

What Makes an Online Ad Political?:

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Understanding public opinion about what makes an ad political is critically important in today's digital landscape. As social media platforms become a key channel for political advertising, the potential for abuse and manipulation looms large. However, determining appropriate regulations and disclosure of paid political content requires consensus on what constitutes a political ad. In this article, we investigate public perceptions of political advertising drawing on data from a series of online surveys and two preregistered experiments. Using a conjoint design, we find that explicit cues, like candidate sponsorship and advocating for government action, are more likely to be perceived as political. Participants also attribute political meaning to ads that clash with their own preferences. These patterns also appear in second experiment using real-world ads drawn from the Facebook ad library, although in this experiment ad sponsorship was more important. Our findings serve as an important benchmark for policymakers and platforms wanting to align their approaches with public expectations about how paid political content should be handled.

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1 INTRODUCTION

Digital political advertising has become an increasingly common part of users' experience of social media and generates growing revenue streams for digital platforms. In the 2020 U.S. election cycle, approximately 18 % of all political ad spending went to digital ads (\$ 1.6 billion), a dramatic increase from the 2-3 % in the 2016 cycle [42].

Political online advertising is controversial among users [40]. To start, the more general concerns that users may have with commercial online advertising also apply to political online advertising, for example the invasiveness of being tracked online so that they can later be (micro)targeted with tailored ads [7], the apparent ease with which fraudsters can spread malicious ads [65], and the prevalence of ads with undesirable content [66]. However, the stakes involved in political advertising are arguably higher than in commercial ads because the forming of political opinions or decisions (such as donating to a political cause or voting for a candidate) may be more consequential than simple purchase decisions. Examples of past misbehavior by political advertisers include the socially divisive ads linked to the Russian IRA during the 2016 U.S. presidential election [49], undisclosed coordinated behavior of fake "grassroots" organizations orchestrated by corporate interests [15], or ads masquerading as political opinion polls to dupe users into providing their personal information [67]. The opaqueness of online advertising (because only the targeted audience can see the ads) makes it more difficult to detect and call out such bad behavior. Additionally, public polling has found that 55 % of U.S. users are 'worn out' by political content on social media [4], and 73 % think that platforms should restrict or entirely ban political advertising [5]. Lastly, there is growing evidence that users think of political advertising as a distinct category and have different expectations and tolerances for it compared to commercial advertising [40, 66].

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In response, platforms have made major changes to how they deliver political ads to users (if at all). For example, Twitter has banned some types of political advertising entirely [60], and restricted permissible targeting methods on others [58]. Facebook and Google/YouTube still allow political advertising (and together received 75 % of U.S. online political advertising spending during the 2020 cycle [16]), but have introduced new transparency mechanisms and restrictions for online political ads. Facebook now allows users to “turn off” political ads [45], and Google limits how political ads can be targeted on its platforms [33]. Facebook and Google also provide transparency portals where users and researchers can see all political ads run by an advertiser [21, 22, 33, 34]. Perhaps the most noticeable change from a user perspective is that both of these platforms now have specific visual presentations for political ads that display the ad’s funding source to users.

A central question remains, however: Are platforms implementing online political ad presentations in a way that is consistent with users’ expectations? Prior work has studied user perception of targeted digital advertising, and the factors of the advertising itself that contribute to those impressions [10, 11, 13, 17, 50]. HCI researchers have also sought to understand user perceptions of ‘sensitive’ categories of ads, including political clickbait [3, 14, 30, 47, 48, 61, 64, 66, 67]. Absent from existing literature, however, is an exploration of *which* ads users perceive as political, and a more thorough analysis of user opinions on the various ways platforms handle political ads.

In this paper, we investigate users’ perceptions of digital political ads. We do so in two parts. First, we seek to measure users’ opinions on how platforms should design political ad UX and policies. Previous work shows that the public is uncomfortable with political advertising on social media, but is broadly supportive of platform efforts to improve disclosure [28]. Other than that, however, very little is known, so we begin by establishing opinions of the basic parameters for political ad UX including the permissibility of political ads, microtargeting, transparency, and exemptions for news organizations.

Research Question 1: What is the public’s stance on whether:

- (a) *political ads should be allowed at all;*
- (b) *political ads should be allowed to be microtargeted;*
- (c) *platforms should provide transparency for political ads; and*
- (d) *news organizations should be exempt from disclosure and transparency requirements?*

The results from a representative survey of 1,061 United States (U.S.) residents (Section 5) suggest that users are in favor of more transparency for this category of advertising, and do not approve of microtargeting of political ads. When asking respondents these survey questions, we deliberately left open what “political” means in the context of online ads. Thus, to understand to which ads exactly these measures should be applied, we need to study *which* ads users consider “political.”

Second, in the main part of this paper we attempt to understand what factors of ads (and users themselves) may contribute to their perceptions of how ‘political’ given digital ads are. To do this, we conduct a *conjoint experiment* asking respondents to compare artificial Facebook ads where we alter their source, content, and political orientation. This conjoint design allows us to isolate the independent effects of each component on perceptions of the political [38, 39]. While rare in the human-computer interactions field, conjoint analyses are widely used in the social sciences to understand how individual components of composite stimuli affect human judgements and perceptions [6, 8, 27, 41, 43, 56]. We supplement the conjoint study with a within-between experiment asking respondents to evaluate real ads drawn from the Facebook Ad Library. This allows us to replicate the findings from our conjoint using authentic stimuli, and we refer to this as the *real ads* experiment.

Using these analyses, we explore three pre-registered hypotheses and one research question:

99 *Hypothesis 1: Ads from sources viewed as being overtly political (i.e. presidential*
 100 *candidates) will be rated as more political than other sources (i.e. corporations and*
 101 *advocacy groups).*

102 *Hypothesis 2: Ads with stronger political messages will be rated as political, regardless*
 103 *of source.*

104 *Hypothesis 3: Prior beliefs will influence opinions, in that, participants will perceive*
 105 *ads with messages that do not conform to their beliefs to be more political than those*
 106 *that do.*

107 *Research Question 2: Do the effects measured in the conjoint analysis replicate when*
 108 *respondents evaluate real social media ads?*¹

109
 110 We find strong support for all of our hypotheses, as described in Section 6 and Section 7. In the
 111 real-ads experiment, the effect on perceived politicalness of an ad being sponsored by a candidate
 112 rather than a corporation was over 1 point on a 5-point Likert scale. We found similar effect sizes
 113 for ad message strength. The effect size from the ad's alignment with viewers' pre-existing beliefs
 114 was smaller in comparison, but still significant. These results hold in both our conjoint and real ads
 115 experiment, supporting our research question as well.

116 Based on our results, we recommend a two-part test for determining if an ad would be perceived
 117 as political by a meaningful portion of U.S. users in Section 8. This test can serve as a criterion for
 118 judging the adequacy of social media companies' political ad transparency efforts, and we use it to
 119 compare our findings about user preferences to the policies of Facebook, Google/YouTube, and
 120 Twitter. While the policies of some services are more closely aligned with user preferences than
 121 others, in each instance there are important differences in scope. As a result, there are categories
 122 of ads that users would consider political, but that are not afforded the special user experience
 123 available for other types of political ads on the respective service. While we do not expect companies
 124 to fully align their policies with the preferences of their users (companies are also accountable
 125 to their advertising customers, for instance), we argue that it is nevertheless important to be
 126 able to understand where user expectations and actual policies diverge. Differences between user
 127 expectations and company policies, and policy differences between companies, can lead to counter-
 128 intuitive and inconsistent user experiences with political ads, and ultimately undermine the goals
 129 of transparency.

130 In conclusion, the contributions of this paper are as follows:

- 131 • Survey of U.S. adult users' opinions on UX preferences for digital political ads
- 132 • Experimental evidence of contributing factors of user evaluations of 'politicalness' of online
- 133 advertising
- 134 • Two-part test for evaluating potential political perception by users

136 2 BACKGROUND

137 Likely in response to user concern about foreign influence operations using political ads [4, 5],
 138 the largest U.S. social media companies have created specific policies for how (and whether) they
 139 display political ads. These policies treat political ads as a distinct class and place tighter restrictions
 140 on them compared to other types of ads. In this description, we focus on the policies and procedures
 141 of the three most prominent social networks, Facebook, Google/YouTube, and Twitter. We first
 142 provide an overview of user-facing differences for political ads, before delving into what exactly the

143
 144 ¹In our pre-analysis plan, this research question was identified as a hypothesis. However, it was stated with sufficient
 145 vagueness that we have elected to re-frame it as a more exploratory research question here. A complete description of all
 146 deviations from our pre-registration is provided in ??.

148 three companies consider a “political” ad. The ultimate purpose of this paper is to study what the
149 users consider “political,” and how their perceptions might differ from the companies’ definitions.
150

151 **2.1 Special Treatment of “Political” Ads in UX and Platform Design**

152 When a social media company considers an ad to be “political,” it is often shown to users in a
153 different way than other types of ads. As an example, while Facebook does not explicitly mark
154 such ads as “political,” a small disclaimer of the funding source (“Paid for by”) is shown below the
155 advertiser’s name above the ad, which is not the case for other types of ads [21].

156 Facebook and Google have also created ad libraries as “asynchronous” transparency tools where
157 users (and researchers) can look up current and past political ads by advertiser or keyword search.
158 This allows interested users to see the variety of political ads run by an advertiser, and how much was
159 spent on them. The details of these ad libraries vary. Google maintains a standalone ‘Transparency
160 Report’ with details for political ads across Google’s websites [34]. Facebook maintains a similar
161 standalone ‘Ad Library’ user interface, which is not directly integrated into the normal user
162 experience (e.g., not linked from political ads that users may encounter in their feed), but can be
163 navigated to from the Facebook pages of advertisers [22]. At the time of writing, Twitter no longer
164 has an ad library [57].

165 The aforementioned tools and user interface components are only available for ads that the
166 respective company considers “political.”

167 **2.2 Platform Definitions and Policies for Political Ads in the United States**

168 All major social media platforms of which we are aware have written policies that govern how (or
169 whether) they will run political advertising. These definitions have shifted significantly over the past
170 several years, but broadly speaking, there are four categories of content that are considered political
171 by one or more platforms: federal electoral content [21, 33, 60], state electoral content [21, 33, 60],
172 local electoral content [21, 60], and “social issue” content [21, 58] (which we refer to as issue
173 ads). Electoral ads are commonly defined as ads featuring candidates or officeholders, political
174 parties, and ballot measures. Issue ads are defined as ads about issues that are subject to political
175 debate. Platforms maintain specific lists of social issue topics in their political ad policies [18],
176 which differ by country. There are also two categories of exemptions to these policies: exemptions
177 for commercial content selling products or services [23, 35], and exemptions for content from
178 recognized news providers [19, 33, 59]. We refer to these as *commercial exemptions* and *news*
179 *exemptions*, respectively. Ads that qualify for either of these exemptions are not considered political
180 and thus are not subject to these policies. These categories are defined slightly differently between
181 platforms, and we explore some of those differences below.

182 When Facebook’s political ad policy was first announced in 2018, it was broadly inclusive of
183 ads with elections (including federal, state, and local) as well as issue ads, and had no substantial
184 exemptions [44]. Shortly thereafter, Twitter announced a political ad disclosure and transparency
185 policy with similar rules for what content would be considered political [24]. Google initially
186 took an extremely narrow approach, requiring transparency only for ads featuring officeholders or
187 candidates for presidential and congressional races (federal electoral ads), but not other state or local-
188 level contests or issue ads [62]. Generally speaking, all these policies required some transparency of
189 some categories of political ads [21, 33, 60] (e.g., the tools and disclosures summarized in Section 2.1).

190 Over the past several years, political ad policies from each platform have changed substantially
191 from these initial positions. However, platform policies are not actually converging on a common
192 definition. Facebook has limited which ads were subject to its political ad policies by adding a news
193 exemption in 2019 [19] and a commercial exemption in late 2021 [23]. Google, initially the platform
194 taking the most limited approach to defining political ads, later broadened its inclusion criteria
195

		Google	Facebook	Twitter
197	Ads Classed as Political Based on Advertiser?	No	Yes	Yes
198	Ads Classed as Political Based on Content?	Yes	Yes	Yes
199				
200	Federal Electoral Ads Transparent?	Yes	Yes	No
201	State Electoral Ads Transparent?	Yes	Yes	No
202	Local Electoral Ads Transparent?	No	Yes	No
203	Issue Ads Transparent?	No	Yes	No
204				
205	Commercial exemption?	Yes	No	Yes
206	News exemption?	Yes	Yes	Yes

Table 1. Electoral and issue ad policies of major social media platforms during the 2020 U.S. election period

somewhat to cover state-level races [31] and in late 2021 ended both its news and commercial exemptions [32].

More fundamentally, other than referring to public opinion, platforms currently have scant authoritative legal guidance they can draw upon in practice to set their policies. For areas such as broadcast television, the primary regulation (and definition) of “political” ads came from governments [25], whose actions are seriously restricted in the digital space by first amendment jurisprudence – making such parallel regulation nearly irrelevant to platform decisions. And in any case, there is currently a near vacuum of federal regulation of digital political ads [28]. All of these factors serve to motivate why the public’s perception of political is an important matter to understand.

2.3 Political Ad Policies during the 2020 U.S. Presidential Election

A useful comparison for motivating our experiments below are the policies that were in place during the 2020 U.S. presidential election, as summarized in Table 1. During this period, Google’s policy for electoral ads was focused solely on content [21, 35], while Facebook and Twitter defined ‘political’ advertising both in terms of content and in terms of the speaker: content from political candidates, office holders, and parties, as well as political action committees (PACs) was always considered political [60]. Google included only federal and state ‘electoral’ content. It also exempted ads for products and services from these policies (a commercial exemption). Twitter defined two separate categories of political ads. The platform referred to electoral ads on the federal, state, or local level as ‘political’ [60] and called issue ads ‘cause-based’ advertising [58]. Twitter defined cause-based advertising as content that seeks to “educate, raise awareness, and/or call for people to take action in connection with civic engagement, economic growth, environmental stewardship, or social equity causes.” Facebook took a third route and used a much broader definition of political content, including ads about federal, state, or local elections [20] and policy issues [18]. Facebook referred to ads that fall under this umbrella collectively as ads on “social issues, elections, and politics.” All three major platforms exempted ads from verified news publishers from their political ad policies [19, 32, 59]. While these policies have evolved since 2020, they have not converged, and users are still faced with different (and potentially counter-intuitive) handling of political ads across social media networks. We will discuss some implications in Section 9.

3 RELATED WORK

3.1 User Perceptions of Ads and Ad Targeting

HCI researchers have sought for many years to understand user perceptions of targeted digital advertising and the factors of the advertising itself that contribute to those impressions [10, 11, 13, 17, 50].

246 Swart et al. studied the impact of specialized visual treatments for social media ads on users' perceptions of those ads [55]. Goldstein et al. measured user perceptions of ad contents and attempted
247 to quantify the cost of ad content features that users find 'annoying' [29]. Saha et al. demonstrated
248 that behavioral targeting factors (among others) have an impact on ad effectiveness [52].
249

250 More specifically, both independent and platform-affiliated researchers have employed user
251 studies to clarify user perceptions of socially contested advertising practices and categories ranging
252 from clickbait [66] to user safety [47] and beyond [3, 14, 30, 48, 64, 67]. For example, in a study
253 closely related to ours, Zeng et al. evaluated user perceptions of several categories of 'bad' ads [66].
254 Ur et al. performed an interview-based user study to uncover user attitudes toward ad targeting and
255 finds that users consider behavior targeting both 'creepy' and 'useful' [61]. Lastly, Herder and Dirks
256 studied user perception of microtargeting of political ads vs. commercial ads and finds that users
257 have differing attitudes to these two categories and are less tolerant of microtargeting of political
258 advertising than of commercial advertising [40]. Absent from existing literature, however, is an
259 exploration of which ads users perceive as political and their perceptions of political ad policies.
260

261 **3.2 Public Perceptions of the Political**

262 Given the diversity of definitions for online political ads in practice, a fundamental question is: How
263 adequate are these definitions, and which of them should prevail? The question of what makes an
264 ad political in the abstract is a longstanding question in both legal and philosophical debates [28].
265 In the legal field, laws regarding political ads have historically focused on "electioneering content,"
266 which is generally defined as "any broadcast, cable or satellite communication that refers to a
267 clearly identified federal candidate" [25]. It is an open question whether definitions developed for
268 traditional offline media would be appropriate for online advertising on social media.
269

270 Debates on the definition of "political" go back at least to the 19th century [63], but there is
271 surprisingly little in the way of an operational definition in existing research [36]. Even scholars of
272 political social interactions note that they have "largely ignored the problem of vague definition" [53,
273 p. 120]. Fitzgerald [26] used a convenience sample of U.S. Americans and Canadians to investigate
274 which *issues* were considered political across contexts. Settle [53] relied on a larger representative
275 survey of U.S. Facebook users in 2016 to study how respondents learned the *political orientation* of
276 friends. Both studies report that what the public views as political is contingent on factors such as
277 ideology, gender, and political engagement, but it is unclear how exactly this translates to online
278 ads.

279 Sosnovik and Goga's work [54] examined which Facebook ads were considered to be about
280 elections, politicians, or social issues by a non-representative set of labelers. While this study did
281 not attempt to identify which components of ads or participants' backgrounds motivated their
282 choices, its goal of attempting to detect political ads based on user labeling is related to ours. The
283 study highlights that using participants' individual judgements can be problematic because they
284 will vary. This means that these individual judgements can lead to inconsistencies or biases in
285 a study's outcome when the potential for variation is not addressed properly (e.g., by obtaining
286 and aggregating judgements for the same item from participants with diverse backgrounds). Our
287 work has the potential to lessen such biases by providing a better understanding of how individual
288 judgements vary (based on a participant's prior beliefs), and by contributing a more explicitly
289 stated definition of what makes an online ad "political" that future studies can use to guide data
annotators.

290 Finally, past research also suggests the possibility that Americans may view content they agree
291 with as being less political on average. There appears to be significant heterogeneity in how
292 individuals define "political" [26]. There is also extensive literature on motivated reasoning, the
293 phenomenon in which humans' decision-making process can be guided by mental biases rather
294

than a strict evaluation of the evidence [9, 46]. Americans may therefore be more likely to associate content they disagree with as being “political” in the same way that previous work has shown they are more likely to identify non-congenial claims as being “misinformation” [37]. This implies that user perceptions of digital political ads may be heterogeneous depending on whether the ad is congenial with users’ prior beliefs. We believe we are the first to quantify the effect that prior beliefs have on the perceived politicalness of online ads.

4 METHODS OVERVIEW

To answer our research questions and test the hypotheses, we rely on five separate surveys described in Section 4.1. Our main analyses rely on three high-quality nationally representative samples collected by the Nonpartisan and Objective Research Organization (NORC) at the University of Chicago. These surveys were designed to (1) measure the public’s views on online political advertising and transparency and (2) assess what drives perceptions of the political.

This latter question was explored using two experimental designs. We conducted a *conjoint analysis* (Section 6), a procedure that allows us to isolate the marginal effects of specific ad components including the ad’s source type, message strength, and political orientation. We also conducted a series of within-between experiments using *real ads* to replicate these findings with fully authentic stimuli (Section 7). These two procedures complement each other to provide a more robust conclusion. The conjoint experiment has the strength of providing clear causal estimates of the effect ad components have on perceptions that are otherwise impossible to isolate [39]. However, the design requires a full randomization of all features, which can lead to some combinations that may seem artificial or less realistic to respondents (e.g., a Republican candidate supporting stronger environmental protections). The real ads experiment is designed to overcome this limitation by relying exclusively on ads drawn from the Facebook Ad Library.

We also conducted two smaller surveys of U.S. adults recruited via Amazon’s Mechanical Turk (AMT). These additional studies were designed to validate our coding of the *message strength*. In both the conjoint and real ads experiments, we identified political messages that we judged to have strong, moderate, and weak messages depending on the degree to which they advocate for a specific electoral or public policy outcome. The AMT studies provide external evidence validating our coding scheme by asking respondents to evaluate the ‘politicalness’ of the messages in isolation from the other ad elements (e.g., ad source).

4.1 Survey Overview

We begin by describing our surveys. Since we draw on multiple surveys for this study, for expositional clarity we refer to the various surveys using the names shown in Table 2 throughout. Two convenience samples were collected from Amazon’s Mechanical Turk to validate our experimental procedures. In particular, we aimed to validate our coding of whether specific messages have weak, moderate, or strong political content.

AMT1 In advance of implementing our conjoint analysis, we recruited 218 respondents who were U.S. adults in May 2020. These respondents were asked to evaluate the political messages included in the conjoint experiment on a five-point Likert scale ranging from “not at all political” to “extremely political.” These messages were shown without additional context (e.g., ad source or image) and the respondents were asked “How political is this ad?”

AMT2 We conducted a separate validation survey ($N = 281$) of the messages’ strength in the real ads experiment in July 2022. Respondents were U.S. adults and were asked to evaluate the message in isolation from the sponsor (although the images were included). Ads were

	AMT1	AMT2	NORC1	NORC2	NORC3
344 Conjoint Message Validation	✓				
345 Real Ads Message Validation		✓			
346 User Opinion Survey			✓		
347 Conjoint Experiment				✓	
348 Real Ads Experiment				✓	✓

350 Table 2. Overview of surveys and their purpose in this paper

351

352

353 evaluated on a 5-point Likert scale. Respondents were asked to read each statement and
 354 then asked, "How political is this statement?"

355 Three surveys were conducted with NORC at the University of Chicago. These are general
 356 population samples of U.S. adults age 18 and older, and were selected from NORC's AmeriSpeak
 357 Panel for this study.

359 NORC1 The NORC1 survey measured attitudes towards various platform policies on ads ($N = 1,061$).
 360 It was fielded from November 16 to December 2, 2020. 978 responded by web mode and
 361 83 by phone. 28.7 % of recruited panelists completed the survey, and the panel itself had a
 362 weighted recruitment rate (AAPOR RR III) of 20.4 %.

363 NORC2 The NORC2 survey was fielded July 1 – 24, 2020 ($N = 1,006$). 56 people responded via
 364 phone and the rest online. 28.4 % of recruited panelists completed the survey, and the panel
 365 itself had a weighted recruitment rate (AAPOR RR III) of 23.6 %. This survey included the
 366 conjoint experiment and the real ads experiment. However, due to a programming error,
 367 the conjoint study from this wave was not usable and we do not discuss this data further.

368 NORC3 The NORC3 survey was fielded to re-administer the NORC2 wave with correct programming
 369 for the conjoint. This was fielded from March 31 to April 19, 2021 ($N = 1,013$). 28.4 % of
 370 recruited panelists completed the survey and the weighted recruitment rate (AAPOR RR III)
 371 of the panel was 19.5 %. We analyze both the conjoint and real ads data from this survey.

372 Demographic data for respondents in all of the NORC samples is presented in Appendix A.1. For
 373 NORC1, we use the complete sample of phone and web respondents. Our conjoint (Section 6) and
 374 real ads (Section 7) experiments relied on visual stimuli, thus phone respondents were excluded
 375 from our analysis of NORC2 and NORC3.

376 5 USER OPINION SURVEY: ATTITUDES ON ONLINE POLITICAL ADS

377 In this section, we explore users' opinions on digital political ads and advertisers in four key areas.
 378 We ask respondents which political ads they want to be allowed (or blocked), whether they want
 379 political advertisers to be able to microtarget ads, what kind of transparency measures they want
 380 in place for political ads that are allowed, and whether they want news organizations exempted
 381 from these rules.

382 5.1 Methodology

383 Our analysis in this section is based on a set of questions in the NORC1 survey. These questions
 384 assessed agreement with various platform policies (real or potential) for handling political advertising.
 385 The questions offered a statement (e.g., "No political ads should be allowed at all.") and asked
 386 respondents whether they agreed or disagreed on a six-point scale ranging from strongly disagree
 387 (1) to strongly agree (6). We asked 20 survey questions in total about a broad range of political ad
 388 issues. Here, we report on the 12 questions that were most closely focused on platform political ad
 389 policy, reserving the remainder for other work. Complete questions are shown in Appendix A.2.1.

390

391

392

393 5.2 Results

394 We first report responses to questions about which political ads should be allowed. The full
395 distribution of responses are shown Table 3, with mean opinions reported in Table B1 and a
396 summary figure shown in ?? both in Appendix B. Voting ads were broadly popular: over 88 %
397 supported the idea that ads encouraging voting should always be permitted, with around 41 %
398 indicating they strongly agreed. The idea of banning candidate ads but allowing issue ads was
399 broadly unpopular (78 %, with 37 % disagreeing and 25 % disagreeing strongly). Banning ads from
400 dark money groups, however, had broad support from 73 % of respondents (28 % strongly agree,
401 28 % agree, 16 % agree only a little). Banning all ads or banning controversial ads were both opposed
402 by smaller majorities of respondents, and opinions on these two questions were generally more
403 mixed. On average, respondents opposed the idea that “no political ads should be allowed” with
404 15 % disagreeing a little, 29 % disagreeing, and nearly 15 % disagreeing strongly. Similarly, 66 %
405 opposed the idea that “all ads on controversial topics should be removed regardless of source.”

406 We also find majority support for banning microtargeting of political ads, both in response to our
407 direct question as well as a question with inverse wording asking if “Political advertisers should be
408 allowed to select who sees their ads.” We phrased this question in two ways out of concern that the
409 term ‘microtargeting’ was loaded. Around 58 % supported the idea that microtargeting should not
410 be permitted, and about 70 % disagreed that advertisers should be able to select who sees their ads.

411 We find broad support both for requiring disclosure of funding when political ads are shown to
412 users and for requiring that digital ad platforms maintain databases of political ads they have run.
413 88 % of respondents supported ads displaying funding sources, and 85 % supported requirements
414 for a public database of political ads (24 % strongly agree, 39 % agree, 22 % agree only a little).

415 Americans also want these rules applied uniformly. We asked this question with both a positive
416 and negative framing: when asked if “Ads from news organizations should be exempted from
417 regulations of political advertising,” almost 77 % disagreed, and when asked if “political ads from
418 news organizations should be subject to the same regulations as ads from other sources,” nearly
419 90 % agreed.

420 Overall, these results suggest a general desire to have social media companies allow most political
421 ads (RQ1a), although support is stronger for some kinds of ads (i.e., voting) than it is for other
422 political ads (e.g., dark money ads). However, most users agree that ads from PACs and dark money
423 groups should not be allowed, nor should political advertisers be allowed to microtarget their
424 ads’ audiences (RQ1b). Users broadly support transparency for political advertising in terms of
425 disclosure of funding sources and for public political ad databases (RQ1c). Lastly, the public is
426 widely opposed to exemptions for news organizations (RQ1d). On RQ1b, our findings are consistent
427 with prior work [40] studying this question among Dutch users. We believe we are the first to
428 explore our other questions about users’ opinions on how platforms should handle digital political
429 advertising. However, we have left open the question of what exactly users perceive as a “political”
430 ad (and thus might be subject to the UX or policies specific to political ads); we investigate this
431 question in the next sections.

433 6 CONJOINT ANALYSIS EXPERIMENT

434 To estimate how the different parts of an ad affect respondents’ judgement of the ad’s ‘politicalness’,
435 we designed a conjoint experiment [39]. Conjoint experiments are a research design used to
436 understand the effect that individual features have on people’s preferences or perceptions when the
437 overall stimuli are composed of multiple features. This is typically done by presenting participants
438 with a series of choices between different options that vary on multiple attributes. For example, a
439 conjoint experiment might ask participants to choose between different policy proposals that vary on
440

Question	Strongly agree	Agree	Agree a little	Disagree a little	Disagree	Strongly disagree
<i>RQ (a) political ads should be allowed at all?</i>						
Ads encouraging voting allowed	40.7 %	36.7 %	10.7 %	4.8 %	4.7 %	2.4 %
No political ads	16.3 %	11.5 %	13.4 %	14.7 %	29.3 %	14.8 %
All controversial ads banned	9.8 %	9.7 %	14.6 %	15.3 %	31.8 %	18.7 %
Candidate ads banned, issue ads allowed	3.5 %	6.8 %	12.0 %	15.6 %	37.2 %	25.0 %
PAC/dark money ads banned	27.8 %	28.3 %	16.5 %	13.3 %	9.2 %	4.9 %
<i>RQ (b) political ads should be allowed to be microtargeted?</i>						
Microtargeting pol. ads banned	20.8 %	21.3 %	16.0 %	15.7 %	18.2 %	7.9 %
Pol. advertisers choose who sees ads	4.0 %	10.9 %	14.7 %	11.2 %	31.7 %	27.5 %
<i>RQ (c) platforms should provide transparency for political ads?</i>						
Pol. advertisers' funding sources private	2.9 %	4.5 %	6.9 %	9.8 %	29.3 %	46.6 %
Pol. advertisers' funding displayed on ad	44.3 %	33.0 %	11.0 %	5.7 %	4.3 %	1.6 %
Public database for companies' pol. ads	23.9 %	38.5 %	22.1 %	7.0 %	5.4 %	3.0 %
<i>RQ (d) news organizations should be exempt from disclosure and transparency requirements?</i>						
News orgs exempt from pol. ad regs	3.3 %	7.6 %	12.3 %	14.0 %	33.7 %	29.0 %
News orgs' pol. ads regulated	39.3 %	40.8 %	9.5 %	5.8 %	3.0 %	1.5 %

Table 3. Distribution of selected opinions on proposed social media advertising regulation. Distribution percentages are weighted (with 95% confidence intervals). (Source: NORC1 survey; $N = 1,061$)

factors such as cost and effectiveness. By analyzing the choices that participants make, researchers can determine to what degree each attribute affects these perceptions, marginalizing over the other attribute dimensions. Although widely used in the social sciences [e.g., 8, 27, 41, 43, 56], to our knowledge, this is the first study in the field of human-computer interactions to implement this design.

In our case, we are interested in understanding the marginal effect of three ad components on judgements of politicalness. Namely, we want to understand the marginal effect of the ad source (H1), message strength (H2), and whether the ad is consistent with prior beliefs (H3) of the viewer. To make the ads seem more natural, we also vary the image associated with the ad, although that is not our main dimension of interest. These dimensions were selected because they are the most visible components of political ads on Facebook.

6.1 Methodology

We constructed artificial ads that still appeared realistic by recombining a source, message, and image selected at random from a predefined set of components extracted from real ads in the Facebook Ad Library. All of the potential components are shown in Figure 1. We then constructed ads representing every possible combination of these features. Respondents were shown two of the possible ads at random and were asked to choose the one that was more political. An example task is shown in Figure 2. Respondents were each asked to complete this task eight times in the NORC3 survey.

The remaining challenge is the selection of the ad components, as shown in Figure 1, from the wide array of ad content available in the real world. Here, we sought to make a compromise between ad elements that were somewhat realistic, and ad elements that lent themselves to clean randomization as part of the conjoint experiment. Since respondents were asked to make eight

491

492

 Joe Biden
Sponsored • Paid for by BIDEN FOR PRESIDENT
ID: 292090191784581

(a) Source

...  Donald J. Trump
Sponsored • Paid for by TRUMP MAKE AMERICA GREAT AGAIN COMMITTEE
ID: 276052360225974 ...

...  Sierra Club
Sponsored • Paid for by SIERRA CLUB
ID: 233220784779105 ...

...  Patagonia
Sponsored • Paid for by Patagonia
ID: 1543770395764275 ...

...  Power The Future
Sponsored • Paid for by Power The Future Inc
ID: 1892229134250781 ...

...  ExxonMobil
Sponsored • Paid for by Exxon Mobil Corporation
ID: 526594501323243 ...

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Pro-environment

Pro-development

Strong

URGENT: Politicians are trying to gut the National Environmental Policy Act, paving the way for disastrous pipelines like Keystone XL to be built. We need 824 more people to submit a public comment before the end of the month to stop this. Take action NOW:
<https://sc.org/3a6avuZ>

NATIONAL POLL: Pipelines are an essential part of American infrastructure. Without them, we are dangerously dependent on foreign oil. Luckily, politicians are working tirelessly to ensure that we all have affordable energy. Let Congress know that you support this industry!

Moderate

New Mexico is leading the charge to tackle the climate crisis. Its commitment to nation-leading policies will #CutMethane pollution and set an example for other states to follow.

Texas oil and natural gas production is making America more energy secure. This industry is helping to create jobs for hard-working Americans and keep our economy strong.

Weak

Let's work together to preserve America's natural beauty for future generations to enjoy.

It's time for America to start training the next generation's energy sector workforce.

511

512

513

514

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517

(c) Image



Desert



Oil



Pipeline



Solar Wind



Yellow Flowers

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Fig. 1. All source, message, and image components used to combine the $6 \times 6 \times 5 = 180$ ads of the conjoint experiment.

choices (seeing as many as 16 unique ads), we also wanted to provide some level of variation in message wording and visual components.

To begin, we chose a single broad issue area in order to control for the level of “controversy.” That is, we did not want to have ads discussing wildly different topics as such a situation would have introduced yet another dimension to consider. We chose *energy and environmental policy*, which has the advantage that private companies (e.g., Exxon and Patagonia) regularly advertise in this issue area, but it is typically not obvious whether such ads qualify as “political.” We discuss how focusing on one issue area may affect our results in our concluding discussion.

Next, to build a set of potential ad sources in this topical domain, we selected real advertisers who had ads in the Facebook Ad Library related to either oil sector development or environmental protection. The categories of ad sources that we chose included political candidates, non-profit

Which of these two ads is more political?

540
541
542 Donald J. Trump
543 Sponsored • Paid for by TRUMP MAKE AMERICA GREAT AGAIN COMMITTEE
ID: 276052360225974

544 NATIONAL POLL: Pipelines are an essential part of American
545 infrastructure. Without them, we are dangerously dependent on
546 foreign oil. Luckily, politicians are working tirelessly to ensure that we
547 all have affordable energy. Let Congress know that you support this
548 industry!



549 Sierra Club
550 Sponsored • Paid for by SIERRA CLUB
551 ID: 233220784779105

552 New Mexico is leading the charge to tackle the climate crisis. Its
553 commitment to nation-leading policies will #CutMethane pollution
554 and set an example for other states to follow.



555 Fig. 2. Example pairwise comparison of constructed ads in the conjoint experiment.
556

557 groups, and politically active companies, such that there was one pro-development² and one pro-
558 environmental source in each category. Candidates were selected by choosing the presidential
559 candidate from the Republican and Democratic parties, Donald Trump and Joe Biden. Non-profit
560 organizations were selected by first identifying the top-spending non-profit organizations on envi-
561 ronmental and business regulatory issues and then selecting the highest spending pro-environment
562 (The Sierra Club) and pro-development (Power the Future) organizations whose advertising was
563 solely focused on those issues. Politically active corporations, Exxon and Patagonia, were identified
564 by looking for corporations that were top spenders on this topic, and then selecting entities with
565 corporate PACs that had more than 75% of their spending identified as being for one party or the
566 other according to Open Secrets [1, 2].
567

568 Images were necessary to make the ads seem authentic but were not the focus of the study.
569 We aimed to choose relatively generic images that might seem appropriate next to a variety of
570 messages. We chose images showing various forms of scenery that could be appropriate for all of
571 the ad messages. Recall, however, that the conjoint design means that any effect of the images is
572 marginalized out due to the complete randomization.
573

574 Potential message texts were taken from real ads in the Ad Library based on the strength of their
575 political message. We chose three pro-development and three pro-environment messages of varying
576 strength. We identified stronger ads as making a more explicit appeal to altering government policy.
577 To validate our coding, we showed these messages in isolation from the other ad content (e.g., ad
578 source) to a small convenience sample (AMT1 described in Section 4), who evaluated how political
579 the statements were on a five-point scale. Full results are presented in Figure 3.
580

581 Figure 3 confirms our ordering of the stimuli with all strong messages scoring higher than
582 moderate messages, which in turn scored higher than all weak messages. There are some remaining
583 differences in perceived politicalness within our assigned categories. For instance, the weak pro-
584 environment message was given an average score of 1.92, while the weak pro-development message
585 received an average score of 2.27. We view this as an inevitable consequence of our effort to

586 ²For the sake of exposition, we refer to ad content that promoted further economic activity in the energy industry as
587 “pro-development” throughout.

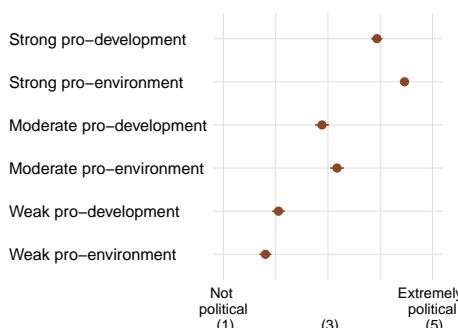


Fig. 3. Mean politicalness scores (with 95% confidence intervals) from the validation of coded message strength for the conjoint experiment. (Source: AMT1; $N = 218$)

build ads based on real-world content. Reassuringly, there is no consistent pattern (e.g., not all pro-environmental ads are viewed as less political than their counterpart) and the within-category differences are substantively modest.

Prior orientation for respondents' opinions on development was measured based on responses to two items. The first asked: "If global warming is happening, is it caused mostly by human activity, mostly by natural causes, or equally by both?" This was coded on a 1–3 scale: (1) "mostly by human activity," (2) "equally by human activity and natural causes," (3) "mostly by natural causes." The second variable asked respondents "Where would you place yourself on this scale?" ranging from (1) "Regulate business to protect the environment and create jobs" to (7) "No regulation because it will not work and will cost jobs." These two variables were then added together for each respondent to create a scale ranging from two to ten. We found the median to be 5, and in our analyses, we refer to all values above the median as "pro-development," while values below and including 5 are referred to as "pro-environment." Creating a binary indicator for prior beliefs aids in estimating the heterogeneous effects of the message and source orientation for these two groups.³

To analyze the data from the conjoint study, we use the statistical methods described in Hainmueller et al. [39] and implemented them in the *cjoint* R package. See Hainmueller et al. for a full discussion of the definition and estimation strategy. Conceptually, the goal of this analysis is to estimate the average marginal component effect (AMCE) for each dimension: source type, message strength, and orientation (both source orientation and message orientation). That is, we want to estimate the effect of one feature while marginalizing over potential values of all of the other feature dimensions.

The *cjoint* R package also allows us to calculate the average component interaction effect (ACIE) [39], which is the effect of a specific component interacted with a background factor. We use this approach to test the extent to which prior beliefs impact the perception that an ad is political in our conjoint experiment, i.e., we estimate an attribute's marginal effect conditional on the respondent's position on environmental concerns versus energy development. Again following the procedures outlined in Hainmueller et al., we use a categorical representation of the background trait (a median split). This allows us to calculate the effect for distinct values of the moderating

³We also conduct an exploratory analysis as to whether there are also heterogeneous effects based on partisanship (Appendix A.2.3). The results are shown in Appendix C.1 and confirm the findings in the main text based on existing environmental attitudes.

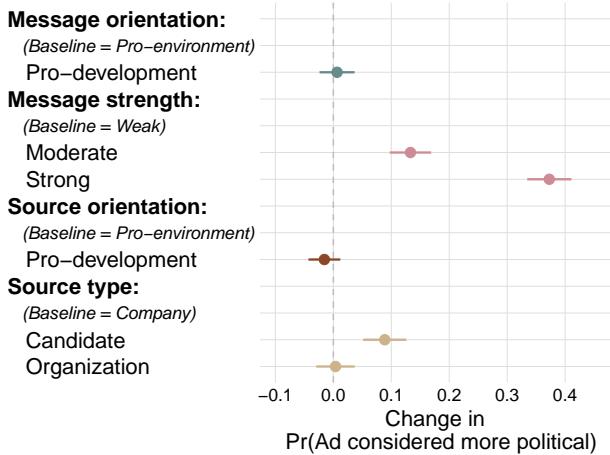


Fig. 4. Effect of advertisement's attributes on perception of ad's politicalness (Average Marginal Component Effects). Estimates of the effects of the randomly assigned ad attributes on perceived politicalness of the ad in a paired conjoint experiment. Full model includes an attribute accounting for the images displayed in each ad. See Table 4 for full results. (Source: Sample NORC3; $N = 1,013$)

factor, something we cannot do for a continuous background factor.⁴ Further, to ease interpretation we fit two separate models to study the heterogeneous effects of message orientation and source orientation. However, the substantive results remain nearly identical if we instead run a single model, as we show in Appendix C.

6.2 Results

We begin by analyzing the unconditional effects of the various components. These estimates are shown in Table 4 and illustrated in Figure 4. While both the ad source and message matter, it is the content of the ad messages that has the largest AMCE on the perceived politicalness of the ad. Specifically, moving from the baseline of a weak message (e.g., “Let’s work together to preserve America’s natural beauty for future generations to enjoy”) to a moderately strong message (e.g., “Texas oil ... 13% ($se = 0.02, p < 0.001$). Moving to a strong message (e.g., “Politicians are trying to gut the National Environmental Policy Act”) has a large 37% effect ($se = 0.02, p < 0.001$). In all, this is clear evidence in favor of Hypothesis 2, i.e., *Ads with stronger political messages will be rated as political, regardless of source*.

In terms of ad source, the AMCE for moving from the baseline of a corporate source (Patagonia and Exxon) to a political candidate (Biden or Trump) was 9% ($se = 0.02, p < 0.001$). Moving from a corporate source to a political organization (Sierra Club or Power the Future) resulted in an ACME of 0% ($se = 0.02, p = 0.83$). Thus, the effects of the source are more modest but still detectable (Hypothesis 1, i.e., *Ads from sources viewed as being overtly political (i.e. presidential candidates) will be rated as more political than other sources (i.e. corporations and advocacy groups)*).

We now turn to analyzing the effects of ad components on perceived politicalness conditional on respondents’ prior beliefs. Consistent with our pre-registered expectations, the results in Table 5 and Figure 5 show that among respondents with more pro-development attitudes, messages more in favor of oil development were perceived as less political than messages with more pro-environment

⁴See Equation 7 in Hainmueller et al. [39].

	Average marginal component effect
687 Constant	0.25*** (0.02)
688 Images (<i>Baseline: Yellow Flowers</i>)	
689 Desert	−0.005 (0.02)
690 Oil rig	0.09*** (0.02)
691 Pipeline	0.08*** (0.02)
692 Solar wind	0.07** (0.02)
693 Message orientation (<i>Baseline: Pro-environment</i>)	
694 Pro-development	0.01 (0.02)
695 Message Strength (<i>Baseline: Weak</i>)	
696 Moderate	0.13*** (0.02)
697 Strong	0.37*** (0.02)
698 Source orientation (<i>Baseline: Pro-environment</i>)	
699 Pro-development	−0.02 (0.01)
700 Source type (<i>Baseline: Corporation</i>)	
701 Candidate	0.09*** (0.02)
702 Organization	0.004 (0.02)
703 R ²	0.11
704 Adjusted R ²	0.11
705 RMSE	0.47
706 N	1013
707 Total Responses	8008

716 *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

717 Table 4. Effects of advertisement's attributes on perception of ad's politicalness (Average Marginal Component
718 Effects). Estimates of the effects of the randomly assigned advertisement attributes on perceived politicalness
719 of advertisement in a paired conjoint experiment. Corresponds to Figure 4. (Source: Sample NORC3; $N = 1,013$)

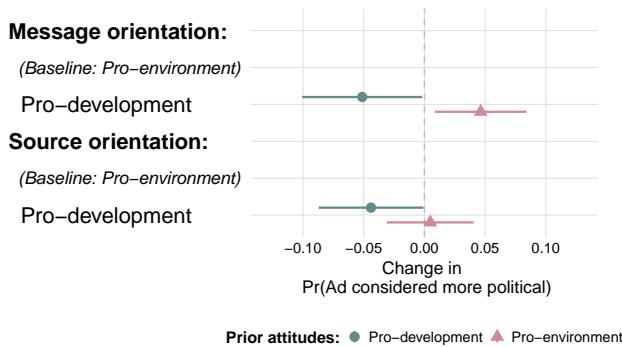
720
721
722
723 messages ($\beta = -0.05$, $se = 0.03$, $p = 0.04$). Likewise, ads from pro-oil sources (e.g., Exxon) were
724 viewed as being less political relative to ads from pro-environmental sources such as Patagonia
725 ($\beta = -0.04$, $se = 0.02$, $p = 0.05$). Respondents with pro-environmental prior beliefs viewed pro-
726 development ads as being more political ($\beta = 0.05$, $se = 0.02$, $p = 0.02$), although there was no
727 measurable effect for source orientation for this group ($\beta = 0.005$, $se = 0.02$, $p = 0.79$). Full results
728 can be seen in Table 5. This evidence largely supports Hypothesis 3 (i.e., *Prior beliefs will influence
729 opinions, in that, participants will perceive ads with messages that do not conform to their beliefs to be
730 more political than those that do*), although these effects are smaller relative to those we see for ad
731 content or ad source.

732 Overall, our conjoint analysis strongly supports our original research hypotheses. Specifically, it
733 shows that the source (H1), strength (H2), and orientation (H3) of the message all matter. However,
734 at least in this setting, it is clearly the strength of the message that has the largest marginal effect.

		Message × Priors	Source × Priors
736	Constant	0.23*** (0.02)	0.22*** (0.02)
737	Images (<i>Baseline: Yellow Flowers</i>)		
738	Desert	-0.005 (0.02)	-0.005 (0.02)
739	Oil rig	0.09*** (0.02)	0.09*** (0.02)
740	Pipeline	0.08*** (0.02)	0.08*** (0.02)
741	Solar wind	0.07** (0.02)	0.07** (0.02)
742	Message orientation (<i>Baseline: Pro-environment</i>)		
743	Pro-development	0.01 (0.02)	0.01 (0.02)
744	Message Strength (<i>Baseline: Weak</i>)		
745	Moderate	0.13*** (0.02)	0.13*** (0.02)
746	Strong	0.37*** (0.02)	0.37*** (0.02)
747	Source orientation (<i>Baseline: Pro-environment</i>)		
748	Pro-development	-0.02 (0.01)	-0.02 (0.01)
749	Source type (<i>Baseline: Corporation</i>)		
750	Candidate	0.09*** (0.02)	0.09*** (0.02)
751	Organization	0.004 (0.02)	0.004 (0.02)
752	Interactions		
753	Pro-development message conditioned on prefers development	-0.05* (0.03)	
754	Pro-development message conditioned on prefers environment	0.05* (0.02)	
755	Pro-development source conditioned on prefers development		-0.04* (0.02)
756	Pro-development source conditioned on prefers environment		0.005 (0.02)
757	R ²	0.11	0.11
758	Adjusted R ²	0.11	0.11
759	RMSE	0.47	0.47
760	N	1013	1013
761	Total Responses	7945	7945

772 *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

773 Table 5. Effect of pro-development message and source on perception of ad's politicalness, conditioned on
774 pro-development prior orientation. Average Component Interaction Effect (ACIE) of pro-development prior
775 orientation on perceived politicalness of advertisements in a paired conjoint experiment. Dependent variable
776 is a dummy variable indicating whether an ad was selected as more political when presented with two ads.
777 The first column estimates ACIE for the message and the second column estimates the ACIE for the source.
778 Corresponds to Figure 5. (Source: NORC3; N = 1,013)



797 Fig. 5. Effect of pro-development message and source on perception of ad's politicalness, conditioned on
798 pro-development prior orientation. Estimates are Average Component Interaction Effects in a paired conjoint
799 experiment. Dependent variable is a dummy variable indicating whether an ad was selected as more political
800 when presented with two ads. See Table 5 for full results. (Source: Sample NORC3; N = 1,013)

803 7 REAL ADS EXPERIMENT

804 While the conjoint analysis allows us to estimate the AMCE of different aspects of ads precisely,
805 the ads we created were artificial, and in some cases, that artificiality would have been obvious to
806 study participants. A particular concern is that our findings may not generalize to more realistic
807 ads. Even more, there is the possibility that some types of ads (e.g., pro-environmental ads with
808 strong messages from Republican candidates) may be so rare in practice that they are not useful to
809 consider. Therefore, we conducted a second experiment based only on real (unedited) ads.

811 7.1 Methodology

812 To study how respondents judge the politicalness of more realistic ads, we designed a second
813 experiment using real ads selected from Facebook's Ad Library for all active ads. This study was
814 repeated on both the NORC2 and NORC3, which we pool in our analysis below.⁵

815 Respondents were asked to evaluate ads from eight different sources. We selected ads from
816 the same six advertisers as in the conjoint experiment (candidates: Trump and Biden, non-profit
817 organizations: Power the Future and the Sierra Club, and politically active corporations: Exxon and
818 Patagonia), and added an additional category: non-political corporations. We added this category
819 to allow us to compare our political corporation ad sources to a non-political baseline. Our non-
820 political corporations, MSC Industrial and Colgate, were identified by looking for advertisers that
821 had a small number of non-declared political ads, and no declared political ads in Facebook's
822 Political Ad Library.

823 From each advertiser, we selected two ads, one to present a relatively strong political message
824 and imagery, while the other presented a message and imagery that was relatively weaker. We
825 defined strong ads to be those that more expressly advocated for a candidate or public policy. For
826 the non-political corporation category, 'strong' ads were selected from the source's non-disclosed
827 political ads⁶ and 'weak' ads were selected from currently running non-political ads from Facebook's
828

829 ⁵In Appendix D, we show that these patterns hold when disaggregating by survey.

830 ⁶When running an ad on Facebook, advertisers need to declare whether the ad falls under the platform policies on political
831 advertising. "Non-disclosed" political ads were not disclosed as political to the platform (i.e., likely not considered political
832 by the advertiser) but subsequently deactivated by the platform for failure to disclose (i.e., considered political by Facebook).

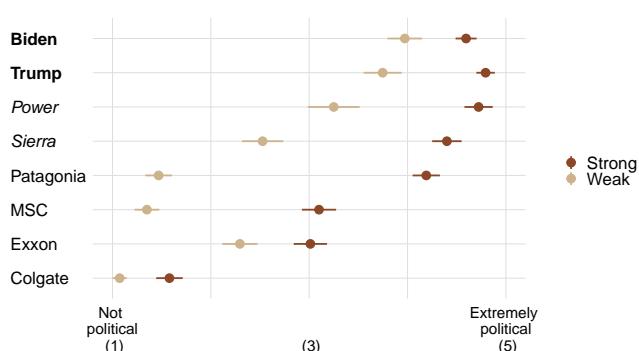


Fig. 6. Mean politicalness scores (with 95% confidence intervals) from the validation of coded ad message strength for the real ads experiment. Candidates are in **bold**, non-profits are in *italics*, and companies are in plain text. (Source: AMT2; $N = 281$)

Library for all ads. These ads were used in our experiment in exactly the form they appeared in the Facebook Ad Library.

The relative strength of the messages was validated with the second Mechanical Turk convenience sample ($N = 281$), which is referred to as AMT2 in Section 4. Validation was done by altering the ads so that only the message and image (and not the source) were shown. On a five-point scale, average message strengths ranged from a high of 4.8 for Trump's strong message and a low of 1.2 for Colgate's weak message. Full validation results are presented in Figure 6 and show that the selected "strong" messages are indeed always ranked higher than the selected "weak" messages from the same advertiser. However, there is clearly important heterogeneity across ad sources. For instance, we were unable to locate a "weak" Biden ad with a message scoring below even the most political Colgate ad.

The experimental design was as follows. Each respondent was shown one ad from each sponsor (for a total of eight ads) and asked, "How political is this ad?" Responses were on a five-point scale ranging from 'not at all political' (1) to 'extremely political' (5). For each source, respondents were randomly assigned to see either the 'strong' or 'weak' ad. Thus, this can be considered a within-between experiment since respondents rated multiple ads (within-subject variation) but the exact composition of the ads was randomized for each respondent (between-subject variation).

This design differs in three important ways from the conjoint analysis, which guides our analysis below. First, the ad content for each source is fundamentally different, making it difficult to isolate independent "effects" of ad sources. For this reason, we first estimate the effects of ad strength separately for each source, essentially treating them as eight separate between-subject experiments. Second, since we are no longer doing a conjoint analysis, we do not ask respondents to choose between ads. Rather, respondents rate each ad independently on a five-point scale, which provides much more information about respondent perceptions than a binary indicator.⁷ This changes our interpretation of the coefficients below. In the conjoint analysis, effects represented the change in the probability that an ad was selected as being the most political in a paired comparison. In the real ads experiment, the coefficients indicate the effects on the five-point Likert scale. Finally, the orientation and even the topic of the ads change across sponsors. For instance, there simply were no

⁷We replicated this analysis changing the outcome to a binary indicator. All of the substantive results remained unchanged.

	Politicians		Organizations		Political companies		Non-political companies	
	Biden	Trump	Power	Sierra	Exxon	Patagonia	MSC	Colgate
Constant	3.62*** (0.05)	3.38*** (0.06)	3.20*** (0.05)	2.59*** (0.05)	2.44*** (0.04)	1.84*** (0.04)	1.73*** (0.04)	1.19*** (0.03)
Strong message (Baseline: Weak)	0.60*** (0.07)	1.07*** (0.07)	0.87*** (0.06)	1.42*** (0.07)	0.65*** (0.06)	1.93*** (0.06)	1.34*** (0.06)	0.60*** (0.05)
R ²	0.07	0.18	0.15	0.29	0.08	0.47	0.29	0.11
Adj. R ²	0.07	0.18	0.15	0.29	0.08	0.47	0.29	0.11
RMSE	1.08	1.14	1.03	1.11	1.06	1.02	1.05	0.85
N	1950	1949	1946	1945	1951	1951	1945	1952

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 6. Effect of exposure to strong (relative to weak) ads on perceived politicalness in the *real ads* experiment. Dependent variable is on a five point scale ranging from not political (1) to extremely political (5). For each of the eight ad sources (Trump, Exxon, etc.), each participant saw either an ad that was strong or weak in message strength. Point estimates based on regression estimators (standard errors in parentheses). Values represent the change in perceived politicalness on a five-point Likert scale. (Source: NORC2 and NORC3 pooled)

weak ads from the Biden campaign on the topic of the environment. This means that we will rely on partisanship rather than prior attitudes on environmental policies *per se* to represent prior attitudes in our analysis below. Partisanship was collected on a 1–7 scale from Strong Democrat to Strong Republican, 4 being “Don’t Lean/Independent/None.” Those below 4 were coded as Democrats, those above 4 were coded as Republicans, and those who chose not to affiliate with either of the two parties (4) were coded as missing for the analyses of heterogeneous effects.

7.2 Results

We first analyze the effect of each treatment (strong versus weak ad) separately for all eight sources. The means are shown in Figure 7, and simple bivariate regressions are reported in Table 6.⁸

To begin, we examine whether the public viewed ads with strong messages as more political. Indeed, for each of the eight sources, the ad with the stronger message was rated as being more political with treatment effects in Table 6 ranging from 0.60 ($se = 0.07, p < 0.001$) for Biden to a remarkable 1.93 ($se = 0.06, p < 0.001$) for Patagonia.

Turning to Figure 7, we see that ads from politicians had a mean politicalness score of 3.9 ($se = 0.02$), ads from advocacy groups had a mean score of 3.5 ($se = 0.02$), ads from politically involved corporations had a mean score of 2.8 ($se = 0.02$), and ads from non-politically involved businesses had a mean politicalness score of 1.9 ($se = 0.02$). To determine which of these differences in mean politicalness score were significant, we used a one tailed t-test to compare the mean score of ads from each source to the mean score of ads from the source with the closest mean. Thus, scores of ads from politicians were compared to the scores of ads from advocacy groups ($t = 23.4, df = 1, 952, p < 0.001$), which were in turn compared to the scores of ads from political businesses ($t = 23.4, df = 1, 952, p = 0.003$), which were then compared to the scores of ads from non-political businesses ($t = 39.5, df = 1, 952, p < 0.001$). See Appendix D.2 for more details.

⁸Since the ad strength was randomized, these regression coefficients are unbiased estimates of the average treatment effects. The t-statistics are sufficiently large, due to the large effect sizes and large samples, that adjusting our significance level for multiple testing would make no difference in the conclusions we reach.

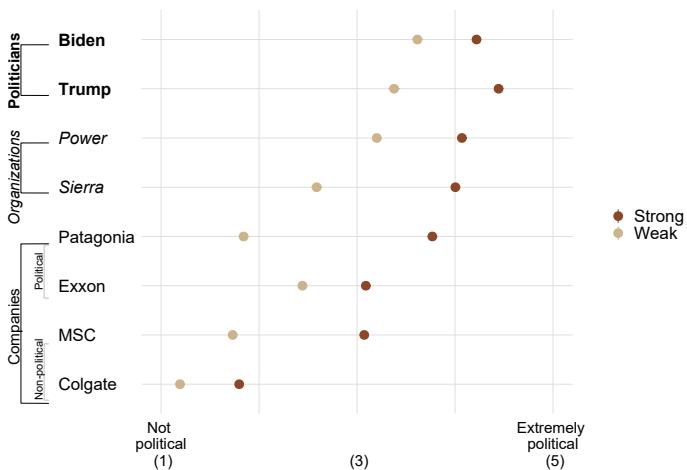


Fig. 7. Average perceived politicalness of political ads by source and message strength. For each of the eight ad sources, each participant saw an ad with either a weak or strong political message. Point estimates represent weighted means (with 95% confidence intervals). The variables are measured on a five-point scale ranging from not political (1) to extremely political (5). Confidence intervals are sufficiently small that they are not always visible behind the point estimates. See Table D1 in Appendix D.1 for full results. (Source: NORC2 and NORC3; $N = 2,019$)

As in the conjoint, the real ads experiment suggests that the public does appear to view ads from politicians as generally more political than ads from advocacy groups, which in turn are perceived as more political than those from politically active businesses. Indeed, Figure 7 illustrates that even ads from politicians with weak messages (e.g., selling t-shirts or coloring books) are on average viewed as political with mean scores of 3.62 for the weak/Biden ad and 3.38 for the weak/Trump ad, placing them somewhere between “somewhat political (3)” and “very political (4).”

To understand how prior attitudes shape evaluations of politicalness, we ran an additional analysis of each study controlling for party affiliation (and excluding independents). This analysis is shown in Table 7. The results show that Republican respondents (relative to Democrats) typically found ads from pro-development/Republican sources less political, while the pro-environment/Democratic ads were viewed as more political. The indicator for Republican respondents is positive and statistically significant for the Biden ($\beta = 0.49, se = 0.08, p < 0.001$), Patagonia ($\beta = 0.18, se = 0.07, p = 0.009$) and the Sierra Club ($\beta = 0.20, se = 0.08, p = 0.008$) experiments. Consistent with expectations, the relevant coefficients are negative and significant for the Trump ($\beta = -0.55, se = 0.08, p < 0.001$), Power the Future ($\beta = -0.33, se = 0.07, p < 0.001$), and Exxon ads ($\beta = -0.18, se = 0.08, p = 0.021$). Here again, this effect is consistent with our results from the conjoint experiment. Lastly, we note that the indicator is (unexpectedly) positive for both the the MSC experiment ($\beta = 0.13, se = 0.07, p = 0.07$) and for Colgate ($\beta = 0.08, se = 0.06, p = 0.18$). However, neither coefficient reaches traditional levels of statistical significance.

Finally, to approximate the analysis from the conjoint study, we fit a pooled model combining six of the sources. For this analysis, the goal was to mimic the conjoint, which did not include non-politically active companies such as Colgate. We, therefore, exclude these ads from our pooled

	Politicians		Organizations		Political companies		Non-political companies	
	Biden	Trump	Power	Sierra	Exxon	Patagonia	MSC	Colgate
Constant	3.31*** (0.08)	3.64*** (0.08)	3.41*** (0.06)	2.42*** (0.07)	2.56*** (0.07)	1.75*** (0.06)	1.66*** (0.06)	1.16*** (0.05)
Strong ad (Baseline: Weak)	0.68*** (0.08)	1.07*** (0.08)	0.81*** (0.07)	1.50*** (0.08)	0.62*** (0.08)	1.94*** (0.07)	1.35*** (0.08)	0.60*** (0.06)
Republican (Baseline: Dem.)	0.49*** (0.08)	-0.55*** (0.08)	-0.33*** (0.07)	0.20** (0.08)	-0.18* (0.08)	0.18** (0.07)	0.13 (0.07)	0.08 (0.06)
R ²	0.13	0.24	0.16	0.32	0.08	0.48	0.30	0.11
N	1377	1376	1371	1370	1379	1374	1374	1377

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 7. Effect of exposure to ads with strong (relative to weak) message strength on perceived politicalness in the *real ads* experiment. Control included for party identification. Dependent variable is on a five-point scale ranging from not political (1) to extremely political (5). For each of the eight ad sources (Trump, Exxon, etc.), each participant saw either an ad with strong or weak message strength. Point estimates based on regression estimators (standard errors in parentheses). Values represent the change in perceived politicalness moving from weak message to strong message. (Source: NORC2 and NORC3 pooled).

analysis. This allows us to estimate the pooled effects of the strong/weak treatment as well as average differences across source types.

Specifically, we estimate three linear regressions pooling across sources. We create a binary variable indicating whether a source is a candidate (*Cand*) or organization (*Org*), leaving corporations as the baseline. Likewise, we create indicators for whether the ad is strong (versus weak) and pro-development (versus pro-environment). Let respondent i evaluating the ad from source j provide evaluation y_{ij} . We estimate the model

$$y_{ij} = \alpha_i + \beta_1 \text{Cand}_j + \beta_2 \text{Org}_j + \beta_3 \text{Strong}_{ij} + \beta_4 \text{Pro-dev}_j + \epsilon_{ij}$$

where α_i is the respondent-level fixed effect, and the β coefficients are the effect of the respective ad feature relative to the baseline. We use clustered standard errors at the respondent level to account for correlated errors within respondents.

The results (Model 1 in Table 8) show the same general pattern discussed above; both the content (message strength) and source matter for perceived politicalness of an ad. However, we can see more explicitly that in this less controlled setting, the source effects on politicalness ratings are similar to the message strength treatments. The coefficient for candidate ads (with ads from Exxon and Patagonia again serving as the baseline) is $\beta = 0.98$ ($se = 0.04, p < 0.001$), while the aggregate effect of the strong ads treatment is $\beta = 1.11$ ($se = 0.03, p < 0.001$). Thus, the evidence suggests that the source type (company, advocacy organization, or candidate) does have a significant correlation with politicalness ratings given more natural content. Finally, there is a modestly negative main effect for ads with a pro-development orientation ($\beta = -0.16, se = 0.03, p < 0.01$). However, this effect is substantively small and (as we discuss below) highly heterogeneous based on respondent partisanship.

The results in Figure 7 suggest that the effect of the ad message on perceived politicalness is generally much smaller for political candidates than for organizations or companies. We, therefore, conduct an exploratory analysis where we interact the ad strength variable with the source type (adding Strong ads \times candidate and Strong ads \times organization interaction terms to Model 1). This allows us to explicitly test whether the ad strength treatment differs across source type. This result is reported as Model 2 in Table 8. This shows that the effects are significantly smaller for candidates

		Model 1	Model 2	Model 3
1030	Candidate	0.98*** (0.04)	1.23*** (0.06)	0.98*** (0.04)
1031	(Baseline: Corporation)			
1032	Organization	0.79** (0.04)	0.99*** (0.05)	0.81*** (0.03)
1033	(Baseline: Corporation)			
1034	Strong ads	1.11*** (0.03)	1.34*** (0.05)	1.09*** (0.03)
1035	(Baseline: Weak)			
1036	Pro-development	-0.16** (0.03)	0.16** (0.03)	0.13*** (0.04)
1037	(Baseline: Pro-environment)			
1038	Strong ads × candidate		-0.49*** (0.07)	
1039	Strong ads × organization		-0.40*** (0.07)	
1040	Pro-development × Rep.			-0.59*** (0.06)
1041	Respondent fixed effects?	Yes	Yes	Yes
1042	R ²	0.50	0.50	0.31
1043	N	1962	1962	1675
1044	Total Responses	11692	11692	9985

Table 8. Pooled model for the real ads experiment. Ads from less politically active companies excluded to better reflect the design of the conjoint analysis. Dependent variable is on a five-point scale ranging from not political (1) to extremely political (5). For each of the six ad categories (excluding non-political companies), each participant was randomly shown an ad with a strong or weak message. Point estimates based on regression estimators with clustered standard errors (standard errors in parentheses). Model 1 is the baseline model, Model 2 explores heterogeneous effects of ad strength by ad source type, and Model 3 explores heterogeneous effects of ad orientation by respondent partisanship. Independents are excluded from Model 3. All models include respondent-level fixed effects. (Source: NORC2 and NORC3 pooled)

($\beta = -0.49$, $se = 0.07$, $p < 0.001$) relative to the baseline of companies. Again, we cannot interpret these naively because the “treatments” differ in important ways across sources. However, the results are consistent with the idea that for some sources (e.g., candidates), all content is viewed as political, regardless of the strength of the message.

Finally, Model 3 in Table 8 provides evidence consistent with Hypothesis 3, that respondents tend to view content they disagree with as being more political. Here, we include an interaction between an indicator for pro-development/Republican ads and Republican identifiers and exclude independents. (Recall that all of these models include respondent-level fixed effects, thus the base term for Republican identifiers is excluded due to co-linearity.) The results show that Democrats identify ads from pro-development/Republican sources as being more political ($\beta = 0.13$, $se = 0.04$, $p < 0.001$). For Republicans, the effect of a pro-development orientation is -0.46 .⁹ Here again, we see a significant but relatively modest effect for source orientation on perceptions of politicalness.

In summary, candidate ads seem to be viewed as inherently political, in contrast to sources such as politically active companies and advocacy organizations, where message strength appears to matter far more in order for an ad to be considered political. This differs from our finding in the conjoint analysis, where ads from companies and advocacy organizations were viewed as equally political. This may reflect the artificial nature of ads in the conjoint experiment, the fact that we did not include non-political companies in the conjoint experiment, or the different nature of the ads

⁹This is calculated by adding the pro-development coefficient (0.13) with the interaction term (-0.59) in Model 3. For Democrats, the effect is simply 0.13, which is the ‘pro-development’ coefficient in Model 3.

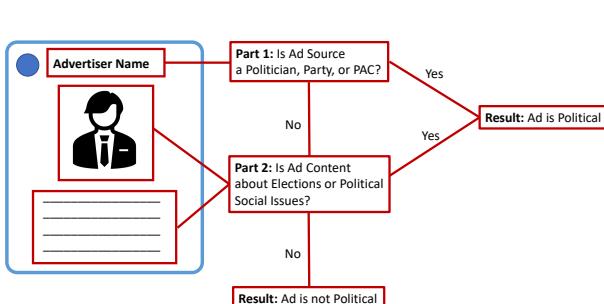


Fig. 8. Two-Part Test for determining whether an online ad is political

available from different source types in the Ad Library in the real ads experiment. Despite these differences, however, these results largely confirm our findings in the conjoint experiment, and thereby provide a positive answer to Research Question 2 (*Do the effects measured in the conjoint analysis replicate when respondents evaluate real social media ads?*).

8 OPERATIONALIZING USER DEFINITIONS OF POLITICAL ADS

Based on our findings, we propose a two-part test, illustrated in Figure 8, for determining if an ad would be considered political by most Americans. Platforms that wish to align their definitions of political advertising with user perceptions can adopt such a test to determine which ads should be subject to their political advertising policies. This test can also serve researchers active in the area of online political advertising, for example when auditing platforms' handling of political advertising, or when conducting user studies involving online political ads (e.g., testing novel transparency UI prototypes).

Two-Part Test. Considering the results from our conjoint and real ads experiments, we find strong evidence that ads from overtly *political sources* will be viewed as political (Hypothesis 1). Some advertisers, such as political candidates, appear to virtually always be considered political by respondents regardless of their messages. Thus, to determine if an ad would meet the public's definition, the ad source should be considered first. If the ad source is an explicitly political one such as a candidate, then the ad should be considered political regardless of its contents.¹⁰ Additionally, both our conjoint and our real ads experiment also show that *strong messages* have a large, statistically significant effect on survey participants' perceptions of how political an ad is, regardless of the nature of the advertiser (Hypothesis 2). Hence, as the second step of our proposed test, an ad should also be considered political if the contents of the ad explicitly refer to an electoral or political issue. Lastly, in our survey of user preferences, we did not find support for exempting news media organizations from rules governing political ads: 77 % of users opposed such exceptions (RQ1d). Therefore, we recommend that this test be applied consistently, without exception for certain categories of advertisers.

¹⁰It seems reasonable to infer that this would also apply to ads from a political party, PAC, or 501(c) organization. However, this should be explicitly tested in future work.

1128 *Comparison to 2020 Platform Policies.* Google's definition of political advertising, as summarized in
1129 Section 2.3, was restricted to electoral ads; this appeared to be more limited than what is captured
1130 in our proposed test. Specifically, it did not include ads with political social issue content, which
1131 would be captured by Part 2 of our test. On the other hand, Facebook and Twitter's conception
1132 of political advertising took into account both the message and the messenger and included a
1133 broader range of content (both electoral and social issue). This conception is better aligned with
1134 user perception. Lastly, all three platforms we review here exempted certain types of ads from
1135 their political ad policies ('commercial' ads on Google and Twitter, and ads from news media on
1136 Facebook, Google, and Twitter). Our proposed two-part test does not allow for any exemption. The
1137 incompatibility of news exemptions with user preferences is directly supported by the outcome of
1138 our survey questions (RQ1d). We did not ask users specifically about their opinions on commercial
1139 exemptions, but some of the ads tested in the conjoint and real ads experiments were commercial
1140 in nature. When these ads were run by strongly political sources or had strong political messages,
1141 they were still considered political by our respondents. Therefore, our test does not allow for this
1142 category of exemption either.

1143 9 DISCUSSION

1144 Mishandling of political advertising by social media companies has led to increasing public dis-
1145 trust [5] of the platforms and serious regulatory scrutiny. In the hope of winning back the trust
1146 of their users and warding off regulators, platforms have dedicated significant resources to de-
1147 veloping and implementing policies regulating if, how, and when political ads are displayed [51].
1148 Paradoxically, online political advertising is not a problem that platforms can sidestep by banning
1149 the practice outright—such a step would still require a careful definition of *what exactly* should be
1150 banned.

1151 The policies that platforms ended up implementing are the end product of various competing
1152 interests, including user preferences, political pressures, and financial considerations. We argue that
1153 it is important to study and understand user perceptions especially when these are not fully aligned
1154 with actual policies. Identifying instances of mismatches can help hold social media companies
1155 accountable for the interests of their users.

1156 Our work sheds light on user preferences and perceptions around online political advertising,
1157 and how these differ from actual platform policies. Specifically, we found that none of the platforms
1158 we studied defines political advertising in a way that fully conforms with users' perceptions and
1159 preferences. For example, both Facebook and Twitter exempt news from their definitions of political
1160 advertising,¹¹ which is opposed by 77 % percent of respondents. Another definitional divide exists
1161 between platforms and users over the question of whether 'social issue' advertising is political
1162 or not. Google only considers 'electoral' advertising, which excludes social issue advertising and
1163 appears to go against user perceptions. Both our experiments tested user perceptions of social
1164 issue advertising content and found that when these ads are backed by a strongly political figure
1165 or simply contain strong messages, users do consider them political. Exactly which social issues
1166 are considered political is not well understood, and likely shifts over time. Better establishing user
1167 perceptions in this area would be useful future work.

1168 We have outlined several important differences in the definition and presentation of political ads
1169 between platforms and user expectations. In some scenarios, such differences may have negative
1170 consequences for users. Most notably, differences between user expectations and platform policies
1171 imply a lack of transparency where users expect it (i.e., no disclosure of funding sources, no public
1172

1173
1174 ¹¹This news exemption was enacted after a concerted lobbying effort from news publishers [12] who objected to their ads
1175 being labeled as 'political.'

1177 archival, and access to such ads). Furthermore, when a platform allows users to ‘opt out’ of political
1178 ads, users may still be exposed to ads they would prefer not to see based on a different understanding
1179 of what is political. Another issue is differences in policies across platforms, which can result in
1180 inconsistent user experiences. For example, when users’ experiences with political ads do not
1181 translate across platforms, users may find it more difficult to identify political ads that seek to
1182 influence their opinion. We encourage future research into these classes of potential harm to users.

1183 It is possible that regulation of social media ads online could lead to more consistent experiences
1184 more in line with user expectations. Our findings, and the two-part test we outlined in Section 8,
1185 can serve as a starting point for such regulation, or for voluntary adjustments to platform policies.
1186 We found that users were split on some issues, such as whether political ads should be allowed at
1187 all. In cases where significant proportions of users disagree, we recommend that platforms give
1188 users more control over their own experiences. For example, Facebook allows users to ‘opt out’
1189 of political ads, and to report political ads that are not marked as such. These designs have the
1190 potential to allow more users to have an experience more consistent with their own preferences.

1191 9.1 Limitations

1192 Our present study has several limitations that future work can improve upon. One important
1193 concern is that additional work is needed to understand what kinds of messages the public will
1194 generally view as a “strong” political message. We based our coding on whether the ad made an
1195 explicit appeal for a candidate or public policy. However, there is surely a continuum of message
1196 strength that we cannot fully explore here. Important factors may include whether the ad explicitly
1197 mentions a politician or government action, whether it asks viewers to engage in a political act
1198 (however defined), or whether the issue at hand is viewed as partisan. Given the paucity of research
1199 on this subject, we considered it important to avoid trying to study the independent effects of
1200 all these factors in a single set of experiments, but clearly, further work on these questions is
1201 warranted.

1202 A related limitation is that we restricted our study (to the extent possible) to a single issue area,
1203 namely energy use and environmental policy. We did so for three primary reasons. First, to isolate the
1204 effects of other ad features (e.g., message strength, source, orientation), we considered it important
1205 to control as many other ad features as possible, including topic. Further, environmentalism is an
1206 area of active political debate where many “non-traditional” organizations are active. In particular,
1207 many corporations make implicit (or explicit) arguments about the balance between environmental
1208 protection and economic development, either as a function of their basic economic activities or as
1209 part of a broader corporate image or brand management strategy. This lends plausibility to the ads
1210 in the conjoint design and supplies many examples of relevant real ads for our real ads experiment.
1211 In addition, environmental policy provided a middle ground between topics that are by their nature
1212 inherently political (e.g., voting rights) and topics that are largely absent from current political
1213 discourse (e.g., soap). This, of course, raises the question of which issue areas are considered more
1214 or less political in the first place. This is obviously an area for future investigation, although existing
1215 work suggests that this is a moving target strongly affected by current events [26, 53].

1216 The user interface design of the ads used in our experiments was based on the way Facebook
1217 displays ads to users. It is unclear how our results would change with a different ad design (e.g.,
1218 showing the advertiser name or funding source disclaimer more prominently or not at all). While
1219 the strong effects of ad source and message strength on perceived politicalness lead us to believe
1220 that these results would likely still hold, it is an interesting question for future work to evaluate
1221 the impact of ad design on perceived politicalness.

1222 Finally, the questions we raise and our design strategy are focused exclusively on the U.S.
1223 setting. It is important to recognize that the platforms’ rules discussed above are specific to the U.S.
1224

1226 context, and each platform has adopted very different policies across countries. Indeed, in many
 1227 global jurisdictions, platform rules (and transparency tools) for political advertising are essentially
 1228 nonexistent. Furthermore, the legal frameworks for political advertising can differ dramatically
 1229 across jurisdictions. Likewise, the very nature of the “political” is likely to vary significantly across
 1230 contexts [26]. Significantly more work is needed to understand these issues from a cross-national
 1231 perspective.

1232 10 CONCLUSIONS

1234 Our results suggest that the message, messenger, and the viewer’s prior beliefs *all* impact the
 1235 public’s determination of what is and what is not a digital political ad. In particular, either a
 1236 strongly political ad source or a strongly political message is enough to tip users’ perceptions of an
 1237 ad towards the “political.” The effect of the prior beliefs of users, while significant, is much smaller
 1238 than impacts from either ad source or message. Based on these findings, we recommend a two-part
 1239 test for determining which ads may be seen as “political” by most American users.

1240 When asked directly about their opinions on political ad policies, users are not uniformly opposed
 1241 to political ads, but they do want transparency and consistent treatment. Policies for political ads
 1242 at Facebook, Google/YouTube, and Twitter do not always appear to be well aligned with users’
 1243 conception of political ads, and their preferences for handling them. As a result, users may find
 1244 platforms’ handling of political ads counter-intuitive and inconsistent, which can lead to a political
 1245 ad experience that does not align with users’ expectations.

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A APPENDIX

A.1 NORC sample demographics

	NORC2		NORC1		NORC3	
	Unw'd	Weighted	Unw'd	Weighted	Unw'd	Weighted
Household Income						
Less than \$30,000	24.2 %	26.0 %	26.8 %	26.5 %	20.9 %	23.3 %
\$30,000 to \$74,999	39.4 %	37.8 %	40.1 %	35.8 %	40.7 %	37.8 %
\$75,000 to \$124,999	23.7 %	22.3 %	22.2 %	23.5 %	23.4 %	23.4 %
\$125,000 plus	12.8 %	13.9 %	10.9 %	14.2 %	15.0 %	15.5 %
Member Age						
18 – 34	29.2 %	29.3 %	28.9 %	29.5 %	25.3 %	29.5 %
35 – 49	24.2 %	24.3 %	22.1 %	24.2 %	23.8 %	24.2 %
50 – 64	26.0 %	24.9 %	24.1 %	24.6 %	25.4 %	24.6 %
65+	20.6 %	21.5 %	24.8 %	21.7 %	25.6 %	21.7 %
Member Race/Ethnicity						
White	66.2 %	62.8 %	60.3 %	62.8 %	66.9 %	62.8 %
Black	10.3 %	11.9 %	14.0 %	12.0 %	9.7 %	12.0 %
Hispanic	15.6 %	16.7 %	18.4 %	16.7 %	15.2 %	16.7 %
Asian/Pacific Islander	3.2 %	5.8 %	2.3 %	3.8 %	2.8 %	4.7 %
Others	4.7 %	2.8 %	5.0 %	4.8 %	5.4 %	3.9 %
Member Education						
Less than High School	4.8 %	9.8 %	5.6 %	9.8 %	4.3 %	9.8 %
High School Equivalent	17.3 %	28.2 %	19.0 %	27.8 %	16.2 %	27.8 %
Some College/Associate Degree	41.8 %	27.7 %	49.0 %	27.6 %	41.1 %	27.6 %
Bachelor's Degree	22.0 %	21.3 %	15.6 %	21.3 %	23.1 %	20.5 %
Graduate Degree	14.1 %	12.9 %	10.8 %	13.5 %	15.3 %	14.3 %
Household Owners						
Owner Occupied	65.6 %	67.2 %	62.4 %	68.6 %	71.2 %	76.4 %
Renter Occupied/Other	34.4 %	32.8 %	37.6 %	31.4 %	28.8 %	23.6 %
Children in House						
With 1+ Under 18 Years	25.5 %	25.6 %	24.6 %	24.6 %	20.5 %	20.7 %
Without Children Under 18	74.5 %	74.4 %	75.4 %	75.4 %	79.5 %	79.3 %
Household Marital Status						
Currently Married	47.9 %	46.1 %	48.7 %	50.0 %	51.3 %	49.8 %
Currently Single	52.1 %	53.9 %	51.3 %	50.0 %	48.7 %	50.2 %
Sex						
Male	46.9 %	48.3 %	43.5 %	48.5 %	47.7 %	48.5 %
Female	53.1 %	51.7 %	56.5 %	51.5 %	52.3 %	51.5 %

NORC2: N = 1006, NORC1: N = 1061, NORC3: N = 1013.

Table A1. Basic Demographics for Survey Samples

A.2 Study Instruments

In this section we provide details on the studies and surveys we fielded in July 2020, November 2020, and April 2021. In the main text, these are referred to as NORC2, NORC1, and NORC3, respectively. Included are the questions we asked, how we asked them, and how we recorded responses.

1471 A.2.1 *User Opinion Survey Instruments.* In the NORC1 survey, we administered a battery of 20
1472 Likert items related to how social media companies should handle political advertisements. These
1473 items were written to summarize various policies (or policy proposals) regarding platform regulation
1474 of ads, including whether ads should generally be allowed, disclosure requirements, transparency
1475 archives, microtargeting, and media exemptions. The item order was randomized, and respondents
1476 were asked whether they agree or disagree on a 6-point scale ranging from “strongly agree” to
1477 “strongly disagree.” Twelve of these items are shown in Table 3 in the main text and in Table B1 in
1478 the appendix. Eight additional items relate to the regulation of ads with misinformation, which
1479 will be analyzed in a future manuscript.

1480 A.2.2 *Attitudes towards social media platforms and regulation.* NORC1 was fielded November 16,
1481 2020 – December 2, 2020. 978 responded by web mode (CAWI) and 83 by phone mode (CATI). See
1482 Methodology in the main text for additional details about this survey.
1483 The second battery was a set of 20 Likert items where respondents were asked to indicate agreement
1484 on a six-point scale. The prompt was:

1485 How much do you agree with the following statements about how social media companies
1486 should handle political advertisements?

1488 For CAWI respondents, this was presented as a standard grid. Response options were: (1) Strongly
1489 agree; (2) Agree; (3) Agree only a little; (4) Disagree only a little; (5) Disagree; (6) Strongly disagree.
1490 CATI respondents were first asked if they agreed/disagreed and then received a follow-up question

- 1491 • IF R SAYS AGREE: Is that strongly agree, agree, or only agree only a little?
1492 • IF R SAYS DISAGREE: Is that strongly disagree, disagree, or only disagree only a little?

1493 CATI respondents received all items in a randomized order. For CAWI respondents the items were
1494 presented in four 5-item blocks, although the order was still randomized. The complete list of items
1495 is listed here.

- 1496 a. Political ads should be removed if they contain false information.
1497 b. Political ads should be allowed, even if they contain misleading information.
1498 c. Political ads with false content should be allowed, but labeled with a warning.
1499 d. Companies should not try to label political ads as false, even if they containing misleading information.
1500 e. No political ads should be allowed at all.
1501 f. Political candidates should always be allowed to post ads without restriction.
1502 g. All ads on controversial topics should be removed, regardless of source.
1503 h. Ads that encourage voting should always be permitted.
1504 i. Ads from news organizations should be exempted from regulations of political advertising.
1505 j. Political ads from news organizations should be subject to the same regulations as ads from other sources.
1506 k. Ads that discredit voting by mail should not be permitted on social media.
1507 l. Political ads should include information about who paid for them.
1508 m. Political advertisers should not be required to disclose their funding sources.
1509 n. Microtargeting political ads to specific audiences based on things like age, gender, and race should not be permitted.
1510 o. Political advertisers should be allowed to select who sees their ads.
1511 p. Ads that contain misinformation about a candidate should be removed.
1512 q. All ads about candidates should be allowed, even if they contain false content.
1513 r. Companies should provide a publicly accessible database of all political ads.
1514 s. Ads about candidates or upcoming elections should be banned, but ads about social issues (e.g., guns or abortion)
1515 should still be allowed.
1516 t. Ads from certain sources like political action committees (PACs) and dark money organizations should be banned.

1520 A.2.3 *Conjoint analysis.* The conjoint study was originally fielded as part of the NORC2 survey,
1521 but a programming error made the results unusable. It was refielded for the NORC3. All respondents
1522 were online respondents. See Section 4 in the main text about this survey.

1523 *Prior attitudes and partisanship.* First, we administered two items to measure respondents' prior
1524 attitudes towards environmental regulation. The first item is from the American National Election
1525 Study. The second item relates specifically to global warming attitudes.
1526

1527 *Item 1.*

1528 Some people think the federal government needs to regulate business to protect the
1529 environment. They think that efforts to protect the environment will also create
1530 jobs. Let us say this is point 1 on a 1–7 scale.

1531 Others think that the federal government should not regulate business to protect the
1532 environment. They think this regulation will not do much to help the environment
1533 and will cost us jobs. Let us say this is point 7 on a 1–7 scale.

1534 Where would you place yourself on this scale?

1535 1 – Regulate business to protect the environment and create jobs

1536 2

1537 3

1538 4

1539 5

1540 6

1541 7 – No regulation because it will not work and will cost jobs

1542 *Item 2.*

1543 If global warming is happening, is it caused mostly by human activity, mostly by
1544 natural causes, or equally by both?

1545 (1) Mostly by human activity

1546 (2) Mostly by natural causes

1547 (3) Equally by human activity and natural causes

1548 **Partisanship** was assessed using the standard two-item branching party ID scale when the
1549 panel was constructed.

1550 *Paired comparisons.* Respondents were next given the following prompt.

1551 In this section, you will see several pairs of ads, and be asked to select which of
1552 the two is more political. Please be sure to look closely at both ads before making
1553 a choice. There are no right or wrong answers, simply select based on what feels
1554 right to you.

1555 Respondents were then asked to compare two ads and choose the one that was most political. An
1556 example item is shown in Figure 2 in the main text. Each respondent evaluated eight pairs of ads.

1557 As explained in Section 6.1, each ad was constructed at random using six potential sources, six
1558 potential messages, and five images (not of direct interest to this study). Sources were chosen to be
1559 candidates, nonprofit advocacy groups, or companies. Two sources in each category were chosen
1560 to ensure balance in ideological orientation. Messages were likewise chosen (from real ad content)
1561 to be strong, moderate, and weak messages but also balanced ideologically. The complete set of
1562 components for the ads is shown in Figure 1 in the main text.

1563 *A.2.4 Real ads experiment.* The real ads experiment study was originally fielded as part of the
1564 NORC2 survey. The total number of respondents was $N = 1,006$, but we exclude 56 CATI (telephone)

1565

1569 respondents because we rely on visual stimuli. Because of the programming error for the conjoint,
1570 the same set of experiments was fielded again as part of NORC3. See Section 4 in the main text for
1571 additional details.

1572 The real ads experiments occurred directly after the conjoint study. Respondents were given the
1573 following prompt:

1574 In this next section, you will see several ads. Please note that these ads are images
1575 and not videos.

1576 Respondents then evaluated eight ads, one chosen at random for each of the eight sources, and
1577 shown in a randomized order, with the prompt “How political is this ad?” Response options were:
1578 (5) Extremely political; (4) Very political; (3) Somewhat political; (2) Slightly political; (1) Not at
1579 all political. This has the advantage relative to paired comparisons that the response scale itself is
1580 somewhat interpretable, as scores above 3 are quite firmly viewed as being ‘political’ content. An
1581 example item is shown in Figure A1.

1582 The actual ads used for each of the eight sources are shown in Figures A2 for candidates, A3 for
1583 advocacy organizations, A4 for politically active companies, and A5 for less-politically active
1584 companies, respectively.

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How political is this ad?



Donald J. Trump

Sponsored • Paid for by TRUMP MAKE AMERICA GREAT AGAIN COMMITTEE

ID: 251960216122369

The so-called Democrat 'leaders' should immediately come back to Washington and approve legislation to help American families. But instead, they are on an ENDLESS VACATION at YOUR EXPENSE.

Nancy doesn't care if Americans suffer as long as she can be on vacation eating \$13 pints of ice cream from her \$24,000 freezer!

...



- Extremely political
- Very political
- Somewhat political
- Slightly political
- Not at all political

Fig. A1. Example item for the real ads analysis

1667

 Joe Biden
Sponsored • Paid for by BIDEN FOR PRESIDENT
ID: 256956252347515

I've defeated the NRA before to ban assault weapons and high-capacity magazines in our country, and I need your help to make sure they're banned once again. I'm counting on 112 more committed Americans to join me in this fight by speaking out before midnight, but I don't see your name yet. Tell me now if you support banning assault weapons and high-capacity magazines:



(a) Strong/Biden

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 Donald J. Trump
Sponsored • Paid for by TRUMP MAKE AMERICA GREAT AGAIN COMMITTEE
ID: 251960216122369

The so-called Democrat 'leaders' should immediately come back to Washington and approve legislation to help American families. But instead, they are on an ENDLESS VACATION at YOUR EXPENSE.

Nancy doesn't care if Americans suffer as long as she can be on vacation eating \$13 pints of ice cream from her \$24,000 freezer!



(c) Strong/Trump

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 Joe Biden
Sponsored • Paid for by BIDEN FOR PRESIDENT
ID: 59014931930213

 The OFFICIAL Joe Biden merch store is back, and better than ever! Hurry, stock up on all your fall favorites before they're gone! 



(b) Weak/Biden

 Donald J. Trump
Sponsored • Paid for by TRUMP MAKE AMERICA GREAT AGAIN COMMITTEE
ID: 169234237814899

This is the FIRST time the Trump store has ever sold a coloring book!

Shop the OFFICIAL Trump Coloring Book TODAY.

These are flying off the shelves. Order now while supplies last!



(d) Weak/Trump

Fig. A2. Real ads for candidates

1716



1717

This is outrageous: Trump's EPA just announced that it won't enforce the nation's most important environmental safeguards during the coronavirus outbreak. Yes, it's really that bad.

1718

The EPA is giving power plants and factories permission to spew unchecked pollution into our air and water without even basic restrictions. Take action:

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<https://sc.org/2wHb4I>



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(a) Strong/Sierra Club

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TAKE ACTION: Our planet is drowning in disposable plastics, and large grocery chains like Albertsons are a big part of the problem.

Help eliminate three billion plastic bags by asking Albertsons to discontinue single-use plastics now: <https://sc.org/2HnB0oM>



(b) Weak/Sierra Club

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New Mexico's Energy Transition Act is just a mini version of the extreme socialist "Green New Deal." The way the bill was crafted is unacceptable, and its results will be devastating.

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Take a stand against it! <http://energytransitiontruth.com/>

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(c) Strong/Power the future

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Fig. A3. Real ads for advocacy organizations



Enjoy affordable energy, plentiful good jobs, and more money for things like schools and infrastructure? You're fracking welcome! "Like" to help protect fracking in the U.S.



(d) Weak/Power the future

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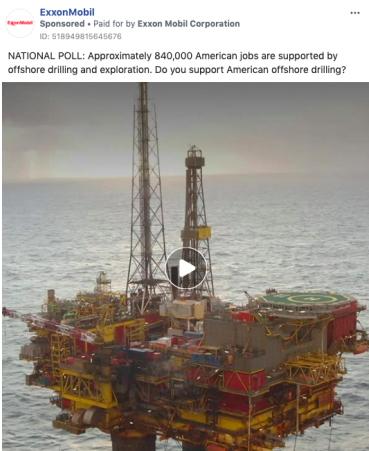
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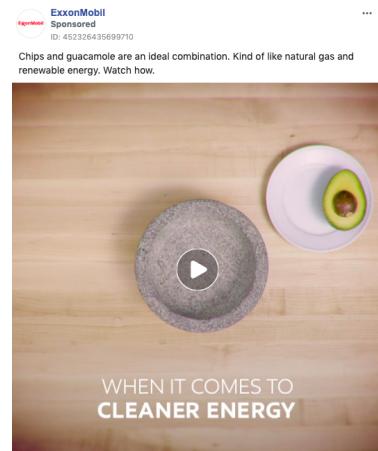
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(a) Strong/Exxon



(b) Weak/Exxon



(c) Strong/Patagonia

(d) Weak/Patagonia

Fig. A4. Real ads for politically active companies

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MSC Industrial Supply
MSC Sponsored
ID: 514478575841638

1815 Trade agreements with China, Mexico and Canada are offering a measure of relief for manufacturers—read why. #BetterMRO #TradeWar



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MSCDIRECT.COM
Expert Insights on What Phase 1 Deal & USMCA Mean for Manufacturers

1821 Recent breakthroughs in trade tensions give U.S. manufacturers a measure of relief, experts share.

(a) Strong/MSC

1822

MSC Industrial Supply
MSC Sponsored
ID: 2390887107120433

As the use of tablets, mobile devices and CNC machines pervade manufacturing, the need for touchscreen gloves is becoming a no-brainer. We talk to experts at Ironclad about the evolution of PPE for the hands that weds safety with practicality.



MSCDIRECT.COM
Touchscreen Gloves Designed to Perform and Protect
Manufacturers asked for long-lasting, hardworking touchscreen gloves, so Ironclad went back to the lab.

(b) Weak/MSC

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Colgate
Sponsored
ID: 1273488449468946

1830 Make sure #EveryDropCounts on World Water Day and every day. Save up to 4 gallons of water by simply pledging to turn off the faucet every time you brush your teeth.



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(c) Strong/Colgate

Colgate
Sponsored
ID: 913350722458603

Whiten your teeth while you sleep, the new Optic White Overnight Pen has officially arrived. #WhiteningThatWorks



(d) Weak/Colgate

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Fig. A5. Real ads for companies not engaged in political activities

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1863 B ADDITIONAL RESULTS FOR USER OPINION SURVEY

1864	Question	Mean	Lower 95% CI	Upper 95% CI	Std. Err.
<i>RQ (a) political ads should be allowed at all?</i>					
1867	Ads encouraging voting allowed	2.08	2.00	2.16	0.04
1868	No pol. ads	3.77	3.67	3.87	0.05
1869	All controversial ads banned	4.10	4.01	4.20	0.05
1870	Candidate ads banned, issue ads allowed	4.53	4.45	4.62	0.04
1871	PAC/dark money ads banned	2.71	2.62	2.81	0.05
<i>RQ (b) political ads should be allowed to be microtargeted?</i>					
1873	Microtargeting pol. ads banned	3.19	3.08	3.29	0.05
1874	Pol. advertisers choose who sees ads	4.41	4.32	4.51	0.05
<i>RQ (c) platforms should provide transparency for political ads?</i>					
1876	Pol. advertisers' funding sources private	5.00	4.92	5.08	0.04
1877	Pol. advertisers' funding sources displayed on ad	2.05	1.97	2.13	0.04
1878	Public database for companies' pol. ads	2.49	2.40	2.57	0.04
<i>RQ (d) news organizations should be exempt from disclosure and transparency requirements?</i>					
1880	News orgs exempt from pol. ad regulations	4.59	4.50	4.67	0.04
1881	News orgs' pol. ads regulated	2.02	1.94	2.09	0.04

1883 Table B1. Select opinions on proposed social media advertising regulations. Average support for proposed
 1884 regulations of political advertisements on social media. Scale from strongly agree (1) to strongly disagree (6).
 1885 Point estimates are weighted means (with 95% confidence intervals). (Source: NORC1 survey; N = 1,061)

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1912 C ADDITIONAL RESULTS FOR CONJOINT EXPERIMENT

1913 In this section, we report additional results for our conjoint experiment and analysis.

1914 1915 C.1 Heterogeneous Effects

1916 To test the extent to which prior beliefs impact the perception that an ad is political in our conjoint
1917 experiment, we calculate the average component interaction effect (ACIE), which estimates an
1918 attribute's marginal effect conditional on the respondent's position on environmental concerns
1919 versus energy development. Consistent with our preregistration, we also conduct an exploratory
1920 analysis as to whether there are also heterogeneous effects based on partisanship.
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1922 *Prior environmental attitudes.* These results can be found in Figure 5 and Table 5, and are discussed
1923 more fully in the main text. We also include an alternative specification where both interactions
1924 are included simultaneously. The results, shown in Table C1, are essentially identical.

1925 *Partisanship.* Next, we look to partisanship as a potential source of heterogeneous treatment
1926 effects. Table C2 demonstrates that pro-development messages were perceived as more political by
1927 Democrats ($\beta = 0.04$, $se = 0.02$, $p = 0.03$) and as less political by Republicans, although the latter
1928 ($\beta = -0.04$, $se = 0.03$, $p = 0.18$) does not meet traditional measures of significance.
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1930 A similar pattern emerges when we turn to the source of the message with pro-development
1931 sources being evaluated as more political among Democrats ($\beta = 0.04$, $se = 0.02$, $p = 0.03$) and as
1932 less political among Republicans ($\beta = -0.07$, $se = 0.02$, $p = 0.002$). This is largely consistent with
the results divided by prior attitudes, and supports Hypothesis 3.
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		Average marginal component effect
Images (<i>Baseline: Yellow Flowers</i>)		
Desert		-0.004 (0.03)
Oil rig		0.09*** (0.02)
Pipeline		0.08*** (0.02)
Solar wind		0.07** (0.02)
Message orientation (<i>Baseline: Pro-environment</i>)		
Pro-development		0.006 (0.02)
Message Strength (<i>Baseline: Weak</i>)		
Moderate		0.13*** (0.02)
Strong		0.37*** (0.02)
Source orientation (<i>Baseline: Pro-environment</i>)		
Pro-development		-0.02 (0.01)
Source type (<i>Baseline: Corporation</i>)		
Candidate		0.09*** (0.02)
Organization		0.004 (0.02)
Interactions		
Pro-development message conditioned on prefers development		-0.05* (0.03)
Pro-development message conditioned on prefers environment		0.05* (0.02)
Pro-development source conditioned on prefers development		-0.04* (0.02)
Pro-development source conditioned on prefers environment		0.006 (0.02)
N		1013
Total Responses		7945

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table C1. Effect of pro-development message and source on perception of ad's politicalness, conditioned on pro-development prior orientation. Average Component Interaction Effect (ACIE) of pro-development prior orientation on perceived politicalness of advertisements in a paired conjoint experiment. Dependent variable is a dummy variable indicating whether an ad was selected as more political when presented with two ads. (Source: NORC3; $N = 1,013$)

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		Message × Party ID	Source × Party ID
2010			
2011	Constant	0.23*** (0.02)	0.22*** (0.02)
2012			
2013	Desert	-0.00 (0.02)	-0.00 (0.02)
2014			
2015	Oil rig	0.09*** (0.02)	0.09*** (0.02)
2016			
2017	Pipeline	0.08*** (0.02)	0.08*** (0.02)
2018			
2019	Solar wind	0.07** (0.02)	0.07** (0.02)
2020			
2021	Message orientation: Pro-development	0.01 (0.02)	0.01 (0.02)
2022			
2023	Moderate	0.13*** (0.02)	0.13*** (0.02)
2024			
2025	Strong	0.37*** (0.02)	0.37*** (0.02)
2026			
2027	Source orientation: Pro-development	-0.02 (0.01)	-0.02 (0.01)
2028			
2029	Candidate	0.09*** (0.02)	0.09*** (0.02)
2030			
2031	Organization	0.00 (0.02)	0.00 (0.02)
2032			
2033	Pro-development message conditioned on Democrat	0.04* (0.02)	0.04* (0.02)
2034			
2035	Pro-development message conditioned on Republican	-0.04 (0.03)	-0.07** (0.02)
2036			

2037 *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

2038 Table C2. Effect of pro-development message and source on perception of ad's politicalness conditioned
 2039 on party identification (ID). Average Component Interaction Effect of party ID on perceived politicalness
 2040 of advertisements. Dependent variable is a dummy variable indicating whether an ad was selected as more
 2041 political when presented with two ads. The first column estimates ACIE for the message and the second
 2042 column estimates the ACIE for the source. (Source: Sample NORC3; $N = 1,013$)

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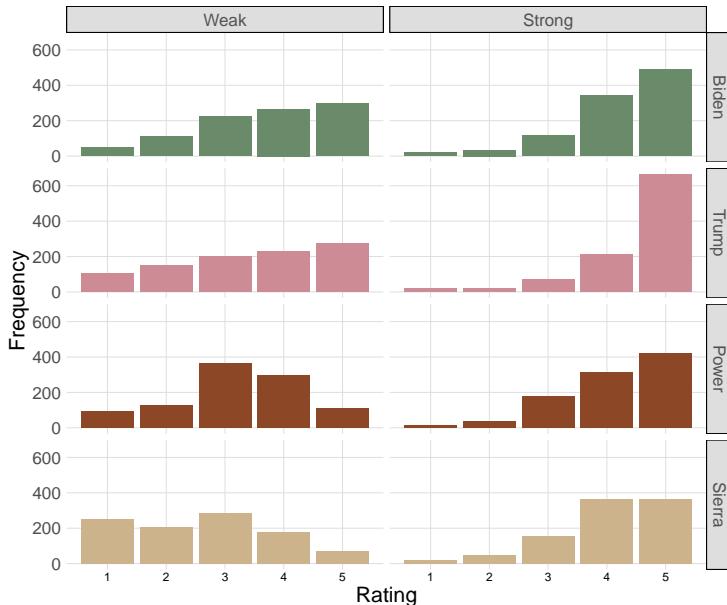
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2059 D ADDITIONAL RESULTS FOR REAL ADS EXPERIMENT

2060 In this section, we report additional results for our real ads experiment and analysis. We begin by
 2061 providing basic summary statistics for ad evaluations, including disaggregating by survey wave.
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2063 D.1 Summary Statistics for Ads



2085 Fig. D1. Full response distributions of politicalness for strong and weak-message ads from candidates and
 2086 organizations in the real ads experiment. Values on a scale from (1) not at all political to (5) very political.
 2087 Each participant saw either an ad with strong or weak message from each ad source. (Source: NORC2 and
 2088 NORC3; $N = 2,019$)

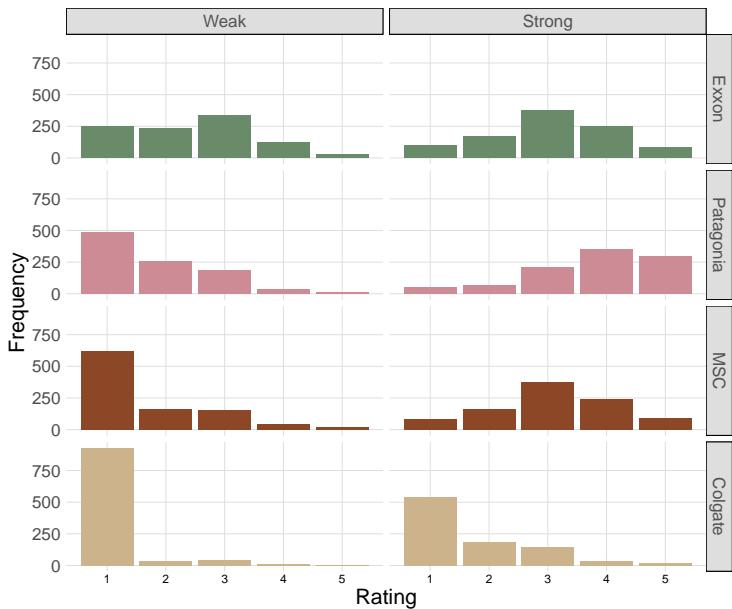


Fig. D2. Full response distributions for companies. Distribution of respondents' rating of politicalness of advertisements. Values on a scale from (1) not at all political to (5) very political. Figure displays advertisement from company sources. For each of the eight sources (Trump, Exxon, etc.), each participant saw either an ad with strong or weak message. (Source: NORC2 and NORC3; $N = 2,019$)

	Mean	Lower 95 CI	Upper 95 CI	Standard Err.	Message strength	Advertisement
2134	4.44	4.40	4.48	0.02	Strong	Trump
2135	3.38	3.32	3.44	0.03	Weak	Trump
2136	4.22	4.18	4.26	0.02	Strong	Biden
2137	3.62	3.56	3.67	0.03	Weak	Biden
2138	4.07	4.03	4.11	0.02	Strong	Power
2139	3.20	3.15	3.25	0.02	Weak	Power
2140	4.00	3.96	4.04	0.02	Strong	Sierra
2141	2.59	2.53	2.64	0.03	Weak	Sierra
2142	3.09	3.04	3.14	0.02	Strong	Exxon
2143	2.44	2.39	2.49	0.02	Weak	Exxon
2144	3.77	3.72	3.82	0.02	Strong	Patagonia
2145	1.84	1.80	1.88	0.02	Weak	Patagonia
2146	3.07	3.03	3.12	0.02	Strong	MSC
2147	1.73	1.69	1.77	0.02	Weak	MSC
2148	1.80	1.75	1.84	0.02	Strong	Colgate
2149	1.19	1.17	1.22	0.01	Weak	Colgate

Table D1. Average perceived politicalness of strong and weak-message ads. Corresponds to Figure 7. Respondents' average rating of political advertisements. For each of the eight ad sources (Trump, Exxon, etc.), each participant saw either an ad with strong or weak message strength. Point estimates represent weighted means (with 95% confidence intervals). (Source: NORC2 and NORC3 pooled; $N = 2,019$)

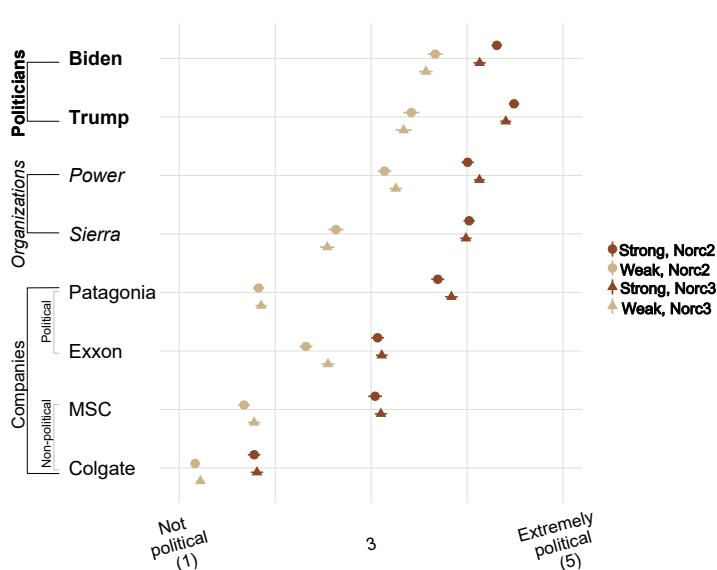


Fig. D3. Disaggregated averages of perceived politicalness of ads by source and message strength. Respondents' average rating of politicalness of advertisements. For each of the eight ad sources (Trump, Exxon, etc.), each participant saw either an ad with a strong or weak message. Point estimates represent weighted means (with 95% confidence intervals) from the NORC2 and NORC3 surveys. (Source: NORC2 and NORC3; $N = 2,019$)

D.2 Testing Difference Across Source Types

Here we simply conduct difference in mean tests comparing perceived politicalness of ads from different source categories. Details for this test are discussed in Section 7.2 of the main text.

Ad Source Type	Comparison Source Type	T-Test Result	p value
Candidates	Advocacy Groups	$t(1952) = 23.4$	< 0.01
Advocacy Groups	Political Businesses	$t(1942) = 2.7$	< 0.01
Political Businesses	Non-political Businesses	$t(1951) = 39.5$	< 0.01

Table D2. One-tailed T-Test results for differences in mean politicalness score between ad source categories

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