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Distorted Communication, Unequal Representation: Constituents Communicate Less To Representatives Not Of Their Race*

Short Title: Constituents Communicate Less to Representatives Not Of Their Race

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Abstract

Communications from constituents strongly shape the representation politicians provide. However, if politicians hear less from some constituents than others, this unequal communication may lead to unequal representation. In this paper I present a field experiment demonstrating that constituents are less likely to communicate to representatives not of their race. The experiment exploited electoral rules in Maryland, where several multi-member districts have both black and white representatives. I provided 8,829 residents of such districts an opportunity to communicate to one of their actual representatives, whose race I randomized. Both blacks and whites were markedly less likely to communicate to their representatives not of their race. These results imply that politicians receive *racially distorted communication*, hearing disproportionately infrequently from constituents unlike them. The fact that most racial minorities have white representatives may thus help explain both minorities' less frequent communication to their representatives and the diminished substantive representation minorities typically receive.

Keywords: race, constituent communication, descriptive representation, field experiments

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The communication politicians receive from their constituents strongly shapes the representation they provide. Representatives typically attempt to act in accordance with their constituents' wishes, although in their natural state they often know surprisingly little about what their constituents prefer (Miller and Stokes 1963; Butler and Nickerson 2011; Broockman and Skovron 2013). As interest groups have long appreciated (Kollman 1998) and field experiments have accordingly confirmed (Bergan 2009; Bergan and Cole 2013), politicians thus crucially rely on constituent communication as they make policy decisions (see also Kingdon 1989; Miler 2010, ch. 5; Congressional Management Foundation 2011). "The constituency that a representative reacts to is the constituency that he or she sees" (Fenno 1977, p. 883), and "Representative[s know their] constituents mostly from dealing with people who *do* write letters, who *will* attend meetings…" (Miller and Stokes 1963, p. 54).

However, politicians do not hear equally often from all their constituents; rather, racial minorities in the United States are significantly less likely to communicate to their political representatives than are whites (e.g., Verba, Schlozman, and Brady 1995, p. 233). In the 2008 Cooperative Congressional Election Study, for example, 33% of whites reported that someone in their household had contacted their House members' office in the last year compared to only 17% of blacks, 18% of Hispanics, and 15% of Asians.[1] Because who politicians hear from significantly affects who they represent, these sizeable racial gaps have important consequences for political equality. However, despite much progress in understanding why Americans participate in politics and shrinking racial gaps in voter turnout (e.g., Aldrich 1993; Brady, Verba, and Schlozman 1995; Gerber and Green 2000), we have yet to understand why racial minorities are so disproportionately unlikely to contact their elected representatives.

In this article I present results from a large-scale field experiment demonstrating that these racial gaps in constituent communication can be explained in part by a phenomenon

[1] Weighted results. Unweighted estimates are similar. Author's analysis, Ansolabehere (2008).

whereby individuals are less likely to communicate to representatives not of their race. This pattern, I argue, implies that politicians receive *racially distorted communication*, hearing much more frequently from constituents of their racial group than other racial groups. However, this bias in who legislators hear from does not disadvantage white Americans and minorities equally because most minorities are not represented by individuals of their race, although nearly all whites are. This phenomenon thus might explain the pattern that American minorities on the whole communicate to their representatives much less often than do whites, even though both groups appear to communicate to coracial representatives at similar rates.

The field experiment revealed these consequences of politicians' races for their constituents' communication by exploiting unique electoral rules in Maryland, where several multi-member state legislative districts have both a black and a white Democratic representative. In the experiment, I offered 8,829 residents of such districts the purported opportunity to communicate to one of their actual representatives. However, crucially, I randomly assigned to which of their representatives I offered subjects an opportunity to communicate: some subjects were randomly assigned to have the opportunity to communicate to their representative of their race, while others instead had the opportunity to communicate to their representative of a different race.

The results show that both blacks and whites were considerably less likely to communicate to their representatives of a different race; indeed, more than a third of black subjects who opted to communicate to their black representative would not have communicated to their white representative. Suggesting that this gap has important consequences for political representation, these patterns suggest that a white politician who represents a majority black district might nonetheless receive *double* the amount of communication from their white constituents than from black constituents. Such stark racial distortions have clear consequences for political representation and reveal a heretofore-unappreciated reason why the presence of

minorities in political office is crucial to minorities' equal substantive representation. Indeed, even politicians making every effort to provide equitable representation may nonetheless underrepresent those not of their race in part because of a racial skew present in the communication they receive.

I also find that black and white subjects had essentially equal interest in communicating to representatives of their race. In stark contrast to the aggregate pattern that minorities are less likely to communicate to their representatives than are whites, blacks in the experiment were just as interested in communicating their views to representatives of their race as were whites. However, far fewer minorities have the opportunity to communicate to representatives of their race than do whites in the US writ large, suggesting that many minorities' representation by whites in government may help explain the racial gap in constituent communication. If the political system as a whole is to hear the concerns of racial minorities in equal measure, more minorities may need to serve in office.

Finally, I show that subjects who live in segregated areas were the most reluctant to communicate to a representative of a different race. This pattern suggests additional guidance for politicians, policymakers, and political scientists about, respectively, when racial distortions in political communication might be largest, when descriptive representation has the greatest potential to ameliorate communicative inequalities, and potential mechanisms that should inspire future research.

In the next section I discuss the theoretical reasons to expect (and to doubt) individuals to be more likely to communicate to representatives of their race and the mixed findings and methodological challenges that have characterized extant scholarly efforts.

Why Might Individuals Communicate More To Representatives Of Their Race?

The persistent racial gaps in citizens' propensity to communicate to their representatives

clearly have important consequences for equal substantive representation (Bergan 2009), but what explains the racial communication gap is by no means obvious. The communication gap might be thought to reflect a more general pattern that minorities are less likely to participate in politics in a variety of ways. However, racial gaps in constituent communication are in fact far larger than for many other political activities. For example, whites and blacks have voted at fairly similar rates in recent Presidential elections, but blacks are about half as likely to contact their representatives.

This article argues that important racial gaps in constituent communication can be explained in part by a phenomenon whereby constituents are less likely to communicate to representatives not of their race. Even if all Americans were equally likely to communicate to legislators of their race, racial minorities might communicate far less often because they are significantly less likely to be represented by someone of their race than are whites.

Why might we expect individuals to communicate more to representatives of their race? First, existing research suggests that trust between minorities and their representatives of their race may arise the "shared experience of subordination" and help facilitate dialogue (Mansbridge 1999; see also Abney and Hutcheson 1981; Williams 1998; Grose 2011). Beyond trust for a particular representative, scholars have also argued that minorities feel more politically empowered when they have representatives of their race and are more likely to participate in politics as a consequence (e.g., Bobo and Gilliam 1990; Banducci, Donovan, and Karp 2004; Barreto, Segura, and Woods 2004). Relatedly, rational constituents might tend to eschew communication to outgroup representatives if they expect them to be less responsive to their concerns. Politicians' campaign strategies might also induce a link between their races and their constituents' communication if their campaigns lead coracial voters to be more likely to recognize their names or have positive affect towards them (e.g., Grose 2011, p. 30-33). Last, extensive psychological research suggests that people generally eschew interactions with an

outgroup (e.g., Allport 1954; Blascovich et al. 2001; Richeson and Trawalter 2005; Richeson and Shelton 2007), especially when they have rarely interacted with members of that outgroup before (Emerson, Kimbro, and Yancey 2002; Plant and Devine 2003; Pettigrew and Tropp 2006; Boisjoly et al. 2006; Paluck and Green 2009; Gaither and Sommers 2013).[2] For a number of reasons, Americans thus might expect to pay a greater psychic cost for (or expect to reap fewer benefits from) communicating to representatives who are not of their race. Gay (2002) and Hickey (2010) provide empirical evidence consistent with these expectations and find that blacks with black Congressional representatives are more likely to report having contacted their Congressperson in the past year.

However, despite the persuasive reasons to expect individuals to communicate to representatives of their race, the empirical record for this conjecture is decidedly mixed. Many scholars have found no effects of descriptive representation on political communication (Haynes 1997; Wong et al. 2011) and on other forms of participation (Broockman 2013a; Gay 2001; Gilliam 1996; Henderson et al. 2013; Keele and White 2011; Lawless 2004; Overby 2005; Tate 2002). There is even some evidence that incorporation can sometimes *decrease* participation (Spence, McClerking, and Brown 2009).

In addition to the conflicting empirical record, there are a number of theoretical reasons to doubt that individuals would be any more likely to communicate to representatives of their race. The most compelling is the perhaps banal observation that members of the public are typically ignorant about who represents them (e.g., Delli Carpini and Keeter 1996); yet in order for individuals to act differently towards representatives who share their characteristics, it seems they must be aware of who their representatives are. In addition, people may expect it to be less worthwhile to communicate to their representative of a their race if they expect coracial

[2] There is also, of course, substantial evidence that intergroup contact can *increase* racial tensions (e.g., Key 1949; Enos 2013a, 2013b; Hersh and Nall 2013).

representatives to already agree with them.

Enduring Methodological Challenges

Scholars investigating the link between race and constituent communication have met two main challenges that may account for this hypothesis' mixed empirical record.

The first challenge scholars have contended with is selection bias: minorities who are more likely to participate in politics may also be more likely to have minority representatives regardless, both because minorities who participate more in politics are more likely to successfully elect someone of their race and because minority politicians may draw themselves districts filled with disproportionately politically active minorities (Henderson et al. 2013). These patterns leave the direction of causality between mass political participation and elite minority representation difficult to assess with strictly observational approaches.

A second challenge researchers have faced is the necessity of relying on subjects' self-reports to measure whether they have politically communicated to their representatives. As political scientists have long appreciated, self-reports of political participation are prone to systematic bias (see Zaller 1996; Schaeffer and Presser 2003, p. 68-72 for review). Indeed, self-reported participation might be particularly unreliable in this case. On the one hand, people may feel more politically engaged when they are represented by a member of their group (e.g., Williams 1998) even if this does not actually translate into actual behavior. On the other hand, social desirability might bias self-reported estimates toward zero when race is at issue. Systematic patterns in non-response might also bias survey-based estimates toward zero, especially when minorities are respondents.

In the next section I describe how I exploited unique electoral rules in Maryland to overcome these challenges.

Experimental Design

Measuring Participation

To measure subjects' propensity to communicate to their representatives without relying on their self-reports of past behavior, the experiment presented individuals who were not aware they were being studied with a purported opportunity to communicate to one of their actual representatives and then measured whether they took this opportunity. Specifically, an automatic dialer called individuals on the phone at their homes and, when subjects picked up the phone, immediately played the recorded message shown in Box 1, "*Hello. Would you like to tell Delegate [FIRST AND LAST NAME OF STATE REPRESENTATIVE] your opinion on a political issue?*" (State house members in Maryland have the title "Delegate", not "Representative.")[3]

Note that there was no other communication after subjects picked up the phone and before this message was played: subjects did not know they were being studied; only after playing the above message and recording the dependent variable were subjects informed that the call was a research survey being conducted by Yale[4] University that would not be sent to their representative.[5] Note also that, as with how political actors typically ask people to communicate,

[3] One disadvantage of this script is that I did not specify on what issue subjects would ostensibly inform their legislator of their views. I chose to avoid mentioning a particular issue in order to ensure that any differences I found were not a result of the interaction between race and one particular issue or issue prime alone – if I had asked individuals to communicate about welfare, for example, one might wonder whether the effects would generalize to other issues. On the other hand, the strategy I did employ naturally raises questions about whether one would expect the effects to be weaker when subjects have more reason to speak up – to take an extreme case, if the Maryland Transportation Administration were planning to seize an individuals' home, one might expect race to be less of a barrier for those seeking relief from their legislators. However, individuals rarely do have much reason to speak up in politics: they rarely expect to be pivotal when they politically participate as voters or as communicators. Even if the results are only generalizable to contexts when individuals do not have much direct reason to speak up, the results would thus still apply to nearly all political communication individuals engage in. In other words, one would expect that individuals who speak up rarely do so in such a purposive manner that the factors that deterred them from communicating in this situation would not also deter them in others. Nonetheless, future research should consider this hypothesis.

[4] This research was conducted when the author was a student at Yale University. The Yale University Human Subjects Committee reviewed and granted an exemption for this research.

[5] See Box SI1 in the Supporting Information for the text of the rest of the call after the dependent variable was recorded. As is shown in Box SI1, for those who signaled willingness to participate, the call concluded by conducting an actual short survey about crime (after the dependent variable was already recorded). I conducted this follow-up survey at the advice of the Human Subjects Committee in order to minimize the deception associated with the experiment; the call initially claimed to be administering a survey on a political issue, and so did administer one lest subjects would feel excessively deceived. As with any experiment on human subjects, ethics were also an important consideration in other ways. First, note that I did seek and receive an exemption from the Human Subjects Committee for this study. Second, I sought to minimize harm to subjects by informing them of the deception as soon

the call did not mention representatives' races to subjects, only their representatives' name.[6]

Box 1. Automated Message in Phone Call
When person first picks up the phone:
"Hello. Would you like to tell Delegate [RANDOMIZED NAME OF ONE OF SUBJECT'S STATE REPRESENTATIVES] your opinion on a political issue? Press 1 if you would participate. Press 2 if you would not participate." **Dependent variable recorded.**

The dependent variable for all analyses is whether subjects opted to communicate to their representative. Subjects were coded as such if they dialed the numeral 1. In accordance with the script, doing so indicated that they wished to communicate to the legislator to which they had been randomly assigned. All other subjects – including both those who pressed 2 (explicitly declining to communicate) and those who simply hang up after hearing the name of the legislator they were assigned – were coded as having declined to participate.

In summary, I measured whether subjects would communicate to one of their legislators by ostensibly presenting them with this very opportunity and then measuring whether they chose to do so.

Overcoming Selection: Multi-Member Districts

The design also overcame the potential for selection bias, which might lead individuals who politically participate more to be more likely to have coracial representatives even if having a coracial representative did not facilitate communication in turn. The experiment did so by exploiting a unique electoral rule: Maryland's multi-member state legislative districts. I conducted the experiment in six districts where a black and a white Democratic legislator both served (as of April 2011). Crucially, I could thus fully randomize the race of the representatives

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as possible: I made the first sentence of the call as short as possible so that most subjects likely heard the disclaimer within about fifteen seconds of picking up the call and so the call took as little of subject's time as possible. As discussed, deception was necessary because previous research indicates that survey self-reports may be unreliable. I also sought to make the call as short as possible so as to represent a minimum imposition on subjects' time. Last, I chose the sample size to be as small as possible while still being able to detect effects so as to limit the number of subjects whose time I took. In these ways I sought to minimize any harm that might come to subjects as a result of participating in the study. Future work that takes a similar approach should keep these concerns in mind in designing experimental interventions.

[6] Any treatment effects are thus likely understated to the extent that subjects did not know their legislators' races. The effects among those subjects who do know are potentially far greater than the average effects for all subjects that I report.

to whom I gave subjects the opportunity to communicate; all subjects had representatives of both races and were thus eligible for random assignment to treatments where they either had the opportunity to communicate to their representative of their race or to their representative not of their race.

The districts used in the experiment were Maryland State House Districts 13, 18, 26, 28, 41, and 43, shown on a map in Figure SI1 in the Supporting Information – they are located throughout where the bulk of Maryland's population is located. In each district I always constructed the scripts with the names of the two Democratic legislators of different races who had served the most similar amount of time in the legislature.[7]

Data and Randomization Procedure

I purchased the subjects' phone numbers and background information from TargetSmart Communications, a well-known and reputable political data firm. TargetSmart provided a sample of people in each of these districts who had landline phone numbers (because calling cell phones is questionably legal). TargetSmart[8] provided approximately 30,000 phone numbers, or approximately 2,250 white phone numbers and 2,750 black numbers[9] in each of the six districts.

I assigned subjects to treatment groups with block randomization by district, race, zip

[7] The legislators I used are available upon request and in the replication data.

[8] TargetSmart is one of the leading political data firms, similar to Catalist (see Ansolabehere and Hersh 2012). To estimate respondent's races, TargetSmart uses an ensemble of predictions from two models from third-party industry-leading commercial racial classification data firms as well as its own algorithm as a supplement. These models rely upon rich individual-level data including not only individuals' names and geographic contexts but also detailed individual-level data like home ownership records, consumer behavior purchased from third parties (e.g., credit card companies), and a variety of other sources. These data thus come from the same state-of-the-art and industry-standard models relied upon by non-political commercial firms of all kinds. Hersh (2013) analyzes the validity of Catalist's very similar model (both rely on much of the same underlying data) by matching respondents to their CCES responses and finds that it correctly identifies between 91% and 96% of voters' races (even in racially heterogeneous areas like the districts I analyze). Note that any inaccuracies in the model are very likely to lead the experiment to underestimate the true treatment effect – to the extent that the data suggests that some white voters are black, for example, this measurement error will only bias the estimates toward zero and lead me to underestimate the effect of the same-race legislator treatment among blacks. Even at the lower bound of Hersh (2013)'s validation, in order to spuriously generate the effects I find an unobservable characteristic would need to be present in only a very small share of the population (those misclassified) and be nearly perfectly correlated both with being racially misclassified and with interest in communicating to representatives.

[9] I ordered more black phone numbers because I expected overall black response rates to be lower and thus statistical power to be lower.

code, party affiliation, whether the subject was over 50 years of age, and whether the subject had voted in the 2008 general election. This procedure retained the equal likelihood that each observation would be assigned to each treatment group while balancing the number of observations in each category that would be assigned to each group (Gerber and Green 2012). A randomization check indicated that balance on covariates remained among those successfully contacted (see Table SI2 in the Supporting Information).

I reached participants by phone using a robotic dialer administered by Impact Dialing and played the script discussed previously and that appeared in Box 1. The dialer called the treatment and control groups at the same time and pace in a fully randomized order so that the groups remained comparable.[10] The dialer also recorded whether the call was picked up by a person (and not voicemail) and subjects' input on the keypad during the call. Phone numbers that were not picked up the first time were attempted twice more by the same procedure on subsequent days.[11]

Excluded Subjects

For the analyses I excluded all subjects who either never picked up the phone or who hung up the phone within 4 seconds of picking it up. The treatment was never administered to these subjects because they never heard the name of the legislator to which they had been randomly assigned, either because they never picked up the phone in the first place or because they hung up before the name was read. This left 8,829 subjects who were played the name of their legislator and thus 'treated', 4,774 black subjects and 4,055 white subjects. (The results remain the same when all observations are included; none of the excluded subjects had the opportunity to communicate in the first place and they attrited equally from both treatment groups.)

[10] The data sent to the dialer company also did not contain information on the race of the subjects (and therefore treatment assignment to the same race condition could not be recovered with this data).
[11] The decision to call back no-answer households a second and third time was made ex ante and without knowledge of the intermediate results.

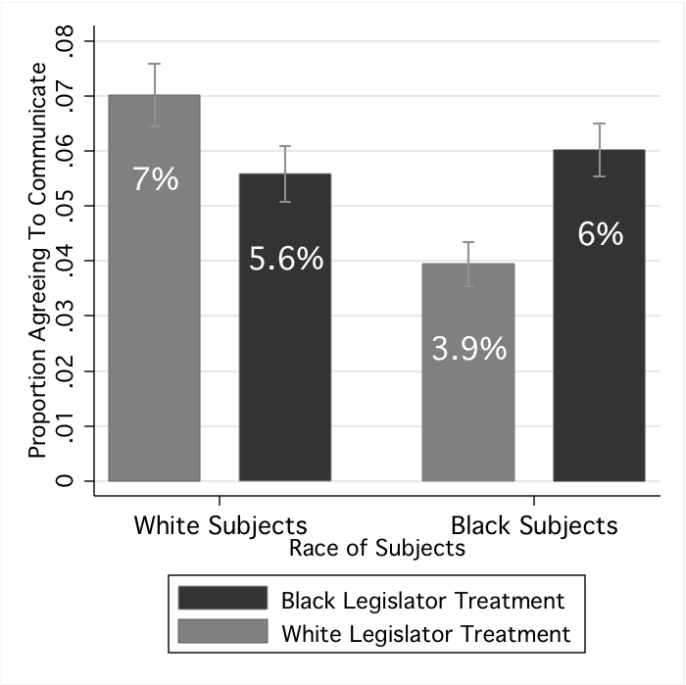
Results

Constituents Communicate Less To Representatives Not Of Their Race

Overall, 6.3% of whites and 5.0% of blacks who had the opportunity to communicate to one of their representatives opted for this opportunity. These overall rates of communication are expectedly low in absolute terms: they mirror the fact that, in reality, very few people do take the time to communicate to their representatives. Indeed, these rates are nearly identical to what Verba, Schlozman, and Brady (1995) report for how likely citizens are to contact state elected officials (p. 72).

However, race greatly impacted whether individuals opted to communicate to their legislators: subjects' rates of communication greatly differed depending on whether they were randomly assigned to have the opportunity to communicate to a legislator of their race. Specifically, subjects were 1.8 percentage points more likely to agree to communicate to their legislator of their race ($p < .001$, all tests two-tailed): 4.7% of subjects opted to communicate to a legislator of a different race, while 6.5% communicated to a legislator of their race. Column 1 of Table 1 presents this result. Because so few people do communicate to their representatives, these small percentage point differences have large aggregate effects on who politicians are likely to hear from. Indeed, the experimental counterfactual implies that *around one in four* of the subjects who opted to communicate to their legislator of their race would not have done so had they had the opportunity to communicate to their legislator not of their race.

Figure 1. Proportion of Subjects Opting To Communicate To Representatives, By Subject Race and Legislator Race



Results by Subjects' Race

These differences are particularly striking for black subjects. As shown in the right half of Figure 1 and in Column 2 of Table 1, blacks communicated to their white legislator only 3.9 percent of the time, yet were a full 2.1 percentage points more likely to do so when they had the opportunity to communicate to their black representative ($p < .001$), a greater than 50% increase in communication. Put differently, the experimental counterfactual implies that more than a third of the blacks who opted to communicate to their black representative would not have done so had they had the opportunity to communicate to their white representative instead.

Table 1. Treatment Effects of Legislators' Race on Constituents' Communication (OLS)

Specification	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Race of Subjects	*All*	*Blacks*	*Blacks*	*Blacks*	*Whites*	*Whites*	*Whites*
Experimental Treatment Effect							
Legislator Same Race as Subject	**0.018*** (0.005)**	**0.021*** (0.006)**	**0.022*** (0.006)**	**0.022*** (0.006)**	**0.014^ (0.008)**	**0.013^ (0.008)**	**0.014^ (0.008)**
Covariates							
Democratic Party Affiliation	-	-	-0.011 (0.007)	-0.011 (0.007)	-	-0.003 (0.008)	-0.003 (0.008)
Voted in 2010 Primary	-	-	0.027** (0.010)	0.027** (0.010)	-	0.033** (0.011)	0.033** (0.011)
Voted in 2010 General	-	-	0.022** (0.008)	0.021** (0.008)	-	0.016^ (0.009)	0.016^ (0.009)

Area % Urban	-	-	0.020	0.016	-	0.013	0.008
			(0.015)	(0.017)		(0.012)	(0.014)
Area % Black	-	-	0.004	-0.035	-	-0.012	-0.013
			(0.011)	(0.022)		(0.018)	(0.025)
Area Black Med. HH Inc. ($10,000s)	-	-	0.002^	0.002	-	-	-
			(0.001)	(0.001)			
Area White Med. HH Inc. ($10,000s)	-	-	-	-	-	-0.000	-0.000
						(0.001)	(0.001)
Leg. District Fixed Effects	-	-	-	Yes	-	-	Yes
Constant	0.047***	0.039***	-0.006	-	0.056***	0.032*	-
	(0.003)	(0.004)	(0.017)		(0.005)	(0.016)	
R^2	.001	.002	.010	.013	.001	.008	.009
N	8829	4774	4752	4752	4055	4025	4025

*Notes: Dependent variable in all regressions is whether the subject opted to communicate to their legislator. ^=p<.10, *=p<.05, **=p<.01, ***=p<.001, two-tailed tests. Robust standard errors.*

Whites were also more likely to communicate to their white representative: as Figure 1 and Column 5 of Table 1 show, whites were 1.4 percentage points less likely to communicate to a black representative (p = .06). In the context of the 7% of whites who communicate to their white representative, this represents a decrease of about 20%. Put differently, about one in five whites who opted to communicate to their white representative would not have done so had they been presented with the opportunity to communicate to their black representative instead.

Robustness of Main Results. To demonstrate the statistical robustness of the results, I first add covariates to the regression specifications in Table 1. Columns 3 and 6 present the results with dummy variables for whether subjects voted in the 2010 primary and general elections, and the income, racial, and urban composition of the respondents' census block groups. Columns 4 and 7 introduce district-level fixed effects. As expected given the randomization, the experimental results remain essentially unchanged in the presence of these covariates.

It may be of concern that the models specify the experiment as having 8,829 observations, whereas I actually analyze variation on the level of legislators, of which there were only 12 (two in each of the six districts I used). To account for this legislator-level and district-level uncertainty, I therefore also ran the analyses with standard errors clustered at the district

and the politician levels and with legislator-level and district-level random effects. Reassuringly, the main results hold and are statistically significant at the same levels under both of these alternative specifications.[12]

In summary, the experimental results are highly consistent: both blacks and whites are markedly less willing to communicate to their representatives of a different race than to their representatives of their race.

Blacks and Whites Communicate Similarly Often To Same-Race Representatives

It has long been observed that blacks are less likely to communicate to their political representatives than are whites (e.g., Verba, Schlozman, and Brady 1995, p. 233). However, if individuals are less likely to communicate to representatives not of their race, could the fact that most racial minorities are represented by whites help explain this racial gap in constituent communication?

Table 2. Predictors of Communication To White and Descriptive Representatives (OLS)

Specification	(1)	(2)	(3)	(4)
Race of Legislator To Whom Subjects Had Opportunity To Communicate	*White Legislator*	*Same Race Legislator*	*Same Race Legislator*	*Same Race Legislator*
Black Subject	**-0.031*** **	**-0.010**	**-0.010**	**-0.005**
	(0.007)	**(0.007)**	**(0.009)**	**(0.010)**
Democratic Party Affiliation	-	-	-0.007	-0.007
			(0.008)	(0.008)
Voted in 2010 Primary	-	-	0.036***	0.036***
			(0.011)	(0.011)
Voted in 2010 General	-	-	0.023*	0.022*
			(0.009)	(0.009)
Area % Urban	-	-	0.029*	0.019
			(0.012)	(0.014)
Area % Black	-	-	0.019	-0.006
			(0.014)	(0.020)
Med. HH Income of Those of Subjects' Race ($10,000s)	-	-	0.001	0.001
			(0.001)	(0.001)
Leg. District Fixed Effects	-	-	-	Yes
Constant	0.070***	0.070***	0.009**	-
	(0.006)	(0.006)	(0.016)	

[12] The results are also identical when employing probit and logistic regression instead of a linear probability model, although best practices in randomized controlled trials do not involve the use of logistic regression (Freedman 2008).

R^2	.005	.000	.010	.013
N	4328	4438	4410	4410

*Notes: Dependent variable in all regressions is whether the subject opted to communicate to their legislator. *=p<.10, **=p<.01, ***=p<.001, two-tailed tests. Robust standard errors.*

To consider this hypothesis, I first compute the racial difference in communication to white representatives in the first column of Table 2 (the same difference can be calculated by comparing the first and third columns in Figure 2). This comparison between how likely black and white subjects were to communicate to white legislators replicates patterns that prevail for most blacks and whites in the United States since most have white representatives: only 33% of blacks have representatives of their race in the US House, though a full 92% of whites do; and no blacks have black representatives in the US Senate (as of 2012) whereas over 99% of whites do. Significantly, this comparison shows that blacks are almost *half* as likely as whites to communicate to white representatives ($p < .001$).

However, strikingly, this long-noted substantial black-white communication gap essentially disappears among the respondents who had the opportunity to communicate to a legislator of their race. The second column of Table 2 estimates the difference in the probability that those of each race communicated to their legislator of their own race (equivalently reached by comparing the leftmost and rightmost columns in Figure 1). Notably, the difference between black and white subjects' rates of communication to representatives of their race is statistically insignificant and less than a third of the similar estimate for communication to white representatives. The final two columns add controls to this comparison identical to those used in Table 1; this null finding is robust.

Recall the patterns discussed at the beginning of the article: racial minorities in the United States are about half as likely to communicate to their political representatives as are whites. The experimental results suggest that minorities' general lack of access to representatives of their race can help explain much of this gap. Blacks and whites in the experiment were

essentially just as interested in communicating to representatives of their race;[13] likewise, blacks and whites were both markedly less likely to communicate to representatives not of their race. Because minorities are much less likely to have descriptive representatives than are whites, however, this generates a systematic skew in who communicates to their elected representatives in the US; reflecting this pattern, communication to white representatives in the experiment mirrored the country's large racial gap in communication.

Constituents In Segregated Areas Communicate To Outgroup Representatives Least

Is one's representative's race always equally relevant to whether individuals communicate, or is it more influential for individuals in certain circumstances? There are several reasons to expect individuals who live in particularly black neighborhoods to be the most reluctant to communicate to representatives not of their race. Most of all, a rich tradition in psychology suggests that those who have experienced little intergroup contact in the past will tend to eschew social contact with outgroups as a result: those who have interacted with members of an outgroup on a regular basis typically show little aversion to doing so, although people with less prior experience interacting with outgroups in the past typically eschew such interactions (Emerson, Kimbro, and Yancey 2002; Gaither and Sommers 2013; Plant and Devine 2003; see also Allport 1954; Pettigrew and Tropp 2006; Paluck and Green 2009). Decades of sociological research also suggests that individuals who live in particularly black neighborhoods are also the least likely to have intergroup contact: very black neighborhoods tend to be highly socially segregated, with both blacks and whites living in them interacting very infrequently (e.g., Blalock 1967; Blau 1977; Sigelman et al. 1996).[14] We would expect this to be particularly true for blacks in very black neighborhoods; in nearly all-black neighborhoods, blacks are likely

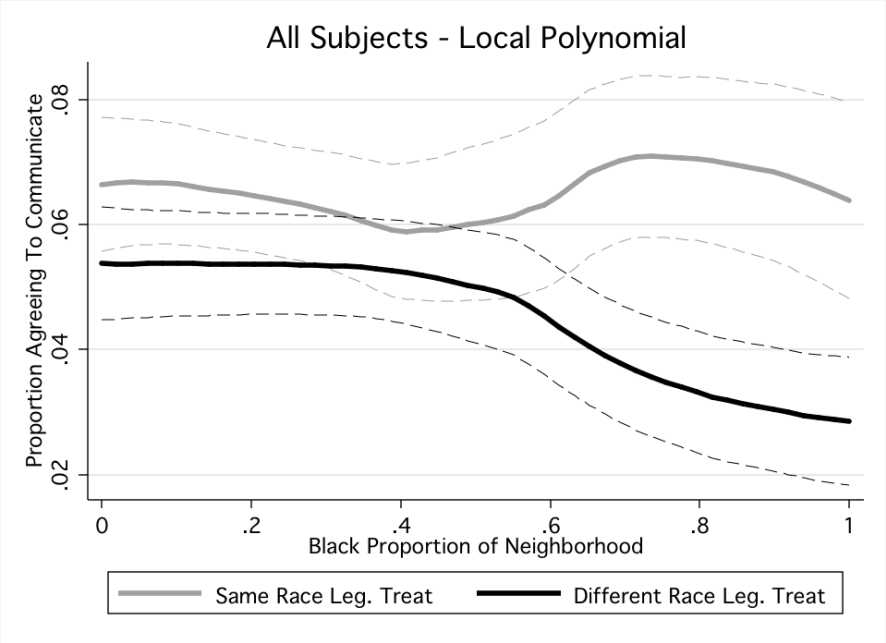
[13] Although the generalizability of this result to other contexts is necessarily a matter of conjecture, racial gaps in access to other resources are similar in these districts as elsewhere in the country: blacks' median yearly household incomes in these areas are nearly $7,000 lower on average than whites'.

[14] A related literature in political science has similarly uncovered significant impacts of segregation and group contact on political participation and views (e.g., Cohen and Dawson 1993; Kinder and Mendelberg 1995; Oliver and Mendelberg 2000; Enos 2013a, 2013b).

to have few white neighbors at all. Black subjects in the experiment who live in segregated neighborhoods might also tend to have less trust in white representatives as a result of being continually subject to residential segregation (Williams 1998).

To test the possibility that subjects who live in black neighborhoods are especially unwilling to communicate to representatives of a different race, I matched subjects to data on the racial composition of their neighborhoods at the census block group level, the smallest level of aggregation available from the US Census and which corresponds roughly to small neighborhoods (the median subject's block group had a total population of 1,136, while the 8,829 subjects were spread across 536 different block groups). I then examined the interaction between the experimental treatment effect and the racial composition of subjects' neighborhoods.

Figure 2. Overall Treatment Effect Heterogeneity by Black Percentage of Neighborhood



Notes: The Figure shows a local polynomial estimate of the likelihood that subjects in each treatment group communicated to their legislators across neighborhoods with varying degrees of segregation.

Figure 2 displays a local polynomial estimate of the percentage of respondents opting to communicate to their legislator in each of the treatment groups by the percentage of their

neighborhood that is black. 95% confidence intervals surround each estimate.[15] Table 3 examines this hypothesis formally.

The Figure and Column 1 of Table 3 strongly support the hypothesis that representatives' races are a much greater determinant of communication in neighborhoods with high black populations, with living in the blackest neighborhoods associated with a more than doubling of political communication to same-race representatives. Column 2 attempts to evaluate competing explanations for this pattern by adding additional interaction terms for political activity/awareness (as measured by whether the subjected voted in the 2010 primary election) and the median household income of blacks in subjects' in Census block groups, factors that might be thought to correlate with neighborhood racial makeup and be responsible for the results. I also introduce a number of covariates to control for factors such as whether subjects voted in the 2010 general election, their party affiliation, district-level fixed effects. The significance of the main heterogeneous effect remains strong, indicating that those in segregated areas do appear to be systematically less communicative to legislators not of their race for reasons not easily explicable by differences in income or political activity.

Table 3. Subjects In Segregated Areas Least Willing To Communicate To Outgroup Representatives

Specification (All OLS)	(1)	(2)	(3)	(4)	(5)	(6)
Race of Subjects	*All*	*All*	*Blacks Only*	*Blacks Only*	*Whites Only*	*Whites Only*
Experimental Treatment Effect						
Legislator Same Race as Subject	0.005	-0.011	-0.002	-0.018	0.008	-0.002
	(0.008)	(0.013)		(0.020)	(0.010)	(0.018)
Heterogeneous Treatment Effects						
Leg Same Race X Neighborhood % Black	**0.032*** **(0.015)**	**0.037*** **(0.015)**	**0.041*** **(0.020)**	**0.047*** **(0.021)**	**0.030** **(0.033)**	**0.025** **(0.034)**
Leg Same Race X Voted in 2010 Primary	-	0.017	-	0.030^	-	0.001
		(0.013)		(0.017)		(0.020)
Leg Same Race X Neighborhood Black Median HH Income ($10,000s)	-	0.002	-	0.001	-	0.002
		(0.002)		(0.003)		(0.002)
Covariates						

[15] To estimate these functions and their confidence intervals I used the local polynomial regression command in STATA 10 (**twoway lpolyci**), employing the software-generated default bandwidths (0.14 for the treatment group values and 0.18 for the control group values), the default kernel setting (epanechnikov), and the default confidence intervals (by default calculated using pilot bandwidths 1.5 times the size of the bandwidths for the fitted values).

Neighborhood % Black	-0.032***	-0.042***	-0.022^	-0.059*	-0.032^	-0.024
	(0.009)	(0.012)	(0.012)	(0.023)	(0.018)	(0.026)
Voted in 2010 General	-	0.018**	-	0.022**	-	0.014
		(0.006)		(0.008)		(0.009)
Voted in 2010 Primary	-	0.022*	-	0.013	-	0.033*
		(0.009)		(0.011)		(0.015)
Democratic Party Affiliation	-	-0.006	-	-0.011	-	0.001
		(0.006)		(0.007)		(0.009)
Neighborhood Black Median HH	-	0.001	-	0.001	-	0.001
Income ($10,000s)		(0.001)		(0.002)		(0.002)
Neighborhood % Urban	-	0.008	-	0.017	-	0.005
		(0.011)		(0017)		(0.015)
Leg. District Fixed Effects	No	Yes	No	Yes	No	Yes
Constant	0.059***	-	0.052***	-	0.062***	-
	(0.005)		(0.009)		(0.007)	
R^2	0.002	0.012	0.003	0.015	0.001	0.010
N	8819	8476	4767	4752	4052	3724

*Notes: Dependent variable in all regressions is whether the subject opted to communicate to their legislator. ^=p<.10, *=p<.05, **=p<.01, two-tailed tests. Robust standard errors. Ns change slightly between regressions because all Census variables are not available for all subjects.*

The remainder of Table 3 breaks down the results by the subjects' race. Considering black subjects only, the heterogeneity remains similarly large and statistically significant. A linear estimate of the effects is presented in Column 3 of Table 3 and finds that in neighborhoods that are nearly all black descriptive representation nearly doubles communication (interaction significant at $p < .05$): blacks in such areas opted to communicate to their white representative only about 3% of the time but to their black representative 6.9% of the time.[16] Column 4 shows that these results are consistent with the addition of controls.

The pattern for whites alone is less clear in Columns 5 and 6 of Table 3. This may be because the theoretical case for expecting the same heterogeneity is less strong for whites (who may interact with many blacks when they live in very black neighborhoods), although the relative paucity of data and weaker baseline effect for whites may also be responsible.

These results have two primary implications. First, the descriptive finding that the treatment effects are larger in blacker neighborhoods has immediate substantive implications for

[16] The borderline significant heterogeneous treatment effect for the coefficient on "Legislator Same Race X Subject Voted in 2010 Primary" among blacks has multiple potential interpretations; one potential explanation is that these subjects were more politically knowledgeable and thus more likely to know that the legislators were of the same/different races. Sampling variability could also be responsible.

politicians and policymakers: politicians who receive racially distorted communication from their constituencies may want to take particular care to encourage communication from those living in such areas, whereas policymakers drawing majority-minority districts might also consider taking into account the especially strong preference for descriptive representation that those who live in segregated areas appear to have.

The results also provide suggestive evidence for the mechanism responsible for the main effects. Although this evidence alone cannot firmly establish any particular account (Bullock et al. 2010), the results are consistent with a hypothesis drawn from the rich literature in psychology on intergroup contact: that subjects who rarely interact with other individuals not of their race will be more likely to avoid such cross-racial contact. These patterns have the same broader social consequences regardless of the mechanisms underlying them, but suggest a potentially promising line of inquiry for future research.

External Validity

One may well wonder how the results obtained from one experiment in Maryland's multi-member state legislative districts might apply to other circumstances. For readers interested in considering these questions, the Supporting Information evaluates a number of ways in which Maryland, these districts, these politicians, and this approach might differ from their analogues elsewhere and what possible implications these differences might have. Along a variety of such dimensions, I discuss why it is unlikely that circumstances unique to Maryland's legislature or these legislators account for the results: these legislators' names are not particularly more or less indicative of their races than other American legislators', these legislators' ideological positions are largely similar to each other, Maryland is not atypical when it comes to race relations, and the role of party differences (not present in these analyses as all the legislators were Democrats) would only seem to exacerbate these effects elsewhere. Likewise, for more well-known politicians like Members of Congress one might expect the effects to be even larger;

any ignorance about state legislators' races would only move this experiment's estimates closer to zero.

Discussion: Distorted Communication, Unequal Representation

Politicians better represent the constituents who contact them (e.g., Miller and Stokes 1963; Fenno 1977; Kingdon 1989, p. 54-60; Kollman 1998). Although representatives typically attempt to act in accordance with their constituents' wishes, in their natural state they often know surprisingly little about what their constituents prefer (Broockman and Skovron 2013; Butler and Nickerson 2011). As field experiments have accordingly confirmed (Bergan 2009; Bergan and Cole 2013), politicians thus crucially rely on constituent communication as they make policy decisions (see also Miler 2010, ch. 5; Congressional Management Foundation 2011). As Verba, Schlozman, and Brady (1995, p. 463) thus write, "it matters for politics what and from whom public officials hear."

However, politicians are not equally likely to hear from all their constituents: racial minorities in the United States are significantly less likely to contact their representatives than are whites. These racial gaps in constituent communication have clear consequences for political equality,[17] yet despite much progress in understanding why individuals participate in politics and shrinking racial gaps in voter turnout (e.g., Aldrich 1993; Brady, Verba, and Schlozman 1995; Gerber and Green 2000), large racial gaps in constituent communication have yet to be explained.

This article presented a field experiment exploring the role of *politicians'* races in the racial constituent communication gap by measuring whether 8,829 people took an opportunity to communicate to one of their actual representatives. Crucially, the race of the representative to

[17] On this point, it is implausible that representatives could merely 'reweight' the communication they receive in order to understand what their constituents would say were these distortions not present: most constituents do not supply their race when they communicate to their legislators, and there is, as discussed, ample evidence that the communication legislators receive greatly impacts their policy decisions.

which subjects had the opportunity to communicate was randomized, an opportunity afforded by their residence in multi-member districts in Maryland that both black and white legislators represent. The results of this field experiment uncovered patterns that help address significant puzzles about the biased substantive representation of racial minorities in American politics.

First, the experiment demonstrates that blacks and whites are both significantly less likely to communicate to political representatives of a different race. Moreover, these differences are substantively large: the experimental counterfactual implies that more than a third of the blacks in the experiment who asked to communicate to their black representative would not have communicated to their white representative.

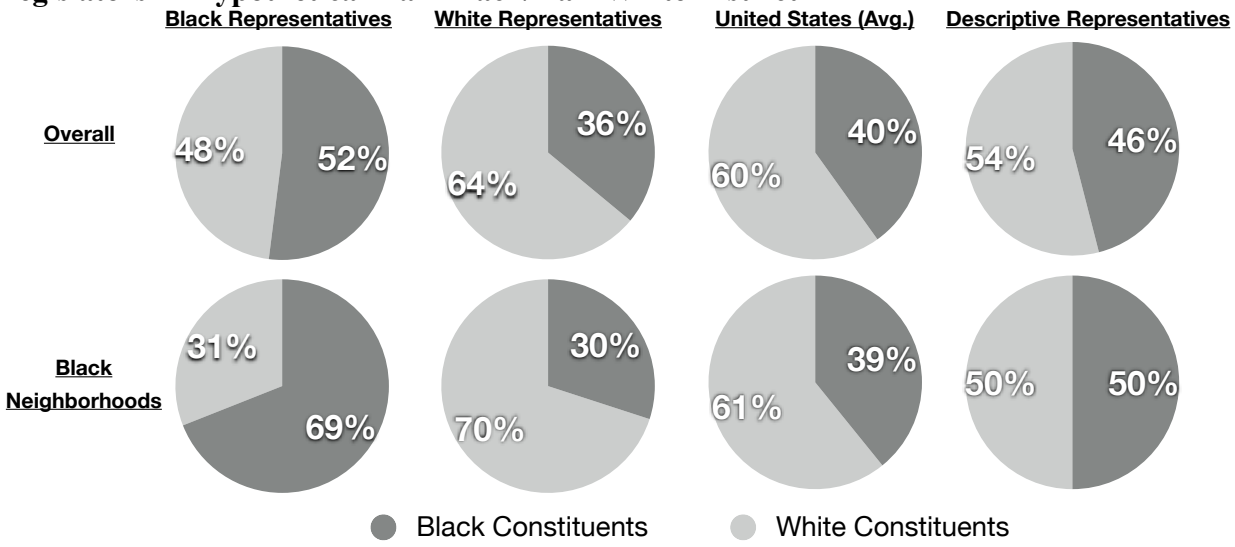
These patterns matter because, as Fenno (1977, p. 883) noted, "the constituency that a representative reacts to is the constituency that he or she sees." The experiment suggests that legislators 'react' to racially distorted views of their constituencies: because blacks and whites are both less likely to communicate to representatives of a different race, politicians will tend to hear disproportionately frequently from individuals of their race and disproportionately infrequently from those unlike them.[18]

Figure 3 helps illustrate the problem these patterns create for minorities' substantive political representation by demonstrating what would have occurred if the experiment had actually been an effort by legislators themselves or an interest group to inform legislators of their constituents' opinions (as subjects were initially led to believe). The Figure calculates what percentage of the respondents to the 'surveys' I ostensibly conducted would have been white and black in a hypothetical district that is exactly half white and half black. Deviations from a 50/50 split in the presence of black and white respondents in the resulting 'sample' thus indicate how distorted legislators' perceptions of their constituents would have been: for example, if whites

[18] Consistent with this expectation, Grose (2011, p. 128) relates anecdotal evidence that some black Congresspeople claim to receive disproportionately more communication from their black constituents than their white constituents.

were twice as likely to communicate to their representatives as blacks, whites would be responsible for fully two-thirds of the communication their legislators received in a half-black district. (These results would certainly vary from context to context and are not meant to precisely estimate what occurs elsewhere. They simply help illustrate the substantive implications of the results.)

Figure 3. Percentage of Communication From Constituents of Each Race Received by Legislators in Hypothetical Half-Black/Half-White District



Notes: The Figure calculates what percentage of the communication representatives would have received from each racial group if they represented half-black, half-white districts, given the treatment effects in the experiment.

The first row of Figure 3 displays estimates derived from the overall results, and the second row is based on the patterns observed in black neighborhoods (where the effects of legislators' races were particularly acute). These calculations show that the experimental subjects' white representatives would have heard from blacks about *half* as frequently as from whites even in a district that nonetheless was actually equal parts white and black. Similarly, black legislators in segregated areas would have heard from blacks nearly double as often as from whites. Although the experimental treatment effects are small in percentage *point* terms (reflecting the fact that, in the real world, a small share of people actually do communicate to their representatives), they imply quite large distortions in the communication politicians receive

from their constituencies.

One might hope that these biases cut equally across races in the United States, but racial minorities are significantly less likely to be represented by a person of their race: while only 33% of blacks have representatives of their race in the US House, a full 92% of whites do; no blacks have representatives of their race in the US Senate (as of 2012) whereas over 99% of whites do; and, likewise, only 38% of blacks have representatives of their race in their state houses while 92% of whites do. Elected representatives thus appear to hear from minorities significantly less often than from whites because while most whites have the opportunity to communicate to a representative of their race, most racial minorities do not. Indeed, as illustrated in the third column of Figure 3, the results of the experiment imply that blacks' relative lack of racial descriptive representation causes elected officials in the United States as a whole to hear from their blacks almost *half* as much as they hear from white constituents relative to what they should.

While the results cannot directly speak to other groups, one should note that even fewer Latinos and Asian Americans have representatives of their race at the federal and state levels than do blacks. The distorting effects documented here may mute these groups' voices to an even greater degree.

This systematic bias muting the voices of minorities relative to whites suggests a new perspective on the important puzzle of why racial minorities receive significantly less substantive political representation in the United States (e.g., Griffin and Newman 2008). Outright racial favoritism among politicians themselves is no doubt real (e.g., Broockman 2013b; Butler and Broockman 2011) as are the many institutional barriers minorities face (e.g., Frymer 1999; Hajnal 2009). However, these findings suggest an additional mechanism for the underrepresentation of minorities in American politics that has yet to be appreciated: even completely unbiased politicians might represent their constituents in a racially biased manner due

to significant distortions in the racial backgrounds of those who communicate to them.

There is a silver lining to these pessimistic results. Blacks in the experiment were essentially just as interested in communicating to their representatives of their race as were whites; the long-observed pattern that minorities are markedly less likely to contact their representatives in the US appears due in significant part to the fact that minorities are much less likely to have representatives of their race than are whites. As the final column in Figure 3 illustrates, it thus appears that the substantial racial skew in who exercises political voice could significantly diminish if all Americans had access to political representatives of their race. As debates over the future of the Voting Rights Act continue, such evidence can play an important role in guiding the debate over the importance of drawing majority-minority districts (Henderson et al. 2013).

Insofar as it is inevitable that some US politicians will represent substantial numbers of people not of their race, the results may also help policymakers and politicians understand where communicative inequalities might most prevail without descriptive representation: additional analyses showed that those living in segregated areas are the most reluctant to communicate to their outgroup representatives. Politicians may thus particularly wish to hire staff members of different races in district offices in segregated areas insofar as some constituents appear more comfortable communicating with those of their race, for example (see relatedly Grose, Mangum, and Martin 2007).

As future research seeks to better understand this phenomenon, these results also suggest several theoretical questions ripe for further inquiry. First, although these results alone cannot definitively isolate the mechanisms responsible for individuals' reluctance to communicate to representatives of different races, they do cast doubt on the sufficiency of most extant theories. First, most accounts based on trust posit that increased communication should occur primarily among groups who have experienced subordination (e.g., Mansbridge 1999); however, I found

substantial effects among whites as well. In addition, although the experiment could not evaluate the role played by generalized empowerment since all subjects had representatives of both races, the effects it did uncover cannot be attributed to general empowerment for the same reason. Fixed effects for Census block group also had little effect on the results, casting doubt on the hypothesis that selective campaigning is responsible; blacks and whites within the same neighborhoods still favor representatives of their own race. The heterogeneous treatment effects by neighborhood racial composition are suggestive of a mechanism that links subjects' reactions to their representatives to more general patterns in willingness to engage in cross-racial contact, and future research could benefit from interventions able to isolate this theory. The patterns this article has uncovered have significant social consequences regardless of the mechanisms underlying them, but understanding their roots is a question ripe for further research.

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