The Moderating Effect of Debates on Political Attitudes [*]

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Abstract

In theory, candidate debates can influence voters by providing information about candidates' quality and policy positions. However, there is limited evidence about whether and why debates influence voters in new democracies. We use a field experiment on parliamentary debates during Ghana's 2016 elections to show that debates improve voters' evaluations of candidates. Debates have the strongest effect on partisan voters, who become *more* favorable toward and more likely to vote for opponent-party candidates and less likely to vote for co-partisans. Experimental and unique observational data capturing participants' second-by-second reactions to the debates show that policy information was the most important causal mechanism driving partisan moderation, especially among strong partisans. A follow-up survey shows that these effects persist in electorally competitive communities, while they dissipate in party strongholds. Policy-centered debates have the potential to reduce partisan polarization in new democracies, but the local political context conditions the persistence of these effects.

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Candidate debates are an increasingly prevalent aspect of electoral campaigns around the world.[1] Yet we lack evidence on how they influence voters in new democracies. On the one hand, debates could help citizens choose representatives based on their qualifications or policy positions, which may enhance accountability (Besley, 2006). Alternatively, debates could reinforce ethnic voting or encourage voters to evaluate politicians on the basis of their appearance (Lawson et al., 2010). Further, it is unknown whether, in the context of newer democracies, debates moderate partisan opinions or polarize the electorate by entrenching the preferences of partisan voters (Levendusky, 2013).

To address the fundamental questions of *whether* and *why* debates influence voters, we conducted a field experiment analyzing the impact of parliamentary debates held ahead of Ghana's 2016 elections.[2] The debates, organized by Ghana's National Commission for Civic Education (NCCE) and the Center for Democratic Development (CDD-Ghana), included all of the *parliamentary* candidates competing in the constituencies where we conducted the research.[3] The debates were real locally organized campaign events, which enhances the external validity of the study. Candidates were in the same location, answered the same questions, and engaged with their competitors; in short, they were similar to debates held in older democracies, including the United States. We videotaped the debates in three electoral constituencies and randomly assigned study participants (N=1,991) to view either the debate or a control video; we surveyed them immediately afterward. To determine whether the effects of the debate persisted, we conducted a follow-up survey two days later with a randomly selected subsample.

We argue that debates could influence voters through two theoretical channels: information about candidates' *quality* and information about candidates' *policy positions*. To assess these causal mechanisms, the debates were organized into a personal background segment, in which candidates did not discuss policies but could convey information about their quality, and a policy segment, in which candidates discussed education and unemployment policy. We randomly assigned participants to view either only the personal background segment, only the policy segment, or the whole debate. To assess the importance of physical attributes, which could be interpreted as a signal of candidate quality (Lawson

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[1]Debates are conducted in over 60 countries, including Cambodia, Canada, Colombia, Ghana, Haiti, Kenya, Liberia, Iraq, Peru, Sierra Leone, and the USA (National Democratic Institute, 2014).

[2]Our hypotheses, measurement strategies, and analyses were pre-specified in a pre-analysis plan. Table A in the Appendix (pg. 1) details all pre-specified hypotheses and associated results.

[3]The NCCE is a constitutionally mandated, non-partisan institution, and CDD-Ghana is a non-governmental organization.

et al., 2010), we also randomly assigned some participants to watch the debates and others to listen to them. By comparing the effects of these separate treatment arms, we can make inferences about causal mechanisms. Further, to gain an in-depth understanding of how debates can shape voter attitudes, we also collected unique observational data that captures participants' real-time, second-by-second positive and negative reactions to the debates. Using these data, we identify the specific moments that generated reactions from participants.

We show that debates *do* influence voters — by improving their evaluations of candidates. The experimental data suggests that this effect is driven by information about both candidates' personal qualities and their policy positions. We find no evidence that physical attributes or visual cues are important.

We further show that debates have the largest impact on partisans and no average effect on swing voters. Rather than entrenching their pre-existing preferences, the debates made partisan voters more favorable to opposition politicians and less likely to want to vote for their party's candidate. In short, the debates *moderated* political attitudes. Regarding the causal mechanisms driving the moderation effect, the experimental evidence demonstrates that policy-centered information is of greater importance than information on quality, particularly among the most strongly committed partisans. Consistent with this, the real-time response data shows that partisans were highly polarized in their reactions to the personal background segment — providing positive reactions to co-partisans and negative reactions to other candidates. In the policy segments, this partisan polarization decreased substantially.

Finally, we show that the moderation effect persisted among partisans who live in electorally competitive communities; the effect dissipates among those who live in politically homogeneous communities. This finding highlights that while debates may promote political moderation in the short term, the political context of a voter's local community conditions the durability of the effect.

With these results, we make three novel contributions. First, we contribute to the literature on how partisan identities shape voter responsiveness to political information (Taber and Lodge, 2006). The American politics literature suggests that swing voters and those with weak partisan attachments are more likely to be influenced by debates (Geer, 1988; Hillygus and Jackman, 2003). However, prior research on debates in new democracies has been unable to detect differences between swing and partisan voters.[4]

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[4]Bidwell, Casey and Glennerster (2016) was statistically underpowered to detect differences in effects between swing and partisan voters.

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Our finding that debates moderated the attitudes of strong partisans implies that debates may have different effects in older versus newer democracies. We suggest two related explanations for this result. First, because partisans hold strong negative prior evaluations of their opponent-party candidates, debates may provide surprising and convincing policy information that can encourage moderation, consistent with a model of Bayesian information processing. Second, because partisanship in newer democracies is often not ideologically anchored and more fluid, voters may not engage in partisan motivated reasoning when evaluating the information debates convey. Thus, partisans in these contexts may be open to new information about opposition candidates, especially information about policy positions.

Second, our focus on causal mechanisms advances the literature on candidate debates and candidate-centered events in developing countries. Consistent with other studies, we show that these types of campaign events can impact voter preferences (Fujiwara and Wantchekon, 2013; Wantchekon et al., 2017; Bidwell, Casey and Glennerster, 2016; Platas and Raffler, 2018, Forthcoming). We advance this literature with experimental and unique observational data that speaks to why debates impact voters. Understanding causal mechanisms is important because of their theoretical and normative implications for the role of debates in democratic elections.[5]

Finally, the study contributes to the literature on candidate messages and voter behavior in new democracies (Cruz et al., 2018). Existing research suggests that political parties in sub-Saharan Africa tend to rely on valence appeals to attract votes (Bleck and Van de Walle, 2013; Lupu and Riedl, 2013) — non-contentious policies such as a commitment to improving living standards. By contrast, we show that debates motivate parliamentary aspirants to stake out distinct positions concerning how they plan to achieve developmental goals in their constituencies. Importantly, we provide evidence that voters are responsive to policy-specific campaign appeals.

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[5]Bidwell, Casey and Glennerster (2016) also attempt to distinguish the policy mechanism from personal background mechanism. They do so by presenting participants with news reports that discuss the policy contents of the debates and "get to know you" videos that focus on the candidates' personal attributes. This design simultaneously alters the content *and* the delivery format. In comparison, we hold the debate format constant and change only the content in order to determine whether differences in content drive differences in effects.

1 Theoretical Background and Hypotheses

The theoretical literature on political accountability highlights that voters often judge political candidates along two dimensions: their *policy positions* and their *quality* (Besley, 2006). Voters in many new democracies struggle to access credible information about candidates along these dimensions (Pande, 2011), which can make it difficult for voters to hold leaders accountable and select better representatives.

Candidate debates are campaign events that, in principle, can give voters access to information about both candidate quality and policy positions. They do so in a way that is distinct from other types of campaign events, such as campaign rallies. For example, the structure of debates forces candidates to discuss similar topics under the same time constraints, which allows voters to directly compare candidates. Debates also allow candidates to directly engage with their opponents' arguments and positions, which exposes voters to competing arguments and justifications for different policy positions. Since voters in many new democracies lack access to the types of information about candidates that debates convey, we expect that, on average, *debates have a positive effect on voters' evaluations of candidates who participate in them (H1).*[6]

1.1 Why Do Debates Influence Voters?

Debates may influence voters through two distinct, though not mutually exclusive, causal channels: information about candidate quality and information about candidates' policy positions. While policy refers to specific positions, goals, and plans, quality refers to characteristics associated with the candidate's ability to achieve these goals.

Regarding quality, candidates can use debates to convey a range of information about themselves, including their level of education, moral character, and capacity as a leader. In the context of legislative elections, this information can enable voters to determine how successfully candidates can accomplish the main tasks of legislators: to legislate and represent constituency needs, to oversee the executive, and to deliver constituency service (Lindberg, 2010; Barkan and Mattes, 2014). Knowledge of these individual qualities can help voters evaluate how well legislators will do at implementing important

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[6]To be consistent with past studies, we also hypothesized that debates would have a bigger impact for candidates who performed well, and for minor and opposition party candidates. We present these results in Appendix H (pg. 17).

tasks such as providing or lobbying the government for local public infrastructure, raising the plight of constituents on the floor of parliament, and holding the government to account. Because debates can provide this information, we hypothesize that *debates influence voters because they provide information about candidates' quality, such as their qualifications, competence, and trustworthiness (H2).*

In addition, debates could influence voters through *non-verbal* (visual) signals and forms of communication. For instance, some candidates may be more physically attractive or visually charismatic, which voters may implicitly (and often incorrectly) interpret as a signal of candidate quality (Lawson et al., 2010). We thus test the hypothesis that *debates influence voters because of non-verbal signals and communication (H3).*

Debates also provide a forum for candidates to outline their policy positions. The African politics literature highlights that political parties and candidates often prefer to communicate their policy messages through *valence appeals*; that is, by couching their messages in terms that almost no one could disagree with, for example by "[saying] they are for something good (like development, education, democratic practices) or against something bad (like corruption or colonial interference)" (Bleck and Van de Walle, 2013, 1414).

However, because valence appeals can make it hard for voters to differentiate between candidates on programmatic grounds, debates may incentivize candidates to stake out specific *policy positions* to distinguish themselves from their competitors. Voters in new democracies may be particularly receptive to policies that promote the provision of local public goods, for example, schools, and health clinics (Lindberg, 2010). In the debates that we study, although candidates did make valence appeals, they also tried to draw policy distinctions from one another by making specific policy promises. For example, both major parties made the valence appeal of promising to expand access to secondary education. However, the debates revealed real differences in the two parties' policy plans for achieving this objective: one advocated investments in infrastructure and the other a plan to eliminate secondary school fees. We thus test the hypothesis that *debates influence voters because they provide information about candidates' policy positions (H4).*

1.2 Which Types of Voters Are Influenced by Debates?

Prior literature suggests that the strength of voters' prior *partisanship* is likely to condition the impact of debates. For example, independent and undecided voters may be more likely than partisans to be influenced by campaign events, including debates (Geer, 1988; Hillygus and Jackman, 2003). There is also evidence that swing voters in some African contexts are more influenced by policy-related information (Weghorst and Lindberg, 2013) and are more likely to change their vote intention during the course of a campaign (Horowitz, 2017). Thus, *debates should have the greatest positive effect when swing and weak partisan voters evaluate candidates who have performed well in the debates (H5).*

By contrast, partisans may be likely to interpret debates in a manner that reinforces their prior political opinions (Geer, 1988) or to discard information from the debate that is inconsistent with their partisan views (Taber and Lodge, 2006). These expectations build upon dual-process models of information processing (Chaiken and Maheswaran, 1994) and theories of motivated reasoning (Kunda, 1990). According to the former, individuals process information through two processes: a heuristic process, in which individuals rely upon simple cues, and a systematic process, which involves conscious deliberation and evaluation (Chaiken and Maheswaran, 1994). Given that systematic processing requires more effort, partisan voters may rely on partisan heuristics when evaluating candidates in the debates (Rahn, 1993). Moreover, information processing is often guided by a desire to affirm partisan or social identity (Kunda, 1990). If partisan voters privilege such goals over accuracy, they will be motivated to scrutinize and evaluate new information in a way that reinforces, or even amplifies, prior beliefs (Taber and Lodge, 2006). Consequently, *among strong partisans, debates may have a greater impact on support for the voter's co-partisan (H6).*[7]

H5 and H6 capture our *ex ante* (pre-specified) expectations. However, there are several reasons why debates could also *moderate* partisan voters' political preferences. First, an alternative model of information processing holds that voters update their beliefs following Bayes' Rule (Bullock, 2009; Gerber and Green, 1999). Consistent with this, there is evidence that voters can accurately update their beliefs in light of policy information, even when that information is accompanied by party cues or is inconsistent

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[7]We also pre-specified hypotheses about how political knowledge would condition the impact of debates and how exposure to debates might influence levels of political tolerance and trust, attitudes toward vote buying, and voter perceptions of electoral and democratic integrity. Due to space constraints, and because these outcomes are theoretically distinct from the outcomes we examine in this paper, we present these hypotheses and the corresponding results in Appendix N (pg. 29).

with partisan priors (Boudreau and MacKenzie, 2014; Bullock, 2011). Although Bayesian learning can be consistent with partisan disagreement (Bullock, 2009; Gerber and Green, 1999), in many contexts it is likely to generate partisan moderation. This is because Bayes' Rule implies that information is most likely to influence voters when it differs from their prior beliefs — when it is new or surprising (Dunning et al., Forthcoming). Since committed partisans are likely to have very negative prior beliefs about candidates from other parties, debates can provide new information to partisans about these candidates that is positive relative to their negative priors. Conversely, debates can provide partisans new information about co-partisans that generates disappointment given their strong positive priors. For example, partisans may be surprised about how well qualified opponents are or, equally, disappointed that their co-partisan's policy proposals are not as convincing as they originally believed. Together, these effects produce moderation; partisan voters' attitudes toward candidates become less polarized.

Second, *partisan* motivated reasoning may be less likely in new democracies compared to older ones because political parties are younger and often do not develop strong ideological platforms or differentiate on policy grounds (Van De Walle and Butler, 1999). Given this, voters may be more responsive to new information than they might be in contexts where partisanship is more clearly structured along ideological lines and partisan identities are stronger. Put simply, voters may not be motivated to privilege partisan goals over accuracy goals when processing new information.[8] Thus, by providing information about candidate quality and policy positions, debates may provide new information about opposing party candidates that partisan voters find convincing.

Finally, the structure of debates – which simultaneously exposes voters to competing political perspectives – can prompt voters to better understand the rationales behind the perspectives of competitors, which can promote moderation (Mutz, 2002). Information provided by opposition candidates may be especially influential in newer democracies because voters may not be aware of the arguments of all parties. Thus, given their unique structure, the effect of debates may be distinct from other types of campaign events and forms of political information.

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[8]Voters may be motivated to affirm other social identities, such as ethnicity, when processing new information (Adida et al., 2017). In the context of parliamentary debates in Ghana, ethnic and regional identities are usually constant across all candidates.

2 Parliamentary Elections and Debates in Ghana

We conduct our study around the parliamentary elections held in Ghana in December 2016, the seventh since the return to democracy in 1992. One Member of Parliament (MP) serves each of the country's 275 political constituencies for a four-year term. The parliament is often composed only of MPs from the two major political parties — the National Democratic Congress (NDC) and the New Patriotic Party (NPP). The prominent minor parties are the Convention People's Party (CPP), the People's Progressive Party (PPP), and the People's National Convention (PNC). Although candidates from the minor parties usually fail to get elected, these parties receive about 5 percent of votes nationally.

While election campaigns in Ghana often involve clientelistic exchanges (Nathan, 2019), there is also evidence that voters consider policy issues and public service provision (Harding, 2015; Weghorst and Lindberg, 2013). Civil society organizations are increasingly coordinating programs designed to promote policy-based campaigning and to provide opportunities for voters to gather information about parliamentary candidates. CDD-Ghana began holding parliamentary debates during the 2012 election campaign. These debates are modeled on the televised presidential debates that have been held since 2000.

3 The Debates

CDD-Ghana and the NCCE organized parliamentary debates in 50 constituencies across Ghana's 10 regions during the 2016 elections. We conducted our study in three: Effutu, Komenda-Edina-Eguafo-Abirem (KEEA), and Mfantseman in the Central Region (See Figure 1). We selected these constituencies because they are a microcosm of Ghana's partisan landscape; each comprises communities that strongly support either the NDC or the NPP, as well as communities that are competitive. The Central region is also home to swing voters. Thus, while these constituencies are more electorally competitive than the

average constituency in Ghana,[9] they are ideal locations to test hypotheses about the effect of debates on partisan and swing voters.[10]

Table 1 displays the candidates' names and party affiliations. The debates were held in public locations and were attended by ordinary voters as well as party members, traditional authorities, and leaders of community organizations. The debates were broadcast on local radio stations and were covered in local newspapers. We videotaped the debates and then transferred the videos to smartphones to show study participants.

Figure 1 about here

Candidates spoke in the language of their choice. While most spoke exclusively in Fante (the dominant language in the Central Region), some spoke partly in English.[11] Each debate had an identical structure. Candidates were in the same location and on the same stage when answering the moderator's questions, and often engaged with the statements of the other candidates. This study focuses on two of the three main debate segments. First, each candidate had two minutes to describe their personal background, qualifications, and values. We refer to this as the *Personal Background segment*. Second, the moderator asked each candidate to discuss their plans in two policy areas: education (2 minutes) and unemployment (2 minutes). We refer to this as the *Policy segment*.[12]

Table 1 about here

3.1 Personal Background Segment

In this segment, candidates discussed three broad topics: their familial heritage, their motivation to enter politics, and their qualifications. Most sought to establish their familial connections to local communities. For example, Ato Arthur (NPP), emphasized his roots in the constituency, stating that he is "a proud

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[9]During the prior election (2012), the average margin of victory in parliamentary races in Central was 11 percentage points. This figure is comparable to other competitive regions in the country. The Central region is also typical in terms of the parliamentary vote share of minor parties: about four percent compared to an average of six percent across the other nine regions.

[10] In Appendix B we present results from a constituency-level analysis (pgs. 2-5). As debates were not randomly assigned to constituencies, these analyses are observational and should be interpreted with caution. Results suggest that debates have a negative association with incumbent vote share and a positive association with minor party vote share. Neither of these relationships are statistically significant.

[11]The study used only the candidates' original language; no translations were provided to participants.

[12]Candidates also fielded questions from audience members. To ensure uniform treatment across constituencies, our experiment did not include these discussions.

son of Komenda; my mother and my father are from Abram-Boase, the former chief family head."
Quandoh Okyere (PPP) noted that "[he] was born in Mankessim, [his] mother is from Mankessim-Twafo,
[his] father was also born in Mankessim and so when they are talking about the indigenous people of
Mankessim [he is] also part of them."

Many also articulated why they got involved in politics. The NPP candidate in Effutu, and in-
cumbent in the district, Alex Afenyoh-Markin said: "Nobody introduced me to politics, I started politics
on my own because growing up I saw the hardships we face here in Winneba, I see what poverty has
done to people and so I promised myself that if God saves me from poverty, I will also come and save
my people. That is why I joined politics."

All candidates detailed their academic qualifications and their professional experience. To
demonstrate their commitment to local issues, most highlighted their involvement in local organizations
or their past work to help the community.

3.2 Policy Segment

The policy segment focused on two salient issues in the 2016 campaign: education and unemployment.
The candidates employed a mix of valence and policy-specific discourse during these segments. Regard-
ing valence, one CPP candidate said, "When the CPP comes into power, the constant power instability
will be a thing of the past ... the light problem is fixed: we will work and be comfortable." Another
candidate said, "There will be a new era for entrepreneurship in Effutu. We will encourage entrepreneurs
to establish their businesses in Winneba."

Most candidates also proposed specific policy plans (summarized in Table 2). For example, the
NDC and NPP candidates offered distinct policies to improve access to secondary education. The NPP
candidates, along with candidates from the CPP and PPP, promised to eliminate school fees for secondary
school. For example, Ato Arthur (NPP, KEEA) argued that "the paramount reason why the children
are unable to complete is the hardship that the parents face to pay for their school fees." By contrast,
the NDC candidates emphasized their commitment to infrastructure development as a way to increase
public access to secondary school. NDC candidates also challenged the NPP's proposal for universal
free secondary school. For example, the NDC candidate in KEEA responded to the NPP candidate's

education proposal by asking "if any government comes here to say that SHS [secondary school] is free, what school is here for the children to go to?"

Regarding employment policies, several candidates discussed the importance of providing skills training for young people. Others emphasized the need to re-open specific local factories to process poultry and locally grown cassava. Many candidates also highlighted their plans to support the fishing industry by constructing a new harbor.

Table 2 about here

4   Research Design

We designed the study to experimentally test hypotheses about *why* debates influence voters' attitudes. To test our hypotheses about causal mechanisms, we employ implicit mediation analysis (Gerber and Green, 2012). The design entails randomly assigning participants to different components of the treatment – in our case, different segments of debates – which correspond to different potential causal channels. Comparing the causal effect of each segment allows us to identify which mechanism (or mechanisms) is responsible for the treatment effects that we identify. This approach avoids concerns about the potential bias involved in using intermediate variables to assess mechanisms (Gerber and Green, 2012; Imai et al., 2011).

Randomization was at the individual level. In one treatment condition, participants watched only the personal background segment; they learned about candidate quality, but not policy positions. In another treatment condition, participants only viewed the policy segment. In another condition, participants watched both segments. In the final condition, participants *listened* to both segments. Participants in the control group watched a non-political, placebo video that was roughly equal in length to the debate.[13] Figure 2 displays the five treatment conditions and the number of respondents in each.

Our design permits experimental inferences about causal mechanisms. For example, if the policy segment has a larger impact than the personal background segment, this would provide evidence that policy-centered discussions are an important mechanism, as those in the personal background segment do not learn about policy positions. Alternatively, if the full debate video condition has a larger effect than

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[13]The video was an extract from a show by a popular Ghanaian comedian.

the full debate audio condition, this would suggest that visual information is important. We also note that candidates may convey quality during the policy segments. Thus, our design focuses on distinguishing the impact of policy-centered discussion from direct information about candidate quality that is conveyed during the personal background segment.

Figure 2 about here

As noted, the debates that we analyze were real campaign events. Accordingly, some respondents in our sample had heard about or seen them before we contacted them. About fifteen percent of respondents had pre-treatment exposure to the debates. Importantly for our analyses, these respondents are distributed equally across the control and treatment groups (see Appendix Tables D.1 and D.2, pgs. 7-8). Our results are also robust to excluding respondents who had prior exposure to the debates.

Relatedly, the research design rules out the possibility of bias from spillover effects within or across constituency boundaries. As discussed below, we gather the main outcome measures immediately after voters are exposed to the debates, which rules out the possibility of spillovers between treated and control participants in the same constituency. The procedure also rules out the possibility of bias from post-treatment exposure to debates from other constituencies.[14]

4.1 Sampling and Interview Procedure

Our sampling procedure was guided by our goal to determine how partisanship conditions the impact of debates on voters. To ensure that the sample contained partisans of both major parties, as well as swing voters, we first stratified Electoral Areas (EAs) within each constituency.[15] We classify EAs as being NPP strongholds, NDC strongholds or electorally competitive.[16] We then randomly selected respondents from EAs within each of these three blocks. Appendix Tables D.1 and D.2 present descriptive information about the sample, including covariate balance across treatment and control groups.

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[14]In addition, if participants were exposed to debates from other constituencies before entering our study, randomization ensures balance across treatment and control in pre-treatment exposure.

[15]EAs are sub-constituency units.

[16]See Appendix C for further details on EA classification and sampling (pg. 6).

After completing a short survey, participants watched (or listened to) the debate (or placebo video) associated with their treatment condition. Respondents viewed the debate on a smartphone.[17] Enumerators gave the participant as much privacy as possible.

4.2   Main Outcome Measures

Our main outcome measures were collected through a survey conducted immediately after each participant viewed the debate (or control video). The first dependent variable is a continuous measure, ranging from one to seven, of the participant's *overall evaluation* of each candidate in the debate: *[What is] your overall assessment of [*candidate name*], who is the [*political party name*] candidate for parliament in [*constituency name*].* We also create a binary measure using the same question (*positive evaluation*), which takes a value of 1 if the overall evaluation is greater than 4 (a positive rating), and 0 otherwise.[18]

We also analyze a dichotomous (0/1) measure of *vote choice*. To limit response bias, the smartphone displayed logos and labels for each participating political party. Participants then privately selected which party's candidate they would vote for by tapping on the party logo. The exact wording of the prompt was: *Please click on the party that you would vote for if the upcoming parliamentary elections were held today in [*constituency name*].*

These outcome measures capture distinct but related outcomes. The evaluation measures capture whether debates lead voters to alter their assessments of candidates. The vote choice outcome assesses whether debates impact intended voting behavior. We emphasize that whether and how debates change citizens' evaluations of candidates is important even if debates do not change intended vote choice. For example, in polarized political contexts it is important to understand whether debates reduce — or increase — partisan bias in voters' evaluation of candidates, as this can have implications for partisan polarization and political stability.

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[17]A random number generator in the survey program assigned participants to one of the five conditions.

[18]This outcome was not pre-specified, but is included to assess whether treatment shifted evaluations from overall negative to overall positive.

4.3 Coding Partisans and Swing Voters

To measure partisanship, we use pre-treatment survey questions similar to "feeling thermometers."[19] To construct the partisan thermometer, we asked participants (pre-treatment) to rate, on a 1–7 scale, how close they feel to each of the major parties. We added these evaluations to produce a continuous scale. Voters with larger negative scores are closer to the NDC, and higher positive scores closer to the NPP. As pre-specified, we coded voters by cutting the distribution of this continuous variable at the 33rd and 66th percentiles, such that the bottom third of the distribution are NDC partisans, the top third of the distribution are NPP partisans, and the middle third are swing voters.

A potential concern with generalizability is that partisans in Central may be different from partisans elsewhere, especially those in non-competitive regions. We note that while our sample contains a significant number of swing voters, it also contains a large proportion of very "strong partisans": those who evaluate their party with the maximum score and opponent parties with the minimum score on the partisan feeling thermometer. About 42 percent of the sample is a strong partisan by this definition. The results are robust and stronger in analyses that only contain strong partisans — the types of partisans that may be present in greater numbers in other regions of the country. In short, while our experimental sample is confined to the Central region — which we selected to ensure that we had the statistical power to assess our hypotheses on voter types — the results are likely to generalize to other areas of the country.

4.4 Model Specification

We created a dataset in which the unit of analysis is the participant–candidate dyad. Our baseline specifications are as follows:

$$Y_{ijk} = \alpha + \beta_0 * T_{ij} + \gamma_j + \theta X_{ij} + \varepsilon_{ijk} \tag{1}$$

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[19]We also pre-specified that we would produce a count measure of swing voters, adapting the measure of Weghorst and Lindberg (2013). Because many of our participants had no voting history or missingness in their voting history — because of their age or because they did not vote in past elections — the count measure is not applicable to our full sample. We therefore focus on the partisan thermometer measure. None of the results presented below change if we use the count measure in the analyses.

and

$$Y_{ijk} = \alpha + \beta_1 * T1_{ij} + \beta_2 * T2_{ij} + \beta_3 * T3_{ij} + \beta_4 * T4_{ij} + \gamma_j + \theta X_{ij} + \varepsilon_{ijk} \tag{2}$$

Y_{ijk} is an outcome for participant i in electoral area j for candidate k. In Equation 1, we estimate the causal effect (β_0) of receiving any of the debate treatments (T_{ij}). In Equation 2, we separate by each treatment condition. γ_j are fixed effects for each EA (our sampling units). These ensure that our inferences are driven by differences between voters who have the same candidate choices (and view the same debates), and should increase the efficiency of our estimates by controlling for differences across constituencies and local communities. As pre-specified and to improve precision (Gerber and Green, 2012), we also include the following pre-treatment covariates (X): age, gender, education, and employment status. Since participants enter into the data multiple times, we cluster standard errors on participants. To account for multiple comparisons, in Appendix F (pg. 12-15) we present adjusted p-values, which control for the False Discovery Rate (Benjamini and Hochberg, 1995). The main results are robust to these adjustments.

5 Results

5.1 Average Treatment Effects in the Full Sample

Panel A of Table 3 presents the mean evaluation of candidates in each of the five experimental conditions. The mean in the control group is 3.38, and this increases to 3.59 in the pooled treatment group. The mean in each treatment group is also higher than in the control group: 3.56 for the Personal Background segment, 3.64 in Policy, 3.59 in Full Debate (video), and 3.58 in Full Debate (audio).[20]

Table 3 also presents average treatment effects (ATEs), estimated using Equations 1 and 2. Column 2 presents the average treatment effect pooling across all treatment conditions. Consistent with *H1*, debates have a positive and statistically significant effect on voters' evaluations of candidates. The

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[20] The inclusion of the vote intention outcome in Tables 3 and 4 would not be informative because these analyses pool across all voter-candidate dyads. The vote intention outcome is only meaningful when we examine whether debates make voters more likely to support specific types of candidates.

magnitude of the coefficient (0.19 on a 7-point scale) is modest: about one-tenth of a standard deviation, or about a 6 percent increase from the control group mean.

<div align="center">Table 3 about here</div>

Panel B of Table 3 displays the results using the binary *positive evaluation* measure. In the control group, 30 percent of candidates are rated positively. The average treatment effect pooling across all treatment conditions is 4.5 percentage points. This effect represents a 15 percent increase in the probability of a respondent positively evaluating a candidate, a substantively meaningful effect that further corroborates *H1*.

Appendix Figure J.1 shows the effect of the debates on evaluations for each candidate separately (pg. 20). We find positive effects for 12 of the 13 candidates. In the full sample, respondents' evaluations of candidates from the CPP and the PPP increased the most after watching the debates.[21] In summary, in the full sample, debates lead to modest improvements in respondents' evaluations of all candidates, especially those from minor political parties (see Appendix M, pg. 28).

To investigate the mechanisms that drive the pooled average treatment effect in the full sample, we compare the effect of the policy treatment to the effect of the personal background treatment. Because participants are randomly assigned to these conditions and participants in the personal background condition do not receive information about policy, this comparison provides a causal estimate of the relative importance of these potential mechanisms. The results are presented in columns 3-4 of Table 3. While each treatment has a positive and statistically significant effect, the magnitude of the policy segment effect (0.23) is larger than that of the personal background segment (0.16), which suggests that information about policy was more influential. However, the background and policy coefficients are not statistically different from one another, which suggests that both policy discussions and information about candidate quality drive the average effects.

To distinguish the effect of visual communication from the information contained in what candidates say, we compare the effect of the Full Debate Video treatment to the Full Debate Audio treatment (*H3*). There are no significant differences between the effects of these two conditions. This suggests that visual information is not driving the treatment effects.

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[21] Appendix Table J.1 presents the results aggregated at the party level. The treatment effects for each party on a 7-point scale are as follows: 0.08 (NDC), 0.06 (NPP), 0.33 (CPP), 0.27 (PPP), and 0.06 (PNC).

5.2 Results by Partisanship

Table 4 disaggregates the sample between partisans and swing voters. Columns 1 and 2 show that the debates had no impact on swing voters. By contrast, the debates had a positive and significant impact on partisans (columns 3 and 4). Thus, the effects that we identify above are driven mainly by the impact of debates on partisans.

<center>Table 4 about here</center>

Nevertheless, we hypothesized that debates would lead swing voters to support candidates who performed well in the debates ($H5$). If swing voters reward good performers and punish poor performers, this would explain the small average effect in Table 4. Yet further analysis shows that swing voters are also no more likely to support the debate winner (see Appendix Table H.2, pg. 18).[22]

Regarding partisans, we hypothesized that debates would further increase their support for co-partisan candidates. To test this hypothesis, Panel A of Table 5 presents treatment effects among all partisans. Columns 1 and 2 show the results for overall evaluations. The coefficient in row 1 is the treatment effect on evaluations of the co-partisan candidate, while the coefficient on the interaction term (row 2) shows how the effect changes when partisans evaluate opponents. To calculate the marginal effect on evaluations of opponent-party candidates, we add the coefficient in row 1 to the interaction coefficient in row 2. Contrary to our expectations, the debates did not affect partisans' evaluations of their *co-partisan* candidate.

Instead, we find a positive and significant effect on partisans' evaluations of *opponent* candidates. Using the results in column 1, we estimate that the debates increased partisans' evaluations of candidates from other parties by about 14 percent. In column 2, we restrict the sample to NDC and NPP candidates to assess whether this moderation effect is driven by changes in evaluations of minor party candidates, or whether NPP (NDC) partisans are becoming more favorable toward NDC (NPP) candidates. The magnitude of the effect remains positive but decreases in magnitude. While the coefficient is less precisely estimated because of the decreased sample size (p=0.19), the results suggest that the moderation effect is not driven entirely by minor party candidates. In Appendix Table K.2 we show that the debates made partisans 8 percentage points more likely to have a *positive evaluation* (defined above) of the candidate

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[22]We code the debate winners using both an expert survey and the survey of study participants. See Appendix H (pg. 18).

<center>17</center>

from the competing major party (pg. 25). This provides further evidence that partisan moderation is not driven entirely by partisans' evaluations of minor party candidates.

Table 5 about here

Panel A of Table 5 also shows that the treatment also significantly influenced the intended vote choice of partisans: debates made partisans 6 percentage points *less* likely to say they will vote for their party's candidate (column 3, row 1). In addition, partisans become about 2 percentage points *more* likely to report an intention to vote for another party.[23] Given that national and legislative races are often decided by one or two percentage points, these effects are substantively large. Indeed, in 2016, about 17 percent of electoral constituencies had a margin of victory of less than 5 percent.

To show that these results are not being driven by the more moderate partisans in the sample, we further restrict our sample to strong partisans (see above for coding). Panel B of Table 5 shows that the moderation results remain the same or even larger among these strong partisans. Notably, column 2 shows that strong partisans of the NDC/NPP become significantly more supportive of the candidate from the other major party,[24] while column 4 shows that they are about 2.5 percentage points more likely to intend to vote for the candidate from the other major party, a marginal effect that is statistically significant.[25] The debates also made strong partisans 7 percentage points more likely to have a *positive evaluation* of the candidate from the other major party, a 54 percent increase (Appendix Table K.2, pg. 25).

Finally, to examine whether the moderation effects are driven by supporters of only one of Ghana's two major parties, in Appendices J.3 and J.4 we disaggregate the results by partisanship and candidate party. When examining all partisan voters, NDC partisans become significantly more favorable toward CPP candidates, while NPP partisans become more favorable toward NDC, CPP, and PPP candidates. This suggests that only NPP supporters moderate their attitudes toward the other major party, while partisans of both parties become more favorable toward minor party candidates. However, when we analyze the strong partisans, we find that both NPP and NDC supporters become more favorable

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[23]The estimate represents the marginal effect of treatment on partisans' preferences for the opponent candidates.

[24]The marginal effect on evaluations is 0.39 and statistically significant.

[25]One potential concern with Table 5 is that partisans already have extremely high evaluations of their co-partisan candidate. However, while co-partisans' evaluations in the control group are high (a mean of 6.15), and the majority of partisans in control say they will vote for their co-partisan candidate (86 percent), both of these control group means have the potential to increase post-treatment. These levels of baseline support mitigate concerns of possible ceiling effects.

toward the other major party candidate. Thus, we observe moderation toward the competing major party candidate among strong partisans of both major parties.

In summary, we find that partisanship conditions the effect of debates, although not in the way that we predicted. Debates make partisans both more favorable and more likely to vote for candidates from opposing parties, and less likely to vote for their co-partisan candidate.[26]

5.3 What Drives Partisan Moderation?

To investigate the drivers of partisan moderation, we first draw on our experimental design to estimate the effect of the personal background segment and the policy segment on partisan moderation. We restrict our analysis to include only partisans evaluating candidates from other parties. Table 6 reports the results. In column 1, the personal background and policy coefficients are both positive and significant. The coefficient for the policy treatment is larger in magnitude, but is not statistically different from the personal background treatment coefficient (0.45 versus 0.34). Thus, information on both candidate qualities and policy lead to increases in partisans' evaluations of opponent-party candidates.

Column 2 again restricts the analysis to strong partisans.[27] Here, the personal background and policy coefficients are both positive and significant, but the policy coefficient is more than twice as large in magnitude (0.50 versus 0.22). The magnitude of the policy coefficient is also substantively meaningful: a half a point increase on a 7-point scale. Furthermore, the policy coefficient is significantly larger than the personal background coefficient ($p = 0.008$). Thus, for the strongest partisans in the sample, the policy mechanism plays a larger role in shaping their evaluations of opponent-party candidates. These results highlight the potential for policy-centered debate to reduce partisan polarization in a new democracy.

Columns 3 and 4 present the results on intended vote choice. Among all partisans (column 3), none of the treatments increased the likelihood that they would vote for an opposition candidate. However, information about policy positions increases the share of strong partisans who intend to vote for opponent candidates by 3 percentage points – a roughly 30 percent increase over the control group

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[26] Appendix Table D.3 examines whether partisan and swing voters differ on pre-treatment variables such as education, wealth, and age (pg. 9). We find no substantively important differences between these types of voters.

[27] This analysis was not pre-specified and thus is exploratory.

mean (column 4). By contrast, information on candidates' personal background has no effect on vote intentions.[28]

Appendix Table K.3 presents the results using the binary *positive evaluation* measure (pg. 26). Again, the policy treatment has a larger effect than the background treatment. For the strong partisans, the policy segments increase the probability of positively rating candidates from other parties by 10 percentage points, a 50 percent increase. By contrast, the effect of the background segment is a 3-percentage point increase, a marginal effect that is statistically significantly lower than the marginal effect of the policy segment. In summary, the experimental evidence shows that policy-centered debate played an important role in driving partisan moderation. These results are consistent with the theoretical argument that some partisans update their beliefs based on the new information about competitors that they were exposed to and are willing to shed their partisan leanings to support alternative candidates.

Table 6 about here

5.3.1 Examining Partisan Moderation using Real-Time Response Data

We further explore the drivers of partisan moderation by analyzing real-time data capturing voters' evaluations of candidates as they watched one of the debates.[29] The respondents in this sample (N=244), who are separate from the main survey sample, watched the full debate on a tablet using a platform that records responses in real time.[30] Figure 3 displays an image of the platform. Respondents were instructed to click every time that they either *approved* or *disapproved* of what the candidate was saying. Participants (irrespective of partisanship) were actively engaged in this exercise throughout the debate.[31] These data are descriptive and illuminate which elements of the debates provoked a reaction from voters.

Figure 3 about here

We aggregate positive and negative responses for each individual to construct an overall assessment of each candidate during each debate segment. A positive overall score indicates that the respondent had more positive than negative reactions. We average these scores across NDC and NPP partisans. Fig-

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[28]These two coefficients are not statistically significantly different, however.

[29]We use the debate from the Effutu constituency. To collect these data, we partnered with *G2 Analytics.*

[30]These data were collected at the same time as the larger survey and in the same three constituencies.

[31]With roughly 35 unique respondents, on average, clicking during any particular 30-second interval of the 40-minute debate. See Appendix Figures O.1 and O.2 (pgs. 30-31).

ure 4 displays the results. The y-axis represents the average aggregate response of partisans during each segment; for example, a value of two shows that partisans had on average two more positive clicks than they did negative. The left plot displays the reactions of NDC partisans, while the right plot displays the reactions of NPP partisans.

Figure 4 suggests that partisan moderation occurred mainly during the policy segment. This is illustrated by trends in the gap between partisans' evaluations of their co-partisan candidate compared to the opponent candidate. In the personal background segment, partisans are quite polarized: their reactions are very positive toward their co-partisan and very negative toward the opposing party candidate. In the policy segments, this partisan gap decreases substantially.[32]

Figure 4 about here

The real-time response data also allow us to examine which statements provoked particularly positive or negative responses from participants. In the personal background segment, NDC partisans responded very negatively when the NPP candidate discussed, rather immodestly, his sacrifice to the community when he became an MP instead of pursuing a career in the United Nations. Similarly, NPP partisans reacted negatively when the NDC candidate praised President John Mahama and rallied the crowd for a "one touch" (first-round) NDC win in the presidential election.

In the policy segments, partisans tempered their attitudes toward candidates from the other major party. For example, the NPP candidate's employment policies proved popular with NDC partisans. Similarly, the NPP candidate's proposal to encourage young entrepreneurs to set up businesses and bid for government contracts, and to boost the constituency's renowned but faltering theater arts and choral music industry, gained support from NDC partisans.

In sum, respondents seemed better able to assess candidates on the merit of their proposals when watching the policy segments.

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[32]In the personal background section, the average net positive clicks to co-partisans is 3 compared to a 1.5 net negative clicks for opponents; a difference of 4.5. In comparison, in the education section, this difference is 1.5, and in the employment section it is 1. The corresponding figure for NPP partisans is a difference of 4 in the background section, and 1.75 and 1.5 in the two policy segments.

6   Do the Effects of Debates Persist?

Finally, we assess whether the effects of debates persist over time. To do so, we conducted a follow-up survey with a random 10 percent of respondents from our original sample. This survey was conducted two days later by the same survey enumerator.[33]

Using this sub-sample, we first replicate the main results and find that the moderation effect is larger in magnitude in this sub-sample (see Appendix Table P.2). However, in the full sub-sample, the moderation effect dissipates after two days. Thus, while debates make partisan voters more positive toward candidates from competing parties immediately after a debate, on average, these effects diminish quickly. Further analysis reveals, however, that this decay is not universal but rather confined to voters who live in politically homogeneous communities.

To demonstrate this, we separate the sub-sample between those living in EAs we classified as competitive versus party strongholds.[34] Figure 5 displays the results.[35] The left panel displays the moderation effect immediately after the debates in both competitive and party stronghold EAs. The right panel shows the same results two days later. The moderation effect persists, and actually increases, on average, for partisan voters living in electorally competitive EAs, while it is short-lived in party strongholds. In short, the durability of debates' influence appears to be conditioned by where voters live, a finding that we discuss further in the next section. We also note that two days is a relatively short period of time. Therefore, it remains an empirical question how long the effects will persist in competitive areas.[36]

Figure 5 about here

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[33]Participants for the follow-up survey were selected using a random number generator in the survey program. Appendix Table P.1 presents descriptive information about this sample, which was balanced between the treatment and control groups (pg. 32).

[34]See Appendix C (pg. 6). This exploratory analysis was not pre-specified.

[35]These results correspond to Columns 5 and 6 of Appendix Table P.2 (pg. 32).

[36] We also analyze the fifteen percent of the sample who had been exposed to the debates before entering the study. The results (Appendix G, pg. 16) show that treatment did not have an effect on these voters. This null effect could suggest persistence of the effect of the original debate on this sub-sample.

7 Discussion and Conclusion

Using an experimental research design and unique observational data, we investigate whether and why candidate debates influence voters' attitudes toward parliamentary candidates in Ghana. Our most important results are that debates moderated the political attitudes of partisans, making them more favorable toward candidates from other parties and less likely to want to vote for co-partisan candidates from their party. We also show that the policy-centered components of the debates are important drivers of partisan moderation.

These results make several novel contributions and suggest several important areas of future research. First, the partisan moderation result contrasts with some of the literature on debates and political communication in the United States (Levendusky, 2013). We suggest that there are two related explanations for this moderation effect. First, because information is most likely to have an impact when it differs from what voters already believe, debates are most likely to provide new information that is positive about opponent party candidates and negative about co-partisans (relative to priors). Second, we suggest that the nature of partisan attachments in new democracies is such that voters are less inclined to engage in partisan motivated reasoning, which makes them more open to arguments about policy from opponent party candidates. Better understanding why debates moderate attitudes in new democracies, as well as in electoral authoritarian regimes (Platas and Raffler, 2018), is an important area for future research.

Second, our findings on partisan moderation contrast with recent research that has found evidence of ethnic and partisan motivated reasoning in African contexts (Adida et al., 2017; Carlson, 2016; Horowitz and Long, 2016). Thus, it will also be important for future research to examine how the type of information and the mode of dissemination shapes the influence of political information on voter attitudes. Our evidence shows that the debate format, where voters hear directly from candidates and watch them engage with one another, encourages partisans to be more open to candidates from other parties. Future research could directly compare debates to other candidate-centered events, such as town hall meetings and rallies, and information from the news media or civil society campaigns.

Third, we find that partisan moderation is mainly driven by policy debate, especially for strong partisans. This result suggests that debates can play a role in increasing policy-based campaigning in

new democracies. While parliamentary aspirants did engage in valence discourse, the format of the debates encouraged them to highlight the specific actions they planned to take to improve the livelihoods of constituents. The real time data suggests that voters are responsive to this type of localized policy information. Future research could more explicitly test the relative impact of valence versus policy-specific appeals in the context of candidate-centered events.

Finally, we find that, on average, debates' influence on voters does not persist, a finding that is consistent with studies on campaign advertising in the United States (Gerber et al., 2011; Hill et al., 2013). However, these results also demonstrate that the longer-run impact of campaign events can be conditional on the political environment in which voters live. Indeed the moderation effect persisted in electorally competitive communities, while it dissipated in non-competitive areas. There may be multiple explanations for this result. Those living in competitive communities may be exposed to (or select into) more diverse media and points of view, which could reinforce the influence of debates. In contrast, those in party stronghold communities may only be exposed to highly partisan information or to social pressure to support the dominant party, which could overtake the information absorbed in the debates. Alternatively, political parties may be able to respond more effectively to counteract the influence of debates in communities where they are electorally dominant (Arias et al., 2018; Humphreys and Weinstein, 2013). Future research should investigate the potential drivers of these contextual effects more directly. Such research will be important for determining the conditions under which debates have a durable influence on voters.

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Tables and Figures

Table 1: Names and party affiliations of parliamentary candidates in the debates

Party	Constituency		
	Effutu	KEEA	Mfantseman
NDC	Eric Don-Arthur	Samuel Atta Mills*	James Essuon
NPP	Alexander Afenyoh-Markin*	Stephen Nana Ato Arthur	Ekow Hayford*
PPP	Nana Ofori Owusu	John Sterlin	Kwabena Amu Quandoh Okyere
CPP	Ebenezer Rolance Akumbea-Sam	Rose Austin Tenadu	Pius Ebo Dughan
PNC	Murtala Muhammed Umar		

Notes: * Denotes the winners of the 2016 election.

Table 2: Candidates' position issues during the policy segment

Education	Employment
• Construct more schools, and build toilets and libraries in every school • Free education up to age 18 • Set up a constituency fund to pay for mock examination fees and extra classes • Organize inter-school quiz competition to encourage reading • Institute a constituency-wide Best Teacher Award • Institute inter-school reading competitions	• Construct a new harbor at Winneba • Re-open processing factory at Ampem • Re-open factory at Abokrom • Re-open poultry factory at Pomadze

Table 3: Average treatment effects (ATE) in full sample across all candidates

Panel A: Overall evaluation (1-7)

	Control (1)	Any treatment (2)	Personal background (3)	Policy segment (4)	Full debate (video) (5)	Full debate (audio) (6)
Mean	3.38	3.59	3.56	3.64	3.59	3.58
	(0.06)	(0.03)	(0.05)	(0.05)	(0.05)	(0.05)
ATE		0.19***	0.16**	0.23***	0.18***	0.18**
		(0.05)	(0.07)	(0.07)	(0.07)	(0.07)

Panel B: Positive Evaluation (binary)

	Control (1)	Any treatment (2)	Personal background (3)	Policy segment (4)	Full debate (video) (5)	Full debate (audio) (6)
Mean	0.30	0.35	0.34	0.36	0.35	0.35
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
ATE		0.05***	0.04**	0.05***	0.04***	0.05**
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

Notes: Observations are at the individual-candidate dyad ($N = 8,186$). The dependent variable in Panel A is on a 1-7 scale with higher numbers indicating more positive evaluations of candidates. The dependent variable in Panel B is a binary measure indicating that the evaluation of the candidate is positive (greater than 4 on the 1-7 scale). The analyses in Panel B were not pre-specified but are included to provide evidence on the substantive importance of the treatment effects. ATEs are estimated using linear regression including individual-level pre-treatment covariates and sampling area fixed effects (corresponding to Equations 1 and 2). Standard errors clustered by individual in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 4: Average Treatment Effects by Partisanship

	(1) Swing	(2) Swing	(3) Partisans	(4) Partisans
Any treatment	0.03		0.26***	
	(0.12)		(0.06)	
Personal background		0.04		0.22***
		(0.14)		(0.07)
Policy		0.07		0.33***
		(0.14)		(0.07)
Full debate (video)		0.13		0.22***
		(0.14)		(0.07)
Full debate (audio)		-0.07		0.28***
		(0.14)		(0.08)
Constant	3.51***	3.51***	3.41***	3.41***
	(0.34)	(0.35)	(0.20)	(0.20)
Observations	2,496	2,496	5,690	5,690
R-squared	0.03	0.03	0.03	0.03

Notes: All models include individual-level pre-treatment covariates and sampling area fixed effects. Standard errors clustered by individual in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Treatment effects among NDC and NPP partisans

PANEL A: All Partisans	(1) Evaluation (All)	(2) Evaluation (NDC/NPP)	(3) Vote (All)	(4) Vote (NDC/NPP)
Any treatment	-0.01	-0.00	-0.06*	-0.05*
	(0.17)	(0.12)	(0.03)	(0.02)
Any treatment x opponent candidate	0.39*	0.26	0.08**	0.05*
	(0.20)	(0.20)	(0.04)	(0.03)
Opponent candidate	-3.35***	-3.58***	-0.80***	-0.83***
	(0.18)	(0.18)	(0.03)	(0.03)
Constant	6.15***	6.56***	0.86***	0.88***
	(0.24)	(0.22)	(0.03)	(0.04)
Observations	5,690	2,640	5,742	2,632
R-squared	0.37	0.49	0.60	0.64

PANEL B: Strong Partisans	(1) Evaluation (All)	(2) Evaluation (NDC/NPP)	(3) Vote (All)	(4) Vote (NDC/NPP)
Any treatment	-0.17	-0.14	-0.06***	-0.06***
	(0.11)	(0.10)	(0.02)	(0.02)
Treatment x opponent candidate	0.56***	0.45**	0.08***	0.08***
	(0.16)	(0.19)	(0.02)	(0.02)
Opponent candidate	-4.56***	-4.71***	-0.97***	-0.97***
	(0.14)	(0.17)	(0.02)	(0.01)
Constant	6.80***	7.08***	0.97***	0.94***
	(0.28)	(0.29)	(0.01)	(0.04)
Observations	3,435	1,596	3,532	1,622
R-squared	0.56	0.71	0.83	0.84

Notes: Partisanship is coded in reference to the respondent: that is, opponents candidates are those who are not aligned with the respondent's preferred party (pre-treatment). Observations are at the individual-candidate dyad. Columns (1) and (3) include all candidates. Columns (2) and (4) only include candidates from the NPP and NDC. The evaluation variable is on a 1-7 scale with higher numbers indicating more positive evaluations of candidates. The vote choice variable is dichotomous. All models include individual-level pre-treatment covariates and sampling area fixed effects. Standard errors clustered by individual in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Analysis of mechanisms when partisan voters evaluate candidates from other parties.

	(1) Evaluation (All partisans)	(2) Evaluation (Strong partisans)	(3) Vote (All partisans)	(4) Vote (Strong Partisans)
Personal background	0.34***	0.22**	0.01	0.01
	(0.10)	(0.11)	(0.01)	(0.01)
Policy	0.45***	0.50***	0.00	0.03**
	(0.10)	(0.11)	(0.01)	(0.01)
Full debate (video)	0.31***	0.33***	0.01	0.02
	(0.10)	(0.11)	(0.01)	(0.01)
Full debate (audio)	0.39***	0.28**	0.01	0.00
	(0.11)	(0.12)	(0.01)	(0.01)
Constant	2.78***	2.76***	0.04**	0.10***
	(0.27)	(0.29)	(0.02)	(0.03)
Observations	4,199	3,129	4,291	3,223
R-squared	0.10	0.05	0.04	0.01

Notes: The sample is restricted to include only partisan voters evaluating candidates from other parties. Observations are at the individual-candidate dyad. All models include individual-level pre-treatment covariates and sampling area fixed effects. Standard errors clustered by individual in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure 1: Map of study constituencies
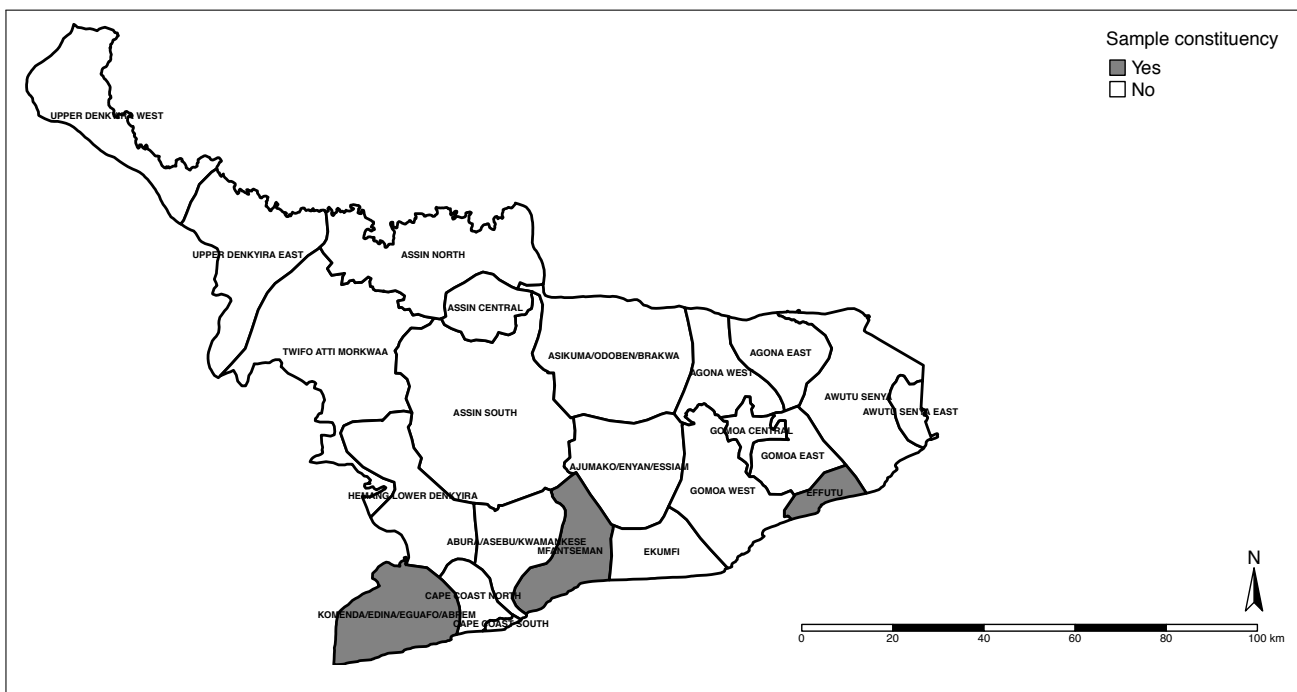
Notes: The figure displays a map of Central region with our three study constituencies highlighted in grey.

Figure 2: Distribution of participants across treatment conditions
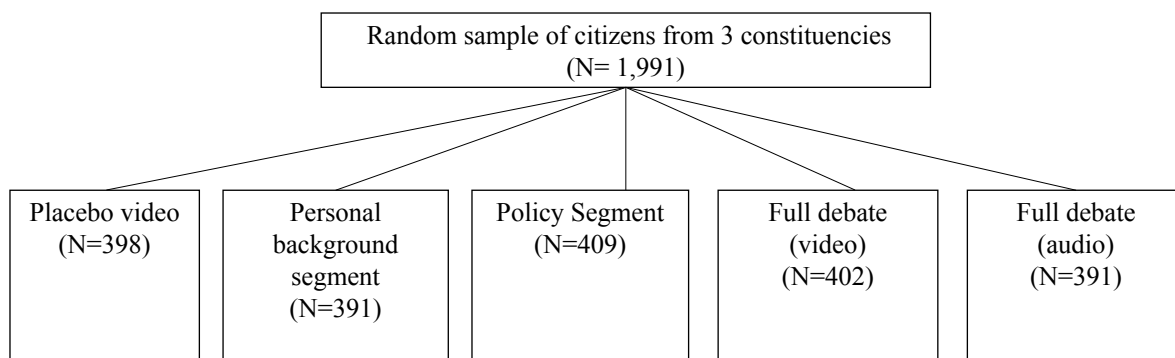
Notes: Each respondent had a 20 percent chance of being randomized into each of the five treatment conditions.

Figure 3: Real time response platform
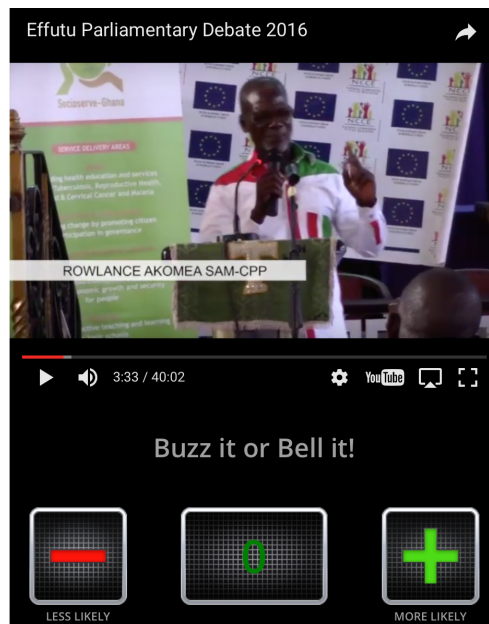
Notes: Photo of G2 Analytics real-time response platform.

Figure 4: Aggregate real-time evaluations of co-partisan and opponent candidates (partisans only)
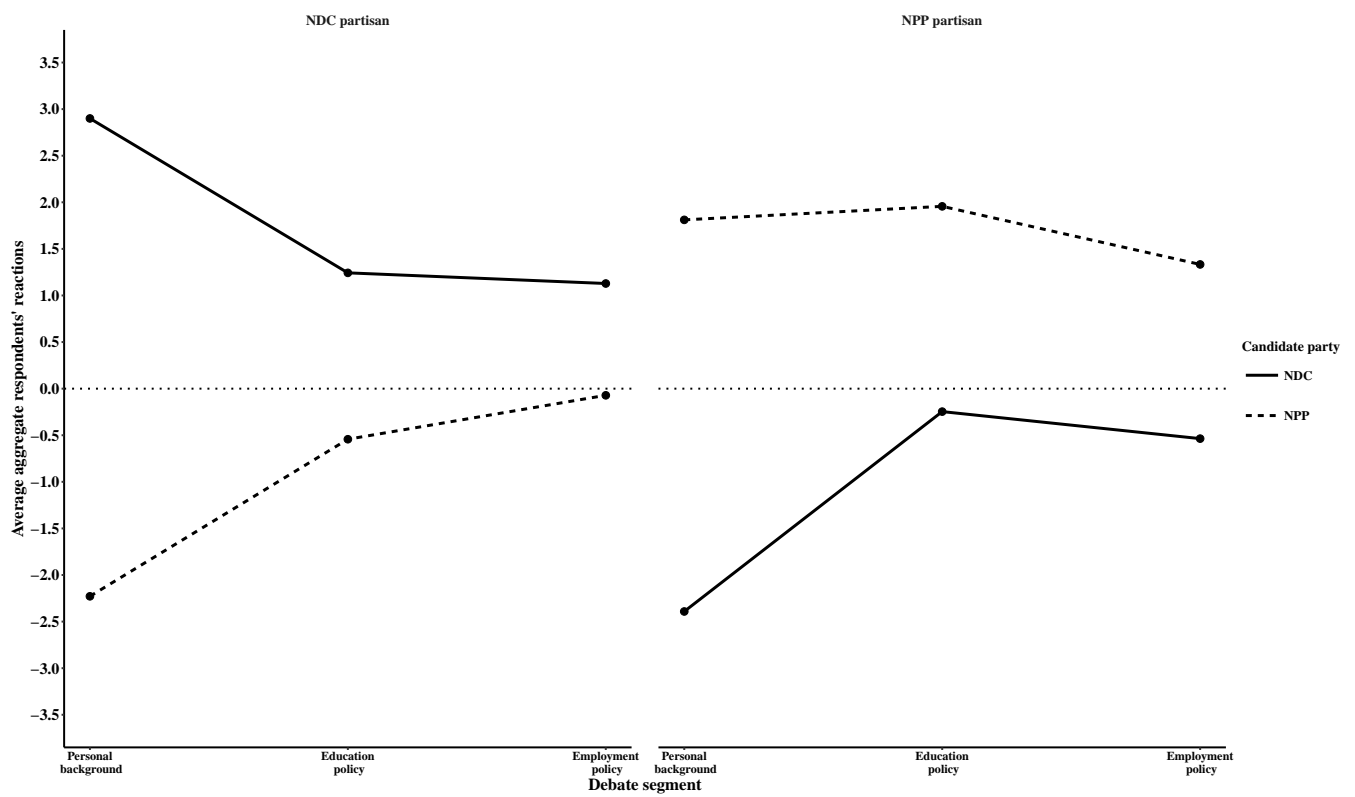
Figure 5: Moderation effects by partisan composition of the electoral area
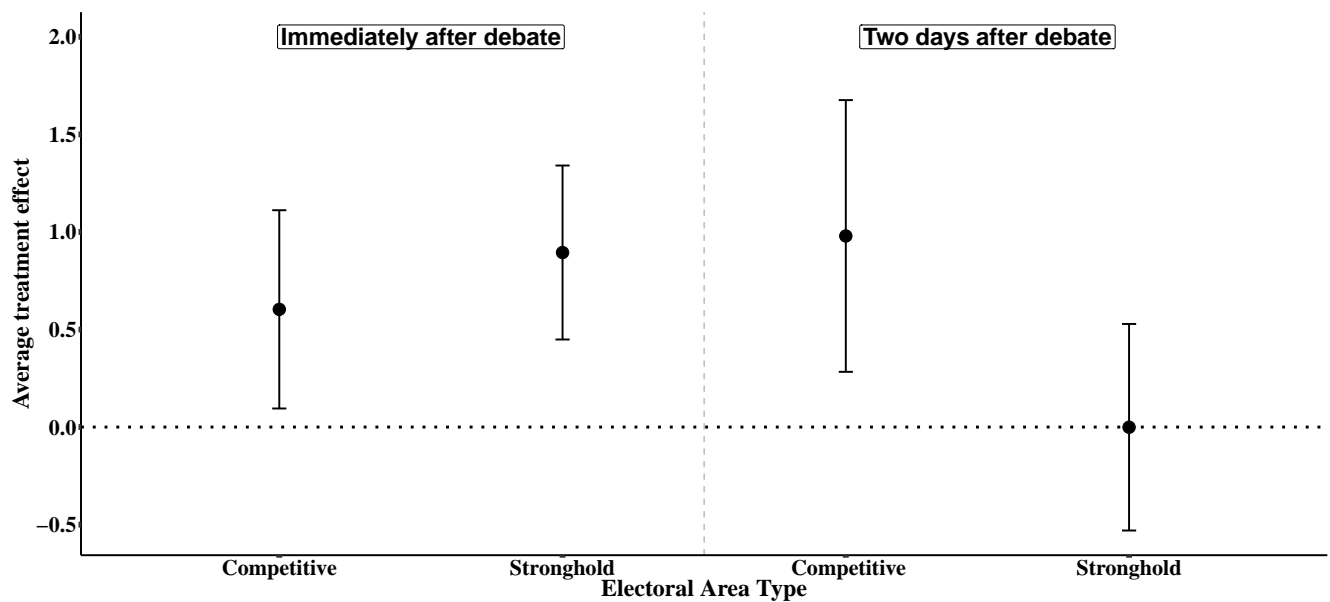
Notes: Figure 5 displays the treatment effect of debates when partisan voters evaluate candidates from opposing parties. Results are separated by electorally competitive and party stronghold EAs. The results correspond to the regression results in Columns 5 and 6 of Appendix Table P.2 (pg. 32).

Supporting Information For:
The Moderating Effect of Debates on Political Attitudes

Intended for Online Publication Only

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A Overview of pre-specified hypotheses

Table A.1: Overview of pre-specified hypotheses

Hypothesis	Outcome	Where
H1: Debates have a positive effect on voters'evaluations of candidates who participate in the debates	Corroborated	Table 3
H2a: Debates have a larger positive effect on evaluations of non-incumbent candidates	Null	Table L.1
H2b: Debates have a larger positive effect on evaluations of minor candidates	Corroborated	Table L.1
H3: Debates have a larger positive effect on evaluations of candidates who performed well in the debate	Null	Table H.2
H4: Debates have a larger positive effect on evaluations for debate winner among independent and weak partisans	Null	Table H.2
H5: Debates have a stronger positive effect on evaluations of co-partisan candidates for strong partisans	Opposite direction	Table 5
H6: Debates have a stronger positive effect on evaluations of debate winner among politically less informed voters	Null	Table N.1
H7: Debates influence voters because they provide information about candidates' policy positions	Corroborated	Table 3, 6
H8: Debates influence voters because they provide information about candidates' personal quality - qualifications, experience, and personality	Corroborated	Table 3, 6
H9a: Debates influence voters because they provide information about candidates' *local* policies and programs	Null	Table Q.1
H9b: Debates influence voters because they provide information about candidates' *national* policies and programs	Null	Table Q.1
H10: Debates influence voters because of non-verbal (visual) signals and communication	Null	Table 3, 6
H11: Voters who view debates are more tolerant and trusting of political opponents	Null	Tables R.2, R.1
H12: Voters who view debates are more likely to reject clientelistic politics	Null	Table R.3
H13: Voters who view debates are more likely to have positive perceptions of the efficacy of the election and the legitimacy of the election outcome	Null	Table R.4

Notes: Table A.1 summarizes all of the hypotheses that were in the pre-analysis plan, the outcome derived from the analyses, and their location in the article.

B   Parliamentary debates across Ghana in 2016

As we note in the main paper, in addition to the three constituencies that we analyze, parliamentary debates were organized by CDD-Ghana and the NCCE in an additional 47 constituencies. In this section, we investigate the association between debates and election results at the constituency level.

To construct our dependent variables, we use the 2016 vote returns provided by Ghana's Electoral Commission. We construct two constituency-level dependent variables: (i) the vote shares of incumbent candidates and (ii) the vote shares of minor party candidates.

As the decision to hold a debate a constituency was not random, we include controls in each analysis. Specifically, we control for the vote share of incumbents in 2012 or the vote share of minor parties in 2012. We also control for the constituency's distance to Accra, the share of individuals within a constituency with access to electricity, which is a proxy for socio-economic development, and the number of days to the December 7 elections when a debate was held. Because constituencies within the same region may share similar underlying characteristics and outcomes, we include region fixed effects in some specifications.

As the debates were broadcast on radio—and radio is the main source of news for most Ghanaians—we construct constituency-level measures of radio coverage. Ghana's census does not ask about radio ownership. We therefore rely on the most recent data gathered by the Demographic and Health Surveys (DHS) in Ghana (conducted in 2014). The DHS survey includes a question on radio ownership. We mapped the DHS sampling points into Ghana's electoral constituencies in order to produce constituency-level estimates of the share of the population in the constituency that owns a radio. However, there are two important limitations. First, DHS surveys are not designed to be representative at the level of the constituency, and in many constituencies there are only about 30-50 respondents. Thus, these are not precise measures and they could be biased depending on where DHS sampling clusters are located in each constituency. Second, DHS does not survey in all constituencies, and so there is missing data on this measure.

We run OLS regressions. Tables B.1 and B.2 display the results. In columns (1) we show the simple bivariate relationship between debates and our dependent variables. The results show that debates decrease the vote share of incumbents (by 2.5 percentage points) (Table B.1), and increase the vote share of minor parties (by 1.7 percentage points) (Table B.2). However, neither of these coefficients are statistically significant. In columns (2) we include prior vote share of incumbent candidates, and minor parties, respectively. The magnitude and signs on both coefficients remain the same, and they continue to be statistically insignificant. In columns (3), we control for Distance to Accra and Access to Electricity because both of these variables are predictive of a constituency holding a debate. The signs on the coefficients remain unchanged but there is a decrease in magnitude of the relationship. In columns (4) we assess whether the relationship between the debate and vote shares is shaped by the level of electoral competition. We code constituencies where the vote margin between the NPP and NDC candidates was ten percent or less in the prior elections (in 2012) as competitive. The results suggest that while there is substantial negative relationship between debate and incumbent candidates' vote shares (a 5 percentage points decrease) in competitive constituencies, such a reduction does not exist in non-competitive electoral districts. However, column (4) in Table B.2 indicate that while debates appear to help minor party candidates in non-competitive districts, it reduce their vote shares in competitive constituencies.

In columns (5) of Tables B.1 and B.2, we assess whether the relationship between debates and vote shares may be driven by the number of days to the polls when they were held. On average, debates were held 25 days in advance of the election. We code debates as being close to election day if they were held fewer than 25 days in advance of the polls. We find that, for incumbent candidates, holding the debates closer (less than 25 days) or further away (25 days for more) from the December 7 polls did not affect the relationship between debates and vote shares. For minor party candidates, holding the debates about 25 days or more to the election appears to boost their vote share while holding the debates closer to the polls may have a negligible impact on their votes. We emphasize, however, that none of these associations are statistically significant.

In columns (6) we interact the debate variable with the radio coverage variable to test whether the debates had a differential impact on vote shares where the penetration of radio ownership is high versus where there is none. The interactions coefficients are not statistically significant. Substantively, we find that in constituencies where radio ownership is universal (increasing radio ownership by one unit), debates increased incumbents' vote shares by 3.7 percentage points but decrease that of minor party candidates by 16.7 percentage points. In contrast, in constituencies where no one owns a radio, the incumbent saw a 3.5 percentage points decrease in their votes while minor party candidates gained 10.8 percentage points. However, we note that the ownership of radio ranges between 22 and 96 percent and thus such extreme cases do not exist in our dataset. We also emphasize that the interaction coefficients are imprecisely estimated and that the radio coverage variable has limitations (discussed above).

Finally, regarding the interpretation of these results, we note that our experimental results show that different kinds of voters residing in the same constituency can have very different reactions to the same debate. As a result, the average constituency-level effects presented in this section may be masking important individual-level variation. For example, if the effect on incumbent vote share is close to 0, this could be because the debates had no impact on voters. Or, it could be that the debates had different effects on different kinds of voters and these effects average out to 0 on aggregate.

Table B.1: Association between debates and incumbent vote shares

	Dependent variable:					
	Incumbent candidates' vote shares					
	(1)	(2)	(3)	(4)	(5)	(6)
Debate held in constituency	−0.025 (0.035)	−0.032 (0.023)	−0.018 (0.024)	0.001 (0.034)		−0.035 (0.151)
Incumbent vote share (2012)		0.902*** (0.080)	0.843*** (0.092)		0.769*** (0.134)	0.588*** (0.201)
Competitive constituency				−0.068*** (0.020)		
Distance to Accra (Km)			−0.0001* (0.0001)	−0.0003 (0.0002)	−0.00001 (0.0002)	−0.00001 (0.0002)
Electricity (% pop)			0.060 (0.051)	0.164** (0.072)	0.093 (0.065)	0.094 (0.082)
Radio coverage						0.083 (0.067)
Debate: competitive constituency				−0.051 (0.103)		
Closer to election ($<$ 26 days to polls)					−0.015 (0.040)	
Further away from election ($\geq$ 26 days to polls)					−0.015 (0.036)	
Debate: radio coverage						0.037 (0.255)
Constant	0.564*** (0.011)	0.031 (0.046)	0.068 (0.067)	0.642*** (0.075)	0.099 (0.091)	0.187 (0.157)
Regional fixed effects	No	No	No	Yes	Yes	Yes
Observations	191	191	174	174	174	126
R^2	0.004	0.582	0.627	0.462	0.658	0.665
Adjusted R^2	−0.001	0.578	0.618	0.415	0.628	0.620

Note: *p<0.1; **p<0.05; ***p<0.01

Table B.2: Association between debates and minor parties' vote shares

	Dependent variable:					
	Minor parties' vote shares					
	(1)	(2)	(3)	(4)	(5)	(6)
Debate held in constituency	0.017	0.011	0.012	0.014		0.108
	(0.016)	(0.016)	(0.017)	(0.025)		(0.088)
Minor parties' vote share (2012)		0.355***	0.329***		0.294***	0.186**
		(0.087)	(0.085)		(0.083)	(0.083)
Competitive constituency				−0.018		
				(0.012)		
Distance to Accra (Km)			0.0001	−0.0001	−0.0002	−0.0001
			(0.00004)	(0.0001)	(0.0001)	(0.0001)
Electricity (% pop)			−0.053**	−0.036	−0.032	−0.013
			(0.027)	(0.031)	(0.031)	(0.039)
Radio coverage						−0.037
						(0.056)
Debate: Competitive constituency				−0.016		
				(0.029)		
Closer to election (< 26 days to polls)					−0.004	
					(0.024)	
Further away from election (≥ 26 days to polls)					0.019	
					(0.025)	
Debate: radio coverage						−0.167
						(0.129)
Constant	0.055***	0.033***	0.050**	0.083*	0.084*	0.091
	(0.006)	(0.007)	(0.024)	(0.043)	(0.044)	(0.056)
Regional fixed effects	No	No	No	Yes	Yes	Yes
Observations	275	275	256	256	256	182
R^2	0.005	0.195	0.261	0.198	0.316	0.381
Adjusted R^2	0.001	0.190	0.250	0.152	0.276	0.325

Note: *p<0.1; **p<0.05; ***p<0.01

C   Sampling procedure

Our sampling procedure was guided by our goal to determine how partisanship conditions the impact of debates on voters. To sample participants, we enumerated the Electoral Areas (EAs) in each constituency.[37] Using results from the last election at the polling station level, we categorized EAs as NPP stronghold, NDC stronghold, or competitive. We classified EAs as an NPP (NDC) stronghold if the NPP (NDC) candidate's margin of victory in the EA was greater than 10 percentage points. We coded the other EAs as electorally competitive.[38] In each constituency, we used stratified sampling to randomly select 12 EAs: six electorally competitive and six strongholds.[39]

Within an EA, we randomly sampled participants using a random walk technique. Randomly sampled polling stations were the starting points for the random walk, and enumerators began at a different polling station each day.[40] About 54 participants were sampled in each EA.[41] To ensure a balance of male and female respondents, each enumerator alternated between males and females.

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[37]EAs are sub-constituency units from which members of local government assemblies are elected.

[38]The sampling frame included 18 EAs in Effutu, 37 EAs in KEEA, and 36 EAs in Mfantseman.

[39]We selected three NDC strongholds and three NPP strongholds in each constituency.

[40]EAs usually contain 2–7 polling stations.

[41]Survey teams of three enumerators spent three days in each EA. Each enumerator sampled 18 participants over the three days.

D Descriptive statistics and covariate balance

Table D.1: Balance statistics

Variable	Treatment	Control	*P-value*
Female	0.53	0.50	0.24
Age	36.28	36.95	0.41
Education	3.90	3.97	0.50
Job	0.70	0.68	0.29
Owns Phone	0.86	0.86	0.85
Owns Radio	0.59	0.61	0.45
Owns TV	0.61	0.63	0.51
Owns Blender	0.15	0.16	0.62
Owns Car	0.04	0.03	0.14
Information	2.98	3.03	0.38
NDC Partisan	0.38	0.35	0.28
NPP Partisan	0.30	0.33	0.23
Swing (rating)	0.32	0.32	0.91
Swing (count)	0.29	0.36	0.19
Saw Debate	0.14	0.16	0.20

Notes: Table D.1 displays the mean value across a set of covariates. P-values are the result of a two-tailed t-test.

Table D.2: Balance statistics (disaggregated by treatment arm)

Variable	Personal Background (I)	Policy (P)	I &P (Video)	I &P(Audio)	Control	*P-value*
Female	0.53	0.50	0.48	0.49	0.51	0.72
Age	36.28	38.51	37.13	35.89	36.21	0.07
Education	3.90	3.86	3.91	4.10	4.03	0.43
Job	0.70	0.67	0.68	0.65	0.70	0.52
Owns Phone	0.86	0.85	0.88	0.85	0.84	0.73
Owns Radio	0.59	0.60	0.64	0.62	0.60	0.60
Owns TV	0.61	0.62	0.63	0.64	0.63	0.94
Owns Blender	0.15	0.18	0.16	0.15	0.16	0.80
Owns Car	0.04	0.02	0.03	0.04	0.01	0.09
Information	2.98	3.01	3.07	3.02	3.01	0.76
NDC Partisan	0.38	0.35	0.34	0.37	0.35	0.73
NPP Partisan	0.30	0.32	0.35	0.35	0.30	0.29
Swing (rating)	0.32	0.34	0.31	0.28	0.35	0.39
Swing (count)	0.29	0.38	0.36	0.33	0.35	0.68
Saw Debate	0.14	0.18	0.15	0.16	0.17	0.50

Notes: Table D.2 displays the mean values across a set of covariates disaggregated by treatment arms. P-values are the result of an AOV test of difference across all five treatment conditions.

Table D.3: Descriptive statistics (disaggregated by swing and partisan voters)

	Swing	Partisans	Difference	P-Value
Female	.5	.5	0	.96
Age	34.78	37.41	2.63	0
Political Information	3.02	3.04	.02	.68
No Schooling	.14	.16	.02	.19
Incomplete Primary School	.2	.24	.04	.06
Primary School Completed	.34	.32	.02	.33
Secondary School Completed	.15	.12	.03	.04
Post-Secondary School	.08	.07	0	.74
Job	.66	.69	.03	.19
Owns Phone	.84	.87	.03	.07
Owns Radio	.58	.63	.05	.05
Owns TV	.59	.65	.05	.03
Owns Blender	.17	.16	.01	.47
Owns Car	.03	.03	0	.94
Total Assets	2.21	2.33	.12	.04

E Manipulation check

After watching the debates (or placebo video), we asked participants to report the names of each of the candidates running for parliament in their constituency. We create a measure that captures the number of correct responses the participant provides. The logic behind the manipulation test is that those who view the debates should be better able to answer these factual questions accurately. The results in Table E.1 show that this is the case: treated participants are able to report the names of more candidates than those in the control condition. The mean in control is 2.05 names, and the mean for treated respondents is 2.51 names. The effect is largest in the full debate video group, and smallest in the full debate audio group, which suggests that the visual presentation of candidates' names may have helped with the retention of this information.

Table E.1: Manipulation check

Variables	(1) Total Correct	(2) Total Correct
Any Treatment	0.44***	
	(0.07)	
Image / Background		0.45***
		(0.09)
Policy		0.45***
		(0.09)
Full debate (video)		0.58***
		(0.09)
Full debate (audio)		0.27***
		(0.09)
Constant	2.14***	2.14***
	(0.07)	(0.07)
Observations	1,989	1,989
R-squared	0.02	0.02

Notes: Table E.1 displays the results of OLS regressions where the total number of correct answers to factual questions about the candidates is regressed as a function of treatment assignment. Observations are at the individual level. Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

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Table E.2: Manipulation check: name recognition disaggregated by party

Variable	(1) Total Correct	(2) NDC	(3) NPP	(4) CPP	(5) PPP	(6) PNC
Any Treatment	0.44***	0.08***	0.06***	0.14***	0.13***	0.06
	(0.07)	(0.02)	(0.02)	(0.03)	(0.03)	(0.04)
Constant	2.14***	0.74***	0.78***	0.17***	0.49***	0.18***
	(0.07)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Observations	1,989	1,992	1,992	1,989	1,992	700
R-squared	0.02	0.01	0.00	0.02	0.01	0.00

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

F   Multiple Comparisons Adjustment

In this section, we present the P-values from all analyses conducted using *overall evaluation* and *vote intention,* and a corresponding False Discovery Rate adjusted P-value (Benjamini and Hochberg, 1995). To compute the adjusted P-values, we include all tests conducted on the two main outcomes (in the main paper and in the SI). Table F.1 shows that the main results are robust to this multiple testing adjustment. Shaded rows indicate results that are statistically significant in the main analysis but have adjusted P-values above 0.05 (in this small number of cases, the adjusted p-values are in the 0.05-0.12 range).

Table F.1: Multiple Comparisons Adjustment

	Location	Outcome	Coefficient	P-Value	FDR Adjusted P-Value	Robust at $p < 0.05$ level?
1	Table 3	Overall evaluation	Treatment	0.001	0.007	Yes
2	Table 3	Overall evaluation	Background	0.018	0.056	No
3	Table 3	Overall evaluation	Policy	0.001	0.007	Yes
4	Table 3	Overall evaluation	Full video	0.009	0.033	Yes
5	Table 3	Overall evaluation	Full audio	0.011	0.036	Yes
6	Table 4 C1	Overall evaluation	Treatment (swing only)	0.771	0.840	–
7	Table 4 C2	Overall evaluation	Background (swing only)	0.760	0.837	–
8	Table 4 C2	Overall evaluation	Policy (swing only)	0.630	0.741	–
9	Table 4 C2	Overall evaluation	Full video (swing only)	0.344	0.551	–
10	Table 4 C2	Overall evaluation	Full audio (swing only)	0.635	0.741	–
11	Table 4 C3	Overall evaluation	Treatment (partisans only)	0.000	0.001	Yes
12	Table 4 C4	Overall evaluation	Background (partisans only)	0.003	0.015	Yes
13	Table 4 C4	Overall evaluation	Policy (partisans only)	0.000	0.001	Yes
14	Table 4 C4	Overall evaluation	Full video (partisans only)	0.003	0.015	Yes
15	Table 4 C4	Overall evaluation	Full Audio (partisans only)	0.000	0.001	Yes
16	Table 5A C1	Overall evaluation	Treatment (partisans only)	0.968	0.977	–
17	Table 5A C1	Overall evaluation	Treatment X opposing party candidate (partisans only)	0.055	0.130	–
18	Table 5A C2	Overall evaluation	Treatment (NDC/NPP partisans only)	0.994	0.994	–
19	Table 5A C2	Overall evaluation	Treatment X opposing party candidate (NDC/NPP partisans only)	0.192	0.349	–
20	Table 5A C3	Vote	Treatment (partisans only)	0.054	0.130	–
21	Table 5A C3	Vote	Treatment X opposing party candidate (partisans only)	0.043	0.112	No
22	Table 5A C4	Vote	Treatment (NDC/NPP partisans only)	0.063	0.146	–
23	Table 5A C4	Vote	Treatment X opposing party candidate (NDC/NPP partisans only)	0.097	0.207	–
24	Table 5B C1	Overall evaluation	Treatment (strong partisans only)	0.104	0.218	–
25	Table 5B C1	Overall evaluation	Treatment X opposing party candidate (strong partisans only)	0.001	0.007	Yes
26	Table 5B C2	Overall evaluation	Treatment (strong NDC/NPP partisans only)	0.152	0.286	–
27	Table 5B C2	Overall evaluation	Treatment X opposing party candidate (strong NDC/NPP partisans only)	0.021	0.064	No
28	Table 5B C3	Vote	Treatment (strong partisans only)	0.000	0.001	Yes
29	Table 5B C3	Vote	Treatment X opposing party candidate (strong partisans only)	0.000	0.001	Yes
30	Table 5B C4	Vote	Treatment (strong NDC/NPP partisans only)	0.001	0.007	Yes
31	Table 5B C4	Vote	Treatment X opposing party candidate (strong NDC/NPP partisans only)	0.000	0.001	Yes

	Location	Outcome	Coefficient	P-Value	FDR Adjusted P-Value	Robust at $p < 0.05$ level?
32	Table 6 C1	Overall evaluation	Background (partisans evaluating opponent candidates)	0.001	0.007	Yes
33	Table 6 C1	Overall evaluation	Policy (partisans evaluating opponent candidates)	0.000	0.001	Yes
34	Table 6 C1	Overall evaluation	Full video (partisans evaluating opponent candidates)	0.003	0.015	Yes
35	Table 6 C1	Overall evaluation	Full audio (partisans evaluating opponent candidates)	0.000	0.001	Yes
36	Table 6 C2	Overall evaluation	Background (strong partisans evaluating opponent candidates)	0.039	0.104	No
37	Table 6 C2	Overall evaluation	Policy (strong partisans evaluating opponent candidates)	0.000	0.001	Yes
38	Table 6 C2	Overall evaluation	Full video (strong partisans evaluating opponent candidates)	0.004	0.018	Yes
39	Table 6 C2	Overall evaluation	Full audio (strong partisans evaluating opponent candidates)	0.017	0.055	No
40	Table 6 C3	Vote	Background (partisans evaluating opponent candidates)	0.245	0.424	–
41	Table 6 C3	Vote	Policy (partisans evaluating opponent candidates)	0.565	0.714	–
42	Table 6 C3	Vote	Full video (partisans evaluating opponent candidates)	0.307	0.515	–
43	Table 6 C3	Vote	Full audio (partisans evaluating opponent candidates)	0.411	0.621	–
44	Table 6 C4	Vote	Background (strong partisans evaluating opponent candidates)	0.198	0.354	–
45	Table 6 C4	Vote	Policy (strong partisans evaluating opponent candidates)	0.027	0.077	No
46	Table 6 C4	Vote	Full video (strong partisans evaluating opponent candidates)	0.172	0.318	–
47	Table 6 C4	Vote	Full audio (strong partisans evaluating opponent candidates)	0.753	0.837	–
48	Table G.1 C1	Overall evaluation	Treatment	0.937	0.968	–
49	Table G.1 C2	Overall evaluation	Background	0.849	0.907	–
50	Table G.1 C2	Overall evaluation	Policy	0.749	0.837	–
51	Table G.1 C2	Overall evaluation	Full video	0.328	0.534	–
52	Table G.1 C2	Overall evaluation	Full audio	0.607	0.741	–
53	Table H.2 C1	Overall evaluation	Treatment	0.000	0.001	Yes
54	Table H.2 C1	Overall evaluation	Treatment x debate winner (participants)	0.217	0.382	–
55	Table H.2 C2	Overall evaluation	Treatment	0.004	0.018	Yes
56	Table H.2 C2	Overall evaluation	Treatment x debate winner (experts)	0.749	0.837	–
57	Table H.2 C3	Overall evaluation	Treatment (swing only)	0.313	0.517	–
58	Table H.2 C3	Overall evaluation	Treatment x debate winner (participants) (swing only)	0.152	0.286	–
59	Table H.2 C4	Overall evaluation	Treatment (swing only)	0.526	0.706	–
60	Table H.2 C4	Overall evaluation	Treatment x debate winner (experts) (swing only)	0.486	0.668	–
61	Table I.1 C1	Overall evaluation	Treatment (Effutu)	0.738	0.837	–
62	Table I.1 C1	Overall evaluation	Treatment x NPP cand. (Effutu)	0.003	0.015	Yes
63	Table I.1 C1	Overall evaluation	Treatment x NDC cand. (Effutu)	0.891	0.943	–
64	Table I.1 C2	Overall evaluation	Treatment (KEEA)	0.422	0.622	–
65	Table I.1 C2	Overall evaluation	Treatment x NPP cand. (KEEA)	0.416	0.621	–
66	Table I.1 C2	Overall evaluation	Treatment x NDC cand. (KEEA)	0.570	0.714	–
67	Table I.1 C3	Overall evaluation	Treatment (Mfantseman)	0.095	0.207	–
68	Table I.1 C3	Overall evaluation	Treatment x NPP cand. (Mfantseman)	0.434	0.624	–
69	Table I.1 C3	Overall evaluation	Treatment x NDC cand. (Mfantseman)	0.124	0.250	–

	Location	Outcome	Coefficient	P-Value	FDR Adjusted P-Value	Robust at $p < 0.05$ level
70	Table M C1	Overall evaluation	Treatment	0.002	0.013	Yes
71	Table M C1	Overall evaluation	Treatment x Incumbent	0.490	0.668	–
72	Table M C2	Overall evaluation	Treatment	0.298	0.508	–
73	Table M C2	Overall evaluation	Treatment x Minor party	0.011	0.036	Yes
74	Table M C3	Vote	Treatment	0.484	0.668	–
75	Table M C3	Vote	Treatment x Incumbent	0.639	0.741	–
76	Table M C4	Vote	Treatment	0.539	0.706	–
77	Table M C4	Vote	Treatment x Minor party	0.384	0.598	–
78	Table M.1 C1	Overall evaluation	Background	0.141	0.274	–
79	Table M.1 C1	Overall evaluation	Background x Minor party	0.412	0.621	–
80	Table M.1 C1	Overall evaluation	Policy	0.559	0.714	–
81	Table M.1 C1	Overall evaluation	Policy x Minor party	0.003	0.015	Yes
82	Table M.1 C1	Overall evaluation	Full video	0.584	0.723	–
83	Table M.1 C1	Overall evaluation	Full video x Minor party	0.032	0.087	No
84	Table M.1 C1	Overall evaluation	Full audio	0.544	0.706	–
85	Table M.1 C1	Overall evaluation	Full audio x Minor party	0.047	0.119	No
86	Table M.1 C2	Vote	Background	0.946	0.968	–
87	Table M.1 C2	Vote	Background x Minor party	0.791	0.854	–
88	Table M.1 C2	Vote	Policy	0.950	0.968	–
89	Table M.1 C2	Vote	Policy x Minor party	0.947	0.968	–
90	Table M.1 C2	Vote	Full video	0.639	0.741	–
91	Table M.1 C2	Vote	Full video x Minor party	0.435	0.624	–
92	Table M.1 C2	Vote	Full audio	0.119	0.245	–
93	Table M.1 C2	Vote	Full audio x Minor party	0.089	0.198	–
94	Table N.1 C1	Overall evaluation	Treatment	0.138	0.273	–
95	Table N.1 C1	Overall evaluation	Treatment x Knowledge	0.618	0.741	–
96	Table N.1 C1	Overall evaluation	Treatment x debate winner (participants)	0.030	0.084	No
97	Table N.1 C1	Overall evaluation	Treatment x debate winner (participants) x Knowledge	0.055	0.130	–
98	Table N.1 C2	Vote	Treatment	0.009	0.033	Yes
99	Table N.1 C2	Vote	Treatment x Knowledge	0.011	0.036	Yes
100	Table N.1 C2	Vote	Treatment x debate winner (participants)	0.006	0.025	Yes
101	Table N.1 C2	Vote	Treatment x debate winner (participants) x Knowledge	0.005	0.022	Yes
102	Table P.2 C1	Overall evaluation	Treatment	0.081	0.184	–
103	Table P.2 C2	Overall evaluation	Treatment (2 days later)	0.366	0.578	–
104	Table P.2 C3	Overall evaluation	Treatment (partisans evaluating opponent candidates)	0.000	0.001	Yes
105	Table P.2 C4	Overall evaluation	Treatment (partisans evaluating opponent candidates, 2 days later)	0.485	0.668	–
106	Table P.2 C5	Overall evaluation	Treatment (partisans evaluating opponent candidates)	0.009	0.033	Yes
107	Table P.2 C5	Overall evaluation	Treatment x Stronghold EA (partisans evaluating opponent candidates)	0.534	0.706	–
108	Table P.2 C6	Overall evaluation	Treatment (partisans evaluating opponent candidates, 2 days later)	0.008	0.032	Yes
109	Table P.2 C6	Overall evaluation	Treatment x Stronghold EA (partisans evaluating opponent candidates, 2 days later)	0.023	0.068	No

G   Main Results Among Those Who Report Having Seen Debate Previously

Table G.1: Average Treatment Effects Among Those Who Report Having Seen Debate Previously

	(1) Evaluation	(2) Evaluation
Received any Treatment	-0.01	
	(0.12)	
Image		0.03
		(0.15)
Policy		-0.05
		(0.16)
Full debate (video)		-0.16
		(0.16)
Full debate (audio)		0.08
		(0.16)
Constant	3.30***	3.25***
	(0.64)	(0.65)
Observations	1,369	1,369
R-squared	0.06	0.06

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

H Coding debate winner

H.1 Participants evaluation of candidates' performance in the debates

Participants answered the following survey question:

- Of all the candidates, which candidate would you say performed best in the debate you just watched?

H.2 Expert evaluation of candidates' performance in the debates

We recruited 17 individuals from the Political Science Department of the University of Ghana and civil society groups to provide their independent (objective) evaluations of the candidates in the debates. Half of our evaluators had completed a bachelor's degree, and the remainder had completed or pursuing a master's qualification. About 40 percent were females. We randomly assigned two debates to each expert. Each of our evaluators then watched the entire debate and provided their judgment on the performance of the candidates. Our judges watched the debates on their own online (we used Google Forms). Before they watched the debate video, we told our experts that the exercise was part of an academic research study, described the structure of the debate, and asked them to put aside any personal partisan leanings in their evaluations.

After watching a debate, we asked our experts to:

1. choose an overall winner of the debate;

2. choose a winner of the personal background segment of the debate;

3. choose a winner of the policy segment (education and employment) of the debate; and

4. rate the overall performance of each candidate on the scale from 1 to 7, where 1 is worst performance, 7 is the best, and 4 is neutral.

Table H.1 shows the results of these evaluations of our experts. Our expert evaluators agreed with constituents on the winner of the debates in two of our study constituencies (Effutu and KEEA) but diverge from one (Mfantseman).

H.3 Treatment Effects Conditional on Performance

Table H.1: Expert evaluation of debate candidates

Party	Name	Overall winner	Personal background Winner	Policy Winner	Average evaluation
Effutu (N = 12)					
NPP	Alexander Afenyoh-Markin	75%	50%	50%	5.58
PPP	Nana Ofori Owusu	25%	25%	50%	4.33
NDC	Eric Don-Arthur	0%	8%	0%	3.58
CPP	Ebenezer Rolance Akumbea-Sam	0%	17%	0%	3.25
PNC	Murtala Muhammed Umar	0%	0%	0%	2.33
KEEA (N = 11)					
NPP	Stephen Nana Ato Arthur	55%	27%	73%	5.45
NDC	Samuel Atta Mills	9%	36%	9%	5
PPP	John Sterlin	9%	0%	18%	4.27
CPP	Rose Austin Tenadu	27%	36%	0%	4.55
PNC					
Mfantseman (N = 11)					
NDC	James Essuon	45%	64%	67%	5.18
NPP	Ekow Hayford	45%	27%	27%	5.09
PPP	Kwabena Amu Quandoh Okyere	9%	9%	0%	4.27
CPP	Pius Ebo Dughan	0%	0%	9%	3.8

Table H.2: Treatment effects by candidate performance

	(1) All	(2) All	(3) Swing voters	(4) Swing voters
Treatment	0.25***	0.21***	0.14	0.09
	(0.07)	(0.07)	(0.14)	(0.14)
Treatment x debate winner (participants)	-0.21		-0.35	
	(0.17)		(0.25)	
Debate winner (participants)	1.60***		1.49***	
	(0.15)		(0.22)	
Treatment x debate winner (experts)		-0.06		-0.18
		(0.18)		(0.25)
Debate winner (experts)		1.31***		0.88***
		(0.16)		(0.22)
Constant	3.11***	3.17***	3.18***	3.32***
	(0.18)	(0.19)	(0.35)	(0.35)
Observations	8,186	8,186	2,496	2,496
R-squared	0.10	0.09	0.09	0.05

Notes: Observations are at the individual-candidate dyad. The evaluation variable is on a 1-7 scale with higher numbers indicating more positive evaluations of candidates. All models include individual controls and sampling unit fixed effects. Standard errors clustered by individual in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

I Treatment Effects among Swing Voters

Table I.1: Treatment Effects among Swing Voters

	(1) Effutu	(2) KEEA	(3) Mfantseman
Received any Treatment	-0.08	-0.22	0.43*
	(0.24)	(0.28)	(0.26)
Treatment x NDC Candidate	0.88***	0.30	-0.31
	(0.29)	(0.36)	(0.39)
Treatment x NPP Candidate	-0.05	0.24	-0.74
	(0.35)	(0.42)	(0.48)
NDC Candidate	-0.27	-1.15***	0.06
	(0.24)	(0.33)	(0.34)
NPP Candidate	2.37***	-0.15	1.60***
	(0.30)	(0.37)	(0.43)
Constant	3.43***	3.89***	3.41***
	(0.57)	(0.45)	(0.37)
Observations	928	862	706
R-squared	0.25	0.06	0.10

Notes: Observations are at the individual-candidate dyad. The evaluation variable is on a 1-7 scale with higher numbers indicating more positive evaluations of candidates. All models include individual controls and sampling unit fixed effects. Standard errors clustered by individual in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

J Treatment effects disaggregated by candidates and by parties

J.1 Treatment effect by candidate

Figure J.1: Treatment Effect (evaluation) by candidate
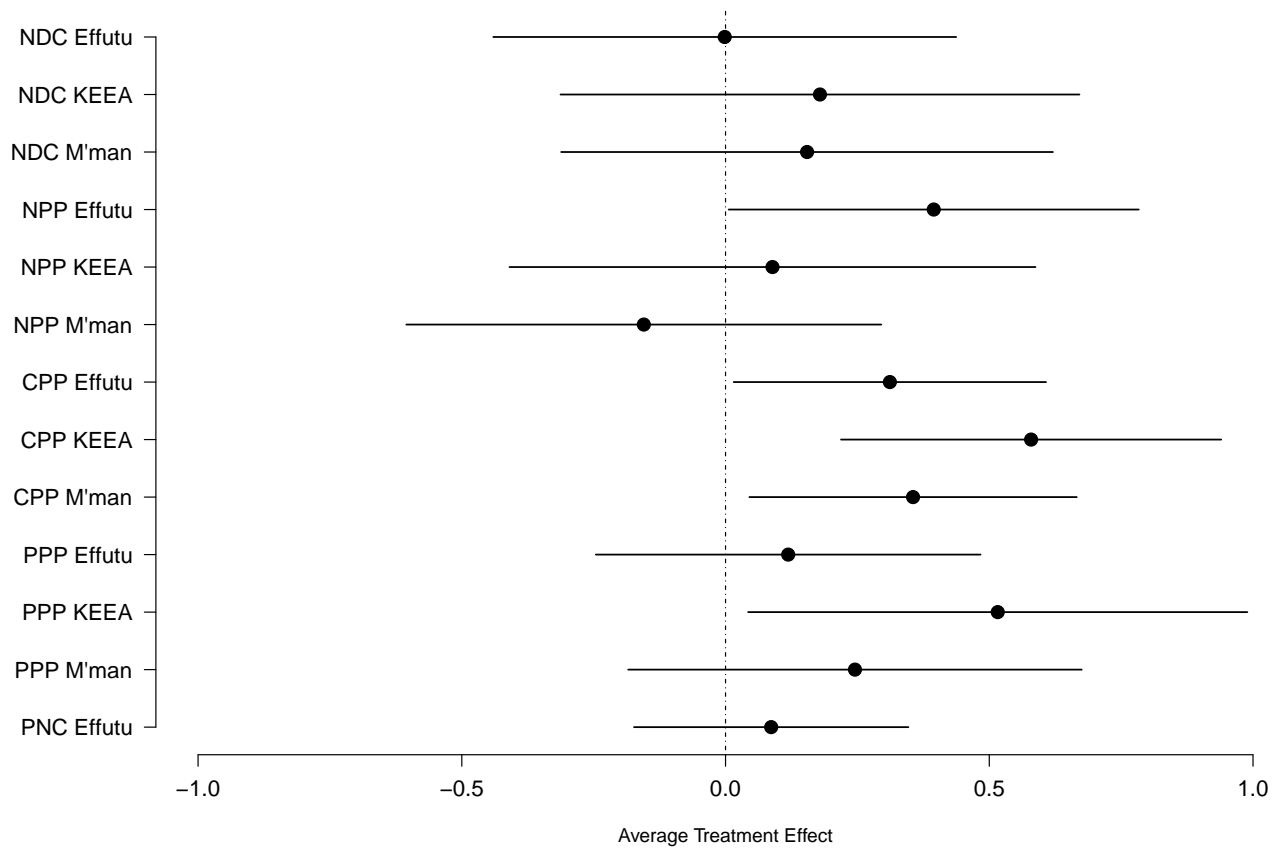
J.2 Treatment effect by party

Table J.1: Treatment effects by party (evaluation)

	(1) 1 NDC Evaluation	(2) 2 NPP Evaluation	(3) 3 CPP Evaluation	(4) 4 PPP Evaluation	(5) 5 PNC Evaluation
Any Treatment	0.09	0.04	0.35***	0.28**	0.06
	(0.14)	(0.13)	(0.09)	(0.13)	(0.13)
Constant	3.88***	4.01***	2.17***	4.24***	1.91***
	(0.26)	(0.25)	(0.18)	(0.23)	(0.26)
Observations	1,895	1,915	1,873	1,889	646
R-squared	0.00	0.01	0.02	0.02	0.01

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

J.3 Treatment effect for NDC partisans

Table J.2: Treatment effects by party among NDC partisans

	(1)	(2)	(3)	(4)	(5)
	1	2	3	4	5
	NDC	NPP	CPP	PPP	PNC
	Evaluation	Evaluation	Evaluation	Evaluation	Evaluation
Any Treatment	-0.05	0.13	0.47***	0.33*	0.24
	(0.15)	(0.18)	(0.13)	(0.20)	(0.19)
Constant	5.57***	2.81***	1.71***	3.29***	1.58***
	(0.27)	(0.35)	(0.28)	(0.36)	(0.38)
Observations	668	668	657	660	230
R-squared	0.01	0.02	0.03	0.03	0.04

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table J.3: Treatment effects by party among Strong NDC partisans

	(1)	(2)	(3)	(4)	(5)
	1	2	3	4	5
	NDC	NPP	CPP	PPP	PNC
	Evaluation	Evaluation	Evaluation	Evaluation	Evaluation
Any Treatment	-0.27*	0.38	0.51***	0.34	0.17
	(0.15)	(0.24)	(0.16)	(0.28)	(0.33)
Constant	6.56***	2.30***	1.63***	2.45***	1.30
	(0.33)	(0.52)	(0.37)	(0.50)	(0.84)
Observations	306	306	298	300	90
R-squared	0.04	0.02	0.04	0.04	0.05

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

J.4   Treatment effect for NPP partisans

Table J.4: Treatment effects by party among NPP partisans

	(1)	(2)	(3)	(4)	(5)
	1	2	3	4	5
	NDC	NPP	CPP	PPP	PNC
	Evaluation	Evaluation	Evaluation	Evaluation	Evaluation
Any Treatment	0.38***	-0.12	0.32**	0.40*	0.09
	(0.14)	(0.12)	(0.14)	(0.22)	(0.21)
Constant	1.89***	6.29***	2.09***	3.62***	1.55***
	(0.32)	(0.26)	(0.30)	(0.42)	(0.43)
Observations	595	606	591	595	226
R-squared	0.03	0.02	0.03	0.05	0.04

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table J.5: Treatment effects by party among Strong NPP partisans

	(1)	(2)	(3)	(4)	(5)
	1	2	3	4	5
	NDC	NPP	CPP	PPP	PNC
	Evaluation	Evaluation	Evaluation	Evaluation	Evaluation
Any Treatment	0.30*	-0.13	0.38**	0.56**	0.18
	(0.16)	(0.13)	(0.15)	(0.24)	(0.20)
Constant	2.02***	6.32***	1.88***	3.27***	1.18***
	(0.36)	(0.30)	(0.33)	(0.47)	(0.42)
Observations	491	499	489	492	184
R-squared	0.04	0.03	0.04	0.05	0.07

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

K Analysis Using Binary Measure of *Positive Evaluation* as the Dependent Variable

In Table 3, we present average treatment effects on the binary dependent variable, *positive evaluation,* which takes a value of 1 if the overall evaluation is 5 or greater, and 0 otherwise. In this Appendix section, we present the results from Tables 4, 5, and 6 using this outcome measure. All results are robust when analyzing this alternative dependent variable.

Table K.1: Replication of Table 4 using Binary Measure of Positive Evaluation

	(1) Positive Eval. Swing	(2) Positive Eval. Swing	(3) Positive Eval. Partisans	(4) Positive Eval. Partisans (4)
Received any Treatment	0.04		0.05***	
	(0.03)		(0.01)	
Image		0.04		0.04***
		(0.03)		(0.02)
Policy		0.02		0.07***
		(0.03)		(0.01)
Full debate (video)		0.05		0.05***
		(0.03)		(0.01)
Full debate (audio)		0.04		0.05***
		(0.03)		(0.02)
Constant	0.27***	0.27***	0.35***	0.35***
	(0.08)	(0.08)	(0.04)	(0.04)
Observations	2,496	2,496	5,690	5,690
R-squared	0.03	0.03	0.02	0.02

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table K.2: Replication of Table 5 using Binary Measure of Positive Evaluation

Panel A: All Partisans	(1) Positive Eval. (All)	(2) Positive Eval. (NDC/NPP)
Any Treatment	-0.00	-0.00
	(0.04)	(0.03)
Treatment x Opponent Candidate	0.08**	0.07*
	(0.04)	(0.04)
Opponent Candidate	-0.69***	-0.73***
	(0.04)	(0.03)
Constant	0.91***	1.03***
	(0.05)	(0.06)
Observations	5,690	2,640
R-squared	0.35	0.47

Panel B: Strong Partisans	(1) Positive Eval. (All)	(2) Positive Eval. (NDC/NPP)
Any Treatment	-0.02	-0.02
	(0.02)	(0.02)
Treatment x Opponent Candidate	0.09***	0.10***
	(0.03)	(0.03)
Opponent Candidate	-0.87***	-0.91***
	(0.02)	(0.02)
Constant	0.99***	1.07***
	(0.05)	(0.07)
Observations	3,435	1,596
R-squared	0.54	0.70

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table K.3: Replication of Table 6 using Binary Measure of Positive Evaluation

VARIABLES	(1) Positive Eval. (All Partisans)	(2) Positive Eval. (Strong Partisans)
Image	0.07***	0.03
	(0.02)	(0.02)
Policy	0.09***	0.10***
	(0.02)	(0.02)
Full debate (video)	0.07***	0.06***
	(0.02)	(0.02)
Full debate (audio)	0.06***	0.04**
	(0.02)	(0.02)
Constant	0.21***	0.20***
	(0.05)	(0.06)
Observations	4,199	3,129
R-squared	0.06	0.03

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

L   Major versus Minor Parties

Table L.1 tests the hypotheses that treatment effects are larger for non-incumbent party and minor party candidates.[42] Columns 1 and 3 provide no evidence that the debates had a more positive effect on non-incumbent candidates. Column 2 shows that debates have a significantly larger effect on voter evaluations of minor party candidates; the interaction between the treatment and minor candidates is positive and significant (consistent with Figure J.1). The treatment effect for minor party candidates represents about a 12 percent increase over the mean in the control group.

      However, this increased evaluation does not correspond to associated changes in intended vote choice. Column 4 shows that treatment does not increase the likelihood that participants will vote for minor party candidates. This may be because the improved evaluation of minor party candidates was not large enough in magnitude to change intended vote choice. It could also be because participants are thinking strategically; they may be unwilling to vote for candidates who are not perceived as electorally viable, even if the debates improve their evaluations of them. Therefore, our results provide partial support for *H2*.

Table L.1: Treatment effects by candidate type

	(1) Evaluation	(2) Evaluation	(3) Vote	(4) Vote
Any Treatment	0.22***	0.07	0.01	-0.01
	(0.07)	(0.07)	(0.01)	(0.01)
Treatment x Minor Party		0.25**		0.02
		(0.10)		(0.02)
Minor Party		-1.44***		-0.33***
		(0.09)		(0.02)
Treatment x Incumbent	-0.12		-0.02	
	(0.17)		(0.03)	
Incumbent	0.38**		0.14***	
	(0.16)		(0.03)	
Constant	3.37***	4.28***	0.17***	0.39***
	(0.18)	(0.18)	(0.01)	(0.01)
Observations	8,186	8,186	8,196	8,196
R-squared	0.03	0.11	0.02	0.15

Notes: Observations are at the individual-candidate dyad. The evaluation variable is on a 1-7 scale with higher numbers indicating more positive evaluations of candidates. The vote choice variable is dichotomous. All models include individual controls and sampling unit fixed effects. Standard errors clustered by individual in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

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[42]NDC candidates are incumbent party candidates.

M   Analysis of Mechanisms Driving Result on Minor Party Candidates

Table M.1: The Effect of Each Treatment Arm For Minor Party Candidates

	(1) Evaluation	(2) Vote
Image	0.12	0.00
	(0.08)	(0.01)
Background x Minor Party	0.10	0.01
	(0.13)	(0.03)
Policy	0.05	0.00
	(0.08)	(0.01)
Policy x Minor Party	0.37***	-0.00
	(0.13)	(0.03)
Full debate (video)	0.05	-0.01
	(0.08)	(0.02)
Full (video) x Minor Party	0.28**	0.02
	(0.13)	(0.03)
Full debate (audio)	0.05	-0.02
	(0.09)	(0.02)
Full (audio) x Minor Party	0.26**	0.05*
	(0.13)	(0.03)
Minor Party	-1.44***	-0.33***
	(0.09)	(0.02)
Constant	4.27***	0.39***
	(0.18)	(0.01)
Observations	8,186	8,196
R-squared	0.11	0.15

Standard errors clustered by individual in parentheses

*** p<0.01, ** p<0.05, * p<0.1

N   Treatment Effects Conditional on Political Knowledge

This section tests the hypothesis that less politically informed voters will become more favorable toward the debate winner after watching the debates. We measure political knowledge by asking respondent's to name each party's presidential candidate and taking a count of the number of correct answers.

Table N.1: Political Knowledge

	(1) Evaluation	(2) Vote
Received any Treatment	0.35	0.07***
	(0.24)	(0.03)
Treatment x Politically Informed	-0.04	-0.02**
	(0.07)	(0.01)
Treatment x Debate Winner (participants)	-1.18**	-0.33***
	(0.54)	(0.12)
Won Debate (subjective) x Politically Informed	-0.27*	-0.08**
	(0.15)	(0.03)
Treatment x Won Debate (subjective) x Politically Informed	0.33*	0.11***
	(0.17)	(0.04)
Informed (count of correct answers)	0.13*	0.02**
	(0.07)	(0.01)
Debate Winner (subjective)	2.39***	0.54***
	(0.48)	(0.11)
Constant	2.80***	0.08***
	(0.26)	(0.03)
Observations	8,110	8,104
R-squared	0.10	0.10

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

O   Real time data using second-by-second evaluations of candidates

Figure O.1: Number of unique respondents per every 30-second of the debate
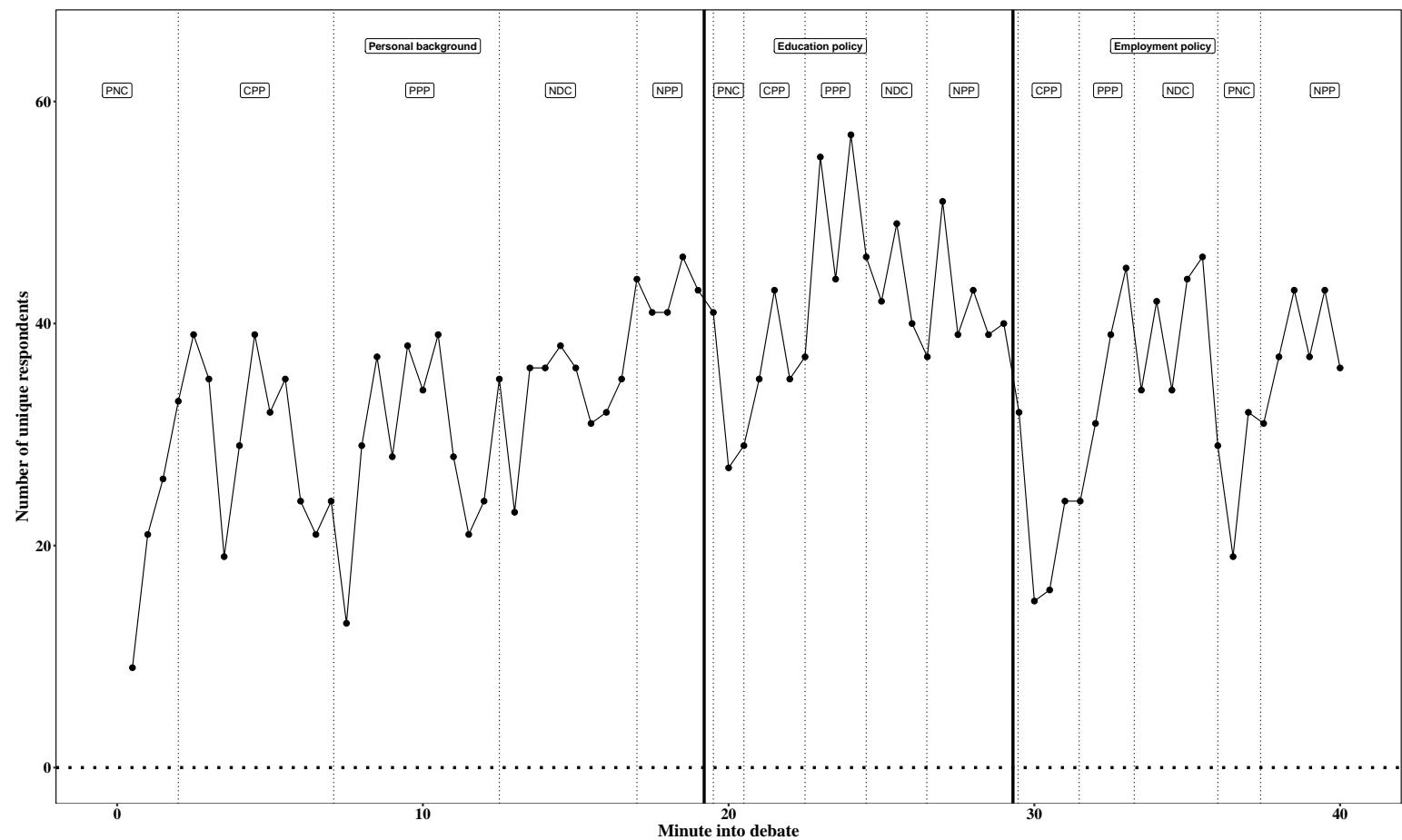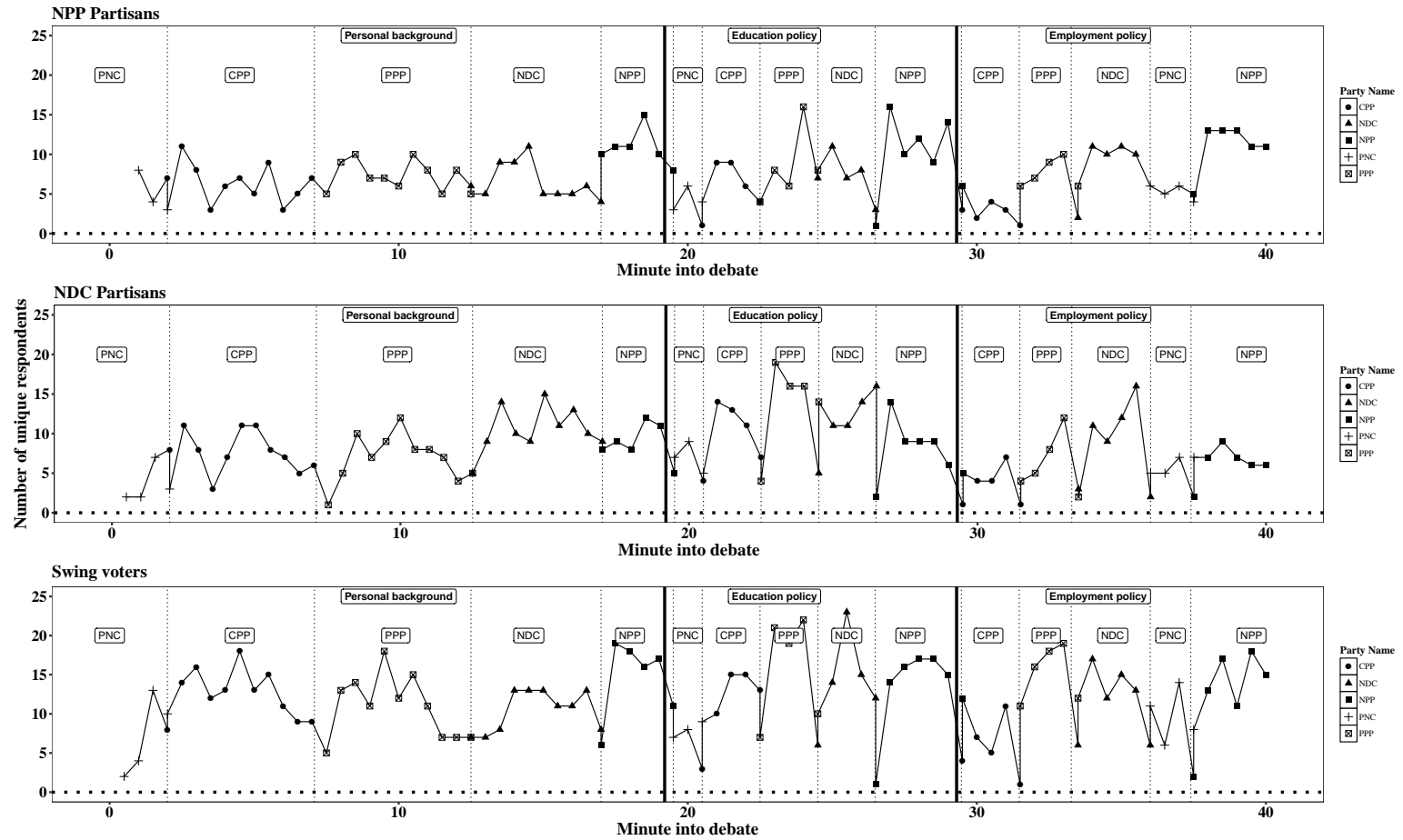
Figure O.2: Number of unique respondents per every 30-second of the debate by partisanship

P   Results in the follow-up sample (10 percent of original sample)

Table P.1: Descriptive Statistics and Covariate Balance in the Follow-Up Sample

	Mean Treatment	Mean Control	Difference	*P-value*
Female	0.48	0.55	0.07	0.43
Age	33.62	34.39	0.77	0.73
Education	4.45	4.36	0.08	0.78
Job	0.66	0.75	0.09	0.28
Owns Phone	0.89	0.89	0.00	1.00
Owns Radio	0.64	0.68	0.04	0.59
Owns TV	0.71	0.75	0.04	0.61
Owns Blender	0.22	0.2	0.02	0.81
Owns Car	0.05	0.05	0.00	0.98
Information	3.18	3.11	0.07	0.67
NPP Eval - NPP Eval	1.3	-0.26	1.56	0.03
NDC Partisan	0.31	0.42	0.10	0.19
NPP Partisan	0.37	0.21	0.16	0.04
Swing (rating)	0.31	0.37	0.06	0.46
Swing (count)	0.39	0.3	0.09	0.59

Notes: Table P.1 displays differences in means across treatment conditions, for different covariates among the sample of respondents in the follow-up survey. P-values are the result of a two-tailed t-test for difference in means.

Table P.2: Treatment effects two days later

	(1) After Debate All	(2) Two Days All	(3) After Debate Partisans Eval Non-Copartisan	(4) Two Days Partisans Eval Non-Copartisan	(5) After Debate Partisans Eval Non-Copartisan	(6) Two Days Partisans Eval Non-Copartisan
Treatment	0.22*	0.12	0.73***	0.16	0.62***	0.94***
	(0.13)	(0.13)	(0.19)	(0.23)	(0.23)	(0.35)
Treatment x Stronghold EA					0.21	-0.99**
					(0.34)	(0.43)
Stronghold EA					0.19	2.63***
					(0.55)	(0.46)
Constant	2.90***	3.34***	2.17***	2.58***	2.16***	1.83***
	(0.37)	(0.33)	(0.59)	(0.60)	(0.59)	(0.56)
Observations	979	979	496	496	496	496
R-squared	0.06	0.04	0.23	0.16	0.23	0.21

Notes: Observations are at the individual-candidate dyad. Standard errors clustered by individual in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Q   Local and national policy concerns

To further examine the potential role of policy information, we also test whether debates have an impact on voter evaluations of candidates' policy positions and potential for good performance if elected. We measure evaluations of both local and national positions, measured on the one to seven scale. The local policy question is as follows: *Thinking about the [party name] candidate, [candidate name]. If elected, to what extent do you agree he will do a good job in implementing programs to improve the lives of people in the constituency?* The national policy question is as follows: *Thinking about the [party name] candidate, [candidate name]. If elected, to what extent do you agree he will do a good job in working in Accra to make good policies for the country?*

Table Q.1 presents the results. There is no evidence that any of the debate treatment conditions have an impact on responses to these policy related questions. The coefficients in each model are not statistically significant and, more importantly, are very close to zero.

Table Q.1

	(1) National Eval	(2) National Eval	(3) Local Eval	(4) Local Eval
Received any Treatment	-0.02		-0.01	
	(0.04)		(0.04)	
Personal Background		-0.02		-0.01
		(0.05)		(0.04)
Policy		0.01		0.01
		(0.04)		(0.04)
Full debate video		-0.04		-0.05
		(0.05)		(0.04)
Full debate audio		-0.01		-0.01
		(0.05)		(0.05)
Constant	3.23***	3.23***	3.26***	3.26***
	(0.09)	(0.10)	(0.09)	(0.09)
Observations	7,880	7,880	7,965	7,965
R-squared	0.02	0.02	0.02	0.02

Notes: Observations are at the individual-candidate dyad. The dependent variables are on a 1-7 scale with higher numbers indicating more positive evaluations of candidates. All models include individual controls and sampling unit fixed effects. Standard errors clustered by individual in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

R   Tests of Additional Outcomes

We also pre-specified a set of hypotheses about the impact of debates on political tolerance, trust, attitudes about clientelism, and attitudes about democracy and perceptions of freeness and fairness of the 2016 election in Ghana. Due to space constraints, we present these results in this section.

   To test our hypotheses on political tolerance, trust, the importance of clientelism, and attitudes about democracy, we create a dataset in which the unit of analysis is the individual survey respondent. As above, our models include electoral area fixed effects, and the individual-level pre-treatment controls.

   Overall, we find no evidence that debates impact any of these outcomes. For example, as one might expect, we find that NPP supporters are less tolerant and trusting of NDC supporters than they are of other Ghanaians, while NDC supporters are less tolerant and trusting of NPP supporters. But we find no evidence that the debates impacted these attitudes.

   Using a list experiment, which reduces response bias on sensitive survey questions, and a direct question about clientelism, we asked voters how important clientelism would be to their voting decision in the upcoming election. If anything, we find that the debates slightly increased the chance that voters would report that clientelism would be important to them, an effect that is bigger among swing voters. But the magnitude of these effects are small and they are not close to being statistically significant.

   We also found that the debates had little impact on attitudes about democracy or perceptions of the election in Ghana. We note, however, that voter support for democracy is extremely high in Ghana and most people in our sample had very positive perceptions about the elections. As a result, there was little room for upward movement on any of our indicators. These results should be interpreted with this ceiling effects in mind, as the effects of debates could be different in contexts where voters' baseline perceptions are less positive, which is the case in many new democracies.

   In the regressions in Table R.1, we construct a tolerance index using responses to the following question:

- I am going to read you a list with groups of people. Please tell me which ones you would like, dislike, or not care about having as neighbors. A) NDC supporters B) NPP supporters.

We sum the two responses. Responses were on a 1-5 scale, with higher responses indicating a higher degree of approval.

Table R.1: Debates and political tolerance

	(1)	(2)	(3)	(4)
	1	2	3	4
	Tolerance Index	Tolerance Index	Tolerance of NPP Supporters	Tolerance of NDC Supporters
Any Treatment	0.00	0.07	-0.02	0.16
	(0.04)	(0.08)	(0.10)	(0.11)
Treatment x NPP Partisan		0.02	0.00	0.04
		(0.11)	(0.14)	(0.16)
Treatment x NDC Partisan		-0.19*	-0.15	-0.22
		(0.10)	(0.13)	(0.15)
NPP Partisan (percentile)		0.06	0.64***	-0.52***
		(0.10)	(0.13)	(0.14)
NDC Partisan (percentile)		0.27***	-0.37***	0.91***
		(0.09)	(0.12)	(0.13)
Constant	3.46***	3.36***	3.74***	3.00***
	(0.13)	(0.14)	(0.18)	(0.20)
Observations	1,970	1,904	1,906	1,906
R-squared	0.11	0.10	0.26	0.23

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: Table R.1 displays the average treatment effects on political tolerance. Observations are at the individual level. Tolerance is measured in terms of approval of having i) NDC neighbors ii) NPP neighbors. The index sums responses to both questions. Responses are on a 1-5 scale, with higher responses indicating a higher degree of approval. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

In the regressions in Table R.2, we construct a trust index using the responses to the following question:

- How much do you trust the following people? A) NDC supporters B) NPP supporters.

We sum the two responses. Responses were on a 1-4 scale, with higher responses indicating a higher degree of approval.

Table R.2: Debates and trust in co-partisans and non-copartisans

Variables	(1) Index	(2) Index	(3) Index	(4) Trust in NPP Supporters	(5) Trust in NDC Supporters
Any Treatment	0.00		-0.07	-0.03	-0.09
	(0.04)		(0.07)	(0.09)	(0.09)
Image / Background		0.00			
		(0.05)			
Policy		-0.01			
		(0.05)			
Full debate (video)		0.03			
		(0.05)			
Full debate (audio)		-0.02			
		(0.05)			
Treatment x NPP Partisan			0.11	0.08	0.13
			(0.10)	(0.13)	(0.13)
Treatment x NDC Partisan			0.05	0.01	0.08
			(0.09)	(0.12)	(0.12)
NPP Partisan (percentile)			0.09	0.70***	-0.52***
			(0.09)	(0.11)	(0.12)
NDC Partisan (percentile)			0.22***	-0.39***	0.85***
			(0.08)	(0.11)	(0.11)
Constant	2.23***	2.23***	2.19***	2.34***	2.02***
	(0.12)	(0.12)	(0.13)	(0.17)	(0.17)
Observations	1,974	1,974	1,907	1,904	1,904
R-squared	0.13	0.13	0.16	0.31	0.36

Notes: Table R.2 displays the average treatment effects on political trust. Observations are at the individual level. Trust is measured with the question: How much do you trust the following people? i) NDC supporters ii) NPP supporters. Responses were on a 1-4 scale, with higher responses indicating a higher degree of approval. Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table R.3: Debates and reported importance of clientelism

	(1)	(2)	(3)
Any Treatment	0.00	0.01	0.01
	(0.03)	(0.04)	(0.03)
Treatment x Swing (count)		-0.07	
		(0.05)	
Swing (count)		0.07	
		(0.05)	
Treatment x Swing (rating)			-0.01
			(0.06)
Swing Voter (percentile)			-0.00
			(0.06)
Constant	0.39***	0.32***	0.38***
	(0.09)	(0.11)	(0.09)
Observations	1,963	1,297	1,897
R-squared	0.06	0.07	0.06

Notes: Table R.3 displays the average treatment effects on clientelism. Observations are at the individual level. The dependent variable is constructed from the following post-treatment survey questions: "When deciding how you will vote in the upcoming parliamentary elections, how important will it be the following be in your decision? Whether the candidate has given money or gifts to you or others in your community." Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

In Table R.4 we construct an index using responses to the following three questions:

- Do you agree with the following statement? Free and fair elections are the best method for selecting political leaders.

- Do you agree with the following statement? It is important for Ghanaians to accept the outcome of the upcoming elections, even if some are not happy with the outcome.

- Do you agree with the following statement? The upcoming parliamentary election offers me a real choice between candidates.

We sum the three responses to create the index. Responses were on a 1-5 scale, with higher responses indicating a higher degree of approval.

Table R.4: Debates and attitudes about democracy

Variables	(1) Index	(2) Index	(3) Elections Best	(4) Elections Best	(5) Accept Outcome	(6) Accept Outcome	(7) Real Choice	(8) Real Choice
Any Treatment	0.02		0.06		-0.00		0.02	
	(0.03)		(0.04)		(0.05)		(0.04)	
Image / Background		0.03		0.03		0.02		0.04
		(0.04)		(0.05)		(0.06)		(0.05)
Policy		0.01		0.06		-0.01		-0.01
		(0.04)		(0.05)		(0.06)		(0.05)
Full debate (video)		0.02		0.06		0.01		0.01
		(0.04)		(0.05)		(0.06)		(0.05)
Full debate (audio)		0.03		0.09*		-0.03		0.03
		(0.04)		(0.05)		(0.06)		(0.05)
Constant	4.31***	4.31***	4.58***	4.58***	4.39***	4.39***	3.94***	3.94***
	(0.09)	(0.09)	(0.12)	(0.12)	(0.15)	(0.15)	(0.13)	(0.13)
Observations	1,963	1,963	1,974	1,974	1,974	1,974	1,970	1,970
R-squared	0.08	0.08	0.09	0.09	0.08	0.08	0.07	0.07

Notes: Table R.4 displays the average treatment effects on attitudes about democracy. Observations are at the individual level. The dependent variables reflect attitudes to the following statements: **Elections Best:** Free and fair elections are the best method for selecting political leaders. **Accept Outcome:** It is important for Ghanaians to accept the outcome of the upcoming elections, even if some are not happy with the outcome. **Real Choice:** The upcoming parliamentary election offers me a real choice between candidates. Responses are on a 1-5 scale, with higher responses indicating a higher degree of approval. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1