

Appendix A Appendix

Appendix A.1 Additional Analysis

- Table A1 reports the relationship between stated intent to turnout and validated turnout in the 2012 for each of the field experiments.
- Table A2 provides descriptive statistics for our survey sample.
- Table A3 reports regression models mirroring those reported in Table A7. Models do not restrict survey experiment sample to registered voters and respondents who provided responses to items used in balance tests. Including these respondents does not affect the substantive findings we report in the main text. The only cases where theoretically relevant coefficients change in terms of whether they meet traditional thresholds of statistical significance ($p < .05$) are in column (2). In this model, the interactions between the negative mailer treatment and *Field Experiment 1* and *Field Experiment 2* each fall just short of this threshold ($p = .075$ and $.051$, respectively), and the *Positive Mailer x Field Experiment 2* interaction exceeds the threshold ($p = .033$).
- Table A4 reports regression models used to extract estimates reported in Figure A1, as well as models assessing whether respondent characteristics moderate the treatment effects (columns [3]-[4]).
- Figure A1 reports estimates from the models reported in Table A4
- Table A5 reports the mean and standard deviation of our outcome variable (which ranges from 1-4) for each treatment condition across the experiments and, in the case of the survey experiment, sample restrictions applied in Figure 1.
- Table A6 reports regression models mirroring those reported in Table A7, but using ordered logit specifications. The substantive results are similar. Note that Brant tests indicate that the parallel regressions assumption is violated in each of these models.
- Table A7 reports regression models used to extract estimates reported in Figure 1.
- Table A8 reports educational attainment statistics for the three state Senate districts where the field experiments reported by Doherty and Adler (2014) were conducted. Source: <https://statisticalatlas.com/United-States/Educational-Attainment>.

Table A1: Relationship between Intent to Turnout and Validated Turnout: Field Experiments

	<i>Field Experiment 1</i>	<i>Field Experiment 2</i>
Will definitely not vote.	85%	33%
Will probably not vote.	85%	69%
Will probably vote.	82%	88%
Will definitely vote.	92%	92%

Cell entries are percent of respondents who updated voter files indicated turned out to vote in the 2012 election. In each experiment, the relationship between intent to turnout and validated turnout is statistically significant at $p < .01$.

Table A2: Summary Statistics: Survey Experiment

Variable	Full Sample	Likely Voters [Voted in 2008 <i>or</i> 2010]
Likely to Vote in 2012 (1=Definitely no; 4=definitely yes)	3.591 [.7367]	3.733 [.5821]
Positive Mailer Treatment	0.395 [.4892]	0.397 [.4897]
Negative Mailer Treatment	0.406 [.4915]	0.403 [.491]
Democrat (1=yes)	0.496 [.5004]	0.522 [.5001]
Republican (1=yes)	0.175 [.3806]	0.190 [.3925]
Female=1	0.444 [.4972]	0.472 [.4998]
Age (in years)	31.765 [10.8262]	33.834 [10.8297]
Education (1=No HS; 6=post-grad)	3.929 [1.2814]	4.175 [1.2338]
Income (1-14; 15=RF)	7.387 [3.6842]	7.353 [3.3999]
Income Refused	0.044 [.2058]	0.039 [.1933]
White = 1	0.829 [.3765]	0.849 [.3583]
Black = 1	0.059 [.2348]	0.065 [.2462]
Hispanic = 1	0.044 [.2058]	0.030 [.1712]
Other race=1	0.103 [.3038]	0.088 [.2841]
Voted in 2008 (1=yes)	0.686 [.4646]	0.935 [.2462]
Voted in 2010 (1=yes)	0.472 [.4996]	0.644 [.4792]
Pieces of political mail each week? (0 = None; 4 = 10+)	1.566 [1.2424]	1.722 [1.248]
Observations	633	464
χ^2 (p-value)	0.965	0.995

Cell entries are sample means. Standard deviations in brackets. Results of balance test reported as χ^2 p-value from multinomial regression model predicting treatment assignment with variables listed (excluding outcome variable—i.e., *Likely to Vote in 2012*)

Table A3: Models Mirroring OLS Models Presented in Table A7 (No Sample Restrictions for Survey Experiment)

	(1)	(2)	(3)	(4)
	Likely to Vote in 2012 (1=Definitely no; 4=definitely yes)			
	Restrictions on Survey Experiment Sample			
	Full Sample	Likely Voters	Independents	Independent Likely Voters
Positive Mailer Treatment	-0.090 [0.096]	-0.089 [0.075]	-0.033 [0.176]	-0.048 [0.139]
Positive Mailer x Field Experiment 1	0.134 [0.102]	0.133 [0.083]	0.077 [0.179]	0.092 [0.143]
Positive Mailer x Field Experiment 2	0.185 [0.105]	0.184 [0.086]*	0.128 [0.181]	0.143 [0.145]
Negative Mailer Treatment	-0.161 [0.098]	-0.065 [0.074]	-0.353 [0.178]*	-0.306 [0.164]
Negative Mailer x Field Experiment 1	0.242 [0.104]*	0.145 [0.082]	0.434 [0.181]*	0.387 [0.168]*
Negative Mailer x Field Experiment 2	0.263 [0.107]*	0.167 [0.086]	0.455 [0.183]*	0.409 [0.170]*
First Field Experiment	0.392 [0.083]**	0.044 [0.064]	0.641 [0.147]**	0.109 [0.118]
Second Field Experiment	0.406 [0.086]**	0.058 [0.068]	0.655 [0.148]**	0.123 [0.120]
Constant	3.395 [0.079]**	3.743 [0.059]**	3.145 [0.144]**	3.677 [0.115]**
Observations	3253	2962	2735	2596
R-squared	0.113	0.018	0.166	0.027

Models including survey experiment respondents who did not indicate they were registered or who failed to provide usable responses to the items used to test for balance across conditions. Including these respondents does not affect the substantive findings we report in the main text. The only cases where theoretically relevant coefficients change in terms of whether they meet traditional thresholds of statistical significance ($p < .05$) are in column (2). In this model, the interactions between the negative mailer treatment and Field Experiment 1 and Field Experiment 2 each fall just short of this threshold ($p = .075$ and $.051$, respectively), and the *Positive Mailer x Field Experiment 2* interaction exceeds the threshold ($p = .033$). Cell entries are unstandardized Ordinary Least Squares (OLS) coefficients. Robust standard errors in brackets. Likely voters are those who reported voting in either 2008 or 2010; Independents did not identify as Democrats or Republicans.

* significant at $p < .05$; ** significant at $p < .01$

Table A4: Regression Models (Party Moderation; Survey Experiment Only)

	(1)	(2)	(3)	(4)
	Likely to Vote in 2012 (1=Definitely no; 4=definitely yes)			
	Full Sample	Likely Voters	Full Sample	Likely Voters
Positive Mailer Treatment	-0.175 [0.129]	-0.119 [0.115]	0.208 [0.441]	0.006 [0.325]
Negative Mailer Treatment	-0.413 [0.143]**	-0.319 [0.143]*	0.222 [0.420]	-0.083 [0.307]
Democrat (1=yes)	-0.004 [0.131]	-0.012 [0.110]	-0.021 [0.126]	-0.016 [0.121]
Republican (1=yes)	0.183 [0.164]	0.050 [0.176]	0.148 [0.181]	0.034 [0.205]
Positive Mailer x Democrat (1=yes)	0.167 [0.170]	0.070 [0.150]	0.196 [0.169]	0.093 [0.163]
Negative Mailer x Democrat (1=yes)	0.485 [0.178]**	0.367 [0.166]*	0.468 [0.178]**	0.355 [0.176]*
Positive Mailer x Republican (1=yes)	0.001 [0.208]	-0.001 [0.211]	-0.031 [0.223]	0.004 [0.235]
Negative Mailer x Republican (1=yes)	0.349 [0.209]	0.295 [0.222]	0.313 [0.228]	0.272 [0.247]
Positive Mailer x Income (1-14; 15=RF)			0.001 [0.026]	0.007 [0.022]
Negative Mailer x Income (1-14; 15=RF)			-0.009 [0.029]	0.002 [0.022]
Positive Mailer x Income Refused			0.104 [0.425]	-0.075 [0.224]
Negative Mailer x Income Refused			0.207 [0.426]	-0.214 [0.250]
Positive Mailer x Education (1=No HS; 6=post-grad)			-0.130 [0.057]*	-0.081 [0.052]
Negative Mailer x Education (1=No HS; 6=post-grad)			-0.171 [0.059]**	-0.120 [0.053]*
Positive Mailer x Female=1			-0.141 [0.152]	-0.020 [0.147]
Negative Mailer x Female=1			-0.152 [0.152]	-0.043 [0.147]
Positive Mailer x Age (in years)			0.008 [0.007]	0.003 [0.007]
Negative Mailer x Age (in years)			0.004 [0.007]	0.004 [0.006]
Positive Mailer x White = 1			-0.156 [0.193]	-0.027 [0.169]
Negative Mailer x White = 1			-0.086 [0.208]	0.063 [0.189]
Positive Mailer x Pieces of political mail each week? (0 = None; 4 = 10+)			0.011 [0.064]	0.046 [0.065]
Negative Mailer x Pieces of political mail each week? (0 = None; 4 = 10+)			0.065 [0.064]	0.040 [0.059]
Income (1-14; 15=RF)			0.024 [0.022]	0.010 [0.016]
Income Refused			-0.322 [0.371]	0.060 [0.146]
Education (1=No HS; 6=post-grad)			0.139 [0.043]**	0.064 [0.035]
Female=1			0.173 [0.116]	0.015 [0.112]
Age (in years)			0.001 [0.006]	0.001 [0.005]
White = 1			0.098 [0.162]	-0.051 [0.135]
Pieces of political mail each week? (0 = None; 4 = 10+)			0.059 [0.050]	0.010 [0.049]
Constant	3.643 [0.095]**	3.792 [0.084]**	2.685 [0.361]**	3.467 [0.218]**
Observations	633	464	633	464
R-squared	0.051	0.035	0.119	0.069

Cell entries are unstandardized Ordinary Least Squares (OLS) coefficients. Robust standard errors in brackets. Likely voters are those who reported voting in either 2008 or 2010. * significant at $p < .05$; ** significant at $p < .01$

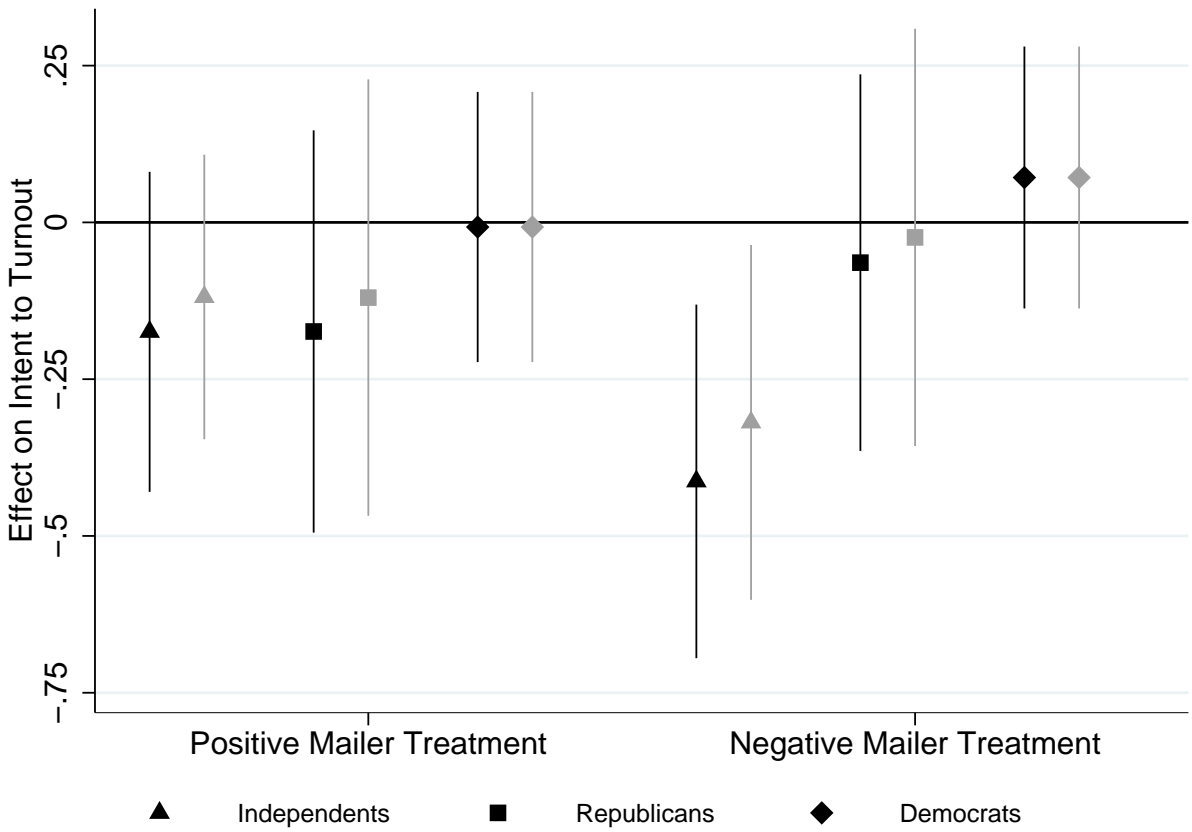


Figure A1: **Treatment Effects by Partisanship (Survey Experiment)**: Black markers are from models reported in column (1) of Appendix Table A7; gray markers from model restricted to likely voters (column [2]). Whiskers are 95% confidence intervals.

Table A5: Outcome Means and Standard Deviations by Experimental Condition

	Control	Positive Mailer	Negative Mailer
Field Experiments			
Field Experiment 1	3.786 [0.026] N = 515	3.83 [0.024] N = 507	3.867 [0.022] N = 518
Field Experiment 2	3.801 [0.034] N = 306	3.896 [0.026] N = 307	3.903 [0.025] N = 290
Survey Experiment			
All	3.675 [0.059] N = 126	3.584 [0.045] N = 250	3.556 [0.049] N = 257
Likely Voters	3.796 [0.054] N = 93	3.712 [0.044] N = 184	3.722 [0.044] N = 187
Independents	3.643 [0.095] N = 42	3.468 [0.088] N = 79	3.23 [0.107] N = 87
Independent Likely Voters	3.792 [0.085] N = 24	3.673 [0.078] N = 55	3.473 [0.116] N = 55

Cell entries are outcome means by treatment condition. Standard deviations in brackets. Outcome measure—How likely is it that you will vote in the 2012 election this November: would you say you will definitely vote, probably vote, probably not vote, or definitely not vote in the election? [1 = I will definitely not vote; 2 = I will probably not vote; 3 = I will probably vote; 4 = I will definitely vote]

Table A6: Ordered Logit Models Mirroring OLS Models Presented in Table A7

	(1)	(2)	(3)	(4)
	Likely to Vote in 2012 (1=Definitely no; 4=definitely yes)			
	Restrictions on Survey Experiment Sample			
	Full Sample	Likely Voters	Independents	Independent Likely Voters
Positive Mailer Treatment	-0.349 [0.239]	-0.406 [0.315]	-0.412 [0.363]	-0.358 [0.515]
Positive Mailer x Field Experiment 1	0.650** [0.307]	0.706* [0.370]	0.711* [0.410]	0.656 [0.550]
Positive Mailer x Field Experiment 2	1.148*** [0.395]	1.203*** [0.445]	1.207** [0.479]	1.152* [0.603]
Negative Mailer Treatment	-0.339 [0.242]	-0.334 [0.318]	-0.813** [0.361]	-0.749 [0.513]
Negative Mailer x Field Experiment 1	0.876*** [0.315]	0.871** [0.376]	1.347*** [0.413]	1.283** [0.550]
Negative Mailer x Field Experiment 2	1.139*** [0.401]	1.134** [0.450]	1.610*** [0.481]	1.546** [0.603]
First Field Experiment	0.579** [0.240]	0.127 [0.298]	0.802** [0.328]	0.371 [0.460]
Second Field Experiment	0.783*** [0.275]	0.332 [0.327]	1.005*** [0.354]	0.573 [0.479]
Cut point 1	-3.609*** [0.241]	-4.078*** [0.311]	-3.315*** [0.326]	-3.740*** [0.465]
Cut point 2	-2.228*** [0.209]	-2.660*** [0.272]	-1.898*** [0.303]	-2.309*** [0.438]
Cut point 3	-1.236*** [0.204]	-1.689*** [0.270]	-1.021*** [0.303]	-1.453*** [0.443]
Observations	3074	2905	2649	2575

Cell entries are ordered logit coefficients. Robust standard errors in brackets. Note that Brant tests indicate that the parallel regressions assumption is violated in each model ($p < .01$ for all tests). Likely voters are those who reported voting in either 2008 or 2010; Independents did not identify as Democrats or Republicans.

* significant at $p < .05$; ** significant at $p < .01$

Table A7: Regression Models for Estimates Reported in Figure 1

	(1)	(2)	(3)	(4)
	Likely to Vote in 2012 (1=Definitely no; 4=definitely yes)			
	Restrictions on Survey Experiment Sample			
	Full Sample	Likely Voters	Independents	Independent Likely Voters
Positive Mailer Treatment	-0.091 [0.074]	-0.084 [0.069]	-0.175 [0.129]	-0.119 [0.114]
Positive Mailer x Field Experiment 1	0.135 [0.082]	0.128 [0.078]	0.218 [0.133]	0.163 [0.119]
Positive Mailer x Field Experiment 2	0.186 [0.086]*	0.179 [0.082]*	0.270 [0.136]*	0.214 [0.121]
Negative Mailer Treatment	-0.118 [0.077]	-0.074 [0.070]	-0.413 [0.142]**	-0.319 [0.142]*
Negative Mailer x Field Experiment 1	0.199 [0.084]*	0.154 [0.077]*	0.493 [0.146]**	0.399 [0.146]**
Negative Mailer x Field Experiment 2	0.220 [0.088]*	0.176 [0.082]*	0.515 [0.148]**	0.421 [0.148]**
First Field Experiment	0.112 [0.065]	-0.009 [0.060]	0.144 [0.098]	-0.005 [0.087]
Second Field Experiment	0.126 [0.068]	0.005 [0.064]	0.158 [0.100]	0.009 [0.090]
Constant	3.675 [0.059]**	3.796 [0.054]**	3.643 [0.094]**	3.792 [0.083]**
Observations	3074	2905	2649	2575
R-squared	0.035	0.011	0.054	0.018

Cell entries are unstandardized Ordinary Least Squares (OLS) coefficients. Robust standard errors in brackets. Likely voters are those who reported voting in either 2008 or 2010; Independents did not identify as Democrats or Republicans.
 * significant at $p < .05$; ** significant at $p < .01$

Table A8: Educational Attainment in State Senate Districts Targeted in Field Experiments

	National	Colorado 19	Colorado 26	Colorado 35	Average in Targeted Senate Districts
Higher Degree	36.7	44.1	50.4	28.5	41
H.S. Diploma	49.4	49.6	42	55.7	49.1
No H.S. Diploma	14.0	6.3	7.6	15.8	9.9

Cell entries are national percentages and percentages within three Colorado state Senate districts where Doherty and Adler (2014) field experiments were conducted. Analysis reported in the paper restricted to voters in districts 19 and 26. See text for details. Source: <https://statisticalatlas.com/United-States/Educational-Attainment>

Appendix A.2 Field Experiment Protocol and Survey Question Wording

In each field experiment, the sample was drawn from registered, but unaffiliated voters whom voter files indicated had participated in at least one of the two previous (2008 or 2010) federal elections. Paraphrasing from (Doherty and Adler 2014, 570-571):

Cases where two voters with the same full name was listed more than once with the same phone number, where an individual with the same full name was listed twice at different full addresses, or where voters living at different physical addresses were listed as having the same phone number were dropped from the target sample. Additionally, households with more than four registered voters were dropped, as were cases that did not include a phone number or where a voter purportedly shared a phone number with more than one other voter. Treatment assignment was conducted at the household level. In cases where more than one eligible individual (i.e., more than one likely independent voter) lived in a given household, one individual was randomly selected for inclusion in the study, and any other eligible voters within that household were dropped.

Survey Script and Question Wording

Hello, you have been randomly selected to participate in a brief five-question survey. This survey is for research purposes, and we will not try to sell you anything. We would really appreciate your participation, and your participation and your responses will be completely confidential. I am going to read you the names of two individuals.

Please tell me whether you have a generally favorable or unfavorable opinion of each one. If you have never heard of the person, please just let us know by pressing 3. If you have heard of the individual but are unsure about how you feel about them, press 4.

What is your opinion of [REPUBLICAN CANDIDATE NAME]? Press 1 if you have a generally favorable opinion of [REPUBLICAN CANDIDATE NAME]; Press 2 if you have a generally unfavorable of [REPUBLICAN CANDIDATE NAME]; Press 3 if you have never heard of [REPUBLICAN CANDIDATE NAME]; Press 4 if you have heard of [REPUBLICAN CANDIDATE NAME] but are unsure about how you feel about them.

And what is your opinion of [DEMOCRATIC CANDIDATE NAME]? Press 1 if you have a generally favorable opinion of [DEMOCRATIC CANDIDATE NAME]; Press 2 if you have a generally unfavorable of [DEMOCRATIC CANDIDATE NAME]; Press 3 if you have never heard of [DEMOCRATIC CANDIDATE NAME]; Press 4 if you have heard of [DEMOCRATIC CANDIDATE NAME] but are unsure about how you feel about them.

Have you received any mail in the last week about any candidates running for office in the 2012 elections? Press 1 if you have received mail about the 2012 elections; Press 2 if you have not received mail about the 2012 elections; Press 3 if you are unsure.

Are you registered to vote in Colorado? Press 1 if you are registered to vote; Press 2 if you are not registered to vote; Press 3 if you are unsure.

Likely to Vote: How likely is it that you will vote in the 2012 election this November: would you say you will definitely vote, probably vote, probably not vote, or definitely not vote in the election?

Press 1 if you will definitely vote; Press 2 if you will probably vote; Press 3 if you will probably not vote; Press 4 if you will definitely not vote.

Appendix A.3 Survey Experiment Details

Below is the full question wording for all items (in order) included on the pre-test and leading up to the post-treatment question we specify as our outcome variable. Items used in our analysis are bolded and indicate reporting values.

Age (in years): What is the year of your birth? (2012 - year of birth).

Education (1=No HS; 6=post-grad): What is the highest level of education you have achieved? (no high school diploma [1]; high school graduate [2]; some college, no degree [3]; 2-year college degree [4]; 4-year college degree [5]; post-graduate degree [6])

Income (1=<10k; 14 =150k+; 15=refused): What was your total FAMILY income in 2014? (Less than \$10,000 [1]; \$10,000-\$14,999 [2]; \$15,000-\$19,999 [3]; \$20,000-\$24,999 [4]; \$25,000-\$29,999 [5]; \$30,000-\$39,999 [6]; \$40,000-\$49,999 [7]; \$50,000-\$59,999 [8]; \$60,000-\$69,999 [9]; \$70,000-\$79,999 [10]; \$80,000-\$99,999 [11]; \$100,000-\$119,999 [12]; \$120,000-\$149,999 [13]; \$150,000 or more [14]; prefer not to say [15]; missing [15])

Income Refused/Missing (1=yes): Set to 1 if Income missing or “prefer not to say”

White (1=yes): What racial or ethnic group best describes you? (White, Black, Hispanic, Asian, Native American, Mixed, Other)

Female (1=yes): What is your gender? (Female [1]; Male [0])

Which state do you live in?

Registered?: Are you registered to vote? [Yes, No, I don’t know]. *Only respondents who said they were registered are included in the analysis.*

Past turnout: Did you vote in each of the following elections–2008 General Election; 2010 General Election; 2012 Primary Election [Yes, No, Not eligible]. *Respondents who said they voted in at least one of these elections are treated as “Likely Voters” in the analysis.*

Already voted?: Have you already voted in the 2012 general election? In other words, did you already vote by mail, vote absentee, or otherwise vote early? [Yes, No, I am not eligible to vote in the United States]. *Respondents who were ineligible or who said they already voted are excluded from the analysis.*

Party Identification: Generally speaking, do you usually think of yourself as a Democrat, a Republican, an Independent, or what? [Indicators for: Democrat, Republican, Independent/Other]

Standard Party identification branching: Would you call yourself a strong [Democrat/Republican] or not a very strong [Democrat/Republican]?; Do you think of yourself as closer to the Democratic party, closer to the Republican party, or equally close to both parties?

We hear a lot of talk these days about liberals and conservatives. Below is a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale? [Extremely liberal; Liberal; Slightly liberal; Moderate, middle of the road; Slightly conservative; Conservative; Extremely conservative]

How interested are you in politics and current events? [Very interested; Somewhat interested; Not at all interested]

Pieces of political mail each week?: During the last month, about how many pieces of political mail would you say you received each week? (None [0]; 1-2 [1]; 3-5 [2]; 6-10 [3]; More than 10 [4])

Thinking about each of the following periods of time, how much attention would you say you paid to the political mail you received during the period? If you did not receive any mail during a period, just let us know: This last week; The first several weeks of October; September; August and earlier (No attention at all; A little bit of attention; A fair amount of attention; A great deal of attention; I did not receive any)

And how much attention would you say you paid to political ads on TV during each period? If you did not see any ads during a period, just let us know.: This last week; The first several weeks of October; September; August and earlier (No attention at all; A little bit of attention; A fair amount of attention; A great deal of attention; I did not receive any)

Please rate your agreement with each of the following statements: It's impossible to find the time to read every piece of political mail that you receive during a campaign.; Sometimes the amount of political mail I receive during a campaign season seems overwhelming.; I read any mail I receive about political candidates even if I already know who I plan to vote for.; Although I sometimes read political mail I receive, if I get more than one or two pieces of mail in one day I usually just put them in the garbage.; At this point in the campaign season I usually just throw away any political mail I receive without looking at it. (Strongly agree; Somewhat agree; Neither agree nor disagree; Somewhat disagree; Strongly disagree)

Aside from this survey, how many political surveys have you taken through Mechanical Turk in the past month? (None; 1 to 2; 3 to 5; 6 to 9; 10 or more)

[TEXT FOR THOSE ASSIGNED TO TREATMENT CONDITION] During this campaign season, campaigns sent out many pieces of mail to eligible voters. On the next page we will show you an example of a mailer that one candidate's campaign sent out this year. The candidate—[REPUBLICAN NAME]—is running against [DEMOCRAT NAME]. Please look at the mailer carefully. After you do we will ask you some questions about the mailer.

Image of back and front of either positive or negative mailer presented to respondents in treatment condition. *Description of mailers from (Doherty and Adler 2014, 565):*

The negative mailers attacked the Democratic candidates' policy positions and the purported implications of those positions. Specifically, the mailer in each district accused the Democratic candidate of eagerly supporting raising taxes: "Raising taxes. Killing jobs." was presented in large, bold font at the top of the front of the mailer. The

back of the mailer described the candidate with the phrase, “Likes high taxes. How much? \$4 billion!” In contrast, the positive mailer focused on the Republican candidates background and policy goals. As with the negative mailers, the positive mailers associated with each of the two candidates were almost identical. Each highlighted the candidates background (e.g., “Husband, father, veteran”) and promised “Jobs for Colorado, Opportunity for All, and Limited Government.”

If you received this mailer, do you think it would make you more likely to support [REPUBLICAN NAME], whose campaign sent the mailer, or more likely to support [DEMOCRAT NAME], the person he is running against? (REPUBLICAN NAME or DEMOCRAT NAME)

Likely to Vote: How likely is it that you will vote in the 2012 election this November: would you say you will definitely vote, probably vote, probably not vote, or definitely not vote in the election? [1 = I will definitely not vote; 2 = I will probably not vote; 3 = I will probably vote; 4 = I will definitely vote]