Do Bilinguals Respond More Favorably to Candidate Advertisements in English or in Spanish?

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Abstract

Candidates for political office in the United States can appeal to constituents in either English or in Spanish. We investigate the consequences of this choice in a series of survey experiments conducted on large, diverse samples of both monolingual and bilingual Americans. We take advantage of parallel advertisements produced in both English and Spanish by real candidates for national office – one presidential and two congressional. Because our design holds constant candidates' policy positions, we can attribute the effects on vote choice directly to the choice of language over and above other candidate attributes. In two of our three experiments, the Spanish-language advertisements increased candidates' electoral support by 5 percentage points among bilinguals. We find the opposite pattern of results among English-speaking monolingual Americans, who respond very negatively to Spanish-language advertisements. Our results shed light on the strategic calculus of candidates who must appeal to multiple linguistic communities at once.

The 1960 presidential campaign featured the first national Spanish-language appeal to the voting bloc that would in subsequent decades come to be described as "Hispanic" or "Latino." Fluent in Spanish and appearing on behalf of her husband, Jacqueline Kennedy delivered a minute-long televised ad highlighting the presidential hopeful's concern for "*los intereses de todos los sectores de nuestra sociedad que necesitan la protección de un gobierno humanitario*" [the interests of all sectors of our society who are in need of the protection of a humanitarian government]. Targeted Spanish-language messaging since then has expanded, broadening the scope of how candidates communicate to Latino voters. In March 2014, for example, President Barack Obama participated in a town hall event in Spanish on Univision and Telemundo to generate support for the Affordable Care Act and to address concerns about his stance on immigration. Similarly, President George W. Bush told Latinos that "*Es Un Nuevo Día*" [It's a New Day]; President Obama assured Latino voters that "*Sí Se Puede*!" [Yes We Can!]; Governor Mitt Romney touted his "*Liderazo Sólido*" [Strong leadership] and offered "*Un Mejor Camino*" [a better path]; and "*La Hillary*," Secretary Hillary Clinton, said "*Para el señor Trump, solo tengo una palabra: Basta!*" [I have just one word for Donald Trump: Enough!] from her Spanish-language Twitter account "Latinos for Hillary."

We seek to understand the strategic environment in which candidates choose *whether* and *whom* to target with Spanish-language appeals. Clearly, if candidates face electorates that are composed of monolingual English speakers, monolingual Spanish speakers, and bilingual English and Spanish speakers, they would ideally like to create language-specific appeals to each of the monolingual groups. It is not ex ante clear how they should target the bilingual group. Furthermore, the microtargeting strategy is not without risks. In a classic example, President Gerald Ford infamously ate a tamale without first removing the inedible corn husk wrapper, embarrassing himself in front of his intended audience of Mexican-Americans (Popkin 1994). Recent studies have further investigated the consequences of mistargeting, finding that candidates are penalized when they reach an unintended audience with a culturally specified message (Hersh and Schaffner 2013). Candidates who are considering producing Spanish-language advertisements must therefore weigh the benefits of directly appealing to Spanish-speakers against the potential costs of reaching exclusively English-speaking constituents.

Studying the strategic environment faced by candidates requires a deeper understanding of the consequences of candidates' language choices. However, both candidates and the scholars who study them face a major inferential challenge. Usually, when language changes,

so too does content. In 2015 and 2016, for example, the Republican Party delivered responses to the State of the Union address in both Spanish and English. Not only were the speakers different (Latino party members spoke in Spanish and non-Latino members spoke in English), but the two speeches were markedly different in their content, particularly on the issue of immigration. Differentiating the separate effects of language and content is impossible in this scenario, as they move together. In statistical terms, these factors are "collinear."

Previous scholarship on the political effects of Spanish- versus English-language communication has attempted to disentangle language and content. In their study of Spanish- and English-language news sources, Abrajano and Singh (2009) conclude that content is the dominant causal factor. They write, "To be clear, *where* Latinos receive their news is crucial not because of the actual language of communication, but because the source (English or Spanish) is indicative of the goals of the news organization, and their subsequent decisions on how to discuss a particular issue" (2, emphasis in original).

Observational research on the effects of Spanish-language appeals on voter turnout generally finds an effect of language over and above content. Soto and Merolla (2006) compared the 2000 election turnout rates of Latino survey respondents, finding that those who reside in places that received higher doses of Spanish-language advertisements were more likely to vote. Using a similar research design with a different source of survey respondents, Barreto et al. (2011) find that survey respondents who reported being contacted by Latino campaign workers were more likely to vote than those contacted by non-Latinos. Comparing voter turnout for Latinos in districts satisfying voting mandates under the revised Voting Rights Act with those in districts that did not, Jones-Correa (2005) finds that Latinos residing in areas where Spanish-language voting materials were made available were more likely to have voted than those living in jurisdictions without these linguistic accommodations. These results are consistent with other studies that suggest language is most likely to shape political behavior when proficiency in English is limited (Hopkins 2011; Parkin and Zlotnick 2011). Employing a regression discontinuity design, Hopkins found, for example, that Spanish-language ballots have a strong impact on Latinos with limited proficiency in English, increasing turnout by 11 percentage points on average.

By contrast, the two randomized Get-Out-The-Vote experiments that explicitly randomize the language of contact (Abrajano and Panagopoulos 2011; Binder et al. 2013) come to different conclusions. Abrajano and Panagopoulos (2011) find that Spanish-language GOTV appeals were *less* effective than their otherwise identical English-language counterparts, even among subjects whose primary language is Spanish. These authors offer two

possible explanations for the negative effect of the Spanish-language treatment relative to the English-language treatment, namely, that Spanish may trigger a "language-related inferiority complex" (Koslow et al. 1994) or that English may be more effective because it is viewed as the language of official communication (Valdés and Seoane 1995). Binder et al. (2013) come to similar conclusions regarding the ineffectiveness of a Spanish-language appeal among both English- and Spanish-dominant Latinos.

The specific language effect that we investigate in the present study is the possibly persuasive effect of Spanish-language appeals on candidate preference. Previous scholarship generally finds a positive effect of Spanish-language appeals, at least among Latinos. Barreto and Nuño (2011) find that Latino voters who were contacted by a Latino Republican were more likely to support President Bush and demonstrate support for conservative political issues than those contacted by a non-Latino Republican. A Latino Decisions study, for example, examined whether recent Spanish-language immigration ads run by the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) had any effect on the political views among Latino voters. Comparing responses between Latino voters who regularly watch television in Spanish and recalled seeing the ads to those that were not exposed to the ads, the study found that a large majority of Latinos who were exposed to the Spanish-language ads had a negative evaluation of the Republican Party and that Latino voters who saw the ads were twice as likely to describe the Republican Party as "anti-immigrant" than those who did not (Barreto 2013). Abrajano (2010) finds a similar pattern: Latino voters exposed to more of Gore or Kerry's Spanish-language ads were more likely to vote for these candidates. These observational studies support the contention that use of Spanish can increase candidates' appeal within the Latino community.

In the present study, we randomize the language in which candidates appeal to voters in a controlled experimental context. We exploit a relatively rare occurrence: candidates for national office who produce the exact same campaign advertisements in both Spanish and English. While many candidates have released ads in both English and Spanish, the vast majority of ads produced in one language have no counterparts in the other language. For example, when ads are otherwise parallel, the Spanish-language version is often overdubbed by a voice actor who speaks about the candidate in the third person, whereas the English-language version is in the first person, spoken by the candidate. Further, Spanish-language ads often contain less policy content than English-language ads (Abrajano 2010, Chapter 4).

We count ourselves lucky that we were able to find three candidates who produced otherwise identical versions of the same advertisement in both English and Spanish: Jeb Bush

running in the 2016 Republican Presidential Primary, Democrat Filemon Vela running for Congress in Texas's 34th district, and Republican Mike Coffman running for Congress in Colorado's 6th District. In all six advertisements, the candidate speaks directly to the camera and in his own voice; the text of the ads, the B-roll, and the background music are all equivalent across versions. All three candidates speak excellent Spanish. The external validity of our experiment is bolstered by the fact that we use real, rather than hypothetical, candidates. Furthermore, the Bush experiment was conducted the day before the New Hampshire primary, and the Congressional candidate experiments were conducted in advance of the 2016 general election. We contend that our survey responses therefore capture realistic candidate appraisals with clear, practical electoral implications.

Our subject pools were furnished by Lucid, a firm that provides internet samples that can be demographically targeted on the front end. In the Bush experiment, we recruited 2,866 self-identified bilinguals, 1,862 of whom passed a simple quiz in both languages.[1] In the Vela and Coffman experiments, we similarly recruited a sample of 2,233 bilinguals, of whom 1,681 passed the quiz. In addition to this bilingual sample, we also recruited an English-speaking Monolingual sample of subjects into the Vela and Coffman experiments. We can therefore answer two questions well. First, does the Spanish-language ad increase candidate support over and above the English-language ad among bilinguals? Second, does the Spanish-language ad have unintended consequences if it is "mistargeted" to English-only monolinguals?

To preview our results, we find that the Spanish-language ad increases the probability that bilingual subjects would vote for Bush by approximately 5 percentage points in a hypothetical general election matchup against Hillary Clinton. We find similar effects for Vela, the Democratic congressional candidate, but not for Coffman, the Republican congressional candidate. With respect to our second question, the evidence is overwhelmingly clear that monolingual Americans severely punish candidates who mistarget them with Spanish-language ads.

1 Theory and Scope Conditions

Existing theory suggests two main mechanisms through which language may exert its persuasive impact: priming of subjects' predispositions and reinforcement of social identities. Some evidence for a priming hypothesis has been found in consumer research. Carroll and Luna

[1]We obtained the text of the quiz via personal communication with the authors of Keysar et al. (2012).

(2011) found that subjects gave higher consumer satisfaction ratings to advertised products that used words in Spanish than to those ads only in English. Luna et al. (2008) suggest that attitudinal differences in response to bilingual messaging emerge because language activates distinct cognitive processes and mental frames that make certain considerations and identities more salient even in response to the same information. Marketing research on the effects of product advertising to linguistic subpopulations suggests that enhanced affect results from message-recipients' positive perceptions about the source (Carroll and Luna 2011; Koslow et al. 1994) and that subjects respond more favorably to such advertisements (Luna and Peracchio 2001).

Social identity theory suggests that individuals seek to categorize themselves and others based on shared characteristics (Tajfel 1981). These in-group and out-group distinctions have a powerful influence on attitude formation; for example, this effect was demonstrated in studies where people expressed positive feelings toward their own group or were more likely to adopt and be persuaded by arguments when made by fellow group members (Mackie and Cooper 1984). Testing group-based thinking and the moderating strengths of cultural differences on attitudes, Hopkins (2014, 2015) finds that brief exposure to Spanish induces anti-immigrant hostility among non-Latino white respondents. Language is not politically neutral: emerging research in linguistics suggests that political biases such as partisanship can even be encoded in word pronunciation (Hall-Lew et al. 2010). Consistent with this literature, we posit that the choice of language highlights the intended audience, concurrently communicating the ideologies and identities associated with that group membership. In essence, we argue that for bilinguals, Spanish-language political appeals are persuasive because they highlight the speaker's affinity with and respect for the Latino in-group, however that may be constructed for the voter (Monforti et al. 2013).

A brief formalization using potential outcomes notation (Rubin 1974) will help to clarify our predictions, as they depend crucially on whether subjects speak Spanish, English, both, or neither. $Y_i(0)$ is the outcome that subject i would express in the absence of any intervention on our part. $Y_i(E)$ and $Y_i(S)$ are the outcomes that subject i would express if exposed to the English- or Spanish-language treatment, respectively. We can decompose $Y_i(E)$ and $Y_i(S)$ into two parts: $Y_i(0)$ and an individual treatment effect. For subjects who speak English, the individual treatment effect of the English-language ad is $\tau_{i,E}$. Similarly, for subjects who speak Spanish, the effect of the Spanish-language ad is $\tau_{i,S}$. These effects are due to both the direct information about a candidate's quality as well as the indirect information that subjects may glean due to the candidate's choice of language. The subjects

Table 1: Potential Outcomes of Four Subject Types

	Languages Spoken		Potential Outcomes		
Type	English	Spanish	$Y_i(0)$	$Y_i(E)$	$Y_i(S)$
Bilingual	1	1	$Y_i(0)$	$Y_i(0) + \tau_{i,E}$	$Y_i(0) + \tau_{i,S}$
Spanish Only	0	1	$Y_i(0)$	$Y_i(0) + \gamma_{i,E}$	$Y_i(0) + \tau_{i,S}$
English Only	1	0	$Y_i(0)$	$Y_i(0) + \tau_{i,E}$	$Y_i(0) + \gamma_{i,S}$
Non-English, Non-Spanish Speaker	0	0	$Y_i(0)$	$Y_i(0) + \gamma_{i,E}$	$Y_i(0) + \gamma_{i,S}$

who do not speak or understand the language in an ad may also express different outcomes depending on which condition they are in.[2] However, this effect will reflect only the information that subjects obtain via indirect channels because subjects cannot understand the direct information about candidate quality. For this reason, in Table 1, these effects are indicated as $\gamma_{i,E}$ and $\gamma_{i,S}$, for the effects of the English- and Spanish-language ads, among those who do not speak that respective language.

Our main estimand is $E[\tau_{i,S} - \tau_{i,E}]$, the average difference in the effects of the Spanish-language ad versus the English ad. As can be seen in Table 1, this quantity can only be obtained among bilinguals. Bilinguals are a heterogeneous group. Some speak Spanish at home and English at work and school; some are native English speakers who use Spanish in their daily lives. While we expect the political preferences within this group to vary in interesting and complex ways, our theoretical prediction about the *treatment effects* pertains to all bilingual Latinos. Our main hypothesis is that $E[\tau_{i,S} - \tau_{i,E}]$ will be positive, that is, we predict that seeing the Spanish advertisement will increase the likelihood that a bilingual subject will report higher support for the advertising candidate.

A second estimand is $E[\gamma_{i,S} - \tau_{i,E}]$. This estimand includes the bewilderment at not understanding what is being communicated in the ad as well as any affective associations the subject may have with the Spanish-language, and can only be estimated among English-speaking monolinguals. Our expectation, in line with Hersh and Schaffner (2013), is that $E[\gamma_{i,S} - \tau_{i,E}]$ will be negative for English-speaking monolinguals. We note that this estimand does not capture the pure effect of language per se, because both language and the content that is successfully communicated by the advertisement differ across the two versions. This estimand captures the effect of mistargeting constituents with the "wrong" language and

[2]For example, Enos (2014) reports the results of an experiment in which the attitudes of Bostonians were affected by the presence of Spanish-speaking confederates despite presumably not being able to understand Spanish.

therefore enriches our understanding of candidates' strategic environment.

2 Experimental Design

The definitions of our two causal estimands indicate that we have two separate populations of interest: bilingual Americans and English-speaking monolingual Americans.

2.1 Sampling Bilinguals

Obtaining a representative sample of American bilinguals is very costly for two main reasons. First, no comprehensive list of bilinguals exists from which to draw a random sample. Second, sampling from all Americans and then conditioning the resulting respondents on being bilingual is prohibitively expensive, as bilinguals make up a relatively small share of the national population. We turn instead to a convenience sample of bilinguals obtained from an online exchange for survey responses. This exchange is maintained by Lucid, a market research firm. Coppock and McClellan (2017) show that the demographic and political profiles of Lucid subjects are very similar to equivalent national figures and successfully replicate a number of survey experiments, showing that experiments conducted on Lucid's platform yield results that are substantively similar to those obtained on national samples. Due to an extraordinarily high volume of survey respondents who pass through the exchange (approximately 350,000 unique IP addresses per day), Lucid's exchange is an especially attractive tool for obtaining a large sample of subjects who are relatively rare in the population, in this case, bilingual Hispanics/Latinos.

We obtained our online convenience sample of bilinguals by screening for two criteria: self-identification as Hispanic or Latino according to the standard U.S. Census question and an answer of "Sí" to the following question that included elements in both English and Spanish: "Do you consider yourself to be bilingual in English and Spanish? Es decir, es capaz de hablar y entender español e inglés? (Sí / No)."[3] In our first experiment (Bush), we collected responses from 2,866 self-identified Latinos, of which 1,862 passed a language

[3]In English, the second half of the question reads, "That is, are you able to speak and understand Spanish and English?"

quiz in both Spanish and English, the full text of which is presented in the appendix.[4] We consider these 1,862 who passed the quiz to be "bilinguals." In our second and third experiments (Vela and Coffman), we obtained responses from 2,233 self-identified bilinguals, 1,681 of whom passed the quiz.

Table 2 compares the demographics of bilingual Lucid subjects in the Bush experiment with those of bilingual respondents in the 2006 Latino National Survey (LNS) and the 2012 Pew National Survey of Latinos.[5] On average, Lucid bilinguals are more female, slightly better educated, and slightly higher income than either the LNS or Pew bilinguals. The age profile on Lucid is similar to the LNS and lower than Pew. With respect to ancestry, Lucid yields strong numbers of those from Mexican, Cuban, and other Hispanic backgrounds. Unfortunately, the demographic data supplied by Lucid did not disaggregate backgrounds with sufficient granularity, so Latinos from Puerto Rico are grouped in the residual categories. We aggregated the more finely grained Pew and LNS data into these same categories for ease of comparison. Relative to Pew and the LNS, the Lucid sample includes fewer bilinguals of Mexican ancestry.

Table 2 confirms that our sample is different from the national population of bilinguals. Whether or not our results generalize to the population does not depend on these differences; what matters is whether the *treatment effects* differ between our sample and the population. Recent research comparing survey experimental findings obtained on convenience and national samples has found a high degree of correspondence across samples (Mullinix et al. 2015; Coppock 2017). For this reason, we expect (but cannot confirm) that the results that we measure in the sample will generalize to the national population of bilinguals.

2.2 Sampling English-speaking Monolinguals

Obtaining a sample of English-speaking Monolinguals is relatively easier. Our sample is also drawn from Lucid, which quota samples subjects to be approximately representative of the US national population. At the end of the survey, we also administered our language quiz

[4]The language quiz is a two-question summary of linguistic ability in two languages; we are sure to have both false positives and false negatives. The quiz was administered post-treatmeant. If, as seems plausible, performance on the language quiz is unmoved by our treatments, then we induce no bias by conditioning our analysis on passing the quiz. For a discussion of the biases associated with dropping subjects based on a post-treatment manipulation check, see Aronow et al. (2017).

[5]For the Latino National Survey, bilinguals are defined as subjects who took the survey in Spanish (English) who said they could carry on a conversation in English (Spanish) "pretty well" or "very well." The Pew survey codes subjects as bilingual depending on their answers to a series of language proficiency questions.

Table 2: Comparison of Lucid Bilinguals to National Sample Bilinguals

	Lucid	LNS	Pew
Female	0.70 (0.01)	0.52 (0.01)	0.46 (0.02)
Age	34.80 (0.30)	33.78 (0.29)	40.11 (0.84)
Education (5 levels)	3.01 (0.03)	2.49 (0.02)	2.45 (0.05)
Mexican	0.49 (0.01)	0.67 (0.01)	0.59 (0.02)
Cuban	0.07 (0.01)	0.04 (0.00)	0.05 (0.01)
Other Hispanic	0.44 (0.01)	0.29 (0.01)	0.36 (0.02)
Income (7 levels)	4.11 (0.05)	4.06 (0.04)	
Income (9 levels)	4.49 (0.05)		4.09 (0.11)
N	1,862	4,184	715

Entries for LNS and PEW are weighted means.
Standard errors are in parentheses.

to these subjects. Of the 2,230 "nationally-representative" subjects supplied to us, 1,344 did not pass the language quiz. These subjects constitute our monolingual sample. Because Lucid does not sample subjects from an explicit sampling frame, and because we apply this language quiz screen, we consider this sample to be a convenience sample as well.

2.3 Experimental Treatments

We conducted three separate experiments, each of which followed very similar designs. Experiment 1 was conducted on February 8th, 2016, among 1,862 bilinguals the day before the New Hampshire primary. We employed a 2x2 factorial design in which the first factor was a Spanish- or English-language advertisement. The second factor is the language of the survey itself. Half the subjects took the entire survey in English, while the other half took the entire survey in Spanish. Experiments 2 and 3 were conducted in October 2016 among 1,681 bilinguals and 1,344 monolinguals. As in Experiment 1, bilinguals could be assigned to take the survey in English or Spanish, but for obvious reasons, monolinguals took the survey exclusively in English. The same set of subjects participated in Experiments 2 and 3; the order in which they participated in each experiment was randomized. Table 3 summarizes the number of subjects in each condition. The number of subjects in each cell is consistent with random assignment ($\chi^2 = 7.3$, $df = 7$, $p = 0.40$).

As mentioned above, the two versions of each ad were nearly identical in terms of visuals, spoken content, and length. Table 4 shows the exact transcripts of each ad. With very few exceptions, the Spanish and English versions are word-for-word translations of one another.

Table 3: Design of Experiments 1, 2, and 3

	English-language Ad	Spanish-language Ad
Experiment 1: Jeb Bush, Bilingual Sample		
English-Language Survey	462	488
Spanish-Language Survey	452	460
Experiment 2: Filemon Vela, Bilingual Sample		
English-Language Survey	437	442
Spanish-Language Survey	420	382
Experiment 2: Filemon Vela, Monolingual Sample		
English-Language Survey	675	669
Experiment 3: Mike Coffman, Bilingual Sample		
English-Language Survey	455	424
Spanish-Language Survey	421	381
Experiment 3: Mike Coffman, Monolingual Sample		
English-Language Survey	711	633

Translation is an imperfect art. We grant that some text might have very slight differences in political emphasis. For example, in his English-language ad, Mike Coffman promises to "hold [Hillary Clinton] accountable every step of the way." In the Spanish-language version, he promises to "hare que su administración diga la verdad." [ensure that her administration tells the truth] If these subtle differences are consequential for subjects' post-treatment survey responses, they constitute very small excludability violations (Gerber and Green 2012). As a statistical matter, we cannot rule out that any differences in outcomes might be due to slight slippage in content across the two versions of the ads. We appeal, therefore, to a broader reading of each version of the ad; they are very similar in nearly every dimension save language.

Bilingual subjects could also be randomly assigned to take the survey in either English or Spanish. We introduced this design element in order to answer a series of ancillary questions. First, within each advertisement condition, are the answers to our dependent variables similar whether the questions are in Spanish or in English? Indeed, we are in a position to test the supposition in Pérez (2016) that, among bilinguals, taking a survey in Spanish increases subjects' reports of linked fate. Second, we are concerned that the Spanish-language ad may appear less effective than it actually is, because switching between languages (treatment video to survey question) may be cognitively taxing. For this reason,

Table 4: Advertisement Treatments

	English-language Ad	Spanish-language Ad
Experiment 1: Jeb Bush (White Republican running in 2016 Presidential primary)		
Title	Jeb: Greatest Century	Jeb: Listo Para Ser Su Líder
Length	1:04 min	1:12 min
Link	https://www.youtube.com/watch?v=43z_L64GCrs	https://www.youtube.com/watch?v=iwW3Ak_cUEE
Transcript	I'm proud of what we accomplished in Florida; proud we're able to make a difference to change lives. We grew our economy and led the nation in job growth; defended life and protected women from domestic violence; eliminated waste and balanced budgets; reformed schools and gave every child an opportunity. We led, we reformed, we got results. That's what's missing from Washington. The DC crowd talks about what's wrong with America, I see what's right. They talk about problems, I see solutions. I see hard working men and women who are ready to rise; children who are ready to learn; entrepreneurs who are ready to innovate; immigrants who are ready to contribute; America's bravest who are ready to defend. I see a great country on the verge of its greatest century and I'm ready to lead.	Estoy muy orgulloso de lo que logramos en Florida; orgulloso de haber hecho una diferencia en el estado; de haber mejorado vidas; crecimos nuestra economía y fuimos líderes en la creación de empleos; defendimos el derecho a la vida y protegimos a las mujeres contra la violencia doméstica; eliminamos despilfarros y balanceamos presupuestos; reformamos la educación y le dimos oportunidades a cada niño; lideramos, reformamos, logramos resultados; en Washington solo se enfocan en lo que anda mal. Yo veo lo que está bien. Ellos hablan de los problemas. Yo veo las soluciones. Veo mujeres y hombres trabajadores listos para salir adelante. Niños listos para aprender. Emprendedores listos para innovar. Inmigrantes dispuestos a trabajar. Y los más valientes del país, listos para defendernos. Cuando miro hacia el futuro veo una gran nación a punto de comenzar su mejor siglo y yo estoy listo para ser su líder.
Experiment 2: Filemon Vela (Latino Democrat running in 2016 Congressional general election)		
Title	Parents	Los Padres
Length	0:30 min	0:30 min
Link	https://www.youtube.com/watch?v=sWntXjzyDQ8	https://www.youtube.com/watch?v=R7DPMyEGcWM
Transcript	I'm Filemon Vela, and I approve this message. My parents taught me to always be honest, work hard, and do what's right. They dedicated their lives to public service and to helping people. I'm proud to share those beliefs. I've dedicated my life to fighting for people and making sure their voices are heard. I'm not a politician, but if I'm elected to Congress, I give you my word, I'll dedicate all of my energy and giving you the representation and the voice you deserve in Washington. I'm Filemon Vela and I want to be your next US Congressman.	Yo soy Filemon Vela y yo apruebo este mensaje. Mis padres dedicaron su vida al servicio público y ayudar a la gente. Me siento orgulloso de compartir esa conección. Yo he dedicado mi vida a pelear por la gente, asegurándome que sus voces sean escuchadas. No soy un político pero si soy elegido para el Congreso, tienes mi palabra que voy a dedicar toda mi energía para representar la voz que mereces en Washington. Soy Filemon Vela y quiero ser congresista de los EEUU.
Experiment 3: Mike Coffman (White Republican running in 2016 Congressional general election)		
Title	Country First	Country First (en Español)
Length	0:30 min	0:30 min
Link	https://www.youtube.com/watch?v=dA8Yv2tJQfY	https://www.youtube.com/watch?v=XoNJaYLBXMg
Transcript	People ask me, "What do you think about Trump?" Honestly, I don't care for him much, and I certainly don't trust Hillary. I'm a Marine. For me, country comes first. My duty is always to you. So if Donald Trump is President, I'll stand up to him. Plain and simple. And if Hillary wins, I'll hold her accountable every step of the way. I'm Mike Coffman, and I approve this message. My job is clear: work hard and serve you. That's what I'll do.	La gente me pregunta, "Qué crees de Trump?" Honestamente, él no me gusta mucho y no confío en Hillary. Yo soy un Marine. Para mí, mi país siempre viene primero. Entonces, si Donald Trump es el Presidente, yo le hago frente. Si gana Hillary Clinton, haré que su administración diga la verdad. Yo soy Mike Coffman, y apruebo este mensaje. Quien gane, mi deber es a ustedes.

we randomize the language of the interview. If we find no interaction effect between the language of the interview and the language of the advertisements, we can conclude that no such process is at work.

2.4 Outcome measures

Our five outcome measures are shown below. We present the English-language versions here; subjects assigned to the Spanish-language survey saw these questions in Spanish, the full text of which is available in the appendix. Our main outcome measure is the candidate preference question, which is coded 1 if the respondent preferred the advertising candidate and 0 otherwise.[6]

Prefer Candidate in General

> Experiment 1: "If the 2016 election for President were being held today, and the candidates were Hillary Clinton the Democrat and Jeb Bush the Republican, for whom would you vote?" [First two response options in random order: Jeb Bush, Hillary Clinton, Don't know.]
>
> Experiment 2: "If the 2016 congressional elections were being held today and you were a voter in the district where Filemon Vela is running, for whom would you vote?" [Democrat Filemon Vela, Republican Rey Gonzalez Jr., Don't know]
>
> Experiment 3: "If the 2016 congressional elections were being held today and you were a voter in the district where Mike Coffman is running, for whom would you vote?" [Republican Mike Coffman, Democrat Morgan Carroll, Don't know]

We group these next three questions as intermediate outcomes, that is, the main mechanisms by which the treatment effects the preference outcomes. We will not conduct formal mediation analyses because the very stringent required assumption of sequential ignorability is unlikely to be satisfied in this experiment (Imai et al. 2010). However, we expect that any increase in declared electoral preference would be mediated at least in part by how much the Spanish-language ad moved the attitudes measured by these questions:

> *Like Candidate* "Do you like [Candidate], dislike him, or neither like nor dislike him?" If *Like him*: "Do you like him a great deal, a moderate amount, or a little?" If *Dislike him*: "Do you dislike him a great deal, a moderate amount, or a little?" [Branching question mapped into scale from 1 to 7.]

[6] In the Bush experiment, we also asked about electoral preference in the Primary; we omit the analysis of this dependent variable to maintain comparability across studies. The effects of the treatments on Bush's electoral support in the primary were slightly stronger than the effects in the general.

Candidate Cares Do you think [Candidate] is someone who cares about people like you or someone who doesn't care about people like you? [Response options: 1: Cares about people like me, 0: Doesn't care about people like me.]

Confidence in Candidate How confident are you in [Candidate]'s ability to make the right decisions about illegal immigration—are you very confident, somewhat confident, not too confident, or not at all confident? [Scale from 1 to 4, where 4 indicates greater confidence.]

Finally, we include a measure of linked fate as a secondary outcome. In line with predictions from Pérez (2016), we expect that this outcome will respond to taking the survey in Spanish more than to seeing the Spanish-language advertisement.

Linked Fate Do you think that what happens generally to Hispanics and Latinos in this country will have something to do with what happens in your life? Will it affect you a lot, some, a little or not at all? [Scale from 1 to 4, where 4 indicates "a lot."]

We will model outcomes according to Equation 1, where $Z_{i,Ad}$ is an indicator for seeing the Spanish-language ad and $Z_{i,Survey}$ is an indicator for taking the survey in Spanish. Because both $Z_{i,Ad}$ and $Z_{i,Survey}$ are randomly assigned, they are by design independent of subjects' idiosyncratic error terms, ϵ_i. Our main estimand of interest is β_1, the average treatment effect of the Spanish ad versus the English ad (averaged over both possible values of $Z_{i,Survey}$). We are also interested in β_2, the average treatment effect of taking the survey in Spanish versus English (only estimated among bilinguals). We will estimate β_1 and β_2 via Ordinary Least Squares (OLS). Some analysts prefer to analyze binary outcomes with nonlinear models such as logit or probit. We choose not to do this because our inferential target is the Average Treatment Effect (ATE), which is consistently estimated by OLS and has the virtue of a direct interpretation in terms of a percentage point change in the probability of choosing one option over the other (Gerber and Green 2012). Our substantive results do not depend on this choice (see Online Appendix C for logistic regression tables equivalent to Tables 5 and 7).

$$Y_i = \beta_0 + \beta_1 Z_{i,Ad} + \beta_2 Z_{i,Survey} + \epsilon_i \tag{1}$$

This exact specification was preregistered at `egap.org` prior to the allocation of treatments and the collection of any data. With the exception of the exploratory analysis of the heterogeneous effects of treatment by respondent partisanship, all of the analyses that we report in the following section were specified in our preanalysis plan.

3 Results

In this section, we present four sets of results: the effects of our treatments on candidate preferences, the effects on intermediate outcomes that may indicate the mechanisms through which the treatments affect preferences, the heterogeneous effects of treatment by partisanship, and the effects of the language-of-interview on feelings of linked fate. Due to item non-response, the number of subjects who answer each question changes very slightly; formal tests indicate that item non-response is unlikely to be related to treatment assignment.

3.1 Effects on Candidate Preference

Table 5 shows our main results in all three experiments. We turn our attention first to columns 1, 2, and 4, which present estimates of Equation 1 among our bilingual samples. In column 1 we estimate that, relative to subjects who saw the English-language ad, bilingual subjects who saw the Spanish-language ad were 4.9 percentage points (SE: 2.3 percentage points) more likely to support Bush in the general election. We obtain the identical point estimate in our second experiment: the effect on bilinguals' general election support for Filemon Vela is also estimated to be 4.9 percentage points (SE: 2.4 percentage points). Both estimates are statistically significant at conventional levels. However, this effect does not appear to extend to Mike Coffman, the Republican congressional candidate, who received no electoral reward from bilinguals who saw his Spanish-language ad. We can only speculate as to the reasons why. The explanation cannot lie in his being White or being Republican, as Jeb Bush shares both those characteristics and the Spanish-language ad worked well for him. It is possible that Jeb Bush's Spanish-language appeals are seen as more authentic, perhaps because it is well-known that Bush is married to a woman of Mexican heritage or because Bush is a more proficient Spanish speaker. We nevertheless conclude from this section of the experiment that the Spanish-language appeals – even holding content constant by design – can increase support for candidates among bilinguals. This effect does not hold for all candidates, though we do not have a definitive explanation for what it is about the Spanish Coffman ad that does not inspire support over and above his English ad.

Turning next to the effect of the language of survey, we see that taking the survey in Spanish or in English did not influence electoral support for either Bush or Coffman among bilingual subjects. Interestingly, we see in column 2 of Table 5 that being assigned to take the survey in Spanish increased support for Filemon Vela by an astounding 7.3 percentage points (SE: 2.4 percentage points). We underline that this effect has nothing to do with any

information provided by the candidate; it is due exclusively to the language in which subjects took the survey. This result is probably best explained by a theory of identity priming in which taking the survey in Spanish highlights our bilingual subjects' Latino identity; this in turn increases support for Vela, a Latino candidate. As we will show below, taking political surveys in Spanish does increase bilinguals' sense of linked fate. We speculate, but cannot confirm, that an increase in linked fate may mediate this observed increase in support for Vela.

Lastly, in columns 3 and 5, we consider the effects of the Spanish-language ad among English-speaking monolinguals. For Vela, the average effect is estimated to be negative two percentage points, though this estimate cannot be distinguished from zero. For Coffman, however, the effect is devastating. Relative to seeing the ad in English, support for Coffman decreases by 18.7 percentage points (SE: 2.6 percentage points) when subjects see the ad in Spanish, a language they do not speak. This very large negative treatment cannot be explained by a high baseline or other ceiling effects, as Coffman's support in the control group was 51%. We will return to this difference when we consider the heterogeneous effects of treatment by respondent partisanship below.

Table 5: Effect of Spanish-language Ad on General Election Support

	Bush: General Election	Vela: General Election		Coffman: General Election	
	(1)	(2)	(3)	(4)	(5)
Spanish-language Ad	0.049**	0.049**	−0.020	0.003	−0.187***
	(0.023)	(0.024)	(0.026)	(0.024)	(0.026)
Spanish-language Survey	0.005	0.073***		−0.028	
	(0.023)	(0.024)		(0.024)	
Constant (Control Mean)	0.449	0.535	0.366	0.384	0.513
	(0.020)	(0.021)	(0.019)	(0.020)	(0.019)
Sample	Bilingual	Bilingual	Monolingual	Bilingual	Monolingual
N	1,849	1,680	1,343	1,681	1,343

*p < .1; **p < .05; ***p < .01
HC2 robust standard errors are in parentheses.

3.2 Effects on Mechanisms

Tables 6, 7, and 8 display the estimated effects of treatment on our three intermediate outcomes, *Like Candidate*, *Candidate Cares* and *Confidence in Candidates*.

The Spanish-language ad causes bilingual subjects to like Bush somewhat more (0.167 points on a seven point scale, SE: 0.075 points), but has no apparent average effect on

whether bilinguals like Vela or Coffman. Monolingual subjects, however, have a strongly negative reaction to both Vela's and Coffman's Spanish-language ad. These results suggest that (or at minimum do not contradict the notion that) the effects on electoral preference may be mediated by the extent to which subjects like candidates.

We also note that the Spanish survey itself increases how much subjects "like" Bush and Vela. The Spanish-language survey asks subjects "Qué apreciación" [what appreciation] they have for the candidates. It could be that the question subtly changes subjects' self-rating of their affect towards the candidates, namely, that for the same level of affect the Spanish-language measurement scale registers a value that is marginally higher than the English-language measurement. Alternatively, it could be that responding in Spanish activates a worldview that is mildly more appreciative of Bush and Vela. This is a fundamental challenge of translation. We cannot be sure whether observed differences are due to slight differences in meaning or the causal effect of thinking in one language versus another.

In Table 7, we report the effects of the treatments on whether the candidates "care about people like [the respondent]." We observe mildly positive effects among bilinguals on the order of 2 to 3 percentage points and massively negative effects among monolinguals – negative 15.2 percentage points (SE: 2.5 percentage points) for Vela and negative 15.5 percentage points (SE: 2.4 percentage points) for Coffman. The Spanish-language ad definitively decreases the extent to which monolingual subjects think the candidates care about people like them.

The last of our three intermediate outcomes is the confidence subjects have in the candidate to make the right decisions about illegal immigration. What constitutes the "right" decision on immigration is obviously defined relative to the subjects' own views on the question. In Table 8, we see a now-familiar pattern. The Spanish-language ad increases the confidence that bilingual subjects have in Bush and Vela and decreases the confidence that monolingual subjects have in Vela and Coffman, with the largest punishment reserved for Coffman.

Figure 1 presents the effect estimates of the Spanish-language ad on all outcomes graphically. Overall, we see small to moderate positive effects among the bilingual sample for Bush and Vela and strongly negative effects among the monolingual sample for both Vela and Coffman.

In the appendix, we report the interactive effects of the Spanish-language ad and the Spanish-language survey on all outcomes among our bilingual samples. Out of twelve opportunities, none of the interaction terms are significant at the 5% level. Two of the twelve

Table 6: Effect of Spanish-language Ad on Liking Candidate (1-7)

	Like Bush	Like Vela		Like Coffman	
	(1)	(2)	(3)	(4)	(5)
Spanish-language Ad	0.167**	0.068	−0.472***	0.019	−0.830***
	(0.075)	(0.067)	(0.070)	(0.077)	(0.074)
Spanish-language Survey	0.165**	0.149**		0.093	
	(0.075)	(0.067)		(0.078)	
Constant (Control Mean)	4.810	4.994	4.712	4.902	5.161
	(0.063)	(0.057)	(0.051)	(0.066)	(0.054)
Sample	Bilingual	Bilingual	Monolingual	Bilingual	Monolingual
N	1,862	1,680	1,341	1,680	1,342

*p < .1; **p < .05; ***p < .01
HC2 robust standard errors are in parentheses.

Table 7: Effect of Spanish-language Ad on Perceptions of Candidate Caring

	Bush Cares	Vela Cares		Coffman Cares	
	(1)	(2)	(3)	(4)	(5)
Spanish-language Ad	0.037*	0.018	−0.152***	0.035	−0.155***
	(0.020)	(0.017)	(0.025)	(0.021)	(0.024)
Spanish-language Survey	−0.035*	−0.024		−0.045**	
	(0.020)	(0.017)		(0.021)	
Constant (Control Mean)	0.734	0.865	0.780	0.744	0.815
	(0.018)	(0.014)	(0.016)	(0.018)	(0.015)
Sample	Bilingual	Bilingual	Monolingual	Bilingual	Monolingual
N	1,858	1,680	1,336	1,680	1,337

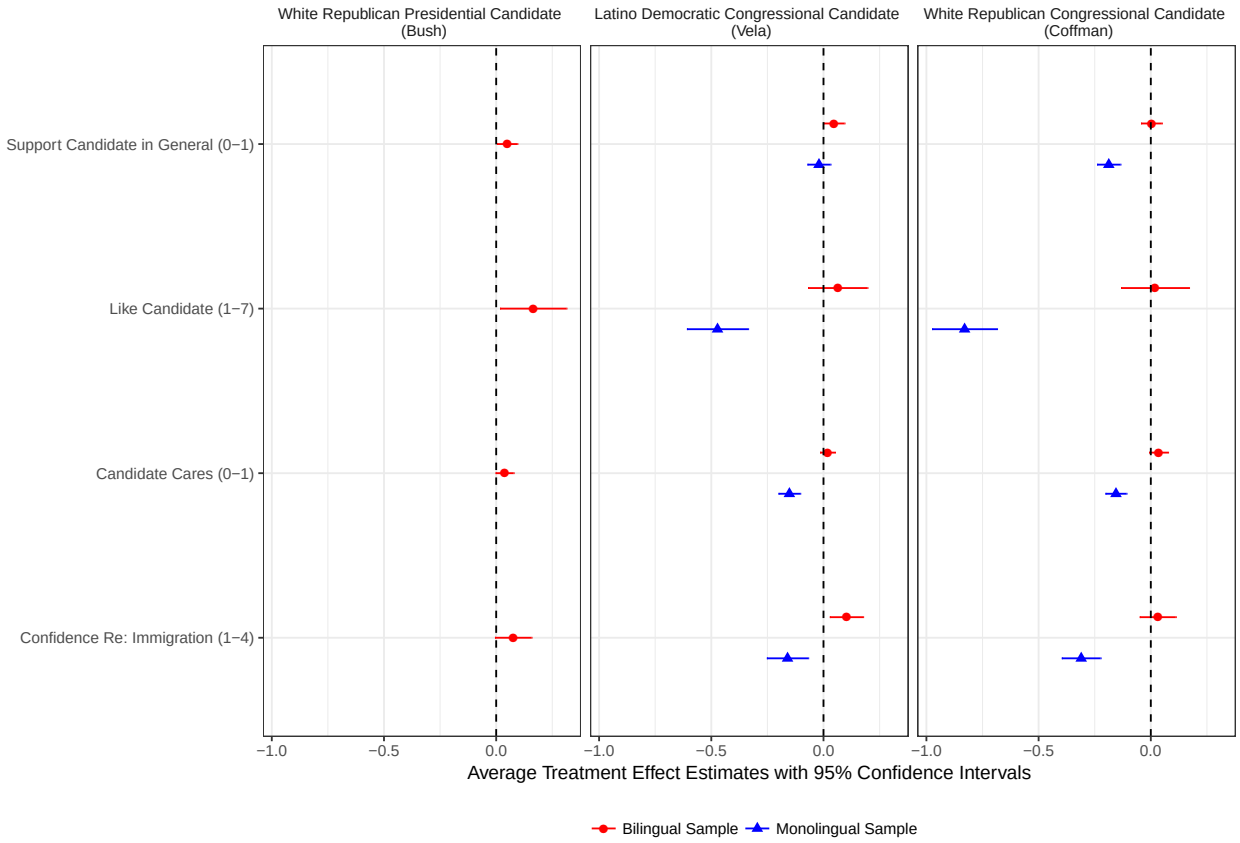
*p < .1; **p < .05; ***p < .01
HC2 robust standard errors are in parentheses.

Table 8: Effect of Spanish-language Ad on Confidence in Candidate to Make Right Decisions about Illegal Immigration

	Confidence in Bush	Confidence in Vela		Confidence in Coffman	
	(1)	(2)	(3)	(4)	(5)
Spanish-language Ad	0.076*	0.103***	−0.160***	0.030	−0.310***
	(0.042)	(0.038)	(0.047)	(0.041)	(0.044)
Spanish-language Survey	−0.018	0.011		−0.084**	
	(0.042)	(0.038)		(0.041)	
Constant (Control Mean)	1.768	1.915	1.730	1.814	1.966
	(0.035)	(0.033)	(0.031)	(0.034)	(0.029)
Sample	Bilingual	Bilingual	Monolingual	Bilingual	Monolingual
N	1,861	1,680	1,338	1,679	1,338

*p < .1; **p < .05; ***p < .01
HC2 robust standard errors are in parentheses.

Figure 1: Estimated Average Treatment Effects of Spanish- versus English-Language Advertisements on Four Outcomes



are significant at the 10% level. We interpret this pattern of evidence to indicate that whatever interactive effects there may be between the language of survey and language of the advertisement, they are small. Since the effect of the language-of-advertisement does not seem to depend on the language-of-survey, we speculate that the Spanish-language ad does not operate by priming political considerations that are more accessible in Spanish than in English (Pérez 2016).

3.3 Heterogeneous Effects by Respondent Partisanship

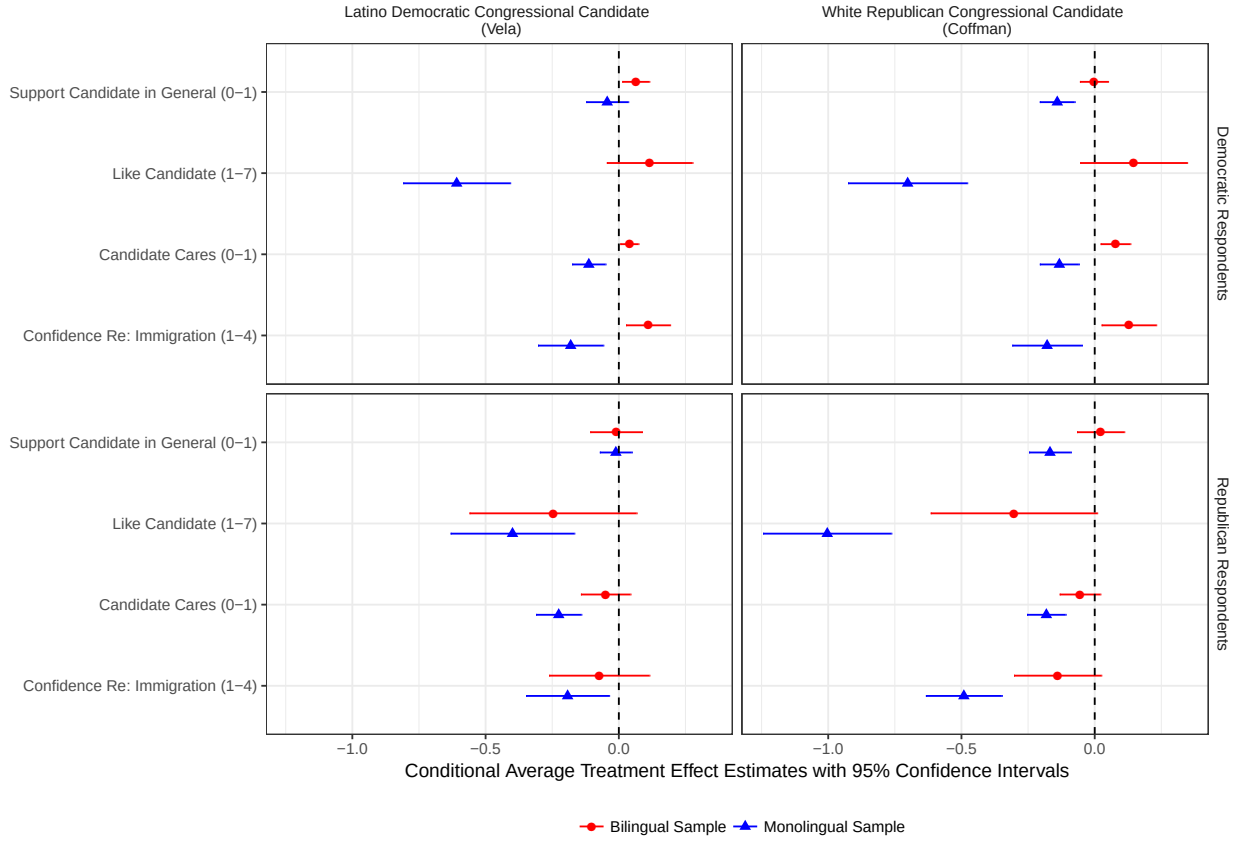
In this section, we consider the heterogeneous effects of treatment by respondent partisanship. As noted above, we saw a null average effect of language for Vela among monolinguals, but a very large and negative average effect for Coffman. We speculated that this difference may be due to the Republicans who form Coffman's base of support being especially averse to the Spanish-language ad. But fascinatingly, when we break down the sample by respondent partisanship, we do not see that this electoral punishment for Coffman is concentrated among Republican respondents.[7] Among Republicans, the effect is -16.8 percentage points (SE: 4.0 points) and among Democrats it is -14.1 points (SE: 3.3 points); the difference is not statistically significant. Our speculation that respondent partisanship may account for the differential effects for Vela and Coffman was not confirmed.

Figure 2 shows the estimated effects of treatment by party for all four dependent variables.[8] The figure reveals two striking patterns. First, among monolinguals, the pattern of treatment effects does *not* differ by respondent partisanship. Monolingual Republicans and Democrats alike respond negatively to the Spanish-language advertisement. By contrast, we do see some differences in treatment response by partisanship among the bilingual sample. Democratic bilinguals respond positively to both the Vela and Coffman Spanish-language Ads, whereas Republican bilinguals respond negatively to both. These analyses suggest that bilingual respondents view the use of Spanish through a partisan lens, possibly inferring the policies that politicians would pursue from their choice of language.

[7]The heterogeneous effects analyses reported in this section were not preregistered ex ante and are reported here as an attempt to explain our main findings through exploratory analysis. Unfortunately, respondent partisanship information is only available for the Vela and Coffman experiments.

[8]Corresponding regression tables are presented in the Appendix.

Figure 2: Heterogeneous Effects of Spanish-Language Advertisment on Four Outcomes, by Respondent Partisanship



3.4 Effects on Linked Fate

In this section, we turn to the effects of the treatments on subjects' sense of linked fate (Dawson 1994). While these effects are not our main focus, the design of our study allows us to replicate and extend previous results. In an observational study of the effects of language-of-interview, Pérez (2011) finds that subjects who interview in Spanish score 0.451 points higher on linked fate. In a footnote to an experimental investigation of language-of-interview effects, Pérez (2016, footnote 27) speculates, "Still, I would expect, but cannot test here, that language impacts peoples sense of group consciousness, linked fate, and/or solidarity insofar as these flow from a specific group identity." Our design allows us to confirm both the observational finding and Pérez's supposition in the context of a randomized experiment.

Table 9 presents the effects of taking the survey in Spanish on the linked fate question among bilinguals. The treatment raised linked fate by 0.24 scale points (SE: 0.04 points) on average in the Bush experiment and by 0.13 scale points (SE: 0.04 points) in the Vela and Coffman experiments. Both estimates are statistically significant. This finding is solidly in line with both the observational finding and with Pérez's theoretical expectation.

Table 9: Effect of Spanish-language Survey on Linked Fate

	Linked Fate	
	(1)	(2)
Spanish-language Survey	0.243***	0.131***
	(0.040)	(0.041)
Constant (Control Mean)	2.080	2.106
	(0.031)	(0.031)
Sample	Bilingual (Bush Experiment)	Bilingual (Vela and Coffman Experiments)
N	1,861	1,681

*p < .1; **p < .05; ***p < .01
HC2 robust standard errors are in parentheses.

4 Discussion

Drawing on evidence from three randomized survey experiments, we have shown that the language a politician uses to communicate with a bilingual audience has electoral consequences. In the Bush and Vela experiments, bilingual subjects who were randomly assigned to view a Spanish-language ad were approximately 5 percentage points more likely to support the advertising candidate. This effect occurs not because of the content of the ad, which is held

constant across the two versions, but because of the language used to communicate with the viewer. We believe that this effect occurs because viewers infer from the use of Spanish that Bush and Vela share an affinity with the Latino in-group. This same pattern of evidence extended to alternative measures such as liking the candidate or agreeing that he cares about "people like them."

We note that this effect does not automatically extend to any candidate. Mike Coffman, the White Republican Congressman running in Colorado, did not experience an overall increase in support, though it is true that Democratic bilingual subjects responded more positively to the Spanish-language appeal than did Republican bilingual subjects. A purely partisan explanation breaks, however, when we consider the plainly positive effects for Republican Jeb Bush. We speculate that Jeb Bush's use of Spanish may be viewed as a more authentic signal of in-group affinity than Coffman's (Monforti et al. 2013).

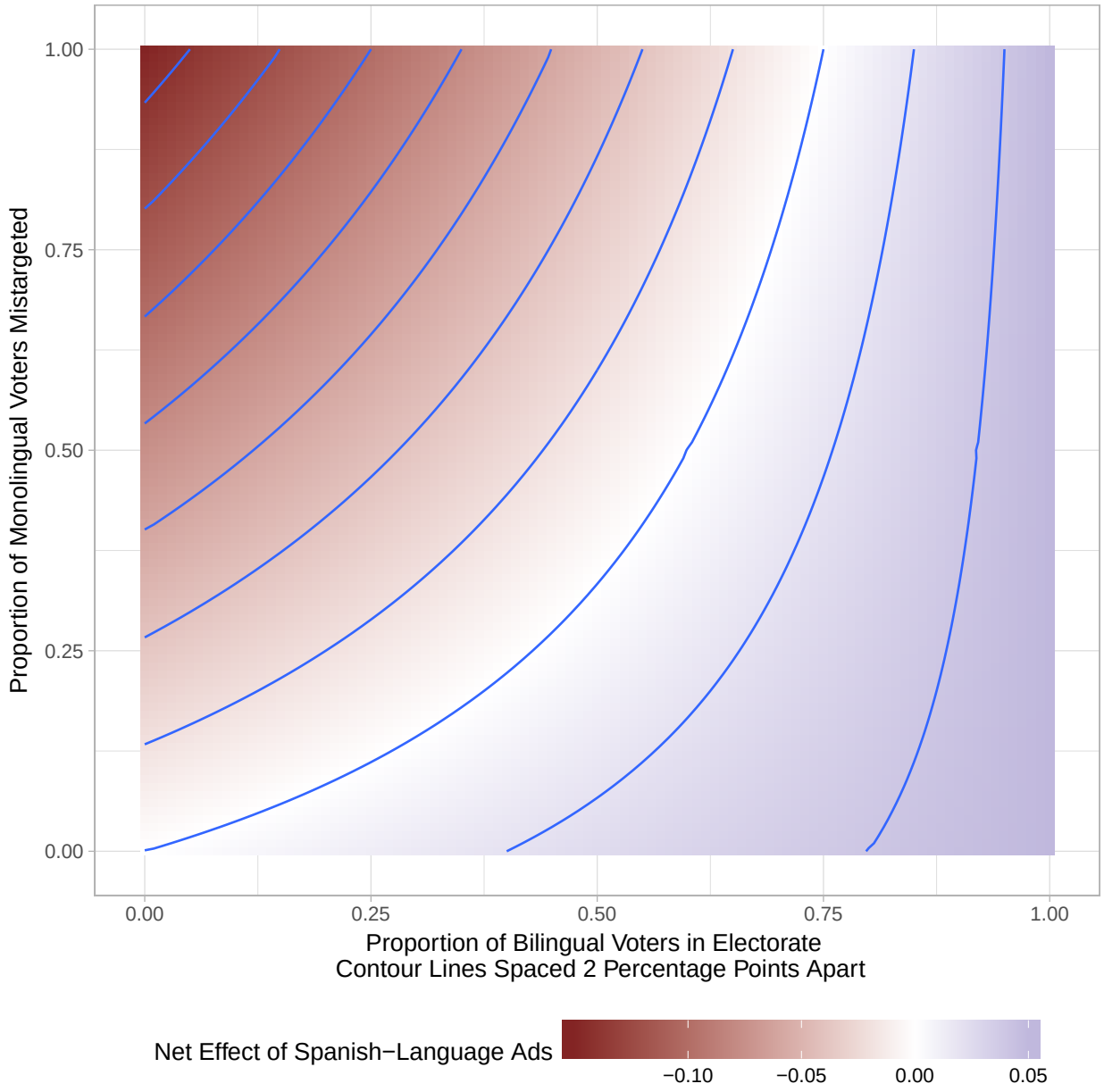
All of the advertisements used in these experiments were drawn from candidates' YouTube channels and shown to respondents in the context of an online survey. For this reason, we cannot learn from these experiments how the treatment effects might vary with electoral or communication context. For example, it could be that effects among bilinguals could be different depending on if a candidate is Latino or if the advertisements were delivered on a Spanish-language television channel.

We have learned from these experiments, however, that mistargeting can have disastrous consequences. For both Vela and Coffman, speaking Spanish to an English-speaking monolingual audience caused large decreases in both electoral support and in other affective evaluations of the candidate. These effects were largest for Coffman, who also enjoyed higher support than Vela in the English-language ad condition. It is possible that Coffman had more support to lose among people who respond especially negatively to the Spanish-language ad.

Our experiments can help calibrate our understanding of the tradeoff faced by politicians when they consider pursuing a multilingual campaign strategy. Suppose for the moment that the positive effect among bilinguals is 5 percentage points but the effect among English-only monolinguals is negative 15 percentage points. If the electorate is only composed of those groups, then the payoff to a multilingual campaign will depend on two parameters: the proportion of bilinguals in the electorate and the mistargeting risk, which we parameterize as the probability that a monolingual encounters the Spanish-language ad. Figure 3 shows our results. When the electorate is 0% or 100% bilingual, the respective strategies are clear: use English or Spanish exclusively. When bilinguals constitute an intermediate proportion of the electorate, the use of targeted ads is advisable, so long as the risk of mistargeting

is not too great. But because of the extreme downside risk of mistargeting relative to the possible benefit of correctly targeting bilingual constituents, candidates should be cautious when pursuing a Spanish-language advertising strategy, even when more than 50% of the constituency is bilingual.

Figure 3: Simulation: The Risks of Mistargeting



Finally, our study has implications for politicians who must appeal to multilingual constituencies. First and foremost, our study shows that without even changing the message,

changing the language of communication can have profound effects. In the United States, bilingual Americans respond more positively to Spanish than English; we find some support for the idea that this effect is mediated by language as a signal of in-group affinity. These findings may generalize to contexts in which in-group affinity with bilinguals can be signaled with the choice of one language over another. For example, we speculate that Canadian politicians aiming to reach bilingual constituencies would do well to address them in French rather than English. However, our study also shows that politicians must take care to tailor their messages to the correct linguistic communities. Mistargeting a monolingual community with the "wrong" language appears to have strongly negative consequences. This negative effect occurred among both Republican and Democratic monolingual subjects, frustrating "easy" explanations like monolingual subjects inferring candidates' preferred policies from their choice of language. We leave further exploration of the mechanisms that may underlie the negative effect of mistargeting to future work.

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