Explaining Public Opinion toward Transgender People, Rights, and Candidates

Online Appendix

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Descriptive statistics

Table A-1: Views of most people and of transgender people

		Not at all well	Not too well	Some- what well	Very well		
Most people	Trustworthy	9.1	16.6	58.6	15.7	100.0%	$N = 857$
	Moral	10.9	20.0	52.5	16.6	100.0%	$N = 845$
	Happy	4.4	17.8	62.4	15.4	100.0%	$N = 848$
Transgender people	Trustworthy	6.2	15.7	57.9	20.2	100.0%	$N = 678$
	Moral	14.4	17.7	50.5	17.4	100.0%	$N = 688$
	Happy	8.8	21.3	53.2	16.7	100.0%	$N = 682$

Note: Cell entries are row percentages, based on weighted data.

Table A-2: Views of transgender people relative to most people

	Transgender people are...				
	Less	Equally	More		
Trustworthy	15.7	62.8	21.5	100.0%	$N = 671$
Moral	24.8	56.0	19.2	100.0%	$N = 674$
Happy	24.8	59.3	16.0	100.0%	$N = 663$

Note: Cell entries are row percentages, based on weighted data.

Table A-3: Support for transgender rights

	Strongly oppose	Somewhat oppose	Somewhat favor	Strongly favor		
Workplace protections	10.5	16.8	41.0	31.7	100.0%	$N = 855$
Military service	13.8	21.4	39.2	25.5	100.0%	$N = 850$
Gender-neutral bathrooms	18.5	27.5	36.8	17.2	100.0%	$N = 833$
School protections	11.9	14.8	41.1	32.1	100.0%	$N = 853$

Note: Cell entries are row percentages, based on weighted data.

Table A-4: Descriptive statistics for all variables used in analysis

		Min.	Max.	Mean	SD	Reliability	Missing values
Dependent variables	**Views of transgender people**						
	Trustworthy	-3.00	3.00	0.08	0.88		226
	Moral	-3.00	3.00	-0.07	0.98		223
	Happy	-3.00	3.00	-0.12	0.87		234
	Index	-3.00	3.00	-0.06	0.76	α=.68	155
	Support for transgender rights						
	Workplace protections	1.00	4.00	2.94	0.95		42
	Military service	1.00	4.00	2.76	0.98		47
	Gender-neutral bathrooms	1.00	4.00	2.53	0.98		64
	School protections	1.00	4.00	2.93	0.97		44
	Index	1.00	4.00	2.78	0.80	α=.83	9
Independent variables	**Values**						
	Egalitarianism	1.00	4.00	2.97	0.97	r=.59	5
	Moral traditionalism	1.00	4.00	2.32	0.82	r=.19	7
	Religiosity	1.00	4.00	2.93	0.97		40
	Ideology	1.00	5.00	3.20	1.19		69
	Party ID	0.00	6.00	2.63	1.92		0
	Need for cognitive closure	1.00	4.00	2.75	0.75	α=.68	9
	Interpersonal contact	0.00	1.00	0.11	0.31		0
	Familiarity with term	0.00	2.00	1.64	0.62		0
	Media consumption						
	TV use	0.00	6.00	2.87	1.74		7
	Network news	1.00	4.00	2.60	1.13		2
	News magazines	1.00	4.00	2.26	1.08		1
	Fox News	1.00	4.00	2.29	1.18		2
	CNN/MSNBC	1.00	4.00	2.14	0.92		1
	Newspaper	1.00	4.00	2.54	1.16		4
	Online news	1.00	4.00	3.22	0.98		175
	E Network	1.00	4.00	1.36	0.76		1
	Late Show/Last Week Tonight	1.00	4.00	1.55	0.78		2
	Demographics						
	Age (decades)	0.18	0.94	0.46	0.17		60
	Education	0.00	7.00	3.38	1.79		24
	Female	0.00	1.00	0.51	0.50		0
	Hispanic	0.00	1.00	0.14	0.35		0
	Black	0.00	1.00	0.12	0.33		0

Note: Means and standard deviations based on weighted data. Total N is 897.

Further details about the sample

The survey obtained telephone interviews with a nationally representative sample of 901 adults living in the continental United States. Telephone interviews were conducted by landline (451) and cell phone (450, including 274 without a landline phone). The survey was conducted by Princeton Survey Research Associates International (PSRAI). Interviews were done in English by Princeton Data Source from November 11 to 17, 2015.

Sample design

A combination of landline and cellular random digit dial (RDD) samples was used to represent all adults in the continental United States who have access to either a landline or cellular telephone. Both samples were provided by Survey Sampling International, LLC (SSI) according to PSRAI specifications.

Numbers for the landline sample were drawn with equal probabilities from active blocks (area code + exchange + two-digit block number) that contained three or more residential directory listings. The cellular sample was not list-assisted, but was drawn through a systematic sampling from dedicated wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers.

Contact procedures

Interviews were conducted from November 11 to 17, 2015. As many as five attempts were made to contact every sampled telephone number. Sample was released for interviewing in replicates, which are representative subsamples of the larger sample. Using replicates to control the release of sample ensures that complete call procedures are followed for the entire sample. Calls were staggered over times of day and days of the week to maximize the chance of making contact with potential respondents. Each phone number received at least one daytime call when necessary.

For the landline sample, interviewers asked to speak with the youngest adult male or female currently at home based on a random rotation. If no male/female was available, interviewers asked to speak with the youngest adult of the other gender. This systematic respondent selection technique has been shown to produce samples that closely mirror the population in terms of age and gender when combined with cell interviewing. Prior to dialing, the landline sample was scrubbed of numbers that have been ported to wireless service by comparing the sample file to the most recently available Intermodal Ported Telephone Number Identification Service database.

For the cellular sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey.

Weighting

A two-stage weighting procedure was used to weight this dual-frame sample. The first stage of weighting corrected for different probabilities of selection associated with the number of adults in each household and each respondent's telephone usage patterns. This weighting also adjusts for the overlapping landline and cell sample frames and the relative sizes of each frame and each sample.

This first-stage weight for the ith case can be expressed as:

$$WT_i = \left[\left(\frac{S_{LL}}{F_{LL}} \times \frac{1}{AD_i} \times LL_i \right) + \left(\frac{S_{CP}}{F_{CP}} \times CP_i \right) - \left(\frac{S_{LL}}{F_{LL}} \times \frac{1}{AD_i} \times LL_i \times \frac{S_{CP}}{F_{CP}} \times CP_i \right) \right]^{-1}$$

Where
S_{LL} = the size of the landline sample
F_{LL} = the size of the landline sample frame
S_{CP} = the size of the cell sample
F_{CP} = the size of the cell sample frame
AD_i = number of adults in household i
LL_i = 1 if respondent has a landline phone, otherwise LL_i=0
CP_i = 1 if respondent has a cell phone, otherwise CP_i=0

The second stage of weighting balanced sample demographics to population parameters. The sample is balanced by form to match national population parameters for sex, age, education, race, Hispanic origin, region (U.S. Census definitions), population density, and telephone usage. The basic weighting parameters came from the US Census Bureau's 2013 American Community Survey data. The population density parameter was derived from Census 2010 data. The telephone usage parameter came from an analysis of the July-December 2014 National Health Interview Survey.

Weighting was accomplished using the SPSSINC RAKE, an SPSS extension module that simultaneously balances the distributions of all variables using the GENLOG procedure. Weights were trimmed to prevent individual interviews from having too much influence on the final results. The use of these weights in statistical analysis ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the national population. Table A-5 compares the weighted and unweighted sample to known population parameters.

Response rates

Table A-6 reports the disposition of all sampled telephone numbers ever dialed from the original telephone number samples. The response rate estimates the fraction of all eligible sample that was ultimately interviewed. Response rates are computed according to American Association of Public Opinion Research standards (RR3). The response rate for the land line samples was 7 percent. The response rate for the cellular samples was 5 percent.

Methodology report prepared by Princeton Survey Research Associates International (PSRAI), November 2015.

Table A-5: Sample demographics, compared to population parameters

	Population parameter	Unweighted sample	Weighted sample
Gender			
Male	48.3%	50.8%	48.9%
Female	51.7%	49.2%	51.1%
Age			
18-24	13.1%	8.1%	13.0%
25-34	17.5%	10.0%	16.3%
35-44	16.9%	11.2%	16.3%
45-54	18.1%	18.1%	18.4%
55-64	16.3%	21.9%	16.9%
65+	18.1%	30.7%	19.0%
Education			
HS graduate or less	41.2%	29.0%	40.3%
Some college/Assoc. degree	31.5%	28.6%	31.3%
College graduate	27.3%	42.4%	28.4%
Race/Ethnicity			
Non-Hispanic White	65.9%	76.9%	67.7%
Non-Hispanic Black	11.7%	10.3%	11.5%
Hispanic	15.0%	7.5%	13.9%
Non-Hispanic Other	7.4%	5.2%	6.9%
Region			
Northeast	18.2%	19.9%	18.3%
Midwest	21.5%	25.3%	21.6%
South	37.5%	35.6%	37.2%
West	22.8%	19.2%	22.8%
Household phone use			
Landline only	7.4%	6.8%	7.2%
Cell phone only	47.8%	30.4%	46.5%
Both	44.8%	62.8%	46.3%

Note: Population parameters for household phone use are taken from an analysis of the July-December 2014 National Health Interview Survey; all other parameters from the US Census Bureau's 2013 American Community Survey data. Source: PSRAI.

Table A-6: Sample disposition and response rates

	Landline sample	Cell sample
Non-residential/business	842	80
Cell in landline frame	382	–
OF (Out of frame)	**1,224**	**80**
Not working	16,416	3,114
Computer/fax/modem	881	9
NWC (Not working/Computer)	**17,297**	**3,123**
UHUO$_{NC}$ (Non-contact, unknown if household/unknown other)	**1,718**	**1,180**
Voicemail	2,678	6,958
Other non-contact	54	12
UO$_{NC}$ (Non-contact, unknown eligibility)	**2,732**	**6,970**
Refusals	2,092	1,950
Callbacks	246	754
UO$_R$ (Refusal, unknown eligibility)	**2,338**	**2,704**
O (Other)	**115**	**267**
Child's cell phone	–	107
SO (Screen out)	**–**	**107**
R (Refusal, known eligible)	**124**	**119**
I (Completed interviews)	**451**	**450**
T (Total numbers sampled)	**25,999**	**15,000**
Frame eligibility of non-contacts	23.7%	76.8%
Estimated screening eligibility of unscreened contacts	100.0%	84.2%
CON	49.1%	31.6%
COOP	14.9%	14.7%
AAPOR RR3	**7.3%**	**4.6%**

Alternate specifications for regression models in Table 1

The following tables provide alternate specifications for the regression models shown in Table 1:

- Table A-7: Ordered logistic regression models predicting views of transgender people as individual items

- Table A-8: Ordered logistic regression models predicting support for transgender rights as individual items

- Table A-9: Replicating models in Table 1, setting missing values in independent variables to mean value and including indicators for missing data

- Table A-10: Replicating models in Table 1, using individual items for egalitarianism, moral traditionalism, and NFCC scales

Table A-7: Ordered logistic regression models predicting views of transgender people as individual items

	View transgender people as...		
	Trustworthy	Moral	Happy
Values			
Egalitarianism	0.11 (0.13)	−0.08 (0.13)	−0.02 (0.13)
Moral traditionalism	−0.09 (0.16)	−0.35 (0.14)*	−0.23 (0.17)
Religiosity	0.04 (0.14)	0.04 (0.12)	0.14 (0.12)
Ideology	−0.07 (0.16)	−0.22 (0.16)	−0.16 (0.13)
Party ID	−0.09 (0.08)	−0.11 (0.07)	0.01 (0.07)
Need for cognitive closure	0.24 (0.17)	0.09 (0.16)	0.13 (0.16)
Interpersonal contact	0.08 (0.31)	0.37 (0.37)	0.01 (0.31)
Familiarity with term	0.27 (0.24)	0.19 (0.26)	0.08 (0.22)
Media consumption			
TV use	0.08 (0.07)	0.18 (0.07)*	0.19 (0.07)**
Network news	0.31 (0.13)*	0.02 (0.13)	0.07 (0.13)
News magazines	0.19 (0.12)	0.13 (0.12)	−0.12 (0.12)
Fox News	−0.17 (0.12)	−0.09 (0.11)	−0.12 (0.11)
CNN/MSNBC	−0.16 (0.15)	−0.10 (0.14)	0.03 (0.14)
Newspaper	−0.04 (0.10)	0.02 (0.11)	0.03 (0.10)
Online news	−0.05 (0.12)	0.00 (0.12)	−0.14 (0.12)
E Network	−0.19 (0.19)	0.09 (0.17)	0.16 (0.22)
Late Show/Last Week Tonight	0.06 (0.18)	0.20 (0.14)	0.08 (0.16)
Demographics			
Age (decades)	−1.96 (0.80)*	−0.42 (0.83)	−0.91 (0.71)
Education	−0.01 (0.06)	0.05 (0.07)	−0.03 (0.07)
Female	0.54 (0.27)*	0.48 (0.24)*	0.54 (0.24)*
Hispanic	−0.01 (0.42)	0.29 (0.36)	0.58 (0.37)
Black	0.54 (0.41)	0.76 (0.43)	0.58 (0.51)
Threshold 1	−4.07 (1.29)**	−4.45 (1.06)***	−5.25 (1.17)***
Threshold 2	−2.95 (1.16)*	−3.29 (0.98)***	−2.87 (1.12)*
Threshold 3	−1.25 (1.10)	−1.22 (0.97)	−1.28 (1.10)
Threshold 4	2.08 (1.11)	1.72 (0.98)	1.71 (1.10)
Threshold 5	3.83 (1.13)***	3.49 (1.04)***	3.72 (1.12)***
Threshold 6	5.30 (1.24)***	4.61 (1.10)***	5.95 (1.42)***
Pseudo-R^2	.14	.17	.10
N	487	484	483

***p-value< 0.001, **p-value< 0.01, *p-value< 0.05

Note: Estimates based on weighted data.

Table A-8: Ordered logistic regression models predicting support for transgender rights as individual items

	Workplace protections	Military service	Gender-neutral bathrooms	School protections
Values				
Egalitarianism	0.31 (0.13)*	0.11 (0.13)	0.24 (0.13)	0.42 (0.14)**
Moral traditionalism	−0.47 (0.15)**	−0.38 (0.15)*	−0.41 (0.15)**	−0.26 (0.16)
Religiosity	−0.22 (0.12)	−0.46 (0.15)**	−0.28 (0.12)*	−0.20 (0.12)
Ideology	−0.50 (0.13)***	−0.33 (0.15)*	−0.42 (0.13)**	−0.31 (0.12)*
Party ID	0.00 (0.06)	−0.16 (0.07)*	−0.13 (0.07)	−0.13 (0.06)*
Need for cognitive closure	−0.45 (0.15)**	−0.20 (0.16)	−0.15 (0.15)	−0.17 (0.15)
Views of transgender people	0.55 (0.16)***	0.45 (0.22)*	0.50 (0.18)**	0.79 (0.15)***
Interpersonal contact	0.17 (0.45)	1.24 (0.38)**	0.42 (0.34)	−0.46 (0.43)
Familiarity with term	0.30 (0.20)	−0.06 (0.19)	−0.01 (0.19)	0.10 (0.22)
Media consumption				
TV use	0.04 (0.08)	0.07 (0.07)	0.10 (0.07)	0.09 (0.07)
Network news	0.03 (0.14)	0.01 (0.12)	0.12 (0.13)	−0.01 (0.12)
News magazines	−0.14 (0.13)	−0.13 (0.12)	−0.24 (0.12)*	−0.09 (0.12)
Fox News	−0.00 (0.12)	−0.17 (0.09)	−0.06 (0.11)	−0.24 (0.10)*
CNN/MSNBC	0.01 (0.15)	0.16 (0.13)	0.02 (0.14)	0.15 (0.14)
Newspaper	0.04 (0.10)	−0.07 (0.10)	0.18 (0.10)	−0.02 (0.11)
Online news	0.03 (0.13)	−0.05 (0.11)	−0.13 (0.13)	0.18 (0.11)
E Network	0.29 (0.18)	0.36 (0.17)*	0.20 (0.17)	−0.17 (0.16)
Late Show/Last Week Tonight	−0.11 (0.13)	−0.04 (0.15)	0.02 (0.14)	0.01 (0.14)
Demographics				
Age (decades)	−0.19 (0.87)	−0.34 (0.72)	−0.22 (0.80)	0.06 (0.75)
Education	0.17 (0.07)*	0.07 (0.06)	−0.03 (0.06)	0.08 (0.06)
Female	0.67 (0.22)**	0.93 (0.23)***	1.01 (0.22)***	0.71 (0.22)**
Hispanic	−0.45 (0.42)	−0.15 (0.35)	−0.37 (0.36)	−0.12 (0.41)
Black	0.05 (0.37)	−0.02 (0.50)	−0.28 (0.37)	0.05 (0.45)
Threshold 1	−4.74 (1.23)***	−5.86 (1.15)***	−4.61 (1.08)***	−3.81 (1.15)**
Threshold 2	−3.42 (1.24)**	−4.29 (1.12)***	−2.84 (1.09)**	−2.47 (1.14)*
Threshold 3	−1.10 (1.22)	−2.00 (1.09)	−0.63 (1.07)	0.11 (1.14)
Pseudo-R^2	.34	.39	.38	.37
N	519	521	504	521

***p-value< 0.001, **p-value< 0.01, *p-value< 0.05

Note: Estimates based on weighted data.

Table A-9: Replicating models in Table 1, setting missing values in independent variables to mean value and including indicators for missing data

	Views of transgender people	Support for transgender rights
Intercept	0.06 (0.35)	3.72 (0.27)***
Values		
Egalitarianism	0.01 (0.04)	0.12 (0.03)***
Moral traditionalism	−0.12 (0.05)**	−0.15 (0.04)***
Religiosity	0.02 (0.04)	−0.14 (0.03)***
Ideology	−0.04 (0.04)	−0.12 (0.03)***
Party ID	−0.04 (0.02)*	−0.03 (0.02)
Need for cognitive closure	0.01 (0.05)	−0.06 (0.03)
Views of transgender people		0.22 (0.03)***
Interpersonal contact	0.13 (0.10)	0.12 (0.09)
Familiarity with term	0.06 (0.06)	0.03 (0.05)
Media consumption		
TV use	0.04 (0.02)*	−0.01 (0.02)
Network news	0.02 (0.04)	0.04 (0.03)
News magazines	0.03 (0.04)	−0.03 (0.03)
Fox News	−0.04 (0.03)	−0.07 (0.03)**
CNN/MSNBC	0.02 (0.04)	0.04 (0.03)
Newspaper	0.01 (0.03)	0.04 (0.02)*
Online news	−0.02 (0.04)	−0.01 (0.03)
E Network	0.04 (0.04)	0.05 (0.04)
Late Show/Last Week Tonight	0.00 (0.04)	0.01 (0.03)
Demographics		
Age (decades)	−0.38 (0.24)	−0.37 (0.19)*
Education	−0.00 (0.02)	0.01 (0.01)
Female	0.24 (0.06)***	0.23 (0.05)***
Hispanic	−0.00 (0.11)	−0.13 (0.09)
Black	0.14 (0.13)	−0.13 (0.09)
Indicators for missing values		
Egalitarianism	−0.50 (0.29)	0.11 (0.28)
Moral traditionalism	0.46 (0.17)**	−0.46 (0.39)
Religiosity	−0.24 (0.15)	−0.04 (0.14)
Ideology	0.31 (0.20)	−0.05 (0.11)
Need for cognitive closure	−0.47 (0.14)**	0.07 (0.17)
Views of transgender people		0.04 (0.07)
TV use	−0.31 (0.17)	−0.09 (0.15)
Network news	0.05 (0.24)	−1.25 (0.39)**
News magazines	−0.58 (0.19)**	1.34 (0.14)***
Fox News	0.66 (0.20)**	0.83 (0.45)
CNN/MSNBC		0.01 (0.51)
Newspaper	−0.17 (0.18)	0.39 (0.11)***
Online news	−0.15 (0.09)	−0.10 (0.08)
Late Show/Last Week Tonight	0.76 (0.16)***	0.86 (0.32)**
Age (decades)	−0.10 (0.13)	−0.18 (0.11)
Education	0.43 (0.31)	0.13 (0.18)
McFadden's pseudo-R^2	.17	.46
N	742	888

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Note: Estimates based on weighted data.

Table A-10: Replicating models in Table 1, using individual items for egalitarianism, moral traditionalism, and NFCC scales

	Views of transgender people	Support for transgender rights
Intercept	0.14 (0.38)	4.05 (0.34)***
Values		
Egalitarianism 1	−0.03 (0.04)	0.08 (0.03)*
Egalitarianism 2	0.02 (0.04)	−0.00 (0.03)
Moral traditionalism 1	−0.02 (0.04)	−0.15 (0.04)***
Moral traditionalism 2	−0.06 (0.04)	−0.05 (0.03)
Religiosity	0.02 (0.05)	−0.09 (0.03)**
Ideology	−0.07 (0.05)	−0.17 (0.03)***
Party ID	−0.01 (0.02)	−0.03 (0.02)
Need for cognitive closure 1	0.00 (0.04)	−0.02 (0.03)
Need for cognitive closure 2	−0.00 (0.03)	−0.00 (0.04)
Need for cognitive closure 3	0.06 (0.04)	−0.07 (0.03)*
Views of transgender people		0.23 (0.04)***
Interpersonal contact	0.03 (0.10)	0.14 (0.10)
Familiarity with term	0.02 (0.07)	0.03 (0.06)
Media consumption		
TV use	0.05 (0.02)*	0.04 (0.02)*
Network news	0.09 (0.04)*	0.03 (0.04)
News magazines	−0.03 (0.04)	−0.10 (0.04)**
Fox News	−0.04 (0.04)	−0.06 (0.03)
CNN/MSNBC	−0.02 (0.05)	0.01 (0.04)
Newspaper	−0.02 (0.03)	0.03 (0.03)
Online news	−0.05 (0.04)	−0.04 (0.04)
E Network	0.04 (0.05)	0.08 (0.05)
Late Show/Last Week Tonight	0.03 (0.05)	0.02 (0.04)
Demographics		
Age (decades)	−0.47 (0.26)	−0.11 (0.21)
Education	0.01 (0.02)	0.01 (0.02)
Female	0.19 (0.08)*	0.29 (0.06)***
Hispanic	0.07 (0.11)	−0.17 (0.10)
Black	0.22 (0.16)	−0.08 (0.11)
McFadden's pseudo-R^2	.15	.51
N	454	454

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Note: Estimates based on weighted data. Egalitarianism 1 = "One of the big problems in this country is that we don't give everyone an equal chance"; Egalitarianism 2 = "If people were treated more equally in this country we would have fewer problems"; Moral traditionalism 1 = "We should be more tolerant of people who choose to live according to their own moral standards even if they are very different from our own" (reverse-coded); Moral traditionalism 2 = "Modern lifestyles are contributing to the breakdown of society"; NFCC 1 = "I don't like situations that are uncertain"; NFCC 2 = "I dislike questions that could be answered in many different ways"; NFCC 3 = "I dislike it when a person's statement could mean many different things".

Further details about the survey experiment

Table A-11: Randomization checks for survey experiment

| | Cisgender candidate | | Transgender candidate | |
	Mean	SD	Mean	SD
Party ID (7 point)	2.79	2.16	2.72	2.27
Egalitarianism	2.85	1.00	2.91	1.00
Moral traditionalism	2.36	0.86	2.37	0.85
Religiosity	2.96	1.00	2.99	0.94
Ideology	3.27	1.21	3.19	1.23
Need for cognitive closure	2.79	0.75	2.76	0.76
Interpersonal contact	0.11	0.31	0.09	0.29
TV use	2.94	1.65	2.99	1.81
Views of transgender people	−0.13	0.70	−0.12	0.84

Note: None of the differences between experimental conditions are statistically significant at the p<.05 level. Based on unweighted data.

Full experimental conditions and conjoint analysis

The full candidate experiment included eight conditions, as shown in Table A-12 below, varying the gender (male or female) of both candidates as well as the gender identity (transgender or cisgender) of the respondent's party's candidate.

In the paper, we note that there are no significant differences across the gender categories and so collapse the conditions into two (either an own-party nominee that is transgender or one that is cisgender). Here we formally test this assertion through a basic conjoint analysis as proposed by Hainmueller et al. (2014).[1] The conjoint analysis allows us to estimate the causal effect of multiple components of a randomized experiment simultaneously — in this case, to compare the causal effect of a transgender nominee (versus a cisgender nominee) with the causal effect of different gender match-ups between the two candidates.

The average marginal component effect (AMCE) is the marginal effect of one component of the experiment averaged over the joint distribution of the remaining components of the experiment. In this particular case, we estimate the AMCE of candidate gender identity on the probability of voting for one's own party, averaged across all levels of the two candidates' gender. We then compare this AMCE to the AMCE of the candidates' gender match-ups, averaged across both levels of the candidate's gender identity. The estimated AMCEs are shown in Table A-13 below.

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[1]Hainmueller, J., Hopkins, D. J., and Yamamoto, T. (2014). Causal inference in conjoint analysis: Understanding multidimensional choices via stated preference experiments. *Political Analysis*, 22(1):1–30.

Table A-12: Topline results for all experimental conditions

	Candidate condition		Would vote for...				
	Own party	Other party	Own party	Other party	DK/ Refused		
(a)	Man	Man	72.9	7.0	20.2	100%	N=88
(b)	Woman	Woman	84.2	6.7	9.1	100%	N=91
(c)	Man	Woman	58.7	6.8	34.5	100%	N=89
(d)	Woman	Man	55.1	9.3	35.6	100%	N=91
(e)	Transgender man	Man	33.1	26.1	40.8	100%	N=98
(f)	Transgender woman	Man	28.9	25.0	46.1	100%	N=88
(g)	Transgender man	Woman	47.2	14.9	37.9	100%	N=83
(h)	Transgender woman	Woman	39.4	25.3	35.3	100%	N=105

Note: Row percentages based on weighted data. Pure Independents and non-partisans (N=164) excluded from analysis.

Table A-13: Average marginal component effects of candidate gender and gender identity

	AMCE on vote for own party
Gender identity[a]	
Transgender candidate	$-0.31\,(0.04)^{***}$
Gender match-up[b]	
Both female	$0.09\,(0.06)$
Own party male, other party female	$0.09\,(0.06)$
Own party female, other party male	$-0.11\,(0.06)$

$^{***}p$-value< 0.001, $^{**}p$-value< 0.01, $^{*}p$-value< 0.05

[a]Relative to cisgender candidate

[b]Relative to both candidates being male

Note: Estimates based on weighted data.

The estimated AMCE for a nominee of one's own party being transgender rather than cisgender is $-.31$ (SE=.04, p-value<.001), essentially as reported in Figure 3 with some rounding error. In contrast, the AMCE for each of the gender match-ups fails to reach standard levels of statistical significance. This is the case no matter the baseline level set for comparison — we present the baseline of both candidates

being male as that tends to be the norm in modern American politics, but there are no significant differences across any of the gender combination conditions.

Re-estimating models in Table 2, with controls for media use and demographic characteristics

Table A-14 below replicates the models predicting vote choice shown in Table 2, controlling for various forms of media use and demographic characteristics of respondents.

Table A-14: Multinomial logit regression models predicting vote choice in candidate experiment, with controls for media use and demographics

		Moderator used			
	Baseline	Republican party ID	Egalitarianism	Moral traditionalism	Religiosity
Vote for opposing party					
Intercept	−3.77 (1.09)***	−3.71 (1.17)**	−3.50 (1.65)*	−4.66 (1.21)***	−3.41 (1.56)*
Transgender candidate	1.73 (0.41)***	1.00 (0.51)	2.55 (1.21)*	0.72 (0.80)	−0.09 (1.27)
Moderator		−0.92 (0.72)	−0.16 (0.35)	0.25 (0.25)	−0.13 (0.39)
Transgender candidate × moderator		2.27 (0.80)**	−0.26 (0.37)	0.46 (0.32)	0.65 (0.42)
Network news	−0.32 (0.19)	−0.25 (0.20)	−0.30 (0.19)	−0.27 (0.19)	−0.29 (0.19)
News magazines	0.38 (0.21)	0.33 (0.22)	0.34 (0.21)	0.38 (0.21)	0.35 (0.22)
Fox News	0.35 (0.15)*	0.31 (0.15)*	0.31 (0.16)	0.26 (0.16)	0.33 (0.15)*
CNN/MSNBC	0.29 (0.22)	0.29 (0.22)	0.35 (0.22)	0.36 (0.23)	0.26 (0.22)
Newspaper	−0.15 (0.14)	−0.14 (0.14)	−0.15 (0.14)	−0.19 (0.14)	−0.20 (0.15)
Online news	−0.01 (0.22)	0.01 (0.23)	0.00 (0.23)	0.07 (0.23)	0.05 (0.24)
E Network	0.03 (0.22)	0.02 (0.22)	0.02 (0.22)	0.01 (0.23)	0.02 (0.23)
Late Show/Last Week Tonight	0.16 (0.22)	0.23 (0.22)	0.22 (0.22)	0.26 (0.23)	0.31 (0.24)
Age (decades)	−0.41 (1.20)	−0.38 (1.22)	−0.39 (1.20)	−0.59 (1.21)	−0.93 (1.32)
Education	0.03 (0.10)	0.01 (0.10)	0.02 (0.11)	0.03 (0.10)	0.03 (0.11)
Female	−0.36 (0.39)	−0.19 (0.38)	−0.26 (0.40)	−0.33 (0.40)	−0.36 (0.40)
Hispanic	0.06 (0.50)	0.16 (0.51)	0.27 (0.52)	0.23 (0.50)	0.00 (0.51)
Black	0.40 (0.54)	0.60 (0.54)	0.60 (0.58)	0.53 (0.57)	0.32 (0.60)
DK/Refused					
Intercept	−1.12 (0.82)	−1.48 (0.86)	−1.00 (1.00)	−1.70 (1.03)	−0.85 (0.96)
Transgender candidate	0.84 (0.24)***	0.57 (0.35)	1.42 (0.76)	0.76 (0.68)	−0.42 (0.72)
Moderator		0.34 (0.38)	−0.05 (0.18)	0.16 (0.20)	−0.05 (0.18)
Transgender candidate × moderator		0.86 (0.50)	−0.19 (0.25)	0.06 (0.28)	0.47 (0.24)
Network news	−0.05 (0.14)	−0.01 (0.14)	−0.04 (0.14)	−0.04 (0.14)	−0.05 (0.14)
News magazines	0.19 (0.14)	0.15 (0.14)	0.18 (0.14)	0.22 (0.14)	0.19 (0.14)
Fox News	0.17 (0.10)	0.12 (0.11)	0.14 (0.11)	0.14 (0.11)	0.15 (0.11)
CNN/MSNBC	−0.08 (0.15)	−0.04 (0.15)	−0.05 (0.15)	−0.04 (0.15)	−0.09 (0.15)
Newspaper	−0.09 (0.11)	−0.06 (0.11)	−0.09 (0.11)	−0.08 (0.11)	−0.10 (0.11)
Online news	0.02 (0.13)	0.02 (0.14)	0.01 (0.13)	0.03 (0.14)	0.05 (0.14)
E Network	−0.03 (0.22)	−0.03 (0.22)	−0.03 (0.21)	−0.03 (0.22)	−0.09 (0.22)
Late Show/Last Week Tonight	−0.09 (0.17)	0.01 (0.17)	−0.05 (0.17)	−0.10 (0.18)	−0.04 (0.18)
Age (decades)	0.90 (0.79)	0.80 (0.82)	0.79 (0.80)	0.85 (0.81)	0.64 (0.83)
Education	−0.04 (0.07)	−0.05 (0.07)	−0.04 (0.07)	−0.02 (0.07)	−0.05 (0.07)
Female	0.03 (0.25)	0.15 (0.25)	0.09 (0.25)	0.07 (0.25)	0.06 (0.25)
Hispanic	−0.43 (0.43)	−0.24 (0.43)	−0.42 (0.45)	−0.52 (0.43)	−0.46 (0.43)
Black	−1.00 (0.48)*	−0.74 (0.47)	−0.91 (0.47)	−0.99 (0.49)*	−1.05 (0.50)*
McFadden's pseudo-R^2	.12	.14	.12	.12	.13
N	562	562	561	559	548

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Note: Estimates based on weighted data.

Table A-14 continued: Multinomial logit regression models predicting vote choice in candidate experiment, with controls for media use and demographics

	Moderator used				
	Ideology	Need for closure	Interpersonal contact	TV use	Views of trans-gender people
Vote for opposing party					
Intercept	−4.58 (1.25)***	−6.71 (1.81)***	−3.78 (1.11)***	−4.36 (1.27)***	−3.87 (1.32)**
Transgender candidate	1.76 (0.90)	4.85 (1.54)**	1.96 (0.47)***	2.54 (0.80)**	1.56 (0.45)***
Moderator	0.28 (0.23)	0.99 (0.41)*	0.59 (0.75)	0.03 (0.18)	0.08 (0.31)
Transgender candidate × moderator	0.01 (0.28)	−1.08 (0.49)*	−1.58 (1.04)	−0.23 (0.20)	−0.93 (0.44)*
Network news	−0.32 (0.19)	−0.35 (0.20)	−0.34 (0.19)	−0.32 (0.19)	−0.25 (0.19)
News magazines	0.39 (0.21)	0.42 (0.22)	0.43 (0.22)*	0.45 (0.21)*	0.37 (0.22)
Fox News	0.28 (0.16)	0.36 (0.15)*	0.34 (0.15)*	0.36 (0.15)*	0.37 (0.15)*
CNN/MSNBC	0.36 (0.23)	0.30 (0.22)	0.28 (0.22)	0.36 (0.23)	0.28 (0.23)
Newspaper	−0.16 (0.14)	−0.13 (0.14)	−0.15 (0.14)	−0.21 (0.14)	−0.19 (0.14)
Online news	−0.02 (0.24)	−0.02 (0.22)	−0.04 (0.22)	−0.04 (0.23)	−0.03 (0.25)
E Network	0.00 (0.23)	0.01 (0.22)	0.01 (0.22)	0.07 (0.22)	0.05 (0.22)
Late Show/Last Week Tonight	0.25 (0.24)	0.19 (0.22)	0.15 (0.22)	0.20 (0.22)	0.25 (0.22)
Age (decades)	−0.79 (1.28)	−0.51 (1.20)	−0.43 (1.21)	0.06 (1.18)	−0.80 (1.28)
Education	0.05 (0.11)	0.04 (0.11)	0.03 (0.10)	0.03 (0.11)	0.03 (0.11)
Female	−0.31 (0.40)	−0.39 (0.39)	−0.34 (0.39)	−0.33 (0.40)	−0.20 (0.41)
Hispanic	0.10 (0.51)	0.10 (0.50)	0.20 (0.50)	0.08 (0.50)	0.24 (0.50)
Black	0.28 (0.57)	0.39 (0.55)	0.40 (0.53)	0.31 (0.55)	0.52 (0.56)
DK/Refused					
Intercept	−1.51 (1.07)	−1.33 (1.03)	−1.06 (0.82)	−1.19 (0.84)	−0.91 (0.91)
Transgender candidate	0.68 (0.70)	0.97 (0.88)	0.87 (0.25)***	1.14 (0.47)*	0.71 (0.26)**
Moderator	0.15 (0.17)	0.10 (0.22)	−0.84 (0.75)	−0.08 (0.12)	0.38 (0.27)
Transgender candidate × moderator	0.09 (0.21)	−0.05 (0.31)	0.20 (0.93)	−0.10 (0.15)	−0.48 (0.36)
Network news	−0.07 (0.14)	−0.05 (0.14)	−0.06 (0.14)	−0.02 (0.14)	0.07 (0.16)
News magazines	0.19 (0.14)	0.19 (0.14)	0.20 (0.14)	0.21 (0.14)	0.10 (0.15)
Fox News	0.12 (0.11)	0.17 (0.10)	0.17 (0.11)	0.19 (0.11)	0.18 (0.12)
CNN/MSNBC	−0.02 (0.16)	−0.08 (0.15)	−0.08 (0.16)	−0.04 (0.16)	−0.14 (0.17)
Newspaper	−0.11 (0.11)	−0.09 (0.11)	−0.08 (0.11)	−0.11 (0.11)	−0.04 (0.12)
Online news	0.01 (0.14)	0.02 (0.13)	0.02 (0.13)	0.03 (0.13)	−0.03 (0.15)
E Network	−0.03 (0.22)	−0.04 (0.22)	−0.04 (0.22)	−0.00 (0.22)	0.02 (0.23)
Late Show/Last Week Tonight	−0.02 (0.18)	−0.08 (0.17)	−0.10 (0.17)	−0.08 (0.17)	−0.11 (0.18)
Age (decades)	0.52 (0.83)	0.88 (0.79)	0.86 (0.80)	1.10 (0.80)	0.61 (0.87)
Education	−0.03 (0.07)	−0.04 (0.07)	−0.03 (0.07)	−0.06 (0.07)	−0.05 (0.07)
Female	0.07 (0.26)	0.02 (0.25)	0.04 (0.25)	0.04 (0.25)	−0.02 (0.27)
Hispanic	−0.43 (0.44)	−0.43 (0.43)	−0.34 (0.43)	−0.40 (0.43)	−0.77 (0.49)
Black	−1.11 (0.49)*	−1.01 (0.47)*	−0.93 (0.48)	−0.93 (0.48)	−1.21 (0.56)*
McFadden's pseudo-R^2	.14	.12	.13	.13	.15
N	548	561	562	560	481

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Note: Estimates based on weighted data.