

# Can Cognitive Dissonance Theory Explain Action Induced Changes in Political Preferences?

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# Can Cognitive Dissonance Theory Explain Action Induced Changes in Political Preferences?

## Abstract

We present the results of a novel experiment investigating how participation in the electoral process can causally change political preference via cognitive dissonance theory. We present a novel experimental design, which complements the existing empirical literature, isolating the net effect of cognitive dissonance on preference changes. Our results suggest that cognitive dissonance created by expressing support for a losing candidate causally led participants to align their preferences with that of the supported candidate more closely. Our results, however, also uncovered a strong dependency of such preferences changes on the outcome of the election. When supported candidates won the election, no preference change was observed. Although more research is needed, our results may be an indication that previous studies overestimated the cognitive dissonance effect on preference changes.

JEL-Codes: C910, D720, D910.

Keywords: political participation, political support, political preferences, cognitive dissonance, online experiment.

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## Introduction

The question of why voters change their political preferences is of central importance to all social sciences (Converse, 1964; Fiorina & Abrams, 2008; Iyengar et al., 2019; Lazarsfeld et al., 1944; McCann, 1997). Widespread evidence documents that expressing support in an election, for example by casting a vote, can lead voters to align their preferences with those of the supported candidate (Acharya et al., 2018; Beasley & Joslyn, 2001; Dinas, 2014; Granberg & Nanneman, 1986; Lazarsfeld et al., 1944; Mullainathan & Washington, 2009). A commonplace mechanism used to explain these ‘support-induced’ shifts in preferences is cognitive dissonance theory: voters exhibit an unconscious drive to align preexisting preferences with their actions more closely (Festinger, 1957). The cognitive dissonance perspective has one major implication. Adjustments in political preferences, for example polarization, may be psychologically rooted in the decision of voters to participate in elections.

Given its widespread implications, it is of paramount importance to investigate the validity of the cognitive dissonance perspective. We argue that existing evidence is insufficient to settle the question. By measuring political preferences before and after elections, existing studies cannot rule out an equally powerful, alternative explanation: social influence. Social interactions are an important part of our life (Lazarsfeld et al., 1944; Pietryka & Debats, 2017).<sup>4</sup> They create opportunities for discussion which in turn can significantly sway our political views (Bursztyn et al., 2021; Pons, 2018). In comparison to nonvoters, individuals participating in elections may also experience more social interactions related to election relevant topics.

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<sup>4</sup> Other factors can contribute to before and after election preference changes, for example information effects. Important for our argument here is that existing studies typically control for plausible confounding factors except social influence effects, see e.g., Jessen et al. (2021).

Take for example the ANES database which is widely used in the literature on cognitive dissonance and preference change (Beasley & Joslyn, 2001). Mimicking existing empirical approaches, we analyzed how voters change their Thermometer ratings for the candidate they voted for before and after U.S. general elections as a function of support activities. For the latter, we calculated an *Effort Index* counting how many activities a voter reported engaging in during the pre-election campaign.<sup>5</sup> We standardized and split the *Effort Index* into quartiles and plotted it against the changes in Thermometer ratings in Figure 1. Positive changes denote more favorable attitudes towards a candidate after the election.

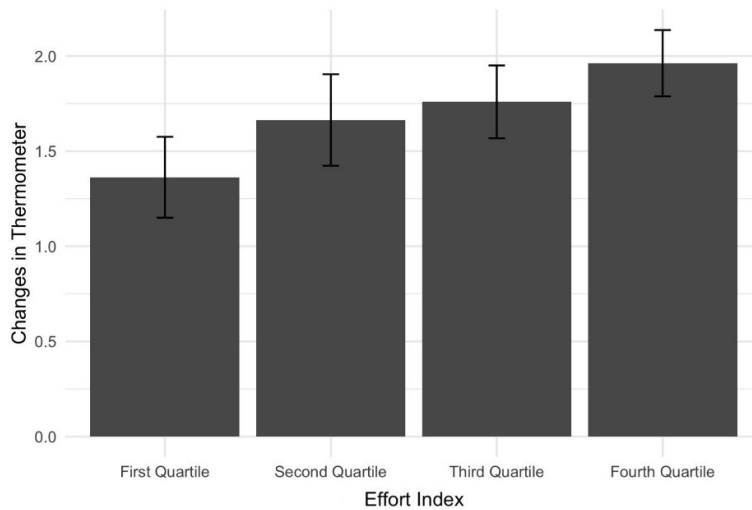


Figure 1: *Effort Index* and changes in Thermometer ratings using ANES data from 1980 to 2020

Figure 1 replicates the basic finding that Thermometer ratings become more favorable for the supported candidate after the election (Beasley & Joslyn, 2001; Mullainathan & Washington, 2009). Furthermore, we observe strong evidence that higher effort in support is associated with stronger

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<sup>5</sup> The activities that consistently appear throughout all panel ANES waves are trying to influence others' vote, joining rallies, working for the candidate in his/her campaign, using bumper stickers, and donating to campaigns.

changes in Thermometer ratings. This finding is highly compatible with the cognitive dissonance perspective. More effort seemingly creates more dissonance, which in turn results in stronger Thermometer rating changes. Our analysis here is reminiscent of the existing literature in the sense that we do not control properly for social influence. Some of the activities reported in the ANES carry a strong social component, for example influencing others or attending rallies, which create many opportunities for social interaction and discussion. We and previous studies cannot identify whether the act of support itself, social influences accompanying the decision to participate in an election, or both contributed to the observed preference changes.

Existing databases, such as the ANES or the CES, do not allow to disentangle social influence and cognitive dissonance effects. We have, therefore, developed a novel experiment to isolate the cognitive dissonance component of support-induced preference changes. We elicit participants' preferences over policies and candidates, ask participants to raise support for a candidate in a hypothetical election via an effort task (mimicking bumper stickers and similar forms real life support), and remeasure preferences.

The preregistered online experiment with 1,200 U.S. participants provides causal evidence that cognitive dissonance theory is a plausible mechanism for support-induced preference changes. In comparison to a neutral control treatment in which no support was raised, participants supporting a candidate in the hypothetical election changed their policy views to be more aligned with those of the supported candidate. In accordance with cognitive dissonance theory, we observed a strong dependency of our results on the outcome of the election (Beasley & Joslyn, 2001). Preference only changed when the supported candidate lost the election. This finding corroborates recent theoretical predictions about changes in policy preferences and highlights a novel, potential dependency of preference changes in policies on the outcome of the election (Acharya et al., 2018). Finally, when the supported candidate won the election, no preference change was observed. This is at odds with previous findings who report preferences changes independent of winning or losing the election.

## Cognitive dissonance, support, and preference changes

Cognitive dissonance is defined as a negative psychological feeling that arises when an action taken conflicts with underlying preferences (Festinger, 1957). Cognitive dissonance theory postulates that humans inherit a natural, unconscious drive to reduce cognitive dissonance and that dissonance reduction takes the path of least resistance. Since actions are often difficult to reverse, preferences are instead changed.

Now consider a voter who takes some actions to support a candidate in an election.<sup>6</sup> Suppose that the candidate's promoted policy views differ from the voter's ideal policy views. This is often the case for a large portion of the electorate when candidates are nominated through primary elections or similar forms of intra-party contests.<sup>7</sup> Such actions constitute inconsistencies, and, hence, create cognitive dissonance. To reduce dissonance, the voter unconsciously changes her or his preferences to be more aligned with the supported candidate (Acharya et al., 2018; Beasley & Joslyn, 2001; Dinas, 2014; Mullainathan & Washington, 2009).

To provide a stringent test of the cognitive dissonance perspective, we aim to isolate the cognitive dissonance component of support-induced preference changes and analyze important correlates of cognitive dissonance with our experiment. A basic prediction of cognitive dissonance theory is that more inconsistency creates sharper preference changes (Festinger, 1957). We, therefore, hypothesized that higher levels of effort exerted in the act of expressing support carry a higher

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<sup>6</sup>In the ANES, 61% of U.S. voters in the 2020 U.S. Presidential Elections self-report having engaged in at least one of the following supporting actions during the pre-election campaign: donations, sticker campaigns, or participating in rallies.

<sup>7</sup>A recent point in case are the millions of Bernie Sanders voters who saw him lose the 2020 Democratic Party presidential primaries. To defeat the incumbent U.S. President Donald Trump in the 2020 presidential election, these voters needed to support Joe Biden whose policy platform was far more centrist than that of Bernie Sanders.

dissonance potential. That is, dissonance increases in the amount of effort exerted into supporting a candidate. We furthermore conjectured that supporting a candidate who wins the election has less dissonance potential than supporting a candidate who loses the election. In the latter case, the provided effort is naught.

## **Experimental design**

We conducted an online experiment to test our main prediction that expressing support for a candidate can causally change preferences via cognitive dissonance. A schematic overview of our design is presented in Figure 2 below. The online appendix contains screenshots of every screen seen the experiment as well as our preregistration file.

The design can be broken down into five steps. In step 1, we elicited participants' policy preferences over U.S. Corporate Taxation and Legal Immigration.<sup>8</sup> For U.S. Corporate Taxation we asked participants whether they would favor an increase or a decrease in the current U.S. corporate tax rate. For Legal Immigration participants stated whether they would favor to allow more or fewer legal immigrants to live in the U.S. Participants expressed their policy preferences on a scale ranging from 0 to 100. The endpoints of the scale, 0 and 100, represented preferences for the strongest changes in policy. The mid-point 50 represented preferences for no change in policy, indicating that the current U.S. policy on an issue was optimal. Assessing policy preferences relative to current policy is a commonplace procedure (e.g., ANES). Real candidates often communicate their policy views relative to the status quo policy. This type of question format, thus, resembles political speech that voters frequently encounter during election campaigns. Another advantage is that the question format calibrates the status quo circumventing problems that arise due to different perceptions of the status

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<sup>8</sup> We have chosen those two issues due to their prominence in the public discourse. See:

<https://news.gallup.com/poll/1660/Immigration.aspx> and <https://news.gallup.com/poll/1714/Taxes.aspx>



quo across political camps. The policy domains were presented in random order to avoid sequence effects. In step 2, we subsequently asked participants to indicate the relative subjective importance of the two policy domains using a slider.

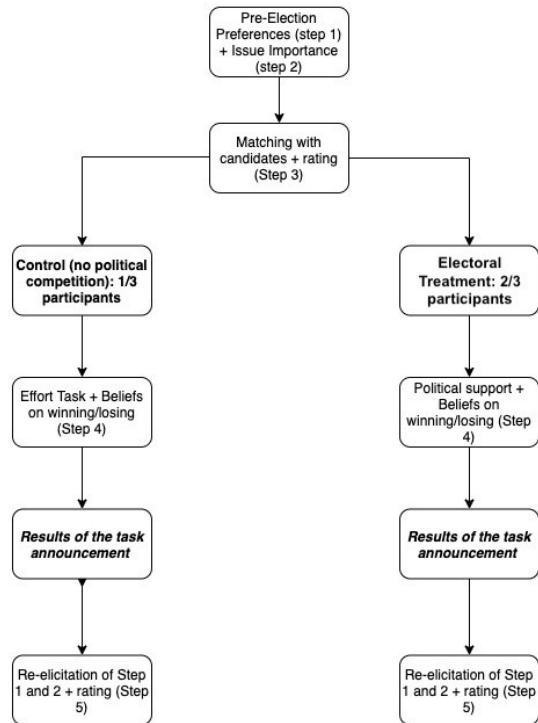


Figure 2: Schematic overview of the experimental design.

In Step 3, we presented participants with an election scenario. The experiment introduced two hypothetical candidates neutrally labeled to minimize nonpolicy considerations. The candidates were presented in terms of policy changes they would implement if elected using the same scale that participants used to indicate their policy preferences. This procedure allowed us to measure the voters' policy preferences and the candidate issue stances in the same, two-dimensional political space. When constructing candidates, we assumed that voters harbor proximity preferences and prefer policy platforms that are located closer to their ideal policy (Artiga Gonzalez and Granic, 2020; Tomz and Van Houweling, 2008).

The candidates were located in proximity of the corners of the two-dimensional policy space. If a participant indicated having preference  $x_i \geq 50$  on issue  $i$  during step 1 of the experiment, one candidate was located at the 90 points mark on issue  $i$  and the other at the 10 points mark. If a participant indicated to have preference  $x_i < 50$  on issue  $i$ , one candidate was located at the 10 points mark on issue  $i$  and the other at the 90 points mark. Figure 3 below shows the four possible candidates that arise from this procedure.<sup>9</sup> We labeled the candidate closest to the participant's ideal policy as **Your Candidate**. The other candidate, labeled **The Opponent Candidate**, was located at the opposite corner of the political space. **Your Candidate** was the designated candidate participants were to express support for in later stages of the experiment. For example, a participant with policy preferences above 50 on both issues was assigned *Candidate 1* as **Your Candidate** and *Candidate 4* as the **Opponent Candidate** (panel (a) and (d) in Figure 3).

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<sup>9</sup> This set-up induces issue-polarization as we expected most participants to take more moderate issue stances than the created candidates. Polarization is just one point in case of the mechanism we study. Our arguments also hold true if candidates are located closer to the center of the political space. In the latter case we would predict depolarization. Our design choice to place candidates at the extremes was motivated by the mounting evidence that the political parties do not manage to keep extreme candidates from participating in political competitions (Buisseret & Van Weelden, 2020; Shor & McCarty, 2011)

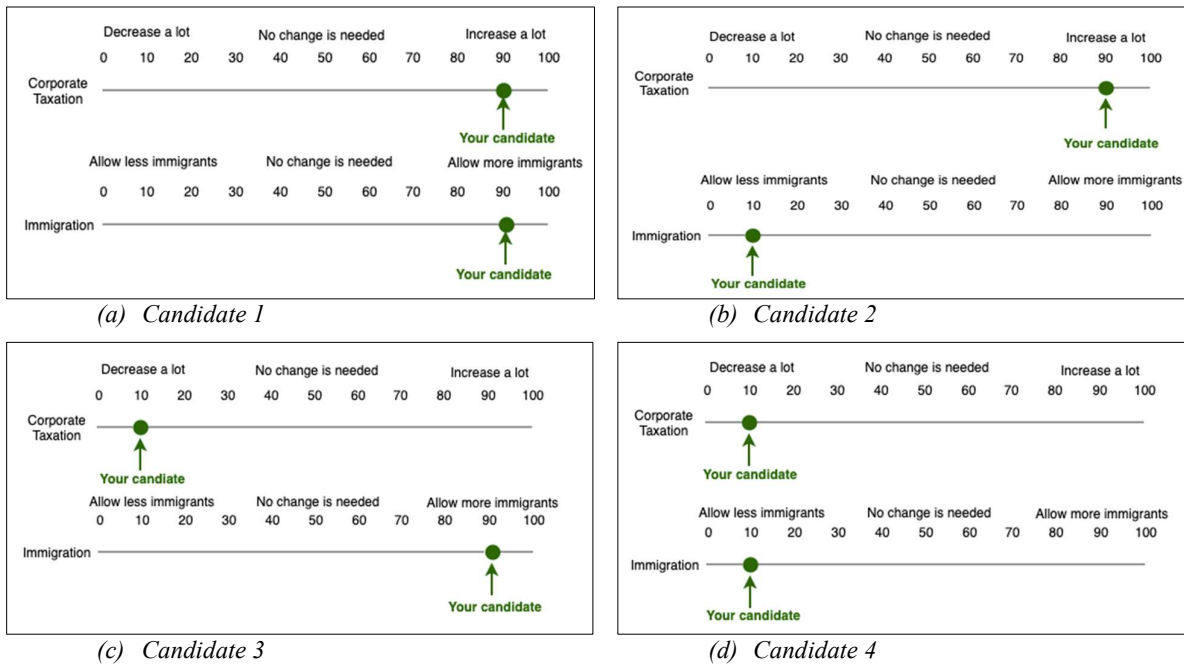


Figure 3: The four possible candidates in the experiment as displayed to participants.

Participants were then asked to rate each candidate on a 100-point thermometer rating scale. The question wording and display format was taken from the ANES, with ratings between 0 and 50 expressing unfavorable feelings toward a candidate, and ratings between 50 and 100 expressing favorable feelings.

In Step 4, we introduced a real effort task. Participants were asked to press a button for a total of 60 seconds. Every participant was matched with a participant from a pilot session and, between them, a competition on the number of clicks took place. To motivate clicking, participants could earn a financial reward of \$0.21 if their number of clicks exceeded the number of clicks from their matched participants. Our *Electoral* treatment introduced an additional, electoral competition framing on top of the financial reward. Participants were told that the outcome of the competition would also determine the fate of the election. Each click of a participant generated support for **Your Candidate** mimicking the act of supporting a political candidate. If they won/lost the competition, **Your Candidate** also won/lost the election.

The electoral competition framing connected participants' clicking behavior and preferences to the supported candidate, which is necessary to create cognitive dissonance. The only difference between the *Control* and the *Electoral* treatment was the electoral competition framing. The *Control* treatment was void of any political connotation. We then elicited participants' beliefs about winning the competition and revealed the outcome of the competition (winning or losing). In the *Electoral* treatment, we also informed participants whether their supported candidate won or lost the election.

In step 5, we reelicited participants' policy preference, their subjective relative importance of the policy domains, and the ANES thermometer rating about the desirability of the candidates. The question format and wording were identical to those in steps 1, 2, and 3. We only included a few sentences explaining that these tasks were not meant as memory tasks.

Participants were randomized into either *Electoral* or *Control* treatment after step 3. Two thirds of our participants were allocated to the *Electoral* treatment, and one third to the *Control* one. The unbalanced division of participants into treatments was motivated by potential outcome effects of the competition on creating cognitive dissonance. To create a balanced division of winning and losing in the competition of the effort cast, with equal chances we randomly selected the second highest (526) or the second lowest click count (31) from the pilot session. For any click count larger than 31 but smaller than 527, we effectively randomized if that participant won or lost the competition. In the *Electoral* treatment, this means that we randomized if **Your Candidate** won or lost the election. Since we aimed to analyze a potential dependency of preference changes on election outcome, we restrict our sample for the analysis part to participants who clicked more than 31 times and less than 527.

Preference changes will be assessed via different preference measures. Borrowing from the existing literature, we will use before and after effort-task changes in Thermometer ratings for **Your Candidate**. Thermometer ratings are often considered good attitudinal proxies for underlying preferences. Next, we assess preference changes by measuring how participants change their self-

reported ideal policy views in relation to the policy views of **Your Candidate** before and after the competition. Notice that the policy issues span a two-dimensional policy space. To assess preference changes, we will calculate how the distance between the policy views of the voter and the ones of **Your Candidate** change before and after the competition.

## Results

In total 1,203 U.S. participants were recruited from a general population via the research platform Prolific, of which 1,106 participants met our inclusion criteria in terms of click count.<sup>10</sup> Our sample shows the typical characteristics of an online panel. Young, male, and Democratic party leaning participants are overrepresented in comparison to the 2020 U.S. voting population. More detailed descriptive statistics of the sample, how the sample compares to the latest U.S. census data, as well as descriptive statistics on our main dependent and independent variables can be found in the online Appendix. Data collection took place in the week of July 5th, 2021. On average, it took participants nine minutes to complete the experiment and they earned \$1.80 (equivalent to a \$12 hourly wage rate).

Figure 4 below presents the main results of the paper. It shows average preference changes across experimental treatments, grouped by winning or losing the competition in the effort task, using three different measures of preference change.  $\Delta Thermo$  refers to the change in Thermometer ratings for **Your Candidate** before and after the competition. Positive values signify more favorable ratings for **Your Candidate** after the competition.  $\Delta CB$  and  $\Delta EUC$  refer to changes in the city-block distance and the Euclidean distance between participants self-reported ideal policy views and the policy views

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<sup>10</sup> Prolific is a well-proven platform for recruiting online participants (Peer et al. 2017). Payments for respondents on Prolific are handled in Pound Sterling. We used the historical exchange rate to convert the Pound Sterling amounts into U.S. Dollar amounts in the manuscript.

of **Your Candidate** before and after the competition. Positive values for  $\Delta CB$  and  $\Delta EUC$  signify that a participant moved closer to the policy views of **Your Candidate** after the competition.

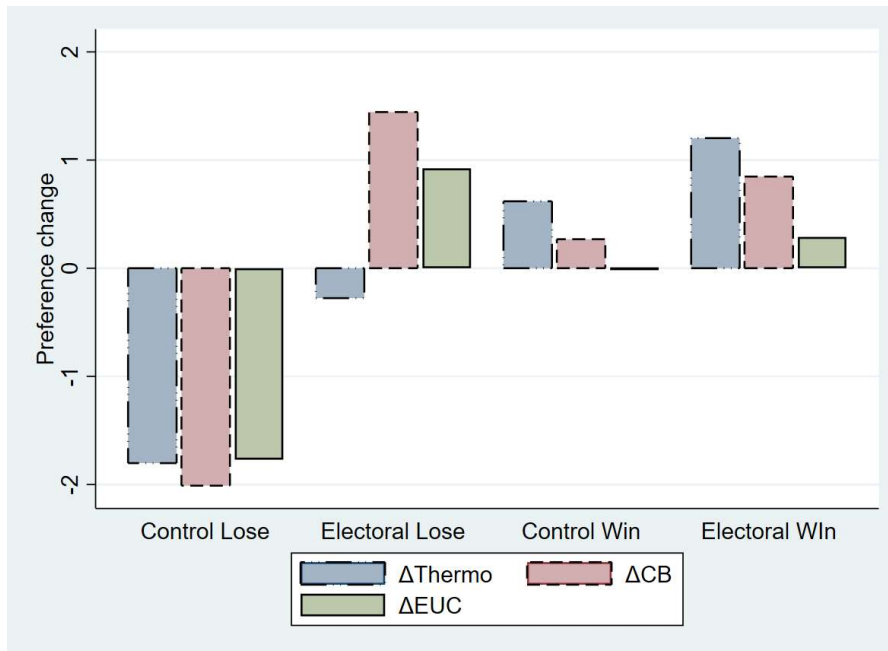


Figure 4: Preferences change across treatments grouped by winning or losing the competition in the effort task.

Comparing preference changes after losing the competition, Figure 4 reveals pronounced difference between treatments. After losing the competition in the *Control* treatment participants on average decreased their Thermometer rating for **Your Candidate** and increased the distance between their policy views and the ones from **Your Candidate**. Of note, we did not employ any political framing in the competition of the *Control* treatment. In *Control*, participants could only win a small amount of money. Losing the competition might have created negative emotions due to losing which could have impacted subsequent preference statements. In the *Electoral* treatment, we observed that after losing the competition participants moved closer to the policy views of **Your Candidate** and that they evaluated this candidate slightly less favorable with their Thermometer ratings. Furthermore,

we did not observe any pronounced differences between treatments after winning the task competition.

Table 1 below corroborates our observations statistically via OLS regressions with robust standard errors. Participants in *Electoral* did not change their Thermometer ratings significantly in comparison to *Control* after losing the competition (Model (1)). They did hold policy views that were significantly closer to the policy views of **Your Candidate** than participants in the *Control* treatment in this case (Models (2) and (3)). Furthermore, no significant differences in preference changes between treatments were observed if the competition was won (Models (4), to (6)).<sup>11</sup>

As a final step in our analysis, we analyzed preference changes as a function of effort intensity. The latter was measured by the number of clicks recorded in the effort task. To account for the endogeneity in the decision to provide effort, we used a two-stage least squares approach. In the first stage, we regressed effort intensity on our demographic variables, pre-effort Thermometer ratings for **Your Candidate**, and the belief about winning the competition. In the second stage, we regressed preference change on the predicted values of effort intensity from the first stage. We restricted the sample to participants losing the competition as our previous result revealed that this is the condition under which treatment differences were observed. The corresponding results are shown in Table 2. Models (1) and (2) reveal a positive association between effort intensity and preference changes in the *Electoral* treatment. Participants who clicked more also aligned their policy closer to the ones of **Your Candidate**. In Models (3) and (4) we replaced the raw click count with the logarithmized click count. It can be argued that diminishing sensitivity regarding the click count is present. We still observe a significant positive association between effort intensity and preference changes in this case.

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<sup>11</sup> The complete Table 1 is reported in the online appendix in Table A.6. Table B.1 also contains the estimation results for pooling winning and losing conditions. We did not observe any significant difference in preference change between treatments in the pooled data.

Under the cognitive dissonance perspective, effort intensity should be unrelated to preference changes in the *Control* treatment. As we did not employ any electoral framing in *Control*, no dissonance should be created and, hence, no need to align preferences was created. Models (5) to (8) corroborate this and as we did not detect any significant association between effort intensity and preference changes in *Control*.



Dependent variable	$\Delta Thermo$	$\Delta CB$	$\Delta EUC$	$\Delta Thermo$	$\Delta CB$	$\Delta EUC$
	(1)	(2)	(3)	(4)	(5)	(6)
Electoral treatment	1.641 (1.274)	3.769** (1.603)	2.962** (1.222)	0.531 (1.181)	-0.363 (1.543)	-0.304 (1.148)
Number of participants	552	552	552	554	554	554
Sample	Losing	Losing	Losing	Winning	Winning	Winning
Thermometer Control	No	Yes	Yes	No	Yes	Yes
Belief winning control	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Robust std errors	Yes	Yes	Yes	Yes	Yes	Yes

Table 1: OLS regression with robust standard-errors (in parentheses below coefficient estimates). Dependent variable is the change in thermometer rating for Your Candidate in models (1), and (4); change in the city-block distance between the voter and Your Candidate in models (2), and (5); change in the Euclidean distance between the voter and Your Candidate in models (3) and (6). Significance coding: \*\*\* 1%, \*\* 5%, \* 10%.

Dependent variable	$\Delta CB$	$\Delta EUC$	$\Delta CB$	$\Delta EUC$	$\Delta CB$	$\Delta EUC$	$\Delta CB$	$\Delta EUC$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Effort intensity	0.048** (0.023)	0.035* (0.019)			0.019 (0.024)	0.010 (0.018)		
LN of Effort Intensity			11.375** (5.042)	8.660** (3.975)			4.551 (5.082)	2.508 (3.827)
Number of participants	365	365	365	365	187	187	187	187
Treatment	Electoral	Electoral	Electoral	Electoral	Control	Control	Control	Control
Robust std. errors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 2: Two stage LS regressions with robust standard-errors (in parentheses below coefficient estimates). Dependent variable is the change in the city-block distance between the voter and Your Candidate in odd-numbered models and the change in the Euclidean distance between the voter and Your Candidate in even-numbered models. In stage 1, we regressed effort intensity on demographic controls, the Thermometer rating for Your Candidate, and the belief about winning the competition. Significance coding: \*\*\* 1%, \*\*, 5%, \* 10%.

## Conclusion

Political preferences shape our political identities and the way we view a variety of aspects in life (e.g., the economy, general satisfaction with one's nation). Thus, understanding the mechanisms that cause preference change is crucial, as it allows social scientists, political institutions, and corporations to predict the future of Democracies around the world (Fiorina & Abrams 2008) .

In this paper, we have studied experimentally whether participation in the electoral process can causally create polarization in political preference via cognitive dissonance. Our experimental design kept constant information effects and social influence effects between treatments. In doing so, we believe we have created the most controlled test of the cognitive dissonance perspective on preference changes thus far. The only difference between experimental treatments was an electoral framing. By winning or losing the competition, participants in our *Electoral* treatment also determined if the supported candidate won or lost the election. Our results strongly suggest that the cognitive dissonance created by expressing support and losing the election causally led participants to align their preferences with that of the supported candidate more closely. With these results we corroborate previous empirical findings demonstrating that cognitive dissonance is a plausible mechanism for support-induced preference changes. Our results also uncovered a strong dependency of such preferences changes on the outcome of the election. As such, our article attempts to both refine our view on the underlying factors that drive preference changes and to make predictions when changes in preferences are expected to be strongest. We hope that our results will prove useful for future research to provide more insight into the factors that lead voters to change their preferences.

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## **Online Appendix**

### **Paper: Can cognitive dissonance theory explain action induced changes in political preferences?**

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This online appendix is organized in three parts. Appendix A contains additional tables mentioned in main text of the manuscript. In Appendix C, we present our preregistration file, explain our addendum and present further analyses. Finally, Appendix B contains screenshots of every screen shown to participants in the experiment.

## Appendix A

Table A.1 below shows our sample demographics. We compare our sample recruited on Prolific with the data from the U.S. Current Population Survey (CPS). We restrict the CPS sample to U.S. citizens who reported having cast a vote in the 2020 election. In comparison to the general voting population from the 2020 CPS, we under-sample women, and oversample younger respondents. We also oversample participants who self-report Democratic party affiliation. For the latter comparison, we used data from Gallup Poll on party affiliations in the week of the 2020 General Elections (as such data is not contained in the CPS).

Variables	Full Sample	Restricted Sample	2020 U.S. voting population
Women	0.432	0.443	0.531
Age			
18-24	0.261	0.256	0.089
25-34	0.367	0.38	0.155
35-44	0.217	0.216	0.151
45-64	0.133	0.129	0.340
65 or older	0.020	0.025	0.256
Ethnicity: White	0.695	0.696	0.710
Political Affiliation			
Democrat	0.596	0.601	0.310
Independent	0.278	0.274	0.380
Republican	0.124	0.123	0.300

*Note:* The table shows the demographic characteristics of the full sample and the sample of the restricted respondents in comparison to the 2020 U.S. voting population. Data on age and gender was obtained from Current Population Survey. Party affiliations were obtained from the Gallup Poll on party affiliations in the week of the 2020 General Elections.

(a) *Table A.2: Sample demographics*

Table A.2 presents the demographic characteristics of our sample, divided into the *Electoral* treatment and *Control* treatment. We ran  $\chi^2$ -tests to check whether the composition of our sample differed between *Electoral* and *Control*. All tests were insignificant. Two-sided independent-sample t-tests showed that the participants neither differed between *Electoral* and *Control* in their average pre-support U.S. corporate taxation preferences (p-value = 0.89), their average pre-support Legal

immigration preferences (p-value= 0.43), nor in their average relative importance of the two policies (p-value = 0.83).

Variables	Control	Electoral	$\chi^2$ -statistics	p-value
Women	0.443	0.443	0.002	0.97
Age			2.1	0.82
18-24	0.238	0.262		
25-34	0.377	0.382		
35-44	0.238	0.204		
45-54	0.078	0.082		
55-64	0.044	0.049		
65 or older	0.020	0.019		
Ethnicity: White	0.703	0.692	0.14	0.7055
Political Affiliation			5.33	0.07
Democrat	0.587	0.608		
Independent	0.257	0.284		
Republican	0.154	0.107		

*Note:* The table shows the demographic characteristics for our sample broken down into Electoral Treatment and Control group.  $\chi^2$  tests were used to assess whether demographic variables followed the same distribution between Electoral Treatment and Control. The third and fourth column report  $\chi^2$  test-statistics and p-values, respectively.

(b) *Table A.3: Balance check randomization treatments*

Table A.3 summarizes which candidates were matched as Your Candidate with the participants. We ran a  $\chi^2$ -test and found no significant differences in the distribution of matched candidates between Treatment and Control (p-value = 0.26).

Candidate	Control	Electoral	Corporate taxation	Legal Immigration
1	0.089	0.103	+	-
2	0.677	0.701	+	+
3	0.165	0.151	-	+
4	0.068	0.044	-	-

*Note:* The table shows the percentage of participants who were matched with candidates 1, 2, 3, and 4 as their **Your Candidate**. "+" and "-" signs indicate increase or a decrease in the issue stances of the candidate with respect to current U.S. policy.

(c) *Table A.4: Distribution of matched Your Candidate between Electoral and Control treatment*

Tables A.4 and A.5 present the descriptive statistics of our main dependent and independent variables between treatments, broken down into winning and losing the effort-task competition as well as pre-effort and post-effort measurements.

Variables	Mean	SD	Min	Median	Max
Corporate taxation preferences pre					
Control Lose	70.3	22.9	0	72	100
Control Win	69.5	23.6	0	71.5	100
Electoral Lose	69.3	23.7	0	72	100
Electoral Win	71.0	22.4	0	71.5	100
Legal immigration preferences pre					
Control Lose	64.7	23.6	0	66	100
Control Win	60.4	24.1	0	64	100
Electoral Lose	64.4	24.2	0	68	100
Electoral Win	63.1	24.3	0	67	100
Corporate taxation preferences post					
Control Lose	69.9	24.9	0	74	100
Control Win	69.4	25.3	0	73	100
Electoral Lose	71.4	25.2	0	75	100
Electoral Win	72.3	23.6	0	75	100
Legal immigration preferences post					
Control Lose	66.6	24.5	0	70	100
Control Win	62.1	25.2	0	66	100
Electoral Lose	66.1	25.7	0	70	100
Electoral Win	64.0	26.2	0	70	100
$\Delta CB$					
Control Lose	-2.01	19.7	-98	0	31
Control Win	0.268	16.2	-72	0	46
Electoral Lose	1.44	15.9	-79	2	40
Electoral Win	0.847	17.7	-133	1	48
$\Delta EUC$					
Control Lose	-1.77	15.1	-72.5	0	27.1
Control Win	-0.01	11.7	-50.4	0	33.4
Electoral Lose	0.923	12.5	-62.2	1.23	31.2
Electoral Win	0.289	14.1	-88.3	0.996	32.8

(d) Table A5: Descriptive statistics policy preferences and distances



Variables	Mean	SD	Min	Median	Max
<b>Your Candidate</b> Thermometer rating pre					
Control Lose	76.4	20.6	3	80	100
Control Win	75.9	21.2	0	80	100
Electoral Lose	79.1	18.4	0	82	100
Electoral Win	78.6	18.2	5	80	100
<b>The Opponent</b> Thermometer rating pre					
Control Lose	19.7	22.9	0	11	100
Control Win	19.3	23.6	0	10	100
Electoral Lose	16.6	21.0	0	10	100
Electoral Win	18.9	23.1	0	10	95
<b>Your Candidate</b> Thermometer rating post					
Control Lose	74.6	21.6	5	80	100
Control Win	76.5	20.9	0	81	100
Electoral Lose	78.8	17.0	0	80	100
Electoral Win	79.8	16.7	0	80.5	100
<b>The Opponent</b> Thermometer rating post					
Control Lose	22.2	24.1	0	15	100
Control Win	20.9	23.4	0	10.5	100
Electoral Lose	19.9	24.5	0	10	100
Electoral Win	20.6	23.1	0	12	95
Effort intensity					
Control Lose	301	98.3	49	308	525
Control Win	297	97.0	38	314	518
Electoral Lose	275	99.4	33	296	521
Electoral Win	283	99.3	37	299	519

(e) Table A.6: Descriptive statistics Thermometer ratings and effort intensity (number of clicks in effort task)

As reported in the main text, Table A.6 below present the full output for the regression results reported in Table 1 of the main manuscript.

Dependent variable	$\Delta Thermo$	$\Delta CB$	$\Delta EUC$	$\Delta Thermo$	$\Delta CB$	$\Delta EUC$
	(1)	(2)	(3)	(4)	(5)	(6)
Electoral treatment	1.641 (1.274)	3.769** (1.603)	2.962** (1.222)	0.531 (1.181)	-0.363 (1.543)	-0.304 (1.148)
Thermometer Rating <b>Your Candidate</b> pre effort		0.223*** (0.056)	0.161*** (0.042)		0.122** (0.052)	0.077** (0.037)
Belief winning effort task	0.015 (0.030)	-0.033 (0.044)	-0.036 (0.033)	0.064* (0.036)	0.016 (0.037)	0.009 (0.027)
Female	1.353 (1.134)	4.464*** (1.370)	4.08*** (1.060)	1.107 (1.191)	2.457* (1.420)	1.936* (1.109)
Income						
\$15,00-\$24,999	-1.293 (2.395)	5.785 (3.778)	4.478 (2.836)	1.318 (3.113)	-1.935 (3.340)	-2.232 (2.678)
\$25,000-\$49,999	-1.156 (2.386)	7.63** (3.655)	5.600** (2.747)	3.347 (3.067)	-0.305 (2.688)	-0.719 (2.029)
\$50,000-\$74,999	1.156 (2.246)	7.913** (3.642)	6.168** (2.747)	6.186** (3.093)	-2.474 (2.846)	-2.411 (2.012)
\$75,000-\$99,999	-0.120 (2.287)	6.846* (3.739)	5.165* (2.824)	2.821 (3.197)	-2.188 (2.650)	-1.527 (1.849)
\$100,000-\$149,999	3.372 (2.323)	3.505 (3.989)	2.723 (2.997)	3.967 (3.211)	-2.044 (2.772)	-2.148 (2.056)
\$150,000-\$200,000	-7.619** (3.418)	-1.335 (5.253)	-0.646 (4.116)	3.880 (3.643)	0.984 (2.878)	0.323 (2.087)
More than \$200,000	1.390 (2.521)	4.130 (4.358)	2.472 (3.518)	5.257 (3.284)	-5.232 (5.541)	-4.026 (4.240)
Age						
25-34	0.453 (1.702)	-0.779 (1.837)	-0.257 (1.430)	1.522 (1.354)	-3.734* (1.958)	-3.098** (1.545)
35-44	2.755 (1.908)	0.356 (2.261)	0.320 (1.755)	2.163 (1.916)	-3.243* (1.834)	-2.329 (1.423)
45-54	2.592 (2.361)	-3.128 (3.015)	-1.756 (2.162)	2.055 (1.709)	-1.065 (2.452)	-0.649 (1.816)
55-64	4.277 (2.858)	1.621 (2.783)	1.653 (2.182)	7.059** (3.374)	-0.955 (2.845)	-1.063 (2.228)
65 or older	1.350 (2.958)	-6.798 (6.121)	-6.166 (4.700)	2.080 (2.210)	-7.086* (4.025)	-5.404* (2.857)
Political affiliation						
Independent	-0.1 (1.229)	1.42 (1.662)	1.076 (1.241)	-0.203 (1.294)	2.276 (1.613)	1.854 (1.163)
Republican	1.144 (2.575)	-0.346 (3.106)	-1.365 (2.698)	0.510 (1.703)	0.365 (2.323)	1.036 (1.649)
Ethnicity white	-0.931 (1.374)	0.526 (1.592)	0.333 (1.242)	1.163 (1.469)	0.145 (1.868)	0.220 (1.448)
Constant	-4.189 (2.828)	-25.062*** (6.833)	-18.241*** (5.146)	-10.571*** (4.240)	-7.581 (5.586)	-4.418 (4.033)
Number of participants	552	552	552	554	554	554
Sample	Losing	Losing	Losing	Winning	Wining	Winning
Robust std errors	Yes	Yes	Yes	Yes	Yes	Yes

(f) Table A.7: OLS regression with robust standard-errors (in parentheses below coefficient estimates). Dependent variable is the change in thermometer rating for Your Candidate in models (1), and (4); change in the city-block distance between the voter and Your Candidate in models (2), and (5); change in the

*Euclidean distance between the voter and Your Candidate in models (3) and (6). Significance coding: \*\*\* 1%, \*\* 5%, \* 10%.*

## Appendix B: Preregistration

The next pages present our preregistration at *ASPredicted*. The time stamp shows that we preregistered our experiment on July 1<sup>st</sup>, 2021, prior to the start of our data collection phase on July 5<sup>th</sup>, 2021.

With regard to our preregistration, we have changed the question to elicit the relative policy importance last minute before collecting the data. Our original question asked participants to allocate a fictitious government budget to reform corporate taxation and immigration policy. After receiving feedback from colleagues, we realized that this question may elicit participants belief about the marginal return of a 1\$-investment in the respective policies, which may not coincide with their personal belief about how important a policy is to them. We therefore decided to replace our budget allocation question with a direct question about policy importance.

We also decided to restrict our analysis to participants for which our randomization into winning and losing worked after collecting the data. This decision was motivated by two insights that emerged after looking at the data and presenting results to colleagues. First, we expected to observe strong preference changes independent of winning or losing the competition. In contrast, we observed a strong dependency on the outcome of the election. Second, losing the competition had a significant impact on preferences in the *Control* treatment, see Figure 4 in the manuscript. This was unexpected. For our analysis, we therefore had to properly control for winning and losing effects. This required a) proper randomization into winning and losing and splitting the *Control* treatment into winning and losing, comparing treatments for losing and winning separately.

Table B.1 below shows the additional analyses that we promised to carry out in the pre-registration. Most notably, assessing preference changes when pooling winning and losing the competition, using an additional measure policy preference change measure  $\Delta WCB$ , analyzing how Thermometer ratings change for the **Opponent Candidate**, and finally, reporting the main results for the sub-sample of participants rating **Your Candidate** equally or more favorably than the **Opponent**

**Candidate** with their Thermometer ratings. Of note,  $\Delta WCB$  refers to the change in city-block distance between a participant and **Your Candidate** weighting the policies by their relative importance elicited in the experiment.



## CONFIDENTIAL - FOR PEER-REVIEW ONLY

### Political Support, Cognitive Dissonance and Political Preferences - Study (#69707)

Created: 07/01/2021 07:55 AM (PT)

This is an anonymized copy (without author names) of the pre-registration. It was created by the author(s) to use during peer-review. A non-anonymized version (containing author names) should be made available by the authors when the work it supports is made public.

#### 1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

#### 2) What's the main question being asked or hypothesis being tested in this study?

We test whether supporting a candidate in an electoral competition leads to changes in political preferences, and, if so, whether cognitive dissonance is the responsible mechanism for the polarization.

#### 3) Describe the key dependent variable(s) specifying how they will be measured.

The study is an online experiment, conducted on the online platform Prolific. We will recruit the participants from a US general population sample. In the experiment, the participants will be randomly allocated in two conditions: "Control", "Treatment".

In both conditions, participants are asked to state their opinion about the current U.S. corporate tax rate as well as the current level of legal immigration in the U.S., both before and after performing an effort task. The question on taxation will be referred to as 'Econ', the question on immigration as 'Social'. We measure all the preferences (along the 'Econ' and 'Social' dimensions, and before and after the effort task) on a 0-100 scale.

Participants also state the relative importance of corporate taxation vs immigration, referred to as 'AttitudeEcon' and 'AttitudeSocial'. We measure the relative importance by asking the participants how they would hypothetically allocate \$100 of government budget to reform corporate taxation and immigration.

The pre-fixes 'Prior' and 'Posterior' signify if we refer to the questions before or after the effort task, respectively.

Based on their Prior preferences, the participants are matched with the closest political candidate to their views. The participants rate their candidate and the opponent candidate with the 'Thermometer' question, borrowed from ANES database (scale 0-100).

The effort task consists of clicking a button for 60 seconds. Participants are matched with another participant from a pilot study. If they click the button more often than this participant, they can win a small financial reward.

#### 4) How many and which conditions will participants be assigned to?

Two conditions. The experimental conditions differ with respect to framing of the effort task.

The condition "Treatment" employs an election framing between two candidates and clicking the button generates support for the candidate closer to the participants political opinions. If their level of support is higher than that of the matched participant, their favorite candidate will win the election.

The "Control" condition will employ a neutral frame, not mentioning any reference to elections at all.

#### 5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Assess the integrity of the randomization across conditions. We will perform Fisher exact tests and t-tests for the following variables: Gender, Age, Ethnicity, Political Affiliation, PriorEcon and PriorSocial, AttitudesEcon and AttitudesSocial.

We compute the following indices of Polarization:

$$\text{EconPolarization} = |\text{PriorEcon} - \text{CandidateEcon}| - |\text{PosteriorEcon} - \text{CandidateEcon}|$$

$$\text{SocialPolarization} = |\text{PriorSocial} - \text{CandidateSocial}| - |\text{PosteriorSocial} - \text{CandidateSocial}|$$

$$\text{Global polarization} = \text{EconPolarization} + \text{SocialPolarization}$$

$$\text{Weighted Global Polarization} = \text{AttitudeEconPre} * \text{EconPolarization} + \text{AttitudeSocialPre} * \text{SocialPolarization}$$

Compare how Treatment and Control differ at all indices of Polarization with a two independent sample t-test.

We assess with regressions how Treatment affects Polarization at the individual level. In the regressions below 'Treatment' refers to a dummy variable that takes the value equal to 1 if the participant is in the Treatment condition.

$$1. \text{EconPolarization} \sim \text{Constant} + \text{ThermoCandidate} + \text{BeliefsElection} + \text{Treatment} + \text{Gender} + \text{Age} + \text{White} + \text{Political},$$

$$2. \text{SocialPolarization} \sim \text{Constant} + \text{ThermoCandidate} + \text{BeliefsElection} + \text{Treatment} + \text{Gender} + \text{Age} + \text{White} + \text{Political}$$



3.  $\text{GlobalPolarization} \sim \text{Constant} + \text{ThermoCandidate} + \text{BeliefsElection} + \text{Treatment} + \text{Gender} + \text{Age} + \text{White} + \text{Political}$

4.  $\text{Weighted GlobalPolarization} \sim \text{Constant} + \text{ThermoCandidate} + \text{BeliefsElection} + \text{Treatment} + \text{Gender} + \text{Age} + \text{White} + \text{Political}$

Robustness check, we recalculate the Indices of polarization using the Euclidean distance as a metric: e.g., for PrePolarization:  $\sqrt{(\text{PriorEcon-CandidateEcon})^2 + [(\text{PrioSocial} - \text{CandidateSocial})^2]}$  and PostPolarization:  $\sqrt{(\text{PostEcon-CandidateEcon})^2 + (\text{PostSocial-CandidateSocial})^2}$ . We perform a two independent samples t-test to compare the two levels of polarization across experimental conditions.

We compute Diff-Polarization:  $\text{PostPolarization} - \text{PrePolarization}$ . We then perform the following regression:  $\text{Diff-Polarization} \sim \text{Constant} + \text{ThermoCandidate} + \text{BeliefsElection} + \text{Treatment} + \text{Gender} + \text{Age} + \text{White} + \text{Political}$

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

In principle, we will not exclude any respondents. However, it could be that some participants will report some inconsistencies when they rate their candidate over their opponent (in our pilot the rate of inconsistent rating was around 10%). We will report the estimates with and without these participants.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

1,200 participants, who are U.S. citizens recruited from the online platform Prolific. The participants are unevenly split across the two experimental conditions. N=400 in Control, N=800 in Treatment. We plan to split up the Treatment condition into two sub-conditions, one sub-condition in which the matched other participant is among the top performers in the effort task (N=400), and one condition in which the matched participant is among the worst performers (N=400). In the former sub-condition, winning the election is more difficult than in the latter. This will allow us to investigate if winning or losing the election makes a difference in terms of polarization.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

We conducted a small pilot with N=210, only Treatment condition, no Control condition, to validate the functionality of our survey experiment, to gather feedback from participants about the Look&Feel of the survey, and to collect effort levels that can be used in the actual experiment for the effort task.

We assess how the rating of the candidates ('ThermoCandidate') affects participants' effort ('Support') to their candidates. We regress the number of clicks in the effort task ('Support') on the rating of the candidates ('ThermoCandidate'), a dummy variable for the treatment, the distance prior beliefs of the participants and the candidates' position along the two dimensions of the spectrum, and the demographics (Age, Gender, Ethnicity, Political affiliation).

We regress EconPolarization and SocialPolarization on the number of clicks in the effort task ('Support'), a dummy variable for the treatment, and the demographics (Age, Gender, Ethnicity, Political affiliation).

We instrument the rating of the candidate ('ThermoCandidate') with the number of clicks in the effort task ('Support') in the first stage of a 2SLS regression (where we include a dummy for treatment and all the demographics). In the second stage, we re EconPolarization and SocialPolarization on the number of clicks in the effort task ('Support'), a dummy variable for the treatment, and the demographics (Age, Gender, Ethnicity, Political affiliation).

We assess how the clicks for the candidate ('Support') affects participants' beliefs to win the election. We regress the beliefs of winning the election on the click rate ('Support'), a dummy variable for the treatment, the distance prior beliefs of the participants and the candidates' position along the two dimensions of the spectrum, and the demographics (Age, Gender, Ethnicity, Political affiliation).

We assess how the rating towards your candidate changes before and after the election and whether you win or lose. We regress the change in ratings for your candidate on a dummy for Treatment, a dummy for Winning and an interaction term between these two dummies, and the demographics (Age, Gender, Ethnicity, Political affiliation).

We explore differences in polarization whether the participant's candidate either wins or loses the elections. We measure the polarization with both the distance from your candidate position and the Euclidean distance.

We measure if thermometer ratings increase due to participation for the favorite candidate and the opponent candidate using one two independent sample t-tests. We compare Treatment and Control: the dependent variable is  $\text{Post\_Thermo\_Rating} - \text{Pre\_Thermo\_Rating}$ .

Assess whether the participants find the study politically biased. We capture this by using a 5-point Likert scale question at the end of the experiment.

## Appendix C: Screenshots experiment

Below we present screenshots of the decision screen as seen by the participants. Screens to measure preferences and issue importance were identical before and after the effort task. After the effort task, we presented all participants with one additional screen explain that we will re-measure preferences. This screen is shown in *Figure r*.



---

Thank you for participating in this survey. Completing the survey will take about 10 minutes.

By clicking NEXT you explicitly give us your consent:

- To collect your anonymous, non-sensitive personal data (like age, income, etc).
- To use this personal data for scientific purposes.
- To store your personal data on our safe-guarded university servers for up to 10 years.
- To make anonymized data available to other researchers online.

Your data will be stored and protected according to the new General Data Protection Regulation (GDPR) laws. You may withdraw your consent at any time by contacting us via Prolific.

In case you have any remaining questions on the survey, do not hesitate to contact us at **capozza@ese.eur.nl**

(g) *Figure e: Consent screen.*





---

Before you proceed, please answer the sports test. The test is simple, when asked for your favorite sport you must enter the word *clear* in the text box below. The test is case sensitive, so please pay attention to upper case and lower case letters.

Based on the text you read above, what favorite sport have you been asked to enter in the text box below?

NEXT

(h) *Figure f: Attention check.*



---

You are about to start the first part of the survey.

You will be asked to state your opinions on some real-life topics. There are **no right or wrong answers** to these questions. Think about these questions and simply express your honest opinion.

When ready, click on NEXT.

NEXT

---

(i) *Figure g: Introduction screen.*

**Consider the current U.S. Corporate Taxation policy. It refers to how much American multinationals pay taxes to the U.S. government.**

How do you think corporate taxation should be in the US compared to now?

Please use a rating scale from 0 to 100 to express your opinion. Ratings between 50 and 100 mean that you feel an increase in the corporate tax rate for American multinationals is needed. Ratings between 0 and 50 mean that you feel a decrease in the corporate tax rate for American multinationals is needed. A rating at the 50 mark means that you feel no change is needed. A rating at the 100 mark indicates that you feel that the corporate tax rate should increase a lot while a rating at 0 indicates that you feel that the corporate tax rate should decrease a lot.

My opinion: (from 0 to 100)

Decrease a lot                                      No change is needed                                      Increase a lot  
 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your opinion on U.S. Corporate taxation policy



*(j) Figure h: Elicitation preferences U.S. corporate taxation.*

**Consider the current U.S. immigration policy. That is, how many legal immigrants the U.S. is currently accepting on a yearly basis.**

How do you think immigration policy should be in the U.S. compared to now?

Please use a rating scale from 0 to 100 to express your opinion. Ratings between 50 and 100 mean that you feel that more immigrants should be allowed to live in the U.S. Ratings between 0 and 50 mean that you feel that less immigrants should be allowed to live in the U.S. A rating at the 50 mark means that you feel no change is needed. A rating at the 100 mark indicates that you feel that much more immigrants should be allowed to live in the U.S. while a rating at 0 indicates that you feel that much less immigrants should be allowed to live in the U.S.

My opinion: (from 0 to 100)

Allow less immigrants                                      No change is needed                                      Allow more immigrants  
 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your opinion on U.S. Immigration policy

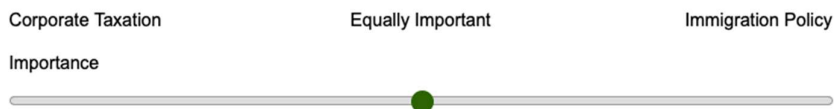


*(k) Figure i: Elicitation preferences U.S. legal immigration.*

How do **Corporate Taxation** and **Immigration Policy** compare in importance to you personally?

Please move the slider below to indicate their relative importance to you.

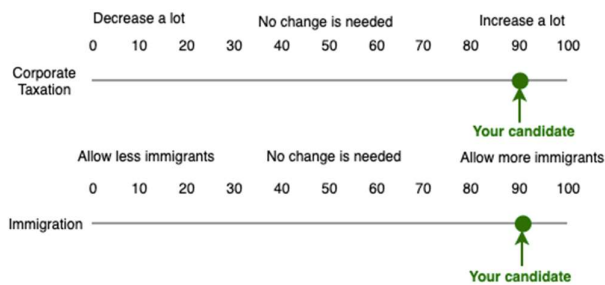
Placing the slider in the middle means that the two issues are equally important to you. The more you move the slider to the left, the more important Corporate Taxation is to you. The more you move the slider to the right, the more important Immigration policy is to you. Placing the slider at the very ends of the scale means that you only care about that issue and not at all about the other.



(l) Figure j: Elicitation of issue importance.

Below you can see how **Your Candidate** would change the Corporate Tax rate and the Immigration Policy concerning new legal immigrants, if elected.

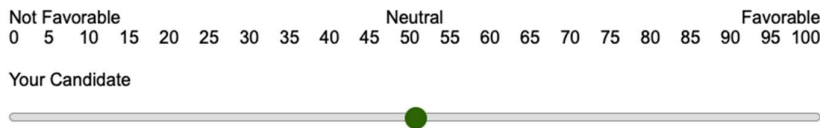
Take some time to look at the stances of **Your Candidate**. When ready, please answer the question below.



(m) Figure k: Matching screen **Your Candidate**.

Please evaluate **Your Candidate** on a scale from 0 to 100. Ratings between 50 and 100 mean that you feel favorable toward the candidate's opinions. Ratings between 0 and 50 mean that you don't feel favorable toward the candidate's opinions. A rating at the 50 mark means that you don't feel particularly favorable nor unfavorable toward the candidate's opinions. A rating at the 100 mark indicates that you feel most favorable toward the candidate's opinions while a rating at 0 indicates that you feel most unfavorable toward the candidate's opinions.

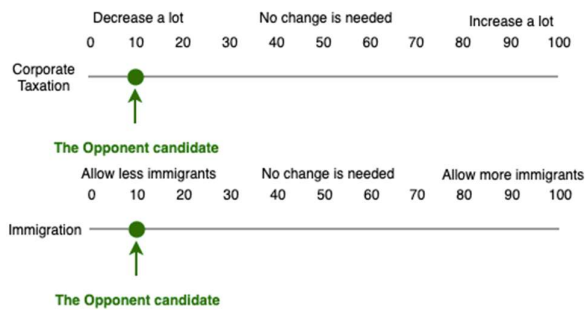
My evaluation: (from 0 to 100)



(n) Figure l: Thermometer rating Your Candidate.

Below you can see how **The Opponent Candidate** would change the Corporate Tax rate and the Immigration Policy concerning new legal immigrants, if elected.

Take some time to look at the stances of **The Opponent Candidate**. When ready, please answer the question below.



Please evaluate **The Opponent Candidate** on a scale from 0 to 100. Ratings between 50 and 100 mean that you feel favorable toward the candidate's opinions. Ratings between 0 and 50 mean that you don't feel favorable toward the candidate's opinions. A rating at the 50 mark means that you don't feel particularly favorable nor unfavorable toward the candidate's opinions. A rating at the 100 mark indicates that you feel most favorable toward the candidate's opinions while a rating at 0 indicates that you feel most unfavorable toward the candidate's opinions.

(o) Figure m: Matching and Thermometer rating Opponent Candidate.

You have now the opportunity to gain an extra bonus in the following task. The more effort you provide in this task, the higher the chances are that you will win a competition against another survey respondent.

To exert effort, simply push the EFFORT button on the next screen as many times as you want. **Important:** You are matched with another respondent who has participated in the survey. This other respondent has already provided EFFORT. **You** will win the competition if you exert more EFFORT than the other respondent has. If you win, you will earn a bonus payment of 0.15 GBP.

When ready click on the button NEXT. You will have 1 minute of time to perform this task.

*It is important that you read this screen carefully. The NEXT button will appear after 30 seconds.*

*(p) Figure n: Instructions effort task Control treatment.*

You have now the opportunity to raise support for **Your Candidate** in the election. The more support you raise, the higher the chances are that **Your Candidate** will win the election against the **The Opponent Candidate**.

To raise support for **Your Candidate**, simply push the SUPPORT button on the next screen as many times as you want. Think of pushing the SUPPORT button as being similar to joining political rallies, putting political stickers on your car, or donating money to support your **Your Candidate**.

**Important:** You are matched with another respondent who has participated in the survey. This other respondent has raised SUPPORT for **The Opponent Candidate**. **Your Candidate** will win the election if you raise more SUPPORT for **Your Candidate** than the other respondent has for **The Opponent Candidate**. If you win, you will earn a bonus payment of 0.15 GBP.

When ready click on the button NEXT. You will have 1 minute of time to raise SUPPORT for **Your Candidate**.

*It is important that you read this screen carefully. The NEXT button will appear after 30 seconds.*

*(q) Figure o: Instruction effort task Electoral treatment.*

Click the EFFORT button to provide effort to win the competition.

If you want to stop and move on to the next page, click the NEXT button.

0:51

EFFORT

Number of EFFORT clicks:

*Remember, another respondent has provided effort already. To win the competition, you have to exert more effort than the other respondent.*

*(r) Figure p: Decision screen effort task Control treatment.*

Click the SUPPORT button to raise support for **Your Candidate** to win the election.

If you want to stop and move on to the next page, click the NEXT button.

0:52

SUPPORT

Number of SUPPORT clicks:

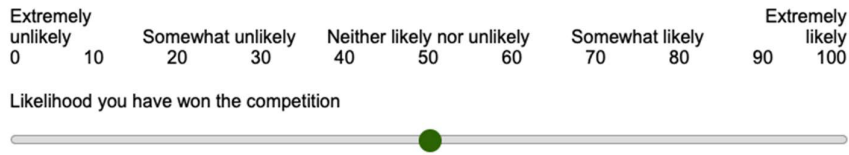
*Remember, another respondent has raised support for **The Opponent Candidate**. To win the election, you have to raise more support than the other respondent.*

*(s) Figure q: Decision screen effort task Electoral treatment.*

You have exerted effort in the competition.

In your opinion, how likely is it that you **won** the competition?

Move the slider to state your opinion.

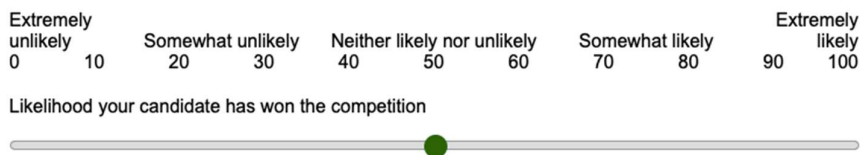


(t) *Figure r: Beliefs about winning the competition in Control treatment.*

You have supported **Your Candidate** in the election.

In your opinion, how likely is it that your candidate **won** the election?

Move the slider to state your opinion.



(u) *Figure s: Beliefs about winning the competition in Electoral treatment.*

Your number of EFFORT clicks: 130

The other participant's number of EFFORT clicks: 31

**You have won** the competition. You are entitled to receive an extra bonus of GBP 0.15.

(v) *Figure t: Feedback competition Control treatment.*

Your number of SUPPORT clicks: 0

The other participant's number of SUPPORT clicks: 526

**Your Candidate** has **lost** the election.

*(w) Figure u: Feedback competition Electoral treatment.*

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You are about to start the final part of the survey.

You will be asked to state your opinions on the same real-life topics from part 1 of the survey.

This is **not** a memory test. There are **no right or wrong answers** to these questions. Think about these questions and express your honest opinion.

When ready, click on NEXT.

*(x) Figure v: Instructions before re-eliciting preferences.*



*(y) Figure w: Demographic questions*

In politics, as of today, how do you consider yourself?

Democrat
Republican
Independent

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What is your age?

18-24
25-34
35-44
45-54
55-64
65 or older

With which gender do you identify the most?

Male
Female
Other
Prefer not to say

What is your family's gross household income in 2020 in US dollars?

Less than \$15,000
\$15,000 - \$24,999
\$25,000 - \$49,999
\$50,000 - \$74,999
\$75,000 - \$99,999
\$100,000 - \$149,999
\$150,000 - \$200,000
More than \$200,000

Which of the following best describes your ethnic identity?

African American/Black
Asian American/Asian
Caucasian/White
Native American
Hawaiian/Pacific Islander
Other
Prefer not to say

In which state do you currently reside?