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Re-Solidifying Racial Bloc Voting: Empirics and Legal Doctrine in the Melting Pot

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Re-Solidifying Racial Bloc Voting: Empirics and Legal Doctrine in the Melting Pot

D. JAMES GREINER*

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Racial bloc voting is the central concept in judicial regulation of redistricting. For the past several decades, the definition and proof of this concept have depended on two premises: that politics can be conceptualized in biracial terms and that nearly perfect information on voting patterns can be inexpensively obtained from simple statistical methods. In fact, however, neither premise has been true for some time, as the nation has become multiracial and allegations have increased that Caucasians vote less monolithically than before, with both assertions imposing severe stress on the simple statistical methods previously used to assess voting patterns. In this article, I analyze these challenges to traditional

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understandings and attempt to answer the following question: how can we litigate racial bloc voting well in the current era? I provide recommendations, including greater reliance on more sophisticated statistical methods, an increase in the use of sample surveys, and a renewed receptivity to nonquantitative evidence on voting patterns, while clarifying that each of these recommendations carries substantial costs. I then discuss the conceptual and normative implications of my recommendations on the empirics.

INTRODUCTION

With the passage of the 2010 U.S. census comes the decennial process of filtering our nation's representative structure, particularly the redistricting process the Constitution compels,¹ through the judiciary. Because the Supreme Court, specifically Justice Kennedy, remains unwilling to endorse a standard to govern claims of undue partisanship in the drawing of district lines,² the primary federal litigation weapon³ for those seeking to alter or influence an officially adopted districting scheme will remain a lawsuit based on a theory of racial vote dilution. I use the phrase "vote dilution" to refer to the interaction of voting patterns, some aspect of a system of translating votes into political power (a districting scheme, for example), and the surrounding circumstances such that the strength wielded by some identifiable and salient group is less than what is thought to be the right amount. When the group is defined by race,⁴ and when an acceptable remedy exists, section 2 of the Voting Rights Act⁵ renders vote dilution illegal.

Election jurisprudence generally, and redistricting law in particular, has never been overly characterized by clarity or stability,⁶ and it seems unlikely that the 2010 round of redistricting will bring much of either. The continued dissatisfaction

1. *Baker v. Carr*, 369 U.S. 186 (1962), and *Reynolds v. Sims*, 377 U.S. 533 (1964), compel states to redraw lines to achieve either exact (in the case of Congress) or rough (for other levels of government) population equality among districts.

2. See *Vieth v. Jubelirer*, 541 U.S. 267, 306–17 (2004) (Kennedy, J., concurring).

3. The overuse-of-race-theory the Supreme Court endorsed in *Shaw v. Reno*, 509 U.S. 630 (1993), and clarified in *Miller v. Johnson*, 515 U.S. 900 (1995), resulted in few lawsuits in the 2000 round of redistricting. At least one prominent commentator has attributed this dearth to redistricters' internalization of the *Shaw* standard (conceptualized as a prohibition on bizarrely shaped districts). Richard H. Pildes, Foreword, *The Constitutionalization of Democratic Politics*, 118 HARV. L. REV. 29, 67–68 (2004). If Professor Pildes is correct on this score, as seems likely, the 2010 round is similarly likely to see little *Shaw* litigation.

4. For convenience, except in footnote 18, I use the terms "race" and "racial" in this Article as shorthand for either race or ethnicity. For similar reasons, I use the terms "Hispanic" and "Latino" interchangeably, as I do "Caucasian" and "white" and "African American" and "black."

5. 42 U.S.C. § 1973 (2006).

6. See, e.g., Heather K. Gerken, *Rashomon and the Roberts Court*, 68 OHIO ST. L.J. 1213, 1235 (2007) (noting that "doctrinal categories are breaking down"); Richard L. Hasen, *Beyond the Margin of Litigation: Reforming U.S. Election Administration to Avoid Electoral Meltdown*, 62 WASH. & LEE L. REV. 937, 945 (2005); Pamela S. Karlan, *Still Hazy After All These Years: Voting Rights in the Post-Shaw Era*, 26 CUMB. L. REV. 287, 288 (1995) (noting "doctrinal instability").

of a more conservative Supreme Court with law articulated in earlier decades is likely to be a source of evolution in racial vote dilution jurisprudence,⁷ but an equal impetus to change may be questions as to whether evolving circumstances on the ground have called into doubt the empirical foundations of the law. For at least the past twenty-five or so years, racial vote dilution litigation, particularly under section 2, has rested on two premises. First, courts and litigants could frame vote dilution litigation in biracial⁸ terms by comparing the preferences of the plaintiffs' racial group (say, "black") to those outside that group, so, for example, "white" is the same thing as "non-black." The second premise is that despite the secret ballot, litigants and courts could obtain nearly perfect numerical information about voting patterns of a jurisdiction's racial groups relatively quickly, relatively cheaply, and for as far back historically as desired. It has been thought possible to accomplish this feat by analyzing census data (usually) and precinct-level vote returns via a set of methods collectively called "ecological inference."⁹ These two premises underlay the merger¹⁰ of doctrine and empirics¹¹ contained in the phrase "racially polarized voting" (equivalently, "racial bloc voting"), which has been the "keystone"¹² of vote dilution. Indeed, it is difficult to overstate the importance of the concept of racial bloc voting to the law and theory in this area; for whatever the phrase means, it defines the dilution injury under widely disparate accounts of voting and democracy,¹³ justifies entry into the "racial thicket"¹⁴ by a reluctant judiciary,¹⁵ and distinguishes official use of race in redistricting from official use of race in other settings.¹⁶

7. See Richard H. Pildes, *The Decline of Legally Mandated Minority Representation*, 68 OHIO ST. L.J. 1139, 1139 (2007).

8. By "biracial" I mean the presence in a polity of only two relevant racial groups.

9. See, e.g., GARY KING, A SOLUTION TO THE ECOLOGICAL INFERENCE PROBLEM 3 (1997).

10. Samuel Issacharoff, *Polarized Voting and the Political Process: The Transformation of Voting Rights Jurisprudence*, 90 MICH. L. REV. 1833, 1847 (1992); see also Bernard Grofman, *Expert Witness Testimony and the Evolution of Voting Rights Case Law*, in *CONTROVERSIES IN MINORITY VOTING* 197, 199 & n.5 (Bernard Grofman & Chandler Davidson eds., 1992).

11. See Grofman, *supra* note 10, at 223–24.

12. *United States v. Marengo Cnty. Comm'n*, 731 F.2d 1546, 1566 (11th Cir. 1984).

13. See Heather K. Gerken, *Understanding the Right to an Undiluted Vote*, 114 HARV. L. REV. 1663, 1667 (2001) (arguing that the right to an undiluted vote is an aggregate right threatened by racial bloc voting); Issacharoff, *supra* note 10, at 1867–72, 1885–90 (showing how racial bloc voting undermines the fundamental assumptions of both process-based and social choice theories of democracy); Michael S. Kang, *Race and Democratic Contestation*, 117 YALE L.J. 734, 752–53 (2008) (clarifying that under a theory of "democratic contestation" racial bloc voting paralyzes the "political discourse" that would otherwise challenge citizens with "political choices about their political identity and sensibilities").

14. *Cf. Colgrove v. Green*, 328 U.S. 549, 556 (1946) (warning against judicial entry into the "political thicket").

15. Issacharoff, *supra* note 10, at 1867–71.

16. See *Shaw v. Reno*, 509 U.S. 630, 679–80 (1993) (Souter, J., dissenting). Compare *Miller v. Johnson*, 515 U.S. 900, 916 (1995) (In redistricting, a constitutional violation occurs only if race is the "predominant factor."), with *Grutter v. Bollinger*, 539 U.S. 306, 326

Increasingly, however, the two premises identified above are no longer true. Actually, the second was never true, although in many areas of the nation where vote dilution lawsuits were brought, the consequences in a particular case of believing the fiction of nearly perfect information may have been minimal.¹⁷ Fewer fact situations fit this mold now, and in any event, both premises have come under pressure from two developments: the United States has become more multiracial than before,¹⁸ and questions have arisen as to whether Caucasians vote against minority groups' candidates of choice as monolithically as they allegedly did before. Commentators have identified these changes previously,¹⁹ but few in academia or elsewhere have attempted to understand the challenges raised or to propose solutions, particularly with respect to the question of how to adjudicate whether voting is racially polarized. On the contrary, perhaps the most prominent expert witness in this field²⁰ has recently argued that models needed to make sense of multiracial data do not exist;²¹ among the purposes of this Article is to show that this statement is not correct.

(2003) (“[A]ll governmental action based on race” is subject to strict scrutiny.).

17. See Richard L. Engstrom, Comment, *Getting the Numbers Right: A Response to Wildgen*, 22 URB. LAW. 495, 495 (1990) (noting that in many early cases methodology mattered little because almost all reasonable methods would yield the conclusion that voting was racially polarized).

18. See U.S. BUREAU OF THE CENSUS, OVERVIEW OF RACE AND HISPANIC ORIGIN (2001), available at <http://www.census.gov/prod/2001pubs/c2kbr01-1.pdf> (stating that in 2000 the United States population was 12.5% Hispanic (of any race), 12.3% black, and 3.6% Asian); WILLIAM H. FREY, POPULATION STUDIES CTR., RACE, IMMIGRATION AND AMERICA'S CHANGING ELECTORATE 2 (2008) (Research Report 08-635), available at http://frey-demographer.org/reports/R-2008-1_RaceImmAmChangingElectorate.pdf.

19. See Melissa L. Saunders, *Of Minority Representation, Multiple-Race Responses, and Melting Pots: Redistricting in the New America*, 79 N.C. L. REV. 1367, 1370–73 (2001); see also Guy-Uriel E. Charles, *Race, Redistricting, and Representation*, 68 OHIO ST. L.J. 1185, 1211 (2007). On allegations of decreasing white bloc voting, see Charles S. Bullock, III & Richard E. Dunn, *The Demise of Racial Districting and the Future of Black Representation*, 48 EMORY L.J. 1209 (1999); Richard H. Pildes, *Is Voting-Rights Law Now at War with Itself? Social Science and Voting Rights in the 2000s*, 80 N.C. L. REV. 1517 (2002); Note, *The Future of Majority-Minority Districts in Light of Declining Racially Polarized Voting*, 116 HARV. L. REV. 2208 (2003). Regarding biraciality, see Pildes, *supra* note 7, at 1147.

Note that I do not necessarily endorse the assertion that racially correlated voting is in fact declining, particularly with respect to local and municipal contests as opposed to the congressional and state legislative elections that tend to draw scholarly attention. Interestingly, the most sophisticated analysis I have seen to date provides little reason to think that bloc voting has decreased in any important way in the nation as a whole. See Stephen Ansolabehere, Nathaniel Persily & Charles Stewart III, *Race, Region, and Vote Choice in the 2008 Election: Implications for the Future of the Voting Rights Act*, 123 HARV. L. REV. 1385 (2010).

20. Professor Grofman was the plaintiffs' expert in the district court litigation in *Thornburg v. Gingles*, 478 U.S. 30, 53 (1986), and has testified in dozens of cases since then.

21. See Bernard Grofman & Matt A. Barreto, *A Reply to Zax's (2002) Critique of Grofman and Migalski (1988)*, 37 SOC. METHODS & RES. 599, 614 n.14 (2009).

In this Article, I seek to answer the following question: how can we litigate the issue of racial bloc voting (and thus vote dilution) well in an era characterized by increasing racial diversity and allegations that white bloc voting may be decreasing? The answer turns out to require work on at least three different fronts: doctrine, ecological inference, and alternative information sources. To begin, we need either to refine doctrinal definitions or to acknowledge that in this area the definitions themselves matter less than the nature of the evidence upon which we rely in actual cases (either would do). As a corollary, any doctrinal developments should be structured in light of the sharp limits on how much available sources of information can tell us about voting patterns. Second, we need to use more advanced statistical techniques to analyze the kind of data upon which courts have routinely relied in section 2 litigation—namely, precinct-level vote returns as married to demographic information from (usually) the U.S. census. Techniques used to analyze this type of data are called “ecological inference” methods and, at the risk of oversimplification, there are good ones and bad ones. For years, experts and courts have relied on bad ones. At first, this reliance stemmed from the lack of another option; more recently it is due to inertia and habit. Inertia must be overcome, and habits must change. Finally, we need to use alternative sources of information, including sample surveys and nonquantitative evidence, both of which are regularly used by candidates and political analysts, but neither of which has as of yet gained much traction in court cases.

This Article proceeds in four parts. In Part I, I briefly trace the legal development of the doctrine of racial bloc voting from its ascendancy in *Thornburg v. Gingles*²² to the present day,²³ focusing in particular on the nature of the evidence upon which courts have relied to adjudicate whether voting in a jurisdiction is racially polarized and on the pressure differing strands of legal doctrine have placed on that evidence. While judicial consumption of evidence from ecological inference techniques has remained unchanged since at least 1986,²⁴ doctrine has been less static, and the case law is moving towards greater reliance on the untrue premises of cheap, quick, near-perfect information and biraciality identified above.

In Part II, I show how and why racial diversity and the allegedly decreasing uniformity of white bloc voting have put increasing pressure on empirical techniques in this area generally and especially on ecological inference methods. Recent advances, particularly a technique Kevin Quinn and I developed called the “GQ Model,” can alleviate some of this pressure, but even modern ecological inference methods will not be enough in all cases. Until the statistical community creates production-ready ways to add other forms of quantitative information into the equations used,²⁵ even cutting-edge techniques such as the GQ Model will be

22. 478 U.S. 30 (1986).

23. Professor Issacharoff traces the pre-*Gingles* history of racial bloc voting in Issacharoff, *supra* note 10.

24. D. James Greiner, *Ecological Inference in Voting Rights Act Disputes: Where Are We Now, and Where Do We Want To Be?*, 47 JURIMETRICS J. 115 app. A (2007).

25. Efforts to create such production-ready methods are underway. See D. James Greiner & Kevin M. Quinn, *Exit Polling and Racial Bloc Voting: Combining Individual-Level and R x C Ecological Data* (Harvard Law School Public Law & Legal Theory Working Paper Series, Working Paper No. 09-40, 2009) (on file with the author).

able to tell us only so much, and (if current trends continue) less and less as time progresses. Accordingly, we should ask ourselves whether other sources of information on racial bloc voting are available.

In Part III, I shift from the descriptive and the analytical to propose alterations to current doctrine and empirics. On the empirical side, I limit myself to recommending inferential techniques that I have personally implemented. Although by necessity I propose a doctrinal definition of racial bloc voting, I suggest that the critical issue is less the words used to define the phrase than the evidence used to adjudicate the issue. Empirically, my primary suggestion is that experts, litigators, and courts stand ready to lessen (perhaps eliminate) their reliance on ecological inference techniques in favor of other sources of information, principally surveys and nonquantitative evidence. My discussion includes a focus on the costs to this approach.

Part IV provides a short case study in the form of an analysis of voting patterns for the Boston City Council to demonstrate the viability of my proposals.

A final word on terminology: I have thus far used terms loosely, mirroring the looseness in judicial opinions. For the remainder of this Article, I use the term “racially correlated voting” to refer to the factual existence of a pattern (whatever its cause) associating voter race and voter preference; as I discuss, the nature and strength of the correlation needed to be legally relevant is uncertain. The (concededly awkward) phrase “racially caused voting” denotes the subset of racially correlated voting patterns that are in some way caused by racial animus in the electorate; ordinarily, this is thought of as white voter animus against minority-preferred candidates (who are frequently of minority race).²⁶ I reserve the terms “racial bloc voting” and “racially polarized voting” to refer to the set of circumstances sufficient to trigger legal consequences in a vote dilution-based challenge to a districting scheme.

I. RACIAL BLOC VOTING FROM *GINGLES* TO THE PRESENT: HOW THE EVOLUTION WAS PREMISED ON CHEAP, NEAR-PERFECT, BIRACIAL INFORMATION

A. *Gingles and Questions*

In *Thornburg v. Gingles*²⁷ the Supreme Court adopted a framework for vote dilution challenges consisting of a set of thresholds followed by a totality-of-

26. This issue has been variously phrased as whether racial animus as opposed to interest group politics were causing racially disparate voting patterns, or whether race (of the voter or the candidate) not political party was “the reason for” such patterns, or whether minority voter cohesion was a defensive as opposed to a calculated move. See *Thornburg v. Gingles*, 478 U.S. 30, 83 (1986) (White, J., concurring) (“interest-group politics”); *id.* at 478 U.S. at 100 (O’Connor, J., concurring) (“the reasons why”); *League of United Latin Am. Citizens v. Clements*, 999 F.2d 831, 855–59 (5th Cir. 1993) (party not race); *Black Political Task Force v. Galvin*, 300 F. Supp. 2d 291, 298 (D. Mass. 2004) (“causation”); John O. Calmore, *Race-Conscious Voting Rights and the New Demography in a Multiracing America*, 79 N.C. L. REV. 1253, 1273 (2001) (questioning whether “black bloc voting is . . . the initial fire [or] the return fire”).

27. 478 U.S. 30 (1986).

circumstances analysis.²⁸ A plaintiff challenging a districting scheme²⁹ first proved the three now-familiar *Gingles* prerequisites—that is the existence of a geographically compact racial minority population numerous enough to constitute a majority in a single-membered district,³⁰ political cohesiveness in the minority population,³¹ and white voting patterns that ordinarily defeated the minority’s candidates of choice.³² If a plaintiff proved the three prerequisites, a totality-of-circumstances stage followed, in which courts were to focus on a nonexhaustive set of factors listed in a Senate Report accompanying the passage of the 1982 amendments to section 2³³ with an eye to deciding whether members of the plaintiff’s group had “less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice.”³⁴ The second and third *Gingles* prerequisites came to be considered together under the rubric of racial bloc voting,³⁵ and at the totality-of-circumstances stage, the extent of racial bloc voting was one of the two most important factors in deciding the ultimate question of vote dilution.³⁶ Thus, racial bloc voting ascended to “the undisputed and unchallenged center of the Voting Rights Act.”³⁷

As Justice Brennan’s opinion for the Court in *Gingles* sought to provide a doctrinal roadmap for courts adjudicating vote dilution cases, it did so with an eye to the nature of the evidence upon which courts would rely to decide whether voting was racially polarized. In this regard, Justice Brennan made three moves important for this Article. First, in a section of his opinion receiving only four votes, Justice Brennan sought to equate racially polarized voting with racially correlated voting,³⁸ resisting any effort to include in the inquiry whether voting was racially caused.³⁹

28. Prior to the 1982 amendments to section 2, courts had employed a single-stage, multi-factored test. See *White v. Regester*, 412 U.S. 755, 765–70 (1973); *Whitcomb v. Chavis*, 403 U.S. 124, 152–55 (1971); *Zimmer v. McKeithen*, 485 F.2d 1297, 1305–07 (5th Cir. 1973) (en banc).

29. See *Grove v. Emison*, 507 U.S. 25 (1993) (extending the *Gingles* framework to include challenges to single-member districting schemes).

30. *Gingles*, 478 U.S. at 50. The Supreme Court’s preference for single-membered districts, particularly as part of a judicially imposed remedy, predated *Gingles*. See *Chapman v. Meier*, 420 U.S. 1, 18–20 (1975).

31. *Gingles*, 478 U.S. at 51.

32. *Id.*

33. S. REP. NO. 97-417 (1982), reprinted in 1982 U.S.C.C.A.N. 177.

34. 42 U.S.C. § 1973(b) (2006).

35. See, e.g., *Abrams v. Johnson*, 521 U.S. 74, 93 (1997).

36. *Gingles*, 478 U.S. at 48 n.15. The other was the extent of success of candidates of minority race. *Id.*

37. Issacharoff, *supra* note 10, at 1851. Note that the California Voting Rights Act is modeled after section 2 but expressly eliminates the first *Gingles* prerequisite as a threshold for liability (although the viability of a single-membered district may be considered at the remedial stage). CAL. ELEC. CODE § 14028(c) (West 2003).

38. *Gingles*, 478 U.S. at 61–74. See *supra* text accompanying note 26 for my use of these terms.

39. The California Voting Rights Act defines racially polarized voting exclusively in terms of racially correlated voting. ELEC. § 14026(e). It also provides that statistical methods

Second, Justice Brennan's discussion of the evidence regarding racial bloc voting was entirely numerical.⁴⁰ Specifically, Justice Brennan relied exclusively on evidence (derived from ecological inference techniques) from one of the plaintiffs' experts regarding the percentages of black and white voters supporting black candidates; his point was that the former percentage was high, the latter was low, and black-preferred candidates usually lost.⁴¹ This exclusively numerical focus created an apparent separation between quantitative evidence regarding voting patterns and a variety of other forms of potentially informative evidence about such patterns that were now apparently relevant only at the totality-of-circumstances stage (e.g., the use of race-based campaign appeals). As explained below, courts have followed this near-exclusive focus on the numbers in adjudicating section 2 challenges to redistricting.

Third, Justice Brennan's numerical discussion included a footnote observing that the plaintiffs' expert in the case had used two particular ecological inference techniques called "extreme case" (also known as "homogenous precincts") analysis and "ecological regression."⁴² As I have detailed elsewhere,⁴³ this observation was read as an endorsement of these two ecological inference methods, which exercised a stranglehold on empirical proof in vote dilution litigation for the next decades, despite growing indications of their shortcomings and the emergence of superior methods.⁴⁴

B. Post-Gingles Questions and Trends

Several questions remained unanswered after *Gingles*, two of which concern the themes of this Article because they demonstrate how the evolution of racial bloc voting doctrine has depended on the presumed availability of cheap, near-perfect information about voting patterns in a biracial polity. First, how much of the

accepted in federal cases under section 2 may be used in cases arising under the California Act. *Id.*

40. This was so despite explicit district court findings (mentioned earlier in the opinion) that race-based campaign appeals had contributed to blacks' inability to participate in the political process. *Gingles*, 478 U.S. at 40. As I discuss below, such appeals constitute important but nonquantitative evidence of racial bloc voting.

41. *See id.*

42. *Id.* at 52–53 & n.20.

43. Greiner, *supra* note 24, at 116–17.

44. *See, e.g.,* League of United Latin Am. Citizens v. Perry, 548 U.S. 399, 500 (2006) (Roberts, C.J., concurring in part and dissenting in part) (noting that proof of racial bloc voting "is typically done through regression analyses of past voting records"); *see also* Campos v. City of Baytown, 840 F.2d 1240, 1243 (5th Cir. 1988). A research assistant and I, after reviewing the published redistricting opinions listed in Ellen Katz with Margaret Aisenbrey, Anna Baldwin, Emma Cheuse & Anna Weisbrodt, *Documenting Discrimination in Voting: Judicial Findings Under Section 2 of the Voting Rights Act Since 1982*, 39 U. MICH. J. L. REFORM 643 (2006), as well as subsequent cases, were unable to discover any instance of a court finding racial bloc voting when the plaintiff did not present evidence from ecological regression or extreme case analysis. Note that courts have, for the most part, considered a third ecological inference technique, called "King's EI," only when it conforms with the results of regression and/or extreme case. *See, e.g.,* United States v. City of Euclid, 580 F. Supp. 2d 584, 598 (N.D. Ohio 2008).

numerical focus in Justice Brennan's discussion of the evidence supporting a finding of racial bloc voting penetrated the concept or definition of bloc voting? Specifically, could voting be deemed racially polarized when white support rates for minority-preferred candidates were in some numerical sense "high," even if these "high" levels were ordinarily insufficient to allow minority candidates of choice to succeed?⁴⁵ Second, what is the role of causation in the racial bloc voting inquiry? I briefly analyze the judiciary's struggles with each question before demonstrating that the answers the courts have proposed place even greater pressure on the premises of perfect information and biraciality. I conclude with a brief word on anti-essentialism.

1. Correlations Versus Functionality

The first question concerns the extent to which racial bloc voting should be defined in numerical as opposed to functional terms. Is a certain numerical level of white crossover voting (meaning white voter support for minority-preferred candidates) so "high" as to be inconsistent with a finding that voting is racially polarized, even if that "high" level is insufficient to allow minority-preferred candidates to succeed? The following hypothetical demonstrates how this might occur. Imagine an at-large system in a 100-person electorate with eighty white and twenty minority voters. A high percentage of minorities (80%) regularly support minority-preferred candidates, but so do 40% of whites.⁴⁶ The 40% white crossover vote might seem "high," implying in some sense merely "mild" polarization, but actually, the fact that 60% of whites regularly oppose minority-preferred candidates means that the latter will never win an election. The minority-preferred candidates regularly receive 32 ($.4 * 80$) white votes plus 16 ($.8 * 20$) minority votes, for a total of 48, as opposed to the non-minority-preferred candidates, who regularly receive 48 ($.6 * 80$) plus 4 ($.2 * 20$) minority votes, for a total of 52. Thus, the "mild" white bloc voting is sufficient to induce regular defeat of minority-preferred candidates. This result obtains despite the fact that minority-preferred candidates receive more (in fact, twice as many) votes from whites than they do from minorities.

Prior to *Gingles*, a debate had raged among expert witnesses concerning whether, to be legally relevant, the correlation between voter race and voter choice had to exceed numerically defined thresholds.⁴⁷ For example, some experts testifying on behalf of official defendants had contended that racially correlated voting could not be deemed legally significant unless minority voter support rates for minority-preferred candidates ordinarily exceeded 80% and corresponding white voter support rates ordinarily fell below 20%.⁴⁸ Note the biraciality inherent

45. See Samuel Issacharoff, *Is Section 5 of the Voting Rights Act a Victim of Its Own Success?*, 104 COLUM. L. REV. 1710, 1726 (2004).

46. See *infra* note 55 for why I chose 40% white crossover voting as a "high" figure.

47. The early debate is summarized in Grofman, *supra* note 10, at 209. For evidence of its more recent revival, see the standards employed in Jeffrey S. Zax, *The Statistical Properties and Empirical Performance of Double Regression*, 13 POL. ANALYSIS 57, 70–74 (2005).

48. Grofman, *supra* note 10, at 209.

in such an argument. Lower courts mostly interpreted Justice Brennan's opinion in *Gingles* as foreclosing reliance on this kind of numerically defined threshold or rule of thumb.⁴⁹ But some commentators did not,⁵⁰ and there are signs that the Supreme Court might soon seek to engraft numerically defined thresholds or rules of thumb into the definition of racial bloc voting, thus reviving the arguments of pre-*Gingles* defendants' experts.

Specifically, in *Abrams v. Johnson*,⁵¹ the Court deemed as evidence *against* the existence of racial bloc voting a lower court finding that "the average percentage of whites voting for black candidates across Georgia ranged from 22% to 38%, and the average percentage of blacks voting for white candidates ranged from 20% to 23%."⁵² And last term, in *Bartlett v. Strickland*,⁵³ despite the fact that a stipulation had removed the issue of racial bloc voting from the litigation,⁵⁴ the oral argument was dominated by questions regarding the level of white crossover voting consistent with a finding of racial bloc voting, with no inquiries into the success of minority-preferred candidates.⁵⁵ The subsequent opinion, both by its own

49. See, e.g., *Bone Shirt v. Hazeltine*, 461 F.3d 1011, 1026–27 (8th Cir. 2006) (Gruender, J., concurring); *Lewis v. Alamance Cnty.*, 99 F.3d 600, 613 (4th Cir. 1996); *Vecinos De Barrio Uno v. City of Holyoke*, 72 F.3d 973, 989 (1st Cir. 1995); *Nipper v. Smith*, 39 F.3d 1494, 1533 n.76 (11th Cir. 1994) (en banc) (plurality opinion) (holding that the required "level of white bloc voting . . . will vary according to local circumstances"); *Jenkins v. Red Clay Consol. Sch. Dist. Bd. of Educ.*, 4 F.3d 1103, 1123 (3d Cir. 1993) ("practical matter"); *Collins v. City of Norfolk*, 883 F.2d 1232, 1240 (4th Cir. 1989); *City of Euclid*, 580 F. Supp. 2d at 595, 602–03 (N.D. Ohio 2008) (citing *Thornburg v. Gingles*, 478 U.S. 30, 57 (1985)) ("functional analysis"). There were rare exceptions: *Clarke v. City of Cincinnati*, 40 F.3d 807, 816–17 (6th Cir. 1994) (Boggs, J., concurring); *Sessions v. Perry*, 298 F. Supp. 2d 451, 484 (E.D. Tex. 2004), *aff'd in part and rev'd in part*, 548 U.S. 399 (2006).

50. See *Pildes*, *supra* note 19, at 1563 ("The Supreme Court has not yet had to specify what precise levels of white support for minority-preferred candidates defines the boundary between polarized and nonpolarized voting."). *But see id.* at 1565–66 (articulating a more functional view).

51. 521 U.S. 74 (1997).

52. *Id.* at 92. *But see id.* (noting supposed substantial success among black and black-preferred candidates). The *Abrams* court's use of figures was odd, as the numbers suggested that black voters in that case generally opposed white candidates at a rate of around 80% (which, again, seems high) and that, apparently, a majority of white voters rarely if ever supported a black-preferred candidate. See, e.g., *Milwaukee Branch of the NAACP v. Thompson*, 116 F.3d 1194, 1198 (7th Cir. 1997) (Easterbrook, J.) (characterizing this level of white support for black candidates as allowing "[n]ot very many" such candidates to prevail). These figures were similar to those Justice Brennan appended to his opinion in *Gingles* to support the contention that voting was racially polarized. See *Thornburg v. Gingles*, 478 U.S. 30, 80–82 (1986) (showing white support rates for black candidates ranging from 10%–50% with several values in the 40% region).

53. 129 S. Ct. 1231 (2009).

54. The parties had stipulated that the third *Gingles* prerequisite had been met. *Id.* at 1240.

55. See Transcript of Oral Argument, *Bartlett v. Strickland*, 129 S. Ct. 1231 (2009) (No. 07-689), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/07-689.pdf. There were extensive passages in the oral argument

language⁵⁶ and by its adoption of a bright-line rule regarding the first *Gingles* prerequisite,⁵⁷ appeared to signal an inclination to deem racial bloc voting absent if the percentage of white voters supporting minority-preferred candidates exceeded certain numerical thresholds. Thus, the Supreme Court may be setting the foundation for the adoption of a rule (perhaps a rule of thumb) specifying that, for example, a 40% white crossover rate (perhaps some kind of “average” rate, although it is hard to understand what would be “averaged” here) forecloses a finding of racial bloc voting, and/or that a greater-than-20% minority crossover rate has the same consequence.⁵⁸

The trend toward a numerical limit or a rule of thumb turning on white crossover voting, if such a trend exists, depends on both of the premises identified above, the availability of near-perfect information about voting patterns and biraciality. Hard, or even presumptive, numerical thresholds cannot tolerate more than a scintilla of statistical uncertainty. What would a lower court working under such a threshold do when faced with an analysis showing that in a particular election, the fraction of Hispanic voters supporting a particular candidate was 95% likely to be between .63 and .98?⁵⁹ What if relevant intervals were this wide in a series of elections? Moreover, what crossover numbers should a court examine in a multiracial polity? If, per the city of Boston examples discussed in Part IV, a black candidate runs against a white candidate, how does one conceptualize Hispanic “crossover,” and what support rate among Hispanic voters would be relevant? Further, suppose in a polity (such as the city of Boston) with four nontrivial racial

transcript. Here is a sample:

Justice Souter: Well, you don’t suggest that if there were 40 percent white crossover voting, we would find white bloc voting within the *Gingles* condition, do you? Do you think that is a serious possibility?

...

Justice Alito: ... 40 percent

...

Justice Scalia: ... 40 percent crossover is fairly high

Id. Chief Justice Roberts later suggested that 11% white crossover voting would be inconsistent with a finding that voting was racially polarized. *Id.*

Note that a decade ago, the Ninth Circuit drew a line at 60% white crossover voting. *See Old Person v. Cooney*, 230 F.3d 1113, 1122 (9th Cir. 2000).

56. *Strickland*, 129 S. Ct. at 1244 (implying that 20% white crossover voting is inconsistent with racial bloc voting).

57. *Id.* at 1246 (justifying a formalist “50%” rule for the first *Gingles* prerequisite with a desire for bright-line rules).

58. Meanwhile, official defendants have revived arguments based on numerical thresholds. *See, e.g., United States v. City of Euclid*, 580 F. Supp. 2d 584, 596 (E.D. Ohio 2008).

59. These are actual figures from the city of Boston for the support rates for Hillary Clinton. *See infra* note 150. Regarding the terms “point estimate” and “interval,” which are used throughout this paper: A point estimate may be thought of as a statistical technique’s best guess as to the value of some quantity of interest. An interval provides a range within which the true value is in some sense “likely” to fall. A commonly used interval is a 95% interval, meaning that the interval is (in various philosophical senses that need not concern us here) 95% likely to contain the true value. The wider the 95% interval, the less we know about the quantity of interest.

groups, whites, Asians,⁶⁰ blacks, and Hispanics, all prefer candidates of their own race first, but when no candidate from their own group runs, each group's preferences correlate with the combination of candidate races presented (e.g., white voters choose the black candidate when a black faces a Hispanic, and so forth). Then, it may be that one group's preferred candidates are consistently shut out of the process despite alternately receiving support from each of the other racial groups. Averaging in this kind of multiracial, shifting-coalition setting could show support rates below any reasonable threshold even though every white voted the same as every other white, every black voted the same as every other black, and so on (meaning that voting is perfectly racially correlated).

Finally, matters become more difficult if voting is not in fact racially polarized. For technical reasons Kevin Quinn and I have explored elsewhere,⁶¹ the degree of separation among racial groups' voting preferences is related to how precisely those preferences can be estimated. In other words, if whites vote differently from blacks who vote differently from Hispanics, the confidence intervals for all three groups usually narrow. So we have a better idea of how racial groups are voting if they have different preferences than we do if they have similar preferences. The connection here to allegations of a decrease in white bloc voting behavior is obvious, with the ultimate implication being that it becomes hard to distinguish two cases: (1) similarity of preferences among racial groups (meaning no racially correlated voting), and (2) lack of information about how racial groups are voting (meaning little information from estimation techniques currently in use).

In short, the questions posed in the previous paragraphs have no answers unless near-perfect information is available and unless the polity is essentially biracial. If these two premises break down, as has already happened, so must a reliance on numerical thresholds or rules of thumb.

2. Causation

The debate on the role of causation⁶² in the racial bloc voting inquiry has occurred primarily in the lower courts,⁶³ which have discussed the issue at great

60. On the general viability of a pan-Asian voting bloc, see Christian Collet, *Bloc Voting, Polarization, and the Panethnic Hypothesis: The Case of Little Saigon*, 67 J. POL. 907 (2005).

61. D. James Greiner & Kevin M. Quinn, *R x C Ecological Inference: Bounds, Correlations, Flexibility and Transparency of Assumptions*, 172 J. ROYAL STAT. SOC'Y (A) 67, 74–76 (2009).

62. See *supra* note 26 and accompanying text for the various ways in which the issue of causation is phrased in the racial vote dilution context.

63. The Supreme Court has indicated some skepticism of the role of racially caused voting in dilution litigation. In *League of United Latin Am. Citizens v. Perry*, 548 U.S. 399, 423–47 (2006), for example, the Supreme Court found a section 2 violation in Texas's mid-decade congressional re-districting without mentioning the concept. See also *Caperton v. A.T. Massey Coal Co.*, 129 S. Ct. 2252, 2264 (2009) (“[P]roving what ultimately drives the electorate to choose a particular candidate is a difficult endeavor, not likely to lend itself to a certain conclusion.”). Both *League of United Latin Am. Citizens* and *Caperton* were Kennedy opinions.

length. These lower courts have picked up on language in Justice O'Connor's opinion in *Gingles* endorsing a focus on the reasons for white voter rejection of minority-preferred candidates,⁶⁴ as well as Justice White's cryptic *Gingles* concurrence.⁶⁵ Here, doctrinally, the lower courts have split on a variety of dimensions, including (i) whether evidence proving or refuting that voting is racially caused is relevant in vote dilution lawsuits;⁶⁶ and (ii) whether, if relevant, the inquiry into causation should occur when a court adjudicates the *Gingles* prerequisites or the totality-of-circumstances stage.⁶⁷ Courts appear to consider these doctrinal disputes important for racial bloc voting,⁶⁸ but equally important for the purposes of this Article is the nature of the evidence upon which courts rely to adjudicate causation. Two points are particularly relevant. First, although judges have long anticipated that quantitative evidence on causation (in the form of

64. *Thornburg v. Gingles*, 478 U.S. 30, 100–02 (1986) (O'Connor, J., concurring).

65. *Id.* at 82–83 (White, J., concurring).

66. Some circuits say such evidence is relevant. *Goosby v. Town Bd. Hempstead*, 180 F.3d 476, 493 (2d Cir. 1999); *Milwaukee Branch of the NAACP v. Thompson*, 116 F.3d 1194, 1198–1200 (7th Cir. 1997); *Lewis v. Alamance County*, 99 F.3d 600, 615 n.12 (4th Cir. 1996); *Sanchez v. Colorado*, 97 F.3d 1303, 1313 (10th Cir. 1996) (“perhaps”); *Vecinos De Barrio Uno v. City of Holyoke*, 72 F.3d 973, 983 & n.4 (1st Cir. 1995); *League of United Latin Am. Citizens v. Clements*, 999 F.2d 831, 856–58 (5th Cir. 1993). Note that *Sanchez* is not 100% clear. One circuit has held that causation is never relevant to vote dilution. *United States v. Blaine County*, 363 F.3d 897, 912 (9th Cir. 2004); *Ruiz v. City of Santa Maria*, 160 F.3d 543, 556–58 (9th Cir. 1998). Another circuit has implied, but not held, the same. *Jenkins v. Red Clay Consol. Sch. Dist. Bd. of Educ.*, 4 F.3d 1103, 1135–38 (3rd Cir. 1993). Another circuit has definitively resolved the issue only in a plurality opinion. *Nipper v. Smith*, 39 F.3d 1494, 1515 (11th Cir. 1994) (en banc) (plurality opinion); *see id.* at 1547 (Hatchett, J., dissenting); *see also Solomon v. Liberty Cnty. Comm'rs*, 221 F.3d 1218, 1225 (11th Cir. 2000) (en banc). Courts in other circuits have found section 2 violations in several cases without discussing causation. *Bone Shirt v. Hazeltine*, 336 F. Supp. 2d 976 (D.S.D. 2004); *Corbett v. Sullivan*, 202 F. Supp. 2d 972 (E.D. Mo. 2002); *Jeffers v. Clinton*, 730 F. Supp. 196 (E.D. Ark. 1989). *But see Jeffers*, 730 F. Supp. at 243 (Eisele, C.J., concurring and dissenting, filed Jan. 26, 1990).

67. For the position that such evidence is relevant at the prerequisite stage, *see League of United Latin Am. Citizens*, 999 F.2d at 855–59; *Barnett v. City of Chicago*, 969 F. Supp. 1359, 1409–11 (N.D. Ill. 1997), *aff'd in part and rev'd in part on other grounds*, 141 F.3d 699 (7th Cir. 1998). For the totality-of-circumstances stage, *see Goosby*, 180 F.3d at 493; *Thompson*, 116 F.3d at 1199; *Lewis*, 99 F.3d at 615 n.12; *Vecinos De Barrio Uno*, 72 F.3d at 980.

68. If causation is relevant but only at the totality-of-circumstances stage, then section 2 plaintiffs will encounter the issue after receiving the benefit of a presumption that a party who proves the three *Gingles* prerequisites should ordinarily win the lawsuit. *See, e.g., Teague v. Attala Cnty.*, 92 F.3d 283, 293 (5th Cir. 1996); *NAACP v. City of Niagara Falls*, 65 F.3d 1002, 1019 n.21 (2d Cir. 1995); *Clark v. Calhoun Cnty.*, 21 F.3d 92, 97 (5th Cir. 1994); *Jenkins*, 4 F.3d at 1135; *United States v. City of Euclid*, 580 F. Supp. 2d 584 (N.D. Ohio 2008). And in fact, cases in which a plaintiff proves the three *Gingles* prerequisites but fails to prevail at the totality-of-circumstances stage appear to be rare. *See Katz et al., supra* note 44, at 660.

multivariate modeling) would emerge,⁶⁹ none has.⁷⁰ This is in contrast to other civil rights litigation class action contexts, where acceptance of statistical evidence on the existence vel non of causally defined harm is the norm.⁷¹ Second, once a plaintiff has proved racially correlated voting, the lower courts have typically placed the burden of disproving racial animus as the source of such patterns on the official defendant.⁷² Legally, this latter choice is hard to justify; none of the traditional indicators of an affirmative defense (e.g., defendant's superior access to evidence, statutory language) support this choice.

In my view, the nonemergence of statistical techniques to tackle causation and the placement of the burden of persuasion on the defendant are related in that the lower courts appear to recognize implicitly that if they assigned the burden of a causation proof to the plaintiff (as is true in other civil rights contexts⁷³) and took that burden seriously, no other issue in vote dilution litigation would be relevant, and no plaintiff would prevail. Nevertheless, there are reasons to believe that a focus on causation will continue to preoccupy courts. Justice O'Connor's opinion in *Gingles* aside, at least one Justice has suggested in another context that statutes remedying disparate impact alone may be unconstitutional.⁷⁴

Finally, note that the first step in discerning causation based on quantitative evidence would be near-perfect information regarding the voting preferences of different racial groups. Discerning what these preferences actually are would seem a prerequisite to explaining them. Moreover, any such inquiry will be more difficult in a multiracial setting. Thus, the causation issue simmering in the lower courts depends on the two premises of near-perfect information and biraciality identified above.

3. A Short Note on Anti-Essentialism

I pause here to mention briefly the rise of anti-essentialism,⁷⁵ a vote dilution principle that has not thus far penetrated racial bloc voting doctrine but which may

69. Cf. *Holder v. Hall*, 512 U.S. 874, 904 n.13 (1994) (Thomas, J., concurring in the judgment); *League of United Latin Am. Citizens*, 999 F.2d at 859–60 (“detailed multivariate analysis”); *Jones v. City of Lubbock*, 730 F.2d 233, 234 (5th Cir. 1984) (Higginbotham, J., concurring); *Rodriguez v. Pataki*, 308 F. Supp. 2d 346, 433–34 (S.D.N.Y. 2004).

70. I argue that pursuing a causal inquiry in this context is highly suspect in D. James Greiner, *Causal Inference in Civil Rights Litigation*, 122 HARV. L. REV. 533, 590–97 (2008).

71. See, e.g., *id.*; see generally RAMONA L. PAETZOLD & STEVEN L. WILLBORN, *THE STATISTICS OF DISCRIMINATION: USING STATISTICAL EVIDENCE IN DISCRIMINATION CASES* (1996).

72. See, e.g., *Vecinos De Barrio Uno*, 72 F.3d at 983; *Nipper v. Smith*, 39 F.3d 1494, 1524 (11th Cir. 1994) (en banc) (plurality opinion). Another circuit has flip-flopped. Compare *League of United Latin Am. Citizens*, 999 F.2d at 855–59 (on plaintiff), with *Teague*, 92 F.3d at 290 (on defendant), and *Session v. Perry*, 298 F. Supp. 2d 451, 478 n.88 (E.D. Tex. 2002) (on plaintiff), *rev'd in part on other grounds sub nom. League of United Latin Am. Citizens v. Perry*, 548 U.S. 399 (2006).

73. See, e.g., *Tex. Dep't Cmty. Affairs v. Burdine*, 450 U.S. 248, 252–57 (1981).

74. See *Ricci v. DeStefano*, 129 S.Ct. 2658, 2681–83 (2009) (Scalia, J., concurring).

75. For the “essentialism” label, see, for example, SAMUEL ISSACHAROFF, PAMELA S. KARLAN & RICHARD H. PILDES, *THE LAW OF DEMOCRACY* 789 (3d ed. 2007).

do so soon.⁷⁶ The anti-essentialism principle holds that governments may not act on the prohibited “assumption” that members of a racial group “share the same political interests, and will prefer the same candidates at the polls.”⁷⁷ On at least one account, this principle underlies the prohibition, stemming from *Shaw v. Reno*⁷⁸ and its progeny, against the overuse of race in the districting process.⁷⁹ The principle also provided the foundation for *League of United Latin American Citizens v. Perry*’s⁸⁰ engrafting of a “cultural compactness”⁸¹ requirement into the first *Gingles* prerequisite; the idea here being that minority groups whose members are geographically dispersed (perhaps due to sparse population of any kind in the relevant area) and characterized by differences in socioeconomic indicia cannot be “compact” enough to warrant a judicially imposed single-membered district remedy.

I do not engage further with anti-essentialism because, as noted above, my project is to articulate a way forward that is consistent with the legal framework as it currently exists, a framework the Court at least says that it is reluctant to abandon.⁸² The application of anti-essentialism to racial bloc voting results in one of two implications. The first is the triumph of theory over facts,⁸³ in that no amount of actual proof that voters of the same race “share the same political interests, and . . . prefer the same candidates at the polls”⁸⁴ keeps this idea from constituting an “assumption,” and because this idea is an “assumption” and not a “fact,” officials may not rely on it when drawing district lines.⁸⁵ If that is true, then racial bloc voting is always an assumption that can never be proved. The second possible implication is that a proof of racially polarized voting will in future cases

76. See Pildes, *supra* note 7, at 1147–48 (predicting that anti-essentialism would lead the judiciary toward “a more complex, multivariate approach to defining racial polarization”).

77. See *Miller v. Johnson*, 515 U.S. 900, 912, 920 (1995) (quoting *Shaw v. Reno*, 509 U.S. 630, 647 (1993)).

78. 509 U.S. 630 (1993).

79. See *Miller*, 515 U.S. at 917 (approving a “predominant factor” analysis). For another account, see Richard H. Pildes & Richard G. Niemi, *Expressive Harms, “Bizarre Districts,” and Voting Rights: Evaluating Election-District Appearances After Shaw v. Reno*, 92 MICH. L. REV. 483 (1993) (interpreting *Shaw* in terms of expressive harms).

80. 548 U.S. 399, 433–35 (2006).

81. Daniel Ortiz, *Cultural Compactness*, 105 MICH. L. REV. FIRST IMPRESSIONS 48 (2006), <http://students.law.umich.edu/mlr/firstimpressions/vol105/ortiz.pdf>.

82. *Bartlett v. Strickland*, 129 S. Ct. 1231, 1244 (2009).

83. See, e.g., Karlan, *supra* note 6, at 304.

84. *Miller v. Johnson*, 515 U.S. 900, 920 (1995) (quoting *Shaw v. Reno*, 509 U.S. 630, 647 (1993)).

85. One can see this tension at work in *League of United Latin American Citizens* itself. To justify a finding that Latinos in west Texas met the three *Gingles* prerequisites, Justice Kennedy quoted with approval a district court finding that voting was racially polarized “throughout the State.” *League of United Latin Am. Citizens v. Perry*, 548 U.S. 399, 427–29 (2006) (quoting *Session v. Perry*, 298 F. Supp. 2d 451, 492–93 (E.D. Tex. 2002)). A few pages later, however, when holding that a borderland-to-Austin district failed to meet the first *Gingles* prerequisite, Justice Kennedy reduced the idea that voting was racially polarized to a “mathematical possibility.” *Id.* at 435.

be necessary but not sufficient, with the additional evidence required perhaps taking the form of a showing that the relevant racial minority has similar levels of income, educational achievement, literacy, and so forth. If so, then the discussion in this article, which focuses on information about voting patterns, is still necessary to the future of racial bloc voting, but it also may not be sufficient.

II. THE EMPIRICS OF RACIAL BLOC VOTING

The previous Part discussed how, beginning with Justice Brennan's opinion in *Gingles* and continuing to the present, the doctrinal definition of racial bloc voting has depended on the twin premises of near-perfect information on racial voting patterns and biraciality, with recent trends suggesting still-greater dependency. This Part analyzes the empirical challenges these doctrinal moves have created in a nation characterized by an increasingly multiracial polity and by allegations of reduced white voter polarization. Because courts have focused to such an extraordinary extent on ecological inference techniques, I focus some of my attention there as well. My purpose in this Part is not to suggest that ecological inference should no longer be attempted, nor to catalog every one of the statistical shortcomings of the various available techniques.⁸⁶ Rather, my purpose is to demonstrate that current circumstances, particularly an increasingly melting-pot United States polity, now challenge these techniques in new ways. These challenges require the use of modern methods, such as the one Kevin Quinn and I invented called the GQ Method. But given the inherent shortcomings of ecological inference, shortcomings current circumstances are rapidly exposing, we need to search for alternative sources of information, a subject I take up in Part III.

Section II.A provides an intuitive⁸⁷ account of how ecological inference works and why it is an unusually fragile class of statistical methodology. Section II.B provides a similarly intuitive account of why the presence of additional racial groups increases the fragility of the ecological inferences. Section II.C shows that forcing the construction of a "biracial" polity by dividing potential voters into members and nonmembers of the plaintiffs' group is not a viable solution. Section II.D discusses the extent to which modern ecological inference methods can solve these problems; as suggested above, the answer is partly, but not completely, and not enough over the long term. Section II.E articulates an additional empirical challenge unrelated to ecological inference, namely, the potentially decreasing amount of information in so-called "exogenous" contests. Section II.F solidifies the

86. For a dated but still instructive debate on the pros and cons of ecological inference, see the articles in Volume 15 of *Evaluation Review*, which are primarily dedicated to this subject, particularly David A. Freedman, Stephen P. Klein, Jerome Sacks, Charles A. Smyth & Charles G. Everett, *Ecological Regression and Voting Rights*, 15 EVAL. REV. 673 (1991).

87. My discussion throughout this paper sacrifices mathematical rigor to accessibility. Readers desiring a more rigorous treatment are referred to the references in the footnotes, along with the following, which are listed in increasing order of technical sophistication: Bernard Grofman, *A Primer on Racial Bloc Voting Analysis, in THE REAL Y2K PROBLEM: CENSUS 2000 DATA AND REDISTRICTING TECHNOLOGY* 43 (Nathaniel Persily ed., 2000); Greiner, *supra* note 24; and the collected works in *ECOLOGICAL INFERENCE: NEW METHODOLOGICAL STRATEGIES* (Gary King, Ori Rosen & Martin A. Tanner eds., 2004).

discussion with a short example. Section II.G addresses whether the empirical situation with respect to racial bloc voting is unusual in civil rights law.

A. How Ecological Inference Works (Intuitively) and Why It Is Inherently Fragile

As noted above, almost all evidence of racial bloc voting to date has come from two statistical techniques mentioned in Justice Brennan's *Gingles* opinion, called "ecological regression" and "homogenous precincts." Both ecological regression and homogenous precincts are examples of a broader class of statistical methods called "ecological inference." As relevant to vote dilution, ecological inference is the attempt to glean information about racial voting patterns by examining precinct-level vote returns together with precinct-level demographic information, typically about voting age population (VAP).⁸⁸ Thus, for example, we know (from the census) the number of (say) African Americans and Caucasians eighteen years or older in a precinct, and we know (from vote returns) for any particular election the number of votes cast for (say) the Democratic candidate and the Republican candidate. What we need to know in order to figure out whether voting is racially correlated is the number of African American voters⁸⁹ who voted for the Democrat and who voted for the Republican, as well as the same figures for Caucasians.

One can think of information of this kind as coming from two sources, (i) the so-called "bounds" within a precinct, and (ii) associations of counts across precincts. Regarding the first source, we know that within a particular precinct, we cannot have more African Americans voting Democrat than we have either African Americans or Democratic votes there. Thus, there are "bounds" for the quantities

88. See Greiner, *supra* note 24, at 121. Note that there is an issue here, potentially important in cases involving Hispanic and Asian Americans, regarding whether one should use raw population (as is done for one person, one vote purposes), VAP, or citizen-VAP (CVAP). See Nathaniel Persily, *The Law of the Census: How to Count, What to Count, Whom to Count, and Where to Count Them*, 45 IND. L. REV. (forthcoming 2011) (manuscript at 18–21) (copy on file with author). Part of the problem is that courts have resolutely refused to acknowledge that citizenship information is not part of the basic census form (and has not been for some time). Instead, citizenship information used to come from the census long form, which was sent to only one-sixth of housing units, and now comes from the American Community Survey, which goes to only 2.5% of housing units. The shift to the American Community Survey means that the citizenship information available to redistricters in the 2010 round will be the results of five-year averaging and (particularly at the low levels of geography used in districting) will come with substantial uncertainty (due to sampling and modeling) expressed in the form of confidence intervals. *Id.* at 22–25. Again, it is not clear how a bright-line rule of the kind the *Bartlett* Court appears to favor would have any meaning here if courts focus on CVAP.

Note that some states, such as South Carolina, do ask for race information when voters register. See Grofman, *supra* note 87, at 21–50. Such information can be combined with public records recording who voted to improve ecological inference results. Of course, such information also begs a question about whether we should care about actual voters, registered voters, eligible voters, or something else. See *infra* text accompanying note 103.

89. Note that racially correlated voting is usually conceptualized in terms of what voters, not potential voters, do. See *infra* text accompanying note 107.

we are attempting to estimate. Tighter⁹⁰ bounds are better because they mean we have more information.⁹¹ Bounds tend to be tighter in precincts that are dominated by one racial group; the intuition here is that if one racial group dominates (meaning constitutes, say, 90% or more of the precinct's VAP), then the observed vote totals in that precinct can be safely attributed to this racial group alone, as there is essentially no one else to speak of in that precinct. For this reason, strongly segregated housing patterns are helpful for ecological inference, a point to which I return below.

Regarding the second source of information, associations of counts across precincts, the numbers may suggest an association between an increase in a racial group's numbers with an increase in a candidate's vote totals. For example, the data may show that generally, precincts with larger black VAP have higher Democratic vote totals. From such a pattern, an ecological inference method attempts to infer that blacks are voting Democrat.

Older ecological inference methods typically use only one of these two sources of information. Both of the techniques identified in Justice Brennan's *Gingles* opinion,⁹² "homogenous precincts,"⁹³ and "ecological regression,"⁹⁴ are such single-source techniques. The homogenous precincts technique uses information only from the first source (the bounds), and because the bounds are usually tight only in precincts dominated by one racial group, it uses only these "homogenous" precincts.⁹⁵ For this reason, this technique must depend on the assumption that, say, white voters in all-white precincts support Democrats at exactly the same rate as white voters in mixed-race precincts.

Meanwhile, because ecological regression makes use only of the second source of information (associations across precincts), this method can produce physically impossible estimates, such as that 115% of Hispanic voters supported the white candidate. Without the bounds to constrain the numbers, impossible results can (and often do) occur.⁹⁶ An important point for the themes of this Article is what courts and expert witnesses do in cases in which regression produces impossible results. The dominant practice is to change the output of the model to the nearest physically feasible number (100% in the example above), argue that the impossible

90. "Tighter" here means that the upper bound and the lower bound are closer together, so that the interval in which the truth could lie is smaller.

91. See Otis Dudley Duncan & Beverly Davis, *An Alternative to Ecological Correlation*, 18 AM. SOC. REV. 665, 666 (1953) ("The individual correlation is approximated most closely by the least maximum and the greatest minimum among the results for several systems of areal subdivision.").

92. See *supra* text accompanying note 42.

93. Also known as "extreme case" analysis.

94. Also known as "Goodman" regression, or "BERA," for "bivariate ecological regression analysis." Note that the "bivariate" in this acronym is a sign of trouble, as the "bi" part assumes only two racial groups in the polity.

95. Greiner, *supra* note 24, at 126-30.

96. Often, such physically impossible estimates are accompanied by "wonderful regression fits," CHRISTOPHER H. ACHEN & W. PHILLIPS SHIVELY, CROSS-LEVEL INFERENCE 74 (1995), corresponding to a high degree of statistical certainty that the "true" value is close to, say, 115%.

number is strong evidence of a high degree of cohesion in the racial group at issue, and attribute the anomaly to “sampling variability,” that is, to chance.⁹⁷ The last claim is made despite small estimated standard errors (if these are provided, which they often are not), suggesting that the impossible result is *unlikely* to be due to chance.⁹⁸

Why are ecological inference methods considered so fragile?⁹⁹ Few jurisdictions have housing patterns so strongly segregated that all (or even most) voters live in racially uniform precincts. Suppose the data show that an increasing number of Hispanics in precincts is associated with an increasing number of votes for a black candidate (running against a white), leading to the conclusion that Hispanics are voting for the black candidate. The problem is that we do not know whether it really is the Hispanics that are voting for this black candidate. It might be that non-Hispanics living in heavily Hispanic neighborhoods are more liberal than non-Hispanics living in non-Hispanic neighborhoods, and that liberals are voting for the black candidate. In that case, non-Hispanics effectively fool us by being more likely to vote for the black candidate if they live in Hispanic neighborhoods, causing the model to “think” that Hispanics are voting for the black candidate (when such is not the case).¹⁰⁰ I have encountered this deceptive situation in my research.¹⁰¹

B. Why Additional Racial Groups Make Matters Difficult

The previous section explained intuitively how ecological inference techniques work as well as why they are so fragile as a general matter; particularly fragile are the two techniques *Gingles* mentioned: homogenous precincts and ecological regression. This section shows why these techniques are even more fragile when they are applied to multiracial jurisdictions. The general theme here is simple: more racial groups mean more moving parts.

1. Within a Single Precinct

One way in which additional racial groups make ecological inference more difficult is by making it harder for a model to figure out what is happening within a particular precinct. To see this, imagine first a precinct that has only three people of voting age in it, two white and one black. For a particular election, the secretary of

97. See Greiner, *supra* note 24, at 132–33 (documenting the extent of this practice and noting a case in which an expert adjusted an estimate of -400% to 0); see also *id.* app. A (listing cases).

98. Unfortunately, it appears that the practice of relying on physically impossible estimates produced by regression remains live and well. See, e.g., *United States v. City of Euclid*, 580 F. Supp. 2d 584, 598 n.17 (N.D. Ohio 2008).

99. Well-respected members of the statistical community believe that ecological inference should never be attempted. See, e.g., Stephen P. Klein, Jerome Sacks & David A. Freedman, *Ecological Regression Versus the Secret Ballot*, 31 JURIMETRICS J. 393 (1991).

100. See W.S. Robinson, *Ecological Correlations and the Behavior of Individuals*, 15 AM. SOC. REV. 351 (1950).

101. Greiner & Quinn, *supra* note 61, at 76.

state reports that for this precinct, one person voted Democrat and one person voted Republican. From that, we can tell that one person did not vote. The question is, how many different combinations of voter race/voter choice could give rise to these numbers? Three, with the possibilities listed immediately below in chart form.

One Precinct, Two Racial Groups

	Possible voter-race/voter-choice combinations		
Case 1	black-Dem	white-Rep	white-NoVote
Case 2	black-Rep	white-Dem	white-NoVote
Case 3	black-NoVote	white-Dem	white-Rep

Now suppose that there are, again, three people of voting age in a precinct, but this time, there is one black, one Hispanic, and one white. As before, the secretary of state reports that for this precinct, one person voted Democratic and one voted Republican, meaning one person did not vote. How many different voter-race/voter-choice combinations could give rise to these numbers? Six, and again, the possibilities are listed below.

One Precinct, Three Racial Groups

	Possible voter-race/voter-choice combinations		
Case 1	black-Dem	Hisp-Rep	white-NoVote
Case 2	black-Dem	Hisp-NoVote	white-Rep
Case 3	black-Rep	Hisp-Dem	white-NoVote
Case 4	black-Rep	Hisp-NoVote	white-Dem
Case 5	black-NoVote	Hisp-Dem	white-Rep
Case 6	black-NoVote	Hisp-Rep	white-Dem

Note that in this second example, there are the same number of persons and the same voting behavior distribution as there were in the first example. The change is an additional racial group. But that makes for additional moving pieces, which means more and harder work for a statistical model.

2. Across Precincts

Another way in which additional racial groups make inference more difficult is by making it harder for a model to figure out what is happening across precincts. To see why, consider a first set of two precincts, in which there are only two racial groups of interest. Information from the Census Bureau and the secretary of state suggests that for a particular election, the two precincts' numbers are as follows:

Multiple Precincts, Two Racial Groups

	Blacks	Whites	Dems	Repubs	NoVote
Precinct 1	20	25	5	10	30 ¹⁰²
Precinct 2	35	15	10	5	35

What might a statistical model do with this information? It might “notice” the fact that as the number of blacks went up (from 20 in Precinct 1 to 35 in Precinct 2), so did the number of Democrats (from 5 in Precinct 1 to 10 in Precinct 2). The model might then associate these two events to predict that blacks are voting Democratic.¹⁰³ Notice that here, the model could also associate an increase in the number of whites (from 25 in Precinct 1 to 15 in Precinct 2) with a decrease in the number of Republicans (10 in Precinct 1 to 5 in Precinct 2), and guess that whites are voting Republican.

Now consider a second set of two precincts, this one with three racial groups.

Multiple Precincts, Three Racial Groups

	Blacks	Hispanics	Whites	Dems	Repubs	NoVote
Precinct 1	10	10	25	5	10	30
Precinct 2	17	18	15	10	5	35

Here, a model might still associate a decrease in the number of whites (from 25 in Precinct 1 to 15 in Precinct 2) with a decrease in the number of Republicans (10 in Precinct 1 to 5 in Precinct 2), and guess as it did before that whites are voting Republican. But with which race should a model associate an increase in the number of Democrats from Precinct 1 to Precinct 2? Both blacks and Hispanics increased in number from Precinct 1 to Precinct 2, and thus it is now difficult for the model to “attribute” the increase in Democratic votes to one race or the other. Again, there are more moving pieces.

3. Other Complications (Especially Housing Patterns and Turnout)

Other factors commonly (although not necessarily) associated with additional racial groups make ecological inference more difficult. Two deserve special attention: housing segregation and turnout. As discussed above, the degree of segregation in housing patterns critically affects the narrowness of the bounds; the more segregated housing patterns, the narrower the bounds, and thus the more information available.¹⁰⁴ Speaking generally, housing segregation as between African Americans and whites has historically been, and continues to be, greater than housing segregation among Hispanics and the other two groups, and as among

102. $20 + 25 - 5 - 10 = 30$. Other “NoVote” values are calculated similarly.

103. See *supra* text accompanying note 100, regarding the fact that the model does not know that the “additional” blacks in Precinct 2 are the ones actually providing the “additional” Democratic votes. It could be that white people in Precinct 2, which is more heavily populated by minorities, are more liberal and thus lean Democratic more than do the white people in Precinct 1.

104. See *supra* text accompanying note 91.

Asians and the other three groups, particularly in urban areas.¹⁰⁵ Whatever this means for race relations, it makes ecological inference more difficult. Thus, once again, three (blacks, whites, and Hispanics) are ordinarily worse than two, four (blacks, whites, Hispanics, and Asians) are ordinarily worse than three.

The critical role of turnout¹⁰⁶ becomes clear when one realizes that in vote dilution cases, racial voting patterns have long been analyzed by reference to actual, as opposed to potential, voters.¹⁰⁷ To clarify: if there are 100 black citizens of voting age in a polity, and in a particular election, 70 do not vote, 25 vote for the Democrat, and 5 vote for the Republican, then the relevant figure for bloc voting purposes is ordinarily considered to be 83% (25 black votes for the Democrat divided by 30 total black votes). With this realization, it is intuitively clear that if a group's turnout is high, it is easier to estimate the behavior of its voters: if more people vote, there is more information about the preferences of voters. And it is well-known that, in general, turnout among Hispanics and Asians is frequently lower than that of whites and African Americans, in part (but not always entirely) because of lower citizenship rates among the two former groups.¹⁰⁸ Again, the presence of additional racial groups increases the challenge for ecological inference.¹⁰⁹

C. A Non-Solution: Biraciality by Construction

One might think that if ecological inference techniques ordinarily work less well if there are more than two racial groups, we could force the issue by dividing the polity into the racial group that is represented by the plaintiffs in the lawsuit versus "everyone else." To do so, we must put aside lawsuits in which members of more than one racial group sue, so suppose for now that the plaintiffs are all of one race. It appears that many expert witnesses and lower courts have adopted the practice of collapsing groups other than the plaintiffs' into "everyone else,"¹¹⁰ and the

105. See, e.g., *Barnett v. Daley*, 32 F.3d 1196, 1200–01 (7th Cir. 1994).

106. See, e.g., Sam Hirsch, *Unpacking Page v. Bartels: A Fresh Redistricting Paradigm Emerges in New Jersey*, 1 ELEC. L.J. 7, 16 n.43 (2002) (noting that low Hispanic turnout hindered estimation of Hispanic voting patterns in *Page v. Bartels*).

107. See *Barnett v. City of Chicago*, 141 F.3d 699, 703–06 (7th Cir. 1998) (noting that this "approach is well entrenched in the cases"); Theane Evangelis, Note, *The Constitutionality of Compensating for Low Minority Voter Turnout in Districting*, 77 N.Y.U. L. REV. 796 (2002) (questioning this practice).

108. For example, according to the Current Population Survey, in the United States in 2008, 64.8% of non-Hispanic whites of voting age voted, as did 60.8% of blacks. *Table 4b: Voting and Registration in the Election of November 2008*, U.S. CENSUS BUREAU (Feb. 2009), <http://www.census.gov/population/www/socdemo/voting/cps2008.html>. The corresponding figures for Hispanics and Asians were 31.6% and 32.1%. *Id.* Using citizen voting age population as the denominator, the corresponding figures were white: 73.5%, black: 69.7%, Hispanic: 59.4%, Asian: 55.3%. *Id.*

109. For additional factors affecting precision in estimation, see Greiner & Quinn, *supra* note 61, at 74–76.

110. See, e.g., *Campos v. City of Baytown*, 840 F.2d 1240, 1242 (5th Cir. 1988); *Martinez v. Bush*, 234 F. Supp. 2d 1275, 1299 (S.D. Fla. 2002) ("non-blacks" versus "blacks"); *Barnett v. City of Chicago*, 969 F. Supp. 1359, 1433–34 (N.D. Ill. 1997), *aff'd in*

California Voting Rights Act even incorporates collapsing into the definition of racially polarized voting.¹¹¹

In general, however, excepting groups of trivial size, collapsing differing racial groups into the plaintiffs' class versus everyone else is unwise, for two principal reasons. The first reason goes to liability: to the extent that we assess polarization in part by a difference in support rates for particular candidates among the plaintiffs' class and the non-plaintiffs' class, we risk serious misinformation if the non-plaintiffs' class is a mixture of groups with disparate voting patterns. This was a thrust of Part I.B.1, above. The second reason concerns remedy: supposing that collapsing into plaintiffs' versus non-plaintiffs' groups had allowed us to obtain proper estimates for the plaintiffs' group, we may still need to know something about the preferences of each of the groups separately in order to assess the viability of a remedy. Even assuming a continued regime in which the only available, court-ordered remedy in a vote dilution case is a single-membered, majority/minority district,¹¹² courts must still inquire whether the remedial district will "perform" in the sense of providing an opportunity to the plaintiffs' class to elect its candidates of choice. That inquiry often depends on the turnout rates and preferences of the disparate nonmembers of the plaintiffs' class placed in a remedial district.

An example may help to clarify this second reason. To make up for line drawing elsewhere, the Tom Delay–engineered mid-decade congressional redistricting plan passed by the Texas legislature in 2003 included a new, border-to-Austin congressional district that was 55% Hispanic VAP.¹¹³ In early January 2004, a three-judge panel found that in this district, "Latino voters will likely control every primary and general election outcome."¹¹⁴ Not so. In the subsequent 2004 congressional Democratic primary, Caucasian Lloyd Doggett defeated Latina Leticia Hinojosa despite the fact that Doggett lost the Latino vote by over ten points. One key to Doggett's victory was the (comparatively) high turnout of African American voters in the primary (relative to both whites and Latinos), who overwhelmingly supported him.¹¹⁵ To have performed as the three-judge panel expected, this district needed to have included more Latinos, but how many more

part and rev'd in part, 141 F.3d 699 (7th Cir. 1998); *Meek v. Metro. Dade Cnty.*, 805 F. Supp. 967, 976–77, 989–90 (S.D. Fla. 1992) ("black" versus "non-black" and "Hispanic" versus "non-Hispanic").

111. CAL. ELEC. CODE § 14026(e) (West 2003).

112. *See supra* note 30 and accompanying text.

113. *See League of United Latin Am. Citizens v. Perry*, 548 U.S. 399, 444 (2006).

114. *Session v. Perry*, 298 F. Supp. 2d 451, 504 (E.D. Tex. 2004), *aff'd in part and rev'd in part sub nom.* 548 U.S. 399 (2006).

115. The relevant 95% posterior intervals from the GQ Method are as follows. For Latino, white, and black voter support rates for Doggett: (.43, .46), (.88, .96), and (.96, .99). For Latino, white, and black turnout in this primary, the 95% posterior intervals were (.13, .14), (.12, .15), and (.16, .24). Point estimates for all of these quantities were centered at approximately the middle of these intervals. All quantities are on the basis of VAP (not CVAP).

The data for this analysis came from Texas Legislative Council's website, <ftp://ftpgis1.tlc.state.tx.us/elections>, as well as from a file of precinct-level demographic information that the TLC was kind enough to provide via email. The quantitative results come from the GQ Model. *See infra* text accompanying note 120.

depended on whether the non-Latino population in the additional neighborhoods added to the district (as well as those removed) were predominantly white or black.

D. What Modern Techniques (Including the GQ Method) Can and Cannot Do

How many of the problems articulated in the previous sections can modern¹¹⁶ ecological inference techniques solve? Some, but not all; enough for ecological inference methods to handle some challenges, but not enough to allow them to serve indefinitely the role they have served in the past, as the primary source of evidence regarding racial bloc voting in vote dilution disputes. First, the good news: at an important price (discussed below), methods are available that can analyze any single-vote¹¹⁷ electoral contest featuring any number of candidates and any number of relevant racial groups.¹¹⁸ Some of these methods never produce physically impossible estimates of voting behavior, and others do so only rarely. Some produce legitimate, statistically defensible estimates of uncertainty, allowing the formation of valid intervals, and by doing so, they flag for the user situations in which no inference is possible (ordinarily by producing extremely wide intervals). Two of these methods have been programmed into publicly available freeware in a popular statistical programming environment.¹¹⁹ One of these two, the GQ Model referred to above, has been validated pursuant to accepted methods for testing statistical software, and it shares all the desirable characteristics identified above. It uses both of the sources of information identified in Part II.A (that is, the bounds as

116. Regarding a technique called “King’s EI,” see Greiner, *supra* note 24, at 138–43 (explaining why extension of this technique to multiracial contexts is uncertain). See *infra* note 119.

117. A particular challenge is whether any method can tackle contests in which each voter can cast more than one vote for a group of candidates, that is, contests in an at-large election system without slotted seats such as the one used for the Boston City Council. The problem is more difficult than it might appear at first blush because there is an additional, hard-to-model aspect of voting behavior that we do not observe, namely, the number of votes each voter casts. In my view, as demonstrated in Part III, it may be best to retreat to simplicity in this situation by using correlation coefficients and other blunt measures. Under the present state of statistical development, regression in the at-large setting appears especially fraught with peril. The following sources debate another proposal, using ecological regression, which is mathematically equivalent to simple correlation coefficients but more mysterious in appearance. See Bernard Grofman & Michael Migalski, *Estimating the Extent of Racially Polarized Voting in Multicandidate Contests*, 16 SOC. METHODS & RES. 427 (1988); Grofman & Barreto, *supra* note 21; Jeffrey S. Zax, *Comment on “Estimating the Extent of Racially Polarized Voting in Multicandidate Contests” by Bernard Grofman and Michael Migalski*, 31 SOC. METHODS & RES. 75 (2002); Zax, *supra* note 47.

118. On this point, I do not agree with Grofman & Barreto, *supra* note 21, at 614 n.14, when they assert that no models to analyze so-called “R x C” situations are currently available.

119. The statistical environment is called R, available for free download at <http://www.r-project.org>. The relevant package names are eiPack and RxCEcolInf. eiPack programs the model proposed in Ori Rosen, Wenxin Jiang, Gary King & Martin A. Tanner, *Bayesian and Frequentist Inference for Ecological Inference: The R x C Case*, 55 STATISTICA NEERLANDICA 134 (2001).

well as across-precinct associations). The GQ Model and software have other advantages, including the ability to incorporate alternative sources of information, such as from exit polls or from prior beliefs; it also corresponds to a theory of voting at the level of the individual voter, which potentially makes it easier to explain to a lay audience.¹²⁰

The important price to be paid for most of these methods is either time or an increase in the level of computational complexity in the analysis. In its current incarnation, the GQ Model, for example, takes on the order of two to three hours to analyze an election in a jurisdiction the size of a typical congressional district using a typical laptop or desktop computer.¹²¹ Regressions, in contrast, can be run in seconds. Speed concerns need not be an insurmountable obstacle if an expert uses one of the increasing number of computer grids available across the country,¹²² some of which can be accessed at low cost to certain users,¹²³ that allow her to analyze dozens of datasets at once. For example, using the Crimson Grid at the Harvard University Division of Engineering and Applied Sciences,¹²⁴ analysis of fifty statewide datasets as run in Pender and New Hanover Counties in North Carolina (the counties at issue in *Bartlett v. Strickland*)¹²⁵ using the GQ Model took a couple of days, once the data had been fully formatted. Such grids could be necessary if an expert is to produce a report within the time frame of, say, one to three weeks.¹²⁶

But one cannot get blood from a turnip. If the numbers have little information, ecological inference methods will fail to produce useful estimates. Or, they *should* fail to produce useful estimates. An advantage of most recently developed techniques, including the GQ Method, is that they will warn the expert that the data have little or no information about a racial group's preferences in a particular election by providing extremely wide intervals for quantities of interest.¹²⁷ That is a substantial improvement over ecological regression, which can fool the expert into thinking that nothing is wrong in such a situation, particularly if she is inclined to

120. We proposed the GQ Model in Greiner & Quinn, *supra* note 61, and programmed it with Paul Baines. Computer code to run the model is contained in the R package RxCEcolInf, available from the R website, <http://www.r-project.org>. Regarding software validation, we followed the method in Samantha R. Cook, Andrew Gelman & Donald B. Rubin, *Validation of Software for Bayesian Models Using Posterior Quantiles*, 15 J. COMPUTATIONAL & GRAPHICAL STAT. 675 (2006).

121. We are actively pursuing methods to reduce the time needed to run the GQ Model.

122. See, e.g., *Research Computing Environment*, HARVARD UNIVERSITY INSTITUTE FOR QUANTITATIVE SOCIAL SCIENCE, http://www.iq.harvard.edu/projects/research_computing_environment.

123. See Allison Barker, *W.Va. to Launch Public Computing Grid*, USA TODAY.COM (Oct. 29, 2004), http://www.usatoday.com/tech/news/2004-10-29-wv-adds-grid_x.htm.

124. Harvard Eng'g & Applied Scis., Office of Info. Tech., *The Crimson Grid Initiative @ Harvard* (Oct. 2, 2005), http://www.gridforum.org/GGF15/presentations/Campus_Sircar.pdf. My thanks to Jayanta Sircar and his staff for allowing me to use the Crimson Grid gratis.

125. 129 S. Ct. 1231 (2009).

126. See Hirsch, *supra* note 106, at 13 ("The parties had just 6½ days to prepare for trial.").

127. See the 95% interval for Asian Americans the Deval Patrick election discussed in the text following note 150.

“adjust” physically impossible results to 0% or 100%, whichever is nearest.¹²⁸ But having discovered that the numbers have little information, we can do little about this fact at present.¹²⁹ And as the previous parts have detailed, the numbers have less information in an increasingly common set of situations.

E. An Additional Empirical Challenge Not Directly Related to Ecological Inference

Another fact on the ground, one unrelated to ecological inference, is making things harder: the increasing possibility that racial bloc voting exists in a jurisdiction with respect to one level of government but not another.

Bloc voting is ordinarily thought of as a characteristic of the voters in a particular area, something that “rarely stops at electoral borders.”¹³⁰ For this reason, courts routinely consider (but sometimes give reduced weight to) what they call “exogenous” elections, that is, elections for offices other than the particular office at issue in the litigation (but in the same geographic area).¹³¹ There are growing indications, however, that voting can be racially polarized in a single geographical area with respect to one level of office but not another.

The city of Boston provides an example.¹³² In 2004, a federal district court found that African American plaintiffs had shown that voting in the Massachusetts House of Representative districts covering the Boston area was racially polarized.¹³³ Further, no African American candidate won an at-large contest in the Boston City Council from 1991 to 2007.¹³⁴ In 2006 and 2008, however, African American candidates of choice defeated white candidates in the Democratic gubernatorial and presidential primaries, winning 59% and 54% of the votes cast, respectively.¹³⁵ Black, white, and Hispanic voter support rates were quite different, but high black voter support for Deval Patrick and Barack Obama overwhelmed less than monolithic opposition among white voters and perhaps stronger opposition among Hispanics to deliver wins for Patrick and Obama among Boston voters.¹³⁶

128. See *supra* text accompanying note 98.

129. As mentioned above, efforts are underway to change this situation. See *supra* note 25.

130. *Black Political Task Force v. Galvin*, 300 F. Supp. 2d 291, 308 (D. Mass. 2004).

131. See, e.g., *Askew v. City of Rome*, 127 F.3d 1355, 1381 n.13 (11th Cir. 1997); *Westwego Citizens for Better Gov't v. City of Westwego*, 872 F.2d 1201, 1209 n.11 (5th Cir. 1989); *Cano v. Davis*, 211 F. Supp. 2d 1208, 1235 (C.D. Cal. 2002) (three-judge court).

132. For another example, compare *League of United Latin Am. Citizens v. Clements*, 999 F.2d 831, 837 n.1 (5th Cir. 1993) (en banc) (voting not polarized in Texas trial judge elections) with *Session v. Perry*, 298 F. Supp. 2d 451, 493 (E.D. Tex. 2004) (voting polarized “throughout the state” in congressional elections) and *Terrazas v. Slagle*, 789 F. Supp. 828, 833 (W.D. Tex. 1991) (strong history of polarized voting in Texas).

133. *Black Political Task Force*, 300 F. Supp. at 300–10.

134. Interview with Kenneth Cooper, Pulitzer Prize-winning journalist, in Cambridge, Massachusetts (Aug. 27, 2009) (notes of interview available from author).

135. There is substantial uncertainty associated with these figures. See *infra* text accompanying note 150.

136. See *infra* notes 150–53 (discussing these figures and the sources for them). Note that in implying that voting was not racially polarized in these elections, I am making a

It is not particularly difficult to articulate how this can happen: turnout and “roll-off”¹³⁷ patterns among racial groups may vary by level of government. For example, in Boston, city council contests are held in odd-numbered years, and the electorate in municipal elections in Boston has been whiter and more conservative than that in statewide elections.¹³⁸ What this demonstrates, however, is that less monolithic white bloc voting in federal and statewide elections need not (and in some cases, does not) translate into similar patterns at other levels of government.¹³⁹

If all of this is true, there are at least two implications. First, the judicial practice of mining exogenous contests for information about voting patterns has become increasingly harder to justify. Second, if exogenous elections provide little (or worse, misleading) information in the current era, then we have fewer contests with which to assess whether racial bloc voting is present. We need alternative sources of information.

F. An Example

An example clarifies many of the principles discussed above, particularly the difficulties raised by more than two racial groups. Consider the 2006 Democratic Massachusetts gubernatorial primary as run in city of Boston precincts. In this contest, African American Deval Patrick faced two white candidates, Christopher Gabrieli and former Attorney General Thomas F. Reilly.¹⁴⁰ In Boston there are four racial groups possibly of interest: African Americans, whites, Hispanics, and

statement specific to African Americans only. As discussed below, both elections may provide evidence that voting was racially polarized with respect to Hispanic voters. Other explanations for the Boston phenomenon include leadership style and generational change. See RONALD SULLIVAN, *BARACK OBAMA AND THE ECLIPSE OF BLACK CHARISMATIC LEADERSHIP* (forthcoming) (on file with author) (contrasting the “blackness” of Barack Obama to that of “Gray Beards” of the civil rights movement); Kenneth J. Cooper, *Young, Black, and in the Running*, BOS. GLOBE (Sunday Magazine), July 19, 2009.

137. “Roll-off” occurs when voters vote only in high-profile contests at the top of a ballot but do not vote in lower-profile state and municipal elections.

138. See, e.g., Eric Moskowitz, *Flaherty, Yoon Pin Hopes on New Voters*, BOS. GLOBE, July 19, 2009, at B1; Donovan Slack & Matt Viser, *Turnout at Polls Lowest in Decades: Arroyo Loses City Council Seat*, BOS. GLOBE, Nov. 7, 2007, at A1; Pete Stidman, *Arroyo Out, Connolly in for At-Large Council; Anemic Turnout Across City*, DORCHESTER REP., Nov. 8, 2007, at 1, available at <http://www.dotnews.com/2007/arroyo-out-connolly-large-council-anemic-turnout-across-city>; Yawu Miller, *Early to Rise*, BAY ST. BANNER (July 9, 2009), <http://baystatebanner.com/Print?page=local14-2009-04-16>; *The New Boston Is Running. Is It Voting?* (WBUR radio broadcast Aug. 21, 2009), available at <http://www.wbur.org/2009/08/21/the-new-boston-is-running-is-it-voting>.

139. See Pildes, *supra* note 19, at 1530–31.

140. In multirace, multiple-candidate, plurality-take-all contests, expert witnesses frequently combine candidates of similar race together when attempting to analyze racial voting patterns. See, e.g., *Barnett v. City of Chicago*, 969 F. Supp. 1359, 1424 (N.D. Ill. 1997). The California Voting Rights Act requires such combinations. CAL. ELEC. CODE § 14028(b) (West 2003). I did not follow this practice here in that the GQ Model produced figures for all three candidates separately.

Asians.¹⁴¹ Meanwhile, recall that the fraction of each race's voters who supported a particular candidate (for instance, Patrick) must lie between 0 and 1. What can ecological inference techniques tell us about this election?

The two techniques identified in *Gingles*—homogenous precincts and regression—both produced plausible results for African Americans and Caucasians. This suggested that blacks overwhelmingly supported Patrick, but that whites generally preferred one of the other two candidates, with a white voter support rate for Patrick of around .30 to just above .40.¹⁴² Notice that if the law included a numerical rule focusing on whether the white crossover rate was above .40, as per Part I.B.1, it is not clear what a judge would do.

The real trouble was with the other two racial groups. There were no homogeneously Hispanic or Asian precincts, rendering homogenous precincts analysis unavailable.¹⁴³ Regression estimated that the support rates for both Gabrieli and Reilly among Hispanic eligible voters¹⁴⁴ were negative, while the estimate for Patrick was positive. According to the industry practice,¹⁴⁵ we should set the Gabrieli and Reilly support rates to the nearest plausible value, 0, and conclude that Hispanic voters overwhelmingly supported Patrick in this primary; at a minimum, we should conclude that Hispanics preferred Patrick to the other two candidates. As for the support rate for the three candidates as a function of Asian VAP, estimates for all three were negative; incidentally, all three estimates were also highly statistically significant, suggesting (in a purely statistical sense) a high degree of confidence that the true support rates among Asian voters were in fact below zero for all three candidates.¹⁴⁶

The results from the GQ Model were more revealing, both in the substantive sense and in the sense of disclosing where trouble lay. The results for blacks and

141. See *infra* Part IV for figures describing the racial composition of the Boston polity.

142. Specifically, the support rate among white voters for Patrick from regression had a point estimate of .40 with a standard error of .07. Patrick support rates in the twenty precincts that were 95% or more white ranged from .17 to .46, with the median around .3. These latter figures are mathematically inconsistent with a critical assumption needed for both regression and homogenous precincts, that is, that the Patrick support rate among white voters is the same (or nearly so) in all precincts. See Grofman, *supra* note 87, at 43. With respect to African Americans, extreme case analysis and regression agreed that support rates among black voters for Patrick were around 90% or higher, although the regression produced a large standard error (.15).

143. The most Hispanic precinct in Boston had a Hispanic VAP on the order of 60%; for Asians, the corresponding figure was around 50%. See BOS. REDEVELOPMENT AUTH., NO. 548B (REVISED), BOSTON'S VOTING POPULATION—2000 (2002), available at http://www.bostonredevelopmentauthority.org/PDF/ResearchPublications/pdr_548b.pdf (providing raw data used by the author to arrive at these percentages).

144. These regressions of percentage of votes for a particular candidate on eligible voters are the building blocks for the estimates for actual voters in what experts have labeled the “double regression” technique. See, e.g., Grofman & Barreto, *supra* note 21, at 600.

145. See *supra* text accompanying note 98.

146. Estimated support rates as a function of Asian VAP for Gabrieli, Patrick, and Reilly were -.13, -.15, and -.10, respectively. The corresponding statistics had absolute values of 6.6, 3.1, and 4.2, respectively.

whites were roughly similar to those stated above,¹⁴⁷ but the GQ Model provided some evidence that Hispanic voters generally *opposed* Patrick (in contrast to the overwhelming support “estimated” by regression), although the results were not conclusive. The point estimate for the Patrick support rate among Hispanic voters was .22 (in contrast to a point estimate of .59 for Reilly). Taking into account uncertainty reveals a more complicated picture. On the one hand, the 95% interval for the Hispanic voter support rate for Patrick was (.00, .78), which is wide.¹⁴⁸ On the other hand, the GQ Model estimated an 80% probability that the majority of Hispanics voters preferred someone other than Patrick.¹⁴⁹ Thus, intervals are wide, but at a minimum, they suggest that it is unlikely that Hispanics overwhelmingly supported Patrick, the conclusion that ecological regression (as currently used) would have us reach. In fact, we have some evidence that Hispanic voters actually preferred someone else (probably Reilly). That Hispanic voters, in contrast to the estimates from regression, might have opposed a black candidate in the Democratic primary is consistent with results estimated from other recent contests in the city of Boston, including the 2008 presidential primary,¹⁵⁰ as well as elsewhere around the nation.¹⁵¹ Finally, for Asian voters, the GQ Model estimated a 95% interval for the Patrick support rate of (.01, .99). Remembering that the support rate had to be between 0 and 1, this is not helpful.

Why were the estimates for Hispanics and Asians so uncertain? There were four racial groups. Hispanics and Asians in Boston have (relative to whites and blacks) somewhat scattered housing patterns, so there were no homogeneously Hispanic or Asian precincts. Further, turnout for both groups (as a function of VAP) was lower, at best about one-quarter of the turnout rate for blacks (which roughly equaled that of whites).¹⁵² In short, all the factors identified above were present, making trouble likely.

147. The 95% posterior intervals for Patrick support rates among black and white voters were (.93, .95) and (.42, .44), respectively. See text accompanying note 142 for the figures from the other techniques.

148. This is an example of Bayesian inference. The GQ Model begins with a mild prior belief that candidate support rates for each race’s voters are all 50-50 (in a two-candidate contest) or 1/3-1/3-1/3 (in a three-candidate field). By “very mild prior,” I mean that the GQ Model begins with a high degree of uncertainty about these beliefs; doing so allows the data to dominate. The question, then, is whether the data usefully “update” this belief. Here, they do so by placing 80% of the posterior distribution (which is a mathematical combination of the prior belief and the data) for the Hispanic support rate for Patrick below .5. For an explanation of this terminology, see D.H. Kaye, *What Is Bayesianism? A Guide for the Perplexed*, 28 JURIMETRICS J. 161 (1988).

149. More technically, the 80% quantile in the posterior distribution for the Patrick support rate among Hispanic voters was approximately .5. The posterior distribution was asymmetric.

150. In the 2008 Democratic presidential primary, the GQ Model estimated that the Hispanic voter support rate for Obama was .12, with a 95% interval of (.02, .37).

151. See, e.g., *Session v. Perry*, 298 F. Supp. 2d 451, 478 (E.D. Tex. 2004), *aff’d in part, rev’d in part sub nom.* *League of Latin Am. Citizens v. Perry*, 548 U.S. 399 (2006).

152. The 95% intervals for black, white, Hispanic, and Asian turnout were (.24, .27), (.21, .22), (.00, .06), and (.00, .04), respectively.

What did we learn from this exercise? First, some current settings, particularly those involving more than two racial groups, require the use of modern ecological inference techniques, such as the GQ Method, to produce useful information regarding racial voting patterns. As a corollary, the practice among expert witnesses of “adjusting” physically impossible figures to 0 or 1, whichever is closer, must be abandoned, and courts should no longer tolerate it. Here, that practice would have produced not just a statistically indefensible result but what is probably the wrong answer for Hispanics. Second, we must have honest estimates of uncertainty, and also keep a firm eye on the fact that statistical uncertainty in the racial bloc voting context involves a nuanced inquiry into more than evidence of a difference in the behavior of racial groups that is unlikely to be due to chance. In the Deval Patrick example above, there was strong evidence that Hispanics voted for Patrick at a rate lower than did blacks,¹⁵³ and there was evidence that Hispanics in fact preferred Reilly to Patrick, but the uncertainty in the estimation cautioned against overreliance on the latter conclusion. Third, even the best ecological inference techniques currently available fail to provide useful information on some racial groups of interest in some settings. At present, for Asian Bostonians, housing patterns are insufficiently segregated, and both raw numbers and turnout are too low, for ecological inference models to say much that is helpful.

G. Is This Unusual?

A question naturally arises: are the estimates produced by ecological inference with respect to racial bloc voting qualitatively worse than estimates produced by statistics in other areas of civil rights law? After all, courts are accustomed to relying on second- or third-best statistical techniques (indeed, empirical methods generally) in the hope of gleaning some evidence on important questions that must be decided within the framework and time limits of a lawsuit.¹⁵⁴ Is the current situation qualitatively different?

Yes, for two reasons. First, the models themselves are crying uncle.¹⁵⁵ As demonstrated immediately above in the discussion of the Deval Patrick primary, the older models are producing impossible results that, even if “adjusted” to the physically possible, are misleading. The modern models are doing what they should do, which is telling us that they can say nothing useful with respect to some racial groups. If we are to trust statistical techniques when they purport to tell us something useful, we ought to trust them when they tell us that they *cannot* tell us anything useful. Second, I believe we can do better by incorporating alternative sources of information; that is the subject of Part III.

153. Again, the GQ Model estimated a 95% interval for the black and Hispanic support rates for Patrick at (.93, .95) and (.00, .78), respectively. Non-overlapping intervals are strong evidence of difference.

154. See *League of United Latin Am. Citizens v. Clements*, 999 F.2d 831, 860 (5th Cir. 1993) (en banc).

155. *Cry Uncle—Idioms*, FREE DICTIONARY (2010), <http://idioms.thefreedictionary.com/cry+uncle> (“to admit defeat”).

III. SOME RECOMMENDATIONS

Can we litigate well (or well enough) the issue of racial bloc voting without primary reliance on ecological inference techniques? Yes, although this may be an instance of accepting second- or third-best outcomes. There are different prices to pay depending on the choices made. At a minimum, proof of racial bloc voting requires transformation so that the standard package becomes a mix of ecological inference methods, surveys, and a healthy dose of nonquantitative evidence. Even so, in some jurisdictions, the needed information may not be available, in which case the party with the burden of “proving” or “disproving” racial bloc voting will simply lose.¹⁵⁶ Whether the needed information is available must be determined on a case-by-case basis, but before concluding that we can say nothing, we should examine all possible sources of information.

I proceed in two Parts. First, I propose definitions of racially correlated and racially polarized voting, definitions that can fit within the *Gingles* framework and that are consistent with much (nothing could be consistent with all) of the case law in this area. Second, I discuss alternatives, both quantitative and otherwise, to ecological inference techniques as a source of evidence of racial bloc voting: surveys and nonquantitative evidence, specifically. I also discuss costs.

A. A Proposed Definition of Racial Bloc Voting

1. What Is Racially Correlated Voting in a Multiracial Polity?

I take as axiomatic that there cannot be racial bloc voting unless there is racially correlated voting. Thus, to define racial bloc voting in a multiracial polity, we need to begin by defining racially correlated voting in a multiracial polity. The primary challenge here is not conceptual (as some commentators have suggested)¹⁵⁷ but empirical. On the conceptual/definition side, we might think of racially correlated voting among more than two racial groups as occurring when each group has a distinctive set of preferences that tend to repeat over time, preferences taking the form of an ordering of the races of each group’s preferred candidates. For example, white voters, say, tend to prefer white candidates, then Hispanic candidates, then black candidates (or some other ordering). One might expect that if such tendencies exist, members of each racial group would tend to place candidates of their own race first. Racially correlated voting is thus defined as patterns that (1) within a group, are reasonably stable over time, and (2) among groups, are different.¹⁵⁸

Implicit in this definition is the fact that contests featuring candidates of a single race provide little information on whether voting is racially correlated because they

156. I place “proving” in quotes to clarify that the proof may occur in a court proceeding under either section 2 or section 5 (in the latter setting, the burden of disproving bloc voting may be on the state), in an administrative proceeding (USDOJ preclearance under section 5), or in the hustle of redistricting by state officials following a decennial census.

157. See, e.g., Saunders, *supra* note 19, at 1372.

158. For purposes of defining racially correlated voting, if two groups’ racial preferences match, then one might consider deeming them a single group for purposes of racially correlated voting.

tell us nothing regarding a preference ordering tied to candidate race. Some might find this unfortunate, and certainly in an ideal world, matters would be different. Nevertheless, *League of United Latin American Citizens v. Perry* suggests that the Supreme Court deems it plausible that single-race contests have little information on racial bloc voting.¹⁵⁹ Moreover, a purpose of this Article is to introduce pragmatism to this sort of debate. In a multiracial polity, we often will not have the data needed to analyze voting patterns without heavy reliance on candidate race.¹⁶⁰

This definition also makes clear the empirical challenge we face even assuming a willingness to rely heavily on candidate race, and even if voting behavior were directly observable (that is, assuming away the secret ballot). There may be an unfortunate sparseness of contests involving the combinations of candidate races we need to draw inferences about preference orderings. For example, even limiting ourselves to two-candidate contests, in a jurisdiction with four relevant racial groups, there are six race-pair combinations. On the bright side, the preference ordering hypothesized in this subpart may not need to be strict to be legally relevant, and we may not need a full preference ordering for every racial group in a polity. For example, white voters may vote en masse for white candidates, but when faced with a series of contests featuring Hispanic versus black candidates, white voters may switch back and forth in their preferences, or they might divide. To see whether this kind of correlation can constitute part of a vote dilution injury, we need a definition of racial bloc voting.

2. What Is Racial Bloc Voting in a Multiracial Polity?

I propose the following definition of racial bloc voting: a plaintiff proves that voting is racially polarized when she shows that voting in a jurisdiction is racially correlated, that the candidates of choice of a politically cohesive racial minority group have ordinarily lost in the past, and that these patterns are likely to continue for the foreseeable future. This definition has three primary features: its explicit focus on the future, its avoidance of reliance on numerically defined thresholds or rules of thumb, and its straddling of the issue of causation. I briefly discuss each in turn.

At this point, however, I reemphasize that the precise definition of racial bloc voting that courts employ matters less, perhaps far less, than the evidence courts accept as sufficient to discharge a burden of proof. As discussed above in the

159. In *League of United Latin American Citizens*, the Supreme Court affirmed as not clearly erroneous a district court finding that Martin Frost, a long-serving white Democratic congressman, was not the candidate of choice among African Americans because he had, allegedly, never faced a black-preferred opponent (although he had faced, and previously lost to, a black opponent), and because the district was drawn for a white Democrat. 548 U.S. 399, 443–47 (2006). It is hard to imagine the Supreme Court affirming this finding had Congressman Frost been black.

160. Even Justice Brennan, who argued strenuously early in his *Gingles* opinion that candidate race meant nothing in the racial bloc voting context, later appeared to concede the importance of candidate race when he appended to his opinion tables of estimated support rates among North Carolina black and white voters for contests involving black candidates, excluding white-on-white contests. See *Thornburg v. Gingles*, 478 U.S. 30, 80–82 (1986).

context of causation,¹⁶¹ courts have nominally imposed burdens in this area that they have not taken seriously. Thus, I provide the proposed definition out of a desire to provide a theoretically coherent structure, but perhaps one might get by without such a structure,¹⁶² so long as all understand the nature of the evidence upon which courts are to rely in adjudicating cases.

a. Focusing on the Future¹⁶³

A primary difference between my proposed definition and those formally articulated in previous judicial opinions is my proposed definition's explicit focus on the future. In my view, this is a matter of candor. True, certain members of the judiciary, particularly Justice Kennedy, have reacted with consternation when confronting the abstract concept of predicting how members of different racial groups are likely to vote in the future,¹⁶⁴ but this consternation conflicts with what courts are actually doing and saying when they discuss facts. Among other things, the fact that the only relief courts award in such cases is forward looking¹⁶⁵ compels a focus on the future. It is unsurprising, then, that section 2 opinions, including at least one by Justice Kennedy, are replete with forward-looking language.¹⁶⁶

161. See *supra* Part I.B.2.

162. The Supreme Court may be attempting to do without coherence in the vote dilution area generally. See Gerken, *supra* note 13, at 1736 (“muddling through”).

163. The focus on the future, as well as the fact that racial bloc voting is not the only thing a section 2 plaintiff must prove to obtain relief, demonstrates that my proposal does not result in equating “mere . . . political defeat at the polls” with a vote dilution violation. *Whitcomb v. Chavis*, 403 U.S. 124, 153 (1971). Compare *Whitcomb*, 403 U.S. 124 (rejecting a vote dilution challenge on the ground that the plaintiffs’ lack of electoral success was mere political defeat), with *White v. Regester*, 412 U.S. 755 (1973) (upholding a vote dilution finding on the ground that something more pernicious than mere political defeat was afoot).

164. *Bartlett v. Strickland*, 129 S. Ct. 1231, 1244–45 (2009).

165. When dismantling an at-large system of districts, courts change the structure of government for the foreseeable future, and when remedying illegal gerrymandering of a single-member districting scheme, courts contemplate that the new set of districts will remain in place until the next census. Only rarely do courts revisit the change in the structure of government once made. When ruling in favor of section 2 plaintiffs, courts do not upset the results of pre-lawsuit elections on the grounds that such elections were held under an illegal electoral system, nor do they invalidate laws passed by the illegally constituted legislatures, nor do they prevent representatives sitting as a result of the illegal electoral system from enacting new laws, nor do they cut existing terms short, nor do they invalidate the current system for the next election cycle only (and allow the pre-lawsuit system to be used for the subsequent election unless the plaintiff reproves her case). In other words, relief in this area is entirely forward-looking.

166. See *League of United Latin Am. Citizens v. Perry*, 548 U.S. 399, 442 (plurality opinion) (Kennedy, J.) (castigating the district court and the Chief Justice for their allegedly myopic focus on “how effective [a district] ‘had been,’ not on how it would operate today, a significant distinction given the growing Latino political power in the district”). “[T]oday” must refer to something like “the current era” or “the foreseeable future.” For additional forward-looking language, see, for example, *Thornburg v. Gingles*, 478 U.S. 30, 51 (1986) (“usual predictability”); *id.* at 99–100 (O’Connor, J., concurring) (“[S]ubstantial minority

b. Rejecting Numerically Defined Thresholds

The definition above omits any reference to a particular threshold of “white” or “majority” crossover voting inconsistent with a finding of polarized voting, *a la Abrams and Bartlett*.¹⁶⁷ That is because in the current era, in many polities, there may be no “white” or even any single, identifiable “majority” bloc. Rather, there may be a system of (potentially shifting and temporary) coalitions among different racial groups that consistently leaves one racial group’s candidates on the short end of the stick.¹⁶⁸

Finally, given the majority- or plurality-wins system in place in most United States jurisdictions, if it can be shown that a cohesive minority’s candidates of choice consistently lose, it must be because nonmembers of this cohesive minority (perhaps in various shifting, but still racially identifiable, combinations) are consistently voting for someone else. Stated another way, if crossover voting by voters outside the plaintiff’s class is sufficient to allow class-preferred candidates a reasonable chance of prevailing, then over time a court should see some successes by the plaintiff group’s candidates, an easily observed event that the court would have to examine anyway. Thus, a separate requirement that a “white” or “majority” bloc consistently defeat the cohesive minority’s preferred candidates adds nothing to the calculus.

c. Straddling Causation

The forward-looking definition I propose straddles the issue of whether a plaintiff must prove racially caused voting or merely racially correlated voting to succeed. By requiring the defeat of the minority’s candidates of choice to be likely in the foreseeable future, causation can be relevant but not dispositive. If courts believe that they can discern whether racial animus in the electorate is causing voting patterns resulting in the defeat of a plaintiff group’s candidates,¹⁶⁹ then, as

success will be highly infrequent.”); *id.* at 100 (“will consistently defeat”); *id.* (“future elections”); *see also* *Vecinos De Barrio Uno v. City of Holyoke*, 72 F.3d 973, 989 (1st Cir. 1995) (“rapidly changing political environment”); *New Rochelle Voter Def. Fund v. City of New Rochelle*, 308 F. Supp. 2d 152, 162 (S.D.N.Y. 2003) (“A reapportionment is not just for today.”); *Martinez v. Bush*, 234 F. Supp. 2d 1275, 1299 (S.D. Fla. 2002) (“reasonable projections”).

167. *See supra* text accompanying notes 51–55.

168. *See, e.g.*, Bernard Grofman, Lisa Handley & David Lublin, *Drawing Effective Minority Districts: A Conceptual Framework and Some Empirical Evidence*, 79 N.C. L. REV. 1383, 1391 (2001) (“[B]lack population percentages of even less than 50% might be adequate to elect black Democratic candidates if there was also a substantial Hispanic component to the district.”). Note that the shifting nature of racial coalitions and competition in multiple-race polities is illustrated well by comparing *Meek v. Metropolitan Dade County*, 908 F.2d 1540, 1545–46 (11th Cir. 1990), in which white voters allegedly took advantage of hostility between blacks and Hispanics, with *Campos v. City of Baytown*, 840 F.2d 1240, 1246–47 (5th Cir. 1988), in which blacks and Hispanics allegedly voted cohesively in opposition to white preferences.

169. For the reasons behind my skepticism on this point, see Greiner, *supra* note 70. Note that highly relevant evidence on “causation” may not be subject to discovery. *See Perry v. Schwarzenegger*, 591 F.3d 1147 (9th Cir. 2010).

Justice O'Connor recognized in *Gingles*,¹⁷⁰ such a conclusion would speak to the minority's future prospects for electoral success. But if a court observes a persistent pattern of losses of the candidates of choice of the plaintiff's class, it might infer that such a pattern is reasonably likely to continue unless it intervenes, even in the absence of complete information about why this pattern occurs.

B. Alternative Forms of Evidence

Suppose, then, that courts adopt some definition of racial bloc voting that includes an inquiry into whether voting has been racially correlated in the past plus some additional requirement, such as my proposal of a forward-looking focus on likely success of minority-preferred candidates, or perhaps a less-than-serious focus on causation.¹⁷¹ How can parties litigate, and courts decide, whether the standard has been met in a world in which, due to the presence of multiple racial groups and the possibility of less monolithic white bloc voting, ecological inference techniques may not tell us all we need to know? In my view, there are several alternative sources of evidence, some quantitative, some not.

1. Alternative Quantitative Evidence

Why do so few¹⁷² section 2 cases feature the primary empirical technique that politicians, the academy, the media, and thus the general public use to gain knowledge about voting patterns by race (or other characteristic), that is, the sample survey? Surveys have three primary drawbacks. First, they cannot go backwards very far in time,¹⁷³ and under most conceptualizations of racial bloc voting (including my proposed forward-looking definition) a plaintiff must establish patterns over some time period.¹⁷⁴ Second, polls can be expensive. Third, current circumstances, particularly the advent of so-called "convenience voting" and the increasing prevalence of cell phones, have lowered response rates, raising the possibility that survey results might be challenged on *Daubert* grounds.¹⁷⁵ Note that a fourth potential issue with surveys, the so-called Bradley or Wilder effect in

170. *Thornburg v. Gingles*, 478 U.S. at 100 (O'Connor, J., concurring).

171. *See supra* Part I.B.2.

172. Of the small number of courts to have considered survey evidence, a few have reacted favorably, while others have been more skeptical. Greiner, *supra* note 24, at 120 n.21 (collecting cases).

173. The problems involved in retrospective political surveys going back any substantial period of time are numerous; for example, once a winner is announced, bias becomes an issue in electoral surveys. *See, e.g.*, Lonna Rae Atkeson, "Sure, I Voted for the Winner!": *Overreport of the Primary Vote for the Party Nominee in the National Election Studies*, 21 *POL. BEHAV.* 197 (1999).

174. *Gingles* upheld a finding of vote dilution based on quantitative data covering three election cycles, a period representing six years. 478 U.S. at 80. Lower courts have sometimes demanded evidence going further back. *See, e.g.*, *Lewis v. Alamance Cnty.*, 99 F.3d 600, 605-06 (4th Cir. 1996).

175. *See Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993) (establishing the district judge as a gatekeeper for scientific or expert evidence under an "assist the trier of fact" standard).

which white respondents overstate their level of support for candidates of minority race so as to avoid appearing racist, appears to be less of a problem now than it used to be.¹⁷⁶

My points here are that the drawbacks identified above, while real, should be thought of as costs, not insurmountable burdens; that, as detailed in Part II, ecological inference has costs in terms of fragility of its inferences (always present) and, increasingly, an inability to provide useful information; that steps can be taken to reduce the costs associated with surveys; and that it may be worth paying these reduced costs to obtain needed evidence, particularly when ecological inference breaks down. In an effort to assess how high these costs are, I experimented with survey methods in the city of Boston. In 2008, I organized a group of three academics and recruited over four hundred college and graduate students from eleven Boston-area colleges and universities to conduct an exit poll in the city of Boston covering the presidential contest as well as three ballot initiatives. In 2009, I organized a group of academics that ran a telephone survey of likely city of Boston voters in the 2009 city council contests.¹⁷⁷ The discussion that follows is thus based on my experiences in this area as well as on what for academics is the more traditional source of information, that is, reading about what someone else has done. I draw the following conclusions.

First, to make polling results part of an evidentiary showing for a court, a litigator must understand that her role may extend beyond packaging and presenting evidence gathered by others to organizing a fact-finding effort (such as a set of surveys) and that this process may require a time investment. In particular, when ecological inference methods produce inconclusive evidence of racial bloc voting, a litigator may need to implement¹⁷⁸ or commission a series of polls over more than one election cycle, potentially requiring that a lawsuit be delayed until polls are taken and the results known. Thus, major costs to this course of action are time and expense.¹⁷⁹ There is little to be done about the time; the need for polls over several election cycles may be a fact of life in some multiracial polities. But expense can be partially addressed. One way to do so is to find partners to share costs, particularly in academia or the media. On the former, my experience in

176. See Daniel J. Hopkins, *No More Wilder Effect, Never a Whitman Effect: When and Why Polls Mislead About Black and Female Candidates*, 71 J. POL. 769 (2008).

177. See Steven Ansolabehere, Rachael Cobb & D. James Greiner, *City of Boston 2009 Telephone Survey* (fielded Oct. 30 to Nov. 3) (data on file with author).

178. A potential issue here is preventing the need for a lawyer to testify in the ensuing litigation. See MODEL RULES OF PROF'L CONDUCT R. 3.7 (2010). Although I bracket this issue for the purposes of this article, this problem seems manageable. Polls are multiperson operations.

179. Some might phrase this concern in terms of an undue burden on the minority group whose members might bring a section 2 action, the idea being that these plaintiffs would have to suffer under an illegal districting scheme until poll results are known. In my view, this is the flipside of the argument made the year after *Gingles* was decided, see ABIGAIL M. THERNSTROM, *WHOSE VOTES COUNT?: AFFIRMATIVE ACTION AND MINORITY VOTING RIGHTS* 240–44 (1987), and now repeated given the election of President Obama, that we no longer need vote dilution law. Both arguments assume that there are, or are not, vote dilution problems prior to the determination that there is, or is not, racial bloc voting.

recruiting students (perhaps “encouraged” by their professors) to administer an exit poll suggests that such partnerships can be readily formed. Similarly, the telephone survey I organized began with an easily formed partnership among four professors. Gaining information useful for a racial bloc voting inquiry involves asking only a handful of survey questions (race/ethnicity, which virtually any poll would ask, along with voter choices on extant contests), leaving survey space free for other partners to explore topics of interest.¹⁸⁰

Second, not all polls are alike in expense and effort required; again, tradeoffs are involved. While they can be the most accurate information-gathering device available (depending on a jurisdiction’s rules regarding convenience voting), exit polls involve substantial startup costs or, if a polling firm is hired, can be expensive,¹⁸¹ and they are not an option in vote-by-mail jurisdictions.¹⁸² Telephone surveys are easier and cheaper, and they require less advanced planning, allowing a decision on whether to poll to be made after the candidates for relevant contests become clear (so that, for example, investment need not be made if the only contests in a particular year are unlikely to produce much useful information).¹⁸³ Moreover, due to the increasing availability of commercial databases detailing demographic information on past voters,¹⁸⁴ telephone surveys can be targeted to members of particular racial groups.¹⁸⁵

Third, the results of reasonably well-executed telephone surveys or exit polls should not be excluded from evidence on *Daubert* grounds.¹⁸⁶ True, surveys have their methodological challenges. Exit polls typically have on the order of fifty percent response rates.¹⁸⁷ Pre-election telephone surveys cannot identify actual voters, so assumptions (sometimes strong assumptions) must be made regarding the relationship between survey respondents and the electorate,¹⁸⁸ and care must be

180. Regarding media partners, see, e.g., David A. Freedman, Stephen P. Klein, Jerome Sacks, Charles A. Smyth & Charles G. Everett, *Ecological Regression and Voting Rights*, 15 EVALUATION REV. 673 (1991) (discussing results of polls commissioned by the *Los Angeles Times*).

181. Our own exit poll had a budget of over \$30,000, although we might have been able to get by with less had we been forced to do so. See *supra* note 177 and accompanying text.

182. Currently, Washington and Oregon either require or allow voting by mail.

183. This might be true because all of the contests in a particular year are predicted to be landslides or because all contests are between candidates of the same race.

184. Our Boston telephone survey targeted and reached approximately 150 likely voters from each of the four major racial groups in the city of Boston, namely, African Americans, whites, Hispanics, and Asians.

185. See *supra* note 184.

186. For an exhaustive discussion of *Daubert* and its progeny in a variety of scientific and quantitative settings, see JOHN M. CONLEY & JANE CAMPBELL MORIARTY, *SCIENTIFIC AND EXPERT EVIDENCE* (2007).

187. Our 2008 exit poll achieved a 57% response rate. See Greiner & Quinn, *supra* note 25.

188. Often, pre-election telephone surveys rely on lists of voters in previous contests (as matched to telephone numbers and demographic information available from commercial sources). Persons who answer the telephone calls are then asked screening questions designed to measure the likelihood that they will actually vote in the upcoming election. Such questions include the respondent’s personal assessment of her likelihood of voting (in

taken to address the tendency among survey respondents to overreport voting behavior.¹⁸⁹ Cell phones, which make locating residents of a jurisdiction by telephone exchange more difficult, constitute an additional challenge, although a challenge that new, commercially available databases linking voters' names, addresses, racial information, and telephone numbers are making less important. Nevertheless, in exit polls, statistical techniques (such as weighting for nonresponse and multiple imputation)¹⁹⁰ can address many of these issues. And in most surveys, including both telephone surveys and exit polls, projected results from the survey that incorporate nonresponse or weighting techniques can be compared to actual vote tallies to assess survey representativeness and to allow for adjustments.

More fundamentally, telephone surveys and exit polls are standard now in the industry of assessing and electing candidates. And one should compare the reliability of polls, not to a hypothetical perfect sample survey with 100% response, but to the reliability of the evidence upon which vote dilution cases have relied for decades, that is, the results of the fragile ecological inference methods discussed in Part II. Surveys do not encounter the problems discussed in Parts II.A and II.B. Reasonable (but imperfect) surveys should thus be compared to fragile ecological inference. Poorly executed surveys, like poorly executed ecological inference analyses, should be excluded or given little evidentiary weight, but there is little new in this realization.

2. Alternative (Nonquantitative) Sources of Evidence

As courts have adjudicated whether voting is racially correlated or even caused, one might have thought that the presence of observable race-based campaign appeals (particularly by successful candidates),¹⁹¹ a factor listed in the Senate Report,¹⁹² would have been highlighted as useful evidence. It is at least plausible that race-based appeals constitute not just revealed predictions by candidates (whose job it is to be knowledgeable about such things) as to the electorate's preexisting preferences but also a means by which candidates attempt to shape those preferences to racially specific voting patterns inuring to the candidates' benefit. Similarly, another Senate Report factor, governmental unresponsiveness to minority issues and concerns, suggests a conclusion among elected officials that they can ignore the views of minority voters without jeopardizing their prospects for reelection, which would ordinarily be true only if voting is racially polarized. Yet, I was unable to find a post-*Gingles* published case in which either race-based

which case surveyors will "count" answers only from a respondent reporting a high likelihood that she will vote) and whether the respondent can identify her polling location.

189. See, e.g., Robert F. Belli, Michael W. Traugott, Margaret Young & Katherine A. McGonagle, *Reducing Vote Overreporting in Surveys: Social Desirability, Memory Failure, and Source Monitoring*, 63 PUB. OPINION Q. 90 (1999).

190. See generally DONALD B. RUBIN, MULTIPLE IMPUTATION FOR NONRESPONSE IN SURVEYS (1987). For an example of the use of multiple imputation in exit polling, taking advantage of observed characteristics of voters, see Greiner & Quinn, *supra* note 25.

191. See Katz et al., *supra* note 44, for a description of the various forms race-based appeals have taken.

192. See *supra* note 33 and accompanying text.

campaign appeals or lack of governmental responsiveness, found to be present in the relevant jurisdiction, was mentioned or discussed during adjudication of racial bloc voting. Instead, these two factors were considered only at the totality-of-circumstances stage, after the court had decided whether bloc voting was present, when it canvassed the laundry list of factors from the Senate Report.¹⁹³

Other facts indicative of the presence or absence of racial bloc voting, factors not mentioned in the Senate Report, are rarely mentioned. I highlight two. First, evidence that voters organize themselves along racial lines suggests a mindset in the community that may carry over into the polling booth. Thus, for example, the presence in a community of the following, among other factors, might suggest racial polarization (although none would be necessarily conclusive): active, racially identifiable civic/political organizations that groom or endorse candidates; overall campaign strategies, or a substantial quantity of campaign events, designed to appeal peculiarly to potential voters of racially defined groups; and politically active media institutions serving members of a racial community and covering political issues of particular concern to that group.¹⁹⁴ Second, organization and action in the legislative body along racial lines, including machinations in the districting process, suggest that the electorate views itself along the same racial lines and votes accordingly.

193. Regarding racial campaign appeals, see *Bone Shirt v. Hazeltine*, 336 F. Supp. 2d 976, 1041 (D.S.D. 2004); *United States v. Charleston Cnty.*, 316 F. Supp. 2d 268, 295 (D.S.C. 2003); *Cofield v. City of LaGrange*, 969 F. Supp. 749, 777 (N.D. Ga. 1997); *Goosby v. Town Bd.*, 956 F. Supp. 326, 342–43 (E.D.N.Y. 1997); *Reed v. Town of Babylon*, 914 F. Supp. 843, 859–60 (E.D.N.Y. 1996); *Vecinos DeBarrio Uno v. City of Holyoke*, 880 F. Supp. 911, 927 (D. Mass. 1995); *White v. Alabama*, 867 F. Supp. 1519, 1556 (M.D. Ala. 1994); *Meek v. Metro. Dade Cnty.*, 805 F. Supp. 967, 982 (S.D. Fla. 1992); *Magnolia Bar Ass'n v. Lee*, 793 F. Supp. 1386, 1409–10 (S.D. Miss. 1992); *Garza v. Cnty. of L.A.*, 756 F. Supp. 1298, 1341 (C.D. Cal. 1990); *Williams v. City of Dallas*, 734 F. Supp. 1317 (N.D. Tex. 1990); *Jeffers v. Clinton*, 730 F. Supp. 196, 212 (E.D. Ark. 1989); *McDaniels v. Mehfoud*, 702 F. Supp. 588, 595 (E.D. Va. 1988); *Roberts v. Wamser*, 679 F. Supp. 1513, 1515 (E.D. Mo. 1987) (employing the *Gingles* analysis in a nonredistricting case). A few cases were ambiguous. See *S. Christian Leadership Conference v. Sessions*, 56 F.3d 1281, 1290 (11th Cir. 1995); *United States v. Alamosa Cnty.*, 306 F. Supp. 2d 1016, 1025–26 (D. Colo. 2004); *Clark v. Roemer*, 777 F. Supp. 471, app. A (M.D. La. 2001); *Smith v. Bd. of Supervisors*, 801 F. Supp. 1513, 1518 (E.D. Va. 1992); *Armour v. Ohio*, 775 F. Supp. 1044, 1056 (N.D. Ohio 1991).

Regarding non-responsiveness, see *Bridgeport Coal. for Fair Representation v. City of Bridgeport*, 26 F.3d 271, 276–77 (2d Cir. 1994); *Bone Shirt*, 336 F. Supp. 2d at 1043–47; *Goosby*, 956 F. Supp. at 344–46, 352; *Ortiz v. City of Philadelphia Office of City Comm'rs Voter Registration Div.*, 824 F. Supp. 514, 538 (E.D. Pa. 1993); *Meek*, 805 F. Supp. at 987, 991, 993; *Jenkins v. Red Clay Consol. Sch. Dist. Bd. of Educ.*, 780 F. Supp. 221, 239–41 (D. Del. 1991); *Armour*, 775 F. Supp. at 1058; *Williams*, 734 F. Supp. at 1406–09; *McDaniels*, 702 F. Supp. at 595–96; *Dillard v. Baldwin Cnty. Bd. of Educ.*, 686 F. Supp. 1459, 1467 (M.D. Ala. 1988). Again, two cases were ambiguous. See *Ward v. Columbus Cnty.*, 782 F. Supp. 1097, 1105 (E.D.N.C. 1991); *Bradford Cnty. NAACP v. City of Starke*, 712 F. Supp. 1523, 1538 (M.D. Fla. 1989).

194. These and other factors were mentioned by the district court in *Bone Shirt*, 336 F. Supp. 2d 976, an outlier (in a positive sense) in this jurisprudence.

Why have none of these potential indicators of racial bloc voting appeared in judicial opinions on the subject? After 1986, this may have been a matter of path dependency: as noted above, even after reciting lower court findings of race-based campaigns by successful candidates in the North Carolina legislature, Justice Brennan's opinion in *Gingles* discussed the issue of racially polarized voting in purely numerical terms.¹⁹⁵ The plaintiffs' victory in *Gingles*, the roadmap this victory offered for future litigants, and the force of precedent in a common-law system may have done the rest. But this begs the question; what are the costs of relying on nonquantitative evidence in this area?

One major cost is the danger that in crediting some of the identified types of nonquantitative evidence, a court characterizes the actions of voters or of potentially powerful actors in the political system as essentially racial, perhaps racist. The divisiveness of such a finding, and what may be a corresponding reluctance among the judiciary to find such facts,¹⁹⁶ were dangers Justice Brennan identified when he articulated the reasons why, in his view, racial bloc voting meant racially correlated voting, without regard to whether voting patterns were caused by white racial hostility to candidates of minority race.¹⁹⁷ To some extent, the dangers here can be overstated. Courts are required to consider the factors listed in the Senate Report, including those listed above, at the totality-of-circumstances stage, so one might argue that a recognition of the probative value of these facts as applied to the *Gingles* prerequisites does not increase the risk of divisiveness. Similarly, courts have sometimes shown considerable impatience with redistricting machinations inside a legislative body that they believe to be targeted in some way at a minority group, even if such machinations are insufficient to support a formal finding of intentional discrimination; in such situations, courts find ways to make such evidence relevant.¹⁹⁸ Finally, if racially identifiable campaign events, newspapers, and other aspects of the community actually exist, the extent of additional damage done by crediting testimony about these circumstances is open to debate.

If I am right about all this, then in certain redistricting contexts, litigators may need to change the witnesses they interview, hire, and call. In certain cases, testimony regarding racial bloc voting should no longer be the primary domain of the quantitatively adept. Instead, the focus should be on persons who make it their business to know (or can find out) the politics and the structure of political organization in the relevant locality: retired politicians, local nonquantitative political scientists, perhaps even journalists.¹⁹⁹ Such persons have specialized

195. See *supra* notes 40–41 and accompanying text.

196. See *Charleston Cty.*, 316 F. Supp. 2d at 270.

197. *Thornburg v. Gingles*, 478 U.S. 30, 70–74 (1986).

198. See, e.g., *League of United Latin Am. Citizens v. Perry*, 548 U.S. 399, 441 (2006) (objecting to the removal of a Latino opportunity to elect a candidate of choice because Latinos were about to exercise it); *Black Political Task Force v. Galvin*, 300 F. Supp. 2d 291, 314–15 (D. Mass. 2004) (objecting to the use of race “as a tool to ensure the protection of incumbents”).

199. As an exercise, I interviewed persons who might provide such evidence about the city of Boston, including Pulitzer Prize-winning reporter Kenneth Cooper, see *supra* note 134, and former head of the Latino advocacy organization *Oiste?*, Giovanna Negretti.

knowledge and methods that they can employ to investigate and gain relevant information,²⁰⁰ and as sources of evidence, they appear at least as reliable as the testimony by politicians courts sometimes admit and consider regarding racial voting patterns.²⁰¹ By way of analogy, courts have long considered evidence from historians when adjudicating whether districting schemes implemented decades in the past were adopted with racially discriminatory intent.²⁰²

A final objection: some might argue²⁰³ that much of nonquantitative evidence highlighted above would come from partisan sources with an intense interest in the outcome of any redistricting lawsuit, and thus the corresponding testimony would carry a heavy taint of potential bias. The answer is, of course this is true. But that does not distinguish redistricting lawsuits from any other type of lawsuit. Frequently in current litigation, including civil rights litigation, critical information is available only from the parties themselves, who are self-interested. Yet, we trust judges and juries to sift through the resulting evidence and to arrive at reasonable conclusions in the run of cases. Judges are more practiced at this sifting process than they are at assessing the results of ecological inference techniques. Evidence of racial bloc voting in redistricting lawsuits has, by virtue of its near-exclusive numerical focus, enjoyed a patina of neutrality that it never deserved and that is no longer sustainable. In the current era, we must trust judges to do what they are practiced at doing.

IV. A SHORT CASE STUDY: THE BOSTON CITY COUNCIL

To make the ideas discussed in this paper more concrete, I conduct a brief case study focusing on the availability of evidence regarding whether voting is racially polarized in Boston City Council contests.²⁰⁴ First, some basic facts: Boston is a true melting pot jurisdiction; according to the 2000 census, Boston's voting age population was 55.4% white, 20.5% black, 12.1% Hispanic or Latino, and 7.7% Asian or Pacific Islander.²⁰⁵ Despite this racial diversity, white candidates have enjoyed extraordinary success in the Boston City Council's non-partisan elections, winning 81% of the seats available from 1990 to 2008.²⁰⁶ Seven of Boston's nine

Results and notes of these interviews are available upon request.

200. See FED. R. EVID. 702.

201. See Greiner, *supra* note 24, at 120.

202. See, e.g., J. Morgan Kousser, *Are Expert Witnesses Whores? Reflections on Objectivity in Scholarship and Expert Witnessing*, PUB. HISTORIAN, Winter 1984, at 5.

203. I thank Elizabeth Warren and Lani Guinier for their comments here.

204. My use of the Boston City Council is to illustrate concepts only. Even if voting in Boston were deemed racially polarized, it is not clear which if any minority groups (or even coalitions) could meet the first *Gingles* prerequisite. See *Bartlett v. Strickland*, 129 S. Ct. 1231 (2009) (requiring fifty percent majority population); Jessica Trounstine & Melody E. Valdin, *The Context Matters: The Effects of Single-Member Versus At-Large Districts on City Council Diversity*, 52 AM. J. POL. SCI. 554 (2008) (noting that the Latino community in Boston is spread across the city).

205. BOS. REDEVELOPMENT AUTH., *supra* note 143.

206. We must, of course, always keep in mind that section 2 does not provide a right to proportional representation. 42 U.S.C. § 1973(b).

The statements made on the Boston City Council's structure, racial composition, and electoral history represent a distillation of a variety of sources, mostly several dozen

districts (four seats are elected at-large) have had effective white majorities for the past two decades, and these seven have consistently elected white candidates. Meanwhile, the other two districts, with 81% and 55% black VAP, have since 1990 consistently elected black candidates.²⁰⁷ Between 1990 and 2008, no African American won an at-large seat, and the council had only one Asian and one Hispanic (each stayed two terms, with one defeated and the other leaving to run for mayor).

Given this record, some inference of racial polarization might arise; nevertheless, the 2009 Boston City Council election may have signaled a change.²⁰⁸ In 2009, the districted seats behaved as they have before. In the at-large seats, however, two incumbents departed the council to launch unsuccessful bids for the mayor's office. Of the eight candidates who survived the subsequent at-large preliminary, four were white, two Hispanic, and two black, and the winners were two white incumbents, a Hispanic, and an African American. Turnout was the highest in several years.²⁰⁹

The takeaway message from this Part is that assessment of whether voting is racially polarized in Boston City Council elections requires a mix of the results of ecological inference methods, survey sampling information, and nonquantitative evidence. All these forms of evidence are available at acceptable costs, and they can complement one another in ways that the current practices (which focus almost exclusively on ecological inference techniques) do not allow. Thus, the city of Boston illustrates the benefits of the more holistic approach to racial bloc voting that I endorse in this Article.

I proceed here in three steps. Part IV.A considers information from ecological inference techniques. Part IV.B considers survey information. Part IV.C considers nonquantitative information.

A. Information from Ecological Inference

What can ecological inference methods tell us about voting patterns in city council contests in Boston? In summary, they provide evidence of differences among whites and blacks, indications of a distinctive Hispanic viewpoint, and virtually nothing useful regarding Asians. Blacks tend to support non-white

newspaper articles, each of which contains a piece of that history. These articles and a spreadsheet that compiles the information are available from the author.

207. As of the 2000 census, Districts 1, 2, 5, 6, 8, and 9 were 60% or more white VAP. BOS. REDEVELOPMENT AUTH., *supra* note 143. District 3 was 47% white VAP, with the nearest racial group being African Americans at 28%. *Id.* CVAP figures by district were not available, but given that white CVAP share is usually a few percentage points higher than white VAP share of Boston's population, it seems likely that whites have a majority CVAP in District 3 as well. Districts 4 and 7 were 81% and 55% African American VAP, respectively. *Id.* Districts 4 and 7 have without fail elected African American candidates for the past two decades.

208. See, e.g., John Ruch, *Turner: Jackson Should Replace Me in '13*, JAMAICA PLAIN GAZETTE ONLINE (Nov. 6, 2009), <http://www.jamaicaplaingazette.com/node/3746> (discussing a "new political force").

209. See Edward Mason, *Councilor John R. Connolly Comes Out on Top*, BOS. HERALD, Nov. 4, 2009, at 4; Eric Moskowitz, *Voters Pick Newcomers and Stalwarts*, BOS. GLOBE, Nov. 4, 2009, at 1; Slack & Viser, *supra* note 138.

candidates, whites tend to provide far less support to non-white candidates. There is some indication that Hispanics support Hispanic candidates.

First, with respect to Caucasians and African Americans, blunt tools suggest racially correlated voting in city council contests dating at least back to 1991 (as far back as I investigated) and continuing through the 2007 round of elections. Table 1 provides an example.²¹⁰

Table 1: City of Boston, 2003, At-Large Contest

Candidate ²¹¹	Correlation Coefficients: % Vote for the Candidate Versus % of Precinct's VAP of Indicated Race			
	Black	White	Hispanic	Asian
A	-.77	.71	-.17	.20
B	.57	-.63	.30	-.02
C	-.56	.64	-.33	-.03
D	.95	-.87	.21	-.28
E	-.63	.62	-.25	.20
F	.88	-.85	.26	-.21
G	-.66	.65	-.18	.07
H	-.47	.45	-.16	.16

This contest features eight candidates: five Caucasians, two African Americans, and one Hispanic. First question: by looking at the figures in Table 1, can one identify the three minority candidates? Looking at the “Black” column, one sees that the most positive correlations²¹² between percentage of the precinct VAP that is black versus percentage of that precinct's vote going to a candidate occurs for Candidates D (.95), F (.88), and B (.57). Bingo. Candidates D and F are the two African Americans, Candidate B is the Hispanic. Note that the most positive black correlations correspond exactly to the most negative white correlations.

Second question: by looking at the figures in Table 1, can one identify the four winners? Looking at the “White” column, one sees that the highest correlations are for Candidates A (.71), G (.65), C (.64), and E (.62). This guess gets three (A, E, and G) out of four correct; this 2003 contest was one of the two (out of 117) city council contests pre-2009 won by a Hispanic. Note that this candidate, Felix Arroyo, Sr. (candidate B), was running as an incumbent, having been named to finish the term of a councilman elected in 2001.²¹³

210. See *supra* note 117 for an explanation as to why I do not use the GQ Model with these data.

211. The key: A = Hennigan (W), B = Arroyo (H), C = O'Malley (W), D = Owens (B), E = Flaherty (W), F = Garrison (B), G = Murphy (W), H = White (W). A candidate who received only four total votes is omitted.

212. Almost all of the correlation coefficients discussed in this section were statistically significantly different from zero, but I interpret this fact with caution. The number of precincts in Boston (about 250) means that correlations only slightly different from zero may be statistically significant.

213. See Yvonne Abraham, 'I Arrived Here, and the Whole City Was Judging People by Their Color,' BOS. GLOBE, Oct. 26, 2005, at B1. In fact, all four victors in this 2003 contest were incumbents.

These patterns repeat almost without fail from 1991 to 2007.²¹⁴ Non-white (black, Hispanic, or Asian) candidates ran in every year except for 1999. Except for one instance, the candidates having the highest correlations with black VAP (and the lowest with white VAP) were non-white. The magnitude of the correlations is also indicative. Black VAP-black candidate correlations are in the high .7s to the low .9s (recall that the highest possible value for a correlation is 1). Black VAP-Hispanic candidate and black VAP-Asian candidate correlations are typically in the .5 to .7 range. White VAP correlations had the same orders of magnitude but with negative signs (the lowest possible is -1). The upshot: if we believe these data hold information on voting patterns (despite the fragility of all ecological inference techniques), they indicate that black voters' preference ordering is a black candidate followed by any non-white candidate, with the least affinity to white candidates. White voters prefer white to non-white, and they least prefer black candidates.²¹⁵

The picture for Hispanic voters is more complicated. No Hispanic candidates survived the preliminary round during the 1990s. Two Hispanics made it to the final round prior to 2009, with one (Felix Arroyo, Sr.) running on four occasions. Using the "technique" applied above, one can always identify Hispanic candidates by looking for the highest Hispanic VAP-candidate correlation, but these correlations are of lower magnitude (on the order of .3 to .4) than the black and white VAP figures examined above, and Arroyo, Sr. did win twice (both times running as an incumbent) before becoming one of the extraordinarily few city council incumbents to be defeated in a reelection bid. With respect to Hispanic VAP-black candidate combinations, the resulting correlations are positive but mild (.1 to .3), and there is an occasional Hispanic VAP-white candidate correlation that is higher than these figures. Thus, subject to the usual caveats, there is some evidence that Hispanic voters prefer Hispanic candidates, with preferences of Hispanic voters vis-à-vis black, white, and Asian candidates uncertain. It is not clear whether these figures suggest an absence of race-based preferences or a lack of information, as discussed in Part II.

The Asian VAP correlations are uninformative. Correlations have low magnitudes, and no discernible pattern emerges. Again, it is not clear whether this signals an absence of race-based preferences among Asian voters or just a shortage of information.

These results should be interpreted with caution. For several reasons, some technical,²¹⁶ correlation coefficients are blunt instruments. To gain additional information, we can try to apply ecological inference techniques to elections other than those for city council involving Boston precincts, despite the increasing

214. Exact figures are available from the author on request.

215. Note that there is also some evidence that minority voters, particularly blacks, were engaging in partial-bullet voting. During the 1990s, the correlation between the percent black VAP and the number of votes cast per voter was highly negative (-.6 to -.8). In the 2000s, as a few more minority candidates emerged, the picture became more complicated.

216. For example, all candidates on the ballot are included in the figures discussed above, even though not all of these candidates obtained a reasonable percentage of the vote. *But see* Teague v. Attala Cnty., 92 F.3d 283, 289 (5th Cir. 1996) (questioning the inclusion of a candidate for sheriff election given the "paucity" of support for him).

danger (as explained above) that voting patterns in these so-called “exogenous” elections may be different from those in council contests.²¹⁷ I examined five such contests; the results, while reinforcing the conclusions suggested above for black voters (and to a lesser extent for the white electorate, which appears somewhat more willing to vote for black candidates in these exogenous contests), contain less than crystal clear indications for Hispanic voters and nothing useful for Asians.²¹⁸ We need more information here, particularly for Hispanics and Asians.

B. Surveys

Can surveys provide useful information about Boston City Council contests in a usable way? As noted above, I organized two surveys in the 2008 and 2009 elections conducted in the City of Boston, the first an exit poll, the second a telephone survey of past voters who were likely to vote again. The 2008 exit poll provided evidence of within-group cohesion among white and black voters as well as mild evidence of a difference in views between Hispanic and white voters, but these signals were not strong because the 2008 contests were either blowouts or ballot initiatives involving issues as to which one would not expect voting to fall along racial lines. With respect to Asians, the exit poll, when combined with ecological data, was able to produce reasonable estimates of Asian voter preferences for certain ballot initiatives, but again, given the subject matter on the ballot, one would not expect distinctive preferences. Thus, the primary usefulness of this exit poll for present purposes was to demonstrate that one can conduct a high-quality poll using students at bearable cost, with results that predict electoral outcomes with reasonable accuracy and in a way that produces other useful research (making the enterprise attractive to partners who might share costs).²¹⁹

The 2009 telephone survey showed interesting patterns. Recall that of the eight unusually talented candidates who sought at-large seats, four were white, two Hispanic, and two black; and the winners were two white incumbents, a Hispanic,

217. See text accompanying notes 130–36. The danger is particularly acute in Boston. See text accompanying note 138.

218. The Massachusetts House of Representatives districts in the City of Boston consist of a small number of precincts (some on the order of twenty), making these contests less helpful regarding voting patterns in the City generally. Moreover, given Boston’s status as an overwhelmingly Democratic town, the general elections available here have less information. Of five contests I examined, two, the 2006 gubernatorial primary and the 2008 presidential primary, are discussed above. See *supra* text accompanying notes 130–36. The other three contests are the 1994 and 2002 primaries for Suffolk County District Attorney and the 2008 Democratic primary for the Massachusetts Senate’s second Suffolk district, with the latter a stretch because it contains only seventy-odd of Boston’s 256 precincts. The first two contests featured black candidates against white candidates. The 95% intervals from the GQ Model for the support rates for the black candidates in them were as follows: in 1994 black (.87, .91), white (.56, .57), Hispanic (.10, .78), Asian (.03, .97); and in 2002, black (.80, .85), white (.22, .24), Hispanic (.01, .40), and Asian (.00, .52). The senatorial primary featured an African American incumbent against a Hispanic/Asian mixed-race challenger. The 95% intervals for the challenger were black (.09, .19), white (.77, .86), Hispanic (.01, .94), Asian (.00, .93).

219. Greiner & Quinn, *supra* note 25.

and an African American. The telephone survey raw data revealed roughly the following voting preferences among the racial groups.

Table 2: Support Levels of Boston Voters by Race
2009 At-Large Seats, Boston City Council

Voters	Candidate							
	W1*	W2*	W3	W4	B1*	B2	H1*	H2
white	High	High	Low	Low	Med	Low	High	--
black	Low	Low	--	--	High	High	High	--
Hispanic	Low	Low	--	--	Low	Low	V High	High
Asian	Med	Med	--	--	Low	Low	Med	--

Here, W1 through W4 are the four white candidates, B1 and B2 the two African Americans, and H1 and H2 the two Hispanics. A "*" symbol identifies the four winners.²²⁰ "Med" means a medium level of support, "V" means "very," and a "--" symbol means minimal support.²²¹

Table 2 illustrates the challenges this paper has discussed. Black and Hispanic voters in Boston clearly preferred candidates of their own race, and as suggested above, black voters prefer candidates of color. White voter behavior was more complex, with whites strongly supporting two white candidates and one Hispanic, and supporting to a lesser extent an African American. With no Asian in the contest, Asian voting behavior essentially mirrored that of whites. Thus, racial differences are clear, and white voters controlled the result in the sense that the four most white-preferred candidates prevailed. And yet two of four at-large seats were won by candidates of color, although one should keep in mind this meant that white candidates won nine of thirteen seats in the Boston City Council (because the districted seats split directly along racial lines).²²²

C. Nonquantitative Information

What information can nonquantitative sources provide about voting patterns in Boston City Council contests, particularly the at-large seats? My goal here is not to provide the kind of comprehensive evaluation that an expert witness, such as a nonquantitative political scientist or an expert in Boston city politics, could produce. Instead, I demonstrate that nonquantitative sources provide solid ground upon which such an appropriately trained and informed witness could build a useful opinion on racial bloc voting.

In city council and mayoral contests in Boston for at least the past several years, a major cleavage has been between "New" and "Old" Boston,²²³ a distinction that is

220. W1 = Murphy, W2 = Connolly, W3 = Bennett, W4 = Kenneally, B1 = Pressley, B2 = Jackson, H1 = Arroyo, H2 = Gonzalez.

221. The portion of the telephone survey generating these data was a joint project with Stephen Ansolabehere. We are still analyzing the resulting data.

222. See *supra* note 206–07 and accompanying text.

223. See Moskowitz, *supra* note 138; Dan Payne, *Some Comfort for Old Boston*, BOS. GLOBE, Sept. 3, 2009, at 17; *The New Boston Is Running*, WBUR, *supra* note 138.

partly but not completely defined by race. Old Boston is whiter (typically Irish and Italian), more conservative, and older. Also part of the Old Boston coalition are city employees, who are disproportionately white and who for over a decade have turned out to support the incumbent (white) mayor.²²⁴ New Boston is predominantly minority (but also includes the odd white yuppie/intellectual), progressive, younger, and more likely to be recently arrived to the nation and to the city.²²⁵ Old Boston has traditionally dominated city politics, both the city council and the mayor's office, by turning out in greater numbers, and it has usually been perceived as having voted for white (frequently Irish and Italian) city council candidates.²²⁶

In the past decade, the Old/New Boston split translated into a division on the council itself, a division defined by race. The division was evident early in the 2000s in a redistricting dispute. A white council president (eleven of the city's thirteen councilors at that time were white) replaced the black chair of the council's post-Census 2000 redistricting committee after the latter proposed a redistricting plan that would have increased to four the number of majority-non-white districts in the city. The new, white committee chair proposed the current plan (which will be used until 2013), which had two predominantly black districts and one district with a razor-thin non-white majority but which (due to citizenship figures and the fact that the non-whites here are a combination of Boston's three non-white racial groups) is effectively dominated by white voters.²²⁷ The deposed black redistricting committee chair interpreted this turn of events as due to race-based concerns.²²⁸

Thereafter, two black and one Hispanic (the only non-white) councilors formed a coalition called "Team Unity," which caucused together, established left-leaning positions on issues, and voted as a bloc, a bloc typically outvoted by the remaining members of the council.²²⁹ Team Unity endorsed another non-white candidate,

224. See, e.g., Yawu Miller, *Kickoff Event Shows Menin's Strength*, BAY ST. BANNER, Apr. 30, 2009, at 12, available at <http://www.baystatebanner.com/local15-2009-04-30>; Payne, *supra* note 223; Richard Weir, *Foes to Mayor: Stop Painting Cabinet White*, BOS. HERALD, Sept. 7, 2009, at 5.

225. See, e.g., Miller, *supra* note 138; Jason Zengerle & Michelle Cottle, *Uncommon Ground*, NEW REPUBLIC, July 15, 2009, at 8; David S. Bernstein, *Yoon or Flaherty*, BOS. PHOENIX (Aug. 12, 2009), <http://thePhoenix.com/Boston/News/88005-Yoon-or-Flaherty>.

226. See, e.g., Pete Stidman, *Arroyo Out, Connolly in for At-Large Council; Anemic Turnout Across City*, DORCHESTER REP. (Nov. 7, 2007, 8:00 PM), <http://www.dotnews.com/2007/arroyo-out-connolly-large-council-anemic-turnout-across-city>.

227. See MAUREEN E. FEENEY, BOS. CITY COUNCIL, 2002 COMM. ON CENSUS AND REDIST. REP., 10–12 (Oct. 2, 2002), available at http://www.cityofboston.gov/cityCouncil/pdfs/approved_report.pdf; Sarah Schweitzer, *Councilor Wants to Shift District Map*, BOS. GLOBE, Oct. 30, 2001, at B2; Sarah Schweitzer, *Lack of Minority Clout Seen in Council Shift*, BOS. GLOBE, Feb. 18, 2002, at A1; Frederick Warren Goldberg, *Promise Unfulfilled: The Failure of the 1981 Boston City Council Electoral Reforms 47–50* (Mar. 2007) (unpublished senior thesis, Harvard College) (on file with the author).

228. Goldberg, *supra* note 227, at 49–50.

229. See Donovan Slack, *Photo Puts a Focus on City Council Rift—Minority Group Draws Criticism*, BOS. GLOBE, Oct. 19, 2006, at 2B; David S. Bernstein, *The Rumor Mill*, BOS. PHOENIX (Sep. 5, 2007), <http://thePhoenix.com/Boston/News/46776-rumor-mill/?rel=inf>.

Asian Sam Yoon, for an at-large council seat in 2005. Yoon won and joined the coalition,²³⁰ which lasted two more years until Felix Arroyo, Sr., the Hispanic, lost. Arroyo's defeat represented only the second time (out of twenty-seven instances) since 1993 that a sitting at-large incumbent lost a reelection bid on the Boston City Council.

Some city council campaigns have had racial elements, but not always in the traditional way of white candidates appealing to white racism or broadcasting minority candidates' races. Several minority candidates emphasized their own races in an effort to build a coalition of New Boston voters²³¹ (white candidates generally do not emphasize their races or ethnicities, but it may be that they do not need to do so given the strong signals communicated by their Irish and Italian surnames).²³² And some candidates of color run against the white establishment,²³³ suggesting distinct viewpoints. Finally, a variety of recent issues in Boston, such as rezoning of public schools²³⁴ and an alleged dearth of minorities in the mayor's cabinet²³⁵ have racial overtones. But other issues, such as a reform of the Criminal Offender Record Information law, have not.²³⁶

What in particular can nonquantitative evidence tell us with respect to voting patterns of Asians, the racial group for which quantitative evidence had proven somewhat unhelpful? Questions about voting administration, particularly transliteration of candidate names and access to interpreters and bilingual ballots in

230. See Yawu Miller, *Yoon Gets Endorsement from Councilors of Color*, BAY ST. BANNER, Oct. 20, 2005, at 1, available at <http://www.baystate-banner.com/archives/stories/2005/102005-3.htm>. Some credited Yoon's win to the Team Unity endorsement. Phil Tajitsu Nash, *Time for the Tea Party*, ASIAN WEEK (Nov. 18, 2005), <http://www.asianweek.com/2005/11/18/time-for-the-tea-party/#>.

231. See, e.g., Adam Gaffin, *City Council Candidates: Demand More Money from Colleges, Hospitals*, UNIVERSAL HUB (June 23, 2009, 10:17 PM), <http://www.universalhub.com/node/25999> (reporting opening statement by candidate Ayanna Pressley, "There has never been a woman of color on the Boston City Council").

232. Recent successful at-large candidates have included Councilors Murphy, Connolly, Flaherty, Hennigan, O'Neil, and Menino. See Interview with Kenneth Cooper, *supra* note 134 ("There is still a fair amount of voting by surname in Boston.").

233. See Bernstein, *supra* note 229; Interview with Kenneth Cooper, *supra* note 134.

234. See John Ruch, *15 Run for 8 At-Large City Council Slots on Final Ballot*, JAMAICA PLAIN GAZETTE ONLINE (Aug. 27, 2009), <http://www.jamaicaplaingazette.com/node/3586> (reporting statement by candidate Tomas Gonzalez "that recent school zone proposals were mostly about white parents not wanting 'brown kids going to school with white-colored kids'").

235. See Weir, *supra* note 224; Gintautas Dumcius, *Yoon, Menino Aides Clash at Mattapan Forum*, DORCHESTER REP. (July 29, 2009, 9:00 AM), <http://www.dotnews.com/litdrop/2009/yoony-menino-aides-clash-mattapan-forum>; John Ruch, *Flaherty Vows BRA, ISD Reform*, JAMAICA PLAIN GAZETTE ONLINE (July 9, 2009), <http://jamaicaplaingazette.com/node/3505>. But see Bianca Vazquez Toness, *Sam Yoon, Activist for Mayor*, WBUR.ORG (Aug. 3, 2009), <http://www.wbur.org/2009/08/03/mayoral-profile-yoon> (reporting that the incumbent has long counted on support from "African Americans, Latinos and lefties").

236. See Editorial, *New Visions for Boston Council*, BOS. GLOBE, July 23, 2009, at 16; Interview with Kenneth Cooper, *supra* note 134.

polling places, have unified Asian-Bostonian voters, with the latter issues resulting in the United States Department of Justice suing the city.²³⁷ But the primary opponent here was the Secretary of State; the Boston City Council unanimously endorsed transliteration in 2007.²³⁸ With respect to candidates, the fortunes of Councilman Sam Yoon may be instructive. Yoon ran for a city council seat in 2005, and was successful in his first attempt (after the Team Unity endorsement mentioned above), a rare feat. Yoon has consistently emphasized his ethnicity in his campaigns²³⁹ and has attempted to build a pan-Asian coalition, to the extent of using fortune cookie prompts (Yoon is Korean American) and handouts in campaign rallies.²⁴⁰ He was reelected to the council in 2007, and in 2009, he abandoned his city council seat for an unsuccessful run at the mayor's office. His fundraising efforts made news with their emphasis on out-of-city Asian donors.²⁴¹ Ultimately, Yoon placed last among the three "serious" candidates in the 2009 preliminary mayoral elections.²⁴²

To conclude: there appears to be a rich amount of nonquantitative information upon which an appropriately trained or placed expert could build an opinion as to the cohesiveness and voting patterns of Boston's four major racial groups. None of an expert's conclusions would be certain, but the point here is comparative. Certainty has never been the standard, and it has never been provided by the quantitative evidence upon which courts have relied heavily in the past.

D. Conclusion Regarding the City of Boston

On the basis of all this evidence, and using the forward-looking definition of racial bloc voting identified in this paper, is voting racially polarized in Boston City Council contests? In my view, the issue is extremely close. It would be difficult to characterize council contests as post- or non-racial, and the lack of success of candidates of minority race is troubling. The council's districted seats have remained solidly identifiable by race. The 2009 success of an African American and a Hispanic for two at-large open seats suggests that racial barriers are not insurmountable, but equality of opportunity, not surmountability of barriers, is the

237. Complaint, *United States v. City of Boston*, No. 05-11598 WGY (D. Mass. 2005), available at http://www.usdoj.gov/crt/voting/sec_203/documents/boston_comp.php; see also Jared Lindh, *Asian Voters Renew Call for Bilingual Ballot Mandate*, BAY ST. BANNER, Feb. 26, 2009, at 21, available at <http://www.baystatebanner.com/local18-2009-02-2>.

238. See Lindh, *supra* note 237.

239. See, e.g., Brian C. Mooney, *Reaching Out to a New Generation, Yoon Stubborn in Quest for Change*, BOS. GLOBE (Sept. 6, 2009), http://www.boston.com/news/local/massachusetts/articles/2009/09/06/reaching_out_to_a_new_generation; Vazquez Toness, *supra* note 235.

240. John C. Drake, *Trying To Walk Fine Line on Ethnicity, Yoon Reaches out in Bid for Mayor*, BOS. GLOBE, Mar. 25, 2009, at 1, available at http://www.boston.com/news/local/massachusetts/articles/2009/03/25/trying_to_walk_fine_line_on_ethnicity.

241. See Jessica Van Sack, *Jet-Setting Pol Sam Yoon Flew the Coop*, BOS. HERALD, Oct. 1, 2009, at 5.

242. See Adam Reilly, *Asians for Yoon—Or Maybe the Other Guy(s)*, BOS. PHOENIX (July 10, 2009), <http://thephoenix.com/Boston/News/86242-Asians-for-Yoon-or-maybe-the-other-guys>.

test. Were a section 2 lawsuit to be filed today, and if the record consisted of the information presented above, I would find voting to be racially polarized, but by a razor-thin evidentiary margin.

CONCLUSION

It seems clear that the days in which “documenting racially polarized voting is generally . . . ‘just beating the obvious’”²⁴³ are gone. If so, then the discussion in Parts I to IV of this Article might be thought to raise two final questions: First, do the empirical difficulties identified here suggest that the Voting Rights Act is no longer necessary? In other words, does the fact that we may now have more trouble discerning how members of different racial groups vote, the “reasons” for such patterns,²⁴⁴ and the prospects for success among minority-preferred candidates indicate that voting is no longer racially identifiable in a way that matters? Second, if we concede the possibility that voting in some locations and as to some electoral contests may be racially polarized, is it now simply too difficult as an empirical/evidentiary matter to distinguish situations in which bloc voting does exist from situations in which it does not? One could phrase this second question in terms of whether identifying situations characterized by racially polarized voting might require an undue investment of scarce resources (time, money, judicial attention), or whether the risk of erroneous decisions is too high even if the needed resources are invested.

With respect to the first question, difficulty of proof is conceptually distinct from whether a legal prohibition remains necessary, and in my view, it is hard to credit an argument linking the two. A principal theme of Part II of this Article is that the increasingly multi-racial nature of the United States polity is alone enough to make analysis of racial voting patterns more difficult. But the fact that we as a nation are becoming more racially diverse, by itself, says nothing about whether we as a nation are becoming more racially tolerant. Irrational prejudices may increase or decrease with greater exposure to racial “others.” Thus, the fact that the increasingly multi-racial nature of United States polities makes bloc voting analysis harder does not necessarily suggest a decreased need for vote dilution law; it may instead suggest the opposite. Without careful empirical analysis, we will not know which is true. Further, and as noted above, in some jurisdictions, there is evidence that blacks vote against Hispanic candidates of choice (often in Democratic primaries) at higher rates than do whites, and vice versa.²⁴⁵ This pattern may not be universal, but its potential existence in certain jurisdictions suggests racial animosities may exist among groups previously characterized as “minorities” (although it may soon be that there is no “majority” racial group). If so, then even assuming for the moment a decrease in white bloc voting, the need for vote dilution law may persist. Again, the fact that racial bloc voting has become harder to litigate says nothing about whether the Voting Rights Act is less necessary.

243. Engstrom, *supra* note 17, at 495.

244. Again, I find the focus on “reasons” and causal concepts in this area unhelpful, but per Part I.B.2, not all courts agree.

245. See *supra* Part IV.A.–B.

With respect to the second question, a principal theme of Parts I and III of this Article is that adjudicating racial bloc voting may appear difficult and expensive because litigators and courts have not yet deployed available resources and methodologies that could provide important information. I have demonstrated here that more sophisticated ecological inference methods, sample surveys, and nonquantitative evidence can help a great deal in this area, and that these sources of information have as yet rarely played any role in the adjudication of racial bloc voting. At a minimum, we should not give up on litigating racial bloc voting well until we have deployed these additional methodologies and found them wanting.

Ultimately, the concerns articulated here appear to reflect a feeling that vote dilution law is an unneeded relic of the past. Vote dilution skeptics might point to events such as the successful campaigns of Barack Obama and Duval Patrick, the growing population of Hispanics in the United States, and the increased number of African American officeholders at various levels government to contend that race consciousness in districting is no longer necessary. In response, I note that we were here before, over twenty years ago,²⁴⁶ and yet the next two decades saw dozens of reported findings of vote dilution,²⁴⁷ along with several findings of intentional discrimination in districting.²⁴⁸

Further, arguments that changes in the world have made vote dilution law unnecessary are fundamentally odd. They ultimately depend on some kind of feeling that we can abandon vote dilution law because voting is no longer racially polarized, which rather obviously puts the cart before the horse. Bloc voting defines the vote dilution injury. If the application of the relevant empirical techniques and properly calibrated doctrine demonstrate that racially polarized voting is a thing of the past, then vote dilution litigation will wither away on its own. Meanwhile, bloc voting has always been a local concept, something that exists in some areas of the country and not others, and as to some political offices and not others. In short, if our nation has changed, good empirics will tell us so. If it has not, good empirics will tell us that. Either way, there seems little justification for abandoning vote dilution law based on an intuition (as opposed to solid empirics) regarding what is going on across the country; instead, the wiser course is to clarify what needs clarification, but to let the empirics tell us how to decide cases.

246. See *Thernstrom*, *supra* note 179, at 240–44. For a response to Thernstrom and others, see the massive research effort encapsulated in *Quiet Revolution in the South: The Impact of the Voting Rights Act, 1965–1990* (Chandler Davison & Bernard Grofman eds., 1994).

247. See *Katz et al.*, *supra* note 44, at 656.

248. See, e.g., *Garza v. Cnty. of Los Angeles*, 918 F.2d 763 (9th Cir. 1990); see also *Katz et al.*, *supra* note 44, at 651 & n.29, 677–93.

