

Donate To Help Us Fight Back: Political Fundraising and Toxic Rhetoric Online

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March 20, 2023

Abstract

Political candidates utilize social media to mobilize supporters, persuade voters, and raise money. However, little is known about the structure of mass electoral appeals when donors are the primary target instead of voters. Because candidates' donors and voters can differ significantly, with donors more partisan and ideologically extreme on average, we theorize that candidates use strategic rhetoric tailored to specific audiences. To analyze how campaigns perceive and target their "financial electorate," we leverage data from the Facebook Ad Library for 2020 U.S. congressional candidates and distinguish political ads by their persuasion targets. Using text analysis, we test the hypotheses that donor-targeting messages are more toxic, negative, and likely to reference a polarizing president than voter-targeting messages. The results support our hypotheses, and Republican candidates, on average, used more toxic language than their Democratic counterparts. As campaigns' scramble for donations intensifies, these characteristics of fundraising appeals may further polarize the electorate.

Word count: 10,890

Keywords: money in politics, campaign contributions, political persuasion,
political advertisements, online discourse

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Electoral persuasion takes many forms, but the literature’s primary interest has been in how persuasion rhetoric affects voters—specifically, their turnout, perceptions of candidates, and vote choice (Brader 2005; Arceneaux 2007; Huber and Arceneaux 2007; Gerber et al. 2011; Bailey et al. 2016; Kalla and Broockman 2018). In contrast, persuasion rhetoric that targets *campaign donors* has not received much attention. This is puzzling, considering the significant role of individual campaign contributors in American elections—they are the primary source of campaign chests, which enable persuasion and mobilization of voters. As the financial resources required to run campaigns increase with every election, campaigns are desperately attempting to reach and solicit money from individual donors, with incentives more skewed than ever before. These strategies, in turn, may also affect the electorate’s behavior. Given such importance of individual campaign contributors to American politics, this paper aims to address this knowledge gap: how do politicians try to convince potential donors to open their wallets, and how might such donor-targeting communications differ from voter-targeting communications?

Although the lack of available data constrained the previous literature, we now have the means to answer these questions. The existing literature on individual donors has primarily focused on how wealthy donors differ from the average American and how they influence and gain access to legislators. We know little about the opposite direction—how political elites present themselves when they speak to donors. This gap is understandable, as how politicians draw in and communicate with wealthy donors via private events would have been mostly unobservable to researchers. However, with a rising proportion of the American citizenry participating in political giving, candidates are attempting to persuade and target a broad class of potential donors, especially small online donors. This recent change allows us to systematically observe differences in how candidates target donors and voters—understanding how this communication is generated and broadcast is vital to understanding elite discourse and its effects on elections and the full political ecosystem.

Why should persuasion targeting donors be different? First, while the sender of messages that target voters and donors may be the same, the intended recipients are very different. Donation solicitations do not explicitly target voters: in fact, candidates may target citizens not even eligible to cast a ballot for the given candidate—i.e., they may ask out-of-district or out-of-state residents for financial support. The *financial electorate*,¹ as opposed to the voting electorate, falls under the “monetary surrogacy” representation (Mansbridge 2003). Donors can be non-constituents as long as they satisfy the legal constraints; for example, Gimpel et al. (2008) illustrate how two-thirds of congressional campaign cash flows from out-district. Baker (2016) shows this reliance on out-district donors increases members’ ideological extremity, and Canes-Wrone and Miller (2021) shows that the reliance pulls legislators’ positions toward the national donor base. Moreover, the literature has consistently shown that donors are more resourced, ideological, and extreme than voters (Verba et al. 1995; Francia et al. 2003; Barber 2016b; Hill and Huber 2017; Carey et al.

¹Others have used the term ‘donorate’ (Hill and Huber 2017).

2022). Given these differences, donors are likely more responsive to partisan polarizing cues from political elites.

Second, it is not only that donors and voters are different. Campaign contributions are also fundamentally different from votes, and strategies targeting them must differ. Unlike the one-person-one-vote principle, levels of monetary contributions can vary widely depending on the donor. Some donors might be induced to give \$10, while others may be stimulated enough to give \$100 or \$1,000. The same person may give different amounts when approached with varying persuasion strategies. And most campaign contributions can be fully utilized—i.e., there are no “wasted” donations from candidates’ point of view as opposed to wasted votes. If money is leftover from campaigns, it is increasingly used for intraparty transfers to advance the candidate up in the party leadership or stay relevant even after losing the election (Heberlig and Larson 2005; Heberlig et al. 2006; Ackley 2021). Therefore, there is a huge difference between quests for votes and for money—or, as Gimpel and Lee (2006) put it, “[t]he two campaigns are governed by different strategic logics and are waged on different terrain.”

Given these, we ask the following: how do campaigns differentially target donors and voters? This paper fills the gap in the literature using data from the Facebook Ad Library for 2020 U.S. congressional candidates. This dataset provides a transparent and comprehensive set of online advertisements that target U.S. residents more broadly than direct mail or email appeals. Facebook Ads have been shown to be extensively utilized by campaigns (Ridout et al. 2021) with Facebook actively involved in shaping communication in tandem with practitioners (Kreiss and McGregor 2018). Our primary motive is to test whether persuasion that targets donors systematically differs from those targeting voters and argue that it is crucial to understand why and how politicians do this. Indeed, this is an extension of Fenno (1978), but observing how politicians approach different electorates unobtrusively and systematically.

Using text analysis, we find that donor-targeting messages—appeals that contain fundraiser links or languages soliciting money—are typically more toxic, negative, and likely to reference a polarizing political figure (Donald Trump) than voter-targeting messages, with some variations by party and chamber. In particular, that donor-targeting ads are more toxic—measured as the presence of rude, disrespectful, or unreasonable language—holds even when we hold candidates as fixed so that even within candidates, we see evidence of tailored responses by recipient type. Politicians strategically devise campaign messages, and our results suggest that congressional candidates believe stoking partisan grievances with donors is an effective communication strategy, even more so than with voters.

Given how prevalent messages soliciting campaign contributions are, this may be a cause for concern. We argue that as the scramble for donations intensifies, a flood of negative, toxic, and polarizing tactics in donor-targeting ads may further polarize the electorate. This is particularly important because online political communication is less regulated (Fowler et al. 2021). These instances of elite political communication influence public agenda and mass political behavior

(Zaller 1992; Lewandowsky et al. 2020), and the differences we analyze have implications for mass behavior and the discursive environment on digital platforms.

1 Strategic Campaign Messages for Donations

1.1 Persuasion for Donations

Congressional candidates have a clear incentive to raise the money necessary to circulate advertisements, build and maintain a digital presence, pay their campaign staff, and perform other tasks expected of contemporary campaigns (Jacobson and Carson 2019). Moreover, the quest for money has intensified significantly over the years, with congressional campaigns spending more than \$8.7 billion in the 2020 elections (Evers-Hillstrom 2021), which is twice the \$4.1 billion spent in 2016. The number of Americans who contributed to campaigns nearly tripled between 2016 and 2020: 4.7 million donated in 2020, compared with 1.7 million four years prior.² And if 4.7 million ended up actually donating, we presume that the number of citizens targeted by solicitation messages is likely an order of magnitude larger.

Therefore, campaigns desperately try to reach and persuade individual donors to keep their apparatus running. And in campaign contributions, the message matters; candidates' messages are often the primary driver of donations (Magleby et al. 2018). This is especially relevant for individual donors who are more likely to be ideologues (Francia et al. 2003; Ansolabehere et al. 2003; Ensley 2009) with more expressive motivations than "investors" who seek to accrue return on their campaign contributions.

But how do messaging strategies and content differ when campaigns are targeting donors as opposed to voters? Is there any difference, given the ideological and socioeconomic differences between voters and donors (Francia et al. 2003; Barber et al. 2017; Hill and Huber 2017), as well as the fundamental difference between donations and votes? The literature has been largely silent on this question. Some work has examined how politicians differentiate across donors. Hassell (2011), for example, shows that campaigns recognize that viable financial electorates differ between the primary and general stages, and they tailor their appeals accordingly. In addition, Hassell and Monson (2014) and Gaynor and Gimpel (2021) show that direct appeals to donors often specifically target previous or frequent donors rather than casting a broad net. Fowler et al. (2021) examine differences between political ads on TV versus online, finding that the former is comparatively less negative but more partisan.

The only paper that, to our knowledge, examines the distinction between donor- and voter-targeting language is Hassell and Oeltjenbruns (2016), which shows that negative rhetoric is more prevalent in campaign emails with donation requests, controlling for characteristics such as election dynamics, incumbency, predicted electability. Does this pattern hold in cases where

²Data obtained from the [Center for Responsive Politics](#).

campaigns target more broadly—as they now do via the Internet and social media—as opposed to when they contact known supporters via email? Are there other fundamental differences between how campaigns strategically attempt to reach voters and donors, given how online tools have increased candidates’ ability to raise from donors beyond their districts (Malbin 2013)?

Given the prevalence of digital campaigning and digital opportunity structures nowadays (Karpf 2013; Bimber 2014; Kreiss 2016, 2019), the limited scope of academic knowledge about donation solicitations may be surprising. After all, fundraising outcomes, unlike persuasion, are straightforward to measure for each implementation, given the surge of analytic activism and the culture of A/B testing (Karpf 2016) that enables rigorous estimates of treatment effects. However, much of the tacit knowledge built in the field has not traversed to academic scholarship. We understand, however, that the strategies employed are likely to have been extensively tested for whether they bring in higher dollar amounts or more unique donors. In other words, the messages likely reflect the campaigns’ understanding of their audience (Fenno 1978), informed by past experiences or experimentation and the observed responses of donors. Therefore, what we are measuring is likely a mixture of an equilibrium outcome (pre-tested messages) and, to a lesser extent, exploratory attempts to field effective messages.

1.2 Emotions, Toxicity, and Polarization in Strategic Political Communication

Although there is no extant work about how campaigns may differentially message donors and voters, we can build predictions by conceptualizing how donations and votes differ, as well as using the broader literature on strategic political communication in turnout and vote choice.

Negative Emotions and Political Messages for Donations. We know that campaigns strategically use strong emotions such as anger and can mobilize, sustain partisan solidarity, and trigger information-seeking behavior (Marcus et al. 2000; Jerit 2004; Brader 2005, 2006). In particular, anger has a potent effect on individuals’ behavior; it rallies them to defend their convictions, foster cooperation with co-partisans, compromise less, seek out bias-confirming information, and participate more in political processes (Druckman and McDermott 2008; MacKuen et al. 2010; Valentino et al. 2011; Phoenix 2019). Furthermore, anger diminishes the importance individuals place upon democratic values and can drive support for extreme politics (Webster 2020; Webster and Albertson 2022). Accordingly, some extreme politicians attempt to engender feelings of anger in their constituents for their own benefit (Frimer et al. 2019; Webster 2020).³

Mass fundraising appeals rely heavily on out-district donations, which are marked by nationalization and negative emotions. As indicated earlier, we know that monetary surrogacy need not be limited to in-district, voting-eligible populations. Indeed, Geng (2020) reports that for the most competitive Senate races, the proportion of donations from out-district can be more than 90

³See however Lau et al. (2007) that argues that “there is no consistent evidence in the research literature that negative political campaigning “works” in achieving the electoral results that attackers desire.”

percent. This exacerbates the nationalization of policy positions (Gimpel et al. 2008; Canes-Wrone and Miller 2021). Moreover, national donors are more ideologically extreme (Baker 2016; Miller 2022) and give “negative contributions” (Miller 2022), driven to remove incumbents they dislike even when alternative candidates are clearly not poised to win the race.

Given these findings, we hypothesize that mobilizing donors entails—besides emphasizing ideological purity—stoking grievances and appealing to negative emotions. More specifically, we expect to find more sentiments of anger in messages soliciting donations.

H1: Messages targeting donors will, on average, contain more negative emotions (e.g., anger) than messages targeting voters.

Toxicity and Political Messages for Donations. Intense political expressions and evaluations can trigger emotional reactions such as anxiety or anger, especially if the tone is uncivil or toxic (Herbst 2010; Kosmidis and Theocharis 2020). Therefore, incivility and polarizing rhetoric are strategically deployed by candidates for greater participation and engagement (Brooks and Geer 2007; Herbst 2010; Mutz 2015; Jamieson et al. 2017; Chen 2017; Sydnor 2019). In particular, digital media technologies have been described as producing a culture of outrage, and scholars find that negative social media posts from political entities are rewarded with greater engagement (Blassnig et al. 2021; Baranowski et al. 2022; Klinger et al. 2022; Zeitzoff 2023) while disengaging with social media has been linked to lower degrees of polarization (Allcott et al. 2020). Indeed, with many nations rapidly polarizing, there has been a steady decline of civility in political discourse and campaigning documented in the U.S. (Boatright et al. 2019; Zeitzoff 2023), Israel (Zeitzoff 2023), and Europe (Klinger et al. 2022), primarily on social media.

Given the relative ideological extremity of donors and the aforementioned need to invoke negative emotions, we hypothesize that candidates would find it optimal to stoke incivility with donors. If considering only voters, even if crude language is useful for signaling commitment and passion, political candidates need to exercise some caution when veering toward uncivil campaigning. Specifically, we expect candidates to be mindful of alienating moderate voters. An appeal to a voter thus may exhibit a less toxic, even if not necessarily conciliatory, tone. Donors, by contrast, may be spoken to with less “filtered” rhetoric to invoke hatred and disdain, given their relative extremism (Barber 2016b; Hill and Huber 2017; Carey et al. 2022).⁴

Further, there is only an intensive margin to target when it comes to voters, but among donors, it is both the intensive margin (the decision to donate) and the extensive margin (the amount to be donated) that candidates would seek to influence. As Gimpel et al. (2008) stated, “[m]onetary surrogacy ... provides opportunities for more consequential and rewarding participation in politics than are available in the single dyadic representational relationship available to voters.” Given this room to be more responsive to solicitations, coupled with the fact that the average donor is

⁴This is regardless of the size of their donations (Magleby et al. 2018).

richer than the average voter (Verba et al. 1995; Francia et al. 2003), we expect that campaigns will reach out to donors using sensational, disrespectful, and toxic rhetoric when addressing potential financial supporters.

H2: Messages targeting donors will, on average, use language exhibiting higher levels of toxicity relative to messages targeting voters.

Partisan Polarization and Political Messages for Donations. A third dimension that political candidates can use to invoke more donations strategically, besides invoking emotional language or incivility, is to emphasize and exaggerate electoral stakes such as differences in parties' policy positions. We define this as polarizing rhetoric, which can build in-group solidarity (Ballard et al. 2022). Given the intensive and extensive margin argument above, we also expect more polarizing rhetoric in donation-soliciting messages.

One way to measure how polarizing the donation rhetoric was in 2020 is to look for references to Donald Trump, then-incumbent president and a key polarizing political figure. Throughout American history, citizens' views of the president have influenced their engagement with politics (MacKuen et al. 1989; Jacobson 2009). Moreover, Trump was no ordinary incumbent president, as he actively instigated hostility and incivility during his campaigns and communications. Indeed, Zeitzoff (2023) finds that Trump was dominant in the era of "nasty politics," initiating 38% of nasty political communication and being a target in 42% of the cases.

Did the Trump factor also affect fundraising? Fu and Howell (2020) find that donors mete out a financial penalty against Republicans who break ranks by criticizing the president during the 2018 campaign. In addition, Ballard et al. (2021) show that Trump's endorsements of candidates in competitive races significantly increased contributions to his endorsees' Democratic opponents, driven by left-leaning donors' dislike of the president.

We expect campaigns to draft highly partisan messages that can grab constituents' attention and influence engagement when they target donors. Therefore, we expect that Republicans' strong approval of Trump and Democrats' near-unanimous disdain for the former president (Jacobson 2019) make communications that mention him a viable fundraising strategy for members of both parties. While we do not expect voter-targeted advertisements to abstain from mentioning Trump, we expect them to mention him less frequently than donor-targeted ads. This is because, while emphasizing one's connections to or disdain for Trump might be a viable electoral strategy in certain circumstances, it may backfire on candidates in others per the median voter theorem.

H3: Messages targeting donors from both Democratic and Republican candidates will, on average, feature more references to Donald Trump than messages targeting voters.

2 Data and Methods

The dataset consists of advertisements that politicians fielded on Facebook⁵ (now Meta) in the 2020 election cycle (January 1, 2019, to December 31, 2020), collected using the Facebook Ad Library, a public archive of all ads run on the platform. This dataset provides a wealth of opportunity because it is not necessarily targeted toward existing donors, unlike ads through emails. Moreover, more U.S. residents are inadvertently exposed to Facebook ads injected into their timelines in contrast to emails for which individuals may have voluntarily signed up.⁶ In addition, while political emails are mostly discarded and open rates are at best estimated at 20% (Gaynor and Gimpel 2021), political ads are harder to avoid once targeted. Of course, Facebook ads are not likely to reach the network of high-dollar donors that the party curates (Hassell 2017). However, these ads will still target a considerable set of valuable potential donors.

We downloaded all ads for congressional candidates in the U.S. 2020 general election. Although citizens and activists may also initiate persuasion (Mutz et al. 1996) by setting up fundraisers independently from the campaign personnel, we restrict the data to official campaign messages. We also drop independent and third-party candidates from the analysis, limiting our sample to Democrats and Republicans explicitly running for elections in 2020.

To analyze differences across ad types, we classified ads into *donor-targeting ads* and *voter-targeting ads* by (1) detecting keywords such as “chip in,” “pitch in,” or “donate,” as well as (2) identifying whether the ad explicitly embeds links from fundraising platforms such as ActBlue and WinRed (Kim and Li 2023).⁷ Table 1 provides some illustrative examples of each type of ad by party. Generally, donor-targeting ads are longer by about eighty-eight characters, which is equivalent to a short- to mid-length sentence.

Because our primary object of interest is the type of language candidates choose, we deduplicate the ads by the candidate and unique content (candidates often field the same ad across different target geographies and demographics). This leaves us with 16,368 Senate ads and 40,217 House ads. The number of unique ads for each candidate varies dramatically across individuals, with some running no ads whatsoever and others running hundreds of unique ads.⁸ The average impression of an ad from House candidates ranged from 10,634.8 to 33,066.7 views, while for Senate candidates, it ranged from 12,916.3 to 61,451.4.⁹

⁵Of course, Facebook is one of many potential social media platforms used for campaign activity, and practitioners recognize this for effective strategic communication (Kreiss et al. 2018). Therefore, it is likely campaigns, if they have the resources to do so, would tailor their strategies to each platform; e.g., verbal content could be repurposed with small changes for Twitter but change dramatically for TikTok.

⁶In addition to the ad text, researchers have access to the metadata, such as target state-level geography/demographics, date, reach, and amount spent (provided as intervals). It is, unfortunately, difficult to determine the exact degree to which each campaign utilizes microtargeting. However, optimization is certainly possible (Haenschen 2022), and therefore the audience for Facebook Ads is not completely random.

⁷For full steps of the rule-based classification, see Online Appendix.

⁸For example, Alexandria Ocasio-Cortez (D, NY-14)’s campaign ran 498 unique ads 48,169 times in total.

⁹The distribution is skewed to the right, and the lower and upper impressions at the individual ad level are provided in rough intervals than raw numbers, such as “ranging from 10,000 to 50,000 viewers.”

		Party	
		Democratic Party	Republican Party
Target	Donor-targeting	Ro Khanna, CA-17, Incumbent. On March 31, our quarterly fundraising numbers will be released to the public. It’s critical that we put up a big number because our political opponents are watching closely. They want to see if our grassroots campaign has what it takes to compete against corporate PAC money, special interests, and big money fundraisers. Let’s show them what people-power is capable of. Chip in \$5 right now before the deadline to send a message.	Ann Wagner, MO-02, Incumbent. Nancy Pelosi has put a giant target on my back. She just placed a huge media buy right here in the St. Louis area. I need your help if we want to fight back against Pelosi and her socialist army, and take back the House for Republicans. I’m asking, if you can, please chip in \$5, \$10, or \$15 before Sunday, May 31 to help us reach our critical fundraising goal.
	Voter-targeting	John Hickenlooper, D-CO, Challenger. I’m ready to get to work in Washington - fighting to lower health costs, take action against gun violence, and combat climate change. But first, we need to win this race. Add your name today to help us flip the Senate.	Ashley Hinson, IA-01, Challenger. I’m Ashley Hinson. For years I reported the news and I loved every minute of it because I got to witness the goodness of Iowans. But now, Washington is failing us and our current congresswoman isn’t getting the job done. That’s why I’m stepping up to make a difference. And I’m asking for YOUR support and vote on November 3rd! Watch my new ad today >>

Table 1: Examples of Facebook Ad Text in the 2020 General Election, By Party and Target

For *H1*, we use sentiment analysis to identify ads charged with anger, disgust, and fear. This is done using the NRC emoticon lexicon, commonly denoted as EmoLex (Mohammad and Turney 2013a,b), which features a collection of 6,456 unique English words, each connected to one or more of eight emotions and negative/positive sentiment.¹⁰ Then, for *H2*, we use a toxicity¹¹ detection algorithm (Perspective API), which was trained on online speech and is widely used to flag toxic and abusive comments (Rieder and Skop 2021; Frimer et al. 2023).¹² For *H3*, we create a binary variable of whether the ad mentions Trump or not.

The Google Perspective API merits further elaboration. Although originally intended to identify toxicity in online comments, the API’s utility stretches beyond it, and scholars have begun to employ this tool in their analyses of online text. For example, in an analysis of misinformation

¹⁰Note, however, that while commonly used, the lexicon is imperfect (Zad et al. 2021).

¹¹Toxicity is defined as “rude, disrespectful, and or unreasonable.” The classifier is trained on human evaluations.

¹²Computational methods can be applied to uncover patterns in text data, quantifying aspects of speech and scaling actors on theoretically relevant dimensions. They have a variety of applications in social sciences (Grimmer and Stewart 2013; Gentzkow et al. 2019; Grimmer et al. 2022).

circulated by political elites on Twitter, [Mosleh and Rand \(2022\)](#) theorize that social media users subjected to more misinformation will use more toxic rhetoric and expressions of moral outrage in their tweets. They used the Perspective API to measure the toxicity of advertisements and showed that Twitter users who followed elites who posted more false information were inclined to use more toxic language in their posts. [Müller and Schwarz \(2022\)](#) likewise use the API to measure the toxicity of tweets and show that the deletion of Trump’s Twitter account in January 2021 led to a significant decrease in the toxicity of his followers’ tweets.

Our analysis featured a number of key variables. *Anger*, *Fear*, and *Disgust* were coded using the NRC’s Emotions Lexicon. *First Ad Delivery Date* was the date when a given advertisement was first delivered on Facebook. *Chamber* was a dichotomous variable indicating whether a given candidate was running for the House or the Senate. *Party* was also measured as a dichotomous variable.¹³ *Gender* was imputed as male, female, or unknown ([Blevins and Mullen 2015](#)). *Incumbency* was a categorical variable with incumbent, challenger, and open seat candidate as its choices. *Targeting* was measured as a dichotomous variable. Advertisements that contained links to fundraising pages were coded as donor-targeting, as were those advertisements that contained explicit fundraising appeals (e.g., “Chip in,” “Donate today”). *Toxicity* featured the scores from the Google Perspective API, the values of which fall between 0 to 1. The closer the score is to 1, the more likely an advertisement is perceived as toxic.¹⁴ Finally, *Trump* was a dichotomous variable indicating whether or not a given advertisement mentioned Donald Trump by name.

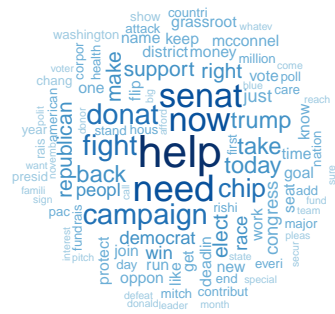
To verify that voter-targeting ads do target the voting electorate, Figure 1 shows the wordclouds of features by party and target, which visualizes the frequency of the tokens that appear in the ads after standard preprocessing. We immediately see that the most frequently used word for both parties when the ads were targeting donors is ‘help,’ while the equivalent word is ‘vote’ when the ads were targeting voters. We also see that ‘Trump’ is frequently mentioned in donor- and voter-targeting ads from both parties, with it being particularly prevalent in Republican voter-targeting ads and Democratic donor-targeting ads.

We also analyze the proportion of such ads that target in-state donors and prospective voters. Figure 2 shows the proportion of ads targeting in-state Facebook users. As should be the case, across both chambers and both parties, voter-targeting ads have a much greater probability of targeting in-state users, indicating that when candidates do target ads to out-of-state Americans, they are highly likely to be courting donations. On average, donor-targeting ads target in-state users at 62.0%, while voter-targeting ads target them at 91.3%. Given that the eligible electorate might be temporarily living out-district, we do not further restrict by geographic targets.

¹³We excluded third-party and independent candidates from our analysis.

¹⁴For example, an ad from incumbent Dan Bishop (R, NC-9), which stated, “These crazy liberal clowns and what they believe are not funny, they are downright scary,” received a toxicity score of 0.9, whereas an ad from incumbent Gil Cisneros (D, CA-39) which stated “Gil Cisneros is helping us and our economy deal with the COVID-19 pandemic – working to assist small businesses and people who have lost their jobs or wages,” received a toxicity score of 0.02.

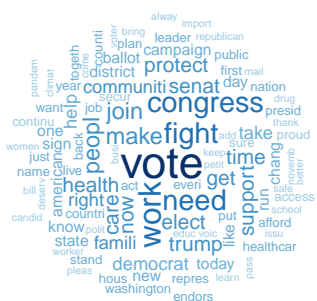
(a) Democrats, Donor-targeting



(b) Republicans, Donor-targeting



(c) Democrats, Voter-targeting



(d) Republicans, Voter-targeting



Figure 1: Wordcloud of 100 Most Frequent Words in Facebook Ads by Party and Target

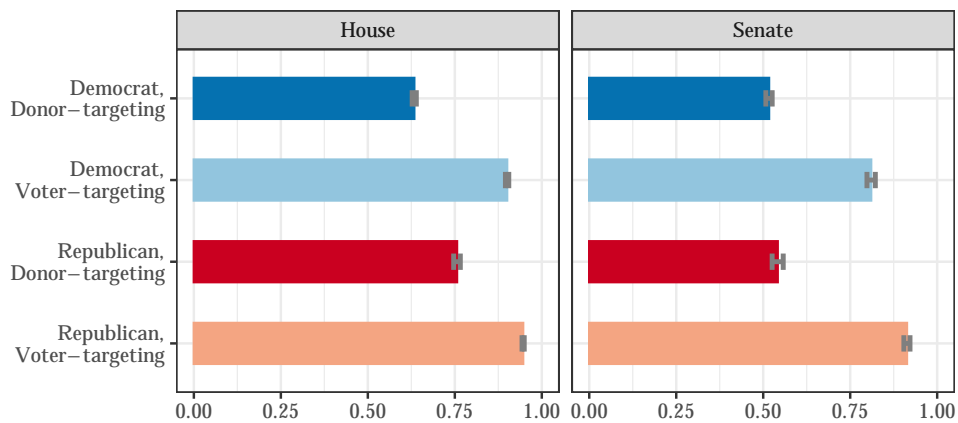


Figure 2: Proportion of In-state Targeting by Type of Facebook Ads

3 Negative Sentiment, Toxicity, and References to Trump

Negative Emotions and Donor-Targeting Ads. Figure 3 displays the average prevalence of emotionally charged words by ad category with 95% confidence intervals. Pooled across chambers and parties, words associated with anger are more prevalent in donor-targeting ads compared to voter-targeting ads (7.5% vs. 5.9%, t -statistic = 24.1). This higher prevalence of anger holds for within all chamber-party subgroups, especially within Senate Republicans. The same trend holds for fear and disgust, except for disgust within Senate Democrats' ads. Pooling across chambers, we observe that donor-targeting ads contain more fear-related words than voter-targeting ads (7.5% vs. 6.4%, t -statistic = 13.9) and disgust-related words (3.9% vs. 3.8%, t -statistic = 3.0), but the difference is smaller in substantive terms.

The majority ads, regardless of the target, will contain at least one word associated with anger, disgust, or fear—but the proportion of such ads is much higher in donor-targeting ads. A word linked to at least one of these emotions is present in 74.1% of donor-targeting ads and in 68.4% of voter-targeting ads (t -statistic = 15.1), with the 95% confidence interval of the percentage difference being [4.98–6.47]. We also observe that 29.3% of ads directed at donors contain words linked to all three emotions while only 20.7% of voter-targeting ads lean simultaneously into these emotions (t -statistic = 23.7), and the 95% confidence interval of the percentage difference is larger at [7.87–9.29]. Overall, donor-targeting ads lean more heavily into invoking negative sentiment than voter-targeting ads, especially anger, confirming our first hypothesis.

Toxicity and Donor-Targeting Ads. Proceeding to the second hypothesis, we first report the average toxicity scores, scaled between 0 to 1 by the intended audience. We find that ads for donors have a toxicity score of 0.065 compared to 0.053 for voter-targeting ads (t -statistic = 17.9). This means that ads that solicit monetary support have a 1.2 percentage point higher probability of being perceived as toxic compared to those asking for votes (95% CI: [1.04–1.30]).

While this difference is statistically significant, it is possible that relevant features of candidates could be unequally distributed across types; to reduce the risk that the relationship between ad type and toxicity is not confounded, we estimate OLS regressions that predict toxicity while conditioning on characteristics such as incumbency or campaign dynamics. The results of the regression where standard errors are clustered by candidate confirm that, on average, donor-targeting ads contain higher levels of toxic language (Table 2(a)).¹⁵ We also see that Republican-sponsored ads have higher toxicity scores on average.

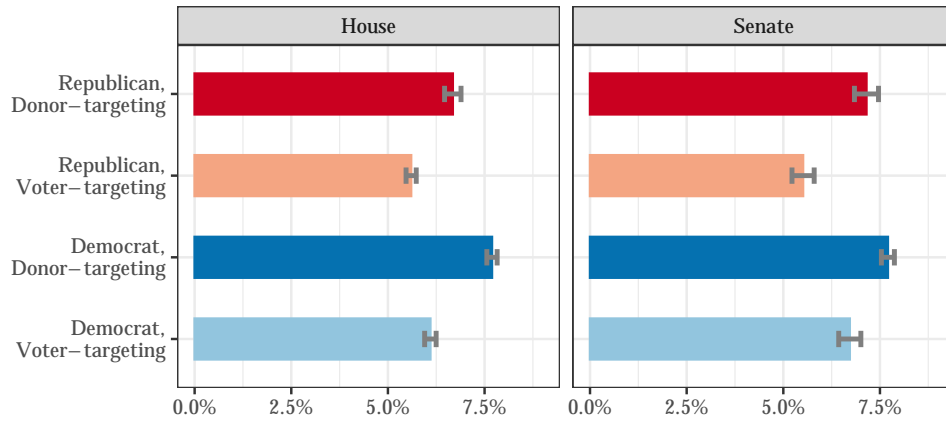
To make sure that this is not a residue of across-candidate heterogeneity, we estimate a within-candidate model. The regression with candidate fixed effects also confirms that donor-targeting ads are more toxic (Table 2(b)).^{16,17} Although the model fit is low, we see that indeed, a given

¹⁵For a model where Republican affiliation and the donor-targeting ad are interacted, see Online Appendix F.

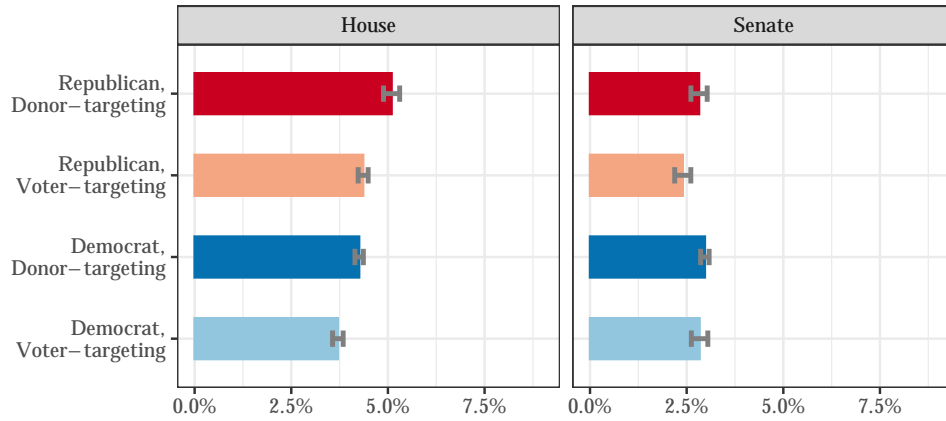
¹⁶Note that 118 candidates (16.4%) had only one type of ads and dropped from the model.

¹⁷To check whether particular candidates were driving the results, we also ran leave-one-out fixed effects models at

(a) Words associated with anger



(b) Words associated with disgust



(c) Words associated with fear

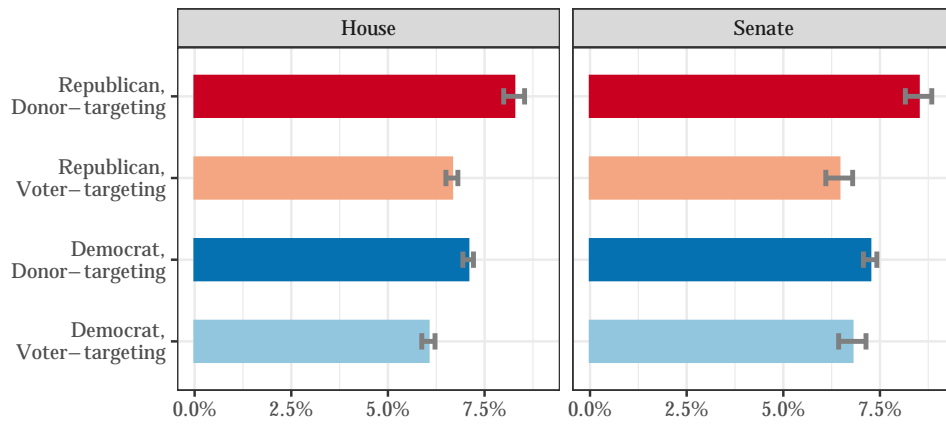


Figure 3: Presence of Words Associated with Negative Emotions by Types of Facebook Ads

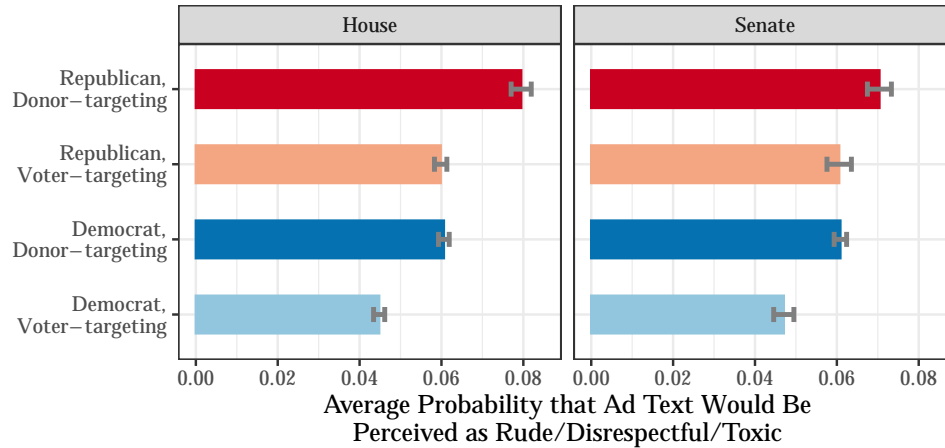


Figure 4: Level of Language Toxicity by Facebook Ad Type

candidate is, on average, likely to shift the persuasion rhetoric towards higher toxicity when targeting donors. Table 3 provides a few illustrative examples of individual candidates from the 2020 Georgia Senate races using more charged rhetoric while targeting donors than while targeting voters during the same campaign period.

Republican ads have a 6.6% average probability of being perceived as toxic, compared to a 5.5% for Democratic ads. In fact, all top 5 most toxic posts are from Republican House members: for example, Mauro Garza (TX-20, R, unsuccessful challenger) wrote a one-word advertisement that said “Idiot.” (toxicity estimate: 0.870), while Kathy Barnette (PA-04, R, unsuccessful challenger) wrote, “I’ve said it once, I’ll say it again: MOBS ARE STUPID! If you’re a part of these mobs, you’re stupid and your days of waging violence, intimidation and chaos on the innocent is OVER WHEN I GET IN OFFICE. You can bet on that... because it’s a FACT! (...just a bunch of stupid, but useful, idiots)” (toxicity estimate: 0.854).

The average toxicity of ads broken down by both party ID of candidates and by the intended audience is displayed in Figure 4. As can be seen, that donor-targeting ads are more toxic is found across all chamber-party pairs with statistically significant differences, and most pronounced among House Republicans. In the House, we observe the following ranking by party and target: toxicity is high in the order of Republican donor-targeting ads (an average ad has an 8.0% probability of being perceived as rude or toxic), Democratic donor-targeting ads (6.1%) Republican voter-targeting ads (6.0%), and Democratic voter-targeting ads (4.5%). Among Senate candidates,

the candidate level. For most of the 720 candidates, statistical significance still held if the candidate was excluded from the dataset, except for four: Raphael Warnock (Democratic Senator, Georgia), Jaime Harrison (Democrat, unsuccessful Senate challenger to Lindsey Graham, South Carolina), Rishi Kumar (Democrat, unsuccessful House challenger to Anna Eshoo (Democrat) for CA-18), Ammar Campa-Najjar (Democrat, defeated in an open-seat race by Darrell Issa (Republican) for CA-50). This seems to be driven by the large number of unique ads that these candidates run, relative to some Republican candidates, who had higher levels of relative toxicity in donor-targeting ads but ran a smaller number of ads. However, a within-candidate regression with candidate/type average-summarized model was still borderline significant ($p < 0.1$)

Dependent Variable:	Toxicity
Republican	0.0157*** (0.0025)
Donor-targeting	0.0167*** (0.0017)
Senate	0.0021 (0.0029)
Incumbent	-0.0082*** (0.0026)
Open seat	-0.0051 (0.0049)
Electoral safety	-3.44×10^{-5} (0.0001)
Male	0.0002 (0.0029)
First ad delivery date	-6.74×10^{-6} (5.8×10^{-6})
<i>Fit statistics</i>	
Observations	56,585
R ²	0.03632
Adjusted R ²	0.03535
(Intercept/state dummies excluded for brevity)	
<i>Clustered (candidate) standard-errors in parentheses</i>	

(a) Clustered Standard Errors

Dependent Variable:	Toxicity
Donor-targeting	0.0160*** (0.0017)
First ad delivery date	-6.16×10^{-6} (6.15×10^{-6})
<i>Fixed-effects</i>	
Candidate	Yes
<i>Fit statistics</i>	
Observations	56,585
R ²	0.12364
Within R ²	0.00797
<i>Clustered (candidate) standard-errors in parentheses</i>	

(b) Candidate Fixed Effects

Table 2: Predicting Toxicity via Simple Linear Regression

toxicity is higher in donor-targeting ads than voter-targeting ads for both parties (7.0% vs. 6.1% for Republicans and 6.1% vs. 4.7% for Democrats).

These patterns are consistent with the expectation that candidates are more motivated to attack and use toxic language when they speak to potential donors relative to situations when they attempt to influence voters. Results based on the Perspective API classification are consistent with the prediction of the second hypothesis.

References to Trump and Donor-Targeting Ads. Finally, we examine the prevalence of references to Donald Trump. Is there a systematic difference in how different types of ads mention Trump? Figure 5 shows that for both chambers and parties, donor-targeting ads are significantly more likely to reference Trump than voter-targeting ads—roughly one out of five ads that target donors mention Trump.

We observe some variation by chamber and party: for Senate ads, there is a clear hierarchy in the order of Republican donor-targeting ads, Republican voter-targeting ads, Democratic donor-targeting ads, and Democratic voter-targeting ads. Within House donor-targeting ads there is not much difference between the two parties, but Republican candidates exhibit a greater propensity to feature Trump in their voter-targeting ads compared to Democratic candidates. Perhaps it can be viewed as surprising that Democratic candidates do mention Trump more frequently, but it is clear that candidates are especially prepared to remind their *donors* of the president they dislike

		Candidate, 2020 Georgia Senate Race	
		Raphael Warnock (D)	Kelly Loeffler (R)
Target	Donor-targeting	Toxicity: 0.200 <i>Rachel Maddow just issued a STUNNING warning to Democrats everywhere:</i> Rachel Maddow says Georgia’s recent election fiasco – the result of Republican voter suppression – is a “WAKE UP CALL” for Democrats. We’re fighting back: We’ve created an emergency response fund to ensure Rev. Warnock (D) has the resources to combat horrific GOP voter suppression, flip the Senate blue and become Georgia’s first Black senator this fall. We’ve set an ambitious goal to raise \$10,000 before midnight, and we’re counting on your support to hit it. We have an incredible MATCH opportunity TODAY ONLY – every dollar you give will be doubled. So please, will you donate right now to fight back against GOP voter suppression and flip Georgia blue?	Toxicity: 0.373 The Black Lives Matter Organization is a radical left-wing group that stands for anti-semitism, defunding the police, and destroying the nuclear family. Racism has no place in our country, but neither does this organization that promotes destruction and violence against anybody who dares to challenge their dangerous agenda. We MUST stand up against this radical organization. ADD YOUR NAME if you agree.
	Voter-targeting	Toxicity: 0.012 The vote is the democratic expression of this idea that all of us have value, so we ought to have a voice in determining our own destiny.	Toxicity: 0.014 I’m a businessperson and conservative political outsider and the ONLY U.S. Senator with a 100% voting record with President Trump. LIKE our page to join Team Kelly today

Table 3: Examples of Donor- and Voter-Targeting Ads, 2020 Georgia Senate Races

Note: Loeffler’s donor-targeting ads received an average toxicity score of 0.068, and her voter-targeting ads received an average of 0.060. Warnock’s donor-targeting ads received an average toxicity of 0.223, and his voter-targeting ads received an average of 0.100. All four advertisements were between August 27, 2020, to Sep 8, 2020, a span of twelve days.

(more so than their voters). These patterns support the third hypothesis.

We conclude with Figure 6, which presents toxicity distributions of advertisements that do and do not mention Donald Trump by party and chamber. Except within Senate Republicans, for all party-chamber combinations, advertisements that mention Donald Trump are more likely to be perceived as toxic than those that do not mention him.¹⁸

The prevalence and toxicity of advertisements that mention Donald Trump are indicative of the former president’s prominence in American politics during the 2020 campaign. Mentions of Trump were far more prevalent among donor-targeting advertisements than voter-targeting advertisements among Democratic candidates for both the House and the Senate. This speaks to campaigns recognizing small-dollar donors’ impassioned embracing or opposition of Trump. For Democrats, the uptick in the toxicity of their ads which mentioned Trump is in keeping with Jacobson (2019)’s findings about the 2018 midterm elections. As Democratic voters and

¹⁸The *t*-test results are in Online Appendix E.

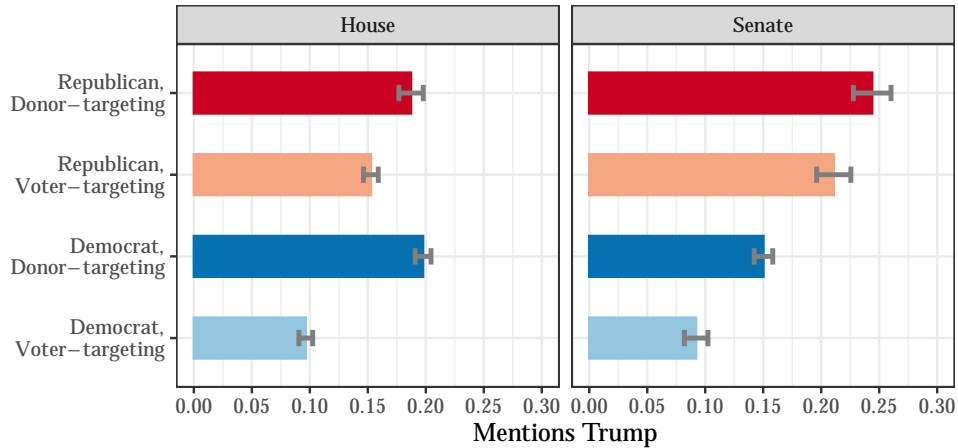


Figure 5: Mention of Trump by Facebook Ad Type

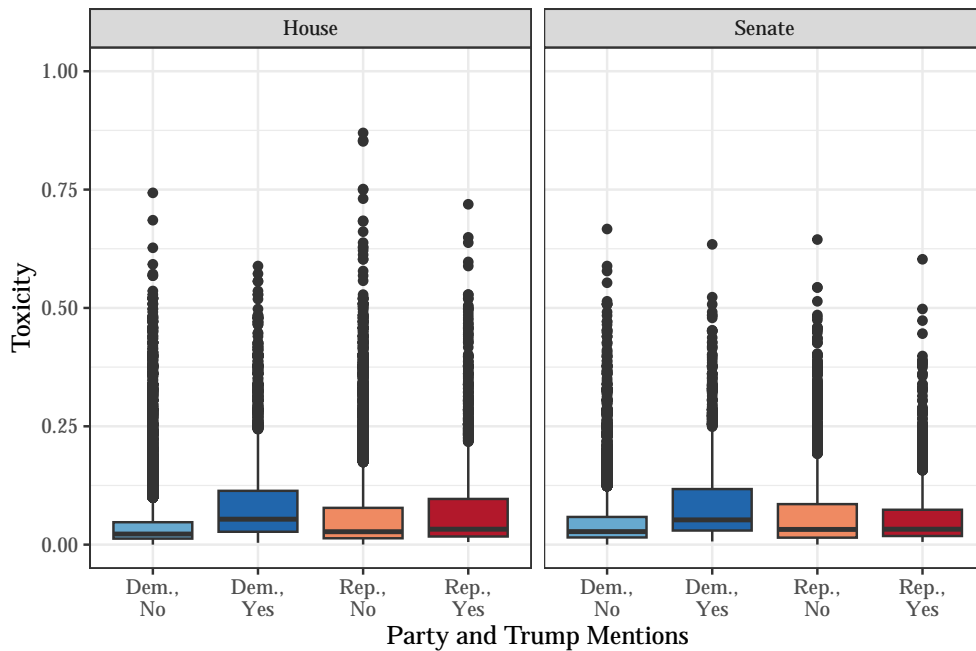


Figure 6: Toxicity of Trump-Mentioning Ads Across Chambers

donors almost universally dislike Donald Trump, it follows that ads featuring mentions of the then-president situated their mentions of him in less-than-flattering language.

Simultaneously, Republican voters' staunch support for the then-president may explain the high prevalence of references to Trump, especially in donor-targeting ads given his strength in appealing to small-dollar donors. The greater similarity between the levels of toxicity among Republican Trump-mentioning and non-mentioning ads shown in Figure 6 seems to be a function of many Republican ads that mentioned Trump mentioning him in a positive context (for a voter-targeting example, see Table 3). With this in mind, it is not altogether surprising that Republican Senate

candidates' Trump-mentioning advertisements were not, all told, more toxic. House Republicans' Trump-mentioning ads, like their Democratic counterparts, tended to be more toxic. Many of these advertisements situated the president's accomplishments and positions in contrast to the Democratic Party's. Attacks on Democrats in Washington and their supporters across the nation were commonplace.¹⁹ The similar results among Republican House candidates and Democratic candidates are indicative of markedly different rhetorical styles, as candidates capitalized on their respective bases' approval of and disdain for Trump.

The data, therefore, supports all our hypotheses. Of course, it should be acknowledged that, for all their strengths, neither the NRC's Emotions Lexicon nor the Perspective API are perfect. [Hosseini et al. \(2017\)](#) and [Gröndahl et al. \(2018\)](#) show that minor modifications to a sentence can have a significant impact on its toxicity score, such as struggling with phrases with a negation or the word "love."²⁰ [Zad et al. \(2021\)](#) show that the NRC's Emotions Lexicon assigns valences to some words typically neutrally in everyday parlance. Some terms are assigned multiple labels which conflict with one another. These cases present some normative concerns when using the NRC's dictionaries in a general context.

Another caveat that should be addressed is that Facebook advertisements are not directed at random samples of the population. Meta's policies on targeted political advertisements have changed over time, but political targeting was used in the 2020 election, and many Facebook users were shown advertisements based in part on their interactions with political topics.²¹ The Facebook Ad Library data we have used does feature the full targeting logic that was used to target political advertisements to certain users. In spite of these limitations, these tools and this data provide useful insights into how candidates compete for their constituencies' support.

4 Discussion

This paper has established important insights on campaign-driven persuasion rhetoric that targets voters and donors. Although individual donors are an integral part of American politics, and donors are systematically different from voters in their wealth, partisanship, and ideological extremism, little is known about how campaigns strategically communicate to donors compared to voters. Considering systematic differences between donors and voters as well as that in donations, both intensive and extensive margins matter, we hypothesized that donor-targeting messages will be, on average, more negative, toxic, and highly reliant on polarizing rhetoric.

Our findings on candidates' strategic use of negative sentiment, toxicity, and polarizing rhetoric

¹⁹One such advertisement, run by Elise Stefanik (NY-21)'s campaign, read, "President Trump stands with Elise! But now, Hollywood liberals are targeting her with disgusting attacks for standing by our President. Help Elise fight back by chipping in now!"

²⁰For example, the phrase "It's stupid and wrong" received a toxicity score of 0.89, whereas "It's not stupid and wrong" received a score of 0.83 ([Hosseini et al. 2017](#)).

²¹<https://www.npr.org/2021/11/09/1054021911/facebook-scraps-ad-targeting-politics-race-sensitive-topics>

generally comport with our initial expectations. Mass online advertisements aimed at donors tended to feature more emotionally charged and toxic rhetoric than those targeted toward voters, and they were more likely to explicitly mention then-president Trump, who was a salient polarizing figure. In addition, we document significant variation by party and chamber; specifically, Republican candidates' language was more toxic than Democrats'. This is consistent with the academic assessment of GOP's recent turn towards extremism (Skocpol 2020). Of course, in many instances, the magnitude of these differences was not immense. However, the fact that we still find significant differences in the content of different types of advertisements reinforces our initial expectation that candidates are incentivized to craft different appeals to voters and donors.

Overall, our findings provide insight into the content and substance of contemporary candidates' online messaging. One broader and theoretically important lesson would seem to be that polarization or extremism alone does not explain why politicians choose to use toxic language. Our fixed-effects evidence shows that candidates are significantly more likely to use more emotional language when they solicit donations. This includes those candidates with centrist positions on policy issues, and those who value policy representation more than scoring symbolic points against the out-party. These findings furnish insight into the nature of campaign messaging more broadly, and the perceived utility of cues that feature more strident language than what candidates typically use when appealing to their voters.

Our results also have implications for legislation and political elites. The ways in which candidates present themselves to donors and voters may have downstream impacts on their behavior in office. Barber (2016a) shows that candidates who receive more backing from small-dollar donations tend to be more ideologically extreme than average. If candidates are using charged language on the campaign trail to bolster their support among small-dollar donors, this may serve to exacerbate many of the problems that have confronted Congress in recent decades. Of course, representatives who are more extreme than the median partisan in their district have been the norm for quite some time (Bafumi and Herron 2010), and the levels of gridlock in contemporary Congresses are certainly not merely a function of candidates' desire to appeal to ideological donors (e.g., Aldrich 2011; Lee 2016). However, the desire to appeal to donors likely will only serve to reinforce polarization, gridlock, and infighting within the legislature, as legislators eschew compromise and double down on polarizing positions to secure the support of their financial constituency.

Furthermore, the results have implications for mass behavior and democracy. Negativity incites strong emotions in humans that act as heuristics and ultimately sway both judgment and behavior, and strong emotions such as anger contribute to the erosion of civility and democracy. First, political anger leads to stronger social polarization (Webster et al. 2022; Wolak and Sokhey 2022) that prevents cross-cutting social interactions as trivial as inviting an out-partisan for a coffee. Second, emotions provide a strategic way for politicians to avoid accountability and policy responsiveness. Invoking strong emotions to sway the judgment of citizens has a profound effect

on political efficacy. In particular, anger, by activating motivated reasoning, contribute to poor deliberation (MacKuen et al. 2010) as well as unregulated reception of political misinformation that the voters' parties propagate (Weeks 2015).

To be sure, harsh language may invigorate democratic debate or promote engagement (Schudson 1997; Sydnor 2019), and name-calling and insults are generally viewed as a milder form of incivility (Sobieraj and Berry 2011) compared to outright hate speech (Siegel 2020). However, disrespectful discourse may silence or demobilize citizens or accelerate democratic backsliding (Kalmoe 2014; Jamieson et al. 2017; Finkel et al. 2020). Although here we do not identify causal effects of political ads with toxic language, existing work suggests that our findings are consistent with the view that U.S. political elites are chipping away at the quality of democracy. Recent analyses have shown that surprisingly many Americans are willing to trade democratic principles for conflicting considerations such as partisan loyalties (Graham and Svobik 2020). Events, such as the attack on the Capitol on January 6, 2021, have made it clear that a peaceful transition of power cannot be taken for granted anymore. The content of the candidates' ads serves as a reminder that rancor and hostility are becoming increasingly normalized as part and parcel of political competition in the United States—and particularly because online ads are less regulated than traditional TV ads (Fowler et al. 2021).

The next natural question is the following: do differences in rhetoric for the financial electorate create differences in mass political behavior? While we do not have a definite answer, we believe that ads, as another type of elite political communication, can be influential to some degree. Electoral persuasion effects can be moderated by audience (Suhay et al. 2020), and the flood of financial solicitations can serve as another kind of “partisan media” that can further polarize citizens and make governing difficult (Levendusky 2013). This is especially true because online ads can target more broadly and reach more than just habitual donors. In addition, since small-donor-based strategies have proven to be somewhat viable (Alvarez et al. 2020), it is likely that campaigns will increasingly douse the average American voter with polarizing appeals for donations. We leave this question for future exercise.

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