Majority-Minority Districts, Co-ethnic Candidates, and Mobilization Effects

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Abstract

We estimate the effects of district demography and the possibility of co-ethnic representation on voter turnout and its political effects. We will examine vote histories from 1996-2000 for all registered voters in five California counties - Los Angeles, Orange, San Bernardino, Ventura, and Riverside, and data from 1996-2002 for all five boroughs of New York City. Moving beyond existing work, where we previously demonstrated the positive relationship between living in majority-minority electoral jurisdictions and the probability of voter turnout, we examine in greater detail the dynamics of the relationship between district population distributions and voter turnout. Using a continuous measure of Latino population share among registered voters and its square, we first replicate our previous findings, but in so doing demonstrate that the relationship between minority population share and turnout is both complex and non-linear. Findings simply comparing majority and non-majority contexts miss the important variation across levels of population. Second, we use data from both southern California and the five boroughs of New York, demonstrating that while the hypothesized effects are somewhat generalizable across Latino national origin groups and geographic context, there is important variation. Third, we examine the effect of turnout on electoral opportunity, and demonstrate how turnout differentials across Latino and non-Latino populations, coupled with the underlying population distributions among registered voters, can allow us to estimate important thresholds of political control. In the wake of the Supreme Court's decision in Georgia v. Ashcroft, we can use those functions and varying assumptions about white racial polarization and Latino unity to estimate the conditions under which potential political control can be translated into a legitimate chance for minority group members to elect a first-choice candidate.

Majority-Minority Districts, Co-ethnic Candidates, and Mobilization Effects

In part as a response to litigation brought under a rewritten Section 2 of the VRA, and in part as a function of the Justice Department's role in pre-clearance of districts pursuant to Section 5, the creation of majority-minority districts has become the standard method for securing minority representation in legislative institutions, a practice that increased markedly after the 1990 census.[i] Most scholars would agree that the establishment of these districts was remarkably successful at securing descriptive representation for minority voters. These districts generally did result in the election of an increasing number of African-Americans and Latinos to legislative office.

Less certain, however, is the impact of these districts on the political behavior of citizens residing in them. Some scholars suggest that majority-minority districts mobilize minority electorates, and find modest support at the mayoral level (Bobo and Gilliam 1990; Lublin and Tate 1992). Creating majority-minority districts provides minority voters with a new-found opportunity to elect a candidate of choice to office, thus empowering this previously excluded group and thereby increasing their incentives to turnout and vote. By contrast, others have taken a more skeptical view. The preponderance of early research reported no meaningful change in the turnout rates of minority voters (Brace et al, 1995; Gaddie and Bullock 1995). More ominously, Lani Guinier (1994) and others have suggested that low levels of competition in majority minority districts, coupled with disappointment associated with the lack of perceived policy effects from increased descriptive representation, serve as dual disincentives to participation. Any gains in turnout, she suggests, will be quickly dissipated by the irrelevance of voter participation.

This question, we would suggest, is of pivotal importance in any effort to evaluate the net effect of these specific aspects of Voting Rights Act on minority representation. How majority-minority districts influence the mobilization prospects of potential minority electorates is of tremendous relevance to the outcome of up-ballot races. If minority voting is enhanced by these structures, then their use as solution to minority under-representation does not alone impose negative externalities on other electoral contests. By contrast, if these districts result in the suppression of voter turnout among minority constituents, they could have profound and detrimental effects by diminishing the impact of minority voices and interests on up-ballot races where the outcome is less certain.

To date, there have been two broad-based efforts to answer this question. In the first, Claudine Gay (2001) used ecological inference (EI) to examine Congressional elections in majority-black districts. She found only modest evidence of increased African-American turnout, concluding that the likely overall effect of majority-black districts was negligible. By contrast, she did find significant declines in turnout among non-Hispanic whites.

The second effort was ours (Barreto, Segura, and Woods 2004). In that work, we set out to determine whether living in majority-minority districts was mobilizing for Latinos, and whether these effects would be better estimated by considering the larger electoral context. Our focus was exclusively on legislative elections and using turnout data at the individual level. Specifically, we estimated the influence of both single and overlapping majority-minority districts on individual level minority voter turnout, comparing the actual turnout of voters over multiple elections. We found a consistently positive effect on Latino turnout. That is, co-ethnic representation at every level had the effect on increasing the likelihood that a Latino voter turned out on election-day. Having the opportunity to elect a candidate of your choosing appears to be a

consistently empowering circumstance. Latinos vote more when in a majority-Latino district, contrary to the expectations of those who expected or feared minority demobilization. Moreover, the larger electoral context was found to play an important role in establishing the incentives or disincentives to vote. If living in one majority Latino district is good for turnout propensity, living in two or even three is better. By contrast, non-Hispanics living in Latino majority districts have less to cheer about and, apparently, less to drag them out to the polls on election-day. Like Gay, we find that non-Hispanic whites appear to vote less.

Our findings would initially appear to close the book on the question of majority-minority districts and voter turnout, at least for Latinos. They do, however, conflict with Gay's findings on African-Americans, and this difference, along with a number of other nagging and important questions, however, suggest the need for significant further inquiry.

At least one important motivation for reexamining this question is a recent development in the jurisprudence of majority-minority districting. After the 2000 Census and accompanying redistricting, the Supreme Court further complicated the calculus of minority districts with their decision in Georgia v. Ashcroft. Among the central elements in this case was the question of whether reducing minority voting strength in a district—something favored by a large majority of black legislators voting on the plan in question—could be acceptable, that is, found to not violate the no-retrogression standard long used for Section 5 pre-clearance. The Supreme Court found that reducing minority voter concentration in these districts was, in fact, acceptable.

The decision was and is controversial among advocates of minority voting rights. On the one hand, growing concentrations of minority voters in majority-minority districts may, in fact, be undermining minority representation by raising the numbers of minority legislators at a cost of reducing the overall impact of minority voters on the behavior and actions of all legislators.

On the other hand, co-ethnic representation has been repeatedly demonstrated to be the most reliable at directly representing the interests of minority voters, and any diminution of the security provided by majority-minority districts and pre-clearance is viewed ominously by advocates of minority representation. Knowing exactly how many minority voters are "enough" to secure a district, then, is of critical importance both given the desire of those hoping to reduce the apparent trade-off between descriptive and substantive representation as well as to the evolving interpretations of "no retrogression" and Section 5 compliance.

More importantly, especially for our purposes, the decision in Georgia v. Ashcroft necessitates that we move beyond the categorical measure of majority-minority districting used in our earlier work. Since that decision effectively permits the unpacking of minority districts, so long as the political opportunity to elect first choice candidates is not effectively diminished, we need a more exacting and nuanced understanding of how minority population share translates into political impact.

Anticipating the Impact of Minority Majority and Influence Districts

In drawing majority-minority districts, the guiding goal is the ability of previously marginalized sub-groups of the electorate to have a meaningful opportunity to elect first-choice candidates to public office. That is, the district is sufficient when the target population has some reasonable hope of electing like-minded representation. We have, often, simplified this calculation as one primarily driven by population, hence the popular moniker "majority-minority."

As a practical matter, however, that hope of electing first-choice candidates is the product of four distinct factors, only one of which is the jurisdiction's or district's demography. A second factor, of course, is turnout. We know that voter turnout among racial and ethnic

minorities generally lags behind that of whites. And our earlier work suggested that turnout is endogenous to the district demography itself, and will vary between majority-white and majority-minority jurisdictions. But the aforementioned implications of Georgia v. Ashcroft – i.e. the potential for partially unpacking some of these majority-minority districts—suggest that we need to understand what the turnout effects would be at various levels of minority group representation in the electorate. That is, while we might be certain that solidly Latino districts are both empowering to voters and successful at securing descriptive representation, we know far less about how marginal or influence districts might affect turnout, an effect whose importance is critical should Georgia v. Ashcroft actually result in the unpacking of some minority districts.

A related concern is whether the relationship between minority voter turnout and minority group share of a district's electorate a linear one. We have good reason to believe that it is not. That is, though our earlier findings suggest that turnout propensity grows with a majority or super-majority minority population share, it seems likely that this relationship flattens out at very high levels of minority population—where additional population share does little to ensure electoral success—and drops precipitously at lower levels where minority voices are too few to have an effect. To adjudicate the effects of minority districts on turnout, especially when considering influence districts as an alternative, we need a clearer specification of the functional form of that relationship. Specifically, at what population share does minority vote increase, and at which levels does that effect diminish?

Beyond population share and turnout, a third intrinsically important factor will be the level of political unity among the target population. Because, historically, our concerns regarding representation were largely focused on the African-American experience, the level of group unity was seldom considered beyond meeting the Gingles Standard's threshold. African-

Americans regularly exhibit 90%+ political unity. Latinos, on the other hand, are a far more politically diverse group. Their political identity, of course, needs to be sufficiently well-formed to meet the Gingles standard, but Latino unity—particularly on partisan matters—lags considerably behind that of African-Americans. Lower levels of target group unity suggest the need for higher population concentrations in order to translate population shares into political power.

A fourth consideration is the degree to which the non-target population manifests racially polarized bloc voting. The very existence of districting solutions to minority vote dilution is premised on the recognition that in many electoral environments, Anglos have historically been reluctant to vote for candidates of color, sometimes to alarmingly high degrees. Nevertheless, there is certainly variation in the degree to which this is the case, both across time and across locale. In some places, the racially polarized white bloc may constitute 90+% of white voters, necessitating a higher population share for a minority to be able to effectively exercise political control. In other environments, the level of racial polarization may only be 70% (that is, as many as 30% of whites showing some willingness to vote for candidates of color). In such an environment, the size of the minority population share necessary for exercising political control—that is, necessary to provide a realistic opportunity to elect first-choice candidates—would be significantly lower.

The implications of this variation are of particular importance in the wake of Georgia v. Ashcroft. That decision effectively permits the draw down of minority vote share in majority-minority districts, suggesting that it need not be inherently retrogressive. But the reduction of a minority vote share from, for example, 60 to 45% will have different effects in different environments. In places where the level of white unity is high, such a decrease is very likely to

be retrogressive, whereas in places where white unity is somewhat lower, the same decrease could actually increase minority voice. The problem, of course, is that the decision specifically allows plans to be judged on a jurisdiction wide basis, rather than on a district by district basis. That is, tradeoffs in district percentages are to be allowed across a jurisdiction. Such tradeoffs, however, would be a fool's bargain if we fail to consider the preferences of the non-minority voters newly districted into minority "influence" districts.

Data and Design

In this effort, we examine the question of how population distributions affect turnout, and how the two jointly interact with distributions of majority and minority preferences to produce political outcomes. Specifically, we intend to estimate the effects of district demography on voter turnout. We test three specific contentions. First, revising previous work on California with the inclusion of a continuous measure, we expect to replicate our finding that Latino voters are more likely to turnout in majority-minority environments. Second, that relationship is very likely to be curvilinear in nature. Third, the empowering nature of minority population concentrations can be found in other jurisdictions (namely, New York City), but there will be important differences in functional form as a consequence of important contextual variation. And fourth, variations in the relationship between turnout and minority population density necessarily imply similar variations in the level of minority and majority population shares and unity necessary to produce effective political voice for the minority population in question.

To test these contentions, we turn to Registrar-of-Voters' records for all registered voters from five counties in Southern California: Los Angeles, Orange, Riverside, San Bernardino, and Ventura,[ii] as well as records of all registered voters in the five boroughs of New York City. Specifically, we examine data on general elections from 1996-2002. Our dependent variables

are constructed using the actual record of whether or not individual registered voters turned out for a particular election.

Our unit of analysis is the individual, consistent with our earlier paper and a departure from previous work. The use of aggregate turnout numbers can often mask what is really happening at the level of individual choice. The universe of analysis is all registered voters in each jurisdiction.

This approach—individual level examination of actual election data—provides us with two advantages and one potential disadvantage. Unlike polling data, our analyses do not require inferences from samples to populations. And since Registrars' records do not rely on self-reporting, over-reporting due to a social-acceptability bias is not a problem. On the other hand, since our measure of turnout is, of necessity, only among registered voters, it is very likely that we may underestimate the empowering or demobilizing effects of living in a majority-minority electoral district since at least part of that effect will take place at the voter registration stage, not exclusively the actual election day decision to vote. In that sense, some of the variance that can be explained by minority district vote share has already been lost, but this loss should raise our confidence in any significant findings since they are more difficult to obtain.

We estimate the effect of living in an assembly district with varying shares of the electorate comprised by Latinos on the likelihood that a Latino citizen turns out to vote, controlling for other well-recognized determinants of behavior. We examine individual voter turnout in each general election. For each individual election, the dependent variable is *Voted*, and is coded one (1) if the registrant signed into the polls on election day, and zero (0) otherwise.

Identification of Latino voters is accomplished through the use of the Census Bureau's Spanish surname list, which flags those registrants with commonly occurring Hispanic

surnames.[iii] We identify Latino registered voters with the variable *Latino*, which is coded one (1) if the voter's surname indicates Hispanic origin. Given long-standing findings on the lower rates of turnout among all minority voters, *ceteris paribus*, we expect the coefficient on this variable to be negative, though some more recent findings about Latino mobilization in California give us caution with regard to these expectations (Barreto and Woods, 2000).

In estimating the principal effect, we measure the share of the registered voter pool in each Assembly district that are Latino. The resulting variable, *Latino Percent*, can theoretically vary between zero and 100%. We also include a squared version of this term (*Latino Percent*^{2}) to allow for the effect we estimate to be non-linear, as we previously suggested.

To differentiate the overall effect of Latino vote share on Latinos from the effect on non-Latinos, we interact both the *Latino Percent* and *Latino Percent*^{2} with the variable Latino. This allows us to estimate different effects of Latino vote share on Latinos and non-Latinos, consistent with our hypotheses. In order to estimate effects for Latino voters, we would need to sum the effects on the direct effect variables with those of the interaction terms (in much the same way as the intercept for Latinos requires us to sum the constant with the dummy variable for Latinos).

African-American voters have similarly demonstrated a lower propensity to turn out. Unfortunately, it is not possible to identify which registrants are African-Americans. To control for this effect, we code *Percent African-American* to capture the probability that a given voter is African-American, inferred from the proportion of non-Hispanic and non-Asian residents in that census tract that are black, ranging from zero (0) to one (1). This variable is set to zero when the registrant is coded as either Asian (in California) or Latino (since their probability of being African-American is known). While this estimate is of limited use for inferential purposes, it is

helpful in separating out the potentially different effects of living in majority-Latino districts on African-Americans and non-Hispanic whites. We would expect the coefficient to be consistently negative.

We control for party identification. We include dummy variables for Republicans and Democrats, with each coded as one (1), with all other voters coded as zero (0), leaving independents and third-party members as the unexpressed category. *Female* is a dichotomous variable. Determination of gender is directly from Registrar-of-Voters records. *Age* is also coded from records. Since younger citizens have been consistently found to vote less often, we would expect a positive coefficient. We include a squared-term to allow the effect of age to flatten at higher levels, so we'd expect a negative coefficient on this term.

In addition to these individual level effects (or proxies, as in the case of *Probability Black*), we include a battery of contextual effects to control for other well-recognized factors influencing turnout which are not part of the registrars' data-base and, hence, not available for each individual registrant. Each variable is coded using the census tract as the unit of analysis, and the data are drawn from the 1990 national Census, with the exception of *Probability Black*, which is drawn from the 2000 Census.

Income and education are the obvious necessary controls. For New York, income is coded by category, with the percent of households in each tract with income below 25000 (capturing the poor) and above 60000 (capturing the comfortable), with all other voters as the unexpressed category. For California, the figure represents the Median Income at the census-tract level of aggregation. *Percent College* captures the percent of residents in the tract with a college education or better. Both college education and higher income should be strongly and

positively associated with turnout, while the low income measure should be negatively associated with turnout.

Results of the Analysis

We present the results of probit analyses from metropolitan Los Angeles in Tables 1a-c, and the City of New York in Tables 2a-2d. Each table represents results at the Assembly district level, which we use because of a larger N and greater variation in the percent Latino at that level. (Results are roughly consistent across estimations for the state Senate and US House.) We look at three elections in California and four in New York. In each case, the dependent variable is whether the respondent signed in at the polls on election day or submitted an absentee ballot, as opposed to not having participated. Our central question is the relationship between Latino population share and the turnout of both Latinos and non-Latinos. Though the specifications vary slightly as a function of the data sets, the models are roughly comparable.

Table 1a-c about here

First, we evaluate whether the evidence supports our first hypothesis, that a continuous quadratic estimation for the California data will yield results consistent with those in our previous work. The data clearly suggest that this is the case. While Latinos are, ceteris paribus, less likely to vote than Anglos, the effect of living in districts with greater Latino population is, ultimately, mobilizing for Latinos and demobilizing for Anglos, ultimately resulting in higher levels of turnout for Latinos than Anglos in heavily Latino districts. Moreover, for both Latinos and non-Latinos, the relationship is curvilinear. The predicted probabilities generated by each model are illustrated in Figure 1.

Figure 1 about here

Our second query was with regard to the consistency of these effects across geographic region. Tables 2a-d report results from the estimations of New York state assembly districts within New York City's five boroughs.

Table 2a-d about here

These results are, in part, consistent with those from California, but they also depart in important ways. Latinos are again disadvantaged vis-à-vis whites. And again, importantly, as the share of the registered voters who are Latino climbs, the effect is empowering for Latinos, as compared to whites. But the effect of Latino vote share is not necessarily positive at lower values, as it was in California. As the illustration of predicted probabilities in Figure 2 suggest, for the lowest values of Latino vote share, the likelihood that a Latino registered voter turns out actually declines as vote share increases. The curvilinear effect, however, suggests that this effect turns positive between 40 and 55%, and since most Latino registered voters live in the higher concentration districts, the overall net effect is also positive.

Figure 2 about here

Results on control variables are generally as predicted and consistent across geographic region and election year. Higher income and higher median education are both positively associated with the likelihood of a registered voter turning out on election day. Similarly, older voters turn out more, though the negative coefficient on the squared term suggests that the effect flattens out above a certain threshold. Female registered voters turn out in greater numbers than males.[iv] In California, GOP voters turn out more than others, a result that differs from that of New York, where registered Democrats appear to turnout more, though the specification makes it difficult to assess whether this difference is significant. In a future iteration, we will use identical modeling approaches to see whether this anomaly disappears. Percent African-

American, which we use as a proxy for the probability that a voter is black, is consistently negatively related to turnout, a result consistent with the long-established finding that African-Americans vote less than Anglos.

Electability and the Translation of Population Share into Political Power

Having estimated the empirical relationship between minority share of a districts voters and the propensity of voters to turn out, we want to take the next step and illustrate the political consequences of these differences. First and most obviously, turnout differentials between minority voters and Anglos have long been considered as an important caveat when attempting to solve minority vote dilution problems. Effective minority control, for example, was often hypothesized to require super-majorities of 55, 60, or even 65% in the face of intransigent white opposition.

Earlier, we suggested that an important second step would be to incorporate additional evidence on the distribution of minority and non-minority preferences, which are an important consideration if we consider unpacking super-majority minority jurisdictions, and which we suggested are likely to vary considerably across electoral environments and time. Ecological regression has long been used in the voting rights arena to estimate the degree of racial polarization, so estimates of white and minority unity should be relatively straightforward to come by in most environments.

In this section, we set out to illustrate two things. First, we will demonstrate that the relationship between turnout and district demography will have meaningful effects on the share of the electorate that minority voters could meaningfully hope to comprise. Second, we will use varying assumptions regarding the level of minority and majority group unity to illustrate how

these effects begin to have political consequences as we seek to secure opportunities for minorities to elect first-choice candidates. In so doing, we will offer an evidentiary basis for our overarching concern that, without careful consideration of varying political contexts, the draw down of minority voters pursuant to Georgia v. Ashcroft could quite easily result in occasional or even frequent retrogression.

Turnout and Vote Share

We have estimated the effect of district demography on the turnout propensities of Latino voters. In order to assess the electoral effect of these relationships, we need to see how that turnout translates into vote share. Figures 3 and 4 illustrate the estimated relationship between demography and turnout for both regions in 1996. Each also estimates what the resulting Latino vote share would be by multiplying the predicted rate of turnout among registered Latinos by the share of the district's registered voters who are, in fact, Latino.

Figures 3 and 4 about here

Given important variation across regions in the relationship between demography and voter turnout, the net effects on the distribution of the turned out electorate also vary. Table 3 reports the anticipated share of the turned out vote constituted by Latinos based on the relationships estimated in Tables 1 and 2 and illustrated in Figures 3 and 4. It is immediately evident that important regional differences have an impact on Latino vote share. Latinos in Southern California, on average, will comprise about 3.5% more of the electorate than Latinos in New York City, holding Latino share of the registered voters constant. Moreover, the size of the difference is not constant but, rather, varies across levels of Latino registration in a curvilinear fashion, reflecting the functional forms found in the estimations of Tables 1 and 2.

Table 3 about here

Why does this matter? In attempting to engineer effective political influence for heretofore marginalized groups, an important intervening step is to arrive at accurate estimates of actual voter impact. The results presented in Figures 3 and 4 and Table 3 help illustrate two things: first, that the effects are dependent on the relationship between demography and turnout, and second, that important differences across space make generalized assumptions about the necessary level of population inappropriate. For example, in the California counties examined, the high levels of Latino mobilization mean that Latino turnout among registered voters consistently exceeds their population share. If, for example, we guessed that the politically necessary level of Latinos as a share of district registration was 50%, Latinos in California would comprise over 51% of the voters, whereas in New York, a 50% share of registrants would yield a share of the electorate less than 48%. While this difference might seem small, it is of crucial importance in a post- Georgia v. Ashcroft environment where drawing down of minority populations to the lowest level necessary to assure "influence" appears to have become permissible.

…and Electing First-Choice Candidates

Among the principal goals of majority-minority districting is the election of first-choice candidates, often assumed to be co-ethnic candidates of color. We have suggested that this opportunity is conditional on four factors, only two of which we have discussed so far…district demography and voter turnout rates, the latter of which is at least partially endogenous to the former. We would be remiss, however, to assume either that communities of interest vote in 100% blocs or that non-minorities are invariably united against minority candidates. While bloc voting certainly does occur, it seldom occurs at rates approaching 100% on either side. Rather, minority communities can vary in their level of unity, either as a consequence of partisan

differences, competing candidates of color, or other factors. And while a majority of whites may remain committed to racially polarized bloc voting, some share of white liberals may reliably support candidates of color.

We can estimate varying levels of unity and white bloc voting, and indeed this is often done for litigation over minority vote dilution claims. For our purposes here, we want to illustrate how varying levels of white and minority unity will produce thresholds of political control—that is, the opportunity for minorities to elect first-choice candidates—that vary across the estimated relationships between demography and turnout which, as we have demonstrated, should be estimated based on actual turnout, and which vary meaningfully across space and time.

Figures 5 and 6 about here

Figures 5 and 6 illustrated the relationship between minority population share and the share of votes received by the first-choice candidate or candidate of color, based on the estimations reported in Tables 1 and 2 and under varying assumptions regarding white and Latino unity. For ease of interpretation, we also report in Table 4 the level of Latino voter registration share where the resulting line crosses the 50% threshold.

Table 4 about here

Table 4 illustrates how the levels of Latino and white unity have a serious impact on the levels of minority population necessary to exercise effective political control. Under the most restrictive assumptions about minority chances, with only 75% Latino unity and a 90% racially polarized white bloc (meaning 10% of these voters would vote for a candidate of color), Latinos would need to comprise almost 60% of the registered voters in Southern California, and about 63.5% in New York, to have a chance of electing first-choice candidates. Again, differences between Southern California and New York City reflect the difference in the actual relationship between

demography and turnout. If, however, we look at the least restrictive assumptions about minority chances, with an 85% Latino unity and only 70% white bloc, Latinos would need only about 35.5% in Southern California and 38.5% in New York. It is worth noting that while the regional differences remain, they narrow somewhat. This narrowing is a reflection of the functional form estimated in the original equations presented in Tables 1 and 2.

Again, it is neither surprising nor new to suggest that the distribution of preferences among minorities and non-minorities will matter for minority chances of electing first-choice candidates. What's important here, however, is the recognition that, in terms of minority share of registered voters, how much is enough is endogenous to the relationship between demography and turnout, which is complex and varies across geographic locales.

And just as we estimated this relationship, we could similarly estimate the levels of bloc voting.[v] For illustrative purposes, we have assumed varying levels, but we could similarly plug in estimates drawn from ecological regression and arrive at region specific estimates of effective political control.

It is worth reemphasizing an important caveat regarding the analyses and simulations presented here. Our data consist of the behavior of registered voters, which is a self-selected sub-group of the larger population. Since at least some of the effects we discussed at the start of this effort will find effect in the rates of registration, these results generally *underestimate* the effect of population distributions on the propensity to vote, and the subsequent political effects derived from this likelihood.

Conclusion

If we begin to draw down minority population shares in hopes of minimizing the tradeoff between descriptive and substantive representation, we will naturally find ourselves having to

make specific estimates of the necessary and appropriate levels of minority population for achieving some form of influence or electoral control. One of the difficulties with that task is our tendency as social scientists and statisticians to make homogenizing assumptions about context. This homogenization is both more likely and more risky as a consequence of Georgia v. Ashcroft where the Court specifically abandoned single-district analysis and suggested that tradeoffs across different geographic regions of a state or other jurisdiction might be appropriate and not constitute retrogression.

We have demonstrated that effective political influence or control for minority populations is specifically the product of four factors, only one of which (population) is not endogenous to location. By demonstrating the endogeneity of turnout to population distributions, as well as important regional variation, we have shown that estimating the necessary population share to afford minority voters a chance at electing first-choice candidates is both necessary and doable. Blanket assumptions regarding turnout and preference distributions is, we think, very likely to result in retrogressive districting plans and significant setbacks in our efforts to assure equitable representation and access to the policy-making institutions of our society for racial and ethnic minority citizens.

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Table 1a
Results: California Assembly 1996

```
Probit regression                                 Number of obs   =    3391123
                                                  LR chi2(18)     =  434666.48
                                                  Prob > chi2     =     0.0000
Log likelihood = -1962077.2                       Pseudo R2       =     0.0997

------------------------------------------------------------------------------
     voted96 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Latino |   -.058425   .0067717    -8.63   0.000    -.0716973   -.0451526
  Latino Pct |    .004797   .0002977    16.12   0.000     .0042136    .0053804
L*Latino Pct |   .0041079   .0004675     8.79   0.000     .0031916    .0050243
  Pct Square |  -.0000453   4.55e-06    -9.95   0.000    -.0000543   -.0000364
L*Pct Square |  -.0000142   6.55e-06    -2.17   0.030     -.000027   -1.35e-06
         gop |   .1078595    .001688    63.90   0.000     .1045512    .1111679
         age |   .0496621   .0002331   213.05   0.000     .0492052    .0501189
        age2 |  -.0003866   2.33e-06  -166.27   0.000    -.0003911    -.000382
      female |   .0406363    .001471    27.62   0.000     .0377531    .0435195
 Pct College |    .536823   .0116419    46.11   0.000     .5140053    .5596407
  Med Income |   1.30e-06   8.68e-08    15.00   0.000     1.13e-06    1.47e-06
Pct For Born |  -.3324644   .0078704   -42.24   0.000      -.34789   -.3170387
       Asian |   -.187435   .0036324   -51.60   0.000    -.1945544   -.1803156
 Pct Af-Amer |  -.1044403   .0043422   -24.05   0.000    -.1129508   -.0959298
       cnty1 |  -.0784909   .0030392   -25.83   0.000    -.0844477   -.0725342
       cnty2 |  -.4304335   .0031896  -134.95   0.000     -.436685    -.424182
       cnty3 |  -1.497619   .0038911  -384.89   0.000    -1.505246   -1.489993
       cnty4 |  -.4955469   .0039793  -124.53   0.000    -.5033462   -.4877476
    Constant |  -.8602186   .0082607  -104.13   0.000    -.8764093   -.8440279
------------------------------------------------------------------------------


Measures of Fit for probit of voted96

Log-Lik Intercept Only:     -2.179e+06   Log-Lik Full Model:         -1.962e+06
D(3391104):                3924154.357   LR(18):                     434666.483
                                         Prob > LR:                       0.000
McFadden's R2:                   0.100   McFadden's Adj R2:               0.100
ML (Cox-Snell) R2:               0.120   Cragg-Uhler(Nagelkerke) R2:      0.166
McKelvey & Zavoina's R2:         0.190   Efron's R2:                      0.128
Variance of y*:                  1.234   Variance of error:               1.000
Count R2:                        0.708   Adj Count R2:                    0.147
AIC:                             1.157   AIC*n:                     3924192.357
BIC:                         -4.707e+07  BIC':                      -434395.823
BIC used by Stata:         3924440.054   AIC used by Stata:         3924192.357
```

Table 1b
Results: California Assembly 1998

```
Probit regression                                 Number of obs   =    4317827
                                                  LR chi2(18)     =  398175.82
                                                  Prob > chi2     =     0.0000
Log likelihood =   -2762543                       Pseudo R2       =     0.0672

------------------------------------------------------------------------------
     voted98 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Latino |  -.0860264   .0056661   -15.18   0.000    -.0971317   -.0749211
  Latino Pct |   .0007524    .000255     2.95   0.003     .0002526    .0012522
L*Latino Pct |   .0051904   .0003919    13.24   0.000     .0044223    .0059585
  Pct Square |  -.0000257   3.92e-06    -6.56   0.000    -.0000334   -.0000181
L*Pct Square |  -8.17e-06   5.51e-06    -1.48   0.139     -.000019    2.64e-06
         gop |   .0867498   .0014547    59.64   0.000     .0838988    .0896009
         age |   .0730069    .000195   374.45   0.000     .0726247     .073389
        age2 |  -.0005436   1.91e-06  -284.05   0.000    -.0005474   -.0005399
      female |   .0198857   .0012514    15.89   0.000      .017433    .0223385
 Pct College |   .2605399   .0097835    26.63   0.000     .2413646    .2797153
  Med Income |   1.35e-06   7.32e-08    18.46   0.000     1.21e-06    1.49e-06
Pct For Born |  -.2394092   .0066855   -35.81   0.000    -.2525126   -.2263058
       Asian |   -.161899    .003128   -51.76   0.000    -.1680298   -.1557682
 Pct Af-Amer |  -.1695744   .0037884   -44.76   0.000    -.1769995   -.1621493
       cnty1 |  -.0325363   .0025508   -12.76   0.000    -.0375358   -.0275368
       cnty2 |  -.2815269   .0027031  -104.15   0.000    -.2868249   -.2762288
       cnty3 |  -.0369079   .0031435   -11.74   0.000     -.043069   -.0307468
       cnty4 |   .1317225   .0033883    38.88   0.000     .1250816    .1383634
    Constant |   -1.89891   .0070266  -270.25   0.000    -1.912681   -1.885138
------------------------------------------------------------------------------


Measures of Fit for probit of voted98

Log-Lik Intercept Only:     -2.962e+06   Log-Lik Full Model:         -2.763e+06
D(4317808):                5525085.996   LR(18):                     398175.821
                                         Prob > LR:                       0.000
McFadden's R2:                   0.067   McFadden's Adj R2:               0.067
ML (Cox-Snell) R2:               0.088   Cragg-Uhler(Nagelkerke) R2:      0.118
McKelvey & Zavoina's R2:         0.135   Efron's R2:                      0.090
Variance of y*:                  1.156   Variance of error:               1.000
Count R2:                        0.640   Adj Count R2:                    0.182
AIC:                             1.280   AIC*n:                     5525123.996
BIC:                      -6.044e+07     BIC':                      -397900.812
BIC used by Stata:         5525376.283    AIC used by Stata:          5525123.996
```

Table 1c
Results: California Assembly 2000

```
Probit regression                                 Number of obs   =    6660566
                                                  LR chi2(18)     =  509677.01
                                                  Prob > chi2     =     0.0000
Log likelihood = -3994543.2                       Pseudo R2       =     0.0600

------------------------------------------------------------------------------
     voted00 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Latino |  -.0931952   .0044027   -21.17   0.000    -.1018243   -.0845661
  Latino Pct |  -.0004946   .0002122    -2.33   0.020    -.0009105   -.0000786
L*Latino Pct |   .0009867   .0003113     3.17   0.002     .0003765    .0015969
  Pct Square |  -.0000232   3.27e-06    -7.08   0.000    -.0000296   -.0000167
L*Pct Square |    .000059   4.45e-06    13.24   0.000     .0000502    .0000677
         gop |   .1460139   .0012104   120.63   0.000     .1436415    .1483864
         age |   .0640163   .0001515   422.43   0.000     .0637193    .0643133
        age2 |  -.0005002   1.50e-06  -333.93   0.000    -.0005031   -.0004973
      female |   .0707015   .0010346    68.34   0.000     .0686738    .0727292
 Pct College |   .1382189   .0078424    17.62   0.000      .122848    .1535899
  Med Income |   3.66e-06   6.19e-08    59.16   0.000     3.54e-06    3.78e-06
Pct For Born |  -.2983499   .0055306   -53.95   0.000    -.3091897   -.2875102
       Asian |  -.1811729   .0024074   -75.26   0.000    -.1858913   -.1764545
 Pct Af-Amer |  -.3422104   .0032248  -106.12   0.000    -.3485309     -.33589
       cnty1 |  -.0051977   .0022728    -2.29   0.022    -.0096523   -.0007431
       cnty2 |   .0944315   .0023257    40.60   0.000     .0898733    .0989897
       cnty3 |  -.0350988   .0027218   -12.90   0.000    -.0404335   -.0297642
       cnty4 |   .1002354   .0030065    33.34   0.000     .0943427    .1061281
    Constant |   -1.41971   .0056941  -249.33   0.000    -1.430871    -1.40855
------------------------------------------------------------------------------

Measures of Fit for probit of voted00

Log-Lik Intercept Only:     -4.249e+06   Log-Lik Full Model:         -3.995e+06
D(6660547):                7989086.394   LR(18):                     509677.014
                                         Prob > LR:                       0.000
McFadden's R2:                   0.060   McFadden's Adj R2:               0.060
ML (Cox-Snell) R2:               0.074   Cragg-Uhler(Nagelkerke) R2:      0.102
McKelvey & Zavoina's R2:         0.118   Efron's R2:                      0.075
Variance of y*:                  1.133   Variance of error:               1.000
Count R2:                        0.679   Adj Count R2:                    0.043
AIC:                             1.199   AIC*n:                     7989124.394
BIC:                      -9.666e+07   BIC':                       -509394.203
BIC used by Stata:         7989384.917   AIC used by Stata:         7989124.394
```

Table 2a
Results: New York 1996

```
Probit regression                                 Number of obs   =    1951838
                                                  LR chi2(18)     =  127203.56
                                                  Prob > chi2     =     0.0000
Log likelihood = -1226771.2                       Pseudo R2       =     0.0493

------------------------------------------------------------------------------
      vote96 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Latino |  -.2170409   .0077111   -28.15   0.000    -.2321544   -.2019274
  Latino Pct |  -.0107642   .0003154   -34.12   0.000    -.0113825    -.010146
L*Latino Pct |   .0030058   .0006181     4.86   0.000     .0017943    .0042173
  Pct Square |   .0000976   5.69e-06    17.16   0.000     .0000864    .0001087
L*Pct Square |   -.000022   9.97e-06    -2.21   0.027    -.0000416   -2.46e-06
         dem |    .339964   .0025853   131.50   0.000      .334897    .3450311
         gop |   .2213538   .0034348    64.45   0.000     .2146217    .2280858
         age |   .0145361   .0000596   243.95   0.000     .0144193    .0146529
        age2 |  -7.19e-06   2.95e-08  -243.73   0.000    -7.24e-06   -7.13e-06
      female |   .1103789   .0018919    58.34   0.000     .1066708     .114087
Income<25000 |   -.187591   .0104174   -18.01   0.000    -.2080088   -.1671732
Income>60000 |   .0339439    .011913     2.85   0.004     .0105948     .057293
 Pct College |   .0768909   .0089192     8.62   0.000     .0594095    .0943722
 Pct Af-Amer |  -.1221884   .0035879   -34.06   0.000    -.1292205   -.1151564
       Bronx |    .090659    .003779    23.99   0.000     .0832522    .0980658
       Kings |  -.1280842   .0031831   -40.24   0.000     -.134323   -.1218454
      Queens |   .0297707   .0034961     8.52   0.000     .0229185    .0366229
  Staten Isl |  -.0840889    .004513   -18.63   0.000    -.0929342   -.0752436
    Constant |  -.3792903   .0093813   -40.43   0.000    -.3976773   -.3609033
------------------------------------------------------------------------------


Measures of Fit for probit of vote96

Log-Lik Intercept Only:     -1.290e+06   Log-Lik Full Model:         -1.227e+06
D(1951819):                2453542.479   LR(18):                     127203.564
                                         Prob > LR:                       0.000
McFadden's R2:                   0.049   McFadden's Adj R2:               0.049
ML (Cox-Snell) R2:               0.063   Cragg-Uhler(Nagelkerke) R2:      0.086
McKelvey & Zavoina's R2:         0.101   Efron's R2:                      0.066
Variance of y*:                  1.113   Variance of error:               1.000
Count R2:                        0.653   Adj Count R2:                    0.072
AIC:                             1.257   AIC*n:                     2453580.479
BIC:                        -2.582e+07   BIC':                      -126942.847
BIC used by Stata:         2453817.680   AIC used by Stata:         2453580.479
```

Table 2b
Results: New York 1998

```
Probit regression                                 Number of obs   =    2214173
                                                  LR chi2(18)     =  213667.32
                                                  Prob > chi2     =     0.0000
Log likelihood = -1426359.5                       Pseudo R2       =     0.0697

------------------------------------------------------------------------------
      vote98 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Latino |  -.2942091   .0074335   -39.58   0.000    -.3087785   -.2796398
  Latino Pct |   -.008473   .0002903   -29.18   0.000    -.0090421    -.007904
L*Latino Pct |   .0015738   .0005859     2.69   0.007     .0004255    .0027221
  Pct Square |   .0000396   5.20e-06     7.61   0.000     .0000294    .0000498
L*Pct Square |   .0000237   9.36e-06     2.54   0.011     5.39e-06    .0000421
         dem |     .41313   .0024479   168.77   0.000     .4083321    .4179279
         gop |   .2820061   .0032365    87.13   0.000     .2756626    .2883495
         age |   .0187754   .0000544   345.02   0.000     .0186687     .018882
        age2 |  -9.21e-06   2.69e-08  -342.29   0.000    -9.26e-06   -9.16e-06
      female |    .009531   .0017613     5.41   0.000     .0060789     .012983
Income<25000 |  -.1198623   .0097117   -12.34   0.000    -.1388968   -.1008278
Income>60000 |     .04591   .0109904     4.18   0.000     .0243692    .0674509
 Pct College |   .0956314   .0082786    11.55   0.000     .0794056    .1118572
 Pct Af-Amer |    -.11796   .0033427   -35.29   0.000    -.1245116   -.1114083
       Bronx |   .0101542    .003511     2.89   0.004     .0032727    .0170357
       Kings |  -.1220616   .0029707   -41.09   0.000     -.127884   -.1162391
      Queens |  -.0695634   .0032308   -21.53   0.000    -.0758957    -.063231
  Staten Isl |  -.1637624   .0041987   -39.00   0.000    -.1719917    -.155533
     Constant |  -.9634676   .0087644  -109.93   0.000    -.9806456   -.9462896
------------------------------------------------------------------------------


Measures of Fit for probit of vote98

Log-Lik Intercept Only:     -1.533e+06   Log-Lik Full Model:         -1.426e+06
D(2214154):                2852718.948   LR(18):                     213667.322
                                         Prob > LR:                       0.000
McFadden's R2:                   0.070   McFadden's Adj R2:               0.070
ML (Cox-Snell) R2:               0.092   Cragg-Uhler(Nagelkerke) R2:      0.123
McKelvey & Zavoina's R2:         0.142   Efron's R2:                      0.094
Variance of y*:                  1.165   Variance of error:               1.000
Count R2:                        0.637   Adj Count R2:                    0.247
AIC:                             1.288   AIC*n:                     2852756.948
BIC:                       -2.950e+07   BIC':                       -213404.335
BIC used by Stata:         2852996.546   AIC used by Stata:         2852756.948
```

Table 2c
Results: New York 2000

```
Probit regression                                 Number of obs   =    2603249
                                                  LR chi2(18)     =  119237.66
                                                  Prob > chi2     =     0.0000
Log likelihood = -1660463.4                       Pseudo R2       =     0.0347

------------------------------------------------------------------------------
      vote00 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Latino |  -.2718613   .0068005   -39.98   0.000    -.2851901   -.2585326
  Latino Pct |  -.0141879   .0002736   -51.86   0.000    -.0147241   -.0136516
L*Latino Pct |   .0041909   .0005425     7.73   0.000     .0031277    .0052542
  Pct Square |   .0001363   4.90e-06    27.84   0.000     .0001267    .0001459
L*Pct Square |  -.0000273   8.75e-06    -3.12   0.002    -.0000445   -.0000102
         dem |   .3375763   .0021295   158.53   0.000     .3334026      .34175
         gop |   .2261615   .0029331    77.11   0.000     .2204128    .2319102
         age |   .0085339   .0000491   173.96   0.000     .0084377      .00863
        age2 |  -4.26e-06   2.43e-08  -175.41   0.000    -4.31e-06   -4.22e-06
      female |   .1136837    .001626    69.91   0.000     .1104967    .1168707
Income<25000 |  -.1533225   .0089406   -17.15   0.000    -.1708457   -.1357993
Income>60000 |   .0078061   .0102948     0.76   0.448    -.0123713    .0279836
 Pct College |   .1492586   .0077362    19.29   0.000      .134096    .1644213
 Pct Af-Amer |  -.1103778   .0030871   -35.75   0.000    -.1164285   -.1043272
       Bronx |   .0619324   .0032406    19.11   0.000     .0555808    .0682839
       Kings |  -.1453303   .0027121   -53.59   0.000    -.1506459   -.1400147
      Queens |  -.0299613    .002975   -10.07   0.000    -.0357923   -.0241304
  Staten Isl |   -.143815   .0039452   -36.45   0.000    -.1515474   -.1360826
    Constant |  -.0658261   .0080129    -8.21   0.000    -.0815312    -.050121
------------------------------------------------------------------------------


Measures of Fit for probit of vote00

Log-Lik Intercept Only:     -1.720e+06   Log-Lik Full Model:         -1.660e+06
D(2603230):                3320926.707   LR(18):                     119237.661
                                         Prob > LR:                       0.000
McFadden's R2:                   0.035   McFadden's Adj R2:               0.035
ML (Cox-Snell) R2:               0.045   Cragg-Uhler(Nagelkerke) R2:      0.061
McKelvey & Zavoina's R2:         0.072   Efron's R2:                      0.047
Variance of y*:                  1.077   Variance of error:               1.000
Count R2:                        0.644   Adj Count R2:                    0.047
AIC:                             1.276   AIC*n:                     3320964.707
BIC:                      -3.513e+07     BIC':                      -118971.761
BIC used by Stata:         3321207.380   AIC used by Stata:         3320964.707
```

Table 2d
Results: New York 2002

```
Probit regression                                 Number of obs   =    3429653
                                                  LR chi2(14)     =  225721.52
                                                  Prob > chi2     =     0.0000
Log likelihood = -2162538.1                       Pseudo R2       =     0.0496

------------------------------------------------------------------------------
      vote02 |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      Latino |  -.2404042    .006268   -38.35   0.000    -.2526893   -.2281191
  Latino Pct |   -.005191   .0002193   -23.67   0.000    -.0056208   -.0047611
L*Latino Pct |  -.0025352   .0004958    -5.11   0.000     -.003507   -.0015634
  Pct Square |  -6.95e-06   3.88e-06    -1.79   0.073    -.0000146    6.50e-07
L*Pct Square |   .0000806   7.73e-06    10.43   0.000     .0000654    .0000957
         dem |   .3729722   .0019239   193.86   0.000     .3692015    .3767429
         gop |   .3191841   .0026355   121.11   0.000     .3140186    .3243496
         age |   .0148136   .0000423   350.03   0.000     .0147306    .0148965
        age2 |  -7.26e-06   2.10e-08  -345.90   0.000    -7.30e-06   -7.22e-06
      female |   .0088921   .0014266     6.23   0.000      .006096    .0116881
       Bronx |   .0203169   .0025488     7.97   0.000     .0153213    .0253126
       Kings |  -.1151757   .0019739   -58.35   0.000    -.1190444    -.111307
      Queens |  -.0781879    .002036   -38.40   0.000    -.0821783   -.0741975
  Staten Isl |  -.0898164   .0032626   -27.53   0.000    -.0962109   -.0834219
    Constant |  -1.119754   .0035415  -316.18   0.000    -1.126696   -1.112813
------------------------------------------------------------------------------


Measures of Fit for probit of vote02

Log-Lik Intercept Only:     -2.275e+06   Log-Lik Full Model:         -2.163e+06
D(3429638):                4325076.263   LR(14):                     225721.516
                                         Prob > LR:                       0.000
McFadden's R2:                   0.050   McFadden's Adj R2:               0.050
ML (Cox-Snell) R2:               0.064   Cragg-Uhler(Nagelkerke) R2:      0.087
McKelvey & Zavoina's R2:         0.103   Efron's R2:                      0.063
Variance of y*:                  1.115   Variance of error:               1.000
Count R2:                        0.637   Adj Count R2:                    0.040
AIC:                             1.261   AIC*n:                     4325106.263
BIC:                       -4.728e+07    BIC':                      -225510.844
BIC used by Stata:         4325301.982   AIC used by Stata:         4325106.263
```

Table 3
Predicted Turnout of Latinos as a Share of All Voters Across Varying Percentages of Latino Registrants in a District, 1996

	Latino Share of Voters on Who Turnout		Difference
Latino Share of Registered Voters	Southern California	New York City	
35	35.80	32.83	2.97
40	41.01	37.79	3.22
45	46.21	42.79	3.42
50	51.38	47.83	3.55
55	56.51	52.90	3.61
60	61.60	58.00	3.60
65	66.63	63.14	3.49

Figures in cells represent the predicted share of the total turned out electorate, obtained by multiplying the predicted turnout rate from the estimations above with the associated level of Latinos in the registered voter pool.

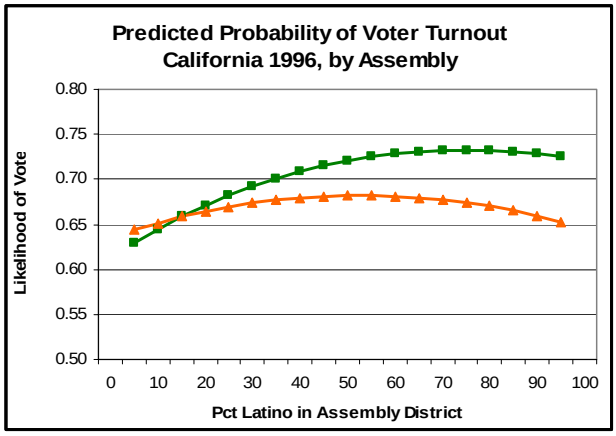
Table 4
Latino Share of Registered Voters Necessary to Elect First-Choice Candidates Under Varying Assumptions Regarding Levels of Latino and Majority Voter Unity

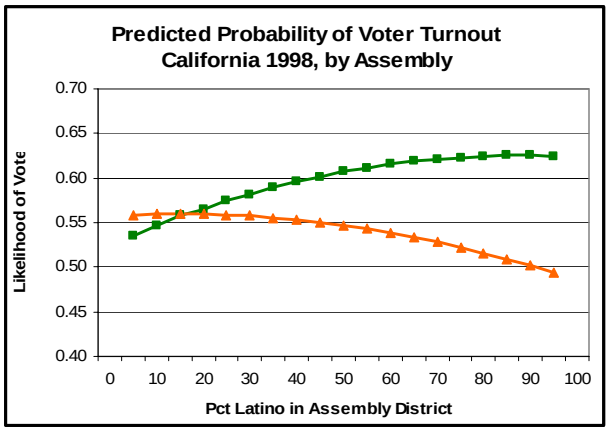
Assumed Preferences	Southern California	New York City	Difference
75% Latino Unity 90% White Bloc	59.94	63.44	3.50
85% Latino Unity 90% White Bloc	51.90	55.42	3.52
75% Latino Unity 70% White Bloc	43.30	46.64	3.34
85% Latino Unity 70% White Bloc	35.54	38.56	3.02

Figures in cells represent the level of Latino share of registered voters necessary such that the sum of the predicted share of turned out Latino and non-Latino voters, each multiplied by the proportion assumed to prefer Latino candidates for public office, exceeds 50%.

Figure 1:

Predicted Turnout Percentages for Latinos and Non-Latinos in Southern California Assembly Elections, 1996-2000.





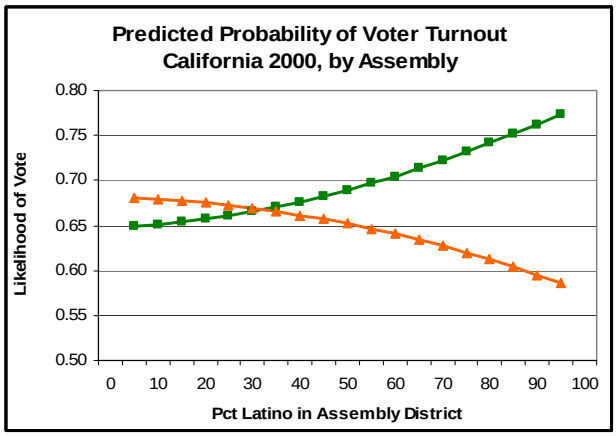


Figure 2:
Predicted Turnout Percentages for Latinos and Non-Latinos in New York City Assembly Elections, 1996-2002.

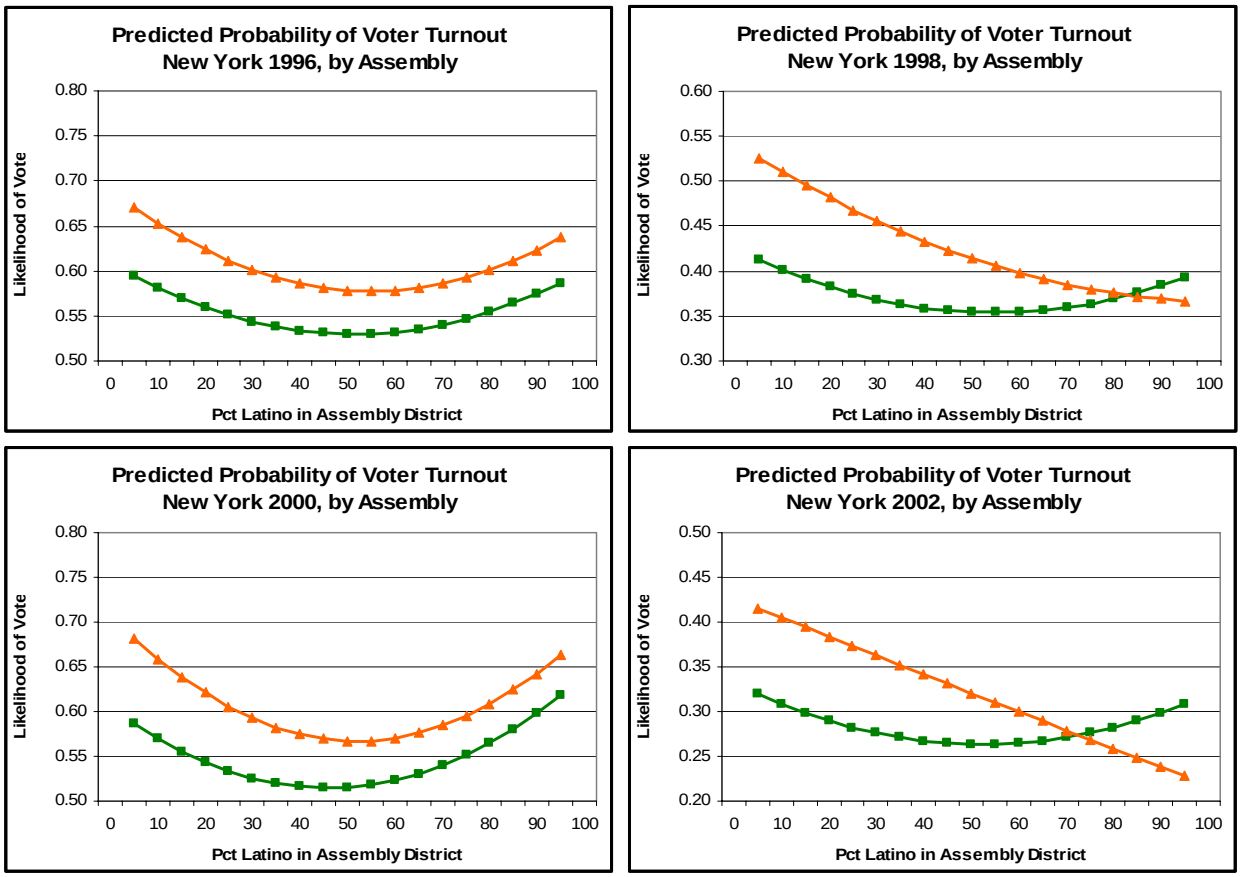


Figure 3

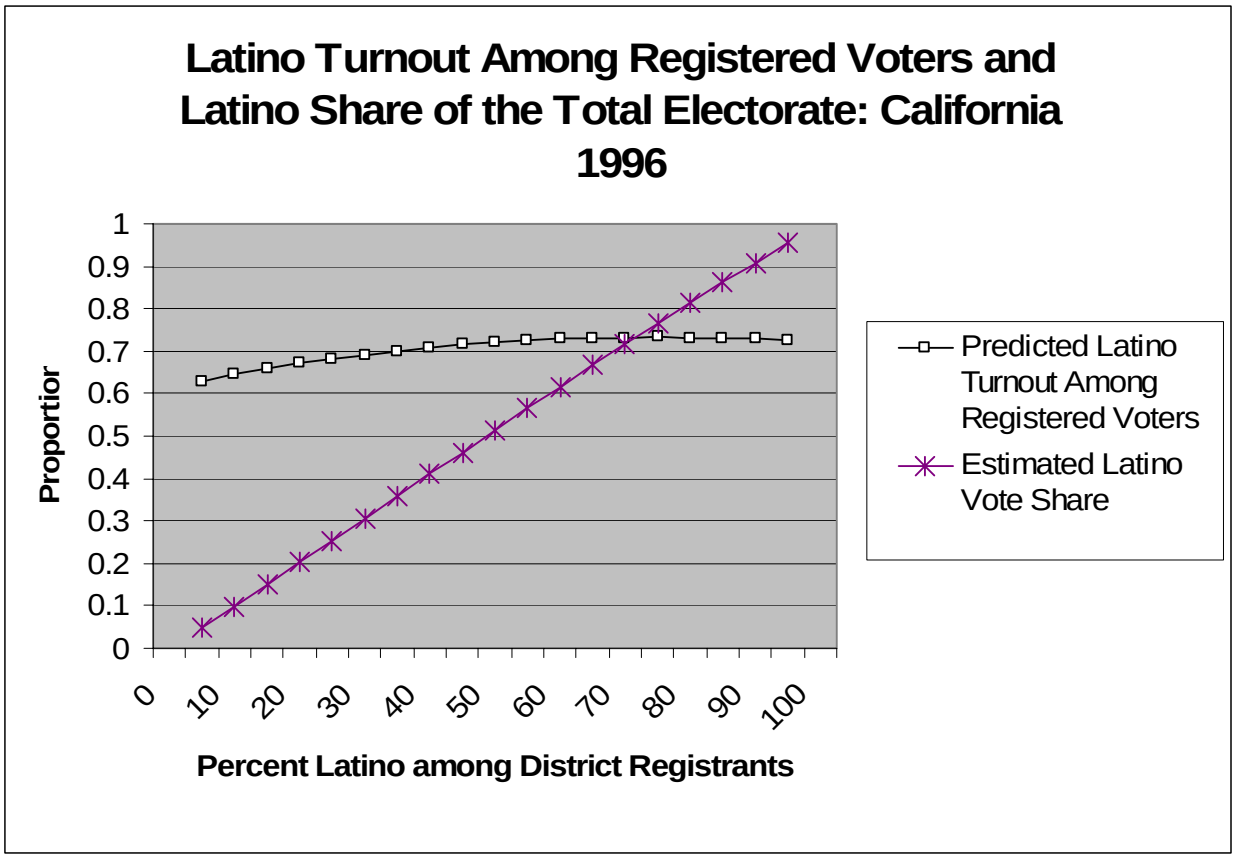

Latino Turnout Among Registered Voters and Latino Share of the Total Electorate: California 1996
Proportior
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
90
100
Percent Latino among District Registrants
Predicted Latino Turnout Among Registered Voters
Estimated Latino Vote Share

Figure 4

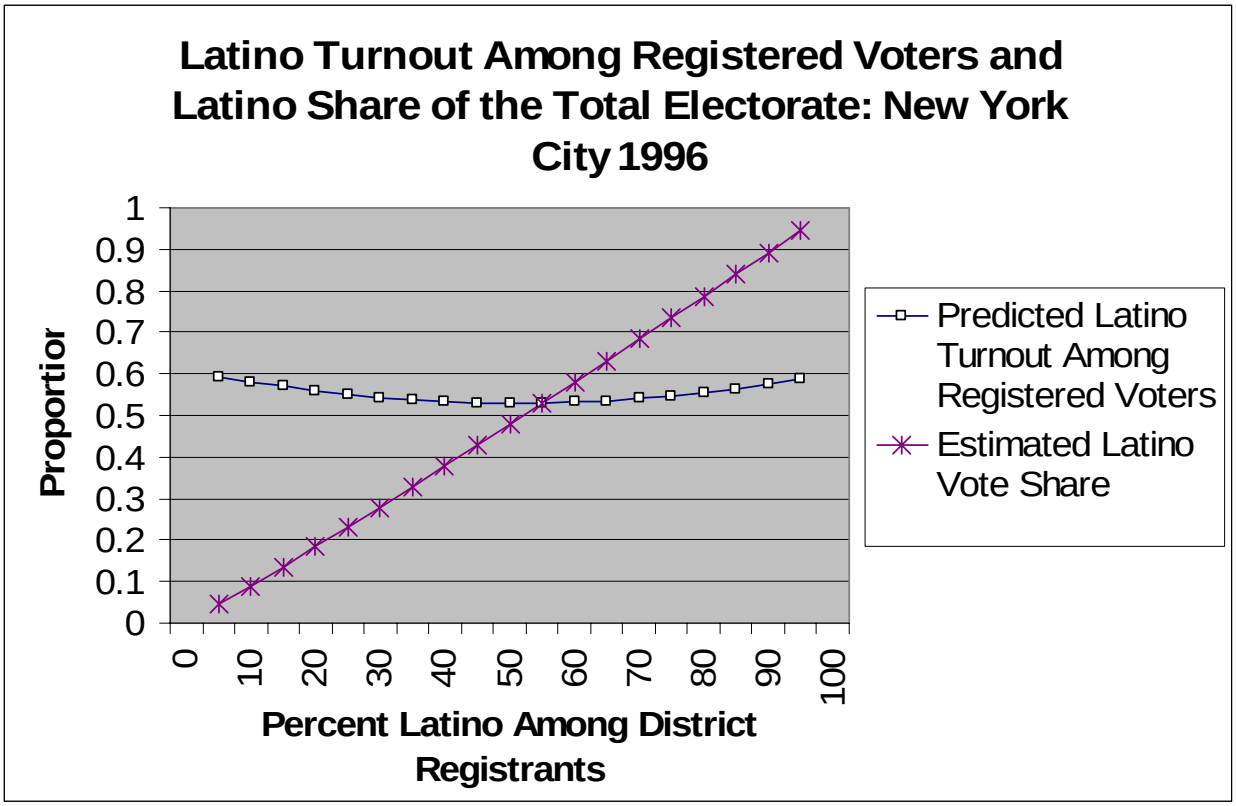
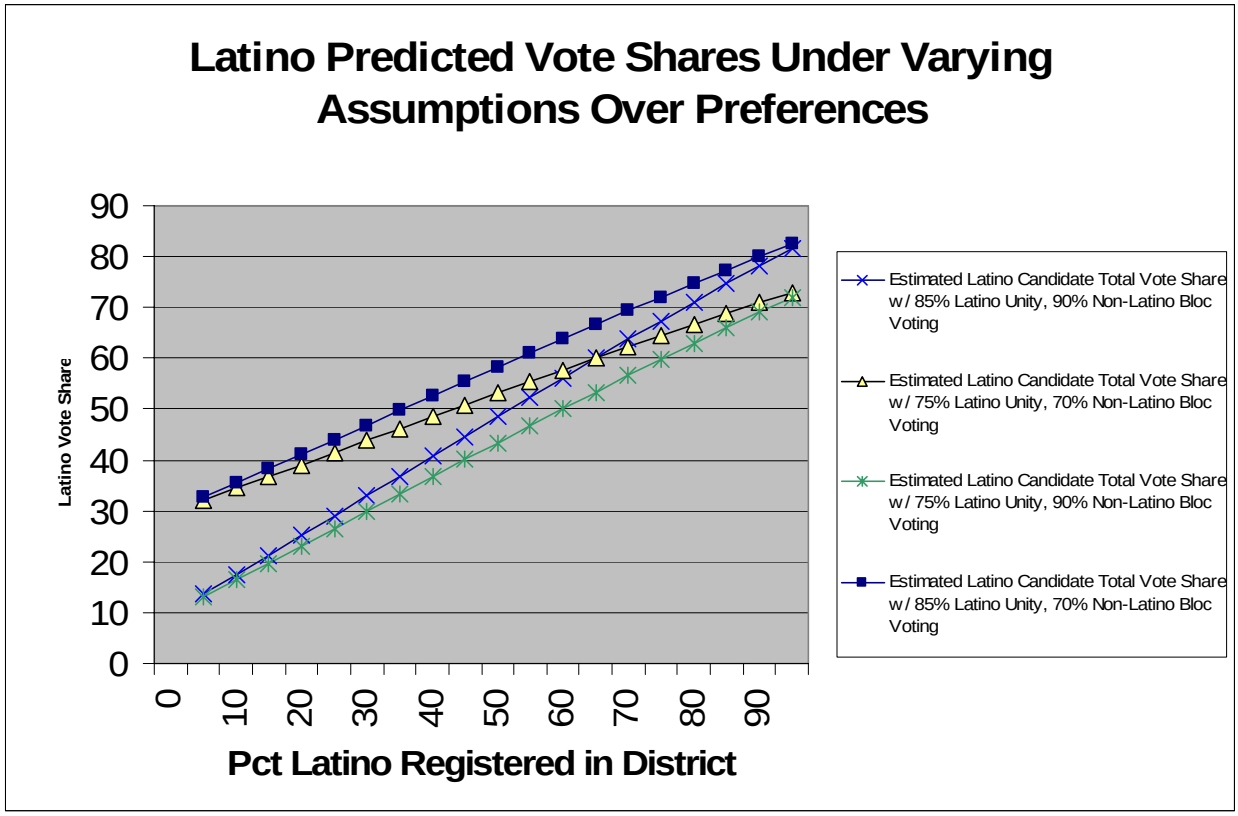
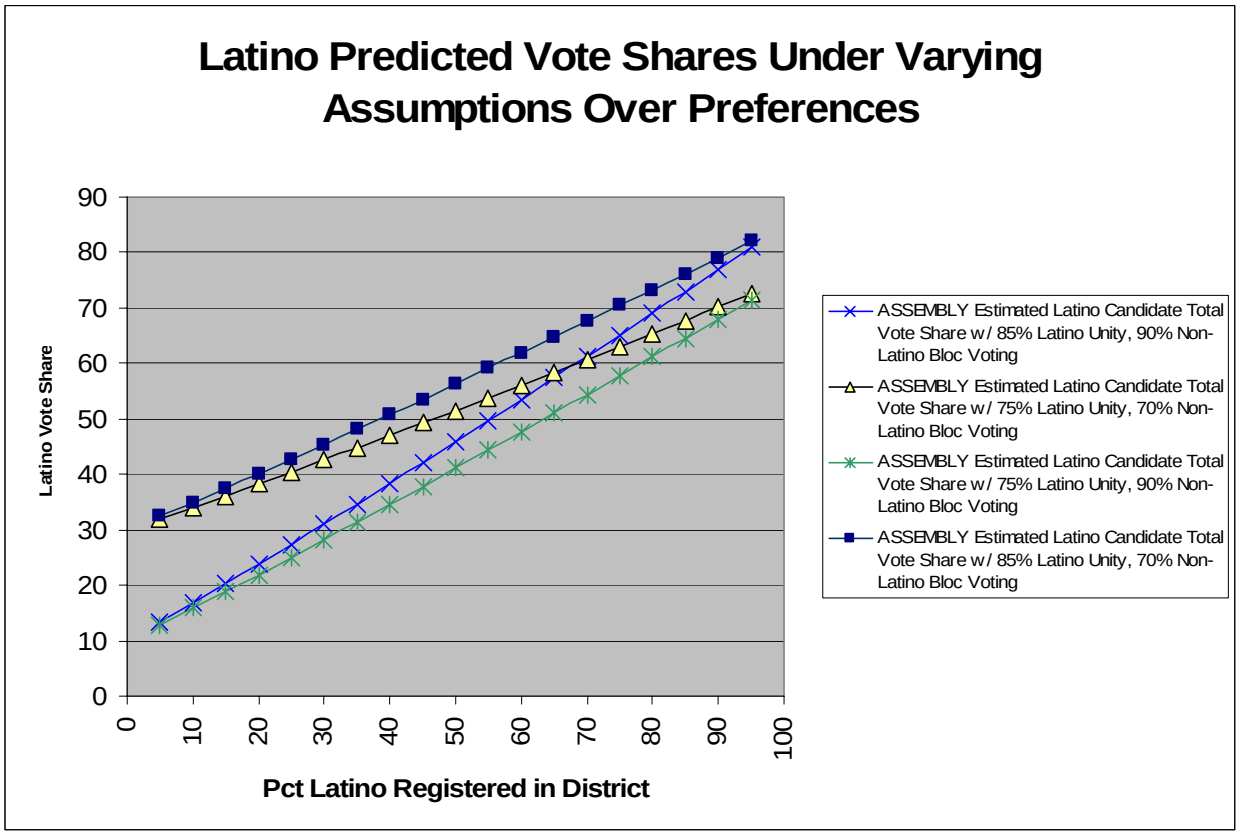

Latino Turnout Among Registered Voters and Latino Share of the Total Electorate: New York City 1996
Proportior
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
90
100
Percent Latino Among District Registrants
Predicted Latino Turnout Among Registered Voters
Estimated Latino Vote Share

Figure 5



Alternative scenarios based on estimated functions from the 1996 election in Southern California Assembly Districts.

Figure 6



Alternative scenarios based on estimated functions from the 1996 election in New York Assembly Districts.

NOTES

[i] Largely as a function of minority geographic population concentration and segregation, there were majority-minority districts in existence prior to the 1991 redistricting process. Majority-minority districts simply refer to electoral districts drawn with a sufficient minority population so that the minority population can elect a candidate of choice. Candidate of like race or ethnicity is typically used as a proxy for candidate of choice. What constitutes "sufficient" population size is a source of some debate, but typically ranges between 55% and 65%. See a recent exchange between Cameron, Epstein and O'Halloran 1996; 1999) and Lublin (1999) for a thorough review of this discussion.

[ii] With the exception of registered voters in assembly districts 67, 70, and 73 in the 1996 and 1998 election and district 73 in the 2000 election. Due to errors by Riverside County in collecting and recording vote history data, these data are not available. Fortunately, these areas are not within Latino-majority jurisdictions.

[iii] The Spanish Surname list is based on the 1990 Census and is constructed by tabulating the responses to the Hispanic origin question. Each surname is categorized by the percent of individuals that identified themselves as "Hispanic." Though the use of this instrument results in a modest underestimate, given the presence of Latinos with non-Hispanic surnames, the Census Bureau estimates this captures 93.6% of all Hispanics, and less than 5% of those identified are false. For a full explanation on the methodology of the list see Word and Perkins (1996).

[iv] Of course, if women register at lower rates, then total participation may still be higher for males, a question beyond the scope of this paper or these data.

[v] It is worth noting that the distribution of preferences could, itself, be endogenous to the demography of this district, something beyond the scope of this paper but part of our larger undertaking.