RACE, RESOURCES, AND REPRESENTATION
Evidence from Brazilian Politicians

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I. Democracy and Descriptive Representation

WHEN and why do democratic elections select politicians who mirror their electorates on ascriptive grounds? Political strength under democracy is at least in part in the numbers. Yet ethnic or racial majorities do not always translate their numerical superiority into greater descriptive representation among elected politicians. The failure of ethnic groups to attain representation commensurate with their numerical strength constitutes an important general puzzle in the study of democratic politics.[1]

The racial disparity between citizens and representatives is especially striking in Latin America, where accounts of "racial democracy" celebrate ethnic harmony, integration, and miscegenation.[2] Even if there are good reasons to be skeptical of such narratives—many of them ratify white minority power while masking racism—scholars note the lack of strong social boundaries based on race.[3] But in Brazil, where a plurality

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Replication code and data for this article are available at Bueno and Dunning 2017a.

[1] Yashar 2005. On descriptive representation, see Pitkin 1967.

[2] Peña, Sidanius, and Sawyer 2004; Freyre 1980 [1933]. The concept of *mestizaje* is an analogue in much of Hispanic Latin America.

[3] For skeptical accounts, see Hasenbalg 2005; Hanchard 1999; Twine 1998; or Telles and Sue 2009. On porous social boundaries, see Telles 2004; Lieberman 2003, 2009; or Marx 1998.

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of the population self-identifies as black or brown, politicians at many levels of government are disproportionately white. One study found only eleven nonwhite federal deputies out of 513, and one nonwhite senator out of eighty-one in a recent electoral term.[4] In Figure 1, we use newly available data to compare the self-identified race of all state and federal deputies, senators, and governors elected in 2014 to the racial distribution of the population. The data suggest substantial racial discrepancies: browns and blacks comprise more than 50 percent of the population but less than 25 percent of elected politicians.

What explains the persistence of racial or ethnic disparities in political representation, even in the absence of strongly politicized racial or ethnic cleavages? We show how gaps in descriptive representation may persist in democracies such as Brazil's, in which black and brown citizens comprise a majority. We argue that ethnic elites may counteract their numerical disadvantages with resource investments. Our findings do not suggest the political irrelevance of race or ethnicity. Yet, we show voters' systematic racial bias is not necessary to explain why politicians' attributes fail to reflect racial and ethnic majorities. Instead, our evidence indicates the importance of elite closure—investments by racial and economic elites on behalf of other elites—in sustaining barriers to descriptive representation.

To reach this conclusion, we pursue several strategies. First, we assess whether racial preferences in the electorate, for instance, deference toward white candidates or discrimination against nonwhites, can explain the representational gap. In our experiment, we showed videotaped political speeches given by actors posing as candidates for city council to a probability sample of residents in the northeastern city of Salvador and the southeastern city of Rio de Janeiro. We assigned respondents at random to view speeches given by a white or black actor, sometimes with identical content and sometimes with differences to emphasize the candidate's race or class background. By using multiple actors of each race, our design addresses some of the difficulties involved in experimental manipulation of race while also overcoming the confounding and social-desirability bias found in observational survey data. Although we find some effects of candidates' social class, there are no discernible effects of candidates' race on respondents' evaluations. These results are robust whether we analyze the data according to treatment assignment (intent-to-treat) or adjust for respondents' racial perceptions using instrumental variables and other methods of principal stratification. Our

[4] Mitchell 2009a.

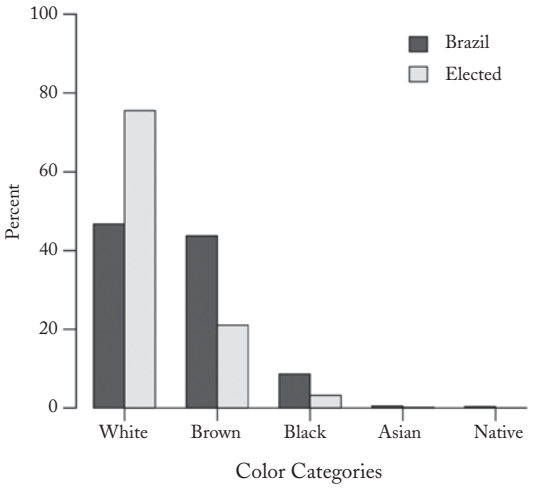


FIGURE 1
RACIAL DISTRIBUTION OF POLITICIANS COMPARED TO BRAZIL'S ADULT POPULATION[a]

[a] White politicians are substantially overrepresented, relative to their population share. The figure compares the self-identified race of state and federal deputies, senators, and governors elected in 2014 to the self-identified race of the Brazilian population. The federal electoral court provides data on race of politicians, while the population data come from the *Pesquisa Nacional por Amostra de Domicilios* (PNAD). The horizontal axis shows race categories used by the Brazilian census.

findings suggest that race-based preferences among voters are unlikely to explain the failures of descriptive representation we document.

We then assess several other plausible hypotheses. We find no evidence that barriers to candidate entry explain the underrepresentation of nonwhite politicians. The racial distribution of nonelected candidates is quite similar to the population's; major racial disparities arise not among candidates who run, but among those who win. Moreover, using a regression-discontinuity design we show that relaxing barriers to candidate entry through the adoption of a runoff system for mayors does not increase the share of nonwhite candidates. To evaluate discrimination by party leaders, we explore whether the mnemonic quality of the numeric codes assigned to politicians, which voters use to choose specific candidates under Brazil's open-list proportional system and which leaders may influence, differs across white and nonwhite candidates. Although higher-quality numbers are indeed positively associated with candidates' probability of victory, white candidates do not have systematically better numbers than nonwhites. The quality

of codes has a similar association with electoral success for whites and nonwhites alike.

We next turn to access to resources. Our research is the first to link politicians' race to data on personal assets and campaign contributions on a national scale. We show that white candidates are substantially better funded, with very large advantages in both average assets and contributions. There are several possible interpretations of these findings, and pinning down the causal effects of resources on racial disparities is difficult. We would like to know whether altering resource allocations would diminish racial disparities, but exogenous variation in campaign financing is challenging to identify. Yet the resource differences we observe are substantively very large and therefore highly suggestive. White candidates are over three times as rich in assets as nonwhite candidates and receive three and a half times more in campaign donations. In addition, in a regression of electoral success on race, personal assets, and campaign contributions in a sample of first-time candidates—for whom past electoral success does not plausibly cause donations—race is significantly associated with success, but not after controlling for assets or contributions. However, in a regression with contributions as the dependent variable, race is a significant predictor even after controlling for personal assets. Thus, despite important caveats we discuss in more detail below, resources appear to drive the association between race and electoral success. And elite donors disproportionately contribute to richer candidates and to whites.

This article makes several contributions to the general understanding of the persistence of ethnic inequality in political representation.[5] Rafaela Dancygier, Karl-Oskar Lindgren, Sven Oskarsson, and Kåre Vernby compare immigrant and native candidates in Sweden who have comparable individual resources and who face similar political opportunity structures. They attribute the greater electoral success among natives to discrimination by party elites in the design of party lists.[6] However, it is rare to look at behavioral, institutional, and resource-based explanations for political inequality in a single study, as we do here. In our work, the importance of resource differentials is magnified by the inability of behavioral or institutional arguments to explain the patterns of representation we document. Our findings also highlight factors that may be overlooked in settings where preferences and institutions better predict underrepresentation of marginalized groups. Racial elite power requires

[5] See inter alia Bloemraad and Schönwölder 2013; Norris and Lovenduski 1995; and Bird, Saalfeld, and Wüst 2011.

[6] Dancygier et al. 2015.

neither ethnic majority deference to high-status groups nor racial discrimination by voters from ethnically advantaged groups.

In addition, our work contributes to the specific study of racial representation in Brazil. Scholars such as Edward Telles have importantly emphasized the contrast between horizontal and vertical relations to show how inclusive racial relations and relatively weak social boundaries—expressed in high rates of interracial marriage and residential integration—can coexist with exclusive, hierarchical socioeconomic structures revealed in labor market discrimination and educational disparities.[7] This distinction reconciles the claims of an early generation of scholars that Brazil is a racial democracy with the critical work of later scholars who highlight substantial race-based inequities. Yet, it is not ex ante clear whether the forces of integration or exclusion shape political acts such as voting, running for office, or even giving campaign donations, since these actions could combine elements of horizontal sociability with vertical discrimination. Compared to the extensive literature on racial inequalities in socioeconomic status, prior research on descriptive representation in Brazilian politics is minimal.[8] In this article, we develop a major new data set to measure the racial characteristics of a nationwide sample of Brazilian politicians (Section II), provide some of the first experimental evidence on race-based electoral preferences in Brazil (Section III), and use several new data sources and empirical approaches to assess whether electoral institutions or resource differentials better explain failures of descriptive representation (Section IV).

Our findings underscore how elites' investments in political power can lead to underrepresentation of disadvantaged groups, especially when race and class substantially overlap, and even in a context in which evidence of overt discrimination by party leaders and voters appears limited. By underscoring avenues through which representational gaps may persist under democratic institutions even in settings lacking in strong politicized racial and ethnic cleavages, we contribute to research on elite power in democratic settings.[9]

II. Measuring Descriptive Representation

Brazilian politicians' race appears surprisingly understudied.[10] One reason may be the complexity of the topic. Even the conceptualization

[7] Telles 2004, e.g., 12–13, 223–24; Silva 2015.

[8] See Campos 2015 and Campos and Machado 2015 for other recent work.

[9] E.g., Acemoglu and Robinson 2008.

[10] Exceptions include Johnson 1998 and Johnson 2006; Mitchell 2009a and Mitchell 2009b; Bailey 2009; Castro 1993; and Soares and do Valle Silva 1987.

of race in Brazil is the subject of enduring debate, with some scholars arguing that the application of North American racial categories such as black or white in Brazil is inappropriate.[11] In contrast to the United States, where the legacy of Jim Crow laws produced such dichotomous categorizations, racial categories tend to be multiple and differentiated in Brazil, where race is sometimes conceptualized more in terms of a color continuum than discrete categories. These are certainly crucial considerations, but notions of race in Brazil are not so hopelessly complex as to inhibit systematic study of racial representation. The Brazilian census agency Instituto Brasileiro de Geografia e Estatística (IBGE) collects census data on race using the simple five-part categorization shown in Figure 1, allowing citizens to self-identify as white (*branco*), brown (*pardo*), black (*preto*), Asian (*amarelo*), or native (*indígena*). We find evidence of the relevance of this schema for contemporary Brazilian racial self-understandings. For example, even in response to open-ended questions about their color, participants in our surveys overwhelmingly used one of these five categories.[12]

Another reason descriptive representation in Brazil is understudied is the absence of systematic data; electoral authorities did not begin to record politicians' race until very recently. Our first step in studying descriptive representation in Brazil is therefore to fill this gap. Our goal is to provide comprehensive measurement of politicians' race at all levels of the Brazilian political system while respecting the nuances of conceptualizing and measuring race in this context.

We measure politicians' race using both self-identification and classification by others. We rely primarily on politicians' self-identified race as reported for the first time in 2014 to the federal electoral court, the Tribunal Superior Eleitoral (TSE), by all 21,448 candidates.[13] These data are arguably most appropriate for assessing disparities between the racial distribution of politicians and the population, as shown in Figure 1, since the population distribution is measured using self-reported data in national surveys.[14] We find some tendency for politicians' to "whiten"

[11] For background, see Telles 2004; Bailey and Telles 2006; also Bourdieu and Wacquant 1999 and Loveman 2014.

[12] In a 1976 survey, Brazilian respondents used more than one hundred labels to describe their race/color. However, 95 percent used the same six terms; Telles 2004, 82. Important additions to the IBGE categories are variants of *moreno*—used somewhat interchangeably with brown (*pardo*)—and *negro*, a more politicized term of black self-identification than *preto*.

[13] The TSE collected the data after requests by black movement organizations. On the state's measurement of race, see Nobles 2000.

[14] We measure the population distribution in Figure 1 using a very large self-weighting national probability sample (the *Pesquisa Nacional por Amostra de Domicilios* [PNAD]) conducted by the Brazilian census organization IBGE. The racial distribution in the PNAD is virtually identical to that in the decennial census.

their self-identification relative to their classification by others, as we discuss below. Thus, using self-identification for citizens and other-classification for politicians, or vice versa, could misstate the racial gap between them.[15] However, the TSE data, which were not available to us when we coded candidates' race in 2013, include only candidates who ran for office in the federal and state elections in 2014, and do not include mayors and city councilors or federal and state candidates from previous elections. They also use only the census categories depicted in Figure 1 to measure race, and thus do not permit analysis of the sensitivity of results to different indicators.

We therefore construct complementary measures of race based on classification by others. We draw these from the codings of Brazilian online survey respondents who classified the race of candidates in the 2008 municipal and 2010 federal and state elections using official photographs. In total, our respondents coded the race of 5,472 federal, state, and local politicians (1,985 elected officials and 3,487 non-elected candidates) in our main sample along with mayoral candidates in an additional eighty-eight municipalities included in our regression-discontinuity design (see Table 1).[16] Following best practice from prior research, we use various measures of race to account for the complexities of racial classification in Brazil.[17] These measures include the five census categories used in Figure 1 (we refer to this measure in figures and tables as "IBGE" or "census"), a 0–1 variable for African descent ("Afro-descent"), and a 0–1 variable for black or white ("black or white"). For some purposes, we dichotomize the IBGE measure into an indicator for white/nonwhite that includes black and brown candidates as nonwhite. We also include in our survey a categorical measure with twelve response categories and a zero to ten color scale running from "very light" to "very dark."[18] In total, 1,100 coders assessed the race of about fifteen politicians each. On average, the race of each politician was evaluated by about three coders. We randomly assigned a set of candidate photographs to each respondent, and respondents' attributes are statistically unrelated to the particular photographs they evaluated.

[15] Nonetheless, we also find substantial racial disparities using the other-classified race data for politicians (figures B.3 and B.4 of the supplementary material; Bueno and Dunning 2017b). Other scholars have found "whitening" tendencies in the population of citizens, e.g., Telles 2004, chap. 4.

[16] Previous, less comprehensive attempts at measuring politicians' race in Brazil have also used photographs of candidates; see Paixão and Carvano 2008. Johnson 1998 consulted with federal deputies, political activists, and congressional staff.

[17] E.g., Bailey, Loveman, and Muniz 2013.

[18] We mainly use the first three measures in our analyses, but we present descriptive analyses using the two remaining measures in figures B.1 and B.2 of the supplementary material; Bueno and Dunning 2017b. For the final measure, coders viewed a scale with the cursor initially positioned over 0 and were asked to slide the cursor to their rating.

TABLE 1
NUMBER OF RACIALLY CODED POLITICAL CANDIDATES BY OFFICE AND JURISDICTION[a]

Office	*Election Winners*	*Election Losers*	*Jurisdictions*
Self-Classified			
Senators	27	138	all states
Federal deputies	513	5,351	all states
Governors	27	135	all states
State deputies	1,059	14,198	all states
Total self-classified	1,626	19,822	
Other-Classified			
Senators	54	160	all states
Federal deputies	513	1,096[b]	all states
Governors	27	123	all states
State deputies	157	314	two states
Mayors (main sample)	101	210	102 municipalities[c]
City councilors	1,045	1,281	102 municipalities[c]
Mayors (RD study group)	88 (all)	303 (all)	88 municipalities[d]
Total other-classified	1,985	3,487	

[a] The table shows the number of candidates who self-identified their race to the federal electoral court in the 2014 elections ("self-classified") and the number of candidates for offices in the 2008 and 2010 elections whose race our coders evaluated using official photographs ("other-classified"). We code a census of candidates in the indicated jurisdictions, except where noted. Senators include only those who ran in the relevant election (2014 for the self-identified data, 2010 for the other-classified data). We include only candidates with candidacies certified by the electoral court; state deputies include *deputados distritais*.

[b] A random sample of losers selected according to a constant sampling fraction.

[c] State deputies in Bahia and São Paulo, as well as mayors and councilors in the state capitals and fifty randomly selected municipalities in those states (one mayor is missing, as explained in our replication file).

[d] Municipalities included in our regression-discontinuity (RD) study.

We assess the reliability and validity of the survey codings in several ways. First, we assess whether our coders' perceptions are consistent with the perceptions we would have obtained from the Brazilian population as a whole. As described in the supplementary material, our coders were recruited from lists maintained by a Brazilian public opinion firm, *Instituto Brasileiro de Opinião Pública e Estatística* (IBOPE), and do not constitute a probability sample.[19] But we maintained quotas on several covariates, and our sample of coders closely matches the Brazilian population in these respects.[20] For robustness checks on empirical

[19] Bueno and Dunning 2017b, Section B.1.

[20] Section B.1 and tables B.1 through B.5 of the supplementary material; Bueno and Dunning 2017b.

analyses using other-identified race data, we also weight our sample of coders so that marginal distributions match the Brazilian population on measures of geographic region, age, gender, education, and race.[21] Results are very similar with and without weighting.[22] We also asked our respondents to code eight photographs included in a previous national probability sample survey (the *Pesquisa Social Brasileira* [PESB] implemented in 2002), which allows us to compare directly the perceptions of our coders with those of a representative sample of Brazilians. Using the IBGE categories, the modal classifications match across our coders and the PESB respondents for six of the eight pictures; using a binary (black or white) classification, seven of the eight modes match across the two groups.[23] Second, we assess intercoder reliability. Among the coders who coded the same photographs, the modal category was unique for around 90 percent of politicians when using dichotomous measures and about 80 percent when using the five-point IBGE census scale.[24] For the binary, black/white measure, however, *all* coders agreed on a particular politician's race only 63.5 percent of the time.[25] In many of our analyses we therefore use the modal categorization to characterize the politician's race.[26] Third, we assess the agreement between other-classification and self-classification for the 1,078 candidates in our survey sample who reran for office in 2014 and are thus also included in the official TSE data. Among those classified as white by our survey participants, about 83 percent self-identify as white. But 40 percent of candidates who were classified as nonwhite by our coders, predominantly those coded as brown, self-identified as white, suggesting a tendency toward self-whitening similar to that found in household surveys of citizens.[27]

Overall, the validity of our measurements on politicians' race appears quite good, but some disagreements exist among coders and between other- and self-classifications. These discrepancies may reflect the

[21] We use the survey package in R.

[22] E.g., Figure 1 versus figures B.3–B.4, Figure 4 versus figures D.3 and D.4, Figure 6 versus figures D.8 and D.9, Figure B.7 versus Figure B.8, and Figure D.1 versus Figure D.2 in the supplementary material; Bueno and Dunning 2017b.

[23] Tables B.6 and B.7 in the supplementary material; Bueno and Dunning 2017b.

[24] The percentage of unique modes decreases in the number of racial categories (Table B.9 in the supplementary material; Bueno and Dunning 2017b).

[25] For the IBGE measure, the corresponding figure is 41 percent; politicians are virtually always coded either as white or brown, or as brown or black.

[26] For politicians with nonunique modes, we sometimes alternately use the "whitest" mode or the "blackest" mode (see figures 5 and 6, also Figure B.11 and Table B.8 in the supplementary material; Bueno and Dunning 2017b.)

[27] E.g., Bailey, Loveman, and Muniz 2012; Telles and Lim 1998. See tables B.10 through B.15 in the supplementary material; Bueno and Dunning 2017b.

ambiguities of racial classifications in Brazil. Our data thus underscore the importance of consistent measurement when comparing the racial distribution of politicians and citizens, and they indicate the value of using multiple race measures as robustness checks. We thus rely on official data on self-identified race to document the political overrepresentation of whites and for many of our hypothesis tests. Wherever possible, we replicate all tests using our survey data in the supplementary material, or vice versa. Our substantive conclusions are similar using self-classified or other-classified data.

Together, our data provide the most systematic and comprehensive measurement of race of politicians in Brazil, and they suggest striking racial discrepancies between politicians and citizens. Over 75 percent of governors, senators, and federal deputies are white, as are a majority of mayors and state deputies and a plurality of city councilors.[28] The evidence we present demonstrates similar contrasts between politicians' and constituents' race at nearly every level of office across Brazil, though disparities are greatest for politically powerful federal offices.[29] The overrepresentation of whites is especially striking in the north and northeast regions.[30] To explain the descriptive overrepresentation of whites, it is important to examine settings like Salvador, the capital of the northeastern state of Bahia, where nonwhites constitute a substantial majority of the population but a substantial minority of politicians.

III. Assessing Race-Based Preferences

What explains the failure of democracy to engender greater descriptive representation along racial lines? Most scholars acknowledge enduring socioeconomic inequalities between lighter- and darker-skinned Brazilians, but the extent to which these inequalities are a function of persistent class hierarchies or racial discrimination still permeates the debate on racial inequities. We thus turn to the relationship of race and class to electoral behavior and voter preferences—a critical first step in explaining patterns of representation along racial lines.[31]

Analyzing the relationship between race and class does not imply

[28] This is per Figure 1, using self-identified data. We also find substantial overrepresentation of whites using both unweighted and unweighted other-identified race data as well; see figures B.3 and B.4 in the supplementary material; Bueno and Dunning 2017b.

[29] See Figure 3 and also figures B.5, B.6, and B.10 in the supplementary material; Bueno and Dunning 2017b.

[30] Figures B.5 through B.9 in the supplementary material; Bueno and Dunning 2017b.

[31] Carnes and Lupu 2015 assess the connection between descriptive and substantive representation of social classes in Latin American legislatures.

dualistic thinking in which either class or race influences voters' preferences. Research stresses instead that socioeconomic inequalities are based at least partially in racial prejudice and highlights the complex interplay of race and class in social, economic, and political realms.[32] Moreover, many scholars (including Gilberto Freyre, in some contrast to his racial democracy thesis) document a deeply hierarchical society where a culture of deference to authority and high status might well produce persistent preferences for whiter candidates.[33] Along with any discrimination among white voters toward black or brown candidates, such deference to white candidates might tend to produce a political class that is whiter than the population. Such preferences could of course be rooted in race, in class, or in both, in that voters could prefer candidates of higher economic and social status, who tend to be white, and they might also infer economic status or other attributes from a candidate's race (a kind of statistical discrimination). It is also important to distinguish between class as an attribute of candidates that voters may value and the possible other advantages that a candidate's objective class position, as measured by personal wealth, for example, could engender for electoral success. In this section, we assess the more specific hypothesis about whether voters prefer richer candidates. Below, we consider whether resources may favor candidates in electoral competition for reasons other than voter preferences.

Inferring the causal relationships between race, class, and electoral behavior from observational data is hindered by several methodological challenges. Many attributes of candidates vary along with their race or class and these confounding characteristics could be responsible for their different support across various racial or class groups. To evaluate the power of the racial democracy hypothesis, it is critical to assess credibly whether candidates' race, rather than other attributes that may be linked to race, influences voters' preferences. Another difficulty in analyzing perceptions and opinions on race is the presence of a strong social desirability bias against public expressions of prejudice. When asked in an opinion survey in 1995 whether they personally favored "racial mixture and miscegenation," 89 percent of respondents categorically declared "yes," as the racial democracy thesis anticipates. But when asked if they thought white people harbor prejudice against black people, 89 percent also answered a resounding "yes."[34] Our experimental

[32] E.g., Bueno and Fialho 2009; Hunter and Power 2007; Bailey 2009.
[33] See Guimarães 2012; Telles 2004; Hanchard 1999; Twine 1998; also, Freyre 1980 [1933].
[34] Telles 2004.

research overcomes some of these limitations by using a design that allows us to estimate more reliably the causal effect of racial and class relationships between voters and politicians.

Experimental Design

We implemented our experiment in metropolitan Salvador and in Rio de Janeiro (the capital of the southeastern state of the same name). These two cities were chosen in part because of the representational gap in local politics, which is particularly stark in Salvador, and because the class and racial composition of these cities is also quite varied. The racial distribution of Salvador is similar to the country's Northeast region, and in Rio it is similar to the important Southeast region. The labor intensity of our experiment did not allow us to replicate it across a greater number of contexts, but any explanation of failures of descriptive representation in Brazil should be able to elucidate the particularly wide gap in the Northeast (including Salvador). Results from Rio de Janeiro may allow plausible conjecture about likely results in similar southeastern capitals, including São Paulo.[35]

We recruited experimental subjects through a probability sample and door-to-door survey. To achieve adequate statistical efficiency, our experimental design required sufficient numbers of subgroups with low frequencies in the population.[36] We therefore recruited subjects via a stratified probability sample of white, brown, and black residents of these two cities, with an oversample of rich blacks and poor whites.[37] After agreeing to participate in our survey, participants were administered a screening questionnaire in which they identified their monthly household income using the A, B, C, D, and E designations of the Brazilian census (where A is richest and E is poorest); their race, using the census categories; their education level; and other variables. They then listened to a videotaped political speech by a male candidate (an actor) for the local city council. Due to variation in regional accents, actors from Salvador were used for the Salvador study group, and actors from Rio were used for the Rio study group.

Each respondent was assigned at random to view a speech by either a white or black candidate, and the actor either wore a business suit (indicating a higher socioeconomic status) or more working-class clothes,

[35] Campos 2015 and Campos and Machado 2015 find similar racial representation in Rio and São Paulo.

[36] Table C.1 in the supplementary material; Bueno and Dunning 2017b.

[37] We excluded Asians and natives, who constitute a small fraction of the cities' populations. Within neighborhoods, households were selected using interval sampling; within households, individuals were selected using the method of birthdays.

such as a t-shirt. We designed speeches to mimic those that politicians routinely deliver during the televised "Free Electoral Hour" (*Horário Gratuito Eleitoral*), which entitles candidates for city council and other offices to media exposure free of charge. In some treatment conditions, candidates of different races and dress gave identical speeches, while in others the content of the speech was altered to draw attention to the candidate's race and class background—that is, rich white, poor white, rich black, and poor black.[38] We used "black" and "white" candidates only, rather than also including "brown" candidates, due to resource constraints and on the theory that using candidates toward the extremes of the color continuum would help us detect any race-based preferences. After watching video, respondents were asked a series of questions about their propensity to vote for the candidate; the extent to which they anticipated receiving jobs or benefits if the candidate were elected; and their impressions of the candidate's likeability, competence, and intelligence.

One way to look at this experimental design is that white and black subjects were exposed at random to (1) a candidate from the same race and social class; (2) a candidate from a different race but the same social class; (3) a candidate from a different social class but the same race; and (4) a candidate from a different race and social class. Within each of these conditions, respondents were further randomly assigned either to (i) a common, baseline speech or (ii) to a speech with race and class prompts for the assigned politician's background, giving a total of eight treatment conditions (see Table 2). This exhausts the universe of planned experimental treatments. We recognize that our approach may seem to presume an in-group preference that is inappropriate in the Brazilian context, particularly if respondents of all races prefer white, high-status candidates. But previous research suggests the possibility of in-group preferences among nonwhites, perhaps due to the recent importance of black social movements in raising consciousness around blackness (reflected inter alia in the growing use of the politicized identity term *negro*).[39] Given earlier evidence of discrimination among white elites in labor and marriage markets, it is also possible that whites, especially rich whites, prefer white candidates to a greater extent than do nonwhites.[40] The extent of in-group preference is therefore an

[38] The text of the speeches is in Section C.1 of the supplementary material; Bueno and Dunning 2017b.

[39] Aguilar et al. 2015. On social movements, see Hanchard 1994; Paschel and Sawyer 2008; on the use of *negro*, Telles 2004.

[40] Telles 2004.

TABLE 2
EXPERIMENTAL DESIGN[a]

	Respondent and Politician Are Same Class	*Respondent and Politician Are Different Classes*
Respondent and Politician Are Same Race	Baseline speech: N=136 Race/class prompts: N=149 *Pooling speech: N=285* *No browns: N=205*	Baseline speech: N=155 Race/class prompts: N=143 *Pooling speech: N=298* *No browns: N=205*
Respondent and Politician Are Different Races	Baseline speech: N=166 Race/class prompts: N=149 *Pooling speech: N=315* *No browns: N=214*	Baseline speech: N=154 Race/class prompts: N=148 *Pooling speech: N=302* *No browns: N=207*

[a]The cells show the number (N) of respondents assigned to each of the eight treatment conditions in our experiment (entries in plain type). The first entry in each cell reports the number exposed to the common baseline speech; the second reports the number exposed to speeches that prime the politician's race and class background. Entries in italics indicate the number exposed to a given race/class relationship when respondents who viewed the baseline and race/class prompt speeches are combined ("pooling speech"), and the number when excluding brown respondents ("no browns"). Black and brown respondents who view a speech by a nonwhite politician are assigned to the "same race" condition. Subjects from the A and B income categories are in the "same class" condition if assigned to view a speech by a "rich" politician (as indicated by his dress and, sometimes, primes in the speech); those in the C, D, and E categories are so assigned if the politician is "poor." For the study group, N=1,200 with all respondents; N=831 without browns.

empirical question. In any case, our design allows us to assess whether respondents of all races do, in fact, prefer white, high-status candidates. It also usefully permits ready comparison of our findings from Brazil with experimental results from several other contexts.[41]

MANIPULATION CHECKS

Manipulating perceptions of race on the basis of an actor's appearance is a delicate enterprise. Unlike perceptions of social class, it is impossible to use the same actor to expose subjects to either a white candidate or a black candidate, which raises nontrivial issues of interpretation.[42] Imagine an experiment in which subjects are exposed at random to a single white or black politician and asked to evaluate that politician's likeability, competence, and so on. Evidence that subjects on average

[41] Our design in Table 2 relates closely to Dunning 2010, Dunning and Harrison 2010, and Dunning and Nilekani 2013, who find experimental evidence of in-group ethnic preferences in diverse contexts. Note that we did not register a preanalysis plan, which were not prevalent in political science when we conducted the experiment in February–March 2009, yet our analysis substantially mimics the protocols for those other experiments.

[42] Holland 1986.

judge the white candidate to be more likable or competent is not ipso facto evidence of a preference for whites.[43] After all, a particular white candidate might indeed have appeared more likeable or competent for reasons independent of race. According to research in psychology, physical characteristics such as facial symmetry shape inferences about personality attributes in similar ways across cultural or ethnic boundaries.[44] Relatedly, Chappell Lawson and colleagues find that after only brief exposure to candidates' photographs, Indian and US-based coders predicted the winners of elections in Mexico and Brazil with surprising accuracy, suggesting cross-cultural consistency of appearance judgments.[45] It therefore appears useful to limit chance associations between the actor's race and valued characteristics such as facial symmetry. Our partial solution was to recruit a substantial number of white and black actors (twelve of each race in both Salvador and Rio) in the hope that such actor characteristics would average out over the two racial groups.[46] As it turned out, in our experiment the race of the actor did not statistically influence a host of perceptions of candidate attributes, including competence, motivations, or trustworthiness.[47] To be sure, readers may be skeptical that such race-independent factors really exist, and we are sympathetic to this concern. The inability to directly manipulate race is a limitation shared by many experiments on racial perceptions and should be borne in mind when interpreting this study.

These caveats notwithstanding, our experiment stimulated perceptions of class and race quite successfully. We asked respondents to rank the candidate's socioeconomic status using the IBGE's five-point descending scale, and we posed both open- and closed-ended questions about candidate race (in that order). Our manipulation checks followed the outcome questions, which is a limitation of the design: we cannot evaluate empirically whether outcome questions affected perceptions of candidate race or class.[48] Our outcome questions did not mention race or class, however. On average, politicians wearing a suit were rated at 2.5, while politicians without a suit were rated at 3.0, a highly statistically significant difference (with a standard error of 0.06)

[43] This problem occurs in, e.g., Almeida 2007.

[44] Albright et al. 1997 provide useful citations.

[45] Lawson et al. 2010.

[46] There is a tradeoff here, since increasing the number of actors for a fixed respondent pool decreases the precision of within-actor estimates, e.g., when we experimentally manipulate the dress of a single actor.

[47] Figure C.2 in the supplementary material; Bueno and Dunning 2017b.

[48] A costlier alternative that would have required a larger sample size would have been to ask the manipulation checks to a subsample of respondents who did not receive any outcome questions.

that is about one-half of one standard deviation in size.[49] As for race, for the closed-ended question (using the IBGE categories), 74 percent of respondents exposed to black candidates said the candidate was black, while 23 percent said the candidate was brown; among those exposed to white candidates, 54 percent said white, while 42 percent said brown. Results were similar for the open-ended question. Thus, very few subjects assigned to black candidates said the candidate was white, and very few subjects assigned to white candidates said the candidate was black. A more substantial portion of subjects in both conditions said the candidate was brown, and this occurred for a much larger proportion of subjects assigned to white candidates. We discuss the implications of these perceptions for our analysis, below. Interestingly, we find little evidence that perceived social class whitens candidates, as some scholars suggest.[50] In response to the closed-ended race question among subjects exposed to black candidates, 73 percent said the candidate was black when he was wearing a suit and 75 percent said so when he was not; the difference is not statistically significant. Black politicians were ranked at 2.9 (se = 0.04) on the five-point descending socioeconomic scale, while white politicians were ranked at 2.6 (se = 0.04), for a statistically significant difference of about one-third of one standard deviation. But wearing a suit increases perceived class by about the same amount for black and white candidates.

The Weak Effects of Candidate Race

How do the race and social class of candidates shape voters' evaluations? Figure 2 presents mean evaluations for each of the eight treatment conditions. We also present average evaluations of black and white politicians by all subjects (including whites, blacks, and browns) and by black and white subjects separately and show results pooling across variation in the speeches, which lend maximal statistical power. The cells report average answers to the question, "[On a scale from 1 to 7], would this speech make you vote for this candidate?" By focusing attention on the quality of the speech rather than on the candidate, the question plausibly gives respondents greater implicit scope to express disapproval of different races, thereby limiting social desirability biases. Our results

[49] The estimates move only slightly when we consider only politicians whose speech contained class-based messages.

[50] See e.g., the somewhat dated de Azevedo 1996; but also Almeida 2007. Silva and Reis 2012, Marteleto 2012, and Telles 2014 (Kindle location 3674-3676) find some evidence of "darkening" by social class in the contemporary period, which could also be related to affirmative action (e.g., Htun 2004 and Lima 2010).

are consistent using a large battery of posttreatment questions about candidate attributes such as competence, likeability, and intelligence, limiting any concern that results are an artifact of our primary outcome question's focus on the speech.

We find little evidence for a race effect in these data. As Figure 2 shows, among respondents who share the politician's class, candidates from the same race are evaluated at 3.35 on the seven-point scale, while candidates from a different race are evaluated at 3.12; the difference is not statistically significant. Among respondents who watched a speech by a politician from a different class, candidates who share the subject's race are rated at 2.92 on average; those from a different race are evaluated more favorably, at 3.21, but again the difference is not significant. We find no average disapproval of black candidates or deference toward whites. Across all respondents, as well as among self-identified whites and nonwhites, differences in evaluations of black and white candidates are substantively small and statistically insignificant.[51] As for our questions about candidate attributes, for fourteen out of nineteen characteristics (using t-tests) and seventeen out of nineteen (using K-S tests), there was no significant difference in the evaluations of white or black politicians.[52] Respondents judged blacks to be slightly more empathetic and intelligent and to have good motives for running, but such differences are not significant when we use standard corrections for multiple statistical comparisons. Also, respondents did not evaluate attributes of candidates of their *own* race more or less favorably, on average. Among blacks, candidates who share the subjects' race and class are weakly preferred to those from the same class but a different race, but the effect is not quite significant at standard levels (p-value 0.09), and the difference does not exist among black subjects exposed to a candidate from a different class.[53] Our data do suggest some evidence of class effects: among whites and blacks, politicians from the same social class and race are preferred by a large and statistically significant margin to politicians from a different class but the same race.[54] In the main, the effects of race do not interact with class, and variation in the speech does not affect either mean candidate evaluations or the impact of candidate race on

[51] "Nonwhites" are those who identified as brown or black using the five-point census scale. See tables C.2 through C.9 in the supplementary materials for more details; Bueno and Dunning 2017b.

[52] See Figure C.2 in the supplementary material; Bueno and Dunning 2017b.

[53] Mitchell 2009b suggests that nonwhite voters who embrace "blackness" do prefer to vote for black candidates. However, here we find little difference in effects for black subjects who identify as Afro-Brazilians.

[54] Table C.4 in the supplementary material shows that class effects are most pronounced for poor subjects; Bueno and Dunning 2017b.

evaluations.[55] Overall, we find little evidence for race-based preferences, and especially no preferences for white candidates that could explain the overrepresentation of white politicians.

We conduct our analysis in Figure 2 according to the treatment condition to which respondents were assigned (intent-to-treat analysis), rather than by the race that respondents actually perceived. However, the tendency of some subjects to perceive black and, especially, white politicians as brown could conceivably weaken the effect of treatment assignment. Statistically, this can be seen as a problem of noncompliance.[56] When we conduct the analysis according to perceptions of candidate race, we find similarly weak effects.[57] But this analysis runs the risk that perceptions of race are endogenous, for example, racist white respondents who tend to perceive candidates as nonwhite might also be generally less prone to enthusiastic candidate evaluations.

A better way to confront the problem of unintended racial perceptions is by stratifying the sample according to potential compliance status—a strategy some scholars refer to as "principal stratification."[58] We use three approaches in this regard. First, we define an indicator variable for those who perceive candidate race as we intended, then estimate the complier average causal effect (CACE) using treatment assignment as an instrumental variable for treatment receipt.[59] We cannot reject the null hypothesis that the CACE is zero, whether we treat all instances of brown politicians as misperception/noncompliance or instead dichotomize subjects and politicians as white or nonwhite (so that a black subject identifying a black politician as brown would be coded as correctly receiving the "same race" treatment).[60] Second, we assess the extent to which pretreatment variables are predictive of compliance and then conduct intent-to-treat analyses within strata defined by each of these covariates. Our Chi-square tests suggest that education level, subject's race, and civil status, but not gender, income category, or religion, have significant but substantively very small relationships to misclassification.[61] Stratifying intent-to-treat analyses by the levels of each of the available pretreatment covariates, we find that only one

[55] Figure C.9 in the supplementary material; Bueno and Dunning 2017b.

[56] Gerber and Green 2012. Our setting is nonstandard, because we did not experimentally assign the condition to which most noncompliers crossed over, i.e., the "brown politician" condition.

[57] See Table C.6 in the supplementary material; Bueno and Dunning 2017b.

[58] Frangakis and Rubin 2002; Imai, Jo, and Stuart 2011.

[59] Page et al. 2015 call this standard estimator of the CACE a "moment-based IV" approach to principal stratification.

[60] Table C.16 in the supplementary material; Bueno and Dunning 2017b.

[61] Tables C.10 though 15 in the supplementary material; Bueno and Dunning 2017b.

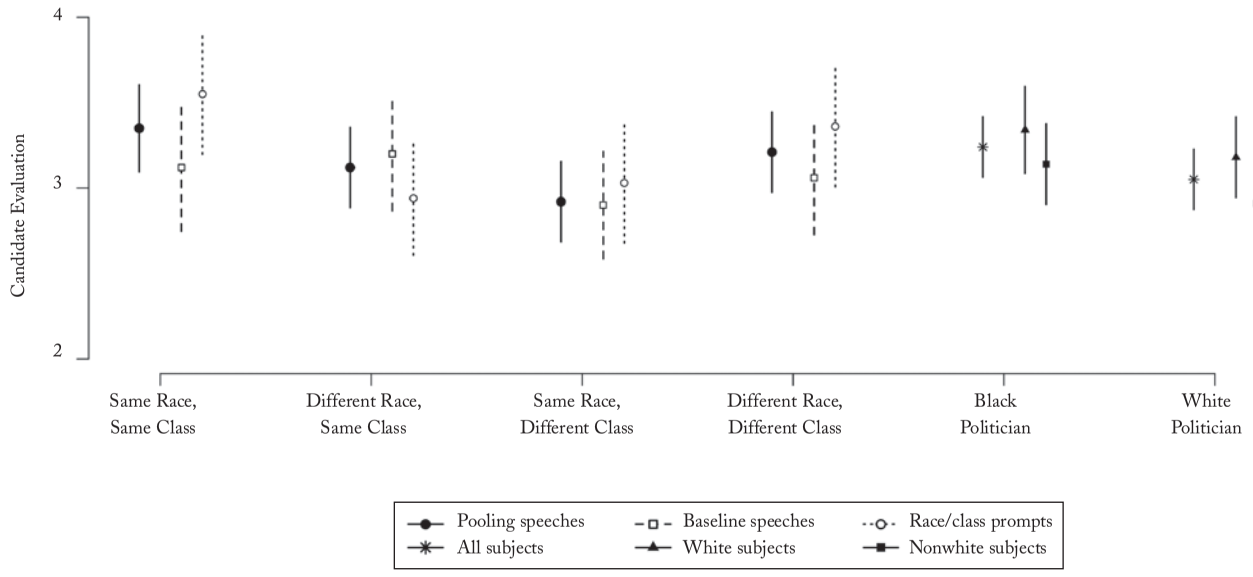


FIGURE 2
EFFECTS OF CANDIDATES' RACE AND CLASS[a]

[a] The figure shows the null estimated effects of candidates' race in our experiment. It depicts average responses to the question, "[On a scale of 1 to 7], would this speech make you vote for this candidate?" We present responses to the baseline speech and to speeches that added primes on the race and class background of the candidates, as well as average responses pooling over variations in the speeches. The horizontal axis shows the treatment variables: the race and class relationship between the respondent and the candidate (first four entries). We also show mean responses to white and black politicians (final two entries of horizontal axis) for all subjects and separately for self-identified whites and nonwhites. Vertical lines indicate 95 percent confidence intervals based on normal approximations. The scale of the vertical axis is truncated (from 2 to 4 instead of 1 to 7) for visual clarity. See Table 2 for further notes. Differences in responses by race of candidate are not statistically significant.

out of twenty-eight tests suggests a nominally significant treatment effect. Similar null results hold within strata for black, brown, and white subjects separately.[62] Third, we complement the previous exploratory approach by modeling the individual propensity to comply and then stratifying on this propensity score. We again find null effects for those with low or high probabilities of correctly perceiving the intended treatment.[63] There is also no evidence of an effect among respondents who say they would be uncomfortable marrying someone of another race (such respondents are only 8.5 percent of our sample) and those who believe local councilors favor councilors' own racial or ethnic group.[64] In sum, no matter how we seek to characterize potential compliers or otherwise stratify the sample to focus on subgroups where we might expect race effects, we fail to reject the null hypothesis of no effect.

The findings of our experiment therefore heighten the puzzle of the overrepresentation of white politicians. We do not claim that race is never relevant for the choices of Brazilian voters, and although our experiment was conducted with probability samples of residents of two important Brazilian cities, our results cannot speak confidently to findings we would have obtained in other locales. In an experimental study related to ours, Rosario Aguilar and associates find weak race effects when Brazilian respondents face a short ballot, but more significant same-race preferences when they are presented with a large ballot of many candidates. Moreover, self-identified black subjects in their experiment consistently demonstrated a preference for black candidates.[65] But this finding of an in-group preference among blacks further begs the question of why Brazilian politicians are disproportionately white. If race-based preferences were strongly prevalent in the Brazilian population, we believe our design would detect them: in other countries thought to be characterized by weak racial or ethnic cleavages, one of us has found significant in-group preferences using a very similar experimental approach.[66] We therefore conclude that race-based voter preferences are unlikely to explain the overrepresentation of white politicians in Brazil.

[62] Figures C.3 through C.6 in the supplementary material; Bueno and Dunning 2017b.
[63] Table C.17 and figures C.7 and C.8 in the supplementary material; Bueno and Dunning 2017b.
[64] Tables C.7 and C.8 in the supplementary material; Bueno and Dunning 2017b.
[65] Aguilar et al. 2015.
[66] See Dunning and Harrison 2010.

IV. Assessing Alternative Hypotheses

What then explains the overrepresentation of whites, if not voter preferences? In this section, we turn to three alternate hypotheses: race-associated barriers to candidate entry; discrimination by party elites; and differential access to resources among white and nonwhite candidates. These factors are not mutually exclusive, and pinning down their causal effects is challenging. But we find strong evidence that the third factor is more likely than the others to explain the overrepresentation of whites.

Candidate Entry

First, does the racial gap reflect constraints on in the candidate pool, whereby nonwhite candidates do not run for office at the same rates as white candidates? Or does it reflect who wins office, rather than candidate entry? Figure 3 compares the racial distribution of elected and nonelected candidates, disaggregated by office, to the Brazilian population.[67] For federal and state deputies, governors, and senators, we use the TSE self-identified race data; for mayors and city councilors in Bahia, we use our coding of candidates in the 2008 elections because municipal elections did not take place in 2014, and thus are not included in the TSE data we use.[68]

As Figure 3 shows, the proportion of whites among nonelected candidates is substantially closer to the population distribution than among elected politicians. For example, although elected federal deputies are about thirty percentage points more likely to be white than the population, the disparity falls to about ten percentage points among nonelected candidates for federal deputy. The figure shows a similar decline for candidates for state deputy, and a smaller but still substantial closing of the gap among candidates for governor or senator. In Bahia, similar patterns hold for city councilors and, to a lesser extent, for mayors. This conclusion holds whether or not we weight the sample of coders that produced other-identified race data.[69] The reduction in the descriptive gap appears larger for offices elected through proportional representation, such as federal and state deputies, senators, and city councilors, than for executive offices elected through winner-take-all systems, such as governor and mayor. Overall, the extent of overrepresentation among

[67] For elected politicians, this distribution was already depicted in Figure 1.

[68] See figure B.7 through B.9 in the supplementary material; Bueno and Dunning 2017b.

[69] Figure 3 uses unweighted data, but weighted data are even a bit more consistent with our claim; see Figure B.7 in the supplementary material; Bueno and Dunning 2017b.

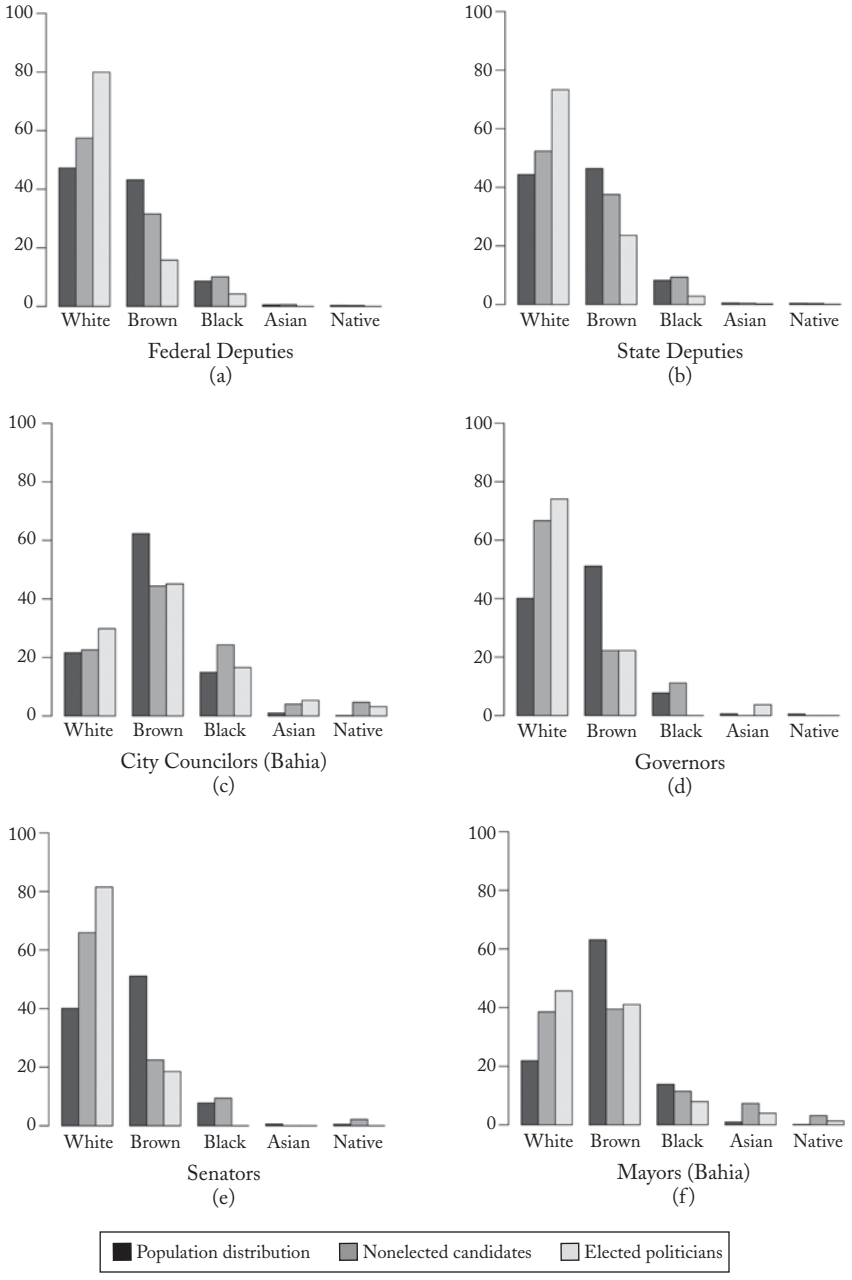


FIGURE 3
COLOR DISTRIBUTION OF ELECTED AND NONELECTED CANDIDATES COMPARED TO THE POPULATION[a]

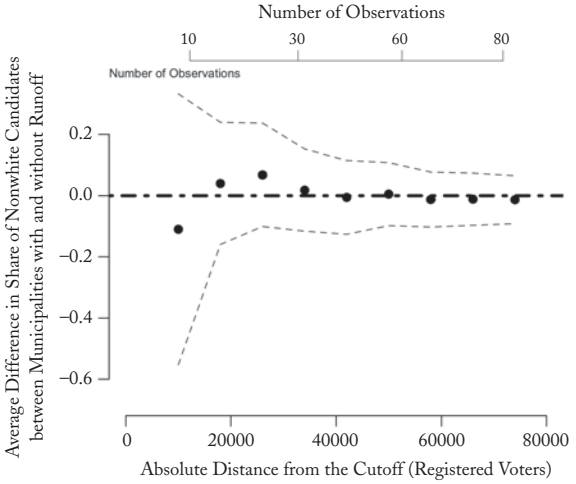
[a]The racial distribution of nonelected candidates is more similar to the population's than is the distribution of elected candidates. We use self-identified race data from the electoral court for federal and state deputies, governors, and senators in 2014. For mayors and city councilors in the state of Bahia, we use other-identified race codings from the 2008 elections. The horizontal axis uses race categories from the census.

nonelected candidates is fairly minor and much less marked than for elected officials.[70]

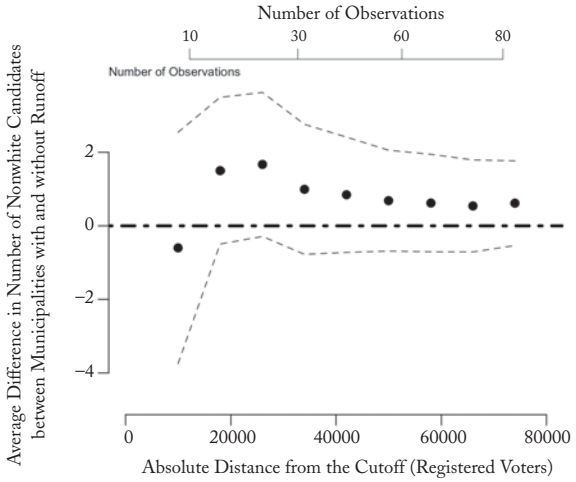
We also use a regression-discontinuity design to assess whether barriers to candidate entry can explain the political overrepresentation of whites. Comparing the racial distribution of election winners and losers as we do in Figure 3 is instructive, but it does not fully establish whether barriers to entry affect the racial composition of politicians. To explore this causal question, we take advantage of exogenous variation in institutions that influence the ease of candidate entry, in particular, the number of candidates. The Brazilian constitution states that municipalities with fewer than two hundred thousand registered voters must use a single-ballot plurality rule (a first-past-the-post system in which the candidate with the most votes is elected) to elect mayors, and that municipalities with more than two hundred thousand voters must use a second-round runoff (dual-ballot plurality rule). Thomas Fujiwara shows that the change from single ballot to a runoff system increases voting for third-place finishers and thus eases candidate entry.[71] We follow this author in constructing a regression-discontinuity design in which we compare municipalities just above the registered-voter threshold of two hundred thousand to those just below it. On average, these two groups should differ only in the system used to elect mayors, plausibly allowing us to identify the effects of the electoral rules. Our interest is whether the presence of a second-round runoff system, which eases candidate entry, also increases the number and share of nonwhite candidates in the first electoral round.

To estimate the causal effect of the electoral rule, we conduct difference-of-means tests for the share and number of nonwhite mayoral candidates, presented in Figure 4. These tests validly estimate the effect under the assumption that assignment to electoral rule is as good as random near the population threshold.[72] Figure D.5 in the supplementary material shows balance tests consistent with this assumption. Tables D.5 and D.6 in the supplementary material show similar results using alternative strategies such as local linear regressions, which estimate the effect under the weaker assumption of continuity of potential outcomes.[73] Figure 4 shows estimates and confidence intervals for different windows around the threshold of two hundred thousand registered voters, from a population range of ten thousand above and

[70] Campos 2015 and Campos and Machado 2015 find overrepresentation of whites among elected local councilors, but not among candidates in the 2012 local elections in Rio de Janeiro and São Paulo.
[71] Fujiwara 2011; Chamon, de Mello, and Firpo 2009.
[72] Dunning 2012, chap. 5.
[73] Bueno and Dunning 2017b.



Share of Nonwhite Mayoral Candidates
(a)



Number of Nonwhite Mayoral Candidates
(b)

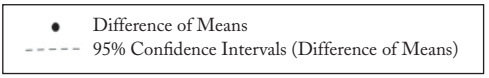


FIGURE 4
THE EFFECT OF BARRIERS TO ENTRY ON THE RACIAL COMPOSITION OF CANDIDATES[a]

[a]The figure shows the null estimated effects of runoff elections, which lower barriers to candidate entry, on the share and number of nonwhite mayoral candidates. We measure outcomes in first-round voting of municipal mayoral elections. Using a regression-discontinuity design, we estimate local average treatment effects for windows of different sizes around the cutoff of two hundred thousand registered voters, at which the electoral system switches from no runoff to a runoff system (horizontal axis). Each blackened circle represents the estimate from a difference-of-means test within the respective window (see Figure D.5 in the supplementary material for balance tests on pretreatment covariates, and tables D.5 and D.6 for similar results using local linear regressions; Bueno and Dunning 2017b). Standard errors assume unequal variances in the treatment and control groups.

below the threshold to a range of eighty thousand above and below.[74] None of the effect estimates for any window is statistically different from zero.[75] Thus, there is no evidence that permissive electoral rules, which increase the number of candidates, also ease entry for nonwhite candidates. Together with our evidence that the racial overrepresentation of whites is most extreme for elected politicians, these findings suggest that the key explanation rests not on who runs for office—but on who wins.

Discrimination by Party Elites

If voters don't discriminate strongly against candidates on racial grounds, it is possible that parties do. In this section we seek to assess whether favoritism by party elites can explain the overrepresentation of whites in elected offices. Electoral rules in Brazil are often taken to imply weak control by party elites mainly because the open-list system of proportional representation induces competition between members of the same party and does not afford the same degree of nomination power to elites as would a ranked, closed-list proportional representation system (or a system of single-member districts in which leaders give party tickets to candidates, as in India). Nonetheless, party leaders can influence the attractiveness of candidates to voters through various mechanisms.

One mechanism of elite control, which to our knowledge has not attracted the attention of other scholars, is the assignment of favorable numeric codes to candidates.[76] These codes are two- to five-digit unique identifiers that voters use to vote for particular candidates. Remembering and recording candidate codes is a nontrivial task, even with the recent introduction of electronic voting systems that have simplified the voting process in Brazil.[77] Several prominent candidates have suspiciously easy-to-remember codes, such as Leonel Brizola Neto, the grandson of a former governor of Rio de Janeiro, who has the identifier 12345; Clarissa Garotinho, the daughter of another former governor of Rio de Janeiro, whose code is 15123; and a prominent member of the city council of Rio de Janeiro, Vera Lins, who has the code 11111. The professional entertainer Tiririca, currently among Brazil's most

[74] See Bueno and Tuñón 2015 on this graphical approach.

[75] For the white/nonwhite measure, we dichotomize the census (IBGE) categories, using unweighted other-identified survey data. The null results hold with weighted data as well; see figures D.3 and D.4 and tables D.7 and D.8 in the supplementary material; Bueno and Dunning 2017b.

[76] Campos 2015 alternatively argues that larger, more important parties have fewer nonwhite candidates than smaller parties.

[77] Hidalgo 2012.

prominent federal deputies, also ran with an easy-to-memorize number, 2222. Candidates typically retain their numbers once assigned, and our fieldwork suggests that party elites sometimes influence the initial assignment of numbers. Thus, the assignment of easily remembered numbers to particular candidates appears somewhat akin to a system of party tickets or to rankings on closed lists. Note that party leaders have incentives to facilitate voting for potentially popular candidates in open-list proportional representation elections, since votes for individual candidates add to the party's overall seat share. Party elites then might discriminate in favor of white candidates in assigning codes, perhaps because they anticipate (erroneously) that voters will do so as well.

To measure the quality of candidates' electoral codes, we create a variable "good number" that is the sum of two components: the number of repeated digits and the maximum number of adjacent consecutive integers in a given candidate's code. Thus, an identifier such as 11111 scores five on the first component, while 12345 scores five on the second.[78] This somewhat blunt measure will not capture all the ways that a number can be good, but it allows us to compare systematically the quality of codes among white and nonwhite candidates.[79] To link numeric codes to race, we use data from our codings rather than the TSE data, as the latter do not include local candidates such as city councilors.[80] We analyze the association of the quality of numbers and the race of candidates using the multiple measures outlined above. Where coders disagree on the race of a candidate, we take the modal rating; where multiple modes exist, we use both the whitest mode and the blackest mode. We also compare the quality of electoral codes for elected and nonelected candidates and construct 95 percent confidence intervals for the differences of means.[81]

Figure 5 provides some striking evidence that good numbers are associated with electoral victory. Election winners have on average about one-half of an additional integer on the good number measure as compared to election losers—a highly significant difference. These differences hold separately for both components of the measure.[82] This

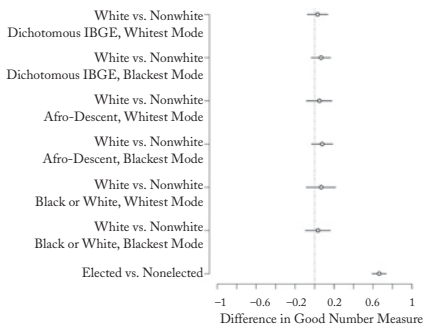
[78] We sum the components because a number like 11345 may be quite mnemonic and thus desirable; however, it would not rate especially well by either of the components alone.

[79] One of our interviewees stuck with his apparently "bad" number because it happened to be the telephone area code for his neighborhood, where he had garnered his largest share of votes.

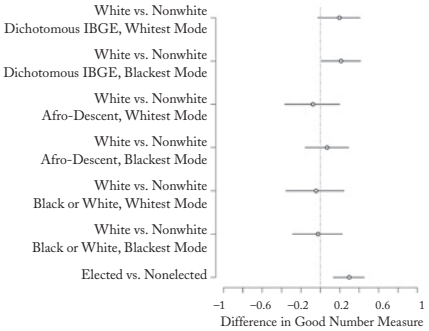
[80] The analysis uses unweighted data; similar results with weighted survey codings are in the supplementary material; Bueno and Dunning 2017b.

[81] Candidates are not stochastically assigned to be white or black. Our interpretation of the confidence intervals is that they would bracket the true difference between all white and nonwhite (or elected and nonelected) politicians in 95 percent of samples.

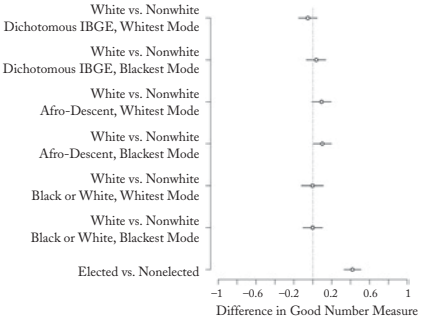
[82] See Figure D.1 in the supplementary material; Bueno and Dunning 2017b.



Good Number: Federal Deputy
(a)



Good Number: State Deputy
(b)



Good Number: City Councilor
(c)

Figure 5
Differences in the Quality of Candidates' Numeric Codes for White/Nonwhite and Elected/Nonelected Politicians[a]

[a]The figure shows the weak relationship between race and the "good number" measure among candidates for federal deputy (a), state deputy (b), and city councilor (c). Good number is the sum of two components: the number of adjacent digits and the number of adjacent repeated integers in a candidate's numeric code. We present differences of means using three race measures—dichotomous IBGE, Afro-descent, and black or white. To accommodate race classifications with nonunique modes, we present results with both the whitest and blackest mode. The final row shows the strong relationship between good numbers and electoral victory. The dashed vertical line is drawn at the point of zero difference. Horizontal lines are bootstrapped 95 percent confidence intervals.

evidence does not necessarily indicate a causal effect of good numbers, as there may be confounding, for example, party elites may assign better numbers to promising candidates. Yet if the elites do so, it would underscore the perceived relevance of the numbers to party elites. That would only make the lack of difference in the quality of numbers between white and nonwhite candidates more striking. As the figure shows, the difference in codes by race is not statistically significant for any of our dichotomous measures. Point estimates are very close to zero for federal and state deputies, as well as for city councilors.[83] We also find no evidence of an interactive relationship between good numbers, race, and electoral success.[84] Thus, differences in the quality of numbers cannot readily explain why white politicians are disproportionately prevalent. This form of potential discrimination by party leaders seems unlikely to explain gaps in descriptive representation.

Candidate Resources

What other factors might influence whether candidates win office and also be linked to race? Scholars have used resource differentials to explain patterns of political participation generally and candidate success specifically across a wide variety of empirical settings.[85] Candidate resources may be especially important in the candidate-centered Brazilian electoral system. Recent research by Lucas Novaes and others emphasizes the importance of "broker buying," that is, the use of resources to facilitate movement of local blocks of voters in support of state or federal deputies.[86] Resources may also allow candidates greater access to the media.[87] But evaluating the connection of resources to racial representational disparities has been hindered by the lack of systematic national data.[88]

To assess race-associated resource differentials, we take advantage of Brazilian laws that require candidates to report their personal assets and campaign contributions, and link these records to our new data on politicians' race. The asset and contributions data are not perfect; for instance, out of 5,081 candidates in our main other-identified

[83] We see some small differences only for the "adjacent number" measure for city councilors (Figure D.1 in the supplementary material; Bueno and Dunning 2017b), though here blacks and candidates of African descent have slightly *better* numbers, as suggested by nominal (unadjusted) *p*-values.

[84] Tables D.1 through D.4 in the supplementary material; Bueno and Dunning 2017b. Results are also similar when weighting our sample of coders (figures D.1 and D.2 in the supplementary material).

[85] E.g., Verba, Schlozman, and Brady 1995; Dancygier, Lindgren, and Oskarsson 2015.

[86] Novaes 2015.

[87] Boas and Hidalgo 2011.

[88] But see Campos 2015 and Campos and Machado 2015 on local elections in Rio and São Paulo.

race sample, we have 1,357 cases of missing asset data.[89] (We have fewer missing data using self-identified race data, and we find similar substantive results with those data; see the supplementary materials).[90] Nonetheless, these data give us a fairly good ability to assess whether resource differentials are linked to race. Figure 6 depicts the difference of mean assets (a) and campaign contributions (b) between white and nonwhite candidates, and also between elected and nonelected candidates. The horizontal lines are 95 percent confidence intervals that reflect our random sampling of candidates; due to the common scale of both plots and the precision of the estimates, the intervals are not all readily visible in (b).

As Figure 6 shows, white candidates are richer than nonwhite candidates by substantial margins. Across our measures of race, the difference of mean assets between whites and nonwhites averages around 730,000 Brazilian *reais* (between US $200,000 and $300,000, depending on exchange rates, and measured in nominal 2008 and 2010 values). These are averages across federal, state, and local offices; differences by race in mean assets are even larger for higher-level politicians alone.[91] The bottom row of Figure 6(a) suggests why personal resource differentials may matter: election winners are richer than losers by about 740,000 reais.[92] White candidates also receive much more in campaign contributions, as Figure 6(b) shows. Though the absolute value of the difference is smaller for campaign contributions than for assets, the relative difference for white and nonwhite candidates is substantial.[93] Overall, white candidates are about three times as rich as nonwhites in assets and receive nearly four times as much in donations.

This evidence admits various interpretations, and pinning down the causal effect of resources is difficult because we lack good exogenous sources of variation: if personal assets or campaign contributions were randomly assigned, would the racial representational gap disappear? It is difficult to know for sure. Resource differences may be linked to confounders such as human capital or social and political connections.

[89] Unfortunately, the missingness is somewhat related both to candidates' race and to electoral success; Bueno and Dunning 2017b, Section D.2

[90] Bueno and Dunning 2017b.

[91] In tables D.9 and D.10 in the supplementary material, we present analogous results using TSE self-identified race data from 2014; Bueno and Dunning 2017b.

[92] In Figure D.6 in the supplementary material, we use a test based on rank sums to minimize the role of outlying values and show significant differences between white and black candidates, as well as election winners and losers. Bueno and Dunning 2017b.

[93] These data on campaign contributions are also far from perfect: candidates systematically misreport contributions and spending. There is also missingness: out of our sample of 2,444 candidates in the 2010 elections, 285 did not report receiving any contributions, and out of our sample of 2,637 politicians in the 2008 elections, 330 did not report any campaign contributions.

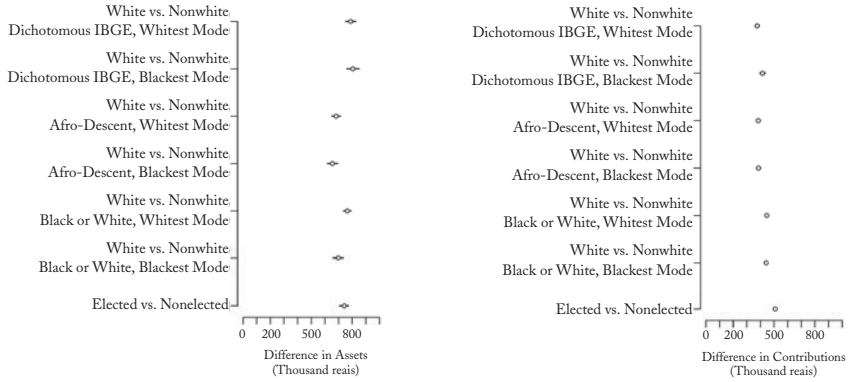


FIGURE 6
RESOURCE DIFFERENCES, WHITE VERSUS NONWHITE POLITICIANS[a]

[a]The figure shows the strong association between race and resources, as well as resources and electoral success. It plots the mean differences in declared personal assets and campaign contributions between white and nonwhite candidates using different color measurements, and between elected and nonelected candidates. Horizontal lines are 95 percent confidence intervals for the average difference in the population of politicians from which sample was drawn (based on bootstrapped standard errors). For notes on the race measures, see Figure 5. Data are for the 2008 and 2010 elections.

For example, the resilience of the racial gap might operate through exclusive social connections established by kinship ties. We evaluate this possibility in the supplementary material using data on political clans operationalized as the number of politicians in each candidate's extended family. We find that white and nonwhite federal deputies are about equally likely to be members of such clans, though white senators are somewhat more likely than nonwhite senators to have other politicians in their families.[94] Another possibility is racial differences in education, which may be broadly thought of as another resource that candidates bring to the political arena. Whites are around fifteen percentage points more likely than nonwhites to have some college or to have completed college, but this difference is smaller than the twenty-nine percentage-point difference in education between elected and nonelected candidates.[95] In contrast, the resource differences between whites and nonwhites are about the same as between elected and nonelected candidates.[96]

[94]Tables D.12 and D.13 in the supplementary material; Bueno and Dunning 2017b.
[95]Table D.11 in the supplementary material; Bueno and Dunning 2017b.
[96]Figure 6a, and figures D.6 through D.9 in the supplementary material; Bueno and Dunning 2017b.

Our evidence is most consistent with an interpretation focused on elite closure, especially the way in which investments by elites help to sustain a white political class. For example, we conduct an analysis in which we regress electoral success on candidate race and sequentially add controls, such as personal assets and campaign contributions. We restrict this analysis to first-time candidates in 2014 to minimize the possibility that past electoral success influences right-hand side variables, such as donations.[97] As anticipated by our analysis above, in a bivariate regression the coefficient on race (a dummy variable where white = 1 and nonwhite = 0) is highly significant and positive. Yet, once we add a control for log campaign contributions, this significant association disappears. The coefficient on race also remains insignificant as we add controls for log personal assets, indicators for education level, and a dummy for gender.[98] Thus, once we equalize or hold constant campaign contributions—at least per the model—race is no longer statistically related to electoral success.[99] Campaign contributions themselves are a significant predictor of electoral success in this multiple regression, however, and so are personal assets when we add them in a subsequent regression. In regressions that take log campaign contributions as the dependent variable and alternately use the full sample of 2014 candidates or the sample of first-time candidates, we find in a bivariate regression that race is a significant predictor of contributions.[100] Although the magnitude of the coefficient on race is reduced by the addition of the measure of personal assets, whiteness is still a positive and significant predictor of contributions. In other words, white candidates attract greater donations even holding constant personal wealth, though wealth attenuates the relationship between race and contributions to some extent.

These findings therefore suggest that elites underwrite their own campaigns or those of other elites, which helps to perpetuate a white political class. To be sure, the multivariate results should be interpreted with caution. In a regression of electoral success on race, for example, campaign contributions and even assets could be posttreatment variables; coefficient estimators on all variables could therefore be biased.[101]

[97] Using candidates' personal electoral identification (título eleitoral) we verified that candidates had not run in any election after 2000 and before 2014.

[98] We do not include a measure for being member of a political clan in these regressions because of substantial missing data for first-time runners in 2014. We use a single variable for campaign contributions (not broken down by types of contributions) because of missing data for this year.

[99] See Table D.14 for linear probability models and Table D.15 for logistic regression models in the supplementary material; Bueno and Dunning 2017b; results are similar.

[100] Tables D.16 and D.17 in the supplementary material; Bueno and Dunning 2017b.

[101] See e.g., Gerber and Green 2012, 322–25.

We also cannot directly observe donors' race in this data set, though it may be a fair assumption that they tend to be both rich and white, given substantial research on socioeconomic inequalities along racial lines.[102] It is also possible that although party elites do not discriminate through the channel we identify above (that is, the quality of numeric codes), they do facilitate donations to white candidates. In addition, our data do not allow us readily to parse racial motivations from economic ones on the part of donors, and both could certainly be at work. Indeed, our findings could support an ethnic/racial closure argument based on racial cohesion among white elites as opposed to such cohesion among voters, though there is some tension between the idea of elite racial cohesion and several arguments in the literature.[103] Alternately or in addition, it could support an economic elite closure thesis. Donors may also give to white candidates disproportionately in part because such candidates are experienced or have other human or social capital advantages as discussed above. Thus, some portion of the explanation may continue to reside in the fact that race and class overlap in Brazil, even as race may also have an independent role in shaping elite contributions. These results call for further research on elites, including experimental designs that can detect racial bias among campaign donors, such as the voter studies that we present in this article.

Our research documents therefore racial representational disparities in Brazil systematically for the first time. We show that several possible explanations, including race-based preferences in the electorate and barriers to candidate entry among nonwhites, do not hold up to empirical scrutiny. Resource investments by racial and economic elites instead appear to play a critical role in sustaining gaps in descriptive representation, even in the absence of strong racial cleavages and racial preferences in the Brazilian electorate. Thus, while further research is needed, we take several important steps by systematically documenting the political overrepresentation of whites; discounting several possible explanations for this failure of descriptive representation; and linking politicians' race, assets, and contributions. Our results strongly suggest that resource disparities help account for the gap.

V. Conclusion

In many democracies, disadvantaged groups—even those that comprise majorities of the voting population—fail to attain political represen-

[102] E.g., Telles 2004.
[103] E.g., Lieberman 2003 or Marx 1998.

tation commensurate with their numbers. But such failures of descriptive representation often seem overdetermined. For example, voters from both high- and low-status groups may prefer to vote for high-status candidates, institutional barriers and elite discrimination may discourage members of marginalized groups from running for office, and socioeconomic barriers may inhibit the electoral success of underrepresented groups. When all these barriers to representation operate at once, it can be challenging to identify their separate effects.

As we show in this article, many of these obstacles do not seem to operate powerfully in the Brazilian context. Voters do not appear to defer to high-status candidates, at least along racial lines. Nor do institutional barriers greatly discourage nonwhites from running for office. Party elites may not overtly discriminate against nonwhite candidates, at least as measured by some metrics. Settings with weak race-based social cleavages, such as Brazil, might thus appear to offer comparatively easy cases for reducing racial representational gaps while also allowing better identification of remaining obstacles to descriptive representation. Yet as we document comprehensively for the first time, the descriptive underrepresentation of nonwhites in the political sphere there remains severe.

To explain these patterns, we document very large resource disparities between white and nonwhite politicians, linking official data on assets and campaign contributions to politicians' race in a large national sample of candidates. We stress that we are not able to manipulate resource distributions and observe counterfactual patterns of racial representation, and we cannot readily identify all the specific mechanisms that may link resources and electoral success in the Brazilian context. Our findings are strongly consistent, however, with the idea of elite closure, that is, the tendency of elites to contribute resources to white candidates who are already members of the racial and economic elite. Our results thus underscore that even where racial or ethnic social cleavages are weak, socioeconomic inequities can influence the persistence of racial disparities in politics. As scholars of race in Brazil have emphasized, interethnic sociability, mass racial intermarriage, and residential integration can coexist with deep socioeconomic inequality along racial lines, as well as with discrimination in elite labor and marriage markets.[104] We similarly find that when it comes to voting behavior, candidate entry, and even the behavior of party elites, horizontal sociability may dominate. Yet winning office may depend on access to resources.

[104] Telles 2004; see Hasenbalg 2005.

Hierarchical and exclusionary vertical relations, for example, in the donation of campaign funds, as well as longstanding race-associated asset inequalities, appear crucial in that domain.

It is critical to be clear that our findings do not suggest the political irrelevance of race itself. That whites possess greater socioeconomic resources than nonwhites is partly due to the legacy of race-based slavery. Persistent preferences for whites in areas other than voter preferences, for example, labor markets or marriage choices among elites, may also perpetuate racialized class stratification.[105] Thus, active discrimination as well as historical legacies may produce racial inequality in socioeconomic status, which, given the link between candidate resources and winning office, can then generate gaps in descriptive representation. Our finding of resource disparities between white and nonwhite candidates, although novel, makes sense given that scholars have shown whites to have more socioeconomic power than nonwhites more generally. It is nonetheless important to know, as our experiment shows, that voters do not appear to prefer white candidates per se. Our evidence suggests that the advantage of such candidates reflects not perceptions of their attributes, but rather the political power that stems from greater resources.

More generally, our findings shed light on how racial or ethnic inequalities in political representation may persist even in the absence of strongly politicized racial or ethnic cleavages. Daron Acemoglu and James Robinson study the capacity of minority elites to retain political power under democracy.[106] In their argument, democracy limits the de jure power of elites by extending the vote to the masses, but elites may counteract their numerical disadvantage under democracy through resource investments. Our data do not yet clearly allow us to assess the extent of resource investment or all the reasons behind the race-associated resource differentials we uncover, but they do suggest the potential importance of such channels for creating enduring disparities in descriptive representation. Our results therefore underscore the difficulties of erasing historical inequalities under democratic regimes. The absence of strong racial boundaries or ethnic cleavages might seem favorable for political equality, especially when historically disadvantaged groups possess the numerical majority and vote in democratic elections, yet such cleavages are not necessary to generate representational failures. The racial gaps in representation we study therefore underscore the deep challenges in many other contexts where institutional

[105] Telles 2004.
[106] Acemoglu and Robinson 2008.

barriers to political participation by disadvantaged groups are even more entrenched.

Supplementary Material

Supplementary material for this article is available at https://doi.org/10.1017/S0043887116000290.

References

Acemoglu, Daron, and James A. Robinson. 2008. "Persistence of Power, Elites, and Institutions." *American Economic Review* 98, no. 1: 267–93.

Aguilar, Rosario, Saul Cunow, Scott Desposato, and Leonardo Barone. 2015. "Ballot Structure, Candidate Race, and Vote Choice in Brazil." *Latin American Research Review* 50, no. 3: 175–202. doi: 10.1353/lar.2015.0044.

Albright, Linda, Thomas E. Malloy, Qi Dong, David A. Kenny, Xiaoyi Fang, Lynn Winquist, and Da Yu. 1997. "Cross-Cultural Consensus in Personality Judgments." *Journal of Personality and Social Psychology* 72, no. 3: 558–69.

Almeida, Alberto Carlos. 2007. *A Cabeça do Brasileiro* [How Brazilians Think]. Rio de Janeiro, Brazil: Editora Record.

Bailey, Stanley R. 2009. "Public Opinion on Nonwhite Underrepresentation and Racial Identity Politics in Brazil." *Latin American Politics and Society* 51, no. 4: 69–99.

Bailey, Stanley R., Mara Loveman, and Jeronimo O. Muniz. 2013. "Measures of 'Race' and the Analysis of Racial Inequality in Brazil." *Social Science Research* 42, no. 1: 106–19. doi: 10.1016/j.ssresearch.2012.06.006.

Bailey, Stanley R., and Edward E. Telles. 2006. "Multiracial versus Collective Black Categories: Census Classification Debates in Brazil." *Ethnicities* 6, no. 1: 74–101. doi: 10.1177/1468796806061080.

Bird, Karen, Thomas Saalfeld, and Andreas M. Wüst, eds. 2011. *The Political Representation of Immigrants and Minorities: Voters, Parties and Parliaments in Liberal Democracies*. New York, N.Y.: Routledge.

Bloemraad, Irene, and Karen Schönwölder. 2013. "Immigrant and Ethnic Minority Representation in Europe: Conceptual Challenges and Theoretical Approaches." *West European Politics* 36, no. 3: 564–79. doi: 10.1080/01402382.2013.773724.

Boas, Taylor C., and F. Daniel Hidalgo. 2011. "Controlling the Airwaves: Incumbency Advantage and Community Radio in Brazil." *American Journal of Political Science* 55, no. 4: 868–84. doi: 10.1111/j.1540-5907.2011.00532.x.

Bourdieu, Pierre, and Loïc Wacquant. 1999. "On the Cunning of Imperialist Reason." *Theory, Culture & Society* 16, no. 1: 41–58. doi: 10.1177/026327699016001003.

Bueno, Natália S., and Thad Dunning. 2017a. "Replication data for: Race, Resources, and Representation: Evidence from Brazilian Politicians." Harvard Dataverse, V1: doi: 10.7910/DVN/RAHUFD.

———. 2017b. Supplementary material for "Race, Resources, and Representation: Evidence from Brazilian Politicians." At https://doi.org/10.1017/S0043887116000290.

Bueno, Natália S., and Fabrício Mendes Fialho. 2009. "Race, Resources, and Political Participation in a Brazilian City." *Latin American Research Review* 44, no. 2: 59–83.

Bueno, Natália S., and Guadalupe Tuñón. 2015. "Graphical Presentation of Regression Discontinuity Results." *Political Methodologist* 22, no. 2: 4–8.

Campos, Luiz Augusto. 2015. "Socialismo Moreno, Conservadorismo Pálido? Cor e Recrutamento Partidário em São Paulo e Rio de Janeiro nas Eleições de 2012" [Brown Socialism, Pale Conservatism? Color and Party Recruitment in São Paulo and Rio de Janeiro in the 2012 Elections]. *Dados* 58, no. 3: 689–719. doi: 10.1590/00115258201556.

Campos, Luiz Augusto, and Carlos Machado. 2015. "A cor dos eleitos: determinantes da sub-representação política dos não-brancos no Brasil." [The color of the elected: determinants of the political under-representation of non-whites in Brazil.] *Revista Brasileira de Ciência Política* 16: 121–51. doi: 10.1590/0103-335220151606.

Carnes, Nicholas, and Noam Lupu. 2015. "Rethinking the Comparative Perspective on Class and Representation: Evidence from Latin America." *American Journal of Political Science* 59, no. 1: 1–18. doi: 10.1111/ajps.12112.

Castro, Mônica Mata Machado 1993. "Raça e Comportamento Político" [Race and Political Behavior]. *Dados* 36, no. 3: 469–91.

Chamon, Marcos, João M. P. de Mello, and Sergio Firpo. 2009. "Electoral rules, political competition and fiscal spending: regression discontinuity evidence from Brazilian municipalities." Discussion Paper 208. Textos para Discussão da Escola de Economia de São Paulo da Fundação Getulio Vargas. At http://bibliotecadigital.fgv.br/dspace/bitstream/10438/6680/1/TD+208+-+Marcos+Chamon%3B+Joao+Mello%3B+Sergio+Firpo.pdf, accessed December 15, 2016.

Dancygier, Rafaela M., Karl-Oskar Lindgren, Sven Oskarsson,, and Kåre Vernby. 2015. "Why Are Immigrants Underrepresented in Politics? Evidence from Sweden." *American Political Science Review* 109, no. 4: 703–24. doi: 10.1017/S0003055415000404.

de Azevedo, Thales. 1996. *As Elites de Cor numa Cidade Brasileira: Um Estudo de Ascensão Social, Classes Sociais e Grupos de Prestígio*, 2nd ed. [The Color Elites in a Brazilian City: A Study of Social Mobility, Social Classes, and Prestige Groups.] Salvador, Brazil: EDUFBA/EGBA.

Dunning, Thad. 2010. "The Politics of Language, Race, and Class: Experimental Evidence from South Africa." Working Paper. At http://www.thaddunning.com/research/all-research.

———. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach*. New York, N.Y.: Cambridge University Press.

Dunning, Thad, and Lauren Harrison. 2010. "Cross-Cutting Cleavages and Ethnic Voting: An Experimental Study of Cousinage in Mali." *American Political Science Review* 104, no. 1: 21–39. doi: 10.1017/S0003055409990311.

Dunning, Thad, and Janhavi Nilekani. 2013. "Ethnic Quotas and Political Mobilization: Caste, Parties, and Distribution in Indian Village Councils." *American Political Science Review* 107, no. 1: 35–56. doi: 10.1017/S0003055412000573.

Frangakis, Constantine E., and Donald B. Rubin. 2002. "Principal Stratification in Causal Inference." *Biometrics* 58, no. 1: 21–29.

Freyre, Gilberto. 1980 [1933]. *Casa Grande e Senzala: Formação da Família*

Brasileira sob o Regime da Economia Patriarcal, 20th ed. [The Masters and the Slaves: A Study in the Development of Brazilian Civilization.] Rio de Janeiro, Brazil: Livraria José Olympio Editora S.A.

Fujiwara, Thomas. 2011. "A Regression Discontinuity Test of Strategic Voting and Duverger's Law." *Quarterly Journal of Political Science* 6, 3–4: 197–233. doi: 10.1561/100.00010037.

Gerber, Alan S., and Donald P. Green. 2012. *Field Experiments: Design, Analysis, and Interpretation*. New York, N.Y.: W. W. Norton & Co.

Guimarães, Antonio Sergio Alfredo. 2012. *Classes, Raças e Democracia*, 2nd ed. [Classes, Races, and Democracy.] São Paulo, Brazil: Editora 34.

Hanchard, Michael George. 1994. *Orpheus and Power: The Movimento Negro of Rio de Janeiro and São Paulo, Brazil, 1945–1988*. Princeton, N.J.: Princeton University Press.

———, ed. 1999. *Racial Politics in Contemporary Brazil*. Durham, N.C.: Duke University Press.

Hasenbalg, Carlos. 2005. *Discriminação e desigualdades raciais no Brasil*. [Discrimination and racial inequalities in Brazil.] Belo Horizonte, Brazil: Universidad Federal de Minas Gerais.

Hidalgo, F. Daniel. 2012. "Digital Democratization? The Political Consequences of Electronic Voting in Brazil and India." Paper presented at the Yale Comparative Politics Workshop, New Haven, March 2012.

Holland, Paul W. 1986. "Statistics and Causal Inference." *Journal of the American Statistical Association* 81, no. 396: 945–60. doi: 10.2307/2289064.

Htun, Maya. 2004. "From 'Racial Democracy' to Affirmative Action: Changing State Policy on Race in Brazil." *Latin American Research Review* 39, no. 1: 60–89.

Hunter, Wendy, and Timothy J. Power. 2007. "Rewarding Lula: Executive Power, Social Policy, and the Brazilian Elections of 2006." *Latin American Politics and Society* 49, no. 1: 1–30. doi: 10.1111/j.1548-2456.2007.tb00372.x.

Imai, Kosuke, Booil Jo, and Elizabeth A. Stuart. 2011. "Commentary: Using Potential Outcomes to Understand Causal Mediation Analysis." *Multivariate Behavioral Research*, 46: 861–73. doi: 10.1080/00273171.2011.606743.

Johnson III, Ollie A. 1998. "Racial Representation and Brazilian Politics: Black Members of the National Congress, 1983–1999." *Journal of Interamerican Studies and World Affairs* 40, no. 4: 97–118. doi: 10.1111/j.1548-2456.1998.tb00075.x.

———. 2006. "Locating Blacks in Brazilian Politics: Afro-Brazilian Activism, New Political Parties, and Pro-Black Public Policies." *International Journal of Africana Studies* 12, no. 2: 170–93.

Lawson, Chappell, Gabriel S. Lenz, Andy Baker, and Michael Myers. 2010. "Looking Like a Winner: Candidate Appearance and Electoral Success in New Democracies." *World Politics* 62, no. 4 (October): 561–93. doi: 10.1017/S0043887110000195.

Lieberman, Evan S. 2003. *Race and Regionalism in the Politics of Taxation in Brazil and South Africa*. New York, N.Y.: Cambridge University Press.

Lima, Márcia. 2010. "Desigualdades Raciais e Políticas Públicas: ações afirmativas no governo Lula." [Racial Inequalities and Public Policy: Affirmative Action during Lula's Administration.] *Novos estudos CEBRAP* 87: 77-95. doi: 10.1590/S0101-33002010000200005.

Loveman, Mara. 2014. *National Colors: Racial Classification and the State in Latin America*. New York, N.Y.: Oxford University Press.
Marteleto, Letícia J. 2012. "Educational Inequality by Race in Brazil, 1982–2007: Structural Changes and Shifts in Racial Classification." *Demography* 49, no. 1: 337–58. doi: 10.1007/s13524-011-0084-6.
Marx, Anthony W. 1998. *Making Race and Nation: A Comparison of South Africa, the United States, and Brazil*. New York, N.Y.: Cambridge University Press.
Mitchell, Gladys L. 2009a. "Campaign Strategies of Afro-Brazilian Politicians: A Preliminary Analysis." *Latin American Politics and Society* 51, no. 3: 111–42.
———. 2009b. "Politicizing Blackness: Afro-Brazilian Color Identification and Candidate Preference." In Bernd Reiter and Gladys L. Mitchell, eds. *Brazil's New Racial Politics*. Boulder, Colo.: Lynne Rienner: 35–50.
Nobles, Melissa. 2000. *Shades of Citizenship: Race and the Census in Modern Politics*. Palo Alto, Calif.: Stanford University Press.
Norris, Pippa, and Joni Lovenduski. 1995. *Political Recruitment: Gender, Race and Class in the British Parliament*. Cambridge, U.K.: Cambridge University Press.
Novaes, Lucas Martin. 2015. "Modular Parties: Party Systems with Detachable Clienteles." Ph.D. diss., Department of Political Science, University of California, Berkeley.
Page, Lindsay C., Avi Feller, Todd Grindal, Luke Miratrix, and Marie-Andree Sommers. 2015. "Principal Stratification: A Tool for Understanding Variation in Program Effects Across Endogenous Subgroups." *American Journal of Evaluation* 36, no. 4: 514–31.
Paixão, Marcelo, and Luiz M. Carvano. 2008. *Relatório Anual das Desigualdades Raciais no Brasil; 2007–2008*. Rio de Janeiro, Brazil: Editora Garamond Ltda.
Paschel, Tianna S., and Mark Q. Sawyer. 2008. "Contesting Politics as Usual: Black Social Movements, Globalization, and Race Policy in Latin America." *Souls* 10, no. 3: 197–214. doi: 10.1080/10999940802347707.
Peña, Yesilernis, Jim Sidanius, and Mark Sawyer. 2004. "'Racial Democracy' in the Americas: A Latin and US Comparison." *Journal of Cross-Cultural Psychology* 35, no. 6: 749–62.
Pitkin, Hannah Fenichel. 1967. *The Concept of Representation*. Berkeley, Calif.: University of California Press.
Silva, Graziella Moraes D., and Elisa P. Reis. 2012. "The Multiple Dimensions of Racial Mixture in Rio de Janeiro, Brazil: From Whitening to Brazilian Negritude." *Ethnic and Racial Studies* 35, no. 3: 382–99. doi: 10.1080/01419870.2011.589524.
Soares, Glaucio Ary Dillon, and Nelson do Valle Silva. 1987. "Urbanization, Race, and Class in Brazilian Politics." *Latin American Research Review* 22, no. 2: 155–76.
Stokes, Susan C., Thad Dunning, Marcelo Nazareno, and Valeria Brusco. 2013. *Brokers, Voters, and Clientelism: The Puzzle of Distributive Politics*. New York, N.Y.: Cambridge University Press.
Telles, Edward E. 2004. *Race in Another America: The Significance of Skin Color in Brazil*. Princeton, N.J.: Princeton University Press.
———. 2014. *Pigmentocracies: Ethnicity, Race, and Color in Latin America*. Kindle Edition. Chapel Hill, N.C.: University of North Carolina Press.

Telles, Edward E., and Nelson Lim. 1998. "Does It Matter Who Answers the Race Question? Racial Classification and Income Inequality in Brazil." *Demography* 35, no. 4: 465–74.
Telles, Edward E., and Christina A. Sue. 2009. "Race Mixture: Boundary Crossing in Comparative Perspective." *Annual Review of Sociology* 35: 129–46.
Twine, France Winddance. 1998. *Racism in a Racial Democracy: The Maintenance of White Supremacy in Brazil*. New Brunswick, N.J.: Rutgers University Press.
Verba, Sidney, Kay Lehman Schlozman, and Henry Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, Mass: Harvard University Press.
Yashar, Deborah. 2005. *Contesting Citizenship in Latin America: The Rise of Indigenous Movements and the Postliberal Challenge*. New York, N.Y.: Cambridge University Press.