Expressive Politics: A Model of Electoral Competition with Animus and Cognitive Dissonance

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Abstract

We study a model of electoral competition that incorporates both the instrumental and expressive benefits of candidate position taking. In the model, voters care about standard policy concerns as well as two expressive considerations: the psychological costs of deviating from one's own preferred policy and the psychological benefits of antagonizing an out-group. Whereas concerns about cognitive dissonance consistently temper candidate extremism, the effects of animus are non-monotonic—exacerbating policy divisions when baseline levels are low, and triggering one candidate's capitulation (as distinct from both candidates' moderation) when they are high. We further show that candidates become more polarized when a government routinely fails to translate policies into law. And when policy disagreements run high and communications are siloed, candidates have incentives to stoke inter-group animosities. The findings have broad implications for our understandings of political polarization, separation of powers, an increasingly fragmented media market, and partisan sorting and representation.

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Electoral politics feature more than just narrow disagreements about policy. They also are infused with social and political identities, psychological needs and wants, and demonstrations of inter-group animosities—or what Brennan (2011) calls "expressive considerations." Elections, thus understood, do more than just alter the direction of public policy-making. They also give voice to voters' self-understandings and feelings about others.

What implications do these expressive considerations have for candidate position-taking and government lawmaking? When will candidates choose to inflame inter-group enmities and thereby amplify the political relevance of expressive considerations? And when, instead, will candidates counsel mutual understanding and tolerance? To investigate these matters, we study a model of electoral competition that incorporates both the instrumental and expressive benefits of position-taking in a setting that includes two distinct groups of voters. The instrumental benefits of position-taking flow from the policies that are ultimately implemented. The expressive benefits of position-taking, by contrast, derive from their mere articulation.[1] Instrumental benefits of position-taking, as such, are probabilistic in nature, whereas expressive benefits are guaranteed.

In our model of electoral competition, expressive benefits assume two distinct forms: one that reflects the reputational and/or psychological costs of deviating from one's own preferred policy; and another that captures the benefits of antagonizing an out-group that one does not merely disagree with, but that one actively dislikes. Just as voters wish to minimize their own cognitive dissonance, so too do they relish the opportunity to offend their opponents—something that, for some supporters of Donald Trump, takes the form of "rage farming"[2] or "owning the libs and pissing off the media... That's what we believe in now. There's really not much more to it."[3]

Expressive considerations, we show, have very different effects on the positions that candidates assume. When voters care more about reducing cognitive dissonance, the two candidates reliably moderate their policy positions. But as inter-group rivalries become inflamed, candidates may respond in very different ways. When baseline levels of animus are reasonably low, we show, the positions of the two candidates rapidly diverge, as voters reward policy extremism. But when baseline levels of animus are much higher, marginal increases ultimately lead to one party's utter capitulation to the other, yielding a portion of the electorate devoid of meaningful political representation.

The model also reveals how obstacles to public policymaking can give way to polarization.

[1] For more on a related distinction between the "intrinsic" and "instrumental" benefits of voting, see citetbrennan2008psychological.

[2] As quoted in Erin Douglas, "Texas GOP's voting meme show how Trump-style messaging wins internet's attention." *The Texas Tribune*, January 8, 2012.

[3] As quoted in Tim Alberta, "The Grand Old Meltdown: What Happens When a Party Gives Up on Ideas?" *Politico*, August 24, 2020.

When a candidate's policy proposals are unlikely to become law—either because of legislative gridlock, political dysfunction, partisan intransigence, or institutional weaknesses of the office she seeks—the relative importance of expressive considerations increase. Candidates then have fewer incentives to moderate and deliver, instead, proposals that directly satisfy members of one group by antagonizing the members of the other. The model, as such, explains an essential aspect of Trump's political appeal—particularly in 2016, when many voters were convinced that the political system was irredeemably broken but that Trump, at least, gave voice to their own policy convictions and their anger towards others, be they Democrats, immigrants, racial minorities, or members of the D.C. establishment (Howell and Moe, 2020; Webster, 2020).

Finally, the model clarifies the incentives of candidates to foment inter-group anger. In periods of broad political consensus and open channels of communication, we find in an extension that endogenizes animus, political candidates abstain from such behavior. By increasing general animosities, after all, candidates stimulate voters' demand for policy extremism. But this rather salubrious result quickly falls apart when dissensus takes hold and communication becomes siloed. While both candidates would be better off if overall animus was kept to a minimum, each candidate individually benefits from stoking anger within her affiliated group. Lacking any disciplinary mechanism, then, the benefits of mutual accommodation quickly give way to the lure of demagoguery.

We proceed as follows. After the first section summarizes the formal and empirical literatures on expressive voting, the second section introduces the model. The third section characterizes the equilibria and comparative statics for different values of animus and when animus is endogenized. The fourth section reflects upon the model's implications for partisan polarization, partisan sorting and representation, political communication, and separation of powers. The final section concludes.

1 Literature Review

Our model draws from and contributes to two distinct bodies of research: a formal literature on expressive voting and a predominantly empirical literature on the psychological foundations of political behavior.

1.1 Expressive Voting

Over the last quarter century, a substantial body of research has been devoted to "expressive voting;" or what Clark and Lee (2016) call "the emotional and/or moral satisfaction" that comes from participating in elections (for reviews, see Hamlin and Jennings 2011; 2018). By voting, this literature postulates, people do more than just improve the odds that one policy or another will be implemented. They also give voice to their feelings about themselves and others, which satiates a variety of psychological appetites for self-expression (Brennan, 2008).

By attempting to explain why rational actors would pay any cost to vote given the vanishingly small probability that their ballots will alter the outcome of an election, much of this literature focuses on turnout (Riker and Ordeshook, 1968; Fiorina, 1976; Jones and Hudson, 2000). The mere act of participation, these scholars suggest, yields expressive benefits that may adequately compensate for the inconveniences of voting. Participation, however, is hardly guaranteed. When these expressive needs are not acutely felt, voters may opt to stay at home (Brennan, 2008; Schuessler, 2000). And when the positions of candidates sufficiently diverge from those of voters, even when one candidate is strictly preferred over another, alienation may set in and voters may be inclined to abstain (for examples, see Hinich et al. (1972); Adams et al. (2006)).

Expressive considerations, however, do more than just convince people to show up on Election Day. They also inform the votes that people actually cast. For instance, in Callander and Wilson's (2006; 2008) model of context-dependent voting, a voter's choice between two alternatives depends on the availability of other candidates in the choice set, such that the presence of a third anti-immigrant candidate, for example, may raise the salience of existing differences in immigration policy between the two main candidates. Other models seek to explain how instrumental and expressive considerations jointly translate into vote choices, whether by reference to people's separate preferences for each (Brennan and Hamlin, 1998; Kamenica and Brad, 2014; Taylor, 2015) or the levels of popular support that different candidates from different groups receive within an electorate (Schuessler, 2000).[4]

Three features of this research warrant emphasis. The first concerns the sheer capaciousness of expressive considerations. Scholars recognize all manner of psychological phenomena as the potential subject of expressive voting, ranging from the joys of cheerleading (Aldrich 1997) to vitriol directed toward an out-group (Glazer, 2008). As Hamlin and Jennings (2011, 333) put it, expressive considerations could include any "aspect of the voter's beliefs, values, ideology, identity or personality regardless of any impact that the vote has on the outcome of the election." In many papers, therefore, expressive benefits are treated as a separate but undifferentiated category of voter preferences (Fiorina, 1976; Jones and Hudson, 2000). And even when specific interpretations are offered, they routinely collapse to a single parameter in a model of turnout or voting (Brennan, 2008; Kamenica and Brad, 2014).

Second, this literature does not characterize how specific instrumental and expressive prefer-

[4]For a related literature that focuses on labor strikes, see Glazer (1992).

ences jointly inform the actions that candidates take. To vote at all, or to vote for a particular candidate, reliably yields both kinds of benefits.[5] Instrumental and expressive benefits, as such, are not endogenously generated through the interactions of voters and candidates. Rather, they are presumed to come with the political territory.

Lastly, there is the referent of these expressive benefits. For most studies, it is the voter herself, as benefits come from the fulfillment of her own patriotism, sense of civic duty, or ideological consistency. A handful of studies, meanwhile, recognize the benefits of expressing views about others, such as the enmity one feels towards an out-group (Glazer, 2008). No one in this literature, however, examines the tradeoffs between different classes of expressive benefits. While voters in some of these models balance instrumental against expressive considerations, none confront the possibility that satisfying one expressive need comes at the cost of denying another.

1.2 Cognitive Dissonance and Animus

Though certainly not exhaustive, two expressive needs routinely inform our politics: one that affirms a person's own ideological consistency, and another that affords an opportunity to distinguish oneself from the opposition. Each warrants some discussion.

Going back decades, psychologists have recognized the benefits of signaling one's ideological purity; or, observationally equivalently, reducing the psychological burdens of inconsistency.[6] When making choices of any kind, very much including political ones, people seek to minimize their cognitive dissonance. Simultaneously holding in mind two contradictory thoughts is cognitively taxing, and so too is acting in ways that expressively violate one's core convictions. In electoral politics, consequently, the costs of voting for someone with whom one disagrees appear twice over: first, in the policy losses that may accompany her election; and second, in the cognitive dissonance that comes from acting in ways that do not accord with one's principles or preferences.[7]

Expressive considerations, however, are not exclusively about self-care. They also encourage attacks on a perceived out-group that one does not merely oppose, but that one actively despises (Webster, 2020). Recent studies on "affective polarization" lay out the basic argument as it relates to Democrats and Republicans in American politics (for a review, see Iyengar et al. (2019)).[8]

[5] But for one exception, see Brennan (2008), which allows candidates to assume independent positions on instrumental and expressive dimensions of a policy choice. In this formulation, however, the position that a candidate takes on an expressive dimension in no way binds her to a particular course of action on an instrumental dimension.

[6] For a review of much of the field's early development, see Harmon-Jones and Mills (1999).

[7] For a discussion of the cognitive rewards associated with casting votes for someone who reaffirms one's ideological priors, see Beasley and Joslyn (2001).

[8] For related studies in psychology, see Pietraszewski, Curry, Petersen, Cosmides, and Tooby 2015; Pietraszewski, Cosmides, and Tooby 2014; Estrada 2015.

Rooted in social identity theory, this literature builds upon Henri Tajfel's famous observation that members of an in-group will discriminate against an out-group "even if there is no reason for it in terms of the individual's own interest" (1970, 99). Tajfel recognized that discrimination is "extraordinarily easy to trigger" even when groups are randomly assigned (102). In politics, however, groups and allegiances are hardly random. Rather, studies of affective polarization suggest, political parties offer powerful and salient social identities for many Americans (Mason, 2015; Abramowitz and Webster, 2016); so much so, in fact, that these "mega identities" have become wellsprings of partisan animus in contemporary American politics (Mason, 2018a,b; Iyengar et al., 2012; Iyengar and Westwood, 2015).

It isn't difficult to see how inter-group animosities can whet a person's appetite for antagonism—a character trait that, along with agreeableness, defines one of the five main dimensions of human personality (Lynam and Miller, 2019). Members of an out-group, after all, are often perceived as not merely mistaken or wrong, but as inferior, un-American, or evil. Compromising with them, as such, invites scorn (Davis, 2019), whereas antagonizing them is cause for minor celebration. Recall, then, the insignia "I really don't care, do u?" written across a green jacket that Melania Trump famously wore in 2019 when she toured an immigration detention center holding children who had been separated from their parents. The first lady shrugged off the public firestorm around the sartorial selection. "I'm driving liberals crazy... You know what? They deserve it."[9] Attuned to her own expressive needs, the First Lady relished the opportunity to antagonize her husband's political adversaries. Their outrage was her delight. As Adam Serwer put it in an *Atlantic* essay, "the cruelty is the point."[10]

2 The Model

We envision an electorate with two distinct groups, $i = 1, 2$, that can be understood by reference to either their partisanship (such as Democrats or Republicans) or any other salient ascriptive characteristic (such as their race, religion, or language). A citizen in each of these two groups is characterized by an ideal point $\theta \in \mathbb{R}$.

[9] As quoted in Wolkoff 2020.

[10] Adam Serwer, "The Cruelty is the Point: President Trump and his supporters find community by rejoicing in the suffering of those they hate and fear." *Atlantic*, October 3, 2018. Nor do these dynamics appear to be confined to the Trump presidency. In another more recent *Atlantic* essay on the Republican Party's communication strategies during the Biden Administration, Elizabeth Bruenig observed that "liberal hysteria is no longer an obstacle to good policy making or even an irritating by-product of the democratic process, but rather the desired outcome of almost all right-wing political rhetoric." ("Lauren Boebert's Gun Photo Is Doing Exactly What She Wanted." *Atlantic*, December 8, 2021.) Or as Molly Jong-Fast observes, a Republican Party that remains in the thrall of Trump continues to make "a point of eschewing policy in favor of 'owning the libs' to garner likes, retweets, and small-dollar donations." ("Owning the Libs Is the Only GOP Platform." *Atlantic*, January 12, 2022.)

From an ex-ante perspective, the distribution of ideal points is uncertain and determined by a shift-variable M, drawn from a distribution $F(\cdot)$ that is symmetric around zero, and has a non-decreasing (non-increasing) density to the left (right) of zero. A positive (negative) realization of M denotes a shift of all voters' ideal points to the right (left). Formally, for any realization m, the distribution of θ for group $i = 1, 2$ is given by $\Phi_i(\theta - m - \mu_i)$, where Φ_i is symmetric around zero. Observe that, from an ex-ante perspective (i.e., before the realization of M), μ_i is the expected median policy ideal point of group i.

Let ϕ_i and f be the pdfs of Φ_i and F, respectively. To guarantee that second-order conditions for the candidates' optimization problems are satisfied, we assume that the distribution F has a strictly increasing hazard rate on its support, i.e., $f(m)/((1 - F(m))$ is strictly increasing for m with $0 < F(m) < 1$.[11] Finally, let q_i denote the fraction of the population that is of type i.

Consistent with Hamlin and Jenning's observation (2011, 650) that "expressive and instrumental motivations are best seen as joint inputs into an overall analysis of behavior," our model incorporates a richer set of voter considerations than the canonical spatial voting model. Specifically, the utility of a voter of population i with ideal point θ consists of three parts. The first is a standard spatial policy utility, i.e. $u^P_{i,\theta}(x) = -|x - \theta|$, where x is the *implemented* policy. We stress that policies proposed by the winning candidate are not necessarily implemented, a point to which we will return shortly.

The second and third parts of the voter's utility capture different expressive considerations. The second part reflects the relationship between a proposed policy and the preferences of the out-group. Consistent with the literature on affective polarization, we recognize that voters are motivated, to some degree, by a political dislike of the other group j, and that this animus can be satisfied by voting for a candidate who espouses a position detrimental to their interests. This element of the voter's utility is captured by the term $\alpha_i|x_\ell - \mu_j|$, where x_ℓ is the chosen candidate's proposed policy and α_i is the voter's weight on the animus utility.

The third term reflects a voter's expressive preference to support a candidate who espouses positions that are consonant with her own policy preferences. Whether to minimize cognitive dissonance or to secure (unmodeled) reputational gains associated with ideological purity, voters would prefer to vote for someone who articulates policy positions close to their own preferences.[12] We capture the expressive voting preference by $-\beta|x_\ell - \theta|$, where β is a weight factor scaling the importance of this component of the voter's utility.

[11] This is a standard assumption that is satisfied, for example, for uniform and normal distributions.

[12] A possible indication of the importance of this utility component is that, in elections with multiple candidates, a significant number of voters cast their lots for candidates who have no chance of winning ("sincere voting").

Combining these three components, we have a voter's utility given by

$$u_{i,\theta}(x, x_\ell) = -|x - \theta| + \alpha_i |x_\ell - \mu_j| - \beta |x_\ell - \theta|. \tag{1}$$

Clearly, setting $\alpha = \beta = 0$ reduces our model to the standard case in the literature where voters care only about policy outcomes. The key innovation in (1), by contrast, is the animus component. If $\alpha = 0$ (so that there is no animus), both other terms (policy utility and cognitive dissonance) lead the voter to support the candidate who is closest to the voter's ideal point θ.[13]

Substantively, α can be understood as a measure of antagonism that an individual feels towards an out-group. When this antagonism is sufficiently small, namely $\alpha \leq \beta + p$, voters uniformly prefer that a candidate move in the direction of their ideal point. But when this antagonism is large, such that $\alpha > \beta + p$, then some voters are willing to support a candidate who moves away from their ideal point provided that it harms the out-group. Thus, the first case reflects the politics of mild-to-moderate animosity, whereas the second captures an immoderate desire to, in today's vernacular, "own" the out-group.

The two candidates' ideal points θ_L and θ_R are (without loss of generality) normalized to be symmetric around zero, $\theta_L = -\theta_R$. The candidates are entirely policy-motivated, with utility $u_P(x) = -|x - \theta_P|$, $P \in \{L, R\}$, where x is the implemented platform. While candidates themselves harbor no animus against any group, they are aware that voters' do, and thus rationally consider voters' reactions when they (simultaneously) choose their policy positions $x_L, x_R \in \mathbb{R}$.

The election winner $P = L, R$ implements policy x_P with probability p, while, with probability $1 - p$, the status quo, denoted by x_S, prevails.

3 Analysis

3.1 Voter behavior

The standard tradeoff in models of electoral competition is that a more moderate position increases a candidate's winning probability, but lowers the candidate's policy utility conditional on winning.

To determine how candidates' positions affect their probability of winning, we need to find the cutoff value $m(x_L, x_R)$ for the shift parameter for which the election ends in a tie, given platforms x_L and x_R. The first step towards this objective is to identify and analyze the behavior of indifferent voters within our framework.

[13] However, as will become clearer below, the first and the third term do have different effects in a world where the probability of policy implementation is less than 1.

The voter type θ in group i who is indifferent between the candidates is given by

$$\begin{aligned}&-p|x_L-\theta|-(1-p)|x_S-\theta|+\alpha_i|x_L-\mu_j|-\beta|x_L-\theta|\\&\quad=-p|x_R-\theta|-(1-p)|x_S-\theta|+\alpha_i|x_R-\mu_j|-\beta|x_R-\theta|.\end{aligned}\tag{2}$$

Note first that, if $x_L = x_R$, then (2) holds for all θ, i.e., all voters are indifferent between the candidates, exactly as in the case with standard voter preferences. Intuitively, the introduction of expressive preferences does not change this result, because they are *not* based on a direct "partisan" preference for candidates "associated" with the voter's in-group or out-group, as in Adams and Merrill (2003) and Erikson and Romero (1990). Rather, expressive preferences work through the candidates' proposed policies, and if both candidates indulge voters' appetite for antagonism equally, each voter is rendered indifferent between the candidates on this dimension.

If, by contrast, $x_L \neq x_R$, we obtain the following result:

Lemma 1 *Let $x_L < x_R$. Then the group i voter who is indifferent between candidates located at x_L and x_R is given by*

$$\bar{\theta}_i=\begin{cases}\frac{\alpha_i}{\beta+p}\mu_j+\frac{\beta+p-\alpha_i}{\beta+p}\cdot\frac{x_L+x_R}{2} & \textit{if } x_L<\mu_j<x_R;\\ \frac{x_L+x_R}{2}+\frac{x_R-x_L}{2}\cdot\frac{\alpha_i}{\beta+p} & \textit{if } \mu_j\geq x_L,x_R;\\ \frac{x_L+x_R}{2}-\frac{x_R-x_L}{2}\cdot\frac{\alpha_i}{\beta+p} & \textit{if } \mu_j\leq x_L,x_R.\end{cases}\tag{3}$$

All proofs are in the Appendix.

Let $\bar{x} = \frac{x_L+x_R}{2}$ be the midpoint between the candidates' positions. Without voter animus ($\alpha_i = 0$), the cutoff voter's position is at $\bar{\theta}_i = \bar{x}$, just like in the standard model.

Now suppose, instead, that group i voters feel animus ($\alpha_i > 0$) towards a right-leaning out-group, and consider the case where $\mu_j > \bar{x}$. By Lemma 1, we have that $\bar{\theta}_i > \bar{x}$, so a group i voter with policy ideal point $\theta = \bar{x}$ strictly prefers candidate L. Intuitively, $\mu_j > \bar{x}$ implies that candidate L's policy hurts the out-group j more than candidate R's position. Increasing α or decreasing β and p increases the gap between $\bar{\theta}_i$ and $\bar{x}$.

In contrast to the standard model, ours yields some overlap in the policy preferences of the supporters of the left and right candidates. Consider Figure 1, which assumes that the two groups' medians are located symmetrically around 0 at -1 (for group 1) and 1 (for group 2), respectively,[14] and that the candidates' policies are distinct and symmetric around zero. Then (3) implies that $\bar{\theta}_1 > 0$ and $\bar{\theta}_2 < 0$, as shown.

[14]Note that the aggregate distribution of voter types θ can again be single-peaked. In particular, this is always true in the case of normal distributions.

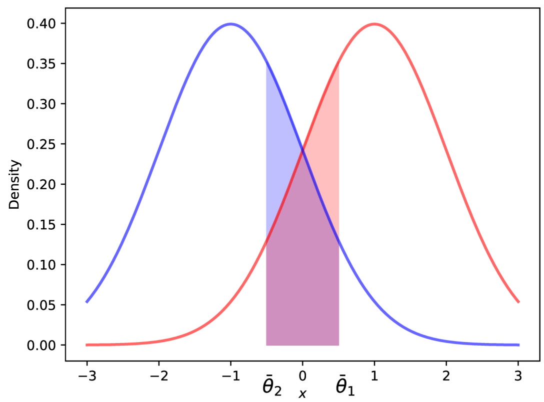

Figure 1: Overlapping voters: Group 1 voters to the left of $\bar{\theta_1}$ vote L, and group 2 voters to the right of $\bar{\theta_2}$ vote R

It is instructive to compare our model with one in which each voter has a *partisan* attachment to one of the two parties; that is, on top of the payoff from policies, a Republican partisan receives an additional fixed, non-policy payoff from Republicans winning office, as do Democratic partisans from Democrats winning office. In such a model of partisanship, overlap also arises, because some Democratic partisans who are policy-wise closer to the Republican position will vote for the Democrats, and vice versa.

The nature of this overlap, however, is quite different from the one that arises in our model. In the partisan model, partisanship matters most when the parties assume the same policy positions; that is, the size of the overlap in the partisan model reaches its maximum when the voter, from a pure policy perspective, is indifferent between the parties. In such a setting, almost all Democratic/Republican partisans (irrespective of their policy preferences) vote for the Democrats/Republicans, respectively. In terms of the voters' ideological positions, the overlap is complete. If, instead, the policy difference between the parties is large, then partisanship plays a smaller role because, for most people, the policy utility difference between the parties outweighs the partisan payoff.

In our model, by contrast, the overlap results from voters' animus toward one another. If the parties' policy positions are indistinguishable from one another, neither candidate provides much of an advantage in antagonizing the out-group. In this case, the cutoffs of both groups are very close to the average party position, and the overlap is minimal. If, instead, the difference between the parties' positions is large, then one of the candidates is significantly worse for the out-group, and many in-group voters are willing to support that candidate even if it comes at the cost of some policy utility. Of course, the behavior among voters of the other group is symmetric. Thus, in our model, large policy differences between parties result in a large overlap in the two groups' voting behavior.

Knowing the indifferent voter in each group allows us to determine m, the critical value of the shift parameter M that determines which candidate wins the election. The election ends in a tie if

$$q_1\Phi_1\left(\bar{\theta}_1 - m - \mu_1\right) + q_2\Phi_2\left(\bar{\theta}_2 - m - \mu_2\right) = \frac{1}{2}, \tag{4}$$

and the left (right) party wins for smaller (larger) values of M. In Lemma 2, we explicitly solve equation (4) for m when the groups are equal sized and have the same preference distributions.

Lemma 2 *If $q_1 = q_2$ and $\Phi_1 = \Phi_2$, then the state at which the election ends in a tie is*

$$m(x_L, x_R) = \frac{\bar{\theta}_1 + \bar{\theta}_2 - \mu_1 - \mu_2}{2}, \tag{5}$$

where $\bar{\theta}_i$ is defined in (3).

In combination with Lemma 1, Lemma 2 reveals that animus among voters reduces candidates' incentives to moderate in electoral competition. To see this crucial result, suppose for example that $\theta_L < x_L < x_R < \theta_R$ and hence

$$m(x_L, x_R) = \frac{\alpha_1\mu_2 + \alpha_2\mu_1}{2(\beta + p)} + \frac{\beta + p - 0.5(\alpha_1 + \alpha_2)}{\beta + p} \cdot \frac{x_L + x_R}{2}. \tag{6}$$

If $\alpha_1 = \alpha_2 = 0$, then the factor in front of the average policy position (i.e., $\frac{x_L+x_R}{2}$) simplifies to one, while this factor shrinks as α_i increases. Thus, in a world with animus, the marginal shift of the indifferent voter that a candidate can attract by moderation, and thus the candidate's electoral benefit of moderation, is smaller than in a world without animus. By contrast, the candidate's cost of moderation only depends on their policy preferences and is thus the same as in the standard model.

3.2 Equilibrium

In this section, we assume that the groups are of equal size, located symmetrically around zero (i.e., $\mu_2 = -\mu_1 = \mu$), and that the candidates' ideal positions are also symmetric around zero ($\theta_L = -\theta_R$). Furthermore, we focus on a case in which candidates are more extreme than the medians of the two population groups, and that there is some intermediate amount of uncertainty about the position shift parameter—that is, $\mu_2 < 1/(2f(0)) < \theta_R$.

Note first that p, the probability that the policy is implemented, does not affect the solution of the candidates' optimization problems (because candidates are purely office-motivated, and their optimal choice just needs to focus on those cases where their position can be implemented). Candidate L and R solve, respectively,

$$\max_{x_L} -F(m(x_L, x_R))|x_L - \theta_L| - (1 - F(m(x_L, x_R)))|x_R - \theta_L|, \tag{7}$$

$$\max_{x_R} -F(m(x_L, x_R))|x_L - \theta_R| - (1 - F(m(x_L, x_R)))|x_R - \theta_R|. \tag{8}$$

As in most models of position choice, a candidate here trades off the benefits of positioning closer to his ideal point (good in case of victory) against the costs of reducing his winning probability. Suppose that $x_L < -\mu$ and $x_R > \mu$. Substituting $\mu_2 = -\mu_1 = \mu$ into equation (6) implies

$$m = \frac{\mu(\alpha_1 - \alpha_2)}{2(\beta + p)} + \frac{\beta + p - \bar{\alpha}}{\beta + p}\frac{x_L + x_R}{2}, \tag{9}$$

where $\bar{\alpha} = (\alpha_1 + \alpha_2)/2$ denotes the average level of animus.

3.2.1 Low to Moderate Animus

Having established preliminaries, we now consider a situation in which inter-group animus is not especially large. In particular, let $\bar{\alpha} \leq \beta + p$, where $\bar{\alpha} = 0.5(\alpha_1 + \alpha_2)$.

Is there an equilibrium in which both candidates adopt positions between their respective ideal points and zero? As proved in Lemma 3 in the Appendix, for an interior equilibrium with $x_L > \theta_L$ and $x_R < \theta_R$, the following first-order conditions are necessary and sufficient:

$$-f(m(x_L, x_R))\left(\frac{\beta + p - \bar{\alpha}}{2(\beta + p)}\right)(x_L - x_R) - F(m(x_L, x_R)) = 0, \tag{10}$$

$$-f(m(x_L, x_R))\left(\frac{\beta + p - \bar{\alpha}}{2(\beta + p)}\right)(x_R - x_L) + (1 - F(m(x_L, x_R))) = 0. \tag{11}$$

When we add these equations, the first terms of both equations cancel out, such that $F(m) = 1/2$. Thus, we see that in equilibrium both candidates win with probability $1/2$, and hence $m = 0$. Using this, (9) and (10) imply

$$x_L = -\frac{\beta + p + f(0)\mu(\alpha_1 - \alpha_2)}{f(0)\,(2(\beta + p) - \alpha_1 - \alpha_2)}; \tag{12}$$

$$x_R = \frac{\beta + p + f(0)\mu(\alpha_2 - \alpha_1)}{f(0)\,(2(\beta + p) - \alpha_1 - \alpha_2)}. \tag{13}$$

Averaging (12) and (13), the expected policy position is

$$\frac{x_L + x_R}{2} = \frac{\mu(\alpha_2 - \alpha_1)}{2(\beta + p) - (\alpha_1 + \alpha_2)} = \frac{1}{2}\frac{\mu\Delta\alpha}{\beta + p - \bar{\alpha}}, \tag{14}$$

where $\Delta\alpha = \alpha_2 - \alpha_1$ is the animus difference, and $\bar{\alpha} = (\alpha_1 + \alpha_2)/2$ is the average animus.

We now want to identify the parameter values for animus under which candidates choose interior positions, and those for which candidates choose their ideal points. Without loss of generality, assume that $\Delta\alpha \geq 0$; The case where $\Delta\alpha < 0$ is analogous.

In this case, by (14), the expected policy is right-of-center. This implies that, as $\bar{\alpha}$ increases, x_R will reach θ_R first, before x_L reaches θ_L. A further marginal increase in $\bar{\alpha}$ then only decreases x_L, while keeping x_R at θ_R. This result is formally stated in the following Proposition 1.

Proposition 1 *In the symmetric model (i.e., $\theta_R = -\theta_L$, $\mu_2 = -\mu_1 = \mu$), let $\mu < 0.5/f(0) < \theta_R$ and $\Delta\alpha \geq 0$. Then there exists $k_1 \leq k_2 < \beta + p$ (where k_1 and k_2 are given by* (23) *and* (24) *in the Appendix, respectively), such that the following holds:*

1. *There exists an equilibrium. The equilibrium is unique for all $\bar{\alpha} \leq \beta + p$.*
2. *If $\bar{\alpha} < k_1$, then x_L and x_R are given by* (12) *and* (13)*, respectively. Each candidate wins with probability 0.5.*
3. *If $k_1 < \bar{\alpha} < k_2$, then $x_R = \theta_R$ and $x_L > \theta_L$.*
4. *If $k_2 < \bar{\alpha} \leq \beta + p$, then $x_L = \theta_L$ and $x_R = \theta_R$. Candidate R's winning probability is $F(\Delta\alpha/(\beta + p)) \geq 0.5$.*
5. *Changing (α_1, α_2) can only change the candidates' winning probabilities if it changes $\Delta\alpha$.*

Proposition 1 shows that increasing animus leads to polarization between candidates, even though the candidates themselves are only policy-motivated. The intuition here is straightforward: as animus increases, voters in both groups become less willing to switch to the candidate associated with the out-group, and therefore both candidates have less incentive to moderate.

Figure 2 displays the equilibrium when animus is symmetric, i.e., $\bar{\alpha} = \alpha_1 = \alpha_2$. Initially, as animus increases, both candidates deviate from one another by equal measure. These deviations, moreover, steadily increase until both candidates simultaneously reach their ideal points θ_i, $i = L, R$. Throughout, Proposition 1 stipulates, both candidates have an equal probability of winning.

Now consider a situation with asymmetric animus. In Figure 3, we assume that the left-wing group 1 does not feel any animus against group 2 ($\alpha_1 = 0$). We then increase group 2's animus

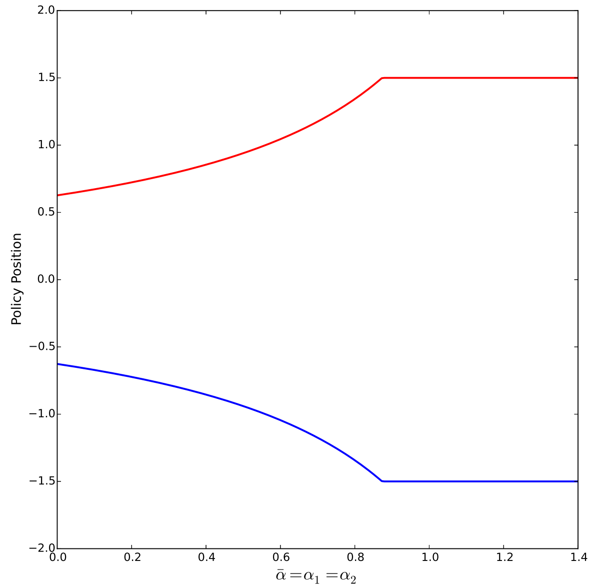

Figure 2: Symmetric animus. Candidate positions when $\alpha_1 = \alpha_2 = \bar{\alpha}$: $\theta_R = 1.5$, $\theta_L = -1.5$, $\beta = 1$, $F \sim N(0, 0.5)$, $p = 0.5$.

against group 1, so that $\Delta\alpha > 0$. Again, we find that both candidates' policy positions become more extreme. In contrast to Figure 2, however, candidate R reaches her ideal point θ_R before candidate L. Further, unlike in the symmetric case, candidate R probability of winning the election also increases when animus increases.

Lastly, we evaluate the comparative statics on β and p.

Corollary 1 *Consider an interior equilibrium where positions are determined by* (12) *and* (13)*, and assume* $\Delta\alpha \geq 0$*. As* $\beta + p$ *increases,*

1. *Candidate R, the candidate associated with the group with stronger animus, becomes more moderate;*

2. *Candidate L becomes more moderate if and only if* $\bar{\alpha} > f(0)\Delta\alpha$*.*

Proof of Corollary 1. Let $B \equiv \beta + p$. Differentiating (13) with respect to B yields

$$\frac{\partial x_R}{\partial B} = \frac{[f(0)\,(2(\beta + p) - 2\bar{\alpha})] - 2f(0)[\beta + p + f(0)\mu(\alpha_2 - \alpha_1)]}{[f(0)\,(2(\beta + p) - \alpha_1 - \alpha_2)]^2} = \frac{-2f(0)[\bar{\alpha} + f(0)\mu\Delta\alpha]}{[2f(0)\,(\beta + p - \bar{\alpha})]^2}, \quad (15)$$

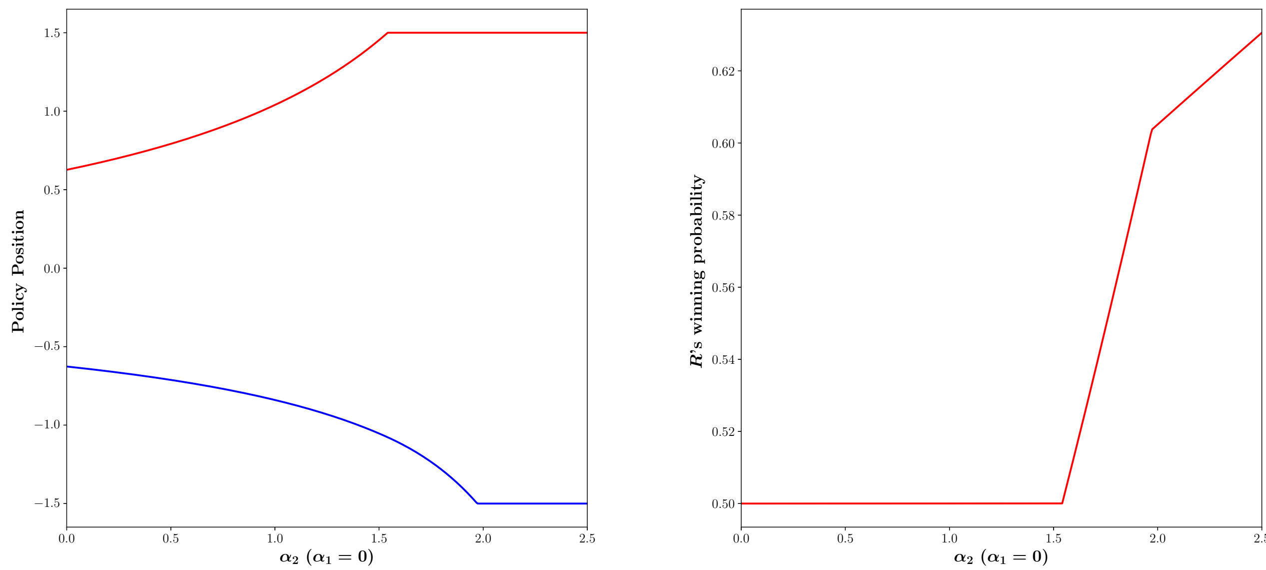

Figure 3: Asymmetric animus. Candidate positions and candidate R's winning probability when $\alpha_1 = 0$, $\theta_R = 1.5$, $\theta_L = -1.5$, $\beta = 1$, $F \sim N(0, 0.5)$, $p = 0.5$.

which is always negative. Thus, an increase in p and/or β leads to a leftward shift in x_R. Similarly,

$$\frac{\partial x_L}{\partial B} = -\frac{f(0)\,(2(\beta + p) + \Delta\alpha) - [\beta + p - f(0)\mu\Delta\alpha]2f(0)}{[f(0)\,(2(\beta + p) - \alpha_1 - \alpha_2)]^2} = \frac{2f(0)[\bar{\alpha} - f(0)\Delta\alpha]}{[2f(0)\,(\beta + p - \bar{\alpha})]^2}. \tag{16}$$

This is positive if and only if the term in square brackets is positive; thus, in particular, if $\Delta\alpha$ is sufficiently close to zero. ■

The candidate associated with the higher animus group always moderates when p and/or β increase. The same applies for the other candidate provided the two groups are not too different in terms of their mutual dislike (i.e., if $\Delta\alpha$ is not too large). Intuitively, an increase in p and/or β does not affect the candidates' utilities directly, but increases the marginal voter's cost of posturing: For example, while $p = 0$ means that one never has to live with the policies proposed by candidates, while for positive p, there is a possibility that the proposed policy does not just irritate the out-group, but is actually implemented, which makes too extreme policies unattractive. Similarly, an increase in β implies that voters have higher mental costs endorsing policies that they do not actually like just in order to irritate the out-group.

3.2.2 High Animus

We now consider the case where animus becomes large, i.e. $\bar{\alpha} > \beta + p$. Establishing equilibrium existence is significantly eased here when the set of policies that candidates can choose is bounded.[15] We therefore assume that x_L, x_R are restricted to the interval $[-X, X]$, where $X > \theta_R$.

If animus between groups is symmetric, higher animus again increases polarization between the candidates. Remember that, when $\bar{\alpha} > p+\beta$, voters become *more willing* to vote for a candidate who proposes a policy farther away from their ideal point as long as it harms the outgroup. In such a setting, the trade-off between electability and their policy preferences thus drives candidates to positions that are *more extreme* than their ideal positions. To see this formally, suppose that $\alpha_1 = \alpha_2 = \bar{\alpha}$ becomes sufficiently large. Then, the left-hand side of (17) becomes strictly negative, while the right-hand side of (18) becomes strictly positive at $x_L = -X$ and $x_R = X$. Thus, in equilibrium both players choose the most extreme policy positions available and win with probability 0.5.

When animus is asymmetric, results change significantly. Consider a setting in which only group 2 dislikes group 1, i.e., $\alpha_1 = 0$, and let α_2 become large. To simplify the argument, suppose further that both Φ and F have bounded support. Suppose, by way of contradiction, that candidate positions are at $-X$ and X, respectively. Then, (3) implies that $\bar{\theta}_2 = -\alpha_2\mu/(\beta + p)$ goes to $-\infty$. Thus, bounded support of the type and shock distribution implies that all voters in group 2 support candidate R. Further, if the support of F is not too large compared to the distribution Φ it follows that a strictly positive share of group 2 voters supports candidate R. Consequently, candidate R wins with probability 1, resulting in policy X with probability 1.

We now show that this cannot happen in equilibrium. To see this, consider a deviation by candidate L to a position that is slightly to the left of X. Then L's winning probability becomes strictly positive, and thus $x_L < X$ is implemented with strictly positive probability. Hence $x_L = -X$, $x_R = X$ is not an equilibrium. Instead, the equilibrium is asymmetric, with Candidate L choosing $x_L \in (\mu, \theta_R)$, while candidate R chooses $x_R > \theta_R$. We formalize our results in the following proposition.

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[15] When α is large, $x_L < \theta_L$ and $x_R > \theta_R$ then the following first-order conditions must be satisfied.

$$-f(m(x_L, x_R))\left(\frac{\beta + p - \bar{\alpha}}{2(\beta + p)}\right)(2\theta_L - x_R - x_L) + F(m(x_L, x_R)) = 0, \tag{17}$$

$$-f(m(x_L, x_R))\left(\frac{\beta + p - \bar{\alpha}}{2(\beta + p)}\right)(2\theta_R - x_R - x_L) - (1 - F(m(x_L, x_R))) = 0. \tag{18}$$

Lemma 3 in the Appendix shows that these first-order conditions are, in fact, sufficient conditions for an equilibrium. However, note that we can replace x_L and x_R by the average policy $\bar{x} = (x_L + x_R)/2$. The same is true for (9). Thus, we have an overdetermined system, because there are three equations but only two variables $\bar{x}$ and m. As a consequence, these first order conditions can only be satisfied for some values of $\bar{\alpha}$, and they will not hold if $\bar{\alpha}$ becomes large.

Proposition 2 *Suppose that Φ and F have bounded support. Let $\theta_R = -\theta_L$, $\mu_2 = -\mu_1 = \mu$, and $q_1 = q_2 = 0.5$. Policies are restricted to the interval $[-X, X]$ where $\theta_R < X < \theta_R + 2\mu$. For any fixed α_1, there exists $k > 0$ such that for $\alpha_2 > k$, the unique equilibrium has the following features:*

Positions satisfy $\mu < x_L < \theta_R < x_R$, and Candidate L is more likely to win than Candidate R. Furthermore, both policies converge to θ_R as $\alpha_2 \to \infty$.

Figure 4 illustrates the implications of Proposition 2 for the case that group 2 (on the right) harbors animus against group 1, but not vice versa. As animus increases ($\alpha_2 \uparrow$), rather than moderating to a position between the two candidates' ideal points, they both converge to θ_R (marked by the dashed line). Thus, Candidate L (the one aligned with the animus-free group 1) ultimately capitulates to candidate R: As animus increases, we see Candidate R assuming less extreme positions closer to her ideal point, while Candidate L rapidly abandons her preferred policy. For very high levels of group 2 animus, the two candidates become indistinguishable.

In the right panel we present candidate R's winning probabilities, where the dashed line is the limit predicted by Proposition 2. Candidate R's winning probability increases in α_2, but it remains much less than 0.5. By moving to the right, we find, candidate L accepts significatly inferior policy positions in order to increase her chances of winning. The result is a political landscape in which the candidate who is aligned with the only group that harbors large amounts of animus wins relatively rarely, but remains perfectly content with the outcome as the other candidate does her bidding.[16]

3.3 Endogenous Animus

In politics, candidates do not merely respond to voter groups' pre-existing antipathy towards one another. Occasionally, they also stoke them.[17] To investigate when politicians will deliberately exacerbate inter-group animus, we now assume that a candidate can manipulate the amount of animus one group of voters feels about another (or both feel against each other).

Whether candidates will choose higher values of α_i depends on whether a candidate can raise the animus felt by the ideologically more-proximate group without affecting the other group; or whether, instead, levels of animus are commonly experienced across both groups. In the latter case, wherein a candidate can only increase α_1 and α_2 by the same amount, inflammatory speech has no benefit. As Proposition 1 indicates, if $\alpha = \alpha_1 = \alpha_2$ and α is increased but α remains below $\tilde{\alpha}$, then

[16] Proposition 2 further indicates that the limiting policy, as well as the winning probabilities, are independent of β and p. The latter follows, because the limit cutoff value m^* is determined solely by θ_R and the distribution F.

[17] For example, Ash et al. (2017) examine how members of Congress allocate time across different issues in their floor speeches, and they find that US senators focus on divisive issues when they are up for election.

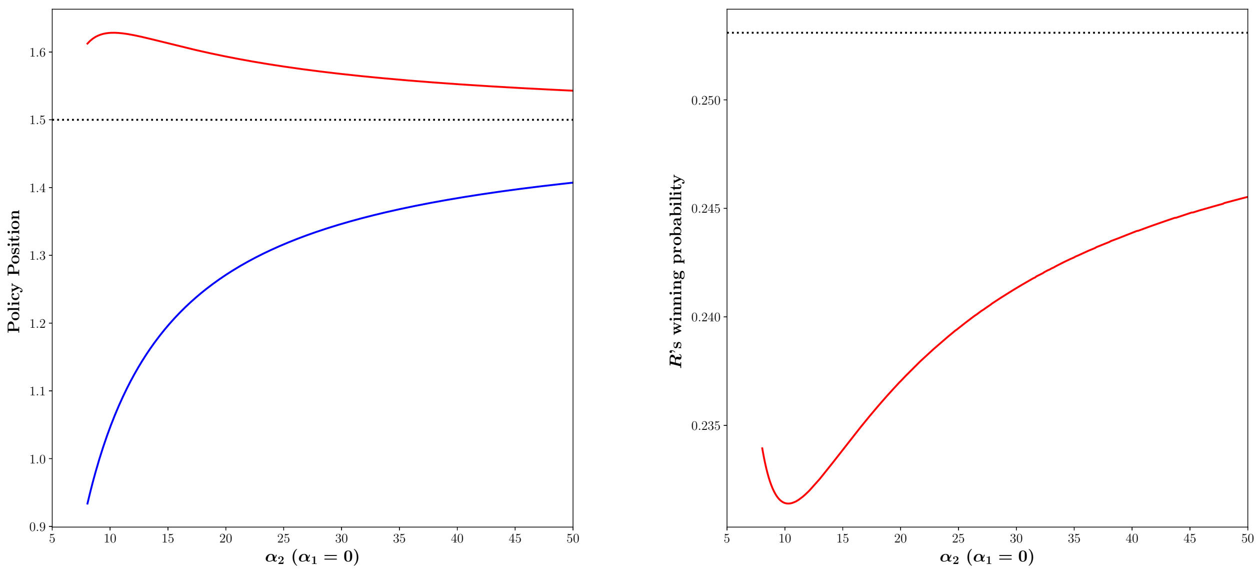

Figure 4: Candidate positions and candidate R's winning probability when $\alpha_1 = 0$, $\theta_R = 1.5$, $\theta_L = -1.5$, $\beta = 1$, $F \sim N(0, 0.5)$, $p = 0.5$, $\bar{X} = 1.7$.

both candidate positions become more extreme, but the candidates' ex-ante expected utilities do not change. If α is raised above $\tilde{\alpha}$, then both candidates are actually worse off. Consequently, if candidates incur any cost associated with increasing animus, then $\alpha = 0$ is optimal.

Things look very different, however, when candidates communicate through exclusive communication channels. When an increase in the animus felt by one group does not automatically induce equivalent increases felt by the other, candidates rather suddenly have incentives to foment intergroup hatreds—at least under some well-specified conditions. To see this, suppose again that both groups have the same size ($q_1 = q_2 = 1/2$), with $\mu_2 = -\mu_1 = \mu$, and ϕ and f are symmetric. Also, let us again consider the case in which candidates are symmetric ($\theta_R = -\theta_L$) and $\mu < 0.5/f(0) < \theta_R$. The only difference now is that each candidate can choose the level of α_i in the group with which she is ideologically aligned, though at cost $c(\alpha_i) = b\alpha_i$, where $b \geq 0$. After this choice has occurred (and becomes common knowledge), the game proceeds as in the basic model, with the candidates choosing positions before the election occurs.

Remember that, for equilibria with $\theta_L < x_L < x_R < \theta_R$, the policy positions are given by (12) and (13). We first analyze whether there exists equilibrium animus levels α_1, α_2, such that policies are strictly between θ_L and θ_R.

In such an equilibrium, the winning probabilities are $1/2$ even if $\alpha_1 \neq \alpha_2$. In the first stage, therefore, candidate R solves $\max_{\alpha_2} 0.5x_L(\alpha_1, \alpha_2)+0.5x_R(\alpha_1, \alpha_2)-b\alpha_2$, subject to (i) $x_R(\alpha_1, \alpha_2) < \theta_R$ and (ii) $x_L(\alpha_1, \alpha_2) > \theta_L$. Note that (14) implies that this objective is strictly convex in α_2. Hence, the solution is either at $\alpha_1 = 0$ or at a point where constraints (i) or (ii) bind. A similar argument holds for candidate L.

For larger $\alpha = \alpha_1 = \alpha_2$, both candidates chooses policies at their respective ideal points. The cutoff value for which this occurs is given in (19) below. Once α exceeds another threshold $\hat{\alpha}$ also defined in (19), no equilibrium would exist unless policies are restricted to be in some compact interval $C = [-X, X]$. If this interval is sufficiently large, then candidates do not have an incentive to raise animus to a level where policies reach the boundary of this set. Thus, in the following we assume that policies are exogenously bounded, but that these bounds are not binding. This ensures that equilibria are defined in all subgames, but the subgames in which the bounds matter are off the equilibrium path.

Proposition 3, whose remaining steps are proved in the Appendix, summarizes the candidates' decisions about whether to stoke animus.

Proposition 3 *Suppose that $\theta_R = -\theta_L$, $\mu_2 = -\mu_1 = \mu$ and that the distribution and size of groups is identical. Let $\mu < 1/(2f(0)) < \theta_R$. Let*

$$\tilde{\alpha} = (\beta + p)\left(1 - \frac{1}{2\theta_R f(0)}\right). \tag{19}$$

Then:

1. *In any subgame perfect and symmetric pure strategy equilibrium animus is either $\alpha_1 = \alpha_2 = 0$ or $\alpha_1 = \alpha_2 \geq \tilde{\alpha}$.*
2. *There exists $\bar{b} > 0$ such that a subgame perfect, pure strategy equilibrium with no animus ($\alpha_1 = \alpha_2 = 0$) exists if and only if $b \geq \bar{b}$. The cost cutoff $\bar{b}$ is strictly increasing in β and p.*

Proposition 3 reveals that when animus increases, it does so rapidly. A very slight change in the underlying fundamentals (such as the candidates' costs of stoking animus or their policy preferences) may move the candidates from a situation in which widespread comity prevails ($\alpha_1 = \alpha_2 = 0$) to one in which inter-group hostilities become inflamed.

Note also that a candidate's interest in stoking animus depends upon the weight that the voter assigns to concerns about cognitive dissonance, β, and the probability that a proposal will actually be implemented, p. When either of these quantities increases, the third point of Proposition 3 shows, the cost threshold at which a candidate no longer invests in animus increases. As a result, α is decreasing in both β and p.

Intuitively, remember that candidates incur a reputational cost if they foment animus, and that their only reason for doing so is to recover a policy platform that is closer to their own ideal point. If the probability p of being able to implement one's policy proposals is small, however, then the cost of stoking animus is no longer worthwhile. The production of animus, as such, arises out of concern about the genuine policy stakes of electoral competition.

4 Discussion

By embedding a richer voter utility function within a standard model of electoral competition, we discover new facts about the origins of partisan polarization, the dynamics of partisan sorting and representation, the animosities that roil our new, more fragmented media landscape, and the electoral consequences of separation of powers.

Partisan Polarization. Our model speaks most directly to an empirical phenomenon that has long puzzled scholars of American politics: namely, why the two major parties have grown increasingly polarized at a time when voters, in the main, have remained ideologically moderate (Ansolabehere et al., 2006; Fiorina et al., 2008; Fowler et al., 2021; Hill and Tausanovitch, 2015). To reconcile these two facts, scholars have offered a variety of explanations that implicate the rise of money in politics (e.g., Baron (1994); Moon (2004); Ensley (2009)), changes in partisan coalitions (Levendusky, 2009), political activists (Layman et al., 2010), partisan primaries (Hill and Tausanovitch, 2015, 2018; Hirano et al., 2010), rule changes within Congress (Theriault, 2008), increasing partisan competition (Lee, 2009), and growing wealth and income inequality (McCarty et al., 2016).[18] To the mix, we add another that focuses our attention squarely on the expressive needs of an electorate.

Expressive considerations are not of a piece. Moreover, we show, they pull in different directions. As voters care more about minimizing cognitive dissonance, our model reveals, candidates assume increasingly moderate positions. But as voters' animosities toward an out-group grow, candidates drift to the extremes of the policy continuum. A political world in which anchoring principles seem less important and inter-group tensions become inflamed, our model reveals, supports rising levels of polarization.

Notice, too, how the voters themselves drive these changes. Whereas much of the existing literature on the causes of polarization points towards external factors that push against the otherwise moderating influence of voters (but see Abramowitz (2010), who argues that the electorate itself is more divided than often presumed), and whereas a vast behavioral literature suggests that

[18]For further discussion of these and other potential causes of polarization, see Barber and McCarty 2018; McCarty 2019.

ill-informed and politically naive voters blindly follow members of their own party or reflexively reject members of the opposition (e.g., Achen and Bartels (2017)), our model reveals how polarization can result from the adaptive behaviors of political elites to an electorate. To draw a straight line from polarized elites to an electorate, one need not reject the possibility that voters hold relatively moderate policy views; nor must one adopt an especially dim view of voters' agency or knowledge. Rather, one need only recognize the expressive needs that inform people's voting behavior.

Partisan Sorting and Representation. A substantial body of work examines the conditions under which voters sort themselves into parties that best represent their policy preferences; and when, instead, voters support a party with which they share some allegiance or identity (see, e.g., (Levendusky, 2009)). Our model clarifies how expressive considerations affect both the propensity of voters to ally themselves with a party that may not represent their policy views well, and the implications their choices have for candidate behavior.

Animus, we show, reifies partisanship and other ascriptive characteristics. As animus towards an out-group increases, voters are inclined to stick with the party with which they are associated, even when the other party does a better job of representing its policy views. Recognizing these calculations by voters, the candidates tack toward their ideal points and, if animus is sufficiently, beyond. As a result, rising levels of animus yield parties that are both ideologically more heterogenous and extreme.

UPDATE When this animus is directed towards a minority group, we also discovered, dramatic changes in the electoral choices presented to voters can ensue. As long as baseline levels of animus remain relatively low, marginal increases have the usual effect of solidifying partisan allegiances and increasing polarization between the candidates. But beyond a certain threshold, the representation of interests associated with this minority group become electorally unviable. As shown in Figure 3, the candidate that previously was associated with this group therefore shifts quite suddenly to the other side of the ideological continuum, leaving its voters bereft of quality (i.e., ideologically proximate) policy representation. Animus directed towards a minority group, once sufficiently acute, can decimate the representation of views over significant portions of an ideological continuum.

The New Media Landscape. Much has been written about the downsides of an increasingly fragmented media market in which consumers self-select into self-affirming news environments (for reviews, see Prior (2013); Winneg et al. (2014); Barberá (2020)). In this new media landscape, it is argued, communication is channelled through enclaves of like-minded individuals. Opportunities for persuasion, mutual understanding, and even the shared recognition of common facts all run in short supply. The result, say some, is a polity that is increasingly divided and "a breeding ground for extremism" (Sunstein, 2018, 71).[19]

Our model highlights yet another pathology associated with the proliferation of these exclusionary channels of political communication. Recall how candidates behave when given the opportunity to manipulate inter-group tensions. When their actions affect voters' understandings of both groups, as assuredly occurs when they are viewed by an entire electorate, candidates seek to temper animosities. By increasing the animus felt by all voters, candidates are driven to the extremes of the policy spectrum without recovering any clear electoral reward. But when candidates can target their messages to voters more closely associated with their own group, their incentives suddenly shift. A candidate is more likely to win re-election, after all, when voters' enmity toward a group associated with the opposition grows. Rather than counsel inter-group tolerance and understanding, therefore, candidates in this setting stoke voters' animosities toward an out-group.

It is clear to see how the new media landscape puts us squarely in this latter world. But notice the source of the polarization that arises. The problem is not just that voters only hear views from political elites with whom they are aligned. The problem also is that these voters are not privy to other communications in which their group is the target of hostilities. This structural asymmetry, in which voters rarely hear what the opposition is saying about groups to which they are affiliated, encourages political elites to foment inter-group hatreds. Changes in the media environment, as such, do not just facilitate new patterns of communication and behavior, as documented by the existing empirical literatures on the media. These changes also alter the political incentives for political elites to stoke animosities within an electorate.

Separation of Powers. Our model reveals an interesting, under-appreciated, and vaguely ironic pathology of systems of separated power, which deliberately impede the translation of campaign promises into established law. In the United States, the Constitution's framers divided power among the various branches of government not just to guard against the accumulation of authority in any single individual or faction. They did so, also, as a check against the worst impulses of what they considered to be an ill-informed, unreasoning electorate. Through staggered elections and the distribution of state power across multiple and sometimes overlapping jurisdictions, it was thought, the government—and by extension, the nation itself—would be afforded some measure of protection against the turbulences and follies of popular sentiment.

James Madison makes the point most forcefully in *Federalist Paper 10*. In it, he recognizes the unavoidable "propensity of mankind to fall into mutual animosities" that yield factions intending to "vex and oppress each other." Unable to extinguish the "impulse of passion," the government instead must seek to control its effects. Because "the CAUSES of faction cannot be removed,"

[19] But see Barberá (2020) for a discussion of empirical studies that suggest that cross-cutting interactions occur more frequently than is usually supposed.

Madison insists, “relief is only to be sought in the means of controlling its EFFECTS.” And the primary way of doing that is through the separation of powers.

At two levels, Madison’s design plainly succeeds. Separation of powers makes it nearly impossible for any one individual, no matter where she resides within the federal government, to advance a policy agenda all on her own. Consequentially, the outcome of any single election bears only weakly on the production of public policies, and the damage wrought by a would-be demagogue is mitigated. Moreover, Proposition 3 tells us, the propensity of candidates to stoke inter-group rivalries increases in the probability that a proposal will become law. To the extent that separation of powers impedes lawmaking, therefore, it may serve as a bulwark against incendiary public appeals.

At a third level, however, separation of powers agitates the very political forces that Madison sought to contain. Within our model, notice the effect that separation of powers has on candidate position-taking. Precisely because the probability of implementation p assumes a relatively small value in systems of separated powers, candidates have greater incentives to indulge the voter’s expressive needs—the baser passions and animosities, that is, that Madison laments. Rather than suppressing these expressive considerations, separation of powers unleashes them into the polity as candidates vie with one another to satisfy voters’ appetites for each. Precisely because the probability of policy change is relatively low in systems of separated powers, candidates have greater incentives to craft positions that are designed, ever more, to antagonize—or “vex,” to borrow Madison’s nomenclature—the opposition. And to do so, the candidates assume ever more increasingly extreme policy positions.

Separation of powers, we now can see, functions at different registers. In ways Madison plainly intended, this institutional design impedes the machinations of a demagogue. But in ways he obviously did not, this same institutional design increases the chances that such a demagogue rises to power.

5 Conclusion

We study a model of electoral competition in which candidates’ positions matter not just for the production of policy, but also for the affirmation of voters’ self-understandings and group enmities. By incorporating both instrumental and expressive considerations into the voter’s utility, we recover reasonably clear comparative statics on candidate position-taking, electoral fortunes, and the manipulation of inter-group tensions. Because the model does not incorporate candidate entry, all of these effects derive from changing electoral incentives.

Whereas concerns about cognitive dissonance discourage candidate extremism, we show, inter-group animosities encourage it. When the stakes of an election are reasonably low, either because insufficient power is vested in an office or because other (un-modeled) political entities stand in its way, candidates can be expected to indulge voters' expressive needs and wants. And when candidates can target their communications, they have individual incentives to inflame inter-group tensions, even though doing so makes them collectively worse off.

As candidates intermittently accommodate or aggravate voters' expressive needs, extremism and demagoguery take root. From the very beginning, the nation's founders worried that politicians might "flatter [citizens'] prejudices to betray their interests," as Alexander Hamilton famously wrote in Federalist 71. Less appreciated, though, were the risks that a system of separated powers might hasten this eventuality; that siloed channels of political communication would exacerbate the problem; and that the demonization of a minority group might further distort patterns of political representation. Our model excavates such possibilities and illuminates their consequence for electoral politics.

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6 Appendix

Proof of Lemma 1. Equation 3 follows from simplifying (2) and dividing by $(x_R - x_L)$. Note that the coefficients of μ_j and $(x_L + x_R)/2$ add up to 1, but that the first coefficient can exceed 1, in which case the second coefficient becomes negative. The comparative statics results are immediate from inspection. ■

Proof of Lemma 2. Recall that the distributions Φ_i are symmetric around zero. Thus, if $q_1 = q_2$ and $\Phi_1 = \Phi_2$ then (4) holds if and only if $\bar{\theta}_1 - m - \mu_1 = -(\bar{\theta}_2 - m - \mu_2)$. Solving this equation for m yields (5). ■

Lemma 3

1. *If $\bar{\alpha} < \beta + p$ then:*
   - (a) *any solution to the first-order conditions* (10) *or* (11) *solves the candidates' optimization problems.*
   - (b) *any solution to the first-order conditions* (17) *or* (18) *is a local Nash equilibrium.*
2. *If $\bar{\alpha} > \beta + p$ then:*
   - (a) (10) *and* (11) *have no solution. In particular, candidate L's expected payoff is strictly decreasing in x_L, while candidate R's is strictly increasing in x_R.*
   - (b) *any solution to the first-order conditions* (17) *and* (18) *solves the candidates' optimization problems. Further, Further, the solutions depends on x_L and x_R only through the average $\bar{x} = (x_L + x_R)/2$.*
   - (c) *Any solution to* (28) *and* (29) *is a local Nash equilibrium if $x_L \geq \mu$.*

Proof of Lemma 3. First consider the first-order condition (10), and let x_L^* be a solution for given x_R. We show that, if this first order condition holds for L or R, respectively, then the left-hand side is decreasing in x_L and x_R, respectively in the neighborhood of any solution of the first order condition.

Suppose that $\bar{\alpha} > \beta + p$. Then the left-hand side of (10) is strictly negative, i.e., increasing x_L lowers candidate L's expected payoff, while (11) is strictly negative, i.e., candidate R's expected payoff strictly increases with x_R. This also implies that there is no solution to the first-order condition in this case.

Now suppose that $\bar{\alpha} < \beta + p$. Dividing both sides of (10) by $F(m)$, and using the symmetry of the distribution F yields

$$\frac{f(-m)}{1 - F(-m)}\left(\frac{\beta + p - \bar{\alpha}}{2(\beta + p)}\right)(x_R - x_L) - 1 \tag{20}$$

Equation (9) implies that m is strictly increasing in x_L. Because F has a monotone hazard rate, $f(-m)/(1 - F(-m))$ is decreasing in x_L. Similarly, $x_R - x_L$ is decreasing in x_L and hence the fact that $\beta + p - \bar{\alpha} > 0$ implies that (20) is decreasing in x_L. Thus, if (10) is zero at x_L^*, then (17) is strictly positive for $x_L < x_L^*$, and strictly negative when $x_L > x_L^*$. Thus, any solution to the first order condition (10) maximizes candidate L's utility, i.e., is a global maximum.

The argument for candidate R's first order condition (11) is similar. In this case, we divide both sides of (11) by $1 - F(m)$ and again use the fact that the hazard rate is monotone.

Now consider the first-order condition (17) for candidate L. Suppose that $x_L + x_R > 2\theta_L$. Then $\bar{\alpha} > \beta + p$ in order for the first-order condition to hold. Now divide the left-hand side of (17) by $F(m)$ and use symmetry of the distribution to get

$$\left(\frac{\beta + p - \bar{\alpha}}{2(\beta + p)}\right)\frac{f(-m)}{1 - F(-m)}(x_R + x_L - 2\theta_L) + 1 \tag{21}$$

Because $\bar{\alpha} > \beta + p$ equation (9) implies that m decreases as x_L is increased. Hence, $f(-m)/(1 - F(m))$ increases with x_L. Similarly, the third factor in (21) is strictly increasing in x_L. Thus, the product of these two positive factor is strictly increasing. Because $\bar{\alpha} > \beta + p$ it follows that (21) is strictly decreasing in x_L. We can therefore again conclude that any solution to the first order condition is a global maximum. (The argument for candidate R is analogous.)

Now suppose that $x_L + x_R < 2\theta_L$. Then $\bar{\alpha} < \beta + p$. We can rewrite (21) as follows

$$-\left(\frac{\beta + p - \bar{\alpha}}{2(\beta + p)}\right)\frac{f(-m)}{1 - F(-m)}(2\theta_L - x_L - x_R) + 1. \tag{22}$$

Because $\bar{\alpha} < \beta + p$ it follows that m increases as x_L is increased. Thus, $f(-m)/(1 - F(-m))$ decreases with x_L. Similarly, $2\theta_L - x_L - x_R > 0$ and decreasing in x_L. Because the first factor in (22) is strictly negative, it follows that (22) is strictly increasing. Thus, a solution to the first order condition is a minimum in this case. Again, a similar argument applies for candidate R.

Finally, suppose that (28) and (29) are satisfied. Similar arguments again show the left-hand sides of the equations are strictly decreasing at any solution. Thus, any solution to both equations is a local equilibrium if $x_L > \mu$. ■

Proof of Proposition 1. First, suppose that $\bar{\alpha} < \beta + p$. Lemma 3 implies that neither (17) nor (18) applies. Thus, we have the following possibilities: (i) both (10) and (11) must be satisfied; (ii) only one of the first-order condition holds, while the other candidate chooses a policy at his ideal point; (iii) both candidates are at their respective ideal policy positions.

Case (i) is discussed in the text, and the formulas for x_L and x_R are derived. It is also immediate that the equilibrium is unique. Further, this type of equilibrium exists for all $\bar{\alpha} < k_1$, where k_1 is given by the value of $\bar{\alpha}$ that makes x_R equal to θ_R. This yields

$$k_1 = (\beta + p)\left(1 - \frac{1}{2\theta_R f(0)}\right) - \frac{\mu\Delta\alpha}{2\theta_R}. \tag{23}$$

When $\bar{\alpha}$ increases above k_1, candidate R's position remains at $x_R = \theta_R$. Lemma 3 implies that candidate L's position is given by the solution of the first-order condition (10) if we substitute $x_R = \theta_R$. Note that, if $\bar{\alpha} = \beta + p$, then (9) implies that the cutoff realization $m = -\Delta\alpha/(\beta + p)$, and is therefore independent of x_L and x_R. Thus, the solutions of maximization problems (7) and (8) are $x_L = \theta_L$ and $x_R = \theta_R$, respectively. Thus, as $\bar{\alpha}$ increases above k_1, we must eventually reach the point where $x_L = \theta_L$. At this point, the first order condition (10) must hold with equality. Raising $\bar{\alpha}$ and keeping $x_L = \theta_L$ immediately implies that the left-hand side of (10) becomes strictly negative.

Furthermore, the cutoff value for $\bar{\alpha}$ is given by

$$k_2 = (\beta + p)\left(1 - \frac{1 - F\left(\frac{\mu(\Delta\alpha)}{2(\beta+p)}\right)}{f\left(\frac{\mu(\Delta\alpha)}{2(\beta+p)}\right)\theta_R}\right). \tag{24}$$

Note that $k_2 > k_1$ if $\Delta\alpha > 0$, because F has a monotone hazard rate, and hence $(1 - F(m))/f(m) < (1 - F(0))/f(0) = 1/(2f(0))$.

For $\bar{\alpha} = \beta + p > k_2$, the change in a candidate's position has no impact on the election probability. In particular, (9) implies that the cutoff is given by $m = -\mu\Delta\alpha/(2\beta + 2p)$.

Lemma 3 indicates that only (17) and (18) can apply if $\bar{\alpha} > \beta + p$. Thus, for $\bar{\alpha} \leq \beta + p$ we get the cases that we just analyzed. ■

Proof of Proposition 2. Lemma 1 and Lemma 2 imply that the critical value of m is given by (9) if $x_L < -\mu < \mu < x_R$. If $\mu < x_L < x_R$ then the cutoff is given by

$$m(x_L, x_R) = \frac{x_L + x_R}{2} - \frac{x_R - x_L}{2}\frac{\bar{\alpha}}{\beta + p}. \tag{25}$$

First, suppose that $x_L < -\mu$ and $x_R > \mu$. Then the first-order conditions (17) and (18) apply.

Subtracting (17) from (18) and substituting the result into (18) we get the following two equations:

$$2\theta_R f(m)\left(\frac{\bar{\alpha}-\beta+p}{\beta+p}\right)=1; \tag{26}$$

$$\frac{\theta_R-\bar{x}}{2\theta_R}=1-F(m). \tag{27}$$

In addition, m is given by (9).

For every $\bar{\alpha}>\beta+p$ there is a unique $\bar{x}$ that solves (27). Let $\Delta\alpha\geq 0$. Then (9) implies $m\leq 0$ for $\bar{x}=0$, which implies $1-F(m)\geq 0.5$. Hence, the left-hand side of (27) is less or equal to the right-hand side. Next, let $\bar{x}=-\theta_R$. Then the left-hand side of (27) is one, and therefore at least as large as the right-hand side. Hence, by continuity there exists a $\bar{x}$ that solves (27)

To show uniqueness, note that the left-hand side of (27) is strictly decreasing in $\bar{x}$. Further, (9) implies that increasing $\bar{x}$ decreases m because $\bar{\alpha}>\beta+p$. Thus, $1-F(m)$ increases, which implies that the solution $\bar{x}(\alpha_2)$ is unique.

Next, (9) implies that m is strictly decreasing in α_2 and hence $1-F(m)$ is increasing when $\bar{x}>-\mu$ while the reverse is true when $\bar{x}<-\bar{\mu}$. Thus, $\bar{x}(\alpha_2)$ is decreasing in α_2 when $\bar{x}(\alpha_2)>-\mu$ and increasing when $\bar{x}(\alpha_2)<-\mu$. Hence, $\bar{x}(\alpha_2)$ remains bounded for large α_2. Thus, (27) implies that $F(m)$ remains bounded away form 0 and 1. This, in turn, implies that $f(m)$ is bounded away from 0 for large α_2. However, this implies that the left-hand side of (26) goes to infinity as $\alpha_2\to\infty$. Hence, no solution to the first order conditions exists for large α_2, and hence no equilibrium with $x_L<\theta_L<\theta_R<x_R$

It is easy to see that equilibria with $x_L=\theta_L$ or $x_R=\theta_R$ also cannot exist for large α_2. A similar argument shows that equilibria with $-\mu<x_L<\mu<x_R$ does not exist.

Thus, it remains to consider the case where $\mu<x_L<\theta_R<x_R$. The first-order conditions are given by

$$-f(m(x_L,x_R))\left(\frac{\beta+p+\bar{\alpha}}{2(\beta+p)}\right)(x_L-x_R)-F(m(x_L,x_R))=0, \tag{28}$$

$$-f(m(x_L,x_R))\left(\frac{\beta+p-\bar{\alpha}}{2(\beta+p)}\right)(2\theta_R-x_R-x_L)-(1-F(m(x_L,x_R)))=0, \tag{29}$$

where m must satisfy (25). The first-order conditions immediately imply

$$\frac{x_L+x_R}{2}=\theta_R-\frac{(1-F(m))(\beta+p)}{f(m)(\bar{\alpha}-\beta-p)}, \tag{30}$$

$$\frac{x_R-x_L}{2}=\frac{F(m)(\beta+p)}{f(m)(\bar{\alpha}+\beta+p)}. \tag{31}$$

Substituting (30) an (31) into (25) and rearranging terms yields.

$$f(m)(\theta_R - m) = \frac{\bar{\alpha}F(m)}{(\bar{\alpha} + \beta + p)} + \frac{(\beta + p)(1 - F(m))}{(\bar{\alpha} - \beta - p)} \tag{32}$$

Dividing both sides of (33) by $F(m)$ and using symmetry yields

$$\frac{f(-m)}{1 - F(-m)}(\theta_R - m) = \frac{\bar{\alpha}F(m)}{(\bar{\alpha} + \beta + p)} + \frac{(\beta + p)(1 - F(m))}{F(m)(\bar{\alpha} - \beta - p)} \tag{33}$$

For $m = \theta_R$ the left-hand side of (33) is less than the right-hand side. Now let $m = 0$. Then the left-hand side of (33) is equal to $2f(0)\theta_R$. Further, the right-hand side is decreasing in $\bar{\alpha}$ and converges to 0.5 as $\bar{\alpha} \to \infty$. Hence, for large $\bar{\alpha}$ the right-hand side is less or equal to 1. However, by assumption $\theta_R > 2f(0)$. Hence the left-hand side of (33) is strictly larger than 1. Hence, by continuity there exists an $m > 0$ that solves the equation. Further, because the left-hand side is decreasing in m while the right-hand side is increasing for large $\bar{\alpha}$, it follows that the solution is unique.

Finally, to show that we have an equilibrium, it remains to check that it is not optimal for candidate L to deviate to a position $x_L < \mu$. The above argument shows that we have solution to the candidates' optimization problem if the cutoff value of m is given by (25). Suppose that candidate L deviates to x_L with $-\mu \leq x_L \leq \mu$. Then the cutoff $\bar{\theta}_1$ is still described by the same formula, i.e., the third case in (3). The cutoff for $\bar{\theta}_2$ changes from the third case to the first case in (3). Denote these values by $\bar{\theta}_{2,3}$ and $\bar{\theta}_{2,1}$. Then

$$\bar{\theta}_{2,3} - \bar{\theta}_{2,1} = \frac{\alpha_2(\mu + x_L)}{\beta + p} \geq 0,$$

with the strict equality holding for $x_L > -\mu$. Lemma 2 implies that the cutoff $m = 0.5(\bar{\theta}_1 + \bar{\theta}_2)$. Thus, the cutoff is higher under $\bar{\theta}_{2,3}$ than $\bar{\theta}_{2,1}$. Thus, if we replace (25) by the actual equation for m the utility of candidate L is decreased. Because a deviation is not optimal with cutoff (25) it is also not optimal for the actual cutoff equation.

Next, suppose that candidate L deviates to $X < x_L < -\mu$. Then the fact that x_L is closer to $-\mu$ than x_R implies that $\theta_2 \to -\infty$ as $\alpha_2 \to \infty$. Therefore as discussed in the text, group 2 does not vote for candidate L and candidate L always loses, i.e., policy x_R is implemented with probability 1. In contrast, in the proposed equilibrium candidate L wins with positive probability with policy $x_L < x_R$.

Taking the limit of (32) for $\alpha_2 \to \infty$ (and hence $\bar{\alpha}_2 \to \infty$) the equation becomes $f(m)(\theta_R - m) = F(m)$ which determines the equilibrium cutoff in the limit. Again, it follows that $m > 0$, i.e., candidate L's winning probability exceeds 0.5.

■

Proof of Proposition 3. The argument that an interior equilibrium (i.e., $\theta_L < x_L < x_R < \theta_R$) cannot exist is in the main text. Next, note that, if the boundaries of the interval of policies C are sufficiently large, then it is not optimal to choose a level of α_i at which the policy moves to the boundaries. Thus, if we consider symmetric equilibria, we can focus on the case where $x_R = -x_L = \theta_R$, or where $\alpha_1 = \alpha_2 = 0$ and therefore $x_L = -x_R = 1/(2f(0))$.

If $x_L = -x_R$ then (9) implies

$$m = \frac{\mu(\alpha_1 - \alpha_2)}{\beta + p}. \tag{34}$$

Let $\hat{\alpha}$ be the value at which (17) and (18) hold for $\alpha_1 = \alpha_2 = \hat{\alpha}$. Thus, $\hat{\alpha}$ is defined by

$$f(0)\theta_R\left(\frac{\hat{\alpha} - \beta - p}{\beta + p}\right) = \frac{1}{2}. \tag{35}$$

For $\alpha_1 = \alpha_2 = \hat{\alpha}$ and choice of policies with $x_L \leq \theta_L < \theta_R \leq x_R$ and $x_L + x_R = 0$ is optimal. For larger α_i the solution is $x_L = x_R = \hat{x}$.

Further, let $\tilde{\alpha}$ be the value at which (12) and (13) are equal to θ_L and θ_R, respectively for $\alpha_1 = \alpha_2 = \tilde{\alpha}$. Thus, $\tilde{\alpha}$ solves

$$\frac{\beta + p}{2f(0)(\beta + p - \tilde{\alpha})} = \theta_R. \tag{36}$$

Hence, $\tilde{\alpha}$ and $\hat{\alpha}$ are given by (19).

In an equilibrium, with $\tilde{\alpha} \leq \alpha \leq \hat{\alpha}$ candidate R's choice of α_2 must satisfy

$$\max_{\alpha_2} -F\left(\frac{\mu(\alpha_1 - \alpha_2)}{\beta + p}\right)(\theta_R - \theta_L) - b\alpha_2. \tag{37}$$

The derivative of (37) at $\alpha_1 = \alpha_2$ is $f(0)\mu(\theta_R - \theta_L)/(\beta + p) - b$, which is independent of α_2. Thus, in equilibrium either $\alpha_1 = \alpha_2 = \tilde{\alpha}$ or $\alpha_1 = \alpha_2 = \hat{\alpha}$.

In an equilibrium with $\alpha_1 = \alpha_2 = 0$ candidate R's utility is

$$-\frac{1}{2}\left(\theta_R - \frac{1}{2f(0)}\right) - \frac{1}{2}\left(\theta_R + \frac{1}{2f(0)}\right) = -\theta_R. \tag{38}$$

If $\alpha_1 = 0$ then $\tilde{\alpha}_2$ at which $x_R = \theta_R$ is given by

$$\tilde{\alpha}_2 = (\beta + p)\frac{2\theta_R f(0) - 1}{f(0)(2 + \theta_R)}. \tag{39}$$

Convexity implies that, if we start with $\alpha_1 = \alpha_2 = 0$, and candidate R deviates, then we only have to consider deviations to α_2 where $x_R = \theta_R$, i.e., to $\tilde{\alpha}_2$. Note that $\tilde{\alpha}_2$ is increasing in β and p. Further, substituting (39) into the objective of (38) yields

$$-F\left(-\frac{\mu(-1+2\theta_R f(0))}{(2+\theta_R)f(0)}\right)(\theta_R - \theta_L) - b\tilde{\alpha}_2. \tag{40}$$

Thus, utility after the deviation is decreasing in β and p, because α_2 is strictly increasing in these parameters. Hence the cost cutoff that supports and equilibrium with no animus, $\bar{b}$, is strictly decreasing in β and p. ■