

Race and Discrimination: Evidence from Campaign Donors

Research Proposal

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Dear EGAP readers: We present here ideas for a research design that extends our previous research on race, resources, and representation in Brazil. For background, we would ask you to look quickly as well at relevant parts of our previous article (Bueno and Dunning 2017, appended to this research design), such as section III and the portion of section IV on candidate resources. Thanks and we look forward to the discussion!

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1 Motivation

What explains variation in racial and ethnic discrimination across distinct social, political, and economic domains? In some societies, ethnic elites discriminate against disadvantaged groups in labor markets, in politics, and also in social realms like marriage and residential location. In others, patterns of discrimination appear more mixed, with varied degrees of racial exclusion evident across distinct substantive areas.

Consider the case of Brazil. Scholars such as Edward Telles have emphasized the contrast between horizontal and vertical race relations.¹ Thus, 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.² This important distinction helps to reconcile claims that Brazil is a “racial democracy” with substantial evidence of racial discrimination in economic domains such as labor markets. In many realms, however, it is not evident whether or why racial or ethnic discrimination should be prevalent. For example, political activities—such as voting, running for office, or even giving campaign donations—may combine elements of horizontal sociability with vertical discrimination.³

Similar distinctions can be found in several other Latin American countries, where narratives of racial democracy and *mestizaje* celebrate ethnic or racial mixing in social realms; yet deep race-associated inequalities prevail in economics and politics. Even in many sub-Saharan African countries, in which the overall importance of ethnic identity appears pronounced, we observe variation in the role of ethnicity across political, social, and economic realms. For example, Senegal has an “ethnicized” society but lacks an “ethnicized” polity, with substantial voting for candidates taking place across ethnic lines.⁴ In Uganda, Nubian identity is highly salient in the military and bureaucracy, whereas some scholars deem Baganda and Catholic identities more important for electoral politics.⁵ By contrast, in some countries—for example, South Africa during the apartheid era—virulent discrimination has characterized political, social, and economic realms alike.

Thus, we find varied patterns in overall discrimination across countries—a topic of considerable previous research in comparative politics—but also substantial variation across realms within countries. The latter topic is critical to explaining varied patterns of racial or ethnic inequality. While scholars have devoted substantial attention to which particular ethnic identity—from within a repertoire of possible ethnic identities—is activated by the forces of demography, political institutions, and the like (Posner 2003, Chandra and Wilkinson 2008), the different question of the salience of intergroup animosity across political, economic, or social realms has commanded

¹Telles (2004).

²See also Lieberman (2003, 2009) on weak race-based social boundaries in Brazil.

³Bueno and Dunning (2017).

⁴Koter (2013). See also Dunning and Harrison (2010) on the lack of ethnic voting in Mali.

⁵Chandra and Wilkinson (2008).

less attention from scholars.⁶ Thus, what explains these varied patterns across countries? And particularly, for countries with mixed patterns of discrimination, why does inclusion or exclusion dominate in a particular domain?

One plausible explanation for these patterns, both across and within societies, could lie in the varied roles of taste vs. statistical discrimination.⁷ Much of the recent literature on ethnicity in comparative politics focuses, in one or another, on taste-based explanations. Posner, for example, describes how politics makes the Chewa and Tumbuka ethnic allies in Zambia but rivals in Malawi—and the ethnic hostility in the latter country extends to attitudes towards intergroup marriage.⁸ Thus, the construction of political coalitions creates enduring intergroup animus in social as well as political domains. By this argument, the way in which ethnic identities are constructed may explain the strength and salience of ethnic boundaries, and therefore the degree of intergroup hostility. Lieberman shows how the strength of ethnic boundaries explains varied policy responses to the AIDS epidemic.⁹ Such institutional or demographic explanations go some of the distance towards explaining the overall degree of intergroup discrimination across different countries.

However, such taste-based explanations appear unlikely to explain variation in discrimination across substantive realms, within countries. Here, variation in the extent and nature of statistical discrimination might plausibly play a more important explanatory role. Particularly in low-information environments, ethnicity may provide a signal of valued characteristics—especially when ascriptive identities are (or are perceived to be) linked to attributes like wealth, education, or skills. Yet, the importance of such signals, and the informativeness of ethnicity as a signal, may vary across different realms. Alternatively, perceptions of the ethnic preferences of other citizens may also matter, and this may be more or less important in different domains. For example, the perceived racism of (some segments of) the population may be less critical for marriage decisions. But in politics, a candidate’s race or ethnicity may shape perceptions of the likelihood that he or she will win an election—with important strategic consequences for statistical discrimination against candidates from particular groups.

We aim in this project to explore such possible explanations for the varied extent of racial discrimination across substantive realms. We develop our research using experiments as well as observational data from Brazil. As noted previously, Brazil presents mixed patterns of discrimination across social, economic, and political domains, making it a good case for exploring explanations for differences across realms. Moreover, while scholars have noted the contrast between the preva-

⁶One counterexample is Bartos et al. (2014), who compare “attention discrimination” in labor and rental housing markets. Becker’s (1957) *Economics of Discrimination* examines the causes of discrimination in different types of markets (employer, consumer, housing); in general, however, it argues that discrimination is driven by an “animus” or “taste” towards different groups, even though the costs of refusing interaction with other racial groups vary by type of market.

⁷Arrow (1973), Becker (1957).

⁸Posner (2004).

⁹Lieberman (2009).

lence of inclusive racial politics in some areas and exclusions in others, the reasons for this variation across domains are not always clear. For example, the relative weight of the forces of inclusion and exclusion in different aspects of politics are not obvious.

Our proposal also extends our previous research on racial representation in Brazil. In Bueno and Dunning (2017), we documented the substantial overrepresentation of whites among Brazilian politicians, relative to their population share.¹⁰ We presented evidence that this gap in descriptive representation is not likely due to voters' preferences nor even to discrimination by party leaders: in an experiment with Brazilian voters, we found no evidence of racial discrimination against nonwhite candidates. Nor do party leaders appear to favor white candidates, for example, by granting them more favorable numeric identifiers (the quality of which are important under Brazil's open-list PR system and which are associated with electoral victory). Still, as we showed, the gap in racial representation arises not from who runs but from who wins: the racial distribution of all candidates is much closer to the population distribution than is the racial distribution of election winners. We therefore used new data to link, for the first time on a national scale, candidates' race to personal assets and campaign contributions, and we documented substantial inequalities in assets and contributions across white and non-white candidates (as well as between election winners and election losers). For example, white candidates are over three times as rich in assets as nonwhite candidates and receive three and a half times more in campaign donations. These descriptive patterns are highly suggestive. To be sure, pinning down the causal effects of resources on racial disparities is difficult: exogenous variation in campaign financing is challenging to identify. Still, in a regression with electoral success as the dependent variable (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. Donors may also play an important role in creating unequal access to resources along racial lines: in a regression with contributions as the dependent variable, race is a significant predictor even after controlling for personal assets of candidates as well as other potential confounders. Despite important caveats we discuss in the paper, this provides suggestive evidence that unequal assets and especially campaign contributions across racial groups contribute to the substantial underrepresentation of non-whites among elected representatives, even in a context in which overt discrimination by voters appears limited.¹¹

Our previous work leaves several important questions unanswered, however, and these connect to the broader interests discussed in this research proposal. First and most obviously, as we noted in our paper, our findings call for further research with elites, including experimental designs (such as those we used for voters) that can detect racial bias among campaign donors. In this project, we

¹⁰The article is appended to this research design.

¹¹The caveats include possible post-treatment bias, as well the presence of confounders associated with race and with electoral victory; see Bueno and Dunning (2017: 28-32).

seek to undertake that important extension. In addition, our data did not allow us to parse taste-based racial motivations from statistical discrimination on the part of donors. Indeed, our previous findings could support a race-based “elite 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). Alternately, donors may also give to white candidates disproportionately in part because such candidates are experienced or have other human or social capital advantages; and in particular, they may expect white candidates to win. And donors may anticipate greater racial bias on the part of voters than in fact exists.¹² Put differently, rationales founded on either taste-based or statistical discrimination could explain why donors give disproportionately to white candidates.

In our proposed research, we therefore seek to assess the extent of race-based preferences among campaign donors; explore variation in preferences of donors across distinct realms (politics vs. labor markets); and assess the extent to which explanations based on tastes vs. statistical discrimination can explain any race-based preferences in those distinct realms. We do this through a series of potential experiments we describe in section 4. We are very much in the initial brainstorming stages on the experimental designs and eagerly solicit feedback on our preliminary ideas.

We anticipate that our research will make several contributions. First, we raise here the question of whether and why discrimination varies across realms within a single country. Variation in the overall salience of intergroup conflict across countries has inspired scholars to develop classifications for different types of societies based on ethnic hierarchies, and explanations for the consequences of ethnic diversity for welfare and public goods provision, political stability and violent unrest.¹³ At the same time, these cross-country comparisons often clash with our theoretical understandings of ethnicity as a context-dependent, multi-faceted construct. Ethnicity is an complex construct of different traits,¹⁴ and the salience of ethnic identity varies depending upon the type of activity, context, and time in history.¹⁵ Instead of examining variation across countries and geographical units, here we shift our focus to variation across substantive realms within a society. Second, we anticipate that our research will contribute to the specific study of racial representation in Brazil, building on our previous work to explore the extent of race-based preferences among campaign donors, and assessing the reasons why donors may give disproportionately to white candidates. This research can therefore also contribute to our understanding of failures of descriptive representation in the political realm.

¹²Some evidence comes from a public opinion survey in 1995: when asked whether they personally favored “racial mixture and miscegenation,” 89 percent of respondents said “yes;” but when asked if they thought white people harbor prejudice against black people, 89 percent also answered “yes” (Telles 2004).

¹³E.g. Horowitz (1985).

¹⁴Sen and Wasow (2016).

¹⁵Wimmer (2013).

2 Objectives and Theory

The key to our proposed research is the ability to conduct experimental work directly with campaign donors—ordinarily a difficult population to reach. We also use new data, described in the next section, to characterize this population descriptively (in particular, along racial lines), which will also help us to extend our work on race, resources, and political representation in Brazil.

Our goals are threefold. First, we seek to establish the extent to which there is variation in race-based preferences across different realms, among campaign donors. In particular, we assess discrimination in how individuals evaluate job seekers and political candidates to determine under which conditions individuals express race-based preferences. We do so employing similar experimental designs, aimed at detecting differential treatment effects for white and nonwhite candidates for jobs and political office.

Second, we seek to distinguish taste-based explanations from statistical discrimination. The theory of statistical discrimination suggests that it will be most prevalent in low-information environments. However, as the quantity of available supplementary information about a job seeker or political candidate increases, the importance of the candidate’s race should recede. We will therefore experimentally manipulate the amount and kind of available information.

Third, our focus on varying the kind of information provided can accomplish a final objective, which is to understand the sorts of inferences that donors may draw from the race of a job seeker or political candidate, and distinguish between alternate interpretations that donors give to the race signal. We also compare the effects of manipulating the amount and kind of information across the two realms on which we focus—markets for jobs and markets for political office.

We lay out and discuss here several provisional propositions:

Proposition 1: We do not expect taste-based preferences for white candidates caused either by “in-group” preferences from white donors or deference towards white candidates from non-white donors.

Our hypothesis here is supported both by thick descriptions of the limited extent of race-based social boundaries in Brazil and our own previous evidence. Scholars such as Marx or Lieberman analyze the ways in which race fails to create a strong sense of in-groups and out-groups in Brazil, certainly relative to many racial diverse societies such as South Africa or even the United States.¹⁶ To be sure, scholars such as Telles show that weak horizontal discrimination in social realms can coexist with strong vertical discrimination in labor markets; thus, it is not ex-ante obvious whether political acts such as voting and campaign donations reflect inclusive or exclusive forces. However, our previous experimental evidence from Brazilian voters suggests weak effects of candidate race on

¹⁶Marx (1998); Lieberman (2003, 2009).

voter preferences. We interpret that evidence to reflect mainly the lack of taste-based racial animus among voters.¹⁷ We expect this lack of a strong “taste” for racism to extend both to the voting and campaign donation decisions of donors. In part this is because, as we show using new data in the next section, campaign donors as a group are not as elite as one might have thought: the average and median amounts of donations are relatively small, and the donor class is substantially less predominantly white in Brazil than we would have suspected ex-ante. We therefore hypothesize that overall, donors will behave much as voters seem to in terms of taste-based discrimination. However, there could certainly be heterogeneity there, with very elite, large-dollar (large-*real*) donors behaving differently from the rest.

Proposition 2: We do not expect donors to anticipate differential distribution of goods, jobs, ideology, and government contracts from white and nonwhite candidates.

We also reject an interest-based explanation for racial preferences of donors. In particular, we hypothesize that donors will not anticipate greater benefits or kick-backs from either white candidates overall or from their “co-ethnics” (meaning, in this context, those with whom they share white or non-white status). Certainly, as scholars such as Boas, Hidalgo, and Richardson have shown, Brazilian campaign donors can anticipate substantial returns to campaign donations if they give to winning candidates.¹⁸ We think that the establishment of such quid-pro-quo does not depend on race. Indeed, it plausibly depends more on the capacity to establish trust in reciprocity, and here the horizontal sociability across racial groups noted by Telles would seem to play the key role. Note that this is one key way in which discrimination in political giving may differ from discrimination in economic realms such as labor markets (described in Proposition 4); the perceived ability to deliver kickbacks does not depend on race as much as the perceived capacity to draw on economically valuable skills.

Proposition 3: However, we expect donors to support white candidates—with campaign contributions and votes—because donors anticipate white candidates to have a greater chance of winning.

We hypothesize that donors will anticipate white candidates to have a greater chance of winning—despite our own experimental evidence that voters do not have race-based preferences over candidates—for several reasons. First, the fact that election winners—if not political candidates—tend to be disproportionately white likely supports the fallacious inference among donors that voters do prefer white candidates. Relatedly, as we noted above, survey evidence suggests that ordinary citizens expect others to be substantially more racist than they themselves profess to be;

¹⁷In part, this is because we conduct our survey experiments in contexts in which statistical discrimination may be relatively unimportant (e.g., in which voters may not be strongly incentivized to consider the probability that a candidate wins), so our null effects seem to shed light on the role of taste.

¹⁸Boas, Hidalgo, and Richardson (2014).

a similar dynamic may extend to donors.¹⁹ Finally, even if donors do not expect taste-based racial preferences among voters, they may use a form of statistical discrimination to infer electorally valuable attributes from race of candidates. In particular—reflecting the fact that whites do on average have greater personal resources to bring to elections, and also may have more education or family connections (Bueno and Dunning 2017)—donors may expect white candidates to bring such electoral resources to the table and thus to have a greater chance of winning.

This proposition therefore has two further observable implications:

Proposition 3.1: Donors expect voters to prefer nonwhite candidates.

Proposition 3.2: Donors expect white candidates to have greater personal resources and family connections to win elections.

Note that we do not expect Propositions 3, 3.1, and 3.2 to vary by the race of donors.

Finally, we also develop propositions about racial preferences of donors in the employment markets of their respective industries. As noted above, this connects to our interest in explaining the varieties of discrimination across different realms.

Proposition 4: We expect both taste-based and statistical discrimination against nonwhite job seekers.

The reason we believe that taste-based discrimination—i.e., racial animus—is activated in labor markets to a greater extent than in politics (or residential or even marriage markets) is not easy to describe. Yet, we think that the vertical discrimination that scholars such as Telles analyze exists in part because of a deep-rooted conception among some Brazilians of how society “ought” to look along economic lines. Brazil is highly unequal society with a colonial legacy of extensive race-based slavery; and the most economically elite Brazilians have long remained predominantly white as a group (outside of the sports and music sectors). Taste-based discrimination in economics and especially in labor markets are an example of both (1) descriptive and (2) injunctive norms. With respect to (1), elites are, descriptively, white; for (2), there can be a deep-seated deference to elites along such racial lines, as Telles and other scholars have described.²⁰ The extent to which such taste-based animus against non-white job seekers kicks in, at least for some portion of the population, may therefore depend on the sector or industry: the more elite the position sought (especially outside of sports and music), the greater the animus.

However, we also think that statistical discrimination plays a critical role in labor markets—but

¹⁹See note 12.

²⁰Telles (2004). Indeed, whatever its other limitations, this was a compelling premise of Gilberto Freyre’s *Casa Grande e Senzala*.

for different reasons and in a different way than in politics. In politics, the statistical discrimination is less about the perceived differential competence or skills of politicians along racial lines (e.g., it does not reflect differential perceived ability to deliver kickbacks) and more an inference from the race “signal” about who is likely to win an election. In labor markets, by contrast, we believe that race continues to signal skills, including competence and reliability. Like taste-based discrimination, this will depend on the economic sector/industry of the donor, but now because of the differential importance of such skills across sectors.

Proposition 4.1: We expect donors to anticipate differential competence, reliability, and from white and nonwhite job candidates.

We think Propositions 4.1 will hold for white and non-white donors alike, but the extent of taste-based animus and statistical discrimination against non-whites will depend on the industry/sector in which the donors work.

Other theoretical ideas have some related purchase for distinguishing politics from labor markets. Bartos et al. propose an interesting concept: knowledge of a group attribute (race) impacts how much attention we give to a particular individual, resulting in asymmetry of information which can lead to biased decisions in selection processes.²¹ Basically, this builds on a model of statistical discrimination. On the one hand, in the labor market—a “cherry-picking” market—employers read and spend more time learning about majority versus minority candidates. On the other hand, a “lemon-dropping” markets such as housing, decision makers spend more time learning about minority candidates, nevertheless also invite them at smaller rates to interview/rent. It is plausible that voting, contributing, and labor markets are all “cherry-picking” markets. Why, then, would individuals favor whites in the latter market but perhaps to a lesser extent in voting and contributing? One possibility, consistent with our propositions above, is that group-based characteristics are not informative of policy positions and/or of distribution of goods (which matters for politics) but they are informative of (assumed) productivity (which matter for labor markets).

In sum, this type of reasoning leads us to the immediate connection between racial identity and stereotyping (and forces us to take seriously the idea of race as a social construct that is unequal across different domains). It also raises important and obvious questions, such as: why does the presumed difference in economic productivity exist? Is this only true of Brazil and perhaps Latin America? And why don’t voters also care for productivity/competence? These are theoretical questions we hope to probe further in this project.

We describe the operationalization of designs that may help test these propositions in section 4, after describing our data on the population of campaign donors.

²¹Bartos et al. (2016).

3 Data on Campaign Donors

We draw from a list of all registered donors from 2002 until 2016²² and we use a proprietary dataset to obtain contact information for campaign donors.²³ In this section, we describe data sources and present descriptive data on campaign donations and race of donors, which is useful for characterizing the population we target in our experiments. These data may also be useful for observational analyses that can complement our previous work on resources and representation.

Table 1: Number of Donors, and Data Sources for Race of Donors and Candidates (2002-2016 elections)

Type of Election	Election Cycle	Number of donors (all types)	Candidates' Race Data Availability	Donors' Race Data Availability
Federal and State	2002	76,858	Sample†	Sample‡
Local	2004	323,854	Sample†	Sample‡
Federal and State	2006	144,584	Sample†	Sample‡
Local	2008	829,994	Sample†	Sample‡
Federal and State	2010	222,399	Sample†	Sample‡
Local	2012	868,664	Sample†	Sample‡
Federal and State	2014	165,631	Census	Sample‡
Local	2016	955,425	Census	Sample‡

Notes: All types of donors, include: corporations, private, own resources, political parties, party committees, other political candidates and also online contributions and revenue from events. †Data on candidates race is available for the 5,472 candidates in the 2008 and 2010 elections classified by Bueno and Dunning (2017) and for candidates that hold a formal job registered at the Ministry of Labor. ‡Data on donors' race is available for donors that hold a formal job, registered at the Ministry of Labor.

As outlined in Table 1, we have data for campaign contributions since 2002. We have several sources of data on the racial classification of candidates and of donors themselves. For candidates, beginning with the federal and state elections in 2014, the Brazilian electoral court (TSE) required all candidates for office to self-identify their race using the five-point scale of the Brazilian census organization (white, black, brown, Asian, and indigenous). Prior to 2014, we also have two additional means of classifying the race of candidates. For the elections in 2008 and 2010, we draw on the other-identified codings of a sample of winning and losing candidates in federal state and local elections (including a census of winning candidates for federal office) that we used in Bueno and Dunning (2017). For these and other elections, we also use Ministry of Labor data which classifies the race of all candidates who held a formal-sector job.

Similarly, for donors, we have some race data for those who held a formal-sector job in 2014 and whose employers declared their employees' race, through the Ministry of Labor.²⁴ We have

²²Data can be found here: http://www.tse.jus.br/hotSites/pesquisas-eleitorais/prestacao_contas.html. From 2002 to 2016, less than 3% of donors' corporate or private identification numbers are missing and, of the 97% donors' data that is available, 2% had identification codes that were not valid.

²³In our previous experiences with this firm, we obtained contact information (address and phone numbers) for more than 90% of subjects. The accuracy of the contact information seems to vary by individuals' socioeconomic status. In our previous experiences, we were able to successfully contact most respondents. We expect contact data to be even more accurate for higher socioeconomic status respondents. We can obtain other types of donors' attributes from this private vendor, such as estimated income, gender, and schooling (we have no previous experience using these additional services to assess the quality of these attribute data on donors).

²⁴Although all employers are required to submit different information on their employees, many decline to classify their employees' race. In 2014, about 21% of the employee-employer race data are missing.

linked those 2014 records to the campaign donation data using personal identification numbers (the *CPF*). About 47% of donors from 2004 to 2016 elections were not identified in the 2014 registry of formal-sector workers by the Ministry of Labor. Furthermore, about 45% of donors who are in the 2014 registry did not have their race classified by their employer, which adds up to about 73% of missing data for donors’ race between 2004 and 2016, as shown in 2. As a result, the dataset we have now is very restricted and most likely not fully representative of the overall set of donors. In future iterations, we will have race data for all donors who held a formal-sector job and whose employers declared their employees’ race from 2006 to 2014. We expect that by including more years we will have a more comprehensive coverage of campaign donors’ race. Note, moreover, that while non-randomness of missing data could pose an issue for observational/descriptive analysis, we can also rely on racial self-identification of donors whom we sample for our experiments.

Table 2: Types and Numbers of Donors (2004-2016 elections)

Election Cycle	Type of Donor	Number of donors	Donors’ Race Data Coverage (%) [†]
2004	corporate	26,297	NA
2004	private	161,690	19
2006	corporate	17,132	NA
2006	private	100,808	23
2008	corporate	42,633	NA
2008	private	544,684	25
2010	corporate	18,344	NA
2010	private [‡]	169,880	26
2012	corporate	47,912	NA
2012	private [‡]	566,676	27
2014	corporate	15,939	NA
2014	private [‡]	137,833	25
2016	private [‡]	694,017	30

Notes: Contributions in the 2002 elections are not coded between private and corporate contributions. Corporate contributions were not allowed in the 2016 elections. [†]Number of donors with formal jobs registered at the Ministry of Labor. Corporate contributions are not available (NA) because refer to contributions made by corporations, they do not have a personal identification number, and therefore no attribute measures (such as race) of the individual donors’ associated with them. We discuss the implications for empirical analysis in section 3. [‡]Private contributions also include online private contributions (less than 2% of contributions).

Table 2 describes the numbers of two types of donors in the 2004-2016 elections: corporate donors (companies)²⁵ and private donors (individuals).²⁶ For individual donors, the table disaggregates race data coverage by election. For corporate contributions, we cannot naturally impute a race to the donor, though using the race of the firm CEO could be one possibility. However, in the 2016 election for mayors and council members, no corporations were allowed to make contributions. Naturally, owners of corporations still made contributions; but they had to use their own private resources to do so. We can therefore link data on contributions to specific individuals (and can code their race, for those individuals with formal-sector jobs).

²⁵The corporate donors are identified by corporate identification (*CNPJ*).

²⁶The private donors are identified by private identification (*CPF*).

We focus on giving by individuals since this allows us to pursue our theoretical and empirical goals, in terms of the relationship between race and campaign donations. Although the largest number of contributions come from private donors, corporate contributions make up the largest share of the total amount of resources available to candidates. Note however that private donations are also very substantial. Table 3 shows the total contributions (in both absolute amount and share of giving) of corporate and private donors. This does not include giving by party committees.

Table 3: Descriptive Statistics on Contributions

Election	Type of Donor	Mean Contribution	Median Contribution	Sum Contributions	Share (%)
2004	corporate	10,932.10	2,398.00	633,110,800.49	34.38
2004	private	2,541.74	1,199.00	549,010,889.93	29.81
2006	corporate	30,936.98	9,165.89	1,170,531,577.60	53.03
2006	private	2,892.42	916.59	371,722,391.46	16.84
2008	corporate	7,625.44	1,043.99	840,963,739.01	22.18
2008	private	1,215.83	414.28	959,855,929.90	25.31
2010	corporate	39,982.01	10,500.03	1,669,768,507.23	34.53
2010	private	2,458.91	750.00	532,394,998.50	11.01
2012	corporate	7,533.10	1,064.57	906,187,233.89	16.85
2012	private	1,751.14	798.43	1,343,665,740.65	24.99
2014	corporate	37,867.98	5,903.96	1,534,296,847.88	29.59
2014	private	3,226.18	1,180.79	581,522,319.14	11.22
2016	private	1,106.11	501.90	1,286,475,659.03	43.31

Notes: Shares do not add up to 100% because this table does not include other types of contributions (from parties and other candidates as well as own resources). All values in January 2017 *reais*.

How does the racial composition of donors compare to the racial distribution of politicians, and of the Brazilian population? For the particular subset of individual donors on which we have race and donation information, the data suggest interesting descriptive patterns. In particular, as Table 4 shows, the overrepresentation of whites is larger among elected officials than among donors.

Table 4: Elected Politicians and Donors' Color Distribution

Election	Native	White	Black	Asian	Brown
Donors (2004)	0.31	65.37	3.03	1.08	30.22
Donors (2006)	0.27	58.58	4.86	1.12	35.17
Donors (2008)	0.27	60.52	4.51	0.93	33.77
Donors (2010)	0.20	55.63	5.12	0.95	38.11
Donors (2012)	0.25	60.09	4.19	0.93	34.54
Donors (2014)	0.28	58.70	3.87	1.25	35.90
Donors (2016)	0.28	56.46	4.40	0.96	37.90
Elected mayors (2016)	0.11	70.50	1.67	0.49	27.24
Elected city councilors [‡] (2016)	0.29	57.12	5.04	0.51	37.04
Elected federal deputies [‡] (2014)	0.00	79.92	4.09	0.00	15.98
Elected state deputies [‡] (2014)	0.09	73.18	2.74	0.19	23.80
Elected senators (2014)	0.00	81.48	0.00	0.00	18.52
Elected governors (2014)	0.00	74.07	22.22	3.70	0.00
Brazil (pop., 2010) [†]	0.42	47.77	7.61	1.09	43.13

Notes: Donors' race refers to employer declared data for a sample of donors (see Table 2 and text for a discussion). Self-reported race collected by the TSE for all elected politicians. [†]Brazil's population in the 2010 census. [‡]These are unweighted proportions (they do not account for malapportionment).

Next, how does the donation behavior of white and non-white donors compare? Table 5 compares the share of resources that white donors allocated to white candidates to the share of resources that non-white donors allocated to white candidates. (Here, for both donors and candidates, we dichotomize the five-point census scale to compare whites to non-whites—the latter includes browns, blacks, Asians and indigenous).

Table 5: Contributions by Donors’ and Candidates’ Race

	Share of Contributions by White Donors to White Candidates†	Share of Contributions by Nonwhite Donors to White Candidates‡
White Mayoral Candidates (2016)	80.86	54.76
White City Councilor Candidates (2016)	65.00	38.23
White Gubernatorial Candidates (2014)	83.61	62.17
White Senatorial Candidates (2014)	88.91	74.39
White Federal Deputy Candidates (2014)	84.72	68.91
White State Deputy Candidates (2014)	76.12	58.63

Notes:†Share of resources contributed by white donors to white candidates (the complement is the share of resources contributed by white donors given out to nonwhite candidates).‡Share of resources contributed by nonwhite donors given out to white candidates (the complement is the share of resources contributed by nonwhite donors given out to nonwhite candidates). Donors’ race is drawn from employer declared data for a sample of donors (see Table 2 and text for a discussion). We dichotomize candidates and donors as white and non-white (the latter includes asian, black, brown, and native). State deputies exclude “district deputies” (DF). Self-reported race collected by the TSE for all candidates and other-reported race by employer for donors. Note that we do not know who fills out these forms for politicians and employers, meaning that race data could effectively be a combination of both self and other-classification for candidates and donors.

Two interesting patterns stand out in Table 5. First, there is some evidence that white donors give to white candidates at higher rates than do nonwhites. Second, however, nonwhite donors spent a greater share of their resources on white candidates than nonwhite candidates. To be sure, this may simply be due to our likely unrepresentative sample of donors for whom we have data on racial classification. And perhaps, this simply reflects the greater supply of white candidates. But it could also reflect the role of statistical discrimination—especially perceptions of who is electable—that we discussed above.

These descriptive patterns cannot begin to capture the specific role of race in shaping the contribution decisions of donors, however; nor can they shed light on the reasons that white and nonwhite donors give to white candidates. For that, we need experimental design, to which we turn in the next section. Note that the preliminary data in Table 5 suggests that we would have access to nonwhite campaign donors who made contributions to white and nonwhite candidates. This will thus allow us to investigate variation in effects among donors who make both “in-group” and “out-group” campaign contributions.

4 Elements of Research Design

In Bueno and Dunning (2017), we showed that elites invest more in white candidates than non-white candidates and that may help to explain the underrepresentation of white candidates. But

do donors invest more in white candidates because they are more likely to win or because of ethnic or racial cohesion? In other words, is it because of statistical discrimination or taste-based discrimination? Do donors discriminate because race is a noisy signal for other attributes (competence, intelligence, ability, likelihood of winning)? Or do they discriminate because of animus—some innate distaste for non-whites? And how do such tastes vary among white and non-white donors? Our experiments will be designed to answer such questions.

4.1 Subject recruitment

We are likely to work with a sample of donors and conduct face-to-face interviews in which we can include experimental manipulations. The reasons are practical: using our data on campaign donors and through our private vendor, we can identify the names, personal numeric identifier (somewhat akin to the Social Security Number in the United States) the physical addresses, and phone numbers of donors. We are likely to conduct small pilots to compare response rates to two modes of recruitment: (1) person-to-person surveys at the home of donors (perhaps in two large cities) and (2) a phone recruitment followed by an online survey.²⁷ The strategy of combining person-to-person or phone recruitment followed by an online survey has found some success in previous work.²⁸ The cost advantages of online surveys may be minimal in our case but could allow recruitment from a wider geographic swath of the country; if we choose face-to-face surveys only, we may be restricted to two or several cities. However, some of the technology described below for implementing experiments may be more feasible in face-to-face interviews.

Indeed, it may be a challenge getting donors to answer the survey since we cannot do a phone survey (no way to plausibly signal race through names). We are considering using non-monetary incentives for donors to participate in our survey: for example, we could inform survey respondents that we will make a contribution to a charity in his or her name if we reach a certain number of respondents. However, we are skeptical that this would be an efficient strategy. We welcome any advice or suggestions for accessing survey subjects.

Aside from these potential difficulties with non-response, we do not expect the donor population to be exceptionally hard to reach, however. Note that although donors are very plausibly more socioeconomically elite than the population of voters at large, in the 2014 federal and state election, the mean contribution of individuals was 3,226 *reais* (about US\$1,012) but the median contribution

²⁷The cost of piloting both is not that great, inter alia because we would use the same software and survey company for the tablet (face-to-face) and online survey.

²⁸For example, Hainmueller et al. (2015) describe a similar recruitment strategy for a study in Switzerland: “The recruitment was done by gfs.bern who contacted a stratified (by age and gender) random sample of 12,236 individuals in the target municipalities by telephone to invite them to participate in our online survey and collect baseline demographics and respondents’ email addresses. Of these, 2,517 respondents agreed to participate in our online survey and were invited by email. Of those that expressed their willingness to participate, N= 1,979 respondents completed the survey, yielding a retention rate of 78.6% from telephone interview to online survey. Overall, this corresponds to a participation rate of 2.6% and a cumulative response rate 3 (RR3) as defined by AAPOR of 12.8%.” (Hainmueller et al. (2015) Supplementary Information)

was only 1,181 *reais* (about US\$370) (Table 3). In the local elections, the corresponding mean and median contributions were 1,106 *reais* (US\$347) and 502 *reais* (US\$158). The majority of donors are thus not giving enormous contributions, even in federal and state elections.²⁹

4.2 Experimental designs

The following sorts of experimental designs may begin to answer the questions we have laid out above:

- **Direct comparison of donors and voters: Replication and extension of Bueno and Dunning (2017).** A first approach is to replicate Bueno and Dunning’s (2017) experiment with Brazilian voters but take campaign donors as subjects. Thus, we would play videotaped speeches of faux candidates for city councilor, using a reasonably large number of white and non-white candidates, and randomizing the race of candidates.³⁰ In our previous work, this approach did not reveal evidence of racial bias on the part of a probability sample of voters in Rio de Janeiro and Salvador, Bahia. It may be useful in this case to work with a probability sample of campaign donors in Rio and Salvador. Thus, we would compare race effects for probability samples of voters and donors in those two cities.

We would likely include the following types of outcome measures:

1. Preference over voting for the candidate (7-item scale). This is an outcome question we used in Bueno and Dunning (2017).
2. Implicit-association tests after viewing videos or photographs of candidates.
3. Preference over donating to the candidate (7-item scale).
4. Perception of the likelihood that donor would be awarded good; job; contract by candidate (or similar); also perceptions of ideology of candidate (7-item scales).
5. Perception of likelihood that the candidate will win an election (7-item scale).
6. Perception of personal resources/types of family connections of candidate.

The first three outcome measures and perhaps especially the implicit-association tests would help to assess the extent of taste-based discrimination among donors.³¹ As outlined in section

²⁹Naturally, these are only contributions registered by the Higher Electoral Court (TSE). As a recent anti-corruption Car Wash (*Lava Jato*) operation has revealed, there exist enormous off-the-books payments from brokers and companies to politicians and political parties. Whether the official contributions represent the tip of the iceberg or a sizable proportion of funds available to politicians remains to be systematically assessed. Nevertheless, off-the-books corporate contributions appear more likely to dwarf their registered counterparts than off-the-books private contributions.

³⁰An alternative to showing the full videos would be simply to show photographs of candidates and ask for preferences over voting and donating as well as perceptions of the likelihood the candidate will win. This of course sacrifices some degree of realism and may not successfully elicit responses.

³¹In principle, it could also be the case that implicit-bias tests pick up on elements of statistical discrimination (however, see discussion of information and statistical discrimination below).

2, given the relatively low stakes of local council elections and the hypothetical nature of the survey experiment, we believe that preferences over voting for the candidate, and even donating to the candidate, would in this case plausibly reflect taste-based discrimination. Thus, answers to questions 1-3 can be used to assess Proposition 1 in section 2 (no taste-based preferences for white candidates), while question 4 could be used to assess proposition 2 (no differential distribution of goods, jobs, ideology, or government contracts by race of candidate).

The final two outcome questions, however, clearly begin to allow assessment of one kind of statistical discrimination: if donors are no more likely to prefer voting for (or even donating to) white than non-white candidates, yet believe that white candidates are more likely to win (Proposition 3.1), this may suggest a reason that they prefer to donate to white candidates. And if they believe white candidates who otherwise do not differ from non-white candidates (in speech, presentation, etc.) have greater resources or family connections—a hypothesis consistent with our evidence from similar experiments with voters—this may suggest one reason that white candidates could be attractive for reasons of statistical discrimination (Proposition 3.2). We can also complement the outcome measures in the experiment with survey questions on, for example, others' racism (if the subject believes voters in general—not the subject—discriminate against nonwhite candidates).

- **Information and statistical discrimination: Conjoint Design** Particularly if we find preferences among donors for white over non-white candidates, a question is then whether adding information about candidate attributes would limit the differences by race. In the statistical discrimination model, as we reduce uncertainty (or lack of information) about the candidate, including relevant information such as previous incumbency, party rank, media appearances, etc, donors may discount race and consider more other attributes (in other words, they would use group attributes, such as race, as proxies for unobservable individual quality to a lesser extent).

A conjoint design would give us the flexibility to compare pairs of candidates—using pictures from both true (yet unknown to survey subjects) and fictitious candidates—and vary both the type and amount of information given to survey subjects about the candidates. In particular, we could experimentally manipulate information along the following dimensions:

1. Wealth of candidate
2. Education of candidate
3. Past experience in office of candidate
4. Likelihood that candidate will win (for example, based on pre-election opinion polls)

5. Name recognition (for example, past activity as a radio or TV show host)

If we find that the addition of such information reduces preferences for white candidates, this may ipso facto provide evidence for statistical discrimination over taste-based explanations. Particularly interesting would be the effect of manipulating information on the likelihood that the candidate will win office.

Note one difficulty is that we cannot readily separate these changes in race's effects due to subjects updating just from having "more information" versus using this information in lieu of the race signal (as models of statistical discrimination would predict). One possibility is including information that is orthogonal to race, but that could be relevant to donors (such information is hard to find, but we seek to come up with some and test it out in pilots). Then, we would compare our "baseline race treatment" to treatments that include a set of attributes that could be used to substitute for race and to a set of attributes that also provide information, but for which race is not as good a proxy. In a way, these race-orthogonal attributes would be placebos. If we found a greater difference from our baseline (a "gross" race effect) with the set of race-related attributes compared to the non-race related attributes, this may suggest that donors do update and substitute away from the race proxy: it's not just about giving more information to survey subjects and, thus (almost mechanically) them giving less weight to race.

- **Labor markets** Manipulate information about seekers of jobs in the donor's industry/sector (a kind of resume study), using a similar conjoint design in which we experimentally manipulate the type of information and the quantity of information about job seekers. If our proposition 4 is correct, we expect that donors to express preference for white job seekers over nonwhite job seekers, though the extent to which this is true should vary by industry/sector of the donor.

However, following proposition 4.1, adding information about the job seeker attributes should limit the differences by race—but to a smaller degree than for candidates for political office. Moreover, the updating from particular attributions—such as education, or other markers of skills—could be greater than in the case of political candidates.

- **Marriage/residential choice** A final option, which might allow us to assess how taste-based and statistical discrimination matter in social realms, is to use a variant of our photograph/videotape design (Bueno and Dunning 2017) or a conjoint design but ask questions about the extent to which the respondent would desire the described individual as a neighbor, a marriage partner for a child of the respondent, and so on.³² This requires more thought,

³²See Almeida (2007) for a related approach.

e.g. about how to avoid ceiling effects due to social desirability bias.

5 Conclusion

Scholars have devoted substantial attention to the varied role of ethnic identity across societies, and explored the conditions under which one ethnic identity rather than another is “activated.” However, the question of why ethnic discrimination is salient in some substantive domains but not others appears not to be sufficiently explored. This design document describes experiments with an interesting potential subject pool—Brazilian campaign donors—that could help assess whether and why discrimination differs in distinct realms, while also addressing some shortcomings in Bueno and Dunning (2017) and contributing further to understanding of race and representation in Brazil.

The experiments we describe may therefore help us assess whether same people (donors) discriminate based on taste and based on statistical discrimination for different realms of life. We are thinking through how to extend these preliminary design ideas to investigate these topics further. An important question, of course, is whether preferences detected through a survey experiment will lend insight into real-world donations. Ideally, it would be attractive to randomize the race of real candidates and assess consequences for campaign donations, but that of course may not be feasible. For example, one possibility would be to hand out vouchers to voters or donors during elections; and give them a pool of candidates from which they would pick one to make a contribution (we would vary the racial makeup and type of information about the candidates in the pool). This type of experiment could be more engaging than a survey experiment, but, on the other hand, it would still be fairly detached from the real-world contribution setting. We look forward to feedback and discussion of these initial ideas.

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RACE, RESOURCES, AND REPRESENTATION

Evidence from Brazilian Politicians

By NATÁLIA S. BUENO and THAD DUNNING*

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.

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

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

³For 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

⁴Mitchell 2009a.

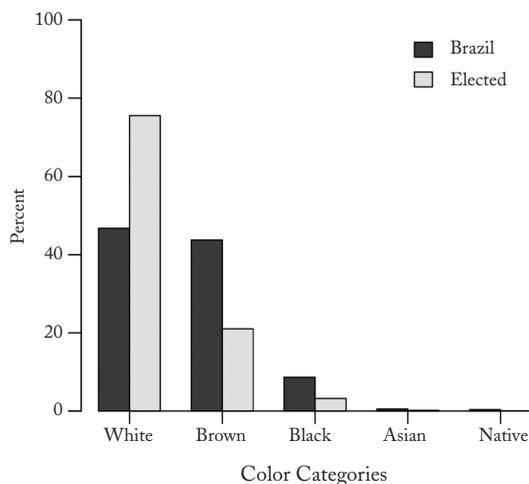


FIGURE 1
RACIAL DISTRIBUTION OF POLITICIANS COMPARED TO
BRAZIL'S ADULT POPULATION^a

^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 Domicílios* (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 Domicílios* [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

<i>Office</i>	<i>Election Winners</i>	<i>Election Losers</i>	<i>Jurisdictions</i>
<i>Self-Classified</i>			
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	
<i>Other-Classified</i>			
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	

^aThe 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*.

^bA random sample of losers selected according to a constant sampling fraction.

^cState 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).

^dMunicipalities 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

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

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

⁴⁰Telles 2004.

TABLE 2
EXPERIMENTAL DESIGN^a

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

^aThe 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.

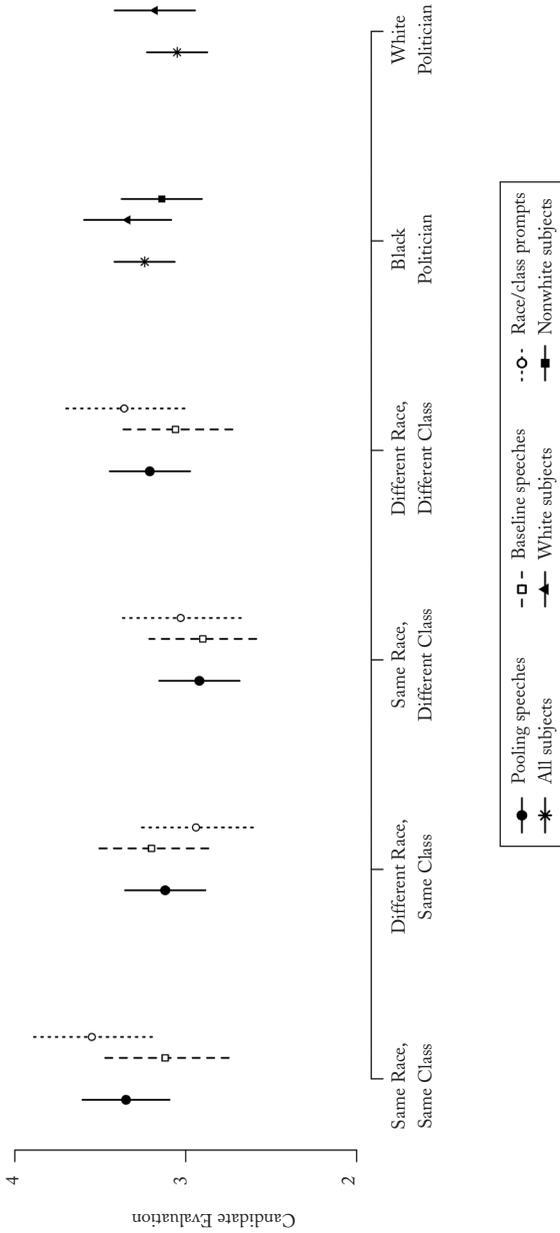


FIGURE 2
EFFECTS OF CANDIDATES' RACE AND CLASS^a

^aThe 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.

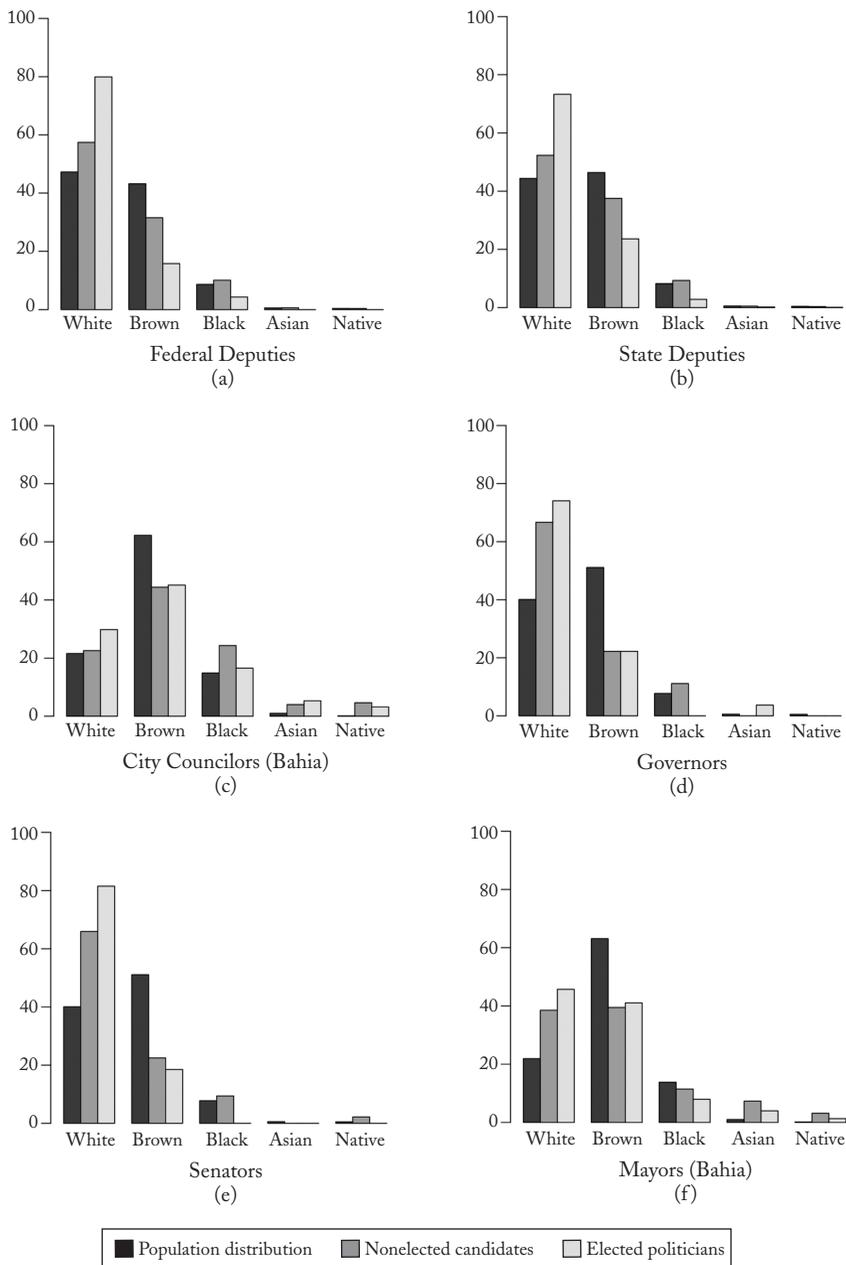


FIGURE 3
 COLOR DISTRIBUTION OF ELECTED AND NONELECTED CANDIDATES
 COMPARED TO THE POPULATION^a

^aThe 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.

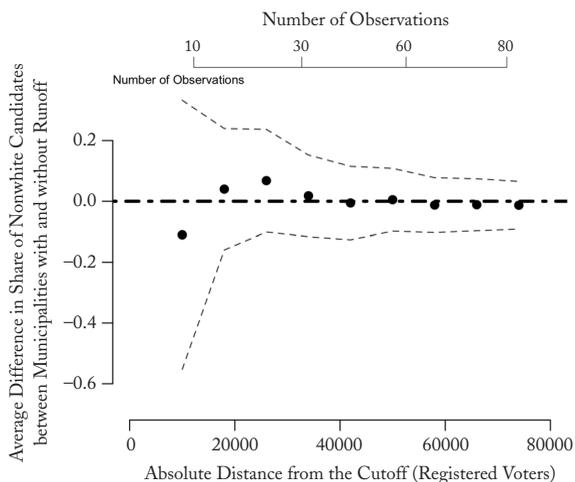
To estimate the causal effect of the electoral rule, we conduct difference-of-means tests for the share and number of nonwhite mayoral candidates, presented in Figure 4. These tests validly estimate the effect under the assumption that assignment to electoral rule is as good as random near the population 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.

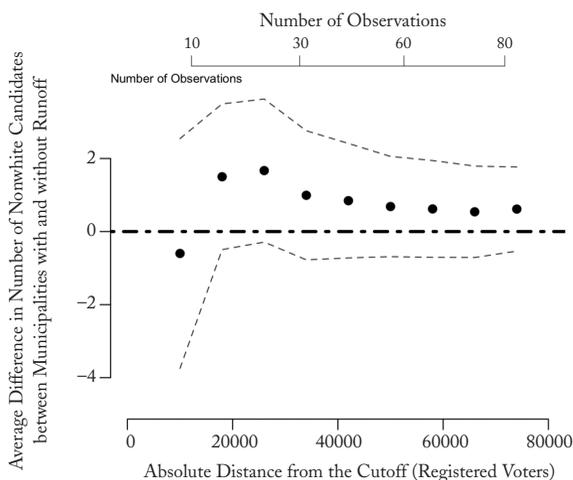
⁷¹ Fujiwara 2011; Chamon, de Mello, and Firpo 2009.

⁷² Dunning 2012, chap. 5.

⁷³ Bueno and Dunning 2017b.



Share of Nonwhite Mayoral Candidates
(a)



Number of Nonwhite Mayoral Candidates
(b)

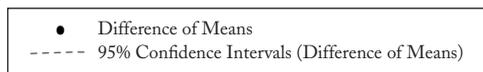


FIGURE 4
THE EFFECT OF BARRIERS TO ENTRY ON THE RACIAL COMPOSITION
OF CANDIDATES^a

^aThe 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

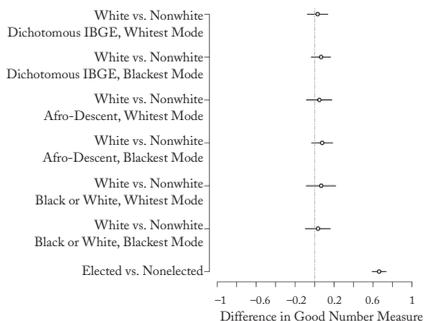
⁷⁸ We sum the components because a number like 11345 may be quite mnemonic and thus desirable; however, it would not rate especially well by either of the components alone.

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.

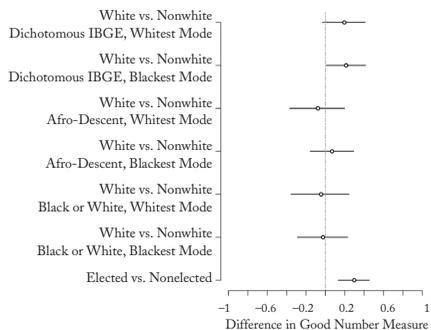
⁸⁰ The analysis uses unweighted data; similar results with weighted survey codings are in the supplementary material; Bueno and Dunning 2017b.

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.

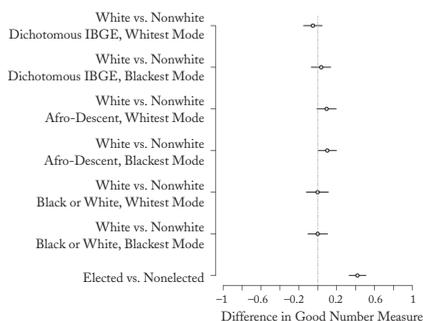
⁸² See Figure D.1 in the supplementary material; Bueno and Dunning 2017b.



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

^aThe 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.

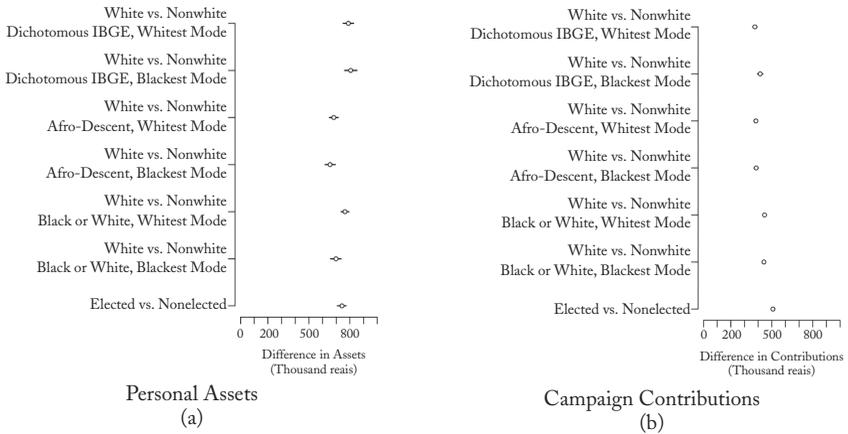


FIGURE 6
RESOURCE DIFFERENCES, WHITE VERSUS NONWHITE POLITICIANS^a

^aThe 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 electoral) 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 under-represented 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>.

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