Candidates or Districts? Reevaluating the Role of Race in Voter Turnout

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Leading theories of race and participation posit that minority voters are mobilized by co-ethnic candidates. However, past studies are unable to disentangle candidate effects from factors associated with the places from which candidates emerge. I reevaluate the links between candidate race, district composition, and turnout by leveraging a nationwide database of over 185 million individual registration records, including estimates for the race of every voter. Combining these records with detailed information about 3,000 recent congressional primary and general election candidates, I find that minority turnout is not *higher in districts with minority candidates, after accounting for the relative size of the ethnic group within a district. Instead, Black and Latino citizens are more likely to vote in both primary and general elections as their share of the population increases, regardless of candidate race.*

Fifty years after passage of the Voting Rights Act, we still witness large gaps in political participation between ethnic groups. According to the 2010 Current Population Survey (CPS 2010), 48.6% of citizen [non-Hispanic] Whites reported voting in the election held that year, whereas only 43.5% of African Americans participated. Although this disparity has been attributed to socioeconomic differences (Leighley and Vedlitz 1999; Verba and Nie 1995), only 31.2% of eligible Latinos and 30.8% of Asian Americans voted in 2010. Past studies assert that low Latino and Asian turnout cannot be blamed on socioeconomics or citizenship rates alone (Jang 2009; Lien 1994; Shaw, de la Garza and Lee 2000). In 2008, an election thought to represent the zenith of minority political participation, Latino and Asian turnout still lagged ten percentage points behind roughly even rates for Whites and African Americans. Across elections and jurisdictions, studies consistently find low rates of minority turnout, with one exception: when a minority candidate is on the ballot, or where minority voters *could* elect a co-ethnic, participation by minorities increases (Barreto 2010; Barreto, Segura, and Woods 2004; Washington 2006). But what accounts for this boost in turnout? Is it

the candidates themselves, or characteristics of the places minority candidates emerge from? Do all ethnic groups follow a similar pattern, and thus should we include measures of ethnoracial political context in longstanding theories of political participation?

The study that follows examines co-ethnic candidacy and jurisdiction racial/ethnic composition as determinants of voter turnout. Reviewing theories of minority political participation, I derive competing hypotheses that seek to account for the impact of ethnoracial political context on voter turnout. I then suggest existing work that makes use of these theories is likely to be biased, and cannot distinguish the impact of candidate race/ethnicity from factors associated with the racial and ethnic makeup of a jurisdiction's electorate. By leveraging a nationwide voter registration database, I give more precise estimates of voter turnout than previously available and then combine these figures with comprehensive data on congressional candidates. The empirical analysis then examines congressional general and primary elections from 2006, 2008, and 2010, distinguishing turnout for Whites, African Americans, Latinos, and Asian Americans.

For both African Americans and Latinos turnout is greater when each group makes up a larger portion of the electorate, *regardless of candidate race.* Thus, the prevailing candidate-centered explanations positing a connection between the ethnicity of office seekers and turnout miss the principal role of jurisdiction racial/ethnic composition. I demonstrate that these effects persist even if the data on voter race/ethnicity are of poor quality, and manifest in both general and primary elections. Further distinguishing between Democratic and Republican primary voters, I show that Black, Latino, and Asian Democrats may be more sensitive to increases in their group's population size than Republicans, but neither party's minority voters appear sensitive to candidate ethnicity. White Republicans, on the other hand, may be *less* likely to turn out in situations where they compose a large portion of the electorate. In my conclusion, I reconnect these findings with models of voter turnout and discuss the ways in which law and policy should shift to reflect minority participation as associated with relative group size rather than descriptive representation.

Theories of Race and Turnout

The Voting Rights Act of 1965 (VRA), and subsequent extension to Latinos, Asian Americans, and other "language minorities" in 1975, was originally intended to remove formal barriers to political participation for minority groups. The immediate effect of the 1965 act on African American turnout was substantial, both with regard to voter turnout and officeholding (Bullock and Gaddie 2009). Subsequent to *Thornburg v. Gingles* (1986), however, states were compelled to design majority-minority districts with the purpose of increasing the number of non-Whites elected to state legislatures and Congress.[1] With a shift in policy toward representational outcomes rather than increases in participation, much scholarship on race and politics focused on the determinants and policy consequences of minority officeholding (Cameron, Epstein, and O'Halloran 1996; Canon 1999; Lublin 1997; Swain 1993). Yet others wondered whether these new political contexts could illuminate the mechanisms influencing minority participation, moving beyond the application of socioeconomic status (SES)-based models

of turnout to non-Whites (see Lien 1994; Verba and Nie 1972; Verba, Schlozman, and Brady 1995; Wolfinger and Rosenstone 1980).

While distinct models emerged linking ethnoracial political context to minority political participation, many theoretical frameworks prioritize *empowerment* as a key determinant of voter turnout for African Americans and Latinos (Barreto 2010, 96; Bobo and Gilliam 1990; Gay 2001, 590; Leighley 2001, 43; Tate 2003, 132).[2] As conceptualized by Bobo and Gilliam (1990, 378–79):

> By political empowerment ...we mean the extent to which a group has achieved significant representation and influence in political decision making. ... [S]uch empowerment should influence mass sociopolitical participation.

The proposed mechanism by which empowerment impacts turnout is an internal process, whereby individuals choose to participate when they feel their participation is likely to have an impact on politics (Barreto, Segura, and Woods 2007, 66; Bobo and Gilliam 1990; Gay 2001). But how should we measure empowerment, or its constituent parts, representation and influence?

Most tests of empowerment theory have focused on minority officeholding or candidacy as indicators for situations where empowerment has occurred. Though authors are generally careful to avoid asserting that co-ethnic politicians are *necessary* to achieve empowerment, when operationalized in such a fashion, groups should respond to descriptive, or co-ethnic, representation with increased turnout. However, empirical tests of the empowerment hypothesis using officeholding or candidacy as indicators have produced decidedly mixed results (Barreto 2007; Bobo and Gilliam 1990; Brace et al. 1995; Gay 2001; Griffin and Keane 2006; Henderson, Sekhon, and Titiunik 2013; Keele et al. 2014; Lublin 1997; Tate 2003).[3] A smaller set of authors has instead operationalized empowerment as dependent on the relative size of a group within a jurisdiction. We have known for some time that minority population size is associated with

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[1]There is disagreement as to whether the "three-pronged" vote dilution test outlined in *Gingles* mandates an approximation of proportional representation (Grofman, Handley, and Niemi 1992). Here I only suggest that, in the absence of substantial minority representation, majority-minority districts were often seen as a tool for complying with Section 2 of the Voting Rights Act.

[2]Several authors use the term "empowerment" interchangeably with what Browning, Marshall, and Tabb (1986) term "political incorporation." As Browning, Marshall, and Tabb (1984, 1986) place greater emphasis in minority representation in dominant coalitions, I use the definition from Bobo and Gilliam (1990).

[3]Despite mixed findings for voter turnout, later work demonstrated that an individual's sense of efficacy could indeed be boosted via descriptive representation, though ideological alignment may be an important prerequisite (Banducci, Donovan and Karp 2004; Gilliam 1996; Merolla, Sellers and Fowler 2013; Sanchez and Morin 2011). This coincides with Griffin and Keane (2006), who found co-ethnic representation resulted in increased turnout, conditional on shared ideology.

control of electoral opportunities (Browning, Marshall, and Tabb 1984, 78, 96), and while the usual indicator of empowerment implies a key role for co-ethnic politicians, "influence in political decisionmaking" may be better reflected in population size. For instance, repeated failures to gain descriptive representation, which may occur when an ethnic group composes a relatively small share of the population, may produce a "disillusioned electorate" with little incentive to participate (Barreto, Segura, and Woods 2004, 67). Nonetheless, empirical tests using various measures of relative group size to measure empowerment again find mixed results (Barreto, Segura, and Woods 2004; Henderson, Sekhon, and Titiunik 2013; Segura and Woods 2007; Spence and McClerking 2010).

Empowerment theory, as noted above, sees individual-level response to political representation and/or influence as the mechanism linking co-ethnic politicians or jurisdiction composition to participation. Leighley (2001) offers an alternative to empowerment theory, bringing *elite mobilization* into understandings of race and voter turnout. Drawing on Rosenstone and Hansen (1993), Leighley argues that individuals vote when asked to do so; election-seeking politicians (e.g., Mayhew 1975) play a key role in the process of determining individual participation. Leighley asserts that "where minorities make up a large, or significant, portion of the electorate, they will be more likely to be targeted" (Leighley 2001, 26). *Elite* response to the demographic composition of the electorate will thus stimulate shifts in *individual* voter turnout. As evidence, Leighley (2001) uses case studies and interviews to demonstrate that elites are indeed more likely to mobilize Black and Latino citizens in heavily Black and Latino areas, and otherwise focus on non-Hispanic Whites in heavily White areas (40–42, 93–95).

Elite mobilization theory may also include co-ethnic candidates as instrumental to understanding race and voter turnout. Focusing on Latinos, Barreto (2010) demonstrates that candidates direct greater resources to mobilizing co-ethnic constituents, and they often use campaign tactics designed to stimulate a sense of shared identity. The result is increased voter turnout for Latinos relative to elections without a co-ethnic candidate on the ballot. Recent work indicates that minority communities may be receptive to Get-Out-the-Vote techniques that differ from those used to mobilize a predominantly White electorate (García Bedolla and Michelson 2012). Thus, while election-seeking candidates may all face similar incentives to mobilize a jurisdiction's electorate, elites may be most effective at stimulating voter turnout for their co-ethnic constituents.

Though there is substantial overlap among extant theories of voter turnout, we must also acknowledge distinct paths by which race and ethnicity may impact political participation. On the one hand, co-ethnic candidate–centered approaches indicate that *the presence of a co-ethnic candidate will increase rates of participation for members of the candidate's ethnic group*.[4] As an alternative, a jurisdiction demographics–based understanding posits that *as the size of an ethnic group within a jurisdiction increases, rates of participation for members of the ethnic group will increase.* Clearly these operationalizations are not exchangeable, but our theoretical basis for understanding the impact of jurisdiction ethnoracial context on turnout may also hinge on a clarification of the conditions associated with increased levels of voter turnout. Simply put, does turnout increase as the relative size of the group increases, or does it instead require a co-ethnic on the ballot?

Contemporary dynamics of race and elections generate both impediments and opportunities for scholars interested in answering such a question. Evidence continues to suggest a close relationship between the ethnic composition of a jurisdiction and the race/ethnicity of candidates and incumbents (Branton 2009; Lublin 1997; Swain 1993; Thernstrom and Thernstrom 1997). The strong correlation between candidate race and district composition makes it difficult to distinguish between individual empowerment via the former or the latter (Brunell, Anderson, and Cremona 2008; Griffin and Keane 2006), or as noted by Leighley (2001, 43), *co-ethnic* elite mobilization could explain the relationship posited by empowerment theory. However, as noted by Grose (2011, 6), minority politicians have started to appear in a wider variety of jurisdictions, including those with a relatively small co-ethnic population. Grose uses diversity in contexts to adjudicate between legislator race and district composition as predictors of congressional representation; such trends may also be conducive to distinguishing between candidacy and demographics as predictors of turnout. Prior to addressing such a possibility, it is important to outline two critical limitations of existing empirical tests, each of which indicates the need for a new analysis of race and voter turnout.

[4]Initial tests of empowerment theory focused on incumbents, though because the election of a minority *candidate* is likely to be related to minority turnout itself, an examination of candidacy may provide a clearer understanding. When replacing a measure of candidacy with the presence of an incumbent in the analysis below, we see no positive impact of co-ethnic incumbency on turnout.

TABLE 1 Vote Overreporting in
Majority-Minority Districts, 2010
General Elections

	Non Majority-[Group]		Majority-[Group]	
	Total	Matched Only	Total	Matched Only
All Citizens	21.9%	13.0%	29.7%	16.3%
White	20.5%	12.5%	19.1%	12.3%
Black	40.5%	21.2%	42.6%	24.2%
Latino	37.2%	17.0%	41.6%	19.8%
Asian	24.6%	15.6%	11.8%	11.8%

Notes: Percentages indicate proportion of individuals who stated that they voted in the 2010 election, but could not be validated as voters. "Matched Only" restricts analysis to individuals who were matched to a current registration record. Cells for "All Citizens" represent individuals living in majority-minority districts of any kind. CCES $N = 54,694$. CCES respondents matched $= 45,644$.

Limitations of Existing Tests

Theoretical issues notwithstanding, existing work that examines race and turnout could provide insights regarding the association between political participation and either candidate ethnicity or jurisdiction demographics. Yet current analyses may bias our understandings in at least one of two important ways.

Survey Overreporting of Turnout

Survey-based studies of minority turnout have found significant increases in participation in the presence of minority officeholding (Bobo and Gilliam 1990; Griffin and Keane 2006; Rocha et al. 2010), candidacy (Washington 2006), or as a function of group size (Griffin and Keane 2006; Jang 2009; Leighley 2001; Spence and McClerking 2010). However, we know that survey respondents overreport voting (Ansolabehere and Hersh 2012; Silver, Anderson, and Abramson 1986). African Americans have also been shown to overreport more than Whites, and thus cross-group comparisons of turnout rates may overstate minority turnout (Deufel and Kedar 2010; McKee, Hood, and Hill 2012; but see Ansolabehere and Hersh 2012). In order to bias findings regarding ethnoracial context and turnout, however, we must see *more* overreporting in particular types of districts. Theories of social pressure–induced misreporting align with this hypothesis (see Deufel and Kedar 2010), but in Table 1, I examine the validated 2010 Cooperative Congressional

Election Study (CCES)[5] to test whether we see systematic variation in survey-derived turnout estimates.

Table 1 displays the results of validating reported turnout by matching CCES respondents to their voter registration records.[6] A comparison of overreporting in majority-minority and non-majority-minority congressional districts spells trouble for nonvalidated survey estimates of turnout shifts. African Americans and Latinos are not only more likely to overreport participation than White respondents, but they also misreport turnout 2–4 percentage points *more* when they reside in majority-Black and majority-Latino districts versus majority-White districts. Whites actually show the *opposite* trend, misreporting more in districts where they are *not* in the majority. Therefore, survey-based comparison of minorities living within and outside of majority-minority districts, or a comparison of minority and White turnout, may *overstate* the role of candidates and relative group size in determining Black and Latino participation.

Case Selection in Nonsurvey Analyses

Given the above issues with survey measurement of minority turnout, it should come as no surprise that many scholars have turned to estimating the effect of majority-minority districts via official election returns. These analyses utilize either aggregate precinct-level data (Barreto 2007; Brace et al. 1995; Gay 2001)[7] or individual-level vote returns coded by race (Barreto, Segura, and Woods 2004; Keele and White 2011; Segura and Woods 2007; Whitby 2007). In both circumstances, limitations in data availability, especially at the state level, mean some measure of external validity is sacrificed to ensure internal validity (Nicholson-Crotty and Meier 2002). Not all analyses need to be run over the entire universe of interest, but when making inferences as to the effects of phenomena outside of the cases examined,

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[5]See http://cces.gov.harvard.edu.

[6]Validation of the CCES involved using YouGov's name, age, and address data to find respondents' registration record, as indicated in Catalist's database. See Ansolabehere and Hersh (2012) for more details. All CCES-related quantities in the table are weighted and exclude noncitizens. The distribution of CCES respondents across districts closely coincides with the true population. Specifically, 15.1% of CCES respondents live in majority-minority districts, versus 16.1% of the citizen voting-age population.

[7]Aggregation bias is a well-documented issue in results derived from precinct-level data (King 1997). Here I focus on the external validity of these studies, understanding that ecological inference and ecological regression may further influence results.

we must make sure our conclusions are not subject to selection bias (King, Keohane, and Verba 1994).

Reviewing work that makes use of official election returns, we discover that a substantial portion of the country has *not* been examined systematically. At the congressional district level, most work has focused on turnout in states with majority-minority districts, where once again high rates of minority officeholding make it difficult to disentangle candidate and district effects. Nonetheless, when studying these areas analyses of Black turnout have excluded well over half of all majority-Black districts, and aside from Gay (2001), researchers have focused exclusively on states in the Deep South (Brace et al. 1995; Keele et al. 2014; Whitby 2007). Latino turnout in majority-minority districts has only been studied in Florida, California, and New York City (Barreto, Segura, and Woods 2004; Brace et al. 1995; Henderson, Sekhon, and Titiunik 2013; Segura and Woods 2007). While the intrinsic benefits of examining turnout over more jurisdictions are straightforward, assessing rates of participation in majority-minority districts also necessitates representative counterfactual cases. Again, with the notable exception of Gay (2001), each of these analyses was conducted in states where minorities also made up a significant portion of the electorate in non-majority-minority jurisdictions.[8] When compared to the nation as a whole, therefore, we may expect the narrow geographic focus of past work to *understate* the role of ethnoracial context on voter turnout.

A Comprehensive Approach

The present analysis seeks to improve upon existing studies in each of the above areas, and to distinguish between the impact of co-ethnic candidacy and jurisdiction racial/ethnic composition. Instead of relying on survey estimates of voter turnout, I use individual-level turnout records. Rather than limiting the analysis to comparisons within a small number of states, I examine participation nationwide across three elections. As such, I am able to provide a more comprehensive look at *whether or not* ethnoracial context impacts voter turnout. Beyond providing precise estimates, however, such design features are necessary to *clarify* the mechanisms behind prominent theories of race and participation, namely, separating the above factors as predictors of

voter turnout.[9] In recent congressional elections, we indeed see patterns consistent with what Grose (2011) identified as an opportunity to distinguish candidate and district effects: half of Black and Latino general election candidates sought office in jurisdictions where their ethnic group did not compose a majority of the electorate.[10] With a nationwide approach, we can thus separate the distinct impacts of co-ethnic candidacy and the racial/ethnic makeup of the places they emerge from.

Though past work on minority turnout focuses exclusively on general elections, I examine primaries as well. Primary elections are the initial arena of candidate contestation and serve as the first opportunity for voters to participate in the congressional candidate selection process (Grofman, Handley, and Lublin 2001). As these contests are almost always intraparty, the electorate is forced to consider factors other than party label. Race is likely to be a salient factor when distinguishing candidates, and indeed, studies have shown that voters acknowledge primary candidate race/ethnicity, and often prefer co-ethnic candidates when choosing among co-partisans (Citrin, Green, and Sears 1990; Grose 2005; Highton 2004; Hopkins 2009; Nelson 2007). Minority candidates are also more likely to appear at the primary election stage, and do so in a substantial number of non majority-minority districts (Branton 2009). In short, primary elections provide an additional (if not superior) arena to isolate the effects of district racial/ethnic composition and candidate background.

Finally, nearly all work that links race and voter turnout focuses on African Americans and Latinos. In some instances, turnout for these groups has been contrasted to that of Whites residing in the same places (Barreto, Segura, and Woods 2004; Gay 2001), but empowerment and elite mobilization theories of participation are generally not extended to the White population. Below I include results for non-Hispanic Whites as well, examining how ethnoracial political context impacts participation for the group composing the vast majority of congressional candidates nationwide. Asian Americans, the fastest-growing racial/ethnic group in the United States (Wong et al. 2011), are also featured

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[8]Indeed, high levels of minority turnout in specific areas *prior* to changes in the overall ethnic composition of the district is a major part of the "null finding" interpretation made by Henderson, Sekhon, and Titiunik (2013).

[9]Of published work that examines ethnoracial context and voter turnout, only Brace et al. (1995) and Griffin and Keane (2006) find evidence of distinct effects for relative group size and co-ethnic candidacy. However, neither study advances a theoretical justification as to *why* district composition should impact participation directly.

[10]See the Supporting Information for details on where candidates seek office. Approximately 8% of non-Hispanic White congressional candidates run in majority-minority districts.

in what composes the first test of whether district ethno-racial context impacts Asian American participation.[11]

Data

Individual-Level Turnout by Race/Ethnicity

The turnout figures I use are extracted from a voter file database developed by Catalist, LLC, a data vendor to political campaigns.[12] Catalist acquires registered voter lists from every state and organizes the records in a fashion suitable for campaign activities, producing approximately 185 million individual-level records for registered voters as of July 2011. As election officials denote turnout at the individual level, Catalist also includes state-provided indicators of individual-level participation.[13] The comprehensive nature of the data means that turnout figures are far more accurate than survey estimates; they have to be, as national totals are derived from the same state-level data used by Catalist and are not subject to overreporting. For the 2006, 2008, and 2010 general elections, Catalist underestimated the official count of ballots cast by less than 1%. Estimates from the Current Population Survey (CPS 2010), generally considered superior to surveys such as the American National Election Studies (ANES; Jang 2009; Rocha et al. 2010), are off by a substantially greater margin due to misreporting and handling of survey nonresponse (Hur and Achen 2013).[14]

Catalist records all information provided by state voter registries, including full name, address, date of birth, gender, and vote history. If we are interested in individual-level minority turnout, however, we need more information. Past studies have made use of southern states' history of recording the race/ethnicity

TABLE 2 Comparison of Catalist Race Coding to CCES Self-Report

	Voter File	Catalist Prediction Confidence		
		Highly Likely	Likely	Possibly
All Voters	97.5%	96.1%	87.9%	64.4%
White	99.1%	99.4%	95.5%	57.8%
Black	96.7%	74.8%	59.8%	72.6%
Latino	79.7%	66.4%	68.2%	70.7%
Asian	64.3%	61.4%	79.3%	40.0%
N	7,571	23,105	5,747	4,996

Notes: Includes 41,419 CCES respondents matched to their voter registration records in early 2012. Cell percents are proportion of CCES respondents self-identifying with the racial/ethnic group indicated, and having the same racial/ethnic background coded in the Catalist database. Total, Catalist accurately coded the race of respondents at a rate of 91.40%.

of registrants (Keele et al. 2014; Whitby 2007).[15] In California, where voter registration does not entail denoting one's race, last name matching to Spanish-surname lists has been a standard way of distinguishing Latinos from non-Latinos in analyses of turnout (Barreto, Segura, and Woods 2007; Henderson, Sekhon, and Titiunik 2013). Catalist, through a contract with CPM Ethnics, uses first, middle, and last name matching, census block contextual data, commercial information, and registrant age to predict the race/ethnicity of every registrant nationwide.[16] As a result, nearly every voter is predicted as either non-Hispanic White, Black, Latino, Asian, or Native American.

How can we quantify the accuracy of Catalist's race predictions? While Catalist provides somewhat coarse information regarding the prediction confidence for each individual registrant,[17] Table 2 compares Catalist's predictions of race to what over 40,000 individuals listed on the 2012 CCES.[18] Not surprisingly, Catalist's codings

[11]Jang (2009) does examine the relationship between Asian American turnout and on county-level demographics.

[12]See http://www.catalist.us. Further details about the database and vendor may be found in Ansolabehere and Hersh (2012, 2014). While Catalist generally vends to progressive political organizations, the data used in this analysis are not likely to be biased in a partisan manner as Catalist acquires the full voter file from each state. At the time of the study, Virginia restricted the use of voter turnout records; thus, I do not include Virginia in my results.

[13]Catalist organizes individual records by state. For individuals who move across states, Catalist maintains a separate registration record for each person in both the "new" and the "old" state. As a result, turnout figures accurately reflect the voting population in an election at time t despite the fact that some registrants may have moved, reregistered, and voted elsewhere for $t + 1$. See the supporting information for more details.

[14]A full comparison of turnout as recorded in the Catalist database, official counts of ballots cast, and CPS (2010) estimates may be found in the supporting information.

[15]These states are Alabama, Florida, Georgia, Louisiana, North Carolina, and South Carolina. Mississippi and Tennessee do not *require* voters to list their race, but provide space for this purpose on the registration form.

[16]Thus, the proprietary method used by Catalist and CPM Ethnics is rooted in well-understood principles of individual race prediction (Elliott et al. 2008). As noted in Ansolabehere and Hersh (2012), Catalist placed second in a national name-matching contest. A (limited) set of information regarding the algorithm used by CPM Ethnics may be found at http://cpm-technologies.com/cpmEthnics.html.

[17]More details about the prediction confidence of all voters in the Catalist database may be found in the supporting information.

[18]Comparisons are made using the process outlined in Ansolabehere and Hersh (2012).

are closest to self-reported race when derived from the individual's voter registration form, as in many southern states (denoted by *Voter File* in the table). Yet we see that even among registrants whose prediction was listed as "Likely," 88% were assigned the correct ethnicity. Also note that over 20% of Latino and Asian CCES respondents listed a different race on their voter registration form from what they marked in the survey, indicating the difficulties inherent in measuring race/ethnicity *even through self-report*.[19] Using these estimates to extrapolate CCES respondents to the whole nation, and assuming that self-reported race on the voter file is as likely to be correct as self-report on the CCES, we may estimate that 96% of non-Hispanic Whites, 79% of African Americans, 72% of Latinos, and 63% of Asian American voters were identified correctly by Catalist.[20] While certainly producing some misclassified individuals, as with any probabilistic technique, the aggregate numbers used here are more precise than extrapolation to congressional districts from national survey samples.

With these data in hand, I examine turnout in federal elections nationwide for 2006, 2008, and 2010.[21] For each district and state, I aggregate vote totals by race/ethnicity, distinguishing between non-Hispanic Whites, African Americans, Latinos, and Asians.[22] Elections are held at the district or state level, and so these serve as the jurisdictions to which I aggregate individual turnout records. Existing studies use estimates of an ethnic group's voting-age population (VAP) as the denominator in turnout calculations (Barreto, Segura, and Woods 2007; Brace et al. 1995; Gay 2001; Henderson, Sekhon,

[19]For instance, current South Carolina Governor Nikki Haley (née Nimrata Randhawa), who publicly identifies as Asian or Indian American, listed her race as "White" on her 2001 voter registration form (Wenger 2011).

[20]The relatively "low" accuracy for Latinos and Asians is noteworthy given that last name matching is a conventional method of identifying these groups when analyzing election data (e.g., Barreto, Segura, and Woods 2007), and the technique used by Catalist and CPM Ethnics incorporates full name and census contextual data to improve predictions further (cf. Elliott et al. 2008). Given the finding that over 20% of Latino and Asian CCES respondents were inconsistent in ethnic self-identification, the prediction rates above are likely quite conservative.

[21]The individual-level turnout records preserved by states do not indicate which portions of a ballot an individual completes. Thus, my turnout measure indicates whether someone cast a ballot, not whether she cast a ballot *for a specific office*. There does appear to be a correlation between roll-off and ethnoracial context (Herron and Sekhon 2005), but that relationship cannot be explored with these data. I thank an anonymous reviewer for suggesting this clarification.

[22]Individuals whose race could not be ascertained, along with Native Americans, are not included in the analysis except when defining the total population of voters or citizens.

and Titiunik 2013). When dealing with Latinos, whose noncitizen population is relatively high, these authors control for aggregate citizenship levels in parametric or nonparametric models. However, since 2006, the American Community Survey (ACS) has released estimates of the citizen voting-age population (CVAP) for all congressional districts and states, broken down by ethnic group.[23] Measures of the citizenry approximate the composition of the electorate, while accounting for differential eligibility both across groups and within groups, across jurisdictions.[24] As changes to the population of a state or district likely occurred even within the time frame I examine, I use 1-year estimates for 2006, 2008, and 2010 as the denominator in my turnout calculations.

Relative Group Size and Co-Ethnic Candidates

Building off of Brace et al. (1995), I use the proportion of the population belonging to a given ethnic group as my primary measure of state or district racial/ethnic composition. Again, instead of using voting-age population, I use the ACS CVAP estimates. I preserve the continuous scaling, also mirroring Brace et al. (1995), but it is worth noting that it may be possible that the makeup of electoral jurisdictions *beneath* the level of congressional districts may influence minority turnout (Barreto, Segura, and Woods 2007). Since state legislative and municipal majority-minority districts are often nested within other heavily minority districts, my estimates of the impact of relative group size on participation may be conservative.

Measuring co-ethnic candidacy is harder, particularly at the primary level. To do so, I compiled a database of all two-party congressional primary and general election candidates for the House of Representatives or Senate in 2006, 2008, and 2010. Candidate names were provided by the Federal Elections Commission (FEC).[25] The database contains a total of 5,104 records, corresponding to approximately 3,000 unique individuals as a significant

[23]The CVAP estimates derived from the ACS are based on a sample of 1% of all households nationwide. While far larger than any other survey, the fact of the matter is that small populations are hard to quantify even with 1% coverage. For each group, I remove jurisdictions where the group's CVAP is *both* less than 1% of the total jurisdiction CVAP *and* fewer than 5,000 individuals. Furthermore, the few instances where the Catalist counts exceed the CVAP for the group are removed. Inclusion of these observations does not impact the directionality of the results I present here, but reduces precision.

[24]See the supporting information for more details about how I build this measure from ACS counts.

[25]See http://www.fec.gov/pubrec/electionresults.shtml.

number of candidates ran more than once over the time period. As the FEC does not provide data on the ethnic background of candidates, I coded the race/ethnicity of each individual as either non-Hispanic White, Black, Latino, Asian, or Native American. Data on the background of each candidate were collected using statements made by candidates, membership in ethnic caucuses or organizations, ethnic advocacy foundations, news articles, and both archived and live candidate websites.[26] As demonstrated in Branton (2009), minority candidates become more common at both the general and primary levels as the minority share of the population increases. For the years 2006–10, 408 congressional primary or general elections had at least one African American candidate, whereas 261 had at least one Latino candidate and 108 had at least one Asian American seek office.[27]

Estimation Procedure

The combination of Catalist records, ACS data, and demographic information about candidates may allow for a superior test of theories regarding ethnoracial context and political participation, but only if we model the predicted relationships correctly. The data I use cover House and Senate primary and general elections over three election cycles, yet draw from the same set of jurisdictions. To ensure my estimates are robust to likely dependence for jurisdictions (i) over time (t), I use a generalized estimating equation (GEE). Clustered or other types of heteroskedasticity-robust standard errors are often employed to improve variance estimates when modeling longitudinal data, but GEEs can account for within-cluster dependence in $\hat{\beta}$ as well via a quasi-likelihood-based

iterative approach (Liang and Zeger 1986; Zorn 2006).[28] Therefore, GEEs are similar to random-effects and fixed-effects models, but they do not force the resulting point estimates to be the average within-cluster effect (Gardiner, Luo, and Roman 2009). As my dependent variable is continuous, I use the same link function as under conventional least squares regression, $\mu_i = x_i\beta$.[29]

Dependence over time is not the only potential confounder in the study. As noted above, Catalist provides estimates of individual-level race for every voter nationwide. While providing greater scope than possible using other data, it is important to recognize that misclassification errors *could* interfere with the turnout estimates. As described by Hausman (2001), mismeasured dependent variables do not bias estimates of β, as they only serve to introduce additional stochastic variation in the model. However, if we have reason to believe that mismeasurement of the true latent variable $y_i^{\star}$ (in this case, turnout) is related to the value of any x_i independent variables, our estimates will be biased.[30] The model used by Catalist to estimate voter race incorporates census block-level aggregate data, thus yielding better estimates in places with highly segregated or concentrated populations of a single ethnic group (Hersh 2015). Estimates of turnout in jurisdictions with few individuals from a particular background, or mixed districts, could be off by a significant amount.

In order to account for this potential bias, I reestimate key results on a series of simulated data sets generated via a multistep process formalized in Appendix A. I first use the Catalist-validated CCES data (see Table 2) to derive estimates of how inaccurate the Catalist estimates of individual race are likely to be under different confidence prediction levels and for each group. Assuming these errors are normally distributed for group members within each quality level, I then create a simulated data set where the number of voters from each group in a given election is randomized within the constraints set by known quantities in the data, specifically, the number of voters whose race is from the voter file, and the total

[26]See the supporting information for a breakdown of candidacy by race, party, electoral stage, and year. More details about the specific methodology used to code candidate background, including the source type used for each candidate and intercoder reliability test results, are available from the author by request.

[27]The supporting information provides a full enumeration of elections by candidate race. A significant literature on congressional candidacy finds those with prior officeholding experience, dubbed "quality" candidates, are far more likely to gain substantial electoral backing (Jacobson and Kernell 1983; Krasno and Green 1988; but see Bond, Covington, and Fleisher 1985). Indeed, recent evidence shows that nonquality co-ethnics are only supported by those with very high levels of ethnic attachment (Manzano and Sanchez 2010), perhaps indicating turnout should only be impacted when quality co-ethnic candidates are available. Defining quality candidates as those who have previously held elected office, for every election type, and across all groups, the candidate effect is either attenuated or insignificant when restricting the analysis to quality candidates. These results can be found in the supporting information.

[28]More details regarding the way I model within-cluster dependence may be found in the supporting information. Results are not significantly different when using ordinary least squares with or without clustered errors, as documented in the supporting information.

[29]Though restricted to values between 0 and 1, I follow the convention of the literature on voter turnout and understand that there are likely to be nonlinearities as turnout rates approach 0 or 1 (see Geys 2006).

[30]Semiparametric techniques resilient to covariate-dependent mismeasurement, such as the monotone rank estimator, rely on noncontinuous independent variables and therefore cannot be used for estimates of voter turnout rates (Abrevaya and Hausman 1999).

number of voters. I repeat this process 100 times for each election and then combine this with the CVAP estimates and all other measures to derive simulated data sets with a randomized dependent variable reflecting error in the Catalist race classifications.[31]

Results

Are minority citizens more likely to participate when residing in majority-minority districts? An examination of the raw turnout data suggests that this is indeed the case. In Table 3, we see that White, Black, and Latino voters are more likely to participate when they live in districts where their ethnic group is in the majority. While the vast majority of Whites live outside of majority-minority districts, for the small proportion who do, turnout is 1.5 points lower. Black and Latino citizens are more likely to vote in majority-Black and majority-Latino districts, respectively, though the effect is much stronger for African Americans. Overall, however, turnout is substantially *lower* in majority-minority districts of any sort, as indicated by the first row of Table 3. Since minority turnout is lower in general, and majority-minority districts have a greater share of minority voters than majority-White districts, past findings attributing low turnout to majority-minority districts ignore substantively significant inter-group heterogeneity.

What about co-ethnic candidates? In Table 4, we see a similar pattern, except here the initial results are stronger. When Whites, Blacks, Latinos, and Asians have a co-ethnic general election candidate to choose from, they turn out at higher rates. Again, the correlation suggesting minority candidates depress turnout is clarified through examination of the raw turnout data, as we see that, overall, fewer voters turn out when minority candidates are on the ballot. Yet most of this effect is due to an increased proportion of low-turnout-prone minority voters in these districts, who again tend to run in heavily-minority districts.

Tables 3 and 4 provide initial evidence that ethnic groups are more likely to participate when they compose a majority of the jurisdiction population, or when they can vote for co-ethnics. That said, congressional elections are decided at the district and state levels, not the national vote. In the section that follows, I separate the data for individual general, primary, and partisan

primary congressional elections, and then run analyses on non-Hispanic White, African American, Latino, and Asian voter turnout. As discussed above, the quantities of interest in this study are jurisdiction-wide turnout by each racial/ethnic group and measures of how these rates change depending on the composition of the electorate and the candidates who seek office. To test for conditional effects of relative group size and co-ethnic candidacy, I interact the two variables, thus allowing observation of the independent effect of each on turnout with the *possibility* of a conditional relationship (Brambor, Clark, and Golder 2006).[32] As interaction terms make substantive interpretation of the magnitude and significance of each factor more difficult, I present model-derived predictions of turnout rates to aid in interpretation. Full regression results may be found in Appendix B.

I specify two types of models, one (*Reduced*) with only a bare set of controls and the other (*Full*) with a complete set of demographic and electoral variables included. Beyond terms for the size of the group and co-ethnic candidates, plus interactions, the reduced model includes an indicator for the presence of a co-ethnic gubernatorial or senatorial candidate, an indicator for whether the jurisdiction is in the South, year fixed effects, and a measure of how much the Catalist vote count deviates from the official count at the state level, scaled from 0 to 1, with 0 indicating no deviation. The full model includes these controls, in addition to census-derived measures of age, education, and income, an open seat indicator, controls for jurisdiction partisanship and general election competitiveness, and indicators for whether a senate or gubernatorial election was held in the jurisdiction's state. A detailed description of the controls included in the full models, whose results are shown in the figures and tables below, may be found in Appendix B.

General Election Turnout

The existing literature focuses on the general election stage and finds mixed evidence regarding the participatory effects of jurisdiction ethnoracial context. For the present analysis, Figure 1 summarizes the full regression

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[31] In essence, I reroll the vote distribution by group with a restriction that the total number of voters in a jurisdiction cannot exceed the observed total, a technique similar to the method of bounds (Duncan and Davis 1953).

[32] The supporting information contains a series of statistical tests that confirm a nested model with an interaction term generally outperforms specifications that do not account for a conditional relationship. An interaction term also follows the spirit of the Bobo and Gilliam (1990) characterization of empowerment as "significant representation and influence" (378), which may suggest that *both* co-ethnic candidacy and the relative size of an ethnic group are factors associated with minority voter turnout. Models excluding an interaction term provide a more conservative estimate of the impact of Black and Latino candidacy on turnout, but they are not significantly different from the results shown below.

TABLE 3 Total Turnout in Majority-Minority Districts, 2010 General Elections

	Non Majority-*[Group]*			Majority-*[Group]*			
	Voters	**CVAP**	**Turnout**	**Voters**	**CVAP**	**Turnout**	**Difference**
All Citizens	74,471,276	173,758,666	42.9%	11,461,274	32,574,443	35.2%	−7.7
White	4,981,529	10,929,753	45.6%	65,019,872	138,156,832	47.1%	+1.5
Black	6,354,427	18,533,499	34.3%	2,524,921	6,445,780	39.2%	+4.9
Latino	3,844,485	16,403,535	23.4%	1,061,036	4,483,941	23.7%	+0.3
Asian	1,773,538	7,115,195	24.9%	–	–	–	–

Notes: Cells for "All Citizens" represent individuals living in majority-minority districts of any kind. Table excludes Hawaii, as does the rest of the study, due to the high multiracial population. As a result, there are no majority-Asian districts in the data.

TABLE 4 Total Turnout in Districts with Co-Ethnic Candidates, 2010 General Elections

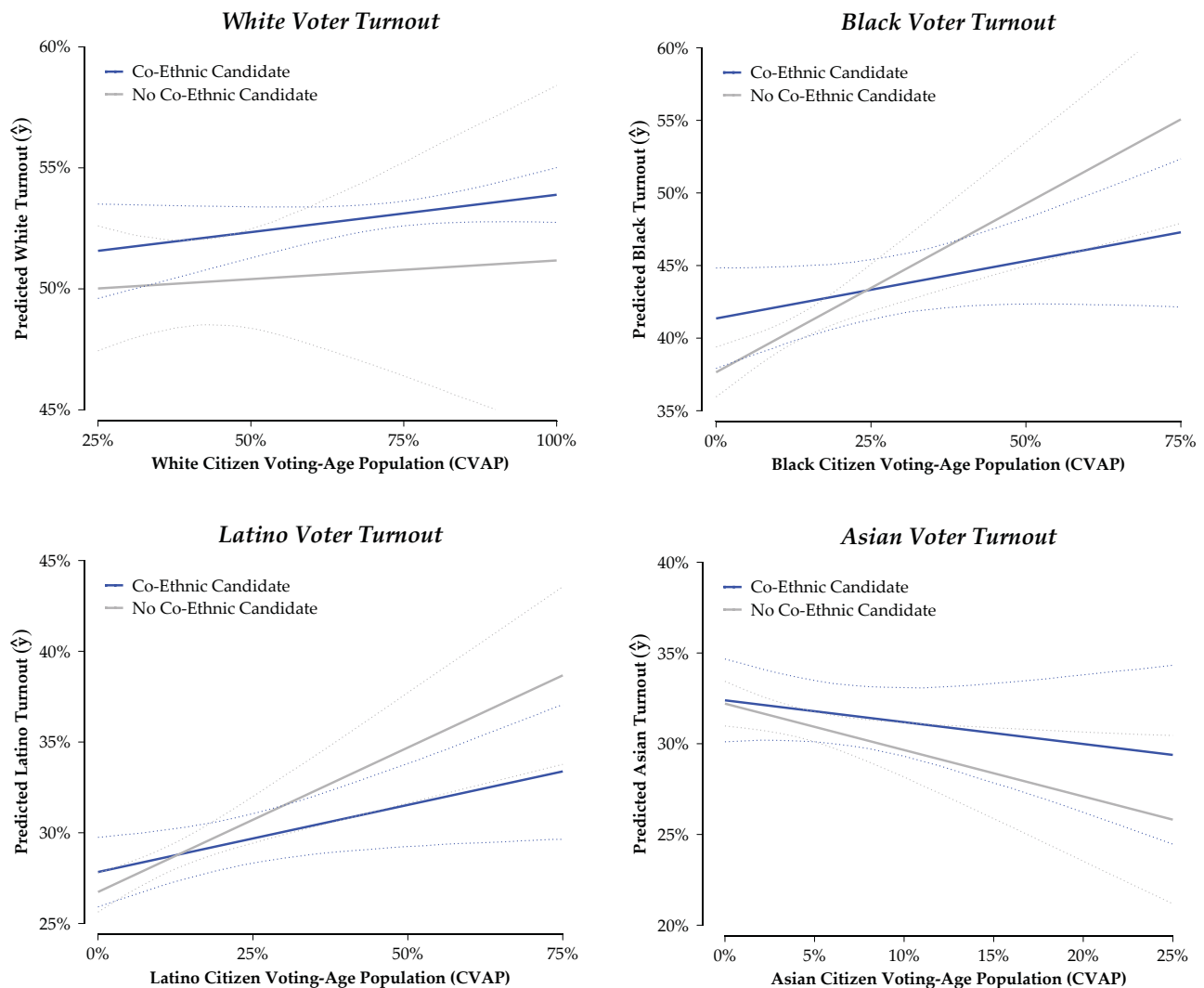|	No Co-Ethnic Candidate			Co-Ethnic Candidate			
	Voters	**CVAP**	**Turnout**	**Voters**	**CVAP**	**Turnout**	**Difference**
All Citizens	69,155,768	162,564,809	42.5%	16,776,782	43,768,300	38.3%	−4.2
White	1,280,041	3,207,003	39.9%	68,721,360	145,879,582	47.1%	+7.2
Black	5,205,999	15,494,718	33.6%	3,673,349	9,484,561	38.7%	+5.1
Latino	3,500,649	14,986,432	23.4%	1,404,872	5,901,044	23.8%	+0.4
Asian	1,616,027	6,548,020	24.7%	157,511	567,175	27.8%	+3.1

Notes: Cells for "All Citizens" represent individuals living in districts where at least one minority candidate is on the ballot (right) versus districts where only White candidates seek office (left).

results found in Table B1 of Appendix B. Panels in the figure visualize the results of a *separate* regression for each ethnic group. Each of the four panels in the figure represents the predicted turnout rate for the indicated racial or ethnic group, given the specified relative group size and when a co-ethnic candidate is or is not on the ballot, while holding all other variables constant at their mean values. Table 5 presents the same results, listing the average effect size and 95% confidence interval of a shift in group size and co-ethnic candidacy.

Recall that Tables 3 and 4 indicated White and minority turnout was slightly higher in congressional districts where the ethnic group composes a majority of the citizen voting-age population, and substantially greater in districts where a co-ethnic runs in the general election. Figure 1 indicates slightly ($\approx$ 1–2 percentage points) greater White voter turnout in heavily White districts, and when a co-ethnic runs for office, but differences across ethnoracial contexts are not statistically significant. For African Americans, however, we see an increase in Black turnout is associated with the size of the Black population, *even when a Black candidate is not on the ballot*. When no African American congressional

candidate is on the ballot, on average we see 40.0% Black turnout in a district where Blacks make up 10% of the citizen voting-age population (CVAP), which increases to 49.3% Black turnout when African Americans are 50% of the CVAP. We see no significant impact of co-ethnic candidacy on Black turnout in general elections. Latinos also turn out at significantly higher rates when they make up a larger portion of the district population, where shifting the district from 10% Latino to 50% Latino, in the absence of a Latino candidate, results in a 6.4-point average increase in Latino turnout. For Asian American voters, Figure 1 would seem to indicate *reduced* general election turnout in heavily Asian districts, though again we see no significant impact of co-ethnic candidacy. On average, Asian turnout drops 4.9 points as we shift the Asian CVAP from 0% to 20%.[33] As a caveat, measurement error–based uncertainty is rather high for estimates of Asian turnout, as indicated by the large Catalist error-based confidence interval indicated in Table 5.

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[33] For Asian Americans, the CVAP change is smaller, as no districts in the data have an Asian CVAP greater than 33%.

FIGURE 1 General Election Turnout, by Racial/Ethnic Group

Notes: Each of the four panels in the figure represents the predicted turnout rate for the indicated racial or ethnic group, given the specified relative group size and when a co-ethnic candidate is or is not on the ballot, while holding all other variables constant at their mean values. Dotted lines represent 95% confidence intervals generated via bootstrapping. Across all groups, we do not see a significant change in turnout when a co-ethnic candidate runs for office, after accounting for district ethnic composition.

In contrast to the prevailing interpretation of empowerment-based theories of minority political participation, I find limited effects of minority candidates on co-ethnic turnout. While turnout is sometimes higher when a co-ethnic is on the ballot, across all groups we cannot say turnout is higher on average after accounting for the share of the population an ethnic group comprises within the district. Instead, the relative size of a voter's ethnic group is associated with increased participation in general elections, *even without a co-ethnic on the ballot.* Given the strong positive correlation between minority candidacy and minority population size, it is plausible that the "candidate" effect found in other studies (and

noted in Table 4) is more closely linked to district demographics than the ethnic background of those who seek office.

Primary Election Turnout

Little research has been done on turnout in primary elections, and even less on minority turnout in primaries (Barreto and Branton 2004; Grofman, Handley, and Lublin 2001). Congressional primaries may nonetheless yield a clearer impact of candidate race, as the heightened salience of an interparty election is removed from the equation. Overall, participation in recent primary

TABLE 5 **General Election Turnout: Effect of Relative Group Size and Co-Ethnic Candidacy**

	White Voter Turnout	Black Voter Turnout
Co-Ethnic Candidate	51.1% → 52.3%	42.1% → 45.3%
(Conventional 95% CI)	[48.6, 53.6] → [51.3, 53.4]	[39.4, 44.9] → [42.3, 48.3]
(Catalist Error 95% CI)	[48.2, 56.2] → [51.2, 54.5]	[36.7, 47.4] → [41.4, 49.2]
No Co-Ethnic Candidate	49.8% → 50.4%	40.0% → 49.3%
(Conventional 95% CI)	[45.8, 53.9] → [48.4, 52.5]	[39.0, 40.9] → [45.0, 53.5]
(Catalist Error 95% CI)	[43.4, 58.8] → [46.7, 54.1]	[38.8, 41.4] → [43.5, 56.8]
	Latino Voter Turnout	Asian Voter Turnout
Co-Ethnic Candidate	28.6% → 31.5%	32.3% → 30.0%
(Conventional 95% CI)	[27.1, 30.1] → [29.2, 33.8]	[30.1, 34.4] → [26.2, 33.8]
(Catalist Error 95% CI)	[23.5, 33.0] → [26.8, 34.2]	[22.2, 36.5] → [20.8, 38.7]
No Co-Ethnic Candidate	28.3% → 34.7%	32.0% → 27.1%
(Conventional 95% CI)	[27.6, 29.1] → [31.6, 37.7]	[30.9, 33.0] → [23.5, 30.6]
(Catalist Error 95% CI)	[26.6, 28.7] → [29.1, 41.0]	[27.4, 30.4] → [21.4, 31.7]

Notes: Table indicates change in predicted turnout for each group when shifting the group's citizen voting-age population (CVAP) of a district from 10% → 50%, and with/without a co-ethnic candidate. All other variables held constant at their mean values. For Asian voters, CVAP is shifted from 0% → 20%. "Conventional" 95% confidence intervals generated via bootstrapping, reflecting model error. "Catalist Error" confidence intervals incorporate *additional* error due to misclassification of voter race, and reflect 2.5 and 97.5 percentiles of predicted turnout over 100 simulated datasets.

elections is less than half of that for general elections, with White turnout at about 25% on average, Black turnout at 15%, and Latino and Asian turnout at 10%. In Figure 2, effect sizes in Table 6, and the extended regression results in Table B2 in Appendix B, I offer evidence that many of the prevailing interpretations of the impact of candidate race on turnout also fail to appear in primary elections, as again we see evidence that relative group size is more closely associated with participation than candidate ethnicity.

In contrast to the results regarding general election turnout, the first panel of Figure 2 demonstrates that jurisdiction ethnoracial context impacts primary election turnout for Whites along with Black, Latino, and Asian voters. For Whites, a 40-point increase in the White population of a district is associated with a 4-point *decrease* in primary election turnout. Though circumstances where White voters find themselves without a White candidate from either party's primary are rare, we see that this effect does not manifest in the absence of a co-ethnic. African American primary turnout displays a pattern somewhat different from general elections, in that a relationship between Black population size and participation appears *in interaction* with co-ethnic candidacy. As Table 6 indicates, Black primary turnout in a jurisdiction that is 10% Black is 2.3 percentage points higher, on average, when a Black candidate is on the primary ballot. In heavily African American districts, where a majority of Black candidates

seek office and where traditional racial bloc voting could still lead to electoral success, we do not see a difference in turnout related to candidate race. Latinos and Asian Americans, on the other hand, each see a significant *increase* in their turnout rates when modeling a change in the ethnic composition of the district, and no substantive or statistically significant difference depending on co-ethnic candidacy. Latino primary turnout is about 5 points higher on average when shifting the Latino CVAP from 10% to 50%, whereas Asian turnout jumps a similar magnitude on average when comparing districts that are 0% Asian to those that are 20% Asian. Though at the limit the turnout-boosting impact of ethnoracial context could be an artifact of misclassification of voter race/ethnicity, the results demonstrate that co-ethnic candidacy *in isolation* does not account for the patterns of minority political participation we witness.

Does Voter Partisanship Mask Candidate Effects?

The above analyses of general and primary election turnout demonstrate that co-ethnic candidates are generally *not* associated with higher turnout for White, Black, Latino, or Asian American voters. Given that candidates may focus campaign efforts on a partisan constituency (Holbrook and McClurg 2005; but see Barreto 2007), we

FIGURE 2 Primary Election Turnout, by Racial/Ethnic Group
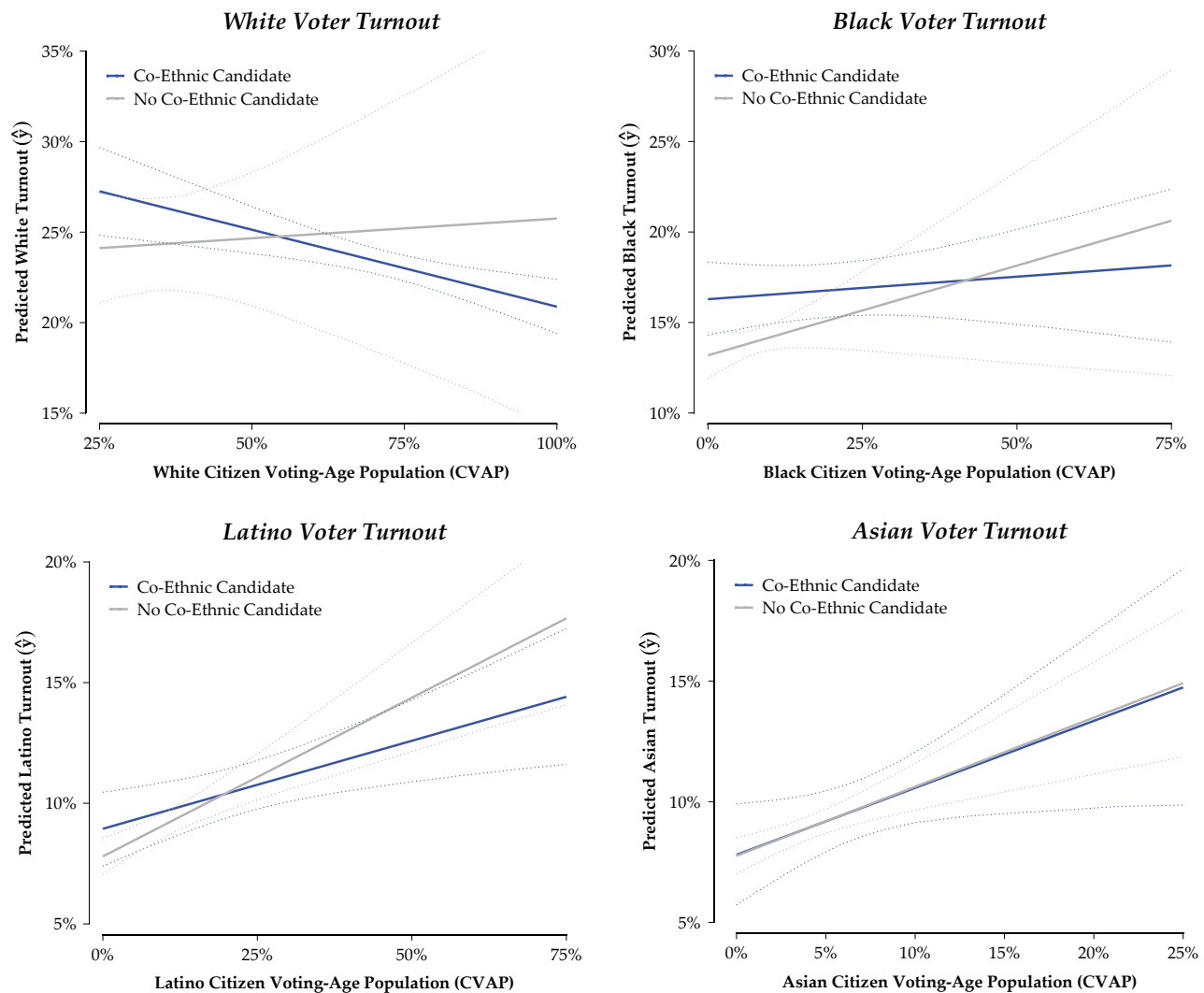
Notes: Each of the four panels in the figure represents the predicted turnout rate for the indicated racial or ethnic group, given the specified relative group size and when a co-ethnic candidate is or is not on the ballot, while holding all other variables constant at their mean values. Dotted lines represent 95% confidence intervals generated via bootstrapping. With the exception of African American turnout in mostly non-Black districts, we do not see a significant difference in turnout when a co-ethnic candidate is on the ballot.

may wonder whether candidate effects are conditioned on the partisan affiliation of the individual, in that voters must be of the same party as a co-ethnic to see enhanced rates of participation (Fairdosi and Rogowski 2015; Washington 2006).[34] Of course, official vote history data do not allow us to directly observe vote choice, but for 38 states, we can determine the party primary ballot voters selected.[35] Do we see differential effects of district

demographics and co-ethnic candidacy for Democratic and Republican primary voters?

Figures 3 and 4 and Tables 7 and 8 show the results of regressions run separately by ethnic group

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[34]Separating general and primary election turnout by *candidate* party demonstrates no significant differences by party, as shown in the supporting information.

[35]Twenty-five states record which primary a voter selects, allowing for direct observation of the primary selected by each voter for

2006, 2008, and 2010. An additional 13 have party registration and closed or semiclosed primaries, where nearly all primary voters are registered with one of the two parties. For these states, I assume individuals who voted in a closed or semiclosed primary in 2006, 2008, or 2010 selected the party they were registered with as of July 2011. While Catalist only preserves the *most recent* party registration of a voter, there is little evidence of strategic crossover voting (Alvarez and Nagler 1997). The states excluded from this portion of the analysis are Alabama, Hawaii, Idaho, Michigan, Minnesota, Missouri, Montana, North Dakota, Virginia, Vermont, Washington, and Wisconsin.

TABLE 6 Primary Election Turnout: Effect of Relative Group Size and Co-Ethnic Candidacy

	White Voter Turnout	**Black Voter Turnout**
Co-Ethnic Candidate	28.5% → 25.1%	16.5% → 17.5%
(Conventional 95% CI)	[25.4, 31.7] → [23.8, 26.4]	[14.9, 18.2] → [14.9, 20.1]
(Catalist Error 95% CI)	[25.0, 33.1] → [23.7, 27.0]	[14.4, 18.7] → [14.4, 21.0]
No Co-Ethnic Candidate	23.8% → 24.7%	14.2% → 18.1%
(Conventional 95% CI)	[18.8, 28.9] → [20.9, 28.3]	[13.5, 14.9] → [12.8, 23.4]
(Catalist Error 95% CI)	[18.2, 32.3] → [18.1, 29.3]	[13.5, 15.3] → [11.7, 24.4]
	Latino Voter Turnout	**Asian Voter Turnout**
Co-Ethnic Candidate	9.7% → 12.6%	8.1% → 13.4%
(Conventional 95% CI)	[8.5, 10.9] → [10.9, 14.3]	[6.2, 10.0] → [9.7, 17.0]
(Catalist Error 95% CI)	[7.5, 12.2] → [9.2, 14.1]	[4.6, 10.4] → [7.6, 18.3]
No Co-Ethnic Candidate	9.1% → 14.4%	8.0% → 13.5%
(Conventional 95% CI)	[8.6, 9.6] → [12.1, 16.6]	[7.4, 8.7] → [11.1, 15.8]
(Catalist Error 95% CI)	[8.2, 9.6] → [9.0, 16.7]	[6.6, 8.3] → [9.8, 16.4]

Notes: Table indicates change in predicted turnout for each group when shifting the group's citizen voting-age population (CVAP) of a district from 10% → 50%, and with/without a co-ethnic candidate. All other variables held constant at their mean values. For Asian voters, CVAP is shifted from 0% → 20%. "Conventional" 95% confidence intervals generated via bootstrapping, reflecting model error. "Catalist Error" confidence intervals incorporate *additional* error due to misclassification of voter race.

and the party ballot selected by the voter for 38 states with partisan primary data.[36] Is turnout higher when co-ethnic co-partisans are on the primary ballot? Each figure and table shows no significant impact of minority primary candidacy on turnout for co-ethnics, for either Democrats or Republicans. However, and in contrast to the results we see for primary election turnout in Figure 2, disaggregating primary turnout by party reveals that turnout for Whites in Democratic Party primaries may actually be *higher* in jurisdictions where Whites are a large portion of the electorate, and that the negative relationship between White CVAP and participation may be unique to White Republicans. Figure 3 implies that Black Democrats display a pattern similar to the aggregated data in Figure 2, though as the vast majority of the African American primary electorate affiliates with the Democratic Party, it is difficult to form substantively useful conclusions regarding Black voter turnout in Republican primaries. While Latino primary turnout is higher on average in heavily Latino districts, limiting the analysis to the 38 states with partisan primary data, then further disaggregating by party, shows that this may have been due to increased turnout by Latino Democrats. In the limited sample, we also see no significant effect of

district demographics on Asian American voter turnout for Democratic or Republican primary voters.

Discussion

The goal of this study was to analyze the impact of ethnoracial context on voter turnout, distinguishing the impact of jurisdiction racial/ethnic composition from co-ethnic candidacy. In contrast to extant interpretations of empowerment and elite mobilization theories, I find co-ethnic candidates do not have an independent effect on White, Black, Latino, or Asian voter turnout. I instead show that when an ethnic group makes up a large portion of the electorate, turnout by that group is often greater. Shifting the proportion of the electorate a group composes from 10% to 50% is associated with a 9-point increase in Black turnout and a 6.4-point increase for Latinos in general elections (5 points for Latinos in primaries). Notably, candidate race is associated with a measurable (2.5 point) increase in turnout for African Americans in primaries, but only in contests held in heavily non-Black districts. White voters in primaries, and perhaps more specifically, White Republicans, do appear sensitive to district demographics and are more likely to stay home when residing in jurisdictions with few minority citizens.

These results have substantial implications for the way we evaluate empowerment and elite mobilization

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[36]Full regression results may be found in Tables B3 and B4 of Appendix B.

FIGURE 3 Democratic Primary Turnout, by Racial/Ethnic Group
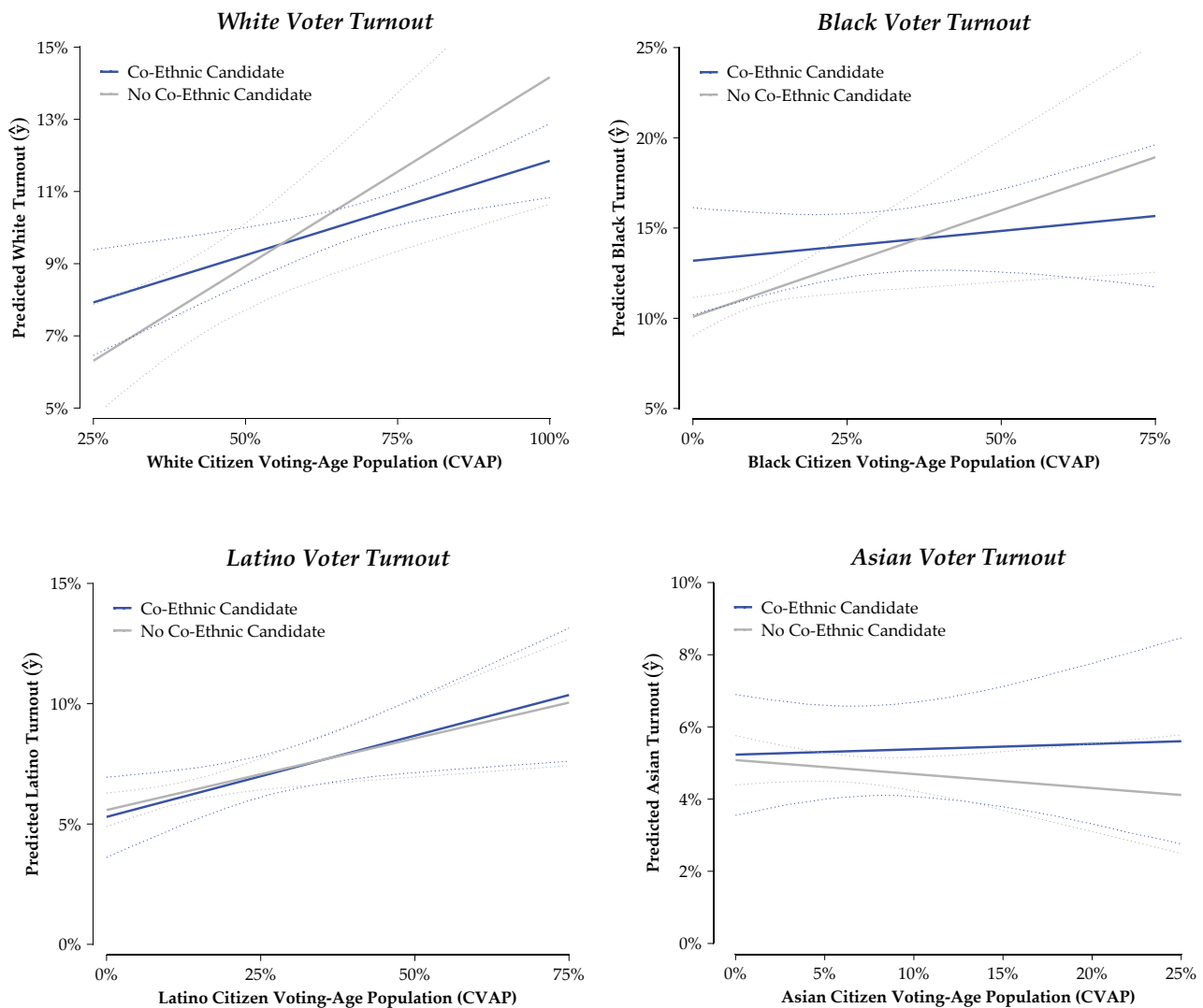
Notes: Each of the four panels in the figure represents the predicted turnout rate for the indicated racial or ethnic group, given the specified relative group size and when a co-ethnic candidate is or is not on the ballot, while holding all other variables constant at their mean values. Dotted lines represent 95% confidence intervals generated via bootstrapping. Across all groups, we do not see a significant change in turnout when a co-ethnic candidate runs for office, after accounting for district ethnic composition.

theories of turnout, and clarify possible mechanisms by which race impacts participation. In the end, I find that the relationships we see are consistent with understandings that emphasize the demographic characteristics of jurisdictions as associated with higher turnout for minority groups, rather than the presence of co-ethnic candidates. Dominant characterizations of Bobo and Gilliam (1990), focusing on "representation" via candidate race, may be well served to note "influence" is also a condition for increased political participation (378). Furthermore, the above evidence does not preclude the possibility that a mix of individual-level empowerment and elite-level mobilization may explain how race impacts

who votes. For instance, when an ethnic group has substantial sway over election outcomes, group members may both feel their votes matter and receive targeted appeals stating such from election-seeking candidates, further reinforcing their sense of efficacy. Yet it does suggest that elites and/or individuals shift their behavior in response to the electoral context they find themselves in. The composition of districts and the composition of the candidate pool are indeed correlated, but a more complete understanding of race and voter turnout now indicates the relative size of ethnic groups within a jurisdiction is more closely associated with turnout rates.

TABLE 7 Democratic Primary Turnout: Effect of Relative Group Size and Co-Ethnic Candidacy

	White Voter Turnout	Black Voter Turnout
Co-Ethnic Candidate	7.1% → 9.2%	13.5% → 14.8%
(Conventional 95% CI)	[5.2, 9.1] → [8.5, 10.0]	[11.1, 15.9] → [12.6, 17.1]
(Catalist Error 95% CI)	[5.9, 10.5] → [8.8, 10.6]	[10.9, 16.8] → [12.5, 18.3]
No Co-Ethnic Candidate	4.7% → 8.9%	11.3% → 16.0%
(Conventional 95% CI)	[2.5, 7.0] → [7.7, 10.1]	[10.7, 11.9] → [12.0, 19.9]
(Catalist Error 95% CI)	[2.9, 9.1] → [7.9, 10.8]	[10.6, 12.1] → [11.0, 20.7]
	Latino Voter Turnout	Asian Voter Turnout
Co-Ethnic Candidate	6.0% → 8.7%	5.2% → 5.5%
(Conventional 95% CI)	[4.7, 7.2] → [7.1, 10.2]	[3.7, 6.8] → [3.3, 7.8]
(Catalist Error 95% CI)	[3.9, 8.3] → [6.1, 10.3]	[2.1, 5.2] → [2.6, 7.8]
No Co-Ethnic Candidate	6.2% → 8.6%	5.0% → 4.3%
(Conventional 95% CI)	[5.7, 6.6] → [7.0, 10.2]	[4.4, 5.7] → [3.1, 5.5]
(Catalist Error 95% CI)	[5.6, 6.8] → [5.9, 10.9]	[2.9, 3.9] → [2.9, 5.4]

Notes: Table indicates simulated change in predicted turnout for each group when shifting the group's citizen voting-age population (CVAP) of a district from 10% → 50%, and with/without a co-ethnic candidate. All other variables held constant at their mean values. For Asian voters, CVAP is shifted from 0% → 20%. "Conventional" 95% confidence intervals generated via bootstrapping, reflecting model error. "Catalist Error" confidence intervals incorporate *additional* error due to misclassification of voter race.

Can we find a role for relative group size within other theories of political participation? Rational choice models generally involve an individual utility maximization strategy, implying little role for group identities (Downs 1957; Riker and Ordeshook 1968; Wolfinger and Rosenstone 1980). Uhlaner (1989a, 1989b) adds collective benefits to the calculus of voting, indicating how the *individual* cost-benefit calculation of an individual may shift in favor of participation if one's group has the opportunity to receive benefits. Group benefits have also been shown to increase proportionally to the influence a group has on outcomes (Morton 1991, 761), with a resultant impact on turnout not directly due to empowerment or elite mobilization (Jang 2009). Beyond the rational choice paradigm, future work should try to distinguish between district-specific electoral factors influencing elite or individual behavior, versus the (group size-related) presence of community resources and social networks that may increase participation (Spence and McClerking 2010; Verba, Schlozman, and Brady 1972). For instance, the ethnic composition of an electoral jurisdiction may have no *causal* impact on turnout, but instead simply reflect the underlying features of a neighborhood.[37] I echo Browning, Marshall, and Tabb (1984) in noting that we should *not* assume

an association between population size and participation obviates a deeper understanding of the processes leading to minority electoral participation (103). While I provide a firmer empirical basis for the race-based correlates of voter turnout, future research should be designed to explore the specific causal mechanisms at work.

Should these results change the way we think about descriptive representation? In some ways, the findings above may coincide with what Tate (1991, 1994) and Gay (2001) found regarding Black political participation in the 1980s and 1990s: African American incumbents are now so routine that descriptive representation no longer has the impact it once did on Black turnout.[38] While I also find little evidence of candidate-associated participation, we do see higher primary election turnout for African Americans in heavily non-Black districts with Black candidates. It is certainly worth exploring whether there is a distinct impact of "nonroutine" or high-profile candidates, especially given the attention paid to minority turnout as impacted by Barack Obama's candidacy in both media (Wheaton 2013) and academic analyses (McKee, Hood, and Hill 2012).[39] Nonminority

[37]Individuals may also self-select into areas with high turnout for co-ethnics, and/or those in charge of the redistricting process may intentionally pack heavily minority, high-turnout areas into majority-minority districts (see Henderson, Sekhon, and Titiunik 2013).

[38]However, they differ with the theoretical claims made by Barreto, Segura, and Woods (2007), who assert that repeated *failures* to gain descriptive representation will deplete turnout more forcefully than repeated *successes*.

[39]Also, as demonstrated in Tables B1-B4 in Appendix B, the presence of a statewide gubernatorial candidate may be associated with slightly higher turnout for Black and Latino voters, but only in

FIGURE 4 Republican Primary Turnout, by Racial/Ethnic Group
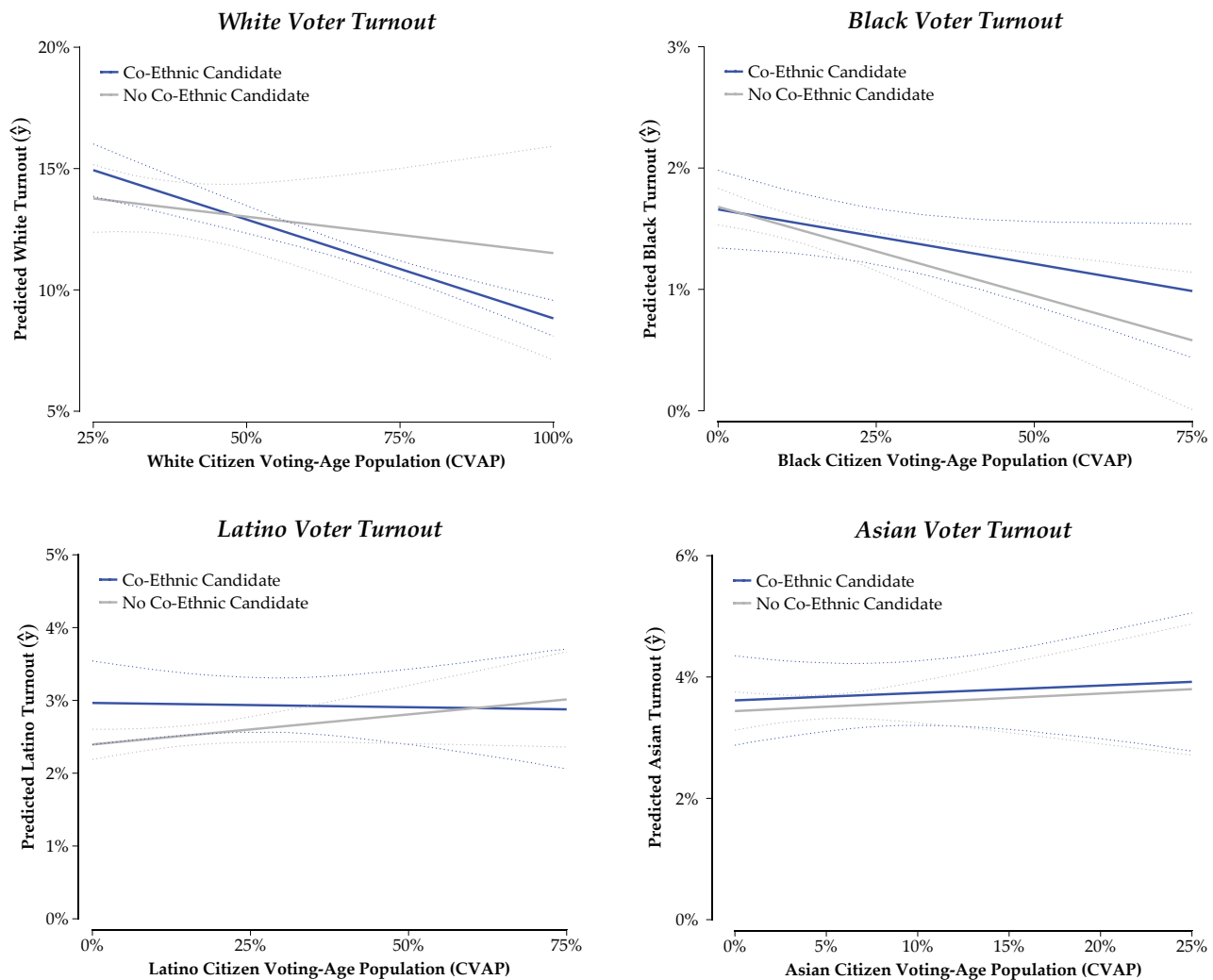
Notes: Each of the four panels in the figure represents the predicted turnout rate for the indicated racial or ethnic group, given the specified relative group size and when a co-ethnic candidate is or is not on the ballot, while holding all other variables constant at their mean values. Dotted lines represent 95% confidence intervals generated via bootstrapping. Across all groups, we do not see a significant change in turnout when a co-ethnic candidate runs for office, after accounting for district ethnic composition.

candidates who seek office in majority-minority districts may also adopt specific strategies to empower and/or mobilize Black and Latino voters, suggesting advances in our scientific understanding of what gets minority voters to the polls (García Bedolla and Michelson 2012) may not be lost on politicians and campaign strategists.[40] Impacts for federal elections may also be distinct from those we would

witness in state legislative or local elections (Keele et al. 2014; but see Spence and McClerking 2010); while members of Congress appear to place even weight on minority and nonminority views once accounting for district ethnic composition (Clifford 2012), evidence continues to suggest co-ethnic officeholding at lower levels offers more opportunities to provide minority-focused services (Broockman 2013; Gay 2001, 599; Pettigrew 1976).

In *Georgia v. Ashcroft* (2003), the Supreme Court upheld Georgia's plan to unpack heavily Black congressional districts into Black "influence" districts, rejecting claims that the plan was retrogressive with regard to Black voting

general and primary elections, respectively. This aligns with state-level findings for African Americans as reported by Washington (2006), though Black candidates also boost *White* turnout in her study.

[40]For instance, Representatives Steve Cohen (TN-9) and Gene Green (TX-29), who represent majority-Black and majority-Latino districts, respectively, appear to acknowledge the electoral necessity of catering to these minority communities (Bacon 2010; Schleifer

2014). See Grose (2011) for further discussion of representation in contemporary majority-minority districts.

TABLE 8 Republican Primary Turnout: Effect of Relative Group Size and Co-Ethnic Candidacy

	White Voter Turnout	Black Voter Turnout
Co-Ethnic Candidate	16.2% → 12.9%	1.6% → 1.2%
(Conventional 95% CI)	[14.8, 17.6] → [12.3, 13.5]	[1.3, 1.8] → [0.9, 1.6]
(Catalist Error 95% CI)	[14.7, 18.1] → [12.4, 13.7]	[1.0, 2.1] → [0.8, 1.7]
No Co-Ethnic Candidate	14.2% → 13.0%	1.5% → 0.9%
(Conventional 95% CI)	[12.1, 16.4] → [11.6, 14.4]	[1.4, 1.6] → [0.6, 1.3]
(Catalist Error 95% CI)	[12.0, 17.2] → [11.8, 14.8]	[1.4, 1.7] → [0.5, 1.4]
	Latino Voter Turnout	**Asian Voter Turnout**
Co-Ethnic Candidate	3.0% → 2.9%	3.6% → 3.9%
(Conventional 95% CI)	[2.5, 3.4] → [2.4, 3.4]	[2.9, 4.3] → [3.0, 4.7]
(Catalist Error 95% CI)	[2.2, 4.0] → [2.2, 3.6]	[1.0, 3.7] → [2.2, 5.7]
No Co-Ethnic Candidate	2.5% → 2.8%	3.5% → 3.7%
(Conventional 95% CI)	[2.3, 2.6] → [2.4, 3.2]	[3.2, 3.7] → [2.9, 4.5]
(Catalist Error 95% CI)	[2.3, 2.6] → [2.1, 3.2]	[2.3, 2.8] → [2.6, 4.5]

Notes: Table indicates simulated change in predicted turnout for each group when shifting the group's citizen voting-age population (CVAP) of a district from 10% → 50%, and with/without a co-ethnic candidate. All other variables held constant at their mean values. For Asian voters, CVAP is shifted from 0% → 20%. "Conventional" 95% confidence intervals generated via bootstrapping, reflecting model error. "Catalist Error" confidence intervals incorporate *additional* error due to misclassification of voter race.

rights. Establishing what constitutes *enough* demographic concentration to produce influence has been a topic of interest to recent scholars of the Voting Rights Act, focusing on representational outcomes and thus linking the effectiveness of these districts to the election of coethnics (Engstrom 2011; Grose 2007; Segura and Woods 2007). I instead offer evidence that the relative size of ethnic groups within a jurisdiction has an independent turnout-boosting effect, suggesting a result worth examining when evaluating redistricting plans. Including participatory consequences along with representational outcomes, however, calls for a new metric to judge what is fair when crafting district boundaries. Refining the concept of vote dilution to include participatory outcomes may be a step along this path (Gerken 2001), and efforts to reform the Voting Rights Act in the wake of *Shelby v. Holder* (2013) have indeed incorporated turnout as a metric (Jackson 2014). As the minority population increases in the United States, electoral districts will necessarily become more diverse; the above findings suggest that shifts in rates of political participation could be in the future as well.

Appendix A: Misclassification Sensitivity Methodology

As noted above, 91.4% of CCES respondents had their racial or ethnic background correctly identified by Catalist. However, in order to assess whether the results shown here are robust to misclassification of individuals' race/ethnicity, I conducted a statistical analysis that leverages the variation in the quality of Catalist's predictions (see Table 2). Part of this analysis requires the generation of a series of simulated data sets via a four-step process. In the first step, for each group g and quality level q combination in jurisdiction i, I take draws from a normal distribution with μ equal to the observed number of voters and σ^2 calculated from the average error in Catalist estimates of how many validated 2008 voters from the CCES belong to a particular group within each quality level, via bootstrapping.

$$\text{Votes}_{gqi} = \mathcal{N}(\mu_{gqi}, \sigma^2_{gqi}) \qquad (1)$$

Second, I sum the vote totals by group for each quality level, adding the number of voters who marked their race on the voter registration form, which is not randomized:

$$\text{Votes}_{gi} = \left(\sum_{q=1}^{Q} \text{Votes}_{gqi} \right) + \text{Voter File Votes}^{\star}_{gi}$$

$$(2)$$

Third, I sum the randomized vote totals for all groups together and then divide to get a proportion of votes in jurisdiction i received by group g:

$$\text{Vote Proportion}_{gi} = \frac{\text{Votes}_{gi}}{\sum\limits_{g=1}^{G} \text{Votes}_{gi}} \qquad (3)$$

Finally, because the total number of voters is known, I multiply this vote proportion by the total number of actual voters in the district to produce totals for each group:

$$\text{Proportional Votes}_{gi} = \text{Vote Proportion}_{gi}$$
$$\times \text{Total Votes}_{i}^{\star} \qquad (4)$$

Appendix B: Regression Tables

The *Full* regression models include the following demographic and electoral controls, in addition to those indicated in the main text:

Demographic

- **Age** (% < 35): ACS 2006–10 estimate of the proportion of all voting-age individuals between the ages of 18 and 35, for each ethnic group.
- **Education (% No HS):** ACS 2006–10 estimate of the proportion of all individuals over 25 who have not completed high school, for each ethnic group.
- **Income** (% <20K): ACS 2006–10 estimate of the proportion of households with income under $20,000, for each ethnic group.

Electoral

- **Statewide Co-Ethnic:** Indicator for jurisdictions in states where a co-ethnic ran for U.S. Senate (House election observations only) or governor (1 = Yes).

- **Open Seat**: Indicator for jurisdictions where the incumbent did not seek re-election (1 = Open).
- **Cook PVI:** Cook Political Report Partisan Voting Index, here rescaled from 0 to 1 with 0.75 representing a district where, in a presidential election in which the national two-party vote was split 50%-50%, the jurisdiction would split 75% for the Democratic Party and 25% for the Republican Party. More details available at http://cookpolitical.com.
- **Competitiveness:** *Ex ante* measure of competitiveness, calculated by rescaling Cook PVI as $1 - |PVI - 0.5|$, such that a value of 1 represents a 50%-50% jurisdiction in presidential voting.
- **Sen. Election/Gov. Election:** Indicator for jurisdictions where a Senate or gubernatorial election was held in the same state that year (1 = Yes).
- **Presidential Primary:** (Primary Only) Indicator for jurisdictions where the congressional primary was held at the same time as at least one party's presidential primary (1 = Yes).
- **Primary Type:** (Primary Only) Measure of openness of primary eligibility rules, scaled from 0 to 1 with 1, representing an open primary and 0 a closed primary.
- **Runoff State**: (Primary Only) Indicator for jurisdictions where runoff elections *could* be held (AL, AR, GA, MS, NC, OK, SC, TX).

TABLE B1 General Election Turnout

	Whites		Blacks		Latinos		Asians	
CVAP	0.011	0.016	0.332*	0.232*	0.252*	0.160*	-0.242*	−0.256*
	(0.043)	(0.060)	(0.056)	(0.057)	(0.038)	(0.038)	(0.108)	(0.113)
Co-Ethnic Candidate	0.027	0.012	0.046*	0.037*	0.020*	0.011	−0.002	0.002
	(0.018)	(0.022)	(0.019)	(0.018)	(0.010)	(0.010)	(0.014)	(0.011)
CVAP × Co-Ethnic	−0.018	0.015	−0.206*	−0.153*	−0.127*	−0.086*	0.127	0.136
	(0.044)	(0.055)	(0.067)	(0.064)	(0.045)	(0.039)	(0.154)	(0.131)
Statewide Co-Ethnic	0.017*	−0.009	0.020*	0.011*	−0.013*	−0.020*	0.015*	0.012*
	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.004)
Age (% < 35)		−0.486*		−0.791*		−0.352*		−0.168*
		(0.082)		(0.103)		(0.144)		(0.081)
Education (% No HS)		−1.089*		−0.440*		−0.151*		−0.292*
		(0.108)		(0.109)		(0.045)		(0.071)
Income (% < 20K)		0.171		0.166*		−0.211*		−0.001
		(0.133)		(0.068)		(0.061)		(0.091)
Open Seat		0.001		0.004		−0.008		−0.000
		(0.004)		(0.005)		(0.005)		(0.007)
Cook PVI		0.100*		0.083		0.222*		0.090*
		(0.029)		(0.050)		(0.028)		(0.036)
Competitiveness		0.029		0.107		0.103*		0.229*
		(0.040)		(0.062)		(0.044)		(0.055)
Sen. Election		0.020*		0.022*		0.002		0.022*
		(0.003)		(0.004)		(0.004)		(0.005)
Gov. Election		0.013*		0.014*		0.001		0.025*
		(0.004)		(0.006)		(0.005)		(0.008)
South	−0.075*	−0.035*	−0.055*	−0.030*	−0.107*	−0.065*	−0.063*	−0.048*
	(0.007)	(0.007)	(0.011)	(0.014)	(0.008)	(0.007)	(0.011)	(0.010)
2006	−0.012*	−0.010*	−0.035*	−0.033*	0.020*	0.019*	−0.011*	−0.012*
	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.004)
2008	0.196*	0.201*	0.261*	0.276*	0.217*	0.218*	0.221*	0.247*
	(0.003)	(0.004)	(0.004)	(0.006)	(0.004)	(0.006)	(0.005)	(0.008)
Record Reliability	−0.122	−0.320*	0.264	0.098	−0.309*	−0.363*	0.097	0.027
	(0.090)	(0.097)	(0.159)	(0.164)	(0.147)	(0.142)	(0.143)	(0.151)
Constant	0.456*	0.543*	0.297*	0.379*	0.214*	0.218*	0.266*	0.068
	(0.020)	(0.050)	(0.007)	(0.072)	(0.006)	(0.062)	(0.007)	(0.067)
N	1,324	1,324	1,237	1,237	1,222	1,222	923	923
Jurisdictions	470	470	438	438	453	453	352	352
Avg. # of Voters	290,228	290,228	40,813	40,813	22,627	22,627	10,097	10,097
R^2	0.627	0.755	0.623	0.674	0.601	0.655	0.582	0.636
Marginal R^2	0.165	0.451	0.119	0.237	0.268	0.366	0.060	0.181
Cluster Correlation ($\hat{\rho}$)	0.749	0.619	0.613	0.580	0.607	0.588	0.541	0.526

Notes: Robust standard errors in parentheses. "Jurisdictions" represents number of unique districts and states in each model. "Avg. # of Voters" shows mean number of voters from each ethnic group per observation. Marginal (cross-year) R^2 calculated using formula from Zheng (2000). "Cluster Correlation" indicates mean intracluster correlation. *p < .05.

TABLE B2 Primary Election Turnout

	Whites		Blacks		Latinos		Asians	
CVAP	0.012	0.022	0.171*	0.099	0.150*	0.132*	0.276*	0.286*
	(0.089)	(0.090)	(0.056)	(0.064)	(0.023)	(0.028)	(0.063)	(0.073)
Co-Ethnic Candidate	0.041	0.058	0.034*	0.031*	0.012	0.011	−0.001	0.000
	(0.034)	(0.033)	(0.011)	(0.011)	(0.008)	(0.008)	(0.009)	(0.010)
CVAP × Co-Ethnic	−0.064	−0.107	−0.075	−0.074	−0.062*	−0.059	−0.006	−0.009
	(0.092)	(0.091)	(0.062)	(0.063)	(0.030)	(0.030)	(0.101)	(0.107)
Statewide Co-Ethnic	−0.013	−0.050*	0.001	0.003	0.051*	0.055*	0.067*	0.060*
	(0.009)	(0.012)	(0.006)	(0.005)	(0.007)	(0.007)	(0.006)	(0.006)
Presidential Primary	0.075*	0.068*	0.140*	0.139*	0.095*	0.091*	0.070*	0.071*
	(0.012)	(0.013)	(0.016)	(0.016)	(0.011)	(0.011)	(0.010)	(0.009)
Age (% < 35)		−0.269*		−0.221*		−0.037		−0.169*
		(0.109)		(0.072)		(0.081)		(0.057)
Education (% No HS)		−0.838*		−0.293*		−0.060*		−0.075
		(0.140)		(0.078)		(0.029)		(0.046)
Income (% < 20K)		0.555*		0.139*		−0.011		0.253*
		(0.133)		(0.055)		(0.038)		(0.064)
Open Seat		0.019*		−0.000		0.007		0.008
		(0.007)		(0.009)		(0.005)		(0.005)
Cook PVI		−0.112*		0.036		0.057*		−0.054*
		(0.042)		(0.031)		(0.019)		(0.024)
Competitiveness		−0.162*		−0.133*		−0.082*		−0.037
		(0.049)		(0.039)		(0.027)		(0.035)
Sen. Election		0.019*		0.002		−0.006*		0.000
		(0.005)		(0.005)		(0.003)		(0.003)
Gov. Election		0.035*		0.013*		0.008*		0.015*
		(0.007)		(0.005)		(0.004)		(0.005)
Primary Type		0.047*		0.000		−0.003		0.019*
		(0.008)		(0.007)		(0.005)		(0.006)
Runoff State		−0.065*		−0.016		0.011		−0.031*
		(0.013)		(0.015)		(0.008)		(0.007)
South	−0.027*	0.005	−0.016*	0.006	−0.047*	−0.048*	−0.024*	−0.014*
	(0.007)	(0.013)	(0.006)	(0.013)	(0.004)	(0.008)	(0.005)	(0.006)
2006	−0.017*	−0.013*	0.012*	0.011*	0.019*	0.019*	−0.000	0.001
	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
2008	0.011	0.031*	0.054*	0.063*	0.025*	0.029*	0.024*	0.036*
	(0.006)	(0.007)	(0.007)	(0.007)	(0.004)	(0.004)	(0.005)	(0.006)
Record Reliability	−0.489*	−0.528*	−0.395*	−0.405*	−0.305*	−0.313*	−0.267*	−0.279*
	(0.050)	(0.053)	(0.044)	(0.043)	(0.028)	(0.028)	(0.035)	(0.032)
Constant	0.262*	0.491*	0.113*	0.275*	0.075*	0.155*	0.084*	0.146*
	(0.032)	(0.065)	(0.006)	(0.046)	(0.004)	(0.036)	(0.005)	(0.043)
N	966	966	906	906	905	905	703	703
Jurisdictions	391	391	366	366	374	374	296	296
Avg. # of Voters	131,412	131,412	15,485	15,485	9,796	9,796	4,275	4,275
R^2	0.197	0.321	0.380	0.426	0.342	0.382	0.305	0.370
Marginal R^2	0.154	0.284	0.285	0.338	0.296	0.340	0.261	0.330
Cluster Correlation ($\hat{\rho}$)	0.546	0.495	0.354	0.299	0.607	0.576	0.515	0.492

Notes: Robust standard errors in parentheses. "Jurisdictions" represents number of unique districts and states in each model. "Avg. # of Voters" shows mean number of voters from each ethnic group per observation. Marginal (cross-year) R^2 calculated using formula from Zheng (2000). "Cluster Correlation" indicates mean intracluster correlation. *p < .05.

TABLE B3 Democratic Congressional Primary Election Turnout

	Whites		Blacks		Latinos		Asians	
CVAP	−0.063*	0.105*	0.175*	0.117*	0.106*	0.059*	−0.001	−0.039
	(0.024)	(0.030)	(0.044)	(0.049)	(0.018)	(0.021)	(0.037)	(0.046)
Dem. Co-Ethnic Candidate	−0.009	0.029	0.034*	0.031*	−0.002	−0.003	−0.003	0.002
	(0.016)	(0.015)	(0.016)	(0.016)	(0.009)	(0.009)	(0.007)	(0.008)
CVAP × Dem. Co-Ethnic	0.010	−0.052	−0.077	−0.085	0.001	0.008	0.057	0.054
	(0.028)	(0.030)	(0.055)	(0.054)	(0.031)	(0.030)	(0.068)	(0.077)
Statewide Dem. Co-Ethnic	−0.025*	−0.060*	0.035*	0.041*	0.055*	0.064*	*(None in data)*	
	(0.007)	(0.007)	(0.008)	(0.009)	(0.009)	(0.008)		
Age (% < 35)		−0.215*		−0.181*		−0.085		−0.022
		(0.059)		(0.073)		(0.076)		(0.049)
Education (% No HS)		−0.172		−0.297*		−0.049		−0.061
		(0.089)		(0.074)		(0.025)		(0.033)
Income (% < 20K)		0.414*		0.230*		0.030		0.116*
		(0.079)		(0.051)		(0.032)		(0.053)
Open Seat		0.010		0.007		0.007		0.011*
		(0.005)		(0.008)		(0.004)		(0.005)
Cook PVI		0.239*		0.053		0.109*		0.061*
		(0.023)		(0.029)		(0.016)		(0.019)
Competitiveness		−0.107*		−0.086*		−0.041		0.028
		(0.032)		(0.038)		(0.025)		(0.030)
Sen. Election		0.018*		−0.001		−0.003		0.005
		(0.004)		(0.006)		(0.003)		(0.004)
Gov. Election		0.060*		0.015		0.031*		0.014*
		(0.010)		(0.009)		(0.005)		(0.006)
Dem. Primary Type		0.026*		0.010		0.016*		0.023*
		(0.006)		(0.008)		(0.005)		(0.007)
Runoff State		0.014		−0.017		0.005		0.001
		(0.009)		(0.013)		(0.006)		(0.006)
South	−0.040*	−0.027*	−0.037*	−0.015	−0.041*	−0.037*	−0.018*	−0.021*
	(0.005)	(0.008)	(0.006)	(0.012)	(0.004)	(0.005)	(0.005)	(0.004)
2006	0.010*	0.007*	0.014*	0.015*	0.017*	0.016*	0.004*	0.004*
	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
2008	0.022*	0.056*	0.058*	0.072*	0.023*	0.048*	0.025*	0.038*
	(0.006)	(0.009)	(0.008)	(0.010)	(0.004)	(0.005)	(0.006)	(0.007)
Record Reliability	−0.264*	−0.266*	−0.373*	−0.385*	−0.218*	−0.223*	−0.182*	−0.168*
	(0.039)	(0.033)	(0.044)	(0.041)	(0.030)	(0.026)	(0.033)	(0.030)
Constant	0.177*	−0.012	0.097*	0.166*	0.053*	0.042	0.053*	−0.033
	(0.013)	(0.040)	(0.006)	(0.046)	(0.004)	(0.031)	(0.004)	(0.037)
N	762	762	731	731	716	716	589	589
Jurisdictions	343	343	329	329	325	325	266	266
Avg. # of Voters	51,737	51,737	13,352	13,352	8,540	8,540	2,166	2,166
R^2	0.163	0.426	0.226	0.297	0.287	0.418	0.091	0.192
Marginal R^2	0.141	0.411	0.177	0.253	0.259	0.395	0.057	0.162
Cluster Correlation ($\hat{\rho}$)	0.433	0.218	0.255	0.184	0.603	0.510	0.272	0.206

Notes: Robust standard errors in parentheses. "Jurisdictions" represents number of unique districts and states in each model. "Avg. # of Voters" shows mean number of voters from each ethnic group per observation. Marginal (cross-year) R^2 calculated using formula from Zheng (2000). "Cluster Correlation" indicates mean intracluster correlation. $^*p < .05$.

TABLE B4 Republican Congressional Primary Election Turnout

	Whites		Blacks		Latinos		Asians	
CVAP	0.058	-0.030	−0.041*	−0.015*	−0.001	0.008	−0.031	0.015
	(0.032)	(0.035)	(0.005)	(0.005)	(0.005)	(0.005)	(0.026)	(0.027)
Rep. Co-Ethnic Candidate	0.022	0.025	−0.001	−0.000	0.006*	0.006*	−0.007	−0.001
	(0.012)	(0.013)	(0.002)	(0.002)	(0.003)	(0.003)	(0.007)	(0.005)
CVAP × Rep. Co-Ethnic	−0.027	−0.051	0.006	0.006	−0.011	−0.009	0.047	0.014
	(0.032)	(0.034)	(0.005)	(0.005)	(0.007)	(0.006)	(0.044)	(0.031)
Statewide Rep. Co-Ethnic	−0.009	−0.024*	0.003*	0.004*	0.007*	0.006*	0.026*	0.024*
	(0.005)	(0.006)	(0.001)	(0.001)	(0.002)	(0.002)	(0.009)	(0.007)
Age (% < 35)		−0.057		0.073*		−0.010		−0.049*
		(0.054)		(0.017)		(0.025)		(0.022)
Education (% No HS)		−0.389*		−0.048*		−0.015		−0.030
		(0.072)		(0.014)		(0.008)		(0.020)
Income (% < 20K)		0.232*		0.006		−0.053*		0.116*
		(0.066)		(0.008)		(0.010)		(0.026)
Open Seat		0.019*		0.002*		0.004*		0.007*
		(0.004)		(0.001)		(0.001)		(0.002)
Cook PVI		−0.302*		−0.044*		−0.042*		−0.082*
		(0.020)		(0.006)		(0.006)		(0.010)
Competitiveness		−0.033		−0.033*		−0.017*		−0.006
		(0.022)		(0.009)		(0.009)		(0.016)
Sen. Election		0.007		−0.002*		−0.000		−0.002
		(0.004)		(0.000)		(0.001)		(0.001)
Gov. Election		0.034*		0.003*		0.004*		0.010*
		(0.005)		(0.001)		(0.001)		(0.003)
Rep. Primary Type		0.036*		0.008*		0.004*		0.010*
		(0.004)		(0.001)		(0.002)		(0.003)
Runoff State		−0.052*		−0.004*		−0.006*		−0.011*
		(0.007)		(0.001)		(0.002)		(0.004)
South	0.011*	0.008	0.003*	−0.003	−0.011*	−0.010*	−0.008*	−0.011*
	(0.005)	(0.005)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)
2006	−0.024*	−0.021*	−0.001*	−0.001*	0.001	0.001	−0.005*	−0.004*
	(0.002)	(0.002)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
2008	−0.019*	0.006	0.000	0.002*	0.000	0.004*	−0.002	0.006*
	(0.003)	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)
Record Reliability	−0.195*	−0.226*	−0.046*	−0.048*	−0.065*	−0.068*	−0.086*	−0.093*
	(0.026)	(0.025)	(0.006)	(0.006)	(0.008)	(0.008)	(0.012)	(0.012)
Constant	0.093*	0.338*	0.021*	0.053*	0.030*	0.080*	0.044*	0.081*
	(0.014)	(0.029)	(0.001)	(0.011)	(0.001)	(0.011)	(0.002)	(0.019)
N	748	748	716	716	709	709	571	571
Jurisdictions	346	346	332	332	332	332	268	268
Avg. # of Voters	65,572	65,572	938	938	2,734	2,734	1,447	1,447
R^2	0.117	0.586	0.160	0.446	0.128	0.354	0.077	0.370
Marginal R^2	0.072	0.565	0.158	0.445	0.128	0.354	0.068	0.363
Cluster Correlation ($\hat{\rho}$)	0.512	0.306	0.571	0.546	0.633	0.569	0.468	0.420

Notes: Robust standard errors in parentheses. "Jurisdictions" represents number of unique districts and states in each model. "Avg. # of Voters" shows mean number of voters from each ethnic group per observation. Marginal (cross-year) R^2 calculated using formula from Zheng (2000). "Cluster Correlation" indicates mean intracluster correlation. *p < .05.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Section 1: Descriptive Statistics for Candidate Data
Section 2: Details of Census Data Aggregation
Section 3: Quality of Catalist Data and Predictions
Section 4: Tests for Heterogeneous Candidate Effects
Section 5: Alternative Modeling Strategies