Learning During the 2020 US Presidential Election: More Information Does Not Mean Better Voting Decisions

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Abstract

Scholars typically think that more information will help voters make better decisions. Current evidence suggests that voters do learn about candidates' policy stances during election campaigns but that their newly-acquired knowledge fails to lead them to change their vote preferences. However, neither the evidence for learning nor the evidence that learning does not lead to changes in vote preferences is flawless. Evidence that learning occurs could in fact reflect voters reinforcing their existing preferences by projecting their own positions onto their preferred candidate. Evidence that learning policy stances fails to lead to changes in vote preferences could reflect measurement error in policy questions or issues that do not matter to voters. Using an original panel survey from the 2020 US Presidential election, we address these shortcomings and confirm that learning does occur but that it does not lead voters to change their candidate preferences, even

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on issues as important to voters as the coronavirus pandemic. Our findings thus cast doubt on the notion that information helps voters. Voters already learn a great deal during campaigns, but that information simply leads them to reinforce their pre-existing preferences.

Introduction

Scholars typically assume that more information will help voters make better decisions (Althaus 1998; Bartels 1996). However, scholars have long argued that voters use their pre-existing attitudes when interpreting new information (Berelson, Lazarsfeld, and McPhee 1954; Campbell et al. 1960; Lodge and Taber 2013; Nyhan and Reifler 2010; Zaller 1992), thus limiting the impact of new information on their decisions. Existing evidence suggests that voters actually do learn about candidates' and parties' positions during election campaigns (Alvarez 1998; Brians and Wattenberg 1996; Lenz 2012; Sears and Valentino 1997), but that newly-acquired knowledge does not lead them to cast vote choices that better reflect their policy preferences. Instead, voters reinforce their prior voting preferences by adopting their candidates' policy stances as their own (Lenz 2012).

There are two problems with existing research. First, it is unclear whether apparent learning reflects actual learning or whether it reflects projection. Voters like to have consistent preferences and, therefore, sometimes project their own position onto their candidate (Berelson, Lazarsfeld, and McPhee 1954; Krosnick 1990). Thus, apparent learning may actually reflect reinforcement, whereby voters who agree with their candidate correctly project their position onto their preferred candidate. To clearly show that voters learn, it is necessary to study issues on which voters disagree with their preferred candidates.

Second, it is unclear whether learners really do fail to adapt their candidate preferences to their policy views. The most detailed study of the impact of learning on voting behavior (Lenz 2012) found strong evidence of following the leader on policy but no evidence of policy voting. However, it has two major limitations. First, it focuses on a small number of issues, which may not have been important to most voters. Second, it uses a single item to assess preferences on each policy dimension and measurement error in that item may make detecting effects difficult (Ansolabehere, Rodden, and Snyder Jr 2008).

We report on a panel study of the 2020 US presidential election that makes progress on

the question of whether voters learn and on whether learning helps voters with their voting decision. The 2020 election provides an unusually interesting opportunity to study whether learning policy stances matters because Donald Trump, the Republican candidate, was out of line with many voters on several issues including the central issue of of the campaign: coronavirus policy. The coronavirus pandemic was one of the more severe crises the US has faced and affected all voters—voters feared getting sick, feared that their family and friends would get sick and experienced major changes in their daily life such as work closures and school closures. Trump's policy stances on the virus were generally unpopular even with his own party. Many voters, however, were ignorant of Trump's stances (Guntermann and Lenz 2021). So, many voters may have learned during the 2020 campaign that they disagreed with Trump on the government response to an issue personally important to everyone.

The panel we report on also addresses the issue of single items by asking voters about their views on many policy items, including multiple items within the same domain, e.g., multiple items on the coronavirus. It also asked respondents about where they think Trump and Biden stood on multiple policy items. The panel survey, therefore, allows us to measure voters' own views and their knowledge of the candidates' stances.

We find substantial evidence that voters learned the candidates' positions on most issues. We even find that respondents who disagreed with their preferred candidate in the first wave became more knowledgeable of the candidates' positions. Improved knowledge in this group is important because it cannot reflect projection. Nevertheless, we find no evidence that the knowledge voters acquired led them to reassess the candidates. Learning only led voters to change their evaluations of a candidate if they already agreed with them before the election: they became more supportive of that candidate. We also find strong evidence that learning led voters to adopt their preferred candidate's policy stances.

Our research challenges the notion that more information helps voters. Campaigns do help voters learn about the candidates' positions. However, voters then use their newly-acquired

knowledge to become even more supportive of candidates they agreed with before the election and to adopt their preferred candidate's policy stances. More information thus serves to reinforce candidate preferences rather than allowing voters to identify the candidate who best reflects their policy stances, thus making the contribution of additional information to a well-functioning democracy dubious.

The 2020 US Presidential Election

The 2020 US Presidential election is a great opportunity to assess learning and its impact on voters' voting decisions. A large number of voters disagreed with their preferred candidate on many issues. That was particularly the case among supporters of Donald Trump. Figure 1 shows a scatter plot of the difference between the proportion of Biden voters sharing his stance and the proportion with the opposite stance on each of the main issues we focus on. It shows them before the election (on the horizontal axis) and after the election (on the vertical axis). Most of Biden's supporters agreed with him on each of the issues. The major exception is lowering taxes.

Figure 2 shows analogous results for Trump supporters. We can see that they only strongly agreed with him on lowering taxes, building a wall on the Mexican border, and repealing the Affordable Care Act. On returning to pre-pandemic lives, assistance to Blacks, closing non-essential businesses to slow the coronavirus, the same-sex marriage ban, WHO membership, the Muslim ban, and restrictions on abortion, Trump supporters much less clearly supported his stances. On background checks, staying six feet apart, requiring masks in public, and planning to wear a mask, more than 40 percentage points more Trump supporters disagreed with his stances than agreed with them. On limiting CO_2 emissions, free trade, reducing the income gap, and how big of a threat COVID is there were also more Trump voters who disagreed with him than who agreed with him.

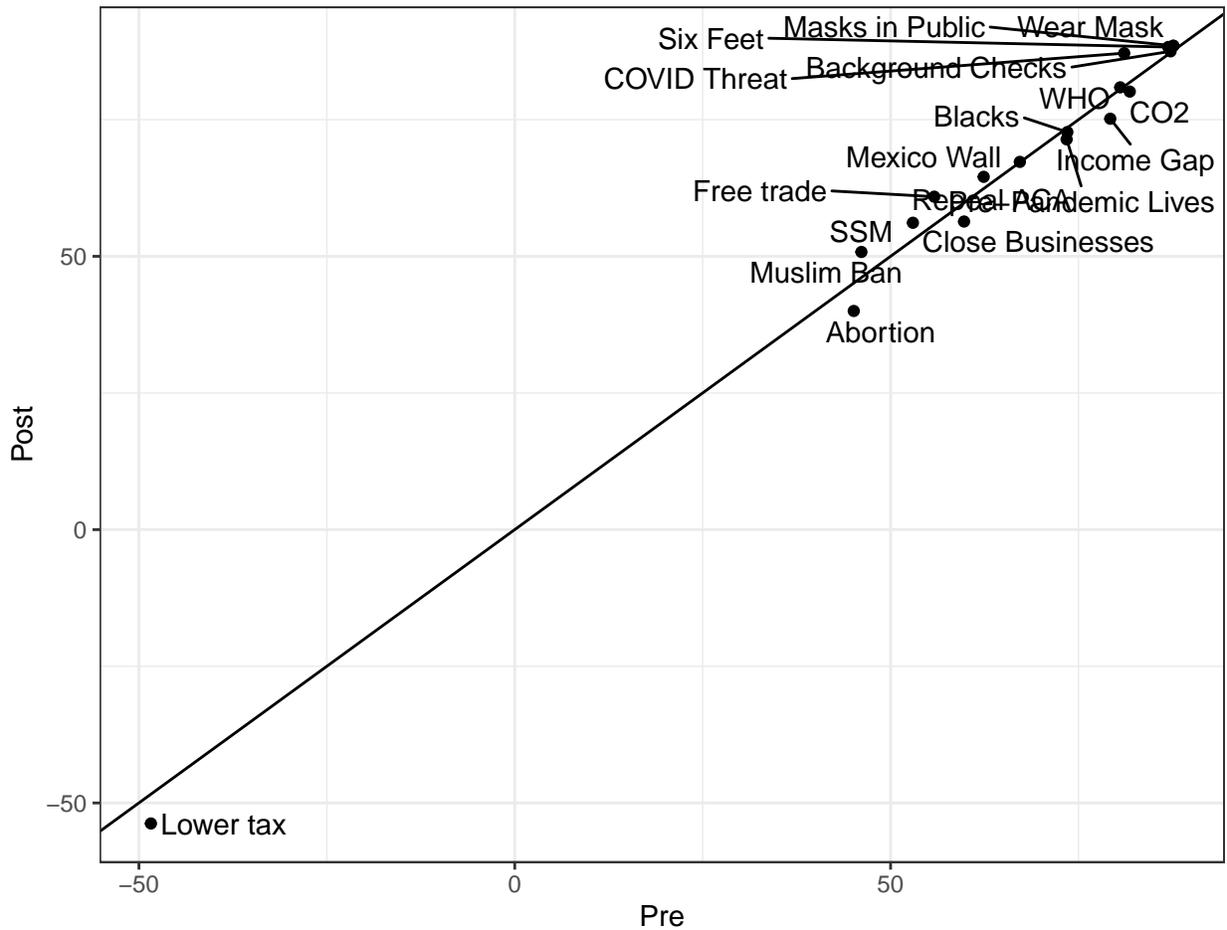In short, many voters supported a candidate with opposing policy stances. There was thus

Figure 1: Policy Agreement of Biden Supporters. Note: this plot shows how close the preferences of respondents who intended to vote for Biden in the pre-election study were to his positions before the election (on the horizontal axis) and after the election (on the vertical axis) on the 14 policy questions as well as on the four coronavirus questions. We subtracted the proportion who disagree with him from the proportion who agree with him.
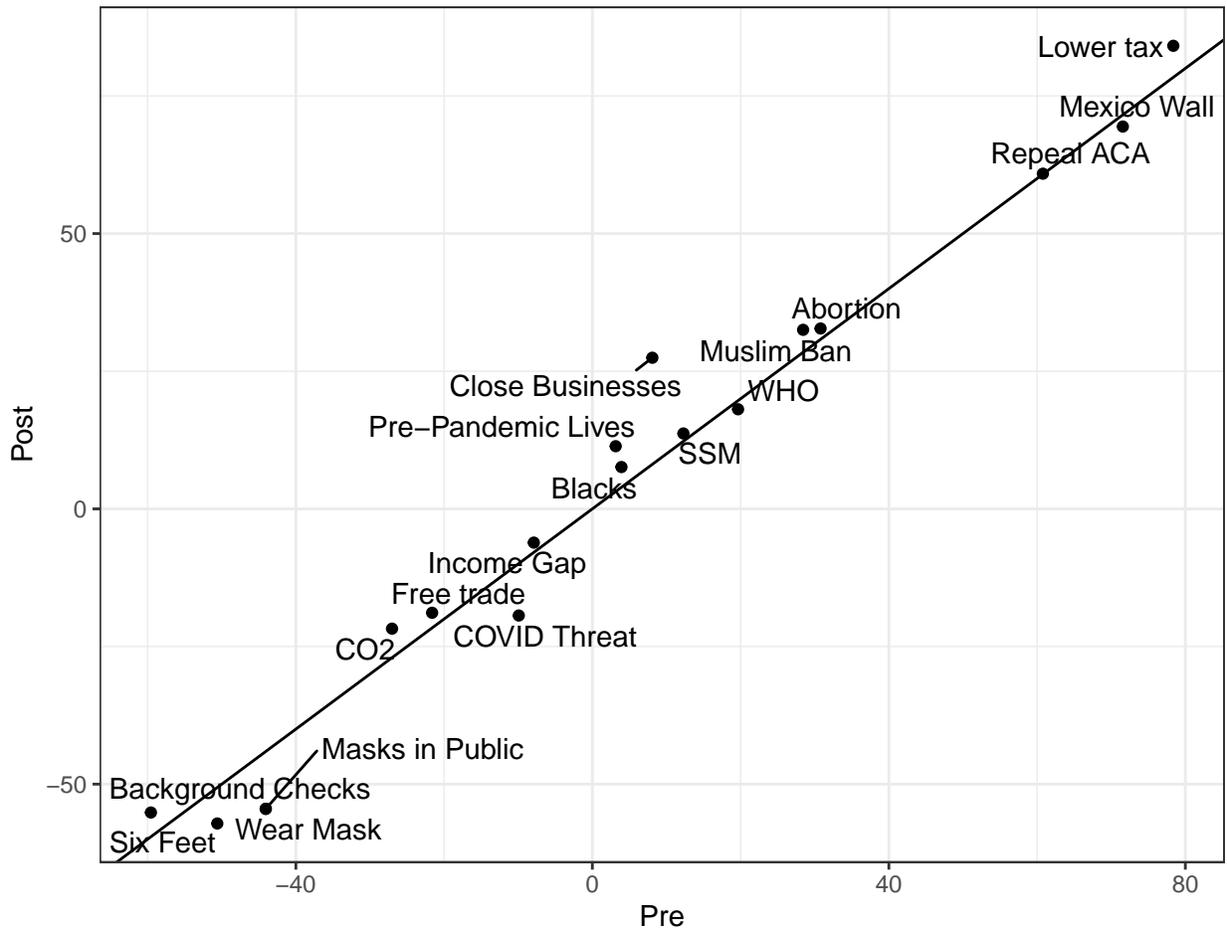
Figure 2: Policy Agreement of Trump Supporters. Note: this plot shows how close the preferences of respondents who intended to vote for Trump in the pre-election study were to his positions before the election (on the horizontal axis) and after the election (on the vertical axis) on the 14 policy questions as well as on the four coronavirus questions. We subtracted the proportion who disagree with him from the proportion who agree with him.

lots of room for voters to learn that they were closer to the other candidate on policy issues and, in turn, react by changing their vote choices or, at the very least, becoming more favorable towards the other candidate relative to their own candidate.

Campaigns and Positional Knowledge

Scholarship on campaign effects has generally assumed that campaigns have little effect (Berelson, Lazarsfeld, and McPhee 1954; Campbell et al. 1960). The authors of *The American Voter* depicted voters as having strong attachments to parties that influence how they see the political world. Since then, scholars have debated whether voters encounter information that challenges their prior beliefs or whether they live within echo chambers that reinforce their prior attitudes. Such concern has increased over the past two decades as scholars have argued that increasingly partisan cable TV and radio programs further polarization among voters (Jamieson and Cappella 2008). Fears of echo chambers have increased with the advent of social media (Sunstein 2018), although scholars have debated whether social media only exposes people to information that supports their pre-existing preferences or whether it actually exposes them to opposing messages from people who are distant in their social networks (Barberá et al. 2015).

Even if voters are exposed to information with which they disagree, that information will not necessarily influence their attitudes. Instead of dispassionately considering the information to which they are exposed, voters interpret information in ways that support their predispositions (Zaller 1992). Research on motivated reasoning has identified three strategies people have to support their prior attitudes: people evaluate arguments that support their prior attitudes more strongly than those that oppose them, people put more effort into refuting opposing arguments that go against their prior attitudes, and they choose to expose themselves to information that supports their prior attitudes (Lodge and Taber 2013). These strategies should limit efforts by campaigns to change people's minds.

Some scholars have disputed the generalization about limited effects of campaigns by pointing to a variety of campaign effects (Bartels 1988; Hillygus and Shields 2008; Holbrook 1996; Johnston et al. 1992, 2004). Others continue to find weak or null effects of campaigns on vote choice and election outcomes (Kalla and Broockman 2018; Pennec and Pons 2019), while others point out that reported campaign effects are generally small, occur in non-partisan contexts or have alternative explanations (Lenz 2009, 2012).

One of the consistent findings seems to be that campaigns increase voters' knowledge of candidates' and parties' policy positions (Alvarez 1998; Brians and Wattenberg 1996; Lenz 2012; Sears and Valentino 1997). These studies find that some citizens become more capable of identifying candidates' positions after the election campaign than before. However, because voters may already support a candidate who shares their policy preferences, some of this apparent increased knowledge may instead reflect projection, whereby voters assume, rightly or wrongly, that their preferred candidate shares their preferences on policy issues (Berelson, Lazarsfeld, and McPhee 1954; Krosnick 1990; Markus 1982). The apparent increases in political knowledge found in previous studies may, therefore, partly reflect rationalization by voters of their preferences. We distinguish two types of increases in knowledge: increases that are clearly due to learning (among people who disagree with their candidate) and increases that may be due to either learning or to projection but that we cannot distinguish in observational data (among people who agree with their candidate).

It is also unclear that increased knowledge of candidates' positions leads voters to change their vote choice. Research in political behavior has long identified obstacles to voters' ability to vote for candidates who reflect their policy preferences and knowledge of candidates' positions is only one of them. Campbell et al. (1960) identified two more fundamental difficulties: lack of knowledge of the issues themselves and insufficiently strong policy preferences. Research has long shown that people's policy preferences are unstable over time (Converse 1964) and influenced by candidates and parties (Druckman, Peterson, and Slothuus 2013; Lenz

2012). Thus, even if people learn candidates' positions, it is far from clear that their policy preferences are strong enough to influence their candidate choices.

While the evidence that election campaigns help voters select candidates who share their policy preferences is unclear, elections may actually be detrimental for democracy. In recent years, there has been increasing evidence that election campaigns make voters more partisan (Dinas 2014; Michelitch and Utych 2018; Singh and Thornton 2019) and even more affectively polarized (Hernandez, Anduiza, and Rico 2020). Thus, not only might campaigns lead voters to support their pre-existing preferences, they might also make them more polarized.

Methods

We ran a two-wave survey using the online survey provider Lucid. Just under 4000 respondents participated in the pre-election survey between August 19th and 21st. We successfully re-contacted about 1000 of those respondents after the election (between November 5th and December 21st).

To assess position knowledge, we asked respondents their perceptions of the positions of the candidates and parties on 14 policy issues (See Table 1). For each of these issues, we asked respondents whether they agree, disagree or neither agree nor disagree with a statement. We also asked them to place each of the major party candidates on these issues. We consider respondents to know the candidates' positions if they correctly placed them relative to each other on each issue scale. In other words, we determined whether they placed the candidate with the more conservative stance in a more conservative position.

If people did not answer one of the placement questions for an issue, we coded them as not knowing the positions on that issue. We consider respondents to agree with the candidate they support if they agree with a policy their preferred candidate supports more than the other candidate (or disagree with a policy their candidate opposes more than the other candidate). We also asked about preferences on 21 other policy issues (see Appendix).

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Table 1: Issues. These are the issues for which we have both respondents' own positions as well as their perceptions of the candidates' positions. Respondents were asked whether they and the candidates agree, disagree or neither agree nor disagree with each item.

Issue	Statement
Improve Position of Blacks	The government should make every effort to improve the social and economic position of Blacks
Gay Marriage Ban	A constitutional amendment banning same sex marriages
Lower Taxes	Lowering federal taxes
Abortion	Restrictions on whether a woman can get an abortion
Background Checks for Guns	Strengthening background checks to prevent guns from being sold to people with criminal records or mental illness
CO2	Restricting the amount of carbon dioxide (CO2) factories can emit
Muslim Ban	Preventing any Muslim who is not a US citizen from entering the country
Repeal ACA	Repeal the Affordable Care Act (ACA)
WHO	The United States should be part of the World Health Organization (WHO)
Mexico Wall	Building a wall along the Mexican border
Masks in Public	Requiring people to wear masks in public to slow the spread of the coronavirus
Free Trade	Increasing free trade with other countries
Income Gap	Reducing the size of the income gap between rich and poor Americans
Close Businesses	Closing non-essential businesses to slow the spread of the coronavirus

We also asked about COVID-19 attitudes and behaviors to prevent infections. We consider two questions about protective behaviors: how often the respondent plans to wear a mask in public in the next month (always, nearly always, usually, sometimes, rarely, and never) and how often they plan to keep a six-foot distance from people in order to avoid spreading the coronavirus (always, nearly always, usually, sometimes, rarely, and never). We, furthermore, examine responses to the questions: "Do you agree or disagree that Americans should return to their pre-pandemic lives right away?" (strongly agree to strongly disagree) and "How serious of a threat do you think the coronavirus is?" (not at all serious, a little serious, somewhat serious, very serious, extremely serious). These questions are different from the policy questions (in particular the policy questions dealing with the coronavirus) because they ask about how people feel about the virus and whether they will protect themselves from it and not about their attitudes towards government policies (although the question about returning to pre-pandemic lives does have implications for government policy).

To assess knowledge of the candidates' stances with respect to COVID-19, we also asked

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respondents how serious of a threat they think each of the candidates consider the coronavirus to be. We consider respondents who perceived that Biden considers it more serious than Trump does to be correct.[1]

Previous research (Ansolabehere, Rodden, and Snyder Jr 2008) has shown that policy attitudes are more stable when assessed using multiple policy items that are aggregated into scales. We, therefore, combined all the 35 policy preference items we asked about (the 14 listed above for which we also asked respondents about their perceptions of the candidates' positions and the 21 others listed in the Appendix) and created eight summative scales. These scales assess preferences in seven issue areas: attitudes towards Blacks, redistribution, abortion, the environment, immigration, health care, and the COVID-19 crisis. We created these scales in both the pre- and post-election surveys. To assess changes in the intensity of partisanship, we also asked partisans eight questions about the extent to which their partisanship is a social identity. These questions are based on research by Huddy and her colleagues (Huddy, Mason, and Aarøe 2015; Huddy, Bankert, and Davies 2018). The items are listed in the Appendix. We combined them into separate summative scales for Democrats and Republicans before and after the election. Cronbach's alpha scores are between 0.88 and 0.90. Table 2 shows Cronbach's alpha reliability scores for each scale.

Table 2: Policy Scale Reliabilities

Scale	Pre election alpha	Post-election alpha
Attitudes towards Blacks	0.80	0.85
Redistribution	0.77	0.82
Abortion	0.80	0.82
The Environment	0.61	0.68
Immigration	0.78	0.84
Health Care	0.60	0.72
COVID-19 Crisis	0.84	0.86

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[1]Note that in the pre-election wave, the COVID-19 questions were originally outcome variables in an experiment. We found no effects of the treatment.

Results

How much did voters know? How much did they learn?

In democracies, campaigns would ideally help voters learn about the candidates' stances on the important issues of the day. Did voters learn in 2020? Figure 3 shows the percentages of respondents correctly answering each candidate placement question before and after the campaign among supporters of each candidate. Biden and Trump supporters both appear to have learned. Before the campaign, Biden voters got an average of 64 percent of the candidate position knowledge questions right and after the campaign they got 74 percent right. Trump voters learned slightly more, maybe because they were starting from a lower baseline. Their mean percentage of correct responses increased from 46 percent to 60 percent. While the average number of issues on which Trump voters learned the candidates' positions is only slightly larger than the average number of issues on which Biden voters learned the candidates' positions (1 vs 0.8), a higher percentage of Trump voters (98) than Biden voters (23) learned the candidates' stances on at least one issue. Moreover, before the election, 74.5 percent of Biden voters knew the candidates' stances on at least half (7 out of 14) of the issues. After the election, 83.6 of Biden voters knew the stances on at least half the issues. Before the election, 46.7 percent of Trump voters knew the stances on at least half the issues. After the election, 66.5 of them knew at least half of the issue positions.

As explained above, it is possible that the appearance of learning here does not reflect actual learning. Instead of learning, respondents may be projecting, that is, supporters of a candidate may increasingly assume their candidate agrees with them on one or more of the issues without actually knowing the positions. For voters who happen to already agree with their candidate, this projection can make it appear as if they're learning, making projection and learning observationally equivalent. For some respondents, it is possible to distinguish projection from learning. For voters who disagree with their preferred candidate, the increased ability to correctly place the candidates cannot reflect projection. We, therefore,
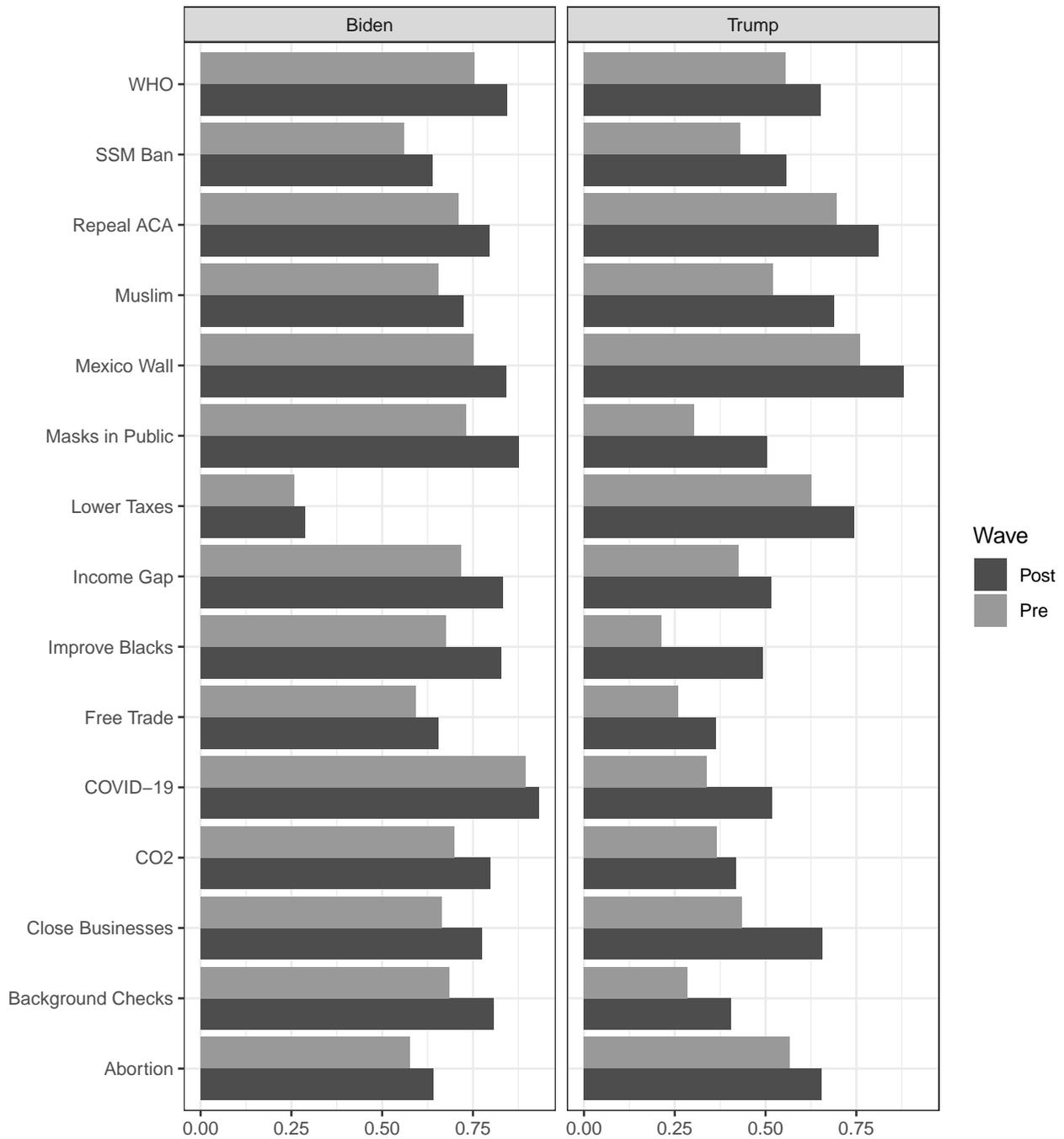
Figure 3: Knowledge of Candidate Positions. This figure shows the proportion of candidate position knowledge questions Biden and Trump voters got correct before and after the election. It shows that Biden voters knew more both before and after the election, while Trump voters learned somewhat more than Biden voters.

next consider improved position knowledge among voters who agreed and disagreed with their preferred candidate prior to the election.

Figure 4(a) shows the percentage of each candidate's voters who correctly place the candidates on each of the issues among voters who agreed with their candidate prior to the election. Figure 4(b) shows the percentages among voters who disagreed with their candidate. As we can see, while respondents who agreed with their candidate knew more before the election and continued to know more after the election, those who disagreed with their candidate learned more. By learning that they disagreed with their candidate, many voters thus became aware of an inconsistency in their preferences.

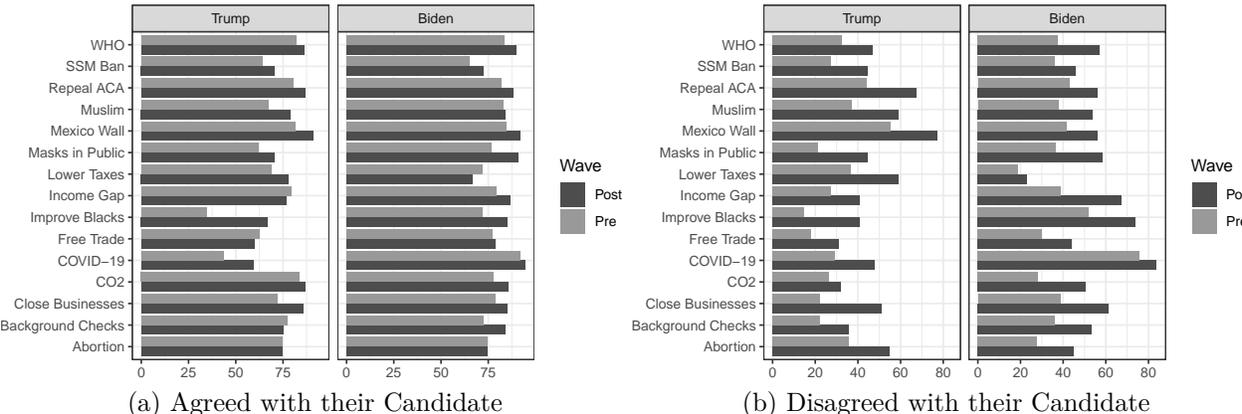(a) Agreed with their Candidate
(b) Disagreed with their Candidate

Figure 4: Knowledge of Candidate Positions by Prior Agreement. This figure shows the percentage of candidate placement questions supporters of each major party candidate who agreed (panel a) or disagreed (panel b) with their candidate got right before and after the election. It shows that, while those who agreed with their preferred candidate knew more before and after the election, those who disagreed with them learned more.

How Did Learners React to their New Knowledge?

In the previous section, we found that the campaign appeared to inform voters, serving its key role in democracy. The next important question for democracy is whether voters use their newly gained information. Since this learning occurred even among voters who disagreed with the candidate they supported in August, some voters learned that the candidate they supported holds positions with which they disagree. How did they react to the knowledge

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they gained during the campaign?

At first glance, the results are not promising. Very few voters changed their vote choices during the campaign. Table 3 shows that nearly 9 out of 10 respondents who intended to support each candidate in August ended up voting for the same candidate. Most of the shifts were not between Biden and Trump, but to or from abstention or "Other." Thus, there is little evidence that the campaign learning induced vote shifts. In a close election such as 2020, however, even small vote shits could have been consequential. Although our sample size may not be large enough to draw inferences about these minimal vote changes, we can look at changes in candidate ratings, which provide a more sensitive test, and presumably changes in candidate ratings would translate to changes in votes, just too few votes to be detected in even this large panel. We focus on relative ratings of Trump and Biden (Biden ratings are subtracted from Trump ratings).

Table 3: Vote Shifts

Post/Pre	Biden	Trump	Other	No vote	Total
Biden	89.1% (392)	4.2% (17)	23.1% (9)	16.5% (15)	44.3% (433)
Trump	2.0% (9)	86.5% (352)	20.5% (8)	3.3% (3)	38.1% (372)
Other	0.5% (2)	1.5% (6)	30.8% (12)	0.0% (0)	2.0% (20)
No vote	8.4% (37)	7.9% (32)	25.6% (10)	80.2% (73)	15.6% (152)
Total	100.0% (440)	100.0% (407)	100.0% (39)	100.0% (91)	100.0% (977)

We assess this possibility by regressing post-election relative candidate ratings on pre-election ratings and each of the policy variables, each of which are interacted with dummy variables indicating knowledge of/learning about the candidates' positions. Figure 5 shows the effect of policy preferences on relative candidate ratings in each of the possible learning categories: 1) never learners: those who could neither place the candidates before nor after the campaign; 2) learners: those who could not place one or both candidates before the campaign but could

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place both after the campaign; 3) forgetters: those who could place the candidates before the election but not after the election; 4) always knowers: those who could place the candidates before and after the election. If learning makes any difference, we should observe a significant influence of policy preferences on relative ratings among learners. As we can see, none of the effects are significant, suggesting that policy preferences did not influence relative candidate ratings among those who learned.

Another possibility is that, learning about policy agreement/disagreement leads voters to reassess how close they are to their party. We assess this possibility using the partisanship as a social identity scale. We tested whether learning positions on each issue led to changes in partisanship by regressing the post-election partisanship scales on the pre-election scales and each policy variable, both of which are interacted with learning variables for each policy item. As above, we then consider the effects for each learning group. In all cases, coefficients were indistinguishable from 0 (not shown). We thus conclude that learning about candidates' positions did not lead voters to reconsider how close they are to the parties.

One objection to this analysis is that we use individual policy items in our analyses. Measurement error in individual policy items may mask the influence of policy preferences on candidate and party preferences. We address this possibility by creating multi-item policy scales (Ansolabehere, Rodden, and Snyder Jr 2008). We then test whether these scales influenced learners' candidate attitudes.

Figure 6 shows the results of regressions of relative candidate ratings from after the election campaign on relative evaluations from before the campaign, each policy scale as as well as the categorical learning variable and interaction terms between that variable and each of the previous variables. For each scale, we used all the knowledge questions that were available for its constituent items. For four of the scales (abortion, blacks, environment, healthcare), candidate placement questions were available on one issue to assess learning. For three of them (coronavirus, immigration, and redistribution), there were placement questions about
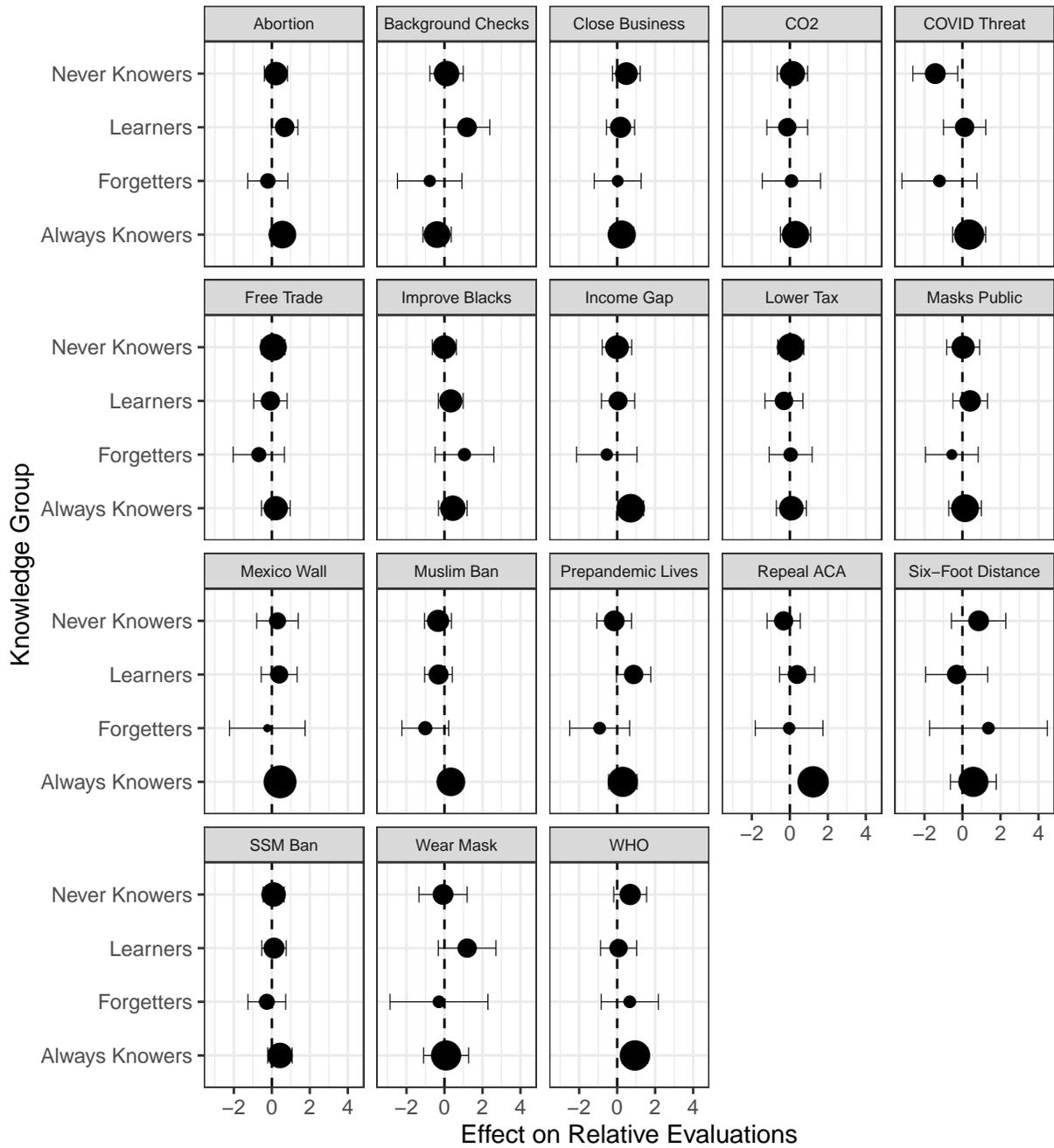
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Figure 5: Does Learning Matter?—Regressions of Relative Candidate Ratings on Individual Policy Items. This graph shows effects of policy preferences on relative candidate ratings from a regression of relative candidate evaluations from after the election on the pre-election measure, each policy preference, a categorical learning variable as well as interactions between that variable and the previous variables. It shows the sum of the main effect of each policy preference and the interaction between the policy preference and the learning variable. Dots sized to reflect the number of respondents in each category.

two or three issues. For those, we added the learning category "always partial knowers" to represent people who always knew the candidates' positions on at least one (but not all) the constituent issues but who neither learned nor forgot any positions.

The policy effects for learners are nearly all non-significant for the multi-item scales as well. The only exception is the coronavirus scale. These results suggest that voters who learned about the candidates' stances on the coronavirus adjusted their attitudes towards the candidates in the appropriate direction.[2]

Figure 6 suggests some limited influence of policy preferences on how voters felt about the two main candidates. The coronavirus policy preferences of voters who learned the candidates' stances on COVID-19 issues led them to re-assess their relative ratings of the candidates. Should such influence be seen as positive for democracy? Voters' prior agreement with the candidates makes a major difference to the implications of this influence for democracy. If voters are simply reinforcing their prior preferences by becoming more supportive of the candidate they agree with, the influence of policy preferences on candidate evaluations is not necessarily positive for democracy. Much more clearly beneficial for democracy is when voters who disagree with their candidate, learn that they disagree with them and become less supportive of that candidate.

To assess whether any of the kind of candidate re-evaluation that is most clearly beneficial for democracy occurred, we reran the same analyses using the scales but we ran separate analyses for respondents who initially agreed and for those who disagreed with their preferred candidate. Figure 7 shows effects for those who initially agreed with their preferred candidate. We found positive and significant policy effects for learners on five of the seven issues. Figure 8 shows effects for those who initially disagreed with their preferred candidate. None of the policy effects are significant for people who initally disagreed with their candidate. These findings thus show that to the extent that learning leads voters to reassess the candidates, it

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[2]Note that we also ran individual models for each multi-item policy scale and found that all the learning effects were weak and none of them were significant.
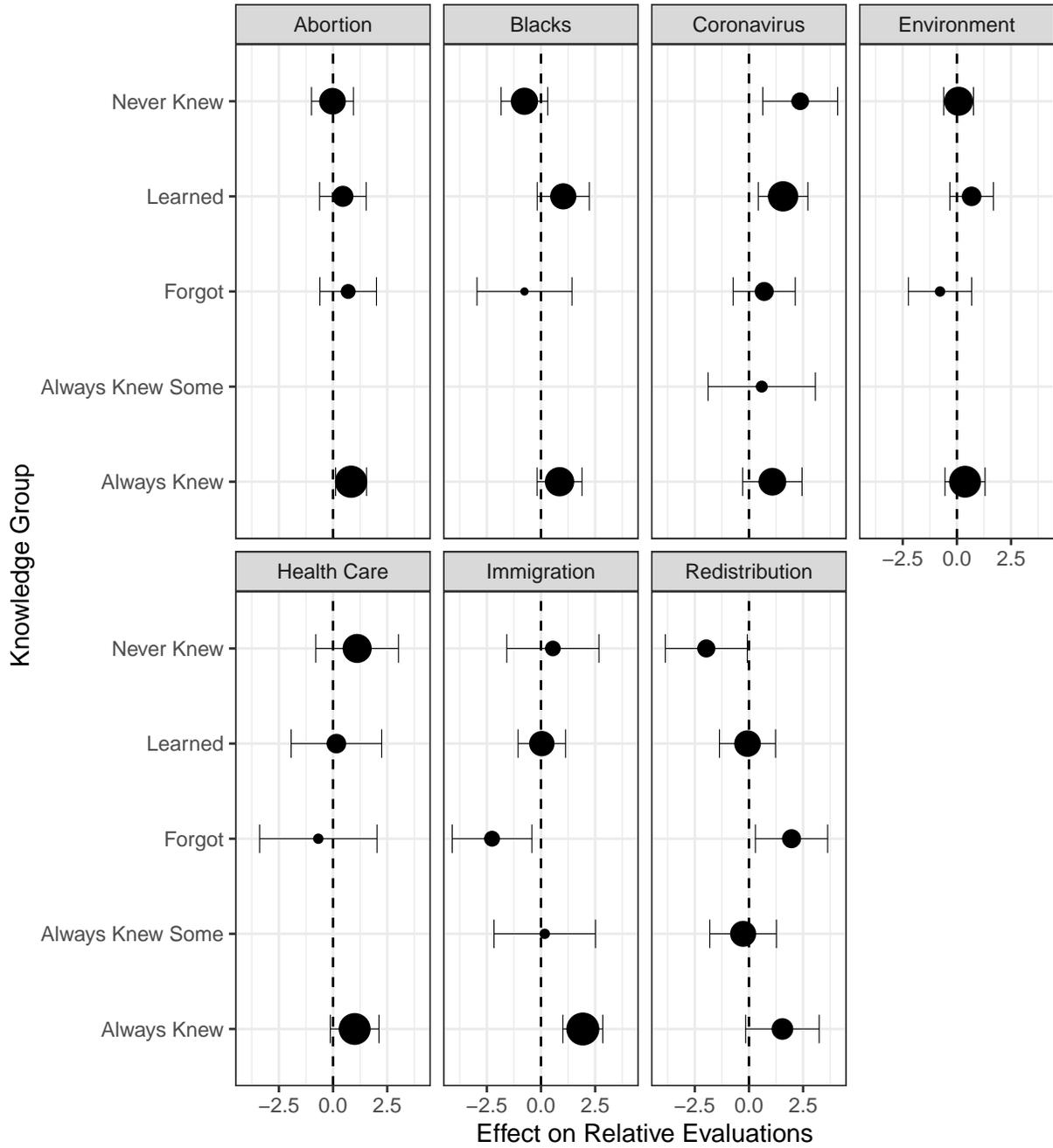
Figure 6: Does the Learning Matter?—Regressions of Relative Candidate Ratings on Multi-Item Policy Scales. This graph shows effects of the policy scales on relative candidate ratings from a regression of relative candidate ratings from after the election on the pre-election measure, each policy scale, categorical learning variables as well as interactions between that variable and the previous variables. It shows the sum of the main effect of each policy scale and the interaction between the policy scale and the learning variable.

does so by making people who agree with their preferred candidate prefer that candidate even more, suggesting that learning fails to induce the changes in preferences that are most beneficial for democracy.

Does learning that a voter disagrees with their preferred candidate ever lead them to become more negative about them? We counted the number of issues on which each respondent learned that they disagreed with their preferred candidate. While very few initial Biden voters learned they disagreed with him on more than one issue (only 16 in the sample), 104 Trump voters learned that they disagreed with him on at least two issues. We found that the average change in relative feeling thermometers only became negative among Trump voters when they learned they disagreed with him on at least four issues. Only a tiny fraction of Trump voters learned they disagreed with him on that many issues, but it's an intriguing result. In regressions of relative candidate ratings on this learning-you-disagree scale among some voters, the coefficient is statistically significant in some specifications but tends to go to zero when we control for multi-item policy scales. Thus, becoming negative about one's candidate relative to the other candidate is a rare phenomenon, but it is possible that it could matter in close elections.

Do voters adopt their preferred candidates' policy preferences?

So far, we have found that, even though they learned a considerable amount about the candidates' policy positions, voters did not exhibit the one behavior that would be most beneficial for democracy. They did not lower their evalutions of a preferred candidate after learning they disagreed with them. However, we did find that those who learned they agreed with a candidate became even more supportive of that candidate. Another way voters could reinforce their preferences is by adopting their preferred candidate's policy positions (Lenz 2012).

Figure 9 shows changes in policy preferences among each candidate's supporters who learned
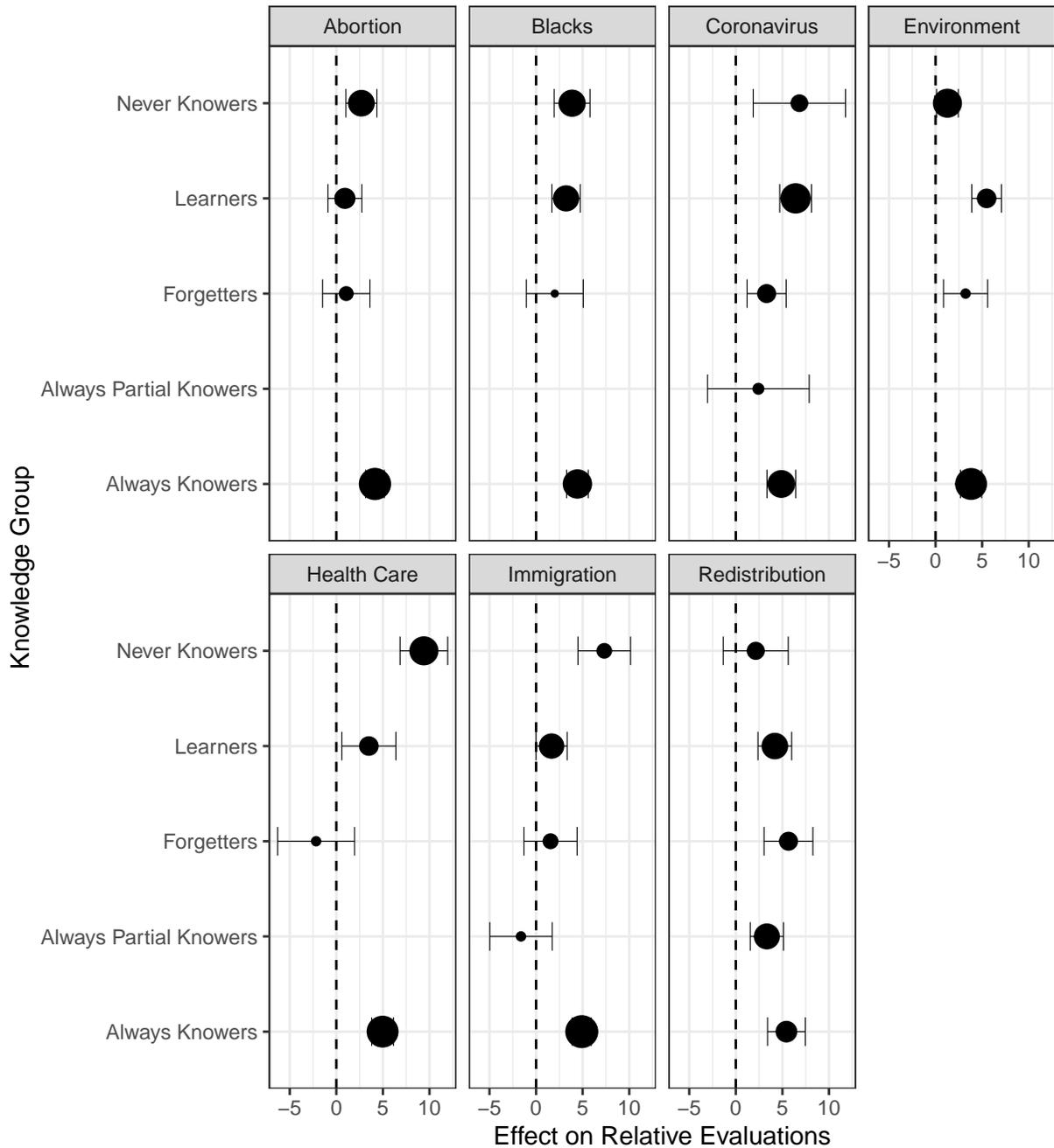
Figure 7: Regressions of Relative Candidate Ratings on Policy Scales Among Voters Who Agreed with their Preferred Candidate Before the Campaign. This graph is analogous to Figure 6 except that it is limited to voters who initially agreed with their preferred candidate on each scale. We can see policy effects on relative candidate evaluations among learners on five of the seven issues.
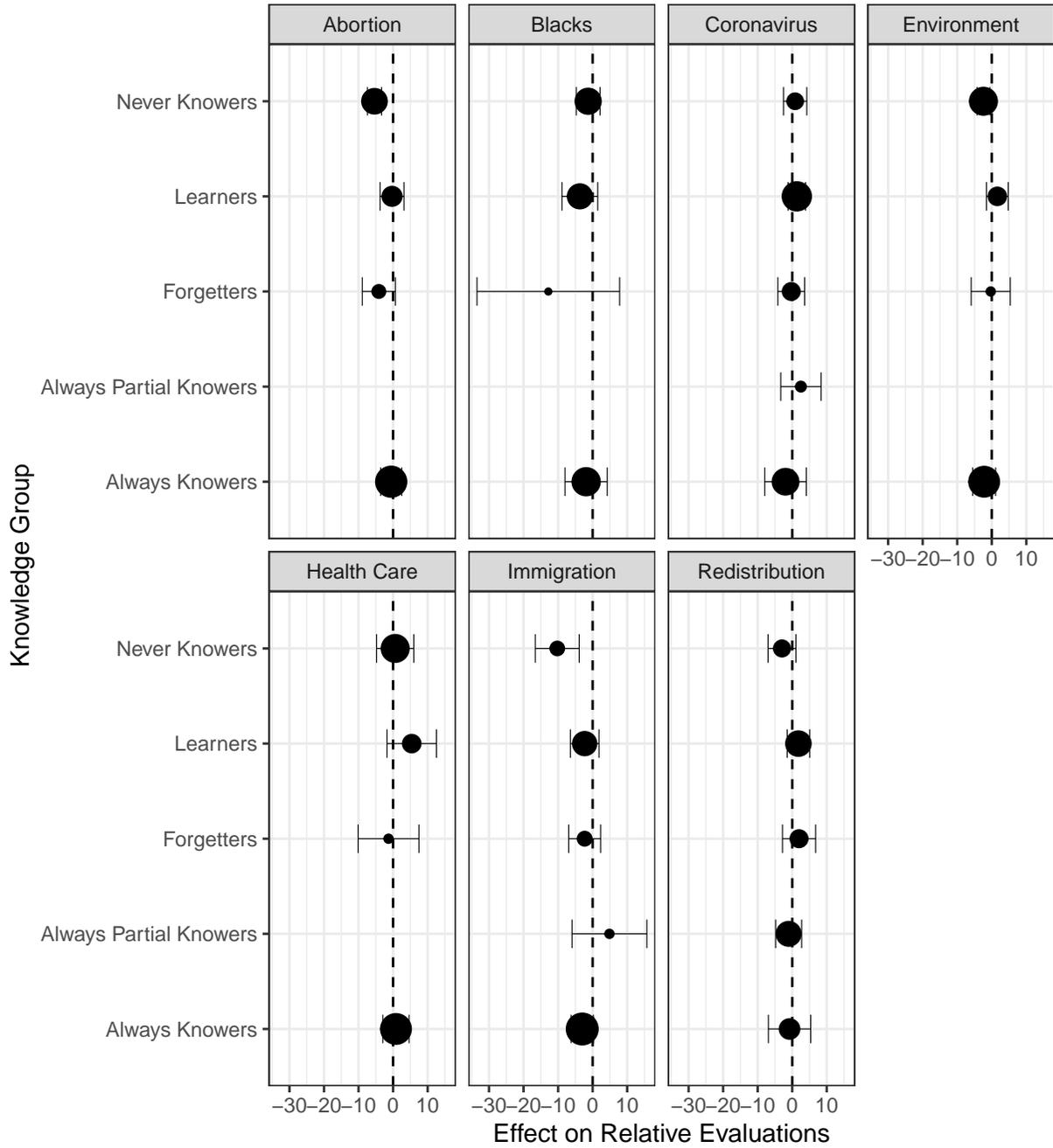
Figure 8: Regressions of Relative Candidate Ratings on Policy Scales Among Voters Who Disagreed with their Preferred Candidate Before the Campaign. This graph is analogous to Figure 6 except that it is limited to voters who initially disagreed with their preferred candidate on each scale. We can see that the policy scales had no influence on learners who disagreed with their preferred candidate. Such an influence would have been the most beneficial effect of the campaign for democracy.

and did not learn to correctly place the candidates on each issue between the two waves. As we can see, respondents who learned moved their preferences in the direction of their preferred candidate's positions on each of the issues.

We then assess such adjustment of policy attitudes in a more systematic way in Figure 10, where we regress each policy item from after the election on the pre-election measure as well as a dummy variable indicating pre-election support for Trump (vs Biden), both of which we interact with the learning category variable. As we can see, all of the following effects are positive and significant for the policy items and two of the COVID-19 items are also positive and significant, showing that voters following their candidates is a widespread phenomenon.

To address the possibility that our results reflect measurement error in the policy questions (Ansolabehere, Rodden, and Snyder Jr 2008), we run similar analyses using the policy scales. Figure 11 shows following effects for each group from these analyses. It shows that there is evidence for following on all seven scales. Thus, following one's preferred candidate's policy preferences is another way learners reinforce their candidate preferences in reaction to learning their policy stances.

Conclusion

Many scholars assume that, if voters had more information, their decision-making would be improved (Althaus 1998; Bartels 1996). Existing evidence suggests though that voters already learn a great deal during election campaigns (Alvarez 1998; Brians and Wattenberg 1996; Lenz 2012; Sears and Valentino 1997) but that they do not use the knowledge they acquire to re-valuate the candidates (Lenz 2012).

Both findings are based on research that is far from flawless. Research on learning may simply reflect voters attempting to have consistent preferences. If they agree with their preferred candidate they may simply correctly project their own preference onto their preferred
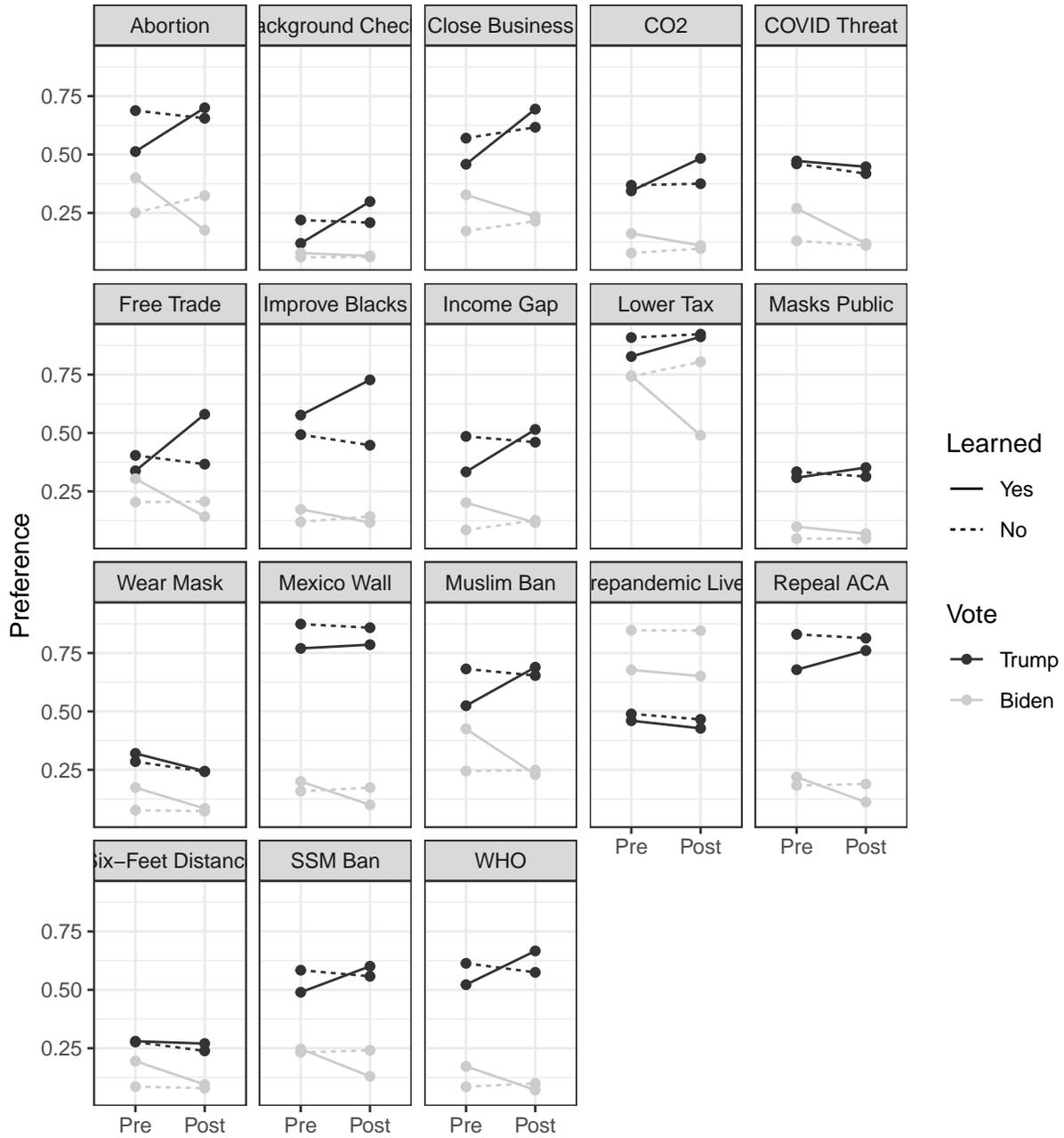
Figure 9: Learning and Changes in Policy Preferences. This figure shows policy preferences on each issue both before and after the campaign among Biden and Trump voters who learned and did not learn their positions on the issues.
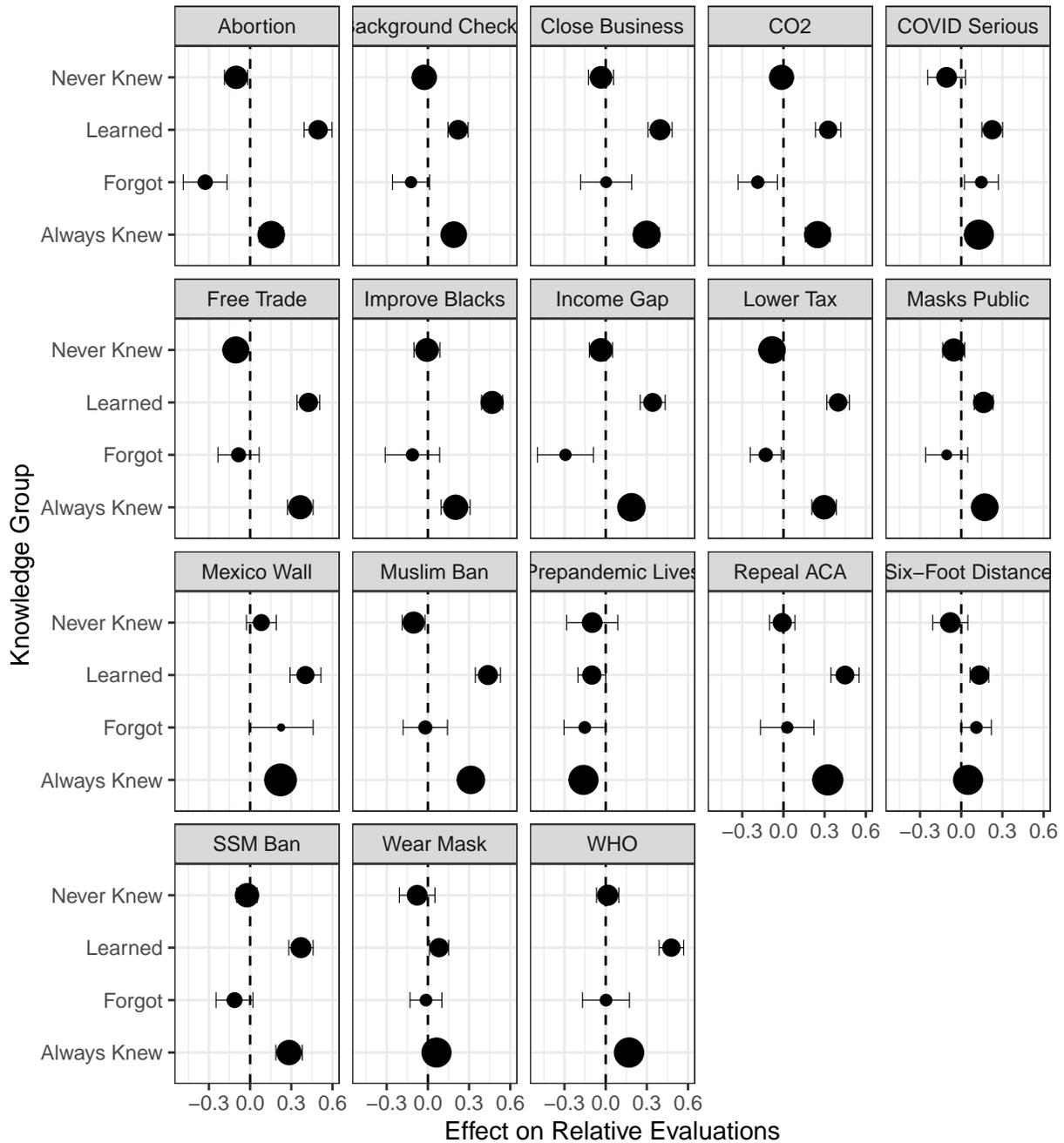
Figure 10: Regressions of Changes in Policy Attitudes. This figure shows the effect of voting for Trump from regressions of post-election measures of each policy preference on pre-election measures as well as a dummy variable indicating that a respondent voted for Trump as opposed to Biden (other responses are excluded from these regressions), each of which is interacted with a variable distinguishing learning categories.
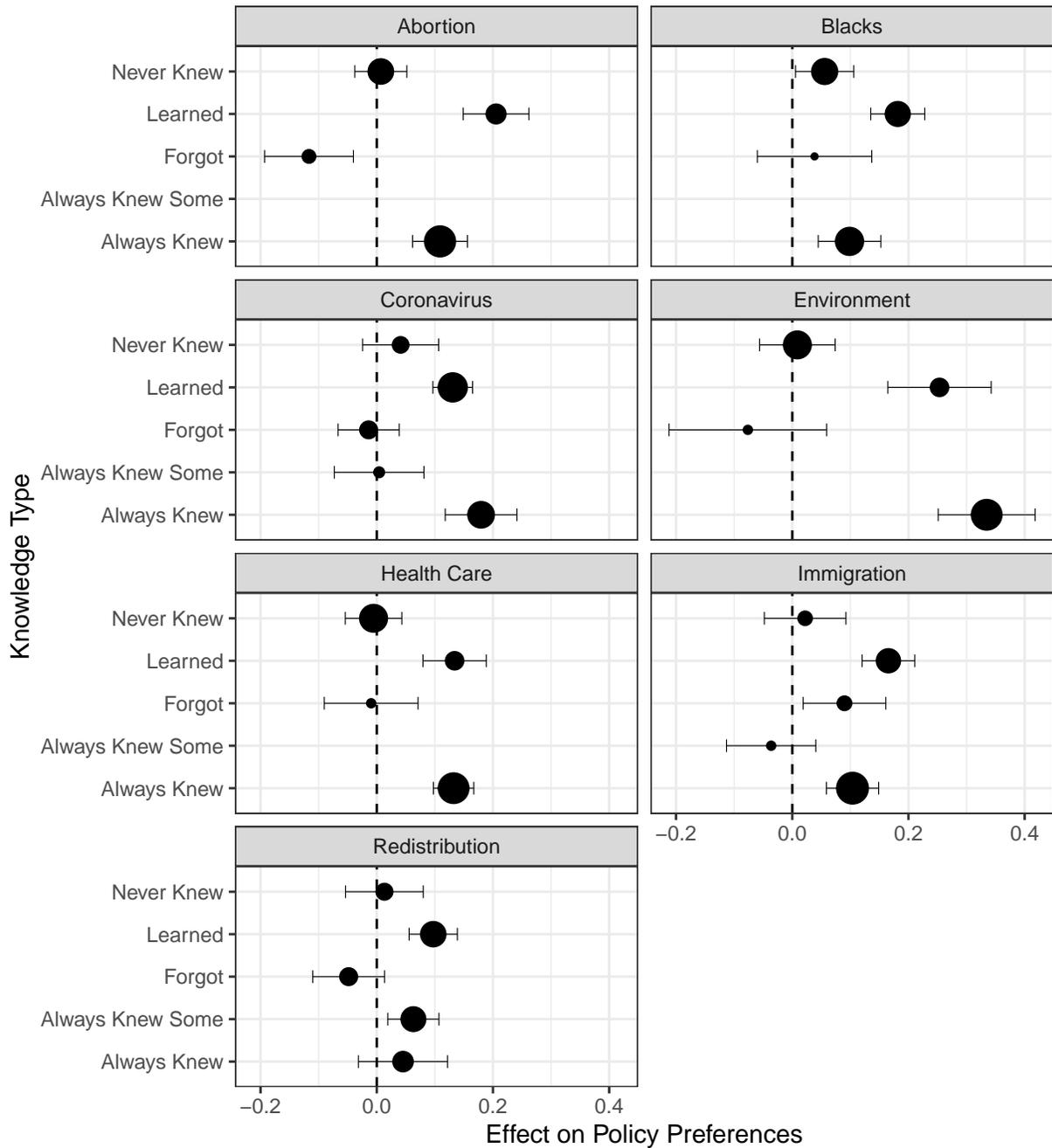
Figure 11: Regressions of Changes in Policy Scales. This figure shows the effect of voting for Trump from regressions of post-election measures of each policy scale on pre-election measures as well as a dummy variable indicating that a respondent voted for Trump as opposed to Biden (other responses are excluded from these regressions), each of which is interacted with a variable distinguishing learning categories.

candidate, thus creating the appearance of learning. Moreover, the most in-depth study of voters' reactions to learning (Lenz 2012) relied on single policy questions that may not be important to voters and that may contain substantial measurement error, thus obscuring learning effects on candidate preferences (Ansolabehere, Rodden, and Snyder Jr 2008).

We test how much learning occurred during the 2020 US election campaign and how voters reacted their new knowledge. We find evidence of learning even among voters who disagreed with their preferred candidate, for whom apparent learning cannot reflect projection. We also test whether learners changed their evaluations of the candidates. We do so using both individual survey questions, notably on the coronavirus pandemic, which has affected everyone's life, and policy scales, thus reducing measurement errors (Ansolabehere, Rodden, and Snyder Jr 2008). We find very little evidence that learning leads voters reassess the candidates. To the extent that it does, it leads those who agree with their preferred candidate to like them even more. We also find that learners adjust their policy preferences to reflect the stances of their preferred candidates. Thus, while voters learn, they fail to use their new knowledge to improve their voting decisions and instead use it to reinforce their prior preferences.

These findings confirm previous research showing that voters learn the positions adopted by candidates during campaigns. However, they show that, contrary to the widespread assumption that learning leads to better decision-making, it simply allows voters to reinforce their prior preferences. In short, more information does not necessarily mean better decisions.

Bibliography

Althaus, Scott L. 1998. "Information Effects in Collective Preferences." *American Political Science Review* 92 (3): 545–58.

Alvarez, R Michael. 1998. *Information and Elections.* Ann Arbor: University of Michigan

Press.

Ansolabehere, Stephen, Jonathan Rodden, and James M Snyder Jr. 2008. "The Strength of Issues: Using Multiple Measures to Gauge Preference Stability, Ideological Constraint, and Issue Voting." *American Political Science Review* 102 (2): 215–32.

Barberá, Pablo, John T Jost, Jonathan Nagler, Joshua A Tucker, and Richard Bonneau. 2015. "Tweeting from Left to Right: Is Online Political Communication More Than an Echo Chamber?" *Psychological Science* 26 (10): 1531–42.

Bartels, Larry. 1988. *Presidential Primaries and the Dynamics of Vote Choice.* Princeton: Princeton University Press.

———. 1996. "Uninformed Votes: Information Effects in Presidential eEections." *American Journal of Political Science* 40 (1): 194–230.

Berelson, Bernard R, Paul F Lazarsfeld, and William N McPhee. 1954. *Voting: A Study of Opinion Formation in a Presidential Campaign.* Chicago: University of Chicago Press.

Brians, Craig Leonard, and Martin P Wattenberg. 1996. "Campaign Issue Knowledge and Salience: Comparing Reception from TV Commercials, TV News and Newspapers." *American Journal of Political Science* 40 (1): 172–93.

Campbell, Angus, Philip E Converse, Warren E Miller, and Donald E Stokes. 1960. *The American Voter.* New York: Wiley.

Converse, Philip E. 1964. "The Nature of Belief Systems in Mass Publics." In *Apter1964.* Vol. v. 5. London: Apter.

Dinas, Elias. 2014. "Does Choice Bring Loyalty? Electoral Participation and the Development of Party Identification." *American Journal of Political Science* 58 (2): 449–65.

Druckman, James N, Erik Peterson, and Rune Slothuus. 2013. "How Elite Partisan Polarization Affects Public Opinion Formation." *American Political Science Review* 107 (1):

57–79.

Guntermann, Eric, and Gabriel Lenz. 2021. "Still Not Important Enough? COVID-19 Policy Views and Vote Choice." *Perspectives on Politics.*

Hernandez, Enrique, Eva Anduiza, and Guillem Rico. 2020. "Affective Polarization and the Salience of Elections." *Electoral Studies.*

Hillygus, D Sunshine, and Todd G Shields. 2008. *The Persuadable Voter: Wedge Issues in Presidential Campaigns.* Princeton: Princeton University Press.

Holbrook, Thomas M. 1996. *Do Campaigns Matter?* Thousand Oaks: Sage Publications.

Huddy, Leonie, Alexa Bankert, and Caitlin Davies. 2018. "Expressive Versus Instrumental Partisanship in Multiparty European Systems." *Political Psychology* 39: 173–99.

Huddy, Leonie, Lilliana Mason, and Lene Aarøe. 2015. "Expressive Partisanship: Campaign Involvement, Political Emotion, and Partisan Identity." *American Political Science Review* 109 (1): 1–17.

Jamieson, Kathleen Hall, and Joseph N Cappella. 2008. *Echo Chamber: Rush Limbaugh and the Conservative Media Establishment.* New York: Oxford University Press.

Johnston, Richard, Henry Brady, Blais André, and Jean Crête. 1992. *Letting the People Decide: Dynamics of a Canadian Election.* Montreal: McGill-Queen's University Press.

Johnston, Richard, Michael G Hagen, Kathleen Hall Jamieson, and others. 2004. *The 2000 Presidential Election and the Foundations of Party Politics.* Vol. 2. Cambridge University Press.

Kalla, Joshua L, and David E Broockman. 2018. "The Minimal Persuasive Effects of Campaign Contact in General Rlections: Evidence from 49 Field Experiments." *American Political Science Review* 112 (1): 148–66.

Krosnick, Jon A. 1990. "Americans' Perceptions of Presidential Candidates: A Test of the

Projection Hypothesis." *Journal of Social Issues* 46 (2): 159–82.

Lenz, Gabriel S. 2009. "Learning and Opinion Change, Not Priming: Reconsidering the Priming Hypothesis." *American Journal of Political Science* 53 (4): 821–37.

———. 2012. *Follow the Leader?: How Voters Respond to Politicians' Policies and Performance.* Chicago: University of Chicago Press.

Lodge, Milton, and Charles S Taber. 2013. *The Rationalizing Voter.* Cambridge: Cambridge University Press.

Markus, Gregory B. 1982. "Political Attitudes During an Election Year: A Report on the 1980 NES Panel Study." *The American Political Science Review* 76 (3): 538–60.

Michelitch, Kristin, and Stephen Utych. 2018. "Electoral Cycle Fluctuations in Partisanship: Global Evidence from Eighty-Six Countries." *The Journal of Politics* 80 (2): 412–27.

Nyhan, Brendan, and Jason Reifler. 2010. "When Corrections Fail: The Persistence of Political Misperceptions." *Political Behavior* 32 (2): 303–30.

Pennec, Caroline Le, and Vincent Pons. 2019. "Vote Choice Formation and Minimal Effects of Tv Debates: Evidence from 61 Elections in 9 Oecd Countries." National Bureau of Economic Research.

Sears, David O, and Nicholas A Valentino. 1997. "Politics Matters: Political Events as Catalysts for Preadult Socialization." *American Political Science Review* 91 (1): 45–65.

Singh, Shane P, and Judd R Thornton. 2019. "Elections Activate Partisanship Across Countries." *American Political Science Review* 113 (1): 248–53.

Sunstein, Cass R. 2018. *# Republic: Divided Democracy in the Age of Social Media.* Princeton: Princeton University Press.

Zaller, John. 1992. *The Nature and Origins of Mass Opinion.* Cambridge, UK: Cambridge University Press.

Appendix

Table A1: Issues. Note: for these questions, respondents were asked whether they strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree or strongly disagree with each policy statement.

Issue	Statement
Work Permit	Allowing existing illegal immigrants to obtain a work permit to stay in the US
Taxes on High Incomes	Increasing taxes on households with very high incomes
No Favors for Blacks	Blacks should work their way up without any special favors
Health Insurance	Requiring people to have health insurance
Late Abortion Restrictions	Restrictions on abortions in the last three months of pregnancy
Early Abortion Restrictions	Restrictions on abortions in the first three months of pregnancy
Deportations	Deporting all people who entered the US illegally back to their country of origin
Roe v Wade	Appointing judges to the Supreme Court who would overturn the Roe v Wade decision that allowed abortion
White Advantage	White people in the US have advantages because of the color of their skin
Affirmative Action	Affirmative action to help Blacks

Table A2: Government Effort Issues. Note: for these questions, respondents were asked whether the government should put much more effort, somewhat more effort, the same amount of effort, somewhat less effort or much less effort than than now into achieving each policy goal.

Issue	Statement
Hiring Illegal Immigrants	Stopping employers from hiring illegal immigrants
Coronavirus Testing	Coronavirus Testing
Protecting the environment	Protecting the environment
Stay at Home	Making sure people with the coronavirus stay at home
Protect from Coronavirus	Protecting Americans from the coronavirus
Protect Air	Protecting the air we breathe

Table A3: Government Spending Issues. Note: for these questions, respondents were asked whether the government should spend much more, somewhat more, the same amount, somewhat less or much less than than now on achieving each policy goal.

Issue	Statement
Alternative Energies	Developing alternative sources of energy that do not depend on oil
Health care	Health care
Health care Assistance	Health care assistance to people who cannot afford health insurance
Assistsance to the Poor	Assistance to poor people
Helping Blacks	Helping Black Americans get ahead

Table A4: Partisanship as a Social Identity Items

Issue	Statement
When I speak about this party, I usually say "we" instead of "they"	I am interested in what other people think about this party
When people criticize this party, it feels like a personal insult	I have a lot in common with other supporters of this party
If this party does badly in opinion polls, my day is ruined	When I meet someone who supports this party, I feel connected with this person
When I speak about this party, I refer to them as "my party"	When people praise this party, it makes me feel good

What Changed During the Campaign?

Although few respondents changed their vote choices, it is possible that respondents changed their attitudes towards the candidates or the parties. This could have occurred if they became more supportive of a candidate or party they agree with or less supportive of a candidate or party they disagree with. We asked respondents to rate the candidates and the parties on scales from 1 to 7, where 1 means they strongly dislike them and 7 that they strongly like them.

Overall, ratings of the candidates and parties were remarkably stable. Biden's mean rating increased slightly from 3.81 before the election to 3.94 after the election. The mean rating of the Democratic Party also increased slightly from 3.85 before the election to 3.93 after the election. Both changes were significant (p=0.000 and p=0.037 using paired t-tests)

Trump's mean rating dropped slightly (from 3.63 to 3.55). The mean rating of the Republican Party remained essentially stable (from 3.77 to 3.75). Neither change was significant at the 0.05 level (p=0.070 and 0.641)

Changes in ratings among the candidates' voters are similar to overall changes. The mean rating of Biden among his voters increased from 5.78 before the election to 5.92 after the election (p=0.010). However, their mean rating of the Democratic Party remained stable (from 5.72 to 5.73 , p=0.800). Note that we keep vote choice constant here by using pre-election vote choice.

The mean Trump rating among his voters dropped slightly from 6.1 before the election to 6.04 after the election (p=0.266). The mean rating of the Republican Party among Trump voters was stable at 5.56 before the election and 5.52 after the election (p=0.583).

We similarly find little change in the strength of partisanship as a social identity. Before the election, the mean score among Democrats was 0.62 and stayed at 0.60 (p=0.054) after the election. Among Republicans, it slightly decreased from 0.62 to 0.58 (p=0.000).

In short, our findings confirm the minimal effects perspective with respect to vote choice. They also extend the minimal effects finding to candidate and party ratings. This is contrary to recent research showing that elections increase partisanship and affective polarization.

How about policy attitudes? Figure A1 shows mean positions on each of the 14 main policy issues (those on which we ask both respondents' own positions and their perceptions of the candidates' stances). We also included the four COVID-19 attitudes and behavioral outcomes. We rescaled all the issues so that 0 is the most liberal position and 1 is the most conservative position. It shows that preferences on all the issues except for the same-sex marriage ban significantly changed during the campaign (p-values are adjusted for multiple hypothesis tests using a Holm correction). Most of the overall changes were small though. The biggest changes in a pro-Trump direction were against closing non-essential businesses and in favor of lowering taxes. The biggest changes in a pro-Biden direction were the extent to which COVID is a threat as well as plans to wear a mask in public and to keep a six-foot distance from people to slow the spread of the coronavirus.
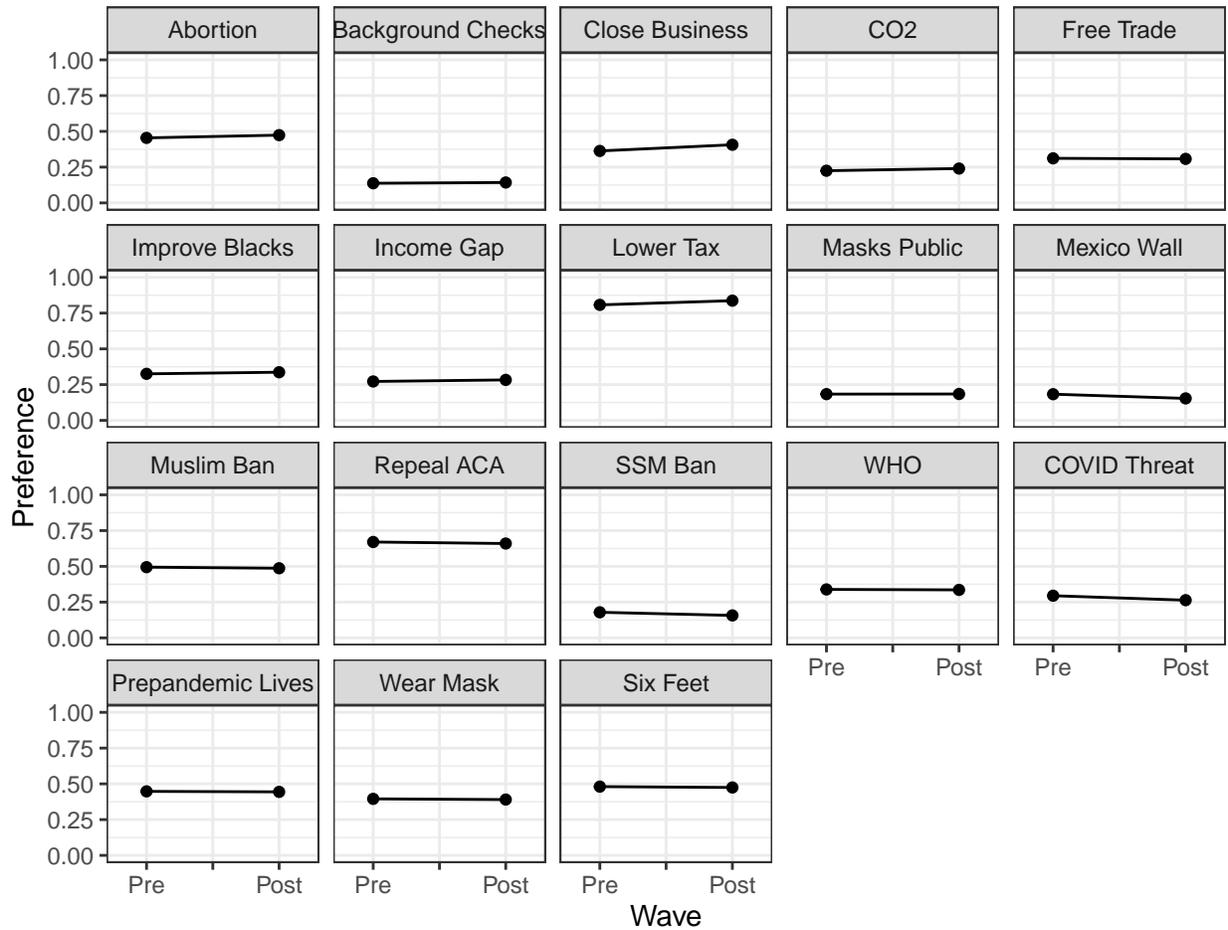
Figure A1: Mean Positions on Each Issue in Each Wave Among all Respondents. Note: This figure shows mean overall preferences on each of the 14 policy issues as well as responses to the four coronavirus questions. All changes are significant at the 0.001 level, except masks in public, which is significant at the 0.10 level.