

Supplemental Information for “Se Habla Español:
Spanish-language Appeals and Candidate Evaluations in
the United States”

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November 7, 2022

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Sections I through T of the Supplemental Materials can be found in the APSR Dataverse at <https://doi.org/10.7910/DVN/GT15SC>.

A Prolific Study

A.1 Study Design

A.1.1 Candidate evaluation items

Below are the questions used to construct our candidate evaluation index. These measure the respondent’s overall impression of the candidate and allows us to capture whether the respondent had a positive or negative evaluation of the candidate. More information on the scale development can be found in Section D of the Appendix.

Table A.1: Candidate Evaluation Items

Candidate Evaluation Index Questions	
How likely is it that you would vote for [candidate] if he were running to represent your district in the state legislature?	Very unlikely (1) Somewhat unlikely (2) Neither likely nor unlikely (3) Somewhat likely (4) Very likely (5)
How much do you think you can trust [candidate]?	None at all (1) A little (2) A moderate amount (3) A lot (4) A great deal (5)
Based on what you have heard, do you like [candidate]? (Reverse coded)	Like a great deal (1) Like somewhat (2) Neither like nor dislike (3) Dislike somewhat (4) Dislike a great deal (5)
How well represented would you feel with [candidate] in office? (Reverse coded)	Extremely well (1) Very well (2) Moderately well (3) Slightly well (4) Not well at all (5)

A.1.2 Information on Audio Treatments

The audio clips are between 37 and 40 seconds in length. The audio for the English condition lasts 37 seconds, while the American-accented Spanish and native-like Spanish are 40 and 38

seconds long, respectively. Since most of the audio is identical in all three clips, the difference stems from how long it takes to say the two sentences in our manipulation.

A.2 Descriptive statistics of Prolific samples

A.2.1 Sample Sizes and Covariate Balance

We determined our sample size based on a power analysis from a pilot study conducted at the University of Texas El Paso. One-way ANOVA tests show there are no significant differences between treatment group means on any of these demographic variables. This shows that randomization was successful.

Table A.2: Demographic means by treatment group for Prolific Hispanic sample

Treatment group	n	Age	% Female	Education level	Income	Ideology	% Democrat	% Republican
Anglo candidate								
English	84	29.61	46.43	3.75	5.85	0.34	66.67	22.62
Non-native Spanish	84	27.88	45.68	3.80	5.75	0.30	69.05	17.86
Spanish	84	27.80	31.25	3.90	6.71	0.32	73.81	17.86
Hispanic candidate								
English	85	28.76	45.88	3.85	6.48	0.33	67.06	16.47
Non-native Spanish	84	30.18	46.34	3.73	6.35	0.33	69.05	19.05
Spanish	82	28.89	51.25	4.21	6.02	0.34	70.73	18.29

Table A.3: Demographic means by treatment group for Prolific Anglo sample

Treatment group	n	Age	% Female	Education level	Income	Ideology	% Democrat	% Republican
Anglo candidate								
English	83	31.95	46.84	3.87	7.12	0.31	66.27	27.71
Non-native Spanish	83	33.70	61.73	4.12	6.39	0.31	56.63	22.89
Spanish	85	33.07	51.25	4.19	6.60	0.31	65.88	24.71
Hispanic candidate								
English	84	34.21	48.19	4.18	6.26	0.38	59.52	26.19
Non-native Spanish	86	34.71	60.24	4.35	6.44	0.30	69.77	23.26
Spanish	84	33.11	43.21	4.21	6.07	0.30	64.29	21.43

A.2.2 Sample Demographics

To assess how representative our samples of Hispanic and Anglo respondents are, we compare them against their corresponding group in the 2014-2018 American Community Survey and the 2019 Cooperative Congressional Election Study on several demographic characteristics. Population estimates for Hispanics and Anglos for age, gender, and education are obtained with the census data; ideological self-placement and partisanship are estimated with the CCES data.

Our Hispanic and Anglo respondents are on average younger and more educated than the population estimates. As noted in the manuscript, both our samples are also more liberal and have a higher proportion of Democrats compared to population estimates.

Table A.4: Sample and sub-population demographics

	Hispanic data		Anglo data	
	Sample	Pop. estimate	Sample	Pop. estimate
Age	28.86	41.29	33.46	49.53
% Female	0.45	0.50	0.52	0.51
Education	3.87	2.51	4.15	3.48
Ideology (0-1)	0.33	0.47	0.32	0.54
% Democrat	0.69	0.55	0.64	0.39
% Republican	0.19	0.23	0.24	0.46

Data: Prolific Study (October 26-31, 2020);
2014-2018 American Community Survey;
2019 Cooperative Congressional Election Study.
Higher levels on the ideology measure indicate more conservatism.

A.2.3 Manipulation Checks

Our experimental manipulations seemed to have the intended effects. In both the Hispanic and Anglo samples, we see that the majority of respondents in our Spanish treatments selected that they heard Spanish. Further, the Spanish ratings are what we would expect: non-native Spanish is rated as lower quality compared to the native-like Spanish. Lastly, our ethnicity treatment was successful as those that received the Hispanic candidate treatment overwhelmingly marked that the candidate was Hispanic.

Table A.5: Manipulation checks for sample of Hispanic respondents

Treatment group	Screen time (seconds)	Spanish selected	Spanish rating	Hispanic selected	White selected
Anglo candidate					
English	83.72	0.00	-	0.08	0.93
Non-native Spanish	70.39	0.93	4.55	0.08	0.92
Spanish	73.20	0.96	8.09	0.35	0.74
Hispanic candidate					
English	71.63	0.05	7.25	0.94	0.06
Non-native Spanish	75.81	0.98	4.06	0.82	0.35
Spanish	75.27	0.98	8.55	1.00	0.05

Table A.6: Manipulation checks for sample of Anglo respondents

Treatment group	Screen time (seconds)	Spanish selected	Spanish rating	Hispanic selected	White selected
Anglo candidate					
English	67.20	0.00	-	0.05	0.94
Non-native Spanish	94.10	0.94	5.41	0.16	0.87
Spanish	73.43	0.95	7.95	0.14	0.89
Hispanic candidate					
English	63.00	0.07	5.00	0.87	0.14
Non-native Spanish	77.34	0.92	5.91	0.76	0.24
Spanish	66.64	0.90	8.68	0.89	0.11

B Lucid Study

B.1 Study Design

This survey experiment, fielded between December 28, 2021, and January 11, 2022, is a 2x3x2 between-subjects experiment. We use the original 2x3 design in our first study except in this follow-up study we also vary whether the hypothetical candidate is running in a nonpartisan primary election or in the participant’s self-identified party primary. By randomizing the setting of the election, we are able to test for the robustness of our results to partisanship. We recruited participants using the survey firm Lucid. Quotas for partisanship were also used so that our sample would match each party’s proportion of the two-party vote share. Participants had to have identified with one of the two major parties. Our partisan quotas reflect the vote share for Joe Biden and Donald Trump in the 2020 election (excluding third-party vote share). Based on the 2020 vote shares, 36% of our Hispanic sample and 45% of our Anglo sample were Republican with the rest being Democrats.

Beside the addition of the six other conditions, the Lucid experiment is very similar to the original with a few exceptions. First, instead of asking about identity group strength after the treatment, we randomly assigned participants to receive the questions either before or after the treatment. We do this to address potential concerns that our treatment affects the responses to these questions. Second, all participants were asked to identify their race or ethnicity at the beginning of the survey. We primarily do this so we can have our ethnicity quotas and termination points at the beginning of the survey. Lastly, we added additional questions to measure our proposed mechanisms, self-monitoring questions to address social desirability bias, and questions that ask participants to guess the partisanship of the candidate to see whether language or ethnicity signaled the candidate’s partisanship.

B.2 Survey Items

We included several questions that measure our mechanisms of interest as well as other items we use to test the robustness of our findings. To measure ability to represent Hispanic interests we use the questions listed in Table B.1. Our willingness questions are listed in Table B.2. Similar to our candidate evaluation index, to construct the ability and willingness indices we took the sum of all the questions for each respondent and indexed it to range from 0-1. Several of these questions have been used before by [Clifford and Simas \(2019\)](#) to measure candidate sincerity. Details on the scale construct validity can be found in Appendix section D.

Table B.1: Items used to measure candidate ability to represent Hispanics

Ability Index Questions	
How likely do you think it is that [candidate] grew up in a predominantly Hispanic neighborhood?	Extremely unlikely (1) Somewhat unlikely (2) Neither likely nor unlikely (3) Somewhat likely (4) Extremely likely (5)
How likely do you think it is that [candidate] grew up speaking Spanish?	Extremely unlikely (1) Somewhat unlikely (2) Neither likely nor unlikely (3) Somewhat likely (4) Extremely likely (5)
To what extent do you agree or disagree with the following statement: “[candidate] is close to the Hispanic/Latino community”	Strongly disagree (1) Somewhat disagree (2) Neither agree nor disagree (3) Somewhat agree (4) Strongly agree (5)
How well do you think [candidate] understands the concerns of the Hispanic/Latino community?	Not well at all (1) Slightly well (2) Moderately well (3) Very well (4) Extremely well (5)
How often do you think [candidate] interacts with Hispanic people in the district?	Never (1) Not often (2) About half the time (3) Most of the time (4) Very often (5)

Table B.2: Items used to measure candidate willingness to represent Hispanics

Willingness Index Questions	
How much do you think [candidate] wants to represent Hispanic interests?	None at all (1) A little (2) A moderate amount (3) A lot (4) A great deal (5)
Do you think [candidate] truly wants to represent Hispanic interests, or is just saying what some people want to hear?	Definitely just saying what people want to hear (1) Probably just saying what people want to hear (2) Not sure (3) Probably does want to represent Hispanic interests (4) Definitely does want to represent Hispanic interests (5)
How likely is it that [candidate] would be a leader on Hispanic interests?	Extremely unlikely (1) Somewhat unlikely (2) Neither likely nor unlikely (3) Somewhat unlikely (4) Extremely likely (5)
How much do you think you can trust [candidate] to represent Hispanic interests	None at all (1) A little (2) A moderate amount (3) A lot (4) A great deal (5)
How genuine do you think [candidate] is about addressing the concerns that are important to the Hispanic community?	Not at all genuine (1) Not too genuine (2) Somewhat genuine (3) Very genuine (4) Extremely genuine (5)
How committed do you think [candidate] is to Hispanic interests?	Not committed at all (1) Not too committed (2) Somewhat committed (3) Very committed (4) Extremely committed (5)

B.3 Descriptive Statistics of Lucid Samples

B.3.1 Sample Sizes and Covariate Balance

We report information on our sample size and covariate balance for the Lucid sample in Tables B.3 and B.4. Our power analysis was based on our first study. There is a similar number of participants in each treatment group for both the Anglo and Hispanic samples. Further, for both samples one-way ANOVA tests show there are no significant differences between treatment group means on any of these demographic variables. This means that participants were successfully randomized.

Table B.3: Mean of Demographics by Treatment Group for Hispanic Lucid Sample

Treatment group	<i>n</i>	Age	% Female	Education level	Income	Ideology	% Democrat	% Republican
<i>Non-partisan conditions</i>								
White candidate								
English	84	39.02	60.24	4.04	6.26	0.45	64.29	35.71
Non-native Span.	79	37.18	53.16	3.68	5.73	0.45	64.56	35.44
Spanish	84	39.54	65.48	4.06	5.80	0.44	67.86	32.14
Latino candidate								
English	86	37.43	61.63	3.95	6.93	0.46	62.79	37.21
Non-native Span.	85	41.25	60.00	3.84	6.34	0.45	62.35	37.65
Spanish	85	38.36	64.29	3.89	5.86	0.44	64.71	35.29
<i>In-party conditions</i>								
White candidate								
English	78	40.60	61.54	3.86	6.51	0.51	58.97	41.03
Non-native Span.	84	40.94	66.67	3.94	6.12	0.45	65.48	34.52
Spanish	90	41.36	55.56	3.70	6.21	0.45	65.56	34.44
Latino candidate								
English	82	41.99	57.32	3.83	6.10	0.45	63.41	36.59
Non-native Span.	81	37.53	72.84	3.73	5.86	0.46	61.73	38.27
Spanish	82	37.01	60.98	3.65	5.79	0.44	65.85	34.15

Table B.4: Mean of Demographics by Treatment Group for Anglo Lucid Sample

Treatment group	<i>n</i>	Age	% Female	Education level	Income	Ideology	% Democrat	% Republican
<i>Non-partisan conditions</i>								
White candidate								
English	87	55.31	67.82	3.86	6.59	0.49	50.57	49.43
Non-native Span.	78	55.47	75.64	4.01	7.21	0.56	51.28	48.72
Spanish	86	55.34	67.44	3.99	6.73	0.59	40.70	59.30
Latino candidate								
English	88	57.78	65.91	3.85	6.51	0.57	38.64	61.36
Non-native Span.	82	55.65	78.05	3.49	5.84	0.56	46.34	53.66
Spanish	77	53.49	68.83	4.17	7.17	0.55	49.35	50.65
<i>In-party conditions</i>								
White candidate								
English	88	55.31	70.45	3.76	6.10	0.50	55.68	44.32
Non-native Span.	82	54.67	63.41	3.85	5.61	0.52	48.78	51.22
Spanish	80	56.75	68.75	3.76	6.59	0.55	41.25	58.75
Latino candidate								
English	84	55.93	60.71	3.76	6.79	0.60	34.52	65.48
Non-native Span.	86	53.24	61.63	3.77	5.91	0.55	41.86	58.14
Spanish	82	55.34	80.49	3.62	5.88	0.57	41.46	58.54

B.3.2 Sample Demographics

Table B.5 compares our sample demographics with that of the corresponding groups' national average. Looking at how representative our data is, we see that on average our Anglo sample was older and generally had a larger proportion of females than the average Anglo population but is otherwise similar based on other demographic metrics. For the Hispanic sample, there was a larger proportion of females and the sample was more educated compared to population averages.

Table B.5: Sample and Sub-population Demographics

	Hispanic data		Anglo data	
	Sample	Pop. estimate	Sample	Pop. estimate
Age	39.37	41.29	55.37	49.53
% Female	0.62	0.50	0.69	0.51
Education	3.85	2.51	3.82	3.48
Ideology (0-1)	0.45	0.47	0.55	0.55
% Democrat	0.64	0.68*	0.45	0.43*
% Republican	0.36	0.32*	0.55	0.57*

Data: Lucid Study (December 12, 2021 - January 11, 2022);
2014-2018 American Community Survey;
2020 Cooperative Congressional Election Study.

Higher levels on the ideology measure indicate more conservatism.

*These proportions have been obtained by excluding nonpartisans from the calculations, as we only recruited partisans for our study.

B.3.3 Manipulation Checks

We report the results of our manipulation checks in Tables B.6 and B.7. On average, our treatments successfully manipulated the intended qualities of the candidate. Those that heard from a Hispanic candidate for the most part marked that their candidate was Hispanic. Interestingly, nearly half of the Hispanic respondents marked that the Anglo candidate that spoke native-like Spanish was Hispanic. Important to our story, those that were in the Spanish conditions marked the quality of the non-native Spanish lower on average compared to the native-like Spanish.

Table B.6: Manipulation Checks for Lucid Sample of Hispanic Respondents

Treatment group	Screen time (seconds)	Spanish selected	Spanish rating	English rating	Hispanic selected	White selected
<i>Non-partisan conditions</i>						
Anglo candidate						
English	65.18	0.02	8.50	9.12	0.23	0.77
Non-native Spanish	66.66	0.82	5.46	9.43	0.24	0.81
Spanish	75.17	0.88	8.45	9.46	0.49	0.55
Hispanic candidate						
English	62.90	0.06	7.80	9.53	0.88	0.14
Non-native Spanish	77.04	0.91	5.06	8.89	0.69	0.40
Spanish	64.42	0.88	8.91	9.31	0.93	0.12
<i>In-party conditions</i>						
Anglo candidate						
English	72.41	0.01	10.00	9.29	0.19	0.85
Non-native Spanish	76.02	0.88	5.46	9.42	0.13	0.87
Spanish	61.85	0.87	8.62	9.43	0.42	0.61
Hispanic candidate						
English	83.98	0.02	7.50	9.59	0.87	0.17
Non-native Spanish	76.61	0.91	6.08	9.45	0.83	0.31
Spanish	68.61	0.87	9.10	9.36	0.88	0.15

Table B.7: Manipulation Checks for Lucid Sample of Anglo Respondents

Treatment group	Screen time (seconds)	Spanish selected	Spanish rating	English rating	Hispanic selected	White selected
<i>Non-partisan conditions</i>						
Anglo candidate						
English	67.79	0.02	6.00	9.43	0.09	0.90
Non-native Spanish	80.65	0.91	6.35	9.06	0.19	0.81
Spanish	77.03	0.87	8.51	9.40	0.26	0.79
Hispanic candidate						
English	78.31	0.01	10.00	9.55	0.82	0.17
Non-native Spanish	80.30	0.82	7.34	9.01	0.83	0.17
Spanish	66.88	0.87	8.85	9.23	0.88	0.12
<i>In-party conditions</i>						
Anglo candidate						
English	64.96	0.00	-	9.59	0.05	0.91
Non-native Spanish	75.50	0.80	7.12	8.95	0.20	0.80
Spanish	83.74	0.89	8.61	9.33	0.30	0.71
Hispanic candidate						
English	61.08	0.05	7.00	9.51	0.86	0.11
Non-native Spanish	67.27	0.86	7.74	9.09	0.86	0.10
Spanish	69.05	0.88	8.94	9.26	0.83	0.15

B.4 Results by Party Condition

The replication study had two primary objectives. The first was to replicate our original results. The second was to test the robustness of our results when the participant needs to evaluate a candidate from their own party. We visualize these results in Figure B.1 for the Hispanic participants and Figure B.2 for the Anglo participants.

Turning first toward the Hispanic results, we see that the effect of Spanish proficiency is still significant. Hispanics had higher evaluations of the Anglo candidate speaking Spanish than the Anglo candidate speaking English. Interestingly, we do not see a significant effect for being a co-ethnic like we do in our first study. Further, there is no longer a significant decrease in evaluations for the Hispanic speaking non-native Spanish compared to the Hispanic speaking English in the non-partisan condition. In the in-party conditions, Hispanics continue to punish the co-ethnic with non-native Spanish. Moreover, there are significant differences in how Hispanics evaluate native-like Spanish speakers compared to non-native speakers. These results give us more confidence that the language a candidate speaks conveys information to the voter that affects their evaluations of the candidate.

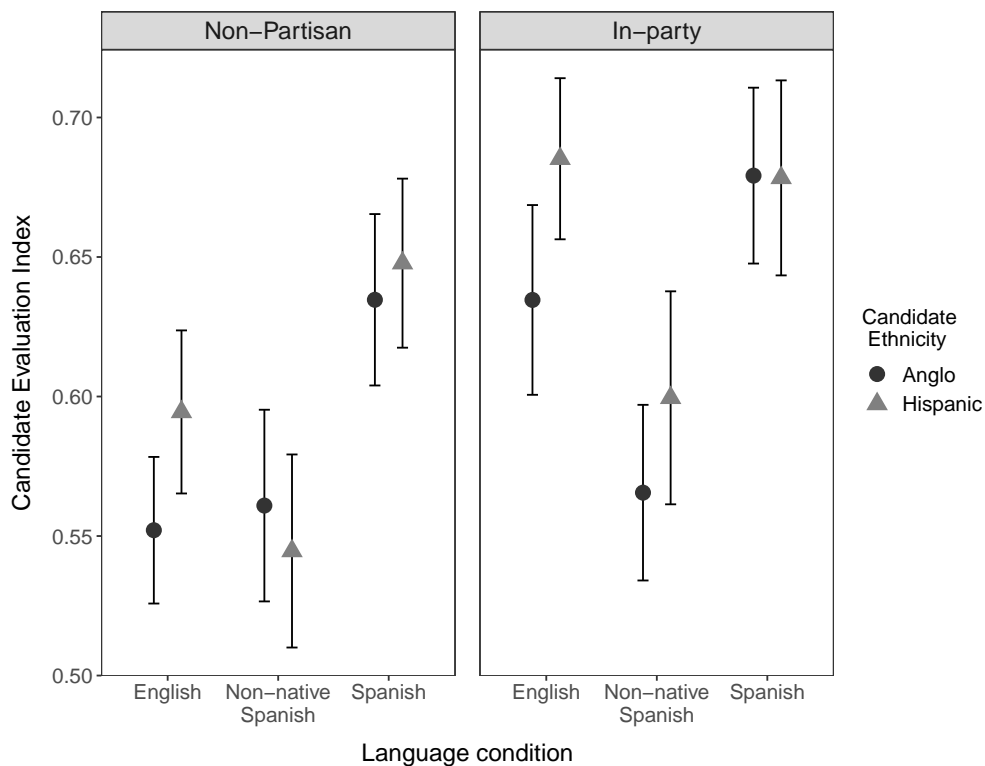


Figure B.1: Mean Candidate Evaluation among Hispanics by treatment group (Lucid sample). Results for respondents in the non-partisan conditions are on the left; results for respondents in the in-party conditions are on the right. Group means are plotted with 84% confidence intervals. Dependent variable ranges from 0 to 1. Results in tabular form shown in Table B.8.

Among the Anglo respondents, we do not see consistent significant results for either candidate ethnicity or Spanish appeals, positive or negative. Candidate evaluations are roughly equal across conditions. The one exception is the Anglo candidate with non-native Spanish who receives less favorable evaluations compared to the Anglo with a native-like accent and the Hispanic English-only candidate.

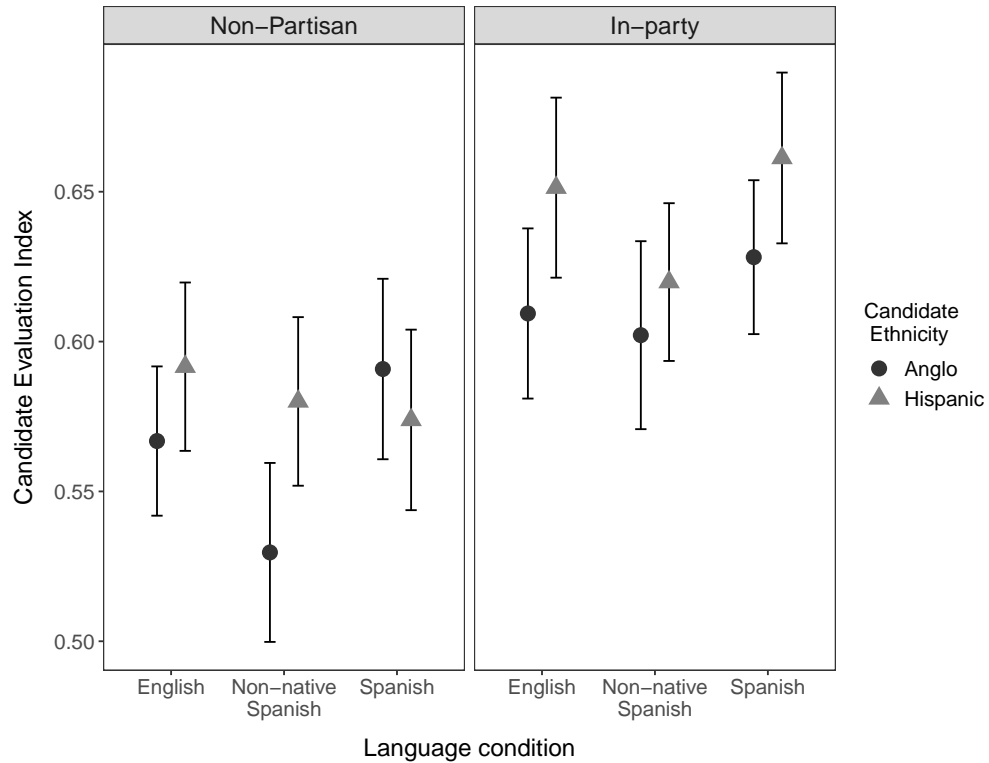


Figure B.2: Mean Candidate Evaluation among Anglos by treatment group (Lucid sample). Results for respondents in the non-partisan conditions are on the left; results for respondents in the in-party conditions are on the right. Group means are plotted with 84% confidence intervals. Dependent variable ranges from 0 to 1. Results in tabular form shown in Table B.9.

Table B.8: Mean candidate evaluation and standard errors by treatment group among Hispanic respondents (Study 2 - All conditions)

Treatment group	n	Mean	Std. Error
<i>Non-partisan conditions</i>			
Anglo candidate			
English	84	0.55	0.019
Non-native Spanish	79	0.56	0.024
Spanish	84	0.63	0.022
Hispanic candidate			
English	86	0.59	0.021
Non-native Spanish	85	0.54	0.025
Spanish	85	0.65	0.021
<i>In-party conditions</i>			
Anglo candidate			
English	78	0.63	0.024
Non-native Spanish	84	0.57	0.022
Spanish	90	0.68	0.022
Hispanic candidate			
English	82	0.69	0.020
Non-native Spanish	81	0.60	0.027
Spanish	82	0.68	0.025

Table B.9: Mean candidate evaluation and standard errors by treatment group among Anglo respondents (Study 2 - All conditions)

Treatment group	n	Mean	Std. Error
<i>Non-partisan conditions</i>			
Anglo candidate			
English	87	0.57	0.018
Non-native Spanish	78	0.53	0.021
Spanish	86	0.59	0.021
Hispanic candidate			
English	88	0.59	0.020
Non-native Spanish	82	0.58	0.020
Spanish	77	0.57	0.021
<i>In-party conditions</i>			
Anglo candidate			
English	88	0.61	0.020
Non-native Spanish	82	0.60	0.022
Spanish	80	0.63	0.018
Hispanic candidate			
English	84	0.65	0.021
Non-native Spanish	86	0.62	0.019
Spanish	82	0.66	0.020

C Effect of Language on Candidate Evaluation

We report several models in Tables C.1 and C.2 where we pool our candidate ethnicity conditions to get a better sense of how language itself shapes candidate evaluations. For both tables, models 1 and 3 have the non-native and native-like Spanish conditions grouped together. Turning first to model 1 in Table C.1, for Hispanic respondents, speaking any form of Spanish significantly increased candidate evaluations. When we run the model with non-native and native-like Spanish separate (model 2), we see that the positive effect of Spanish is primarily due to the native-like Spanish conditions. The significance of native-like Spanish is replicated in model 2 Table C.2 where we see that the effect of native-like Spanish is positive and significant. Interestingly enough, we also have a negative and significant effect for non-native Spanish. The Lucid sample seemed to punish non-native Spanish more than the Prolific sample. These findings, however, suggest that only native-like Spanish will increase positive evaluations among Hispanics. Model 4 in Table C.1 suggests that Anglo respondents have positive evaluations of native-like Spanish as well. In our Lucid study, however, all significance disappears for all analyses. We attribute this to our Lucid sample containing a much higher proportion of conservative participants than our Prolific sample.

Table C.1: Effects of Language on Candidate Evaluation (Study 1 - Prolific sample)

	<i>Dependent variable: Candidate Evaluation</i>			
	Hispanic respondents		Anglo respondents	
	(1)	(2)	(3)	(4)
Spanish (grouped)	0.056*** (0.018)		0.022 (0.019)	
Non-native Spanish		-0.010 (0.021)		-0.023 (0.022)
Spanish		0.122*** (0.021)		0.066*** (0.022)
Constant	0.502*** (0.015)	0.502*** (0.014)	0.563*** (0.016)	0.563*** (0.015)
Observations	501	501	503	503
R ²	0.018	0.092	0.003	0.035
Adjusted R ²	0.016	0.089	0.001	0.031

Note:

*p<0.1; **p<0.05; ***p<0.01

Table C.2: Effects of Language on Candidate Evaluation (Study 2 - Lucid sample)

<i>Dependent variable: Candidate Evaluation</i>				
	Hispanic respondents		Anglo respondents	
	(1)	(2)	(3)	(4)
Spanish (grouped)	-0.001 (0.014)		-0.006 (0.012)	
Non-native Spanish		-0.048*** (0.016)		-0.020 (0.014)
Spanish		0.044*** (0.016)		0.009 (0.014)
Constant	0.616*** (0.012)	0.616*** (0.012)	0.604*** (0.010)	0.604*** (0.010)
Observations	997	997	996	996
R ²	0.00000	0.032	0.00002	0.004
Adjusted R ²	-0.001	0.030	-0.001	0.002

Note:

*p<0.1; **p<0.05; ***p<0.01

D Scale Development Analyses

In our study, we seek to tap into respondents' evaluation of a candidate as well as their perceptions of the candidate's ability and willingness to represent Hispanics. To do so, we included several items to measure each of these constructs (see Appendices A and B). In this section, we present our analyses as to the reliability and unidimensionality of these items for each of our three scales (i.e., candidate evaluation index, ability index, and willingness index). We measure reliability through Cronbach's alpha and use factor analysis to examine whether our items load onto a single factor. For the latter, we use maximum likelihood estimation and oblimin rotation for two-factor solutions.

D.1 Candidate Evaluation Index

For our candidate evaluation index, we ask respondent how likely they are vote for the candidate, how much they like them, how much they trust them, and whether they would feel well represented by them. In both of our studies, these items showed high reliability using Cronbach's alpha. In our Prolific study, the Cronbach's alpha was 0.89 among our Hispanic subsample and 0.9 among the Anglo subsample. In our Lucid study, the Cronbach's alpha was 0.88 for both subsamples. Further, in none of these cases did alpha increase when excluding any given item.

As Tables D.1 and D.2 show, the four items load strongly onto the same factor among

both Hispanic and Anglo respondents in our Prolific and Lucid samples. Although still loading strongly, the vote item had the lowest loading in all cases. This suggests that even though liking, trusting, and feeling represented by a candidate are related to choosing to vote for a candidate, they are not synonymous.

Table D.1: Factor Loadings for Candidate Evaluation Items in Prolific Samples

Variable	Hispanic sample	Anglo sample
	Factor loading	Factor loading
Based on what you have heard, do you like [candidate]?	0.83	0.83
How much do you think you can trust [candidate]?	0.83	0.84
How well represented would you feel with [candidate] in office?	0.83	0.87
How likely is it that you would vote for [candidate]?	0.79	0.80

Table D.2: Factor Loadings for Candidate Evaluation Items in Lucid Samples

Variable	Hispanic sample	Anglo sample
	Factor loading	Factor loading
Based on what you have heard, do you like [candidate]?	0.79	0.81
How much do you think you can trust [candidate]?	0.80	0.82
How well represented would you feel with [candidate] in office?	0.87	0.87
How likely is it that you would vote for [candidate]?	0.76	0.73

D.2 Index for Perceptions of Candidate Ability to Represent Hispanics

We included five items in our Lucid survey to measure perception of candidate ability to represent Hispanics. We estimated a one-factor and a two-factor solution as some tests suggested one factor fit the data and others suggested using two factors. We ran these tests using the `psych` package in R. Table D.3 shows the results of these two solutions. The first

model shows that all the items load strongly onto a single factor, but the first two have the lowest loadings. The second model, which allows items to load onto two factors, shows that these same items load much more weakly or not at all onto the first factor. Meanwhile the other three factors continue to load strongly onto the first factor.

Substantively speaking, the first two items ask about the candidate’s upbringing (i.e., growing up in a Hispanic neighborhood or grew up speaking Spanish) while the other three items ask about the candidate’s relationship with the Hispanic community in the present (i.e., close to Hispanics and understands their concerns). A Hispanic candidate may score high in both types of items, but an Anglo candidate would be less likely to score high on the Hispanic upbringing questions.

Table D.3: Factor Loadings for Ability Items in Lucid Hispanic Sample

Variable	One-factor	Two-factor	
	(1)	(1)	(2)
How likely do you think it is that [candidate] grew up in a predominantly Hispanic neighborhood?	0.75	0.45	0.36
How much do you think it is that [candidate] grew up speaking Spanish?	0.78	0.00	1.00
To what extent do you agree or disagree with the following statement: [Candidate] is close to the Hispanic/Latino community.	0.85	0.85	0.01
How well do you think [candidate] understands the concerns of the Hispanic/Latino community?	0.84	0.81	0.04
How often do you think [candidate] interacts with Hispanic people in the district?	0.82	0.88	-0.06

The bolded items in Table D.3 comprise our *ability index*. Both the Hispanic and Anglo candidate can score higher on these items without being constrained by perceptions about their upbringing. Further, these three items had similar loadings on the same factor in both solutions. The Cronbach’s alpha for these items is 0.88.

D.3 Index for Perceptions of Candidate Willingness to Represent Hispanics

To measure perceptions about a candidate’s willingness to represent Hispanics, we included six items. Similar to our previous analysis, test to determine how many factors to extract pointed to either a one- or a two-factor solution. Table D.4 shows the results for both models. In the one-factor solution, the second item has the weakest loading compared to the rest. In the two-factor model, the second item has a similar loading on the first factor and a a much weaker loading on factor two. While the other items continue to load strongly on factor one, the last item (“how committed do you think [candidate] is to Hispanic interests?”) loads primarily on the second factor.

Taking into account these results, we use the four bolded items to build our *willingness index*. We exclude the second item to avoid redundancy as our first item taps into the same concept and has a higher factor loading. We exclude the last item for similar reasons.

Table D.4: Factor Loadings for Willingness Items in Lucid Hispanic Sample

Variable	One-factor	Two-factor	
	(1)	(1)	(2)
How much do you think [candidate] wants to represent Hispanic interests?	0.86	0.77	0.10
Do you think [candidate] truly wants to represent Hispanic interests, or is just saying what some people want to hear?	0.67	0.62	0.05
How likely is it that [candidate] would be a leader on Hispanic interests?	0.85	0.84	0.01
How much do you think you can trust [candidate] to represent Hispanic interests?	0.88	0.99	-0.10
How genuine do you think [candidate] is about addressing the concerns that are important to the Hispanic community?	0.87	0.72	0.16
How committed do you think [candidate] is to Hispanic interests?	0.90	0.03	0.97

E Defining Language Proficiency, Fluency, and Accent

In this paper we choose to use the term proficiency over fluency when describing the differences between our language conditions. We make this decision based on how these terms are commonly used within linguistics. While neither proficiency or fluency have exact definitions that all linguists agree on, some scholars have proposed guiding definitions which we adopt. Proficiency refers to the users grammatical knowledge of the language (Treffers-Daller 2019). This includes the syntax (how words are arranged in a sentence), morphology (how words are constructed), phonology (how language sounds), and general vocabulary of the speaker (Bachman and Palmer 2010; Treffers-Daller 2019). Fluency is about the language flow or how quickly the appropriate words are accessed which contributes to the rhythm of the speech. When someone is fluent in a language we should expect them to have no unintended pauses in their speech (Segalowitz 2010; Treffers-Daller 2019). Finally, accent is not a technical concept in linguistics, but what people seem to point to when they use the term are the prosodical and segmental features in someone’s speech. Prosody refers to the stress patterns in words and sentences, and segments are the vowels and consonants and their associated sounds (Lippi-Green 2012).

In our experiment, the difference between the non-native Spanish and native-like Spanish conditions is, specifically, in how vowels and consonants are pronounced. In the non-native Spanish condition, the speaker uses the pronunciation of vowels and consonants from English phonology when speaking Spanish. In the native-like Spanish condition, the speaker uses the phonology of Spanish when speaking Spanish. To be clear, there is no difference in the stress patterns at the word or sentence level between the two conditions. Further, both conditions feature what we would consider a fluent Spanish speaker since there are no unintended pauses in their speech. Thus, we vary language proficiency only through the speaker’s accent, and more specifically the segmental features of speech.

F Examining Ethnic/Racial Group Strength as a Moderator

In Figure F.1, we plot predicted candidate evaluations across levels of group strength for Hispanics in our Lucid sample. Moving from left to right is going from no group strength to very strong group strength. These results show an even clearer effect than the Prolific results we report in the main text. As Hispanic group strength increases, so too do evaluations of Spanish speakers and the Latino candidate. This replicates our results for Hypothesis 4a and 4b.

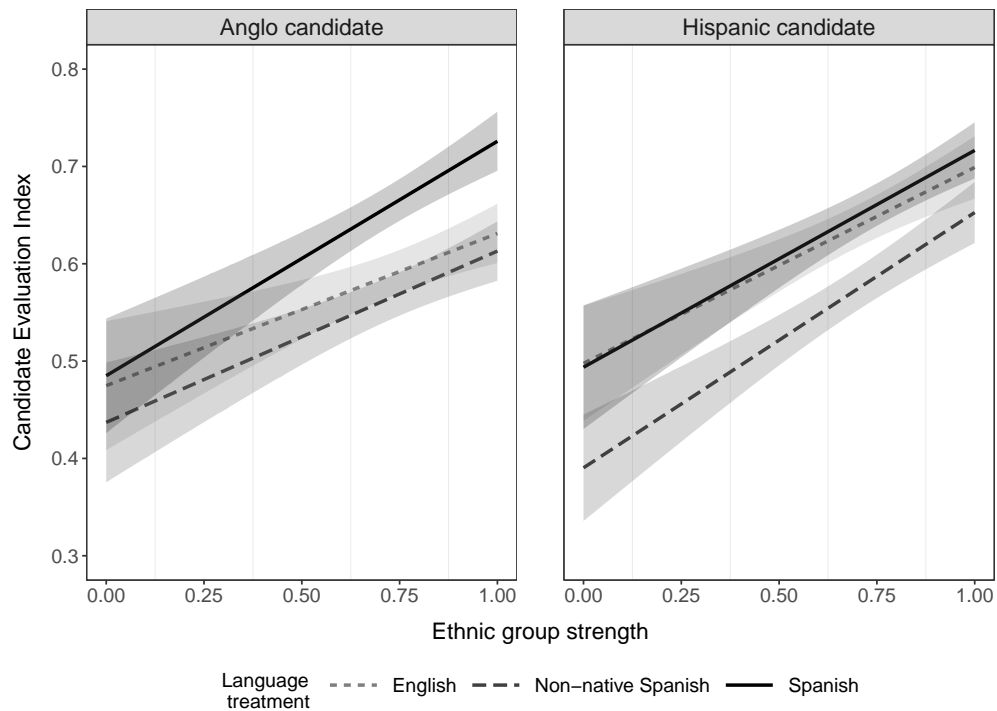


Figure F.1: Predicted candidate evaluation among Hispanics by treatment group across levels of racial identity (Lucid sample, pooled conditions). Larger values on the x-axis indicate greater importance of being white to an individual's identity. Group means are plotted with 84% confidence intervals. Dependent variable ranges from 0 to 1. Full model results shown in Table K.2, Model 2 of Online Appendix.

G Descriptive Data on Spanish-language Appeals in Campaign Ads

To sense how often candidates make appeals in Spanish and how proficiently they speak the language, we focus on Spanish-language advertisements aired during the 2010-2018 election cycles for Congressional House races. We use the Wesleyan Media Project’s (WMP) data, which includes information and video files for all campaign advertisements aired on broadcast television in all markets in the United States (Fowler et al. 2020). These data, then, allow us to estimate the prevalence of Spanish-language appeals and assess candidate language proficiency in four election cycles—two that correspond with a presidential election and three non-presidential election cycles. Per the user agreement with WMP we are not at liberty to share the advertisements or WMP-produced datasets used for our analyses. These advertisements were purchased from WMP at <https://mediaproject.wesleyan.edu/dataaccess/>.

It is important to note that candidates can and do use Spanish-language appeals in a variety of settings such as town halls, debates, and media appearances, so the content of these advertisements will not fully encapsulate how many candidates use these types of appeals or how many candidates speak Spanish with an American or native-sounding accent. That said, campaign ad data has been collected in a systematic fashion by WMP, which makes us confident about what we can find in this arena. In addition, given that the majority of candidates who create a Spanish-language advertisements approve of the message in Spanish, we felt that coding advertisement content was the best way to get as clear of an idea of the frequency and proficiency of Spanish-language appeals as possible.

In the following sections, we first show descriptive statistics on the frequency of Spanish-language ads. We then explain how we coded all Spanish ads based on the Spanish proficiency of the candidates.

G.1 Prevalence of Spanish-language Advertisements in House Races

Between 2010 and 2018, there were a total of 407 unique Spanish-language ads and 56,029 ad airings in House races. As Table G.1 shows, the number of unique Spanish ads in each election cycle varies with the number of unique Spanish ads jumping from 40 ads in 2010 to 103 ads in 2012. The number of ads decreases again in 2014 and 2016 with 60 and 67 Spanish advertisements, respectively. Spanish ads increased again in 2018 with 137 unique Spanish advertisements representing the most unique ads for an election cycle within our sample. In the years evaluated, out of all unique House ads 2010 had the lowest proportion of Spanish ads with 1.29% of ads being in Spanish while 2012 had the largest proportion of ads in Spanish with 3.80% of all ads being in Spanish. The number of ad airings also increased from 3,322 airings in 2010 to 20,396 in 2018, accounting for 0.43% and 1.54% of airings, respectively. Lastly, the number of House races or House districts with at least one Spanish-language ad has increased in this period from 13 to 22 with the largest change occurring between 2010 and 2012 with a jump from 13 districts to 19 districts having a Spanish ad. To place these numbers in a broader context, according to work by Abrajano

(2010), only 8 House races in 2000 and 2004 had a Spanish-language ad. The number of House races with a Spanish ad in 2012 and beyond more than doubled compared to these races in 2000 and 2004.

Table G.1: Frequency of Spanish Ads in House Races 2010-2018

Year	Unique Spanish ads		Spanish ad airings		Districts
	n	%	n	%	
2010	40	1.29	3,322	0.43	13
2012	103	3.80	9,107	1.26	19
2014	60	2.82	12,215	1.95	18
2016	67	3.37	10,989	1.77	18
2018	137	3.64	20,396	1.54	22

G.2 Assessing Language Proficiency in House Candidates

Two of the authors coded the videos and were each randomly assigned to half of all the videos. Each coder was then assigned about 10% of the other coder’s videos in order to test for intercoder reliability. For each video, the coder evaluated whether the video was primarily sponsored by a candidate or an interest group, the partisanship of the candidate, whether the candidate themselves spoke any Spanish during the ad, whether the candidate spoke Spanish in a native-sounding or non-native (American) accent, and the race/ethnicity of the candidate sponsoring the ad.

Table G.2 reports the intercoder reliability statistics for each of our coded variables. For all variables, the percent of agreement is greater than 90%, and each variable has a Kappa statistic above 0.85 indicating an “almost perfect” strength of agreement (Stemler 2001, 4). Among the videos coded by the two authors, any video with coder disagreement was examined by both authors to determine what the correct coding for that video should be.

Since we are interested in the ethnicity and language proficiency of candidates, we keep only the 303 ads sponsored by candidates between 2010 and 2018. Table G.3 displays the number of candidates, as well as the number of ads, where a candidate did not speak Spanish in the ad, spoke Spanish with a non-native (American) accent, and spoke Spanish with a native or native-sounding accent. We separate the candidates and the ads created by candidate ethnicity. Since candidates may run and produce Spanish-language ads in more than one election, they are counted every year for which they had a Spanish ad. Across all years, there were 118 unique candidates who produced a Spanish ad but when accounting for candidates whose ads appear in multiple years there are 151 candidate observations. In 92.7% of these ads, the candidates speak Spanish at some point in the ad: 42.2% approve the message in Spanish and 50.4% speak Spanish beyond the approval message. Of the of

Table G.2: Reliability Statistics for Content Analysis Coding

Variable	% agreement	Krippendorff's Alpha	Cohens Kappa
Party ID or PAC	0.976	0.960	0.959
Language	0.902	0.857	0.855
Accent	0.927	0.891	0.890
Candidate Ethnicity	0.927	0.897	0.895

151 candidates who had Spanish ads in this period, 62 candidates (41%) are white and 77 candidates (50%) are Hispanic. The remaining 12 candidates are coded as “Other.”

The results show that most white candidates who have Spanish ads chose to speak in Spanish; only 13 of the 62 white candidates in our sample spoke only English during the ad. Forty-seven white candidates who spoke Spanish in their Spanish-language ads did so with an American accent while 2 white candidates (3.2%) spoke with a native-sounding accent. On the other hand, all Hispanic candidates who use Spanish ads chose to speak Spanish. Of the 77 Hispanic candidates, 64 candidates (83.1%) spoke with a native accent. Thirteen candidates, accounting for 16.8% of the Hispanic candidates in this group, spoke with an American accent. In sum, while a majority of white candidates speak Spanish with an American accent and a majority of Hispanic candidates speak with a native accent, there is a small number of white candidates and an important number of Hispanic candidates who speak Spanish with a native-sounding and American accent, respectively.

Table G.3: House Candidate Spanish Ad Language Use and Spanish Accent

Candidate ethnicity	No Spanish		Non-native Spanish		Native-level Spanish	
	# of candidates	# of ads	# of candidates	# of ads	# of candidates	# of ads
White	13	13	47	82	2	6
Hispanic	0	0	13	37	64	146
Other	6	9	5	9	1	1

These results are instructive and provide a sense of how often candidates use Spanish-language ads as well as how proficient they are with Spanish. However, it is possible we are missing a number of candidates who have made Spanish-language appeals in venues other than television advertising. Nevertheless, the systematic collection of these data gives us confidence in the descriptive statistics we can provide on this front as a starting point on the proficiency with which white and Hispanic candidates make Spanish-language appeals.

H Debriefing Procedures and Compensation Information

Before beginning the survey, respondents are told they have been invited to participate in a study titled “Campaign Speeches of State Representatives,” where the purpose is to evaluate state legislature candidates floor speeches. Respondents are also told they will be asked “about the ability of a state legislature candidate to communicate with their electorate.” In our vignettes, respondents are told the audio comes from a campaign event for a state representative seeking reelection. Since our study involves deception, we make sure to debrief participants at the end of the survey with the following message: “Thank you for participating in this study. The purpose of this study was to investigate how politicians’ usage of Spanish may impact their potential voters/supporters. The state representatives and candidates as well as the audio were fabricated for the purposes of this study.” The study was determined exempt (Category 2) by the Rice University Institutional Review Board (IRB-FY2020-150).

Respondents were contracted through the online survey platform Prolific Academic. All respondents resided in the United States and were at least 18 years of age. Respondents received a payment of approximately \$3.30 after completing the survey. Based on the length of the survey this came out to approximately \$12 an hour, well above the minimum wage in the United States.

Lucid decides the pricing of the survey. We were charged \$2.00 for each Anglo respondent and \$2.50 for each Hispanic respondent. Lucid works with a variety of supplier types which vary their incentive structures. Thus, we cannot be sure how much of the respondent fee went to the respondent.

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