material ends with a reference to Grofman, Migalski, and Noviello 1985, 203. Shortly thereafter Brennan similarly asserted that "it is the difference between the choices made by blacks and whites—not the reasons for that difference—that results in blacks having less opportunity than whites to elect their preferred representatives. Consequently, we conclude that under the 'results test' of Section 2, only the correlation between the race of the voter and selection of certain candidates, not the causes of the correlation, matter." Brennan spoke directly only for a plurality in the particular section of his opinion from which these quotations come. But because Justice Byron White's concurring opinion expressed no disagreement with the plurality position on this point, the rejection of multivariate and related approaches to bloc voting in the Brennan opinion is the governing case law.

34. Engstrom and McDonald 1985; Grofman, Migalski, and Noviello 1985.

tions did not happen by chance."[35] Thus the specific thresholds for statistical significance that I offered in *Gingles* v. *Edmisten* and that were accepted by the *Gingles* court in effect became incorporated into the voting rights case law.

Another measurement question discussed in *Thornburg* had to do with whether the terms "minority candidate of choice" or "minority preferred candidate" mean simply the candidate who has received majority or plurality support from the minority group's voters regardless of the race of that candidate. The answer given by Justice Brennan was that, "under Section 2, it is the *status* of the candidate as the *chosen representative of a particular racial group,* not the race of the candidate that is important."[36] However, his position on this point did not reflect a majority; other justices took the position that the race of the candidate could or should be relevant, especially to a judgment of political cohesiveness. Moreover in *Gingles* the only elections that were examined by experts for either side were ones involving black candidates, but no Supreme Court justice required information on any elections other than those reviewed by the lower court to reach conclusions about whether voting in any given North Carolina legislative district was polarized. The relevance of the race of a candidate to judgments about polarized voting continues to be debated in the courts and by expert witnesses.

Issues in Racial Bloc Voting after Thornburg

Although the Court's decision in *Thornburg* effectively decided the question of how, for voting rights purposes, racially polarized voting was to be defined, and provided considerable legitimacy to the use of homogeneous precinct and ecological regression techniques for measuring bloc voting, it certainly did not end the disputations in court about racial bloc voting.[37] Not all these questions have yet been definitively resolved, but some appear to be near resolution.

One set of related questions that has arisen since *Thornburg* has to do with which elections are appropriate to examine to test for a pattern of racially polarized voting. For example, are the only relevant elections those that were for the office under litigation? What weight, if any, is to

35. 478 U.S. at 53, note 22.

36. 478 U.S. at 68.

37. Especially the double-equation approach; see Grofman, Migalski, and Noviello 1985; Loewen and Grofman 1989.

be given to patterns of polarization in other types of elections? How many elections must there be data from to establish a pattern of polarization? Are there some minority candidates who are so minor in terms of their campaign efforts that lack of minority support for them should not count as evidence for lack of minority political cohesion?

In a situation where the only minority candidates for supervisorial positions were minor ones as judged by campaign expenditures (with most spending less than $500 on their campaigns for an office in which a $1 million war chest was the sign of a viable candidate), the district court in *Garza* v. *Los Angeles Board of Supervisors* paid little attention to the evidence for racially polarized voting in supervisorial elections, relying instead on other types of evidence for polarization and minority cohesion, including the fact that the only Hispanic congressional and legislative officeholders in the county were elected from heavily Hispanic areas and that these areas elected Hispanic candidates with virtual certainty. However, the court noted that the relatively high levels of support from Hispanic voters for minor Hispanic candidates indicated a potential for political cohesion in contests where viable Hispanic candidates were running. In *Garza,* I testified that in the absence of special factors such as the absence of viable minority candidates, results in elections involving minority candidates of the same or similar type as were at issue in the lawsuit and relatively proximate to the present were the most relevant. Elections that satisfied only some of these conditions were informative to a lesser degree, depending on case-specific circumstances. These three criteria for selecting the most relevant elections are also found in my testimony in *Gingles.* Generally, however, courts have adopted considerable case-specific flexibility in judging the relevance of other elections.[38]

Other questions have arisen concerning the meaning of minority candidate of choice. What kinds of inferences about polarization, if any, can be drawn from elections without any minority candidates? Are there some minority candidates who could be identified as not supporting the minority group's particular interests, and thus for whom lack of minority support should not be taken as lack of minority cohesion? Is there a test to determine which nonminority candidates, if any, actually reflect the minority group's own particular interests?

In *Citizens for a Better Gretna* v. *City of Gretna* a Louisiana dis-

38. See, for example, *Citizens for a Better Gretna* v. *City of Gretna,* 834 F.2d 496 at 502–03 (1987).

trict court rejected as spurious the claim made by defendants that "black citizens have elected candidates of their choice to the Board of Aldermen with regularity because Gretna's white officials have always received a significant portion of the black vote and the support of Gretna's political organization."[39] The Fifth Circuit Court, on appeal, stated its test for the relevance of the race of the candidate by holding that "the race of the candidate is in general of less significance than the race of the voter—but only within the context of an election that offers the choice of supporting a viable minority candidate. . . . Implicit in the [*Thornburg*] holding is the notion that black preference is determined from elections which offer the choice of a black candidate. The various . . . concurring and dissenting opinions do not consider evidence of elections in which only whites were candidates. Hence, neither do we."[40] The Supreme Court denied certiorari of this case. Another district court decision, *Chisom* v. *Roemer,* took the opposite position, that black support of successful white candidates in contests in which only white candidates are running can be used to demonstrate absence of racial polarization, but that feature of the *Chisom* opinion is unlikely to stand up on appeal because it is before the same circuit that decided *Citizens for a Better Gretna.*

Another question has arisen with respect to whether polarized voting is sufficient evidence for cohesiveness. If voting is polarized, can socioeconomic differences among the members of the protected class be taken as evidence for lack of cohesion? If voting is polarized, can low minority turnout be taken as evidence for lack of minority cohesion? In *Gomez* v. *City of Watsonville* a demographer testifying for the city pointed out that Hispanics in the wealthier parts of the city were better educated and earned higher incomes than did Anglos citywide and were much better off than Hispanics in the heavily Hispanic areas of the city. He also testified that low levels of minority turnout vitiated any claim that Hispanics were cohesive. Both arguments were accepted by the district court; both were rejected by the Court of Appeals, which reversed the lower court's

39. Slip opinion at p. 20. The Court ventured that this argument recalled an anecdote once attributed to Henry Ford: "Any customer can have a car painted any color he wants so long as it is black." As I stated in my testimony in a subsequent case in Louisiana, *Chisom* v. *Roemer,* 853 F.Ed 1186 (5th Cir. 1988), now on appeal: "In like manner, if blacks are able to elect any candidate they want, *but only as long as that candidate is white,* we cannot say that blacks have an equal opportunity to elect candidates of their choice."

40. *Citizens for a Better Gretna* v. *City of Gretna,* 834 F.2d 496 at 503 (1987).

finding that there was no section 2 violation. The appellate decision said that the behavior of minority voters was a litmus test of cohesion and that there was unrebutted testimony in the trial record, based on standard ecological regression methods, that Hispanic voters overwhelmingly supported Hispanic candidates for city council.

Perhaps the single most important measurement issue that has arisen in cases since *Thornburg* has to do with how to judge the probable reliability of ecological regression and homogeneous precinct methods in particular circumstances. In the *Thornburg* decision the Supreme Court required expert witnesses to do far more than produce correlations; they must also estimate levels of candidate support among minority and nonminority voters.

A defense to a section 2 claim based on allegations about the unreliability of the methodology used in plaintiffs' expert testimony about bloc voting is becoming increasingly common in court. Jerome Sacks, one of the expert witnesses for Los Angeles County in *Garza,* in his depositions in some previous cases, took the position that none of the statistical analyses of racial voting patterns that he had ever seen (including the one accepted by the Supreme Court in *Thornburg*) was statistically valid. In his testimony in *Garza,* however, he tempered his remarks about the accuracy of at least the *Thornburg* analysis. He continues to attack the standard methods for proving polarization as unreliable except in circumstances where housing patterns are almost completely segregated. *Garza* v. *Los Angeles County Board of Supervisors* has the most extensive attack on the reliability of methodology to determine bloc voting of any court case to date. In it Sacks, another statistician, and social scientists testified that it was impossible to reliably estimate the voting behavior of blacks or Hispanics in Los Angeles County elections in the absence of exit poll or other survey data. According to these experts, no conclusions could be drawn about whether voting in the county was polarized along Hispanic versus non-Hispanic lines in a fashion that would affect the ability of Hispanics to elect a candidate of choice to the county board of supervisors. The district court found otherwise. "While in theory there exists a possibility that ecological regression could overestimate the [degree of polarization], experts for defendants have failed to demonstrate there is in fact any substantial bias."[41]

How can there can be so much dispute about what should be a relatively

41. *Garza* v. *Los Angeles County Board of Supervisors* (D.Cal. 1990), 90 C.D.O.S. 8138 (9th Cir. 1990), *cert. denied* January 1990.

straightforward measurement problem? In a nutshell, the answer is that estimates of racial polarization are often the targets of attack for three reasons. First, exit poll or survey data for the elections most relevant to a finding of racial polarization (those that involve minority candidates, those of the same type that are at issue in the lawsuit, and those that are relatively proximate to the present, with data from all three types highly desirable) are almost never available. Thus inferences about the voting behavior of individuals of each race must normally be based on evidence from aggregate (precinct-level) data, and courts must be convinced that such inferences can validly be drawn, even though no one can penetrate the secrecy of the ballot box to know how any given person voted. Second, estimates of racial polarization are attacked because the statistical techniques used to generate inferences about racial bloc voting are likely to be unfamiliar to courts and involve esoteric terminology such as "correlation coefficient," or "regression slope." Explaining results intelligibly can be difficult. Third, explanations of how estimates are derived can be subject to claims that problems of nonlinearity, such as those that may arise from contextual effects, invalidate the reliability of the statistical and descriptive techniques that were used, especially if only a small number of precincts are racially homogeneous.

My own view, quite simply, is that in most instances statistical issues raised to challenge the accuracy of bloc voting estimates are esoteric quibbles that lack any practical importance and that serve mostly to prolong trials and to increase the incomes of expert witnesses for both sides. Nonetheless, a mechanical application of regression methodology without an understanding of its basic logic and without attention to any accuracy checks can lead to error in some special circumstances, such as situations in which there is more than one covered minority of substantial size and in which minority populations are heavily intermingled without any single-minority homogeneous precincts.[42]

The Third Prong of the Thornburg Test

Although in most recent voting rights cases, most of the testimony by defendants' experts has been about alleged flaws in the testimony on purported measurements of polarization by the plaintiffs' experts, in

42. Accuracy checks are described in Grofman, Migalski, and Noviello 1985; Grofman and Migalski 1988; Loewen and Grofman 1989.

several recent cases a crucial matter of dispute has been whether the minority is large enough and geographically compact enough to constitute a majority in one or more districts. There are three aspects of this prong of the *Thornburg* test that have been subject to dispute.

First, what constitutes a minority group? In jurisdictions with more than one covered minority, the question has arisen as to whether distinct covered groups (blacks and Hispanics, for example) could be combined to determine if they passed *Thornburg*'s threshold size test. Most courts that have looked at this question have held that blacks and Hispanics could, in principle, be treated as a combined group, but to do so would require proof of electoral coalitions between them. In several California cities where this issue has arisen and in Boston, courts have rejected as inadequate the evidence of such coalitions offered by plaintiffs' witnesses. But in some Texas jurisdictions the evidence presented has been held to be sufficient.

While the question of whether distinct minority groups can be combined has been the focus of some litigation, there has also been at least one case in which experts for the defendant jurisdiction have claimed that a group covered under the Voting Rights Act should have its size reduced because it actually consists of disparate subgroupings that should not be combined for purposes of voting rights analysis. In *Garza* v. *Los Angeles County Board of Supervisors,* expert witnesses testified that not all those who identified themselves as of Spanish origin in the census should be regarded as falling under the covered rubric of "persons of Spanish heritage." In particular it was argued that persons born in Spain were not covered under the Voting Rights Act and that the portion of the Filipino population who identified themselves as of Spanish origin ought not to be counted as being of Spanish heritage. This issue was important in the litigation because removing these and some other categories from the protected class would reduce to below 50 percent the proportion of Hispanic citizens of voting age in the most heavily Hispanic district. The court followed the precedents of earlier decisions involving Hispanics by taking a response of Spanish origin on the census questionnaire as the defining characteristic of the covered population.

A second matter of dispute has been what constitutes geographic compactness. The use of the phrase in the *Thornburg* test raises the possibility that some sort of compactness analysis is called for.[43] Courts

43. See, for example, Niemi and others 1990.

generally have taken this language, however, to mean nothing more than indicating the existence of a minority population sufficiently geographically concentrated so that a district could be created in which the minority is a majority. This is certainly my view of how the phrase is to be interpreted in the context of section 2, and it is an interpretation consistent with the discussion by Blacksher and Menefee that Justice Brennan cited when he outlined the *Thornburg* three-pronged test.[44] Even more important, it is what the language of Justice Brennan's own discussion of the phrase suggests was intended.[45]

In *Gomez* v. *City of Watsonville* the demographer Peter Morrison, testifying on behalf of the city, pointed out that most of the Hispanic voters were located outside either of the two Hispanic-majority districts that were created as part of the plaintiffs' proposed seven-district replacement for the at-large elections then being used to elect city council members. As a consequence, the district court held that the city's Hispanics were not sufficiently geographically concentrated to have a claim under *Thornburg*. The appellate opinion, in reversing the lower court, held this finding erroneous as a matter of law. It called attention to the undisputed fact that two city council districts could be drawn, in each of which a majority of the population, the voting age population, and the estimated voting age citizen population was Hispanic.

A final difficulty involving the third prong of the *Thornburg* test has been how to resolve ambiguities in the phrase "constituting a majority in at least one district." The phrase is ambiguous without further specification. What is it that the minority is to constitute a majority of? Population? Voting age population? Voting age citizen population? Registrants? Actual voters?

Justice Brennan's discussion in *Thornburg* suggests a test based on potentially eligible voters, that is voting age population or citizen voting age population: "Unless minority members possess the *potential* to elect representatives in the absence of the challenged structure or practice, they cannot claim to have been injured by that structure or practice."[46] In *Romero* v. *City of Pomona* the appellate court required that the minority be numerous enough to constitute a citizen voting age majority in at least one district.[47] A majority of voting age population was the threshold

44. Blacksher and Menefee 1982.
45. 478 U.S. at 50–51, note 17.
46. 478 U.S. at 50–51, note 17.
47. *Romero* v. *City of Pomona*, 883 F.2d 527 (5th Cir. 1989).

used in an Illinois case. However, in that case, citizenship was not an important consideration.

In *Garza* v. *Los Angeles County Board of Supervisors* the district court rejected a rigid application of a bright-line test and harkened instead to the functional approach advocated by Justice Brennan in *Thornburg*. Judge David Kenyon noted that the Hispanic population in Los Angeles County was steadily growing, and the non-Hispanic white population was declining. In the light of this and other considerations a supervisorial district that almost met a 50 percent citizen voting age population test and that had roughly a 65 percent minority population and a Hispanic registration percentage comparable to that in other districts that had regularly elected Hispanic candidates was held to be adequate to create a realistic opportunity for Hispanics to elect a candidate of choice during the decade.[48] Judge Kenyon also found purposeful discrimination in the form of racial gerrymandering to fragment the Hispanic core population in the eastern and central part of the county. When the Eleventh Circuit Court considered *Garza* on appeal, it held that a bright-line test of minority population concentration was not a prerequisite to a voting rights violation in a situation where intentional discrimination had been shown. It upheld unanimously the trial court's finding of purposeful discrimination. The Supreme Court subsequently denied certiorari.

All but one court since *Thornburg* has treated the "ability to elect candidates of choice" as the right to be protected, although the Brennan opinion in *Thornburg* was explicit on the point that the decision did not address the question of "what standards should pertain to a claim brought by a minority group that is not sufficiently large and compact to constitute a majority in a single-member district, alleging that the use of a multimember district impairs its ability to influence elections."[49] The sole exception

48. Judge Kenyon also noted a fact pointed out by an expert witness in the Los Angeles County case, and not raised in earlier litigation, that citizen voting age population by race and Spanish origin was not available at the time of the postcensal redistricting in 1981 and would not be available in time for redistricting in 1991 or even 1992. Thus a threshold test that requires use of citizen voting age population data makes it effectively impossible for Hispanic plaintiffs to challenge 1990s redistricting plans until 1993 or so, and in some instances makes it impossible for jurisdictions to know whether they have drawn plans that will satisfy the provisions of the Voting Rights Act. Also, a number of Hispanics who are not citizens may be naturalized in the 1990s as a result of the special amnesty provisions passed by Congress several years ago, suggesting that the proportion in 1990, even if it could be known, may be a poor indicator of Hispanic potential to elect candidates of choice during the decade.

49. 478 U.S. at 46, note 12. The court in *Gingles* v. *Edmisten*, considering a remedy

is a recent opinion in *Armour* v. *Ohio* holding that racial concentrations of any size that constitute communities of interest cannot be unnecessarily fragmented.[50] However, that case is presently on appeal.

Social Science in the Courtroom

In the 1980s a number of social scientists whose testimony on bloc voting had been accepted by trial courts wrote journal articles explaining the nature of the methodology they had used, sometimes also arguing against alternative approaches. Some of these articles were cited in *Thornburg,* a few extensively. Indeed, one of the more remarkable features of the *Thornburg* opinion is its frequent citation of articles by social scientists, seventeen references in all. Moreover, unlike the common lawyerly practice of drawing only on social science materials that had been given the imprimatur of acceptance by a law review, many of the Court's citations were to articles in social science journals. These materials were used in the opinions, especially that of Justice Brennan, to support or to critique the expert testimony that was being reviewed. While many of the citations were no doubt window dressing, some of the articles proved influential in informing Justice Brennan (or perhaps it would be better to say, his clerk) about the methodological problems involved in defining and measuring racial bloc voting. No doubt in part because they believe their views may influence future decisions, expert witnesses who have lost in court and seek vindication are now also beginning to attack ecological regression and homogeneous precinct methodology in social science and law journals.[51]

The debate in the federal courts as to the measurement of racially polarized voting and the interpretation of the data is important because once racial bloc voting became the linchpin of any vote dilution case, how racially polarized voting was to be defined often had critical implica-

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to the dilution it found occurring under multimember district elections, rejected the need to combine minority populations that were not large enough to form the majority within a single district.

50. *Armour* v. *Ohio,* 895 F.2d 1078 (6th Cir. 1990).

51. For example, Freedman and others 1991 repeat nearly verbatim the testimony offered by Freedman, Klein, and Sacks that was rebutted by the district court in *Garza* v. *Los Angeles County Board of Supervisors.* Their views are in turn rebutted by social scientists who testified for the plaintiffs in *Garza* (see Grofman 1991; Lichtman 1991).

tions for whether plaintiffs or defendants prevailed in the now hundreds of jurisdictions that have had their election mechanisms challenged. Moreover, the remarkable success rate of plaintiffs in section 2 litigation has affected outcomes in scores of other jurisdictions that have now shifted to single-member districts because of the fear, or the actual threat, of a voting rights lawsuit. Once the Supreme Court picked a definition of racial polarization, social scientists offering definitions that were incompatible would not be listened to by the courts.[52]

The definitions of racially polarized voting favored by expert witnesses for plaintiffs have considered correlations between race of the voter and race of the candidate and levels of own-race voting in elections involving minority candidates. Given the realities of own-race voting patterns in the jurisdictions being sued, an acceptance of definitions of this sort would almost certainly guarantee that courts would find voting to be racially polarized.

In contrast, the definitions of polarized voting offered by many experts for defendants before *Thornburg* made it almost impossible to prove polarization. Under the requirement that at least 90 percent of each minority group had to have voted for candidates of its own minority, for example, few elections anywhere would be found to be polarized. Requiring evidence of racial campaign appeals or turnout surge to prove polarization meant that business-as-usual voting by whites against black candidates would not count as polarization. Requiring that race be shown to have a major independent causal effect, after controlling for a laundry list of factors that were highly collinear with race, was to set a virtually impossible hurdle—as well as to ask the wrong question, as Justice Brennan's opinion in *Thornburg* made clear.

After *Thornburg* racially polarized voting became an even more important determinant of the outcomes of voting rights litigation, and the legal battle over racial bloc voting intensified as defendant jurisdictions sought loopholes in the definition of bloc voting in *Thornburg* and tried to force a reconsideration of the reliability of the techniques customarily used to estimate it. After *Thornburg*, if a case did go to trial, the defendant jurisdiction was apt to spend rather lavishly on expert testimony (mostly about alleged flaws in the testimony of plaintiffs' experts' measurements of polarization), and plaintiffs responded in kind—a litigious arms race in terms of the number of expert witnesses and the length of

52. See, for example, the trial court decision in *McNeil* v. *City of Springfield*, 658 F.Supp. 1015 (C.D. Ill. 1987).

their testimony. There has also been an escalation in the desirable length of the resumé of an expert witness. In many early cases, locally knowledgeable social scientists provided testimony about polarization that was sometimes little more than a look at election outcomes in racially homogeneous precincts. Now experts testifying about racial bloc voting who are not intimately familiar with heteroscedasticity and contextual effects may find themselves at a severe disadvantage.

In one 1987 vote dilution case in Peoria, Illinois, six experts were brought in, three of whom were from out of state. The plaintiffs' lead expert was a quantitative historian and author of the only statistical textbook devoted exclusively to ecological regression. The former chair of the Statistics Department at the University of Illinois and the former chair of the Statistics Department at Stanford were brought in by Peoria to rebut his testimony and that of another expert witness, a political scientist, that voting in the city was racially polarized. Plaintiffs, in turn, brought in as a rebuttal witness to these statisticians the political scientist who was the principal expert in *Thornburg*. Teams of experts on bloc voting also appeared on each side in *McNeil* v. *City of Springfield* and in several other cases since. In 1990 the ultimate battle of the experts occurred in *Garza* v. *Los Angeles County Board of Supervisors*. At one point, nearly two dozen were on the potential witness list, and eleven or more actually testified, five of them (three for defendants and two for plaintiffs) primarily on racial bloc voting. (It is hard to find better evidence for the importance attached by litigants in voting rights cases to social science testimony, especially that concerning racially polarized voting, than the amount of money litigants, especially defendant jurisdictions, are willing to pay for it.)[53]

The history of the debate over racially polarized voting shows that there has been a complex interaction between social science terminology and legal definitions, to the point that it is virtually impossible to distinguish where the former leaves off and the latter begins. For example, "racially polarized voting" is a term originating in social science that has come to be given a precise legal meaning whose relevance is supported in the Supreme Court's reading of the language of the Voting Rights Act and its legislative history. Still, it is impossible to imagine the Court's definition of "legally significant" polarization in *Thornburg* apart from the social science definition of polarization on which it rests. Similarly,

53. Several of the expert witnesses testifying for the County of Los Angeles in *Garza* received nearly $100,000.

questions about specification of the elections relevant to a polarization analysis and about the definition of "minority preferred candidate" that have been the topic of litigation in cases since *Thornburg* also have the characteristic that social science testimony is helping to shape legal conclusions in a fashion analogous to the way it shaped the standards for the definition and measurement of racially polarized voting in *Thornburg* itself. Moreover, the testimony of experts in voting rights cases sometimes is allowed to deal directly with the ultimate question of law, the finding of vote dilution in violation of the Voting Rights Act or the Constitution or both.

Also, most expert witnesses build upon both earlier expert testimony and earlier legal decisions in crafting their testimony. It is particularly important to recognize the continuities between the Supreme Court's approach to racial polarization in *Thornburg* and the way that previous lower court decisions had approached the matter. Much as I would like to take all the credit, the definitions I offered in my testimony in *Gingles* v. *Edmisten* were not really original with me. They built upon the earlier testimony of experts such as Charles Cotrell, James Loewen, Richard Engstrom, Chandler Davidson, and others, and the ways in which previous courts had looked at polarized voting.[54]

The *Thornburg* Test and the "Totality of Circumstances"

In *Gingles* v. *Edmisten,* both the expert testifying on behalf of North Carolina (Thomas Hofeller) and I offered virtually identical definitions of submergence of minority voting strength in an at-large or multimember district system. We each defined submergence as occurring if the minority group did not comprise a voting majority of the multimember district, but the minority population was large enough and concentrated enough

54. As I see it, my original contributions in *Gingles* to the analysis of racial bloc voting were threefold. First, I codified, in something approaching a logically exhaustive fashion, the questions that needed to be answered and helped reconcile conflicts in the earlier testimony between experts who sought to rely primarily on the correlation coefficient and those who had focused on the actual level of differences in minority and nonminority voting. Second, I invented (or, as I later learned from James Loewen and Alan Lichtman, reinvented) the double-equation regression methodology designed to cope with the problem that minorities often do not vote at the same rates (relative to voting-age population or even relative to registration) as those who are members of the majority—a methodology

to form at least one single-member district in which its members would constitute an effective voting majority, *and* voting was significantly racially polarized. If this test were to be used, the standards for a section 2 violation for multimember districts could be dramatically simplified.[55]

The three-judge federal district court in *Gingles,* having found evidence of six of the seven factors of the totality of circumstances test, did not discuss whether submergence, as defined here, had occurred. Justice Brennan, writing the opinion of the Supreme Court in *Thornburg,* cited my coauthored 1985 article but did not adopt the two-pronged test suggested there. Instead, following an approach suggested by Blacksher and Menefee, the Court majority adopted a three-pronged test that combined the two-pronged test of submergence with factor 7 of the totality of the circumstances test, the history of minority electoral success. With the advantage of hindsight, I prefer the Supreme Court's three-pronged test of vote dilution in a situation involving at-large or multimember district elections to the two-pronged test I offered. I also believe that, from the standpoint of social science, the *Thornburg* three-pronged test scores far better marks than does the old totality of circumstances test.

From the perspective of both law and social science, one of the greatest potential difficulties with court intervention into any legislated policy is the problem of developing manageable standards that are plausibly related to the relevant statutory and constitutional provisions. The test for manageable standards is similar to my earlier discussion of criteria for evaluating proposed use of social science variables. For standards to be manageable they must be clear, workable, explainable, and capable of developing the necessary evidence within the realistic time frame of litigation. With respect both to manageable standards and to relevance, the merits of the *Thornburg* test are considerable, especially when compared to its totality of circumstances predecessor.

that has now become standard in voting rights cases. Third, I worked out the statistical refinements to this regression methodology that were needed to cope with North Carolina multimember districts without head-to-head contests (see Grofman and Migalski 1988). (In some of these districts, voters could cast as many as eight votes. Moreover, voters varied considerably in how close they came to using all the votes to which they were entitled, and black and white voters did not on average cast the same number of ballots.)

When I testified in *Gingles* I was a relative novice. *Gingles* was my third voting rights case. Leslie Winner and Lani Guinier, the two lead attorneys with whom I worked on *Gingles,* had a thorough knowledge of the voting rights case law and previous expert witness testimony. I learned a great deal from them by "osmosis" and by having my ideas subject to mock (and not so mock) cross-examination.

55. Grofman, Migalski, and Noviello 1985.

First, while each of the elements of that test may be subject to dispute among competing expert witnesses, each can be related to objective indicators of the potential for and previous success of members of the minority group (and of those nonminority candidates who share the particular interests of the minority) who are the minority's candidates of choice, based on electoral data.

Second, each of the factors in the test is directly related to the definition of racial vote dilution offered in *Fortson* v. *Dorsey,* and repeated in subsequent cases, in which the Court alluded to practices that minimized or canceled out the voting strength of racial (or political) groups.[56] For there to be a violation under *Thornburg* there must first be a group that is sufficiently politically cohesive in its voting patterns (in the relevant elections) so that it is sensible to talk about that group's voting strength being minimized or canceled out. Next, given this level of minority cohesion, the general lack of minority success must be attributable to the unwillingness of the majority to support minority candidates. Finally, there must be an alternative to the challenged practice in which fairer representation would have been possible. In marked contrast, most of the factors in the totality of circumstances test bear only an indirect relationship to the concepts of vote dilution or submergence.[57] Thus although the *Thornburg* test deemphasizes the importance of factors highlighted by the 1982 Senate report and by previous court cases, this is not a failing. As I wrote in 1985, "Given the nature of the definition of vote dilution in Section 2 of the Voting Rights Act, it seems reasonable to look for factors which may impact the ability of a protected class to . . . translate its voting strength into representation of its choice."[58]

Third, the critical factors to be looked at under *Thornburg* are both few and close-ended, at least for cases involving the potential submergence of a single protected group's voting strength in an at-large or multimember district plan. (In *Thornburg* the Supreme Court clearly recognized that other types of factors might be relevant in other types of cases.)[59]

Fourth, unlike the totality of circumstances test, the three-pronged *Thornburg* test provides a clearly specified set of conditions sufficient to prove a voting rights violation, rather than a grab bag of factors whose exact relevance to a vote dilution claim is very much left to the vagaries

56. *Fortson* v. *Dorsey,* 379 U.S. 433 at 439 (1965).
57. See Grofman 1985, 144.
58. Grofman, Migalski, and Noviello 1985, 216.
59. 478 U.S. at 46–47, note 12.

of the trial court. The 1982 Senate report makes clear that there is no intent that any particular number of factors must be proved, nor that a majority of factors must point one way or another, and warns against using the factors in a mechanical point-counting fashion.[60] In the totality of circumstances test, identical factual conditions could, in principle, be interpreted in quite different ways by different judges. As one noted civil rights attorney characterized the test, it was "Throw mud against the wall. If enough of it sticks, you win."[61] However, some courts may have teflon-coated walls.

Fifth, despite what appears to have been the aims of the *Thornburg* test both to simplify the criteria for establishing a voting rights violation and to make them more precise and more relevant to the underlying concept of vote dilution, the Court also recognized that an inquiry into vote dilution is very much a fact-intense and a case-specific one. Thus while in most instances involving at-large or multimember jurisdictions the *Thornburg* three-pronged test specifies factors that are necessary as well as sufficient to establish vote dilution, the decision permits lower courts a flexibility in appraising particular facts in the light of common sense and local knowledge that has proved to be important in subsequent cases. Thus the Court has retained one of the most attractive features of the totality of circumstances approach without most of its drawbacks.

Sixth, the three-pronged test sets standards for minority vote dilution that allow litigants to anticipate the probable outcome of any litigation. In particular, jurisdictions for which no single-member remedy is feasible, or those in which voting is not racially polarized, or those in which minorities regularly succeed despite the presence of patterns of racially polarized voting (at levels comparable to what might be expected from a fairly drawn single-member-district plan), cannot be successfully challenged. This has meant that scores of jurisdictions now settle cases out of court once they review the relevant *Thornburg* factors and that plaintiffs prosecute only those cases with a high probability of success. Indeed, plaintiffs lose relatively few cases that they bring, with those few mostly on the cutting edge of voting rights case law—for example, cases in jurisdictions with more than one covered minority such as *Romero* v. *City of Pomona* or *Badillo* v. *City of Stockton*.[62]

60. Senate, 1982b.

61. Frank Parker, personal communication, 1986.

62. *Romero* v. *City of Pomona*, 883 F.2d 527 (5th Cir. 1989); *Badillo* v. *City of Stockton* (D. Cal. 1989), appeal pending.

Discussion

There are many avenues of further research that an examination of the testimony by experts in racial vote dilution cases might explore. For example, detailed examination of courtroom testimony and of depositions and other supporting documents could illuminate the dynamics of complex litigation and the ways in which the adversarial process reveals and conceals truth. Courtroom testimony is an almost unexplored source for comparative analysis of state and local election practices, comparisons of levels of polarization over time or across jurisdictions, and evidence about racial discrimination more generally. The specific topics of expert testimony in voting rights matters also raise important methodological issues that are of very general relevance to social science, as was suggested by the discussion earlier of the uses of ecological regression. Important issues worthy of inquiry include criteria to detect and measure racial gerrymandering in the context of single-member districts and standards for deciding when a district contains a minority population sufficient to give minorities a realistic opportunity to elect candidates of choice.[63] Another matter is to decide on methods for estimating the Hispanic share of registration using Spanish surname data and other population data, given the fact that not all people with a Hispanic surname are of Spanish origin, and some who lack a Hispanic surname nonetheless consider themselves of Spanish origin, and given the fact that Spanish origin is not a racial category and thus whites as well as blacks and Asians may be Hispanic. All these issues and many more were the subject of expert witness testimony in *Garza* v. *Los Angeles County Board of Supervisors*.[64] Racial gerrymandering and deciding the viability of a minority population, at least, can be expected to be important in voting rights litigation in the 1990s.

63. On racial gerrymandering, see Engstrom and Wildgen 1977; Grofman 1990; Grofman and Handley, forthcoming. On deciding when a district contains a significant minority population, see Brace and others 1988.

64. In *Garza* experts for plaintiffs introduced an alternative measure of Spanish origin based on corrections at the level of the census tract for type I and type II errors in surname-to-origin matchups. The two measures were shown to yield highly similar conclusions about minority registration percentages at the district level and virtually identical conclusions about levels of polarization in voting.

Other important questions for social scientists and other scholars to consider involve the normative implications of the *Thornburg* test and other recent developments in voting rights case law (see Cain in this volume). My views on that topic must be left to another paper.

I would however not wish to leave the reader with an overestimate of the importance of social science testimony in voting rights litigation. As in other civil rights domains, the nature of the case law is critical in determining who is likely to win and who to lose.[65] Given that case law, it is the facts—not attorneys and not expert witnesses—that almost always prove dispositive.[66] Here the *Thornburg* test offers a clear and manageable standard for vote dilution, and American politics is the better for the gains in minority representation it has brought.

65. Compare with Chesler, Sanders, and Kalmuss 1988. Success has many parents, failure is parthenogenic. The Voting Rights Act has been a marvelous success and there is plenty of credit to go around. The act would not have come to be without courageous black Americans willing to risk their lives to gain justice and the leadership of Lyndon Johnson and a Congress that provided bipartisan support for the act and then to its several extensions. It would never have had the success it had without the actions of the Supreme Court, the Department of Justice, and the many attorneys who litigated to make its provisions meaningful. Credit also must go to foundations such as Rockefeller, Ford, and Carnegie that helped finance and bring into being groups such as the Lawyers' Committee for Civil Rights Under Law, the Southwest Voter Registration Institute, and the Mexican American Legal Defense and Educational Fund.

66. As one prominent civil rights attorney, James Blacksher, once put it: "the job of the expert witness is to put the hay down where the goats can get at it" (as quoted by Peyton McCrary, personal communication, October 19, 1990).