All the world's a stage: Comparing the use and drivers of negative campaigning in Western and Non-Western democracies

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Abstract. Negative campaigning is ubiquitous. Yet, little is known about it outside some well-known cases - the US or a handful of European countries. Due to the scarcity of large-scale comparative data, virtually no research exists on the use of negative campaigning in Non-Western democracies. On the one hand, the theory of "Americanization" of campaigning practices suggests that electoral communication should tend to converge towards a universal set of instruments regardless of the context; on the other hand, profound differences in social and political cultures across the globe should yield dissimilarities in elite behavior. To the best of our knowledge, no large-scale study exists that supports either of these two propositions. In this article, we study the communication behavior of political elites in a comparative perspective and pay special attention to the similarities and differences between campaigns in Western and Non-Western democracies. To do so, we rely on a new dataset (NEG^{ex}), based on the judgments of almost 1,000 scholars in elections and comparative politics, that includes information about the campaigning strategies of 248 candidates having competed in 50 national elections in 41 countries across the globe (2016-2018). Our comparative analysis focusses on (i) the content of election campaigns in those countries, and more specifically on the use of a negative tone and fear appeals, and (ii) the drivers of such a "negative" rhetoric, both in terms of candidate profile and contextual differences. In doing so, we contribute to the emerging field of comparative political communication by presenting one of the largest existing datasets of election campaigns, and by discussing the importance of studying the specific communication dynamics in Non-Western democracies.

Keywords. Elite behavior; Comparative political communication; Negative campaigning; Fear appeals; Expert survey; Non-western democracies

Introduction

Although the phenomenon of negative campaigning is not novel, it has only just received increased attention from academia in the past two or three decades. While there is consensus on that the tone of campaigns matters, its consequence on the political life has been subject to an intense debate. Up to this day, it remains highly controversial whether negativity is good or bad for democracy. One the one hand, literature has argued that negative messages tend to demobilize voters, negatively influences public trust (Ansolabehere and Iyengar 1995) and increase political cynicism (Cappella and Jamieson 1997). On the other hand, scholars find the opposite and claim that negative campaigning enables citizens to acquire important and useful information (Finkel and Geer 1998), that voters are mobilized (Goldstein and Freedman, 2002; Martin, 2004) and that it stimulates interest and participation (Geer, 2006).

The questions of 'why' and 'when' candidates go negative has similarly inspired a growing body of literature. As negative campaigning is by far not always beneficial and has the potential to backfire and harm the attacker, the choice to make use of negativity becomes more likely in some cases than in others. Research finds that candidates tend to go negative when the election day approaches (Damore, 2002), when they lag behind in the polls (Skaperdas and Grofman, 1995) or when they are part of the opposition (Kahn and Kenney, 1999). Undoubtedly, the context and specific electoral factors matter.

It is commonly accepted that there is a global trend towards American-style electioneering. Yet, although the political communication has become increasingly similar to the communication process in the United States (Plasser, 2000), negativity does not reveal a consistent record and varies strongly between countries. Furthermore, most of the research on negativity in politics focus on the USA. Outside this case, existing evidence is either on specific countries – such as, e.g., Brazil (Da Silveira & De Mello, 2011), Denmark (Hansen & Pedersen, 2008; Elmelund-Praestekaer, 2008), Germany (Maier & Jansen, 2015), Ghana (Tietaah, 2013), Mexico (Wallis, 2001), Russia (Sigelman & Shiraev, 2002), Switzerland (Bernhard, 2012; Nai & Sciarini, 2015), Taiwan (Sullivan & Sapir, 2012) – or, if it is comparative, is often limited to only a handful of countries (e.g., Curini, 2011; Walter, Van der Brug, & Van Praag, 2014).

A recent study (Nai, 2018) compared the use of negative campaigning strategies by candidates having competed in 35 recent national elections worldwide, but mostly focused on differences among sponsors and targets of attacks, and only addressed the issue of cross-country comparison marginally. In a nutshell, we know very little, as of today, about whether (i) negative campaigning strategies in elections across the world – from Albania to Zimbabwe, so to speak – follow the same logic studied in the US literature, and (ii) to what extent differences across countries – their political system and culture, for instance – drive the use of negativity in election campaigns differently. Is negative campaigning a global phenomenon, driven by universal "rules" (e.g., the fact that incumbents are less likely to go negative than challengers; Lau & Pomper, 2004), or can we pinpoint to contextual specificities?

This article contributes to the emerging literature of comparative political communication by looking more specifically at the use of negativity in elections worldwide (see also Maier and Nai 2019). We do so by comparing the content of election campaigns of 248 candidates having competed in 50 elections worldwide between June 206 and December 2018, rated by selected samples scholars (almost 1,000 experts in total).

We proceed as follows: The next section discusses the conditions under which candidates are expected to rely on negativity in their campaigns, and focusses on (i) candidates' profile, (ii) the nature of the context, and (iii) how the two might interact. The following sections present the data and variables and provide special attention to the measures of "negativity" in our expert dataset. We then present the main results and conclude in the last section.

Why and under which conditions candidates go negative

According to Lau and Pomper (2004), political parties are rational actors who seek to maximize their votes in order to win elections. One way to do so is by trying to diminish the voters' positive perception of the opposition by using negative campaigning (Budesheim et al. 1996; Lau et al. 2007; Westen 2007) and "talking about (...) the (deficient) nature of [the opponents] programs, accomplishments, qualifications, associates and so on"(Lau and Pomper, 2001, p.73). Attack ads can, however, reflect badly on the sponsor and result in so-called backlash effects (Roese and Sande 1993; Shapiro and Rieger 1992). The trade-off between the uncertain benefits and potential costs that results from attack messages make the use of negativity a strategic decision (Lau and Pomper, 2004).

It is commonly accepted that parties are collective actors that mostly behave cohesively. As they act through the individuals, however, they leave room for individual action and behavior (Ennser-Jedenastik et al. 2017). In other words, it is the individual politician, in the end, that takes the final decision to go negative. Hence, this paper seeks first to explore what personal attributes of politicians increase their likelihood to employ negative campaign tactics. More specifically, it focuses on the candidate's electoral (incumbency status) and its personal profile (ideology, extremism and gender). Although the political behavior of politicians is to a great extent driven by the characteristics of a candidate, it is further shaped by the social and political context in which the individual politicians operate. Accordingly, this paper further explores how the political environment influences the negativity of elections campaigns. We present our expectations in this sense in the following subsections.

Candidate profile

The literature claims that incumbents are less likely to use negativity in their campaign strategies as compared to the challengers (Lau and Pomper 2004; Walter and Vliegenthart, 2010; Walter and Nai 2015). Incumbents have a larger political record which they can promote and use as a source for positive campaigning (Benoit 1999, p. 178). Because challengers are less likely to have this option (Nai, 2018), they need to provide good reasons as to why voters should turn against the incumbents (Hale et al., 1996, p.331; Kahn and Kenney 2004, p.23). Moreover, challengers tend to receive weaker media coverage (Hopmann et al. 2011) which will encourage them to find ways to increase their visibility, by, for example, attracting the attention through negative rhetoric (Nai, 2018). Last but not least, challengers have no office to lose which makes it electorally less risky for them to use negativity in their campaign strategies. Following these arguments, the first hypothesis can be formulated as follows:

H1: Challengers are more likely to use negativity than incumbents.

Evidence from the US further suggests, that right-wing candidates have a higher chance of making use of negative campaigning than left-wing candidates (Lau and Pomper, 2001). The right-wing tendency to view "the world as a ruthlessly competitive jungle in which the strong win and the weak lose" (Duckitt, 2006, p.685) may possibly increase the acceptance of attack messages among the electorate. This assumption is at least partially supported by studies that show that Democrats, in comparison to Republicans and Independents, exhibit less sympathy for negativity (Ansolabehere and Iyengar 1995; Mattes and Redlawsk 2015). Accordingly, the hypothesis to be tested goes as follows:

H2: *Right-wing candidates are more likely to use negativity than left-wing candidates.*

It further seems likely to assume that parties that position themselves on the extremes of the political spectrum have a higher tendency to use negative rhetoric. The more extreme a party is, the more it disagrees with other parties on certain political issues (Elmelund-

Praestekaer, 2010, p.142). This, in turn, makes it less likely for these parties to form coalitions or policy agreements (Nai, 2018). Attack advertisements are especially unlikely in multiparty systems, in which parties running against each other are forced to work together despite their diverging views. Assuming that political disagreements may lead to rhetorical attacks, it can be expected that more extreme parties or ideologically extreme candidates are more negative in their campaign than mainstream politicians. Results of previous studies indeed suggest, that parties far from the ideological center are more inclined to go negative (Elmelund-Praestekaer, 2010; Walter et al., 2014). This logic leads to the following hypothesis:

H3: Extreme candidates are more likely to use negativity than mainstream candidates.

Besides the political profile of candidates, it is often debated if gender is able to predict negativity: Up to this day, evidence is inconclusive on whether females are more or less likely to go negative in their election campaigns. Following the argumentation, however, that the usage of negative and aggressive rhetoric violates the female stereotype, this paper assumes that female candidates will abstain to go overly negative. Gender stereotypes are a "structured set of beliefs about personal attributes of women and men" (Ashmore and Del Boca 1979, p. 222). The stereotypical role of men and women in society that result from these sets of beliefs often trigger concrete expectations of "appropriate" social behaviors (Ennser-Jedenastik et al. 2017). While these stereotypes are often found in the occupational and private environment such as family and professional life (Eagly et al., 2000), they extend to the political realm and result in stereotypical expectations of certain behavior in electoral campaigns (Dinzes et al., 1994, p.68–69). Assuming that politicians are rational actors who seek to maximize their electoral votes, women are often confronted with a choice of either dispelling or exploiting the gender stereotypes in their campaign strategies. As the disruption of this expected behavior might have damaging electoral consequences in the form of backlash effects (Kahn, 1996; Trent and Friedenberg, 2008), we formulate the following hypothesis:

H4: Female candidates are less likely to use negativity than male candidates.

Contextual factors

Turning to the contextual determinants that potentially drive negativity, this paper takes four different factors into consideration, namely the personalization of politics, the level of democracy, political polarization and female representation, all of which will be elaborated in the following section.

First, US politics is known for being candidate-centered. The increased emphasis on individuals is often reflected in American elections campaigns which overwhelmingly focus on the candidates rather than on the respective parties (Dalton et al., 2000; Newman, 1994). In consequence, US campaigns are often associated with negativity and more specifically, trait attacks (Walter, 2014, p.46). Scholarly literature claims that political systems over the world are currently witnessing a process of personalization of politics. Parliamentary democracies in Western Europe are no exception of this phenomenon (Farrell, 2005; Holtz-Bacha and Kaid, 2006; Mughan, 2000; Poguntke and Webb, 2005). The shift of focus from parties, organizations and political institutions to an emphasis on individual politicians is said to be grounded in the decline of traditional party loyalties and the mediatization of politics (Kriesi, 2011, p.826; Walter, 2014, p.46).

Undoubtedly, presidential systems place a greater emphasis on individual candidates than parliamentary democracies. This is often reflected in a higher degree of personalization in these democratic systems (Kriesi, 2011). A similar assumption can be made for the type of election: While presidential elections witness higher personalization by placing a stronger focus on the individual politicians, parliamentary elections are usually more party-centered.

The case of the US suggests that there is a relationship between the degree of personalization and negativity of campaigns. Applying this logic to other democracies, we test the two hypotheses:

H5: The level of negative campaigning is higher in countries with a presidential system than in countries with a parliamentarian system.

H6: The level of negative campaigning is higher in presidential than in parliamentary elections.

The trend of personalization can be observed in various political areas including election campaigns, voting behavior, and media coverage. As the name implies, personalization in media coverage refers to the increased focus on individual politicians in the presentation of politics in the media (Rahat & Sheafer, 2007, p.67). With the decline of parties as the main political actors (Dalton and Wattenberg 2000), individual candidates not only become more important for the voters and the electoral outcome (Aarts et al., 2011), but also for the journalists and media in general (Walter & Vliegenthart 2010, p.445). Besides an increase in personalization, the media is also said to have experienced a rise in negativity by systematically looking for and emphasizing negative news (Kleinnijenhuis et al., 2003, p.65). Assuming that politicians adjust to the requirements of the media in order to safeguard their visibility, we expect an increase in negativity with a higher personalization of the media. Hence:

H7: The level of negative campaigning is higher in countries with high levels of media personalization.

While personalization of politics is one factor that might drive negativity, there is good reason to believe that negativity is further determined by the quality of democracy. A 'good' democracy is one that presents a stable institutional structure through which citizen's liberties and equalities are enforced. It is a legitimate regime, that satisfies its citizens and whose institutions have the full backing of civil society (Morlino, 2004, p.12). Based on this argumentation, one can assume that political parties enjoy more legitimacy and greater appreciation in high- than in low-quality democracies. It is likely that higher levels of legitimacy make aggressive rhetoric towards opposing parties more risky for political candidates. Conversely, we expect that there is a higher likelihood for negativity in democracies that show lower quality because the chance of the potential electoral backlash is smaller than in high-quality democracies. The hypothesis to be tested reads as follows:

H8: The level of negative campaigning is higher in low-quality democracies than in high-quality democracies.

Going in a similar direction of argumentation, this paper further expects that negativity is more likely in polarized political systems. According to Fiorina and Abrams (2008, p.566), political polarization can be defined as the presence of opposing principles. While the phenomenon can be viewed as a state, many scholars agree that it marks the movement away from the center towards the extremes of the political spectrum (Fiorina and Abrams 2008, p.566-67). It seems reasonable to assume that the radicalization of political positions is accompanied with a decline in sympathy for opposing views and, therefore, more negative feelings towards opposing parties, their representatives and their electorate. This, in turn, may result in a greater acceptance of negativity and a reduced risk of an electoral backlash. Accordingly, this paper argues that a polarized environment makes it electorally less risky for candidates to go negative which leads to the following hypotheses:

H9: The level of negative campaigning is higher polarized democracies.

Taking the previous argument of gender one step further, it seems reasonable to assume that negativity decreases with an increase in female representation. While there is extensive literature on how the political presence of women influence the legislative discourse in terms of the political agenda and policy outcomes, there is little to no research on how the presence of female politicians influences the communicative behavior of political candidates in electoral campaigns. Women are said to practice a "kinder, gentler politics" that is "characterized by cooperation rather than conflict, collaboration rather than hierarchy, honesty rather than sleaze" (Norris, 1996, p.93). This 'feminized' style of politics is assumed to radically transform the political behavior, institutions, and public policy once a 'critical mass' of elected women is reached (Studlar and McAllister 2002). Although it is debated what number constitutes the threshold for this critical mass (see Studlara and McAllister 2002 for an overview), one can assume that an increasing number of female representatives lead to a greater convergence of certain norms and political styles. Thus, we posit that negative campaigning decreases as the share of female politicians increases:

H10: The level of negative campaigning is higher in democracies with lower levels of female representation.

Moderation effects

It is highly likely that the aforementioned factors interplay and that the different candidates' decision to use negative campaigns strategies depends on the diverse settings. The possible interactions of variables are manifold: One might, for example, expect that female candidates use more negative campaigning in democracies with high female representation than in systems that are dominated by men. This could be attributed to the fact that they feel more comfortable to express their views openly. Conversely, one could assume that high numbers of female representatives reduce the likelihood of negativity especially for male candidates as they adjust to the 'feminized' style of politics. Moreover, it seems plausible that polarization reinforces the aggressive and negative rhetoric of extreme and right-wing candidates or that challengers are more negative in high-quality democracies because they need to break the old structures of the established party systems.

The possible combinations of factors are countless. For this reason, we abstain to formulate clear-cut hypotheses and approach the interaction effects between the personal characteristics of the candidates and the contextual factors in an exploratory manner.

Data and Methods

Dataset

Due to the complexity of measuring discourse comparatively, very little data exists that compares the content of election campaigns worldwide, across different cultures, languages, and political systems. In this article, we rely on the Negative Campaigning Comparative Expert Survey Dataset (NEG[ex]; Nai, 2018; Nai & Maier, 2018), covering all national elections held worldwide between June 2016 and December 2018.[i] The dataset is based on a systematic survey distributed to election-specific samples of national and international scholars[ii] in the weeks following each election. Experts were asked a series of questions about the campaign in general, as well as actor-specific questions (e.g., the "tone" of the campaign for a selected list of competing actors). The average response rate across all elections in the dataset is approximately 19%. After the exclusion of missing values on all relevant variables (see below) and considering only elections for which at least five different scholars rated the campaign, our models are run on 248 candidates who competed in 50 elections worldwide. Information is based on answers provided by 988 experts. Appendix A in the appendix lists all elections and candidates in our dataset; the number of responses for each election is signaled in Table A1. Figure 1 illustrates the geographical coverage of our dataset (excluding missing values on all variables).

[Figure 1 about here]

On average, scholars in the dataset lean slightly to the left (M = 4.35/10, SD = 1.81), 77% are domestic (that is, have a professional appointment at a university in the country for which they were asked to evaluate the election), and 32% are female. Overall, experts declared themselves very familiar with the elections (M = 8.01/10, SD = 1.78) and estimated that the questions in the survey were relatively easy to answer (M = 6.49/10, SD = 2.42).

Measuring negativity

Two variables in the dataset measure the overall "negativity" of the election. First, experts were asked to assess the "tone" of the campaign (Lau & Pomper, 2004; Nai & Walter, 2015) used by competing actors, that is, to what extent they "talked about the opponents in the race by criticizing their programs, attacking their ideas and accomplishments, questioning their qualifications, and so on" instead of "talking about one's own accomplishments, qualifications, programs and ideas by praising them" (quoted directly from the questionnaire). Experts had to evaluate the tone on a scale from -10 to +10, where -10 meant a "very negative" campaign and +10 a "very positive" one.

Due to the complex nature of the concept measured (Sigelman & Kugler, 2003), and because the concept itself of "negativity" could suffer from cross-cultural comparability issues, the questionnaire included six "vignettes" – examples of campaign messages[iii] that experts had also to rate using the scale for the campaign "tone". We used those vignettes to "anchor" the experts' ratings, starting to the assumption that answers to these vignettes provide a useful benchmark across experts. More specifically, we ran a series of parametric adjustments (King, Murray, Salomon, & Tandon, 2004; Hopkins & King, 2010) through ordered probit models (*gllamm* models). The models adjusted the measure of campaign negativity simultaneously via the values assigned to all vignettes and five set parameters: the unique election identifier to control the fact that experts are clustered within different elections, and four at the expert level: gender, domestic/international, self-reported familiarity with the election, and left–right positioning. This last control is important, as political orientations have been shown in the past to affect experts' evaluations (e.g., Curini, 2010). The obtained variable is a continuous measure of negative tone that ranges between 1 "very positive" and 7 "very negative". Table 1 illustrates the differences in the overall campaign tone in the 41 countries in our dataset, ranked from the most "positive" to the most "negative" campaign (overall assessment). Perhaps unsurprisingly, relatively low scores of campaign negativity can be found in Northern Europe (Finland, Iceland, Sweden); on the other hand, countries that have witnessed recent elections contested by brash and provocative political figures (USA, Brazil, Hungary) score the highest in overall negativity.

[Table 1 about here]

Next to the tone of their campaign, experts also had to assess to what extent, in their opinion, competing candidates relied on emotional appeals intended to steer fear and anxiety in the general public ("fear appeals"; Brader, 2005; Marmor-Lavie & Weimann, 2005; Ridout & Searles, 2011). Experts were asked to rate each competing candidate on a 0-10 scale ranging from 0 "very low use of fear appeals" to 10 "very high use".

Negative tone and the use of fear appeals are the two dimensions of negativity that we study in this article. Of course, the two dimensions are closely associated. From a theoretical standpoint, first, they both reflect the use of a language highlighting "negative" issues (attacks and negative emotions) rather than positive issues (personal records and positive emotions), and indeed some scholars consider the use of attacks and fear appeals as subdimensions of

"negativity" in election campaigns (Crigler, Just, & Belt, 2006). From an empirical standpoint, second, the two variables are strongly correlated, $r(246) = .84$, $p < .001$. Yet, as shown in Figure 2, enough variation on the two scores exist across all candidates to treat them as separate dimensions, with possibly diverging determinants. For instance, Vladimir Putin (Russia) and Andrej Babiš (Czech Republic) – two examples of ex-USSR conservative authoritarians with a relatively similar personality profile (Nai & Martinez i Coma, 2019) – scored relatively similar on the use of fear appeals (around 5.5) but Babiš' campaign was almost twice as negative as Putin's (respectively, 4.8 against 2.5). Similarly, Heinz-Christian Strache (Austria) and Serzh Sargsyan (Armenia), again two conservative figures with relatively aligned profiles, scored quite similarly on negative tone (about 4.4) but Strache's campaign was much more framed on fear appeals than Sargsyan's (respectively, 7.8 against 3.0). Figure 2 shows also that candidates with very different profiles can score quite similarly on the two dimensions. For instance, Brazil's Jair Bolsonaro and Argentina's Cristina Fernández de Kirchner, major figures of recent Latin-American populism but from virtually opposite sides, respectively left-wing ("pink tide") for Kirchner and right-wing authoritarian for Bolsonaro, score similarly high on both on fear appeals and negative campaigning.

[Figure 2 about here]

Candidate and country characteristics

Gender, age, and incumbency status of candidates are information easy to find, and their measure is straightforward. Less so is their left-right position. As discussed in Nai (2018), the dataset relies on information provided by the Wikipedia pages for candidates. Although not ideal, for obvious reasons, Wikipedia can often provide quality factual information (Brown 2011). Furthermore, an external validity check performed by comparing the information in Wikipedia with left-right measures in the Chapel Hill Expert Survey (CHES; Polk et al. 2017) and the data in Benoit and Laver (2007) shows very high correlations (see Nai, 2018). Our variable ranges from 1 'far left' to 7 'far right'. This variable is then folded on itself to create the "extremism" variable, which takes the value 0 for low extremism (this includes candidates from center left to center right), 1 for moderate extremism (left and right) and 2 for high extremism (far left and far right).

In order to measure the personalization of politics, we used the proxy variable 'type of political systems' (presidential vs. parliamentary system). Although we are currently witnessing a trend of personalization that is by no means restricted to presidential systems, it seems safe to assume that presidentialism is yet strongly correlated to a candidate-focused style of politics. To put it in McAllister's words, presidential systems are the "traditional institutional home" of personalized politics (2007, p.571). We assigned all parliamentary systems a value of 0 and all presidential systems a value of 1. Parliamentary constitutional monarchies such as the Netherlands, Lesotho or Norway were coded as 0. Semi-presidential systems including France, Romania, Sao Tome and Principe were coded 1. The data was provided by The World Factbook[iv].

We measured "media personalization" via a question in the expert survey dataset; experts had to evaluate how much attention the media as a whole provided "individual candidates, their characters and motivations" (from 0 "no attention" to 4 "a great deal of attention").

We decided to use The Economist Intelligence Unit's index[v] to assess the countries' level of democracy. The 10-point scale is based on the evaluation of 60 indicators grouped in five distinct categories including (1) electoral process and pluralism; (2) civil liberties; (3) the functioning of government; (4) political participation; (5) and political culture. The overall score derives from the average of the five category indexes that are separately rated on a 0 to

10 scale. Based on this score, each country is classified as one of four types of regimes: While democracies with scores above 8 are known as 'full democracies', those with scores between 6 and 8 are defined as 'flawed democracies'. Countries with a score between 4 and 6 are classified as 'hybrid regimes' and those with less than or equal to 4 as 'authoritarian regimes'[vi].

To account for polarization, we used the aggregated data of the World Value Survey (WVS) and the International Social Survey Programme (ISSP) on the citizens' political left-right placement and calculated the standard deviation of ideology[vii]. The resulting variable "polarization" ranges from 0 'no polarization' to 1 'complete polarization'.

The level of female representation was quantified by the percentage of female politicians in parliament. The variable was recoded to range from 0 to 1. The data was provided by the Institute for Democracy and Electoral Assistance (IDEA)[viii].

Finally, we created a binary variable sorting Western countries from non-western ones, including all European countries (including Southern and Northern European countries) plus the USA, Australia, and New Zealand in the first category, and all remaining ones in the "non-Western" category. Descriptive statistics for all variables are presented in Table 2.

[Table 2 about here]

Results

We first assess to what extent determinants at the candidate and context levels drive the use of a negative tone and fear appeals by competing candidates (Table 3). Our results show that, even controlling for the nature of the context, individual differences across candidates drive the use of negativity quite substantially. As expected (H1), incumbents are significantly less likely to go negative on their opponents – but, perhaps surprisingly, not less likely to use fear appeals than challengers. More extreme candidates are significantly and substantially more likely to go negative and use fear appeals in their campaigns (H3), and so are candidates on the right-end side of the political spectrum (H2). We do not find however any support for the expectation that female candidates are less likely to use negative elements in their campaigns (H4), in line with results in Maier (2015).

[Table 3 about here]

Turning to the contextual determinants, our models show however that candidates in countries with higher female representation in their national parliament are significantly less likely to go negative on their opponents (H10); according to our results, above approximately 30% of female representation campaigns are more likely to be positive than negative – that is, their average negativity is below 4 point out of 7 (marginal effects). Table 3 also confirms that polarization drives the use of negative campaigning (H9), in line with studies showing that more conflictual or competitive races are usually associated with higher negativity (Kahn & Kenney, 1999; Lau & Pomper, 2004; Elmelund-Praestekaer, 2008; Fowler et al., 2016) and directly confirming one of the main arguments advanced by Geer (2012) to explain the rise of attack politics. We also show that negativity increases with higher media personalization (H7), even if this last effect is only significant at p<.1. Contrarily to our expectations (H6) negativity is lower in presidential elections. Our models also show no significant effects on the use of negative campaigning for the type of political system (presidentialism vs parliamentarianism), democracy index, and region (Western vs. Non-Western country); as we will see below, the difference between Western and Non-Western countries comes however back into play as a major moderator of the direct effects described here. It is also noteworthy that no direct effects are found for the contextual determinants on the use of fear appeals – signalling perhaps that the use of negative emotions is more directly a matter of individual differences than contextual constraints or cultural habits.

[Table 4 about here]

Table 4 dives deeper into the effects discussed above and tests the assumption that individual drivers of campaigning strategies are influenced by the nature of the context. We did not formulate specific expectations in this sense, even if some interaction effects seem intuitive – for instance, the fact that female candidates use more negativity in countries with higher female representation than in countries that are dominated by men. Even if we find evidence suggestive of this trend (Figure 3, for fear appeals), the interaction between the gender of candidates and the share of female representation in national parliaments is not statistically significant for neither negative campaigning (M1) and fear appeals (M2).

[Figure 3 about here]

Model M1 shows then that female politicians are less likely to go negative during presidential elections, but the effect is relatively marginal and only significant at p<.1. More consistent is the evidence we find that incumbents are *even less* likely to rely on negativity – both negative campaigning and the use of fear appeals – in presidential systems, perhaps due to the higher risks for them individually. At the same time, and even in presidential systems, increased media personalization drives a more negative tone, suggesting that media incentives are able to redefine political dynamics, in line with theories of "mediatization" of politics (Strömbäck, 2008; Van Aelst, Sheafer, & Stanyer, 2012).

The strongest effect in Table 4 is the interaction between polarization and incumbency status, which we substantiate in Figure 4 via marginal effects. The figure plots linear estimations for the use of negative campaigning as a function of increasing polarization of the political system (x-axis) for both challengers and incumbents (respectively, the dashed and plain slopes). 95% Confidence intervals are also plotted. The figure shows that polarization does not shape campaigning strategies for challengers, but strongly drive the use of negativity for incumbents: at low levels of polarization incumbents mostly run positive campaigns or, at the very least, are significantly less likely than challengers to go negative. The situation is the opposite in highly polarized environments. High polarization "induces alignment along multiple lines of potential conflict and organizes individuals and groups around exclusive identities, thus crystallizing interests into opposite factions" (Baldassarri & Gelman, 2008, p. 409). We could imagine that, in such a configuration, incumbents are less exposed to backlash risks; as partisan preferences are more entrenched in polarized environments, the risk of self-sabotaging a positive competitive standing – by the virtue of being the incumbent – are less severe.

[Figure 4 about here]

Table 4 also shows that more extreme candidates – already more drawn to negative campaigning strategies than moderates, as shown beforehand – are even more likely to go negative and use fear appeals in presidential elections. This effect is probably driven by the risks of being cut out of post-election coalition bargains if competitors are excessively attacked during the campaign, a risk already higher for more extreme actors.

In Table 5, finally, we test to what extent the candidate and context drivers of negativity have differential effects in Non-Western vs. Western countries (these latter include Europe, the USA, Australia, and New Zealand). Results show several significant interactions, especially for the use of fear appeals (model M2). Extreme candidates are substantially more likely to go negative and use fear appeals in Western countries, to the point that the difference between extreme candidates and moderates is virtually inexistent in non-Western countries (Figure 5). Similarly, polarization strongly drives the use of fear appeals especially for

candidates competing in elections in Western countries but makes no difference at all in non-Western countries (Figure 6). Also similarly, presidentialism and media personalization matter especially for Western countries and have much less of an effect in non-Western countries. Taken together, these two results suggest that some of the most well-known dynamics of attack politics and negativity – that is, the fact that more conflictual actors (extreme candidates) and contexts (high polarization, high mediatization) are strong drivers of more muscular and negative campaigns; according to our results, this is the case in Western countries, but much less so in other contexts and cultures.

[Figure 5 and Figure 6 about here]

Discussion and conclusion

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Tables and Figures

Table 1. Negative campaigning in last national election(s), ranked

Country	Negativity	Election(s) code(s)		
Finland	2.28	FIN_P_20180128		
Uzbekistan	2.42	UZB_P_20161204		
Rwanda	2.63	RWA_P_20170804		
Iceland	3.60	ICE_P_20160625	ICE_L_20161029	ICE_L_20171028
Germany	3.77	DEU_L_20170924		
Sweden	4.26	SWE_L_20180909		
Belarus	4.26	BLR_L_20160911		
Lithuania	4.37	LTH_L_20161009		
Japan	4.37	JAP_L_20160710	JAP_L_20171022	
The Netherlands	4.40	NLD_L_20170315		
New Zealand	4.42	NZL_L_20170923		
Ghana	4.43	GHA_P_20161207		
France	4.46	FRA_P_20170423	FRA_L_20170611	
Norway	4.54	NOR_L_20170911		
Czech Republic	4.58	CZE_L_20171020	CZE_P_20180112	
Russia	4.59	RUS_L_20160918	RUS_P_20180318	
Chile	4.65	CHL_P_20171119		
UK	4.74	GBR_L_20170608		
Australia	4.81	AUS_L_20160702		
Zimbabwe	4.92	ZWE_P_20180730		
Albania	4.97	ALB_L_20170625		
Hong Kong	4.98	HKG_L_20160904		
South Korea	5.00	KOR_P_20170509		
Armenia	5.05	ARM_L_20170402	ARM_L_20181209	
Georgia	5.18	GRG_L_20161008	GRG_P_20181028	
Argentina	5.20	ARG_L_20171022		
Cyprus	5.22	CYP_P_20180128		
Spain	5.23	ESP_L_20160626		
Austria	5.33	AUT_P_20161204	AUT_L_20171015	
Ecuador	5.34	ECU_P_20170219		
Mexico	5.37	MEX_P_20180701		
Colombia	5.43	COL_P_20180527		
Pakistan	5.44	PAK_L_20180725		
Romania	5.45	ROU_L_20161211		
Malaysia	5.56	MYS_L_20180509		
Turkey	5.57	TUR_P_20180624		
Kyrgyzstan	5.57	KGZ_P_20171015		
Morocco	5.65	MRC_L_20161007		
Brazil	5.85	BRA_P_20181007		
Hungary	6.01	HUN_L_20180408		
USA	6.13	USA_P_20161108		

Note: The score of negativity comes from a question where experts were asked to evaluate the overall tone of the campaign and varies between 1 'Very positive' and 7 'Very negative'. For countries with multiple elections in the dataset (e.g., Iceland), the table presents the average score. More information about the elections are in Table A1 in the Appendix.

Table 2. Descriptive statistics (missing values excluded)

Level	Variable	Measure	N	Mean	Std. dev.	Min	Max
Candidate	Negative campaigning [a]	From 1 'Very positive' to 7 'Very negative'	248	4.04	1.15	1.50	6.78
	Fear appeals [a]	From 0 'Very low' to 10 'Very high'	248	4.94	1.83	0.69	9.78
	Female [a]	0 'Male', 1 'Female'	248	0.17	0.38	0.00	1.00
	Incumbent [a]	0 'Challenger', 1 'Incumbent'	248	0.15	0.36	0.00	1.00
	Extremism [a]	0 'Low' to 2 'High'	248	0.45	0.67	0.00	2.00
	Left-right position [a]	1 'Far left' to 7 'Far right'	248	4.16	1.55	1.00	7.00
	Year born [a]	Year of birth	248	1962.05	11.26	1925	1993
Context	Female representation [b]	Percent female PMs in national parliament	50	0.27	0.12	0.10	0.61
	Democracy index [c]	From 0 'Low' to 10 'High'	50	6.82	2.06	2.01	9.87
	Presidential system [d]	0 'Parliamentary, 1 'Presidential'	50	0.46	0.50	0.00	1.00
	Polarization [e]	From 0 'Low' to 1 'High'	50	0.24	0.04	0.18	0.31
	Media personalization [a]	From 1 'Very low' to 4 'Very high'	50	2.86	0.44	1.63	3.69
	Presidential election [a]	0 'Legislative, 1 'Presidential	50	1.42	0.50	1.00	2.00
	Non-Western country [a]	0 'Western country', 1 'Non-Western'	50	0.62	0.49	0.00	1.00

[a] Source: Own data (NEG^ex dataset, version 1.2)
[b] Source: Institute for Democracy and Electoral Assistance (IDEA)
[c] Source: The Economist Intelligence Unit
[d] Source: The World Factbook
[e] Source: World Value Survey (WVS) and International Social Survey Programme (ISSP)

Table 3. Negativity by candidate profile and characteristics of the context; direct effects

	Negative campaigning M1			Fear appeals M2		
	Coef	Se	Sig	Coef	Se	Sig
Female	0.04	(0.17)		-0.03	(0.27)	
Incumbent	-0.45	(0.18)	**	-0.05	(0.28)	
Extremism	0.51	(0.09)	***	0.81	(0.15)	***
Left-right position	0.18	(0.04)	***	0.38	(0.06)	***
Year born	-0.01	(0.01)	†	-0.01	(0.01)	
Female representation	-1.74	(0.88)	*	-1.62	(1.41)	
Democracy index	-0.05	(0.06)		0.09	(0.10)	
Presidential system	0.20	(0.18)		0.43	(0.29)	
Polarization	4.89	(2.37)	*	5.56	(3.77)	
Media personalization	0.37	(0.21)	†	0.41	(0.34)	
Presidential election	-0.60	(0.19)	**	-0.45	(0.31)	
Non-Western country [a]	0.09	(0.26)		0.49	(0.42)	
Intercept	22.11	(11.48)	†	28.74	(18.53)	
N(candidates)	248			248		
N(elections)	50			50		
R2	0.309			0.295		
Model Chi2	96.82			97.81		

Note: All models are random-effect hierarchical linear regressions (HLM) where candidates are nested within elections. The dependent variable in M1 (negative campaigning) varies between 1 'Very positive' and 7 'Very negative', whereas the dependent variable in M2 (fear appeals) varies between 0 'Very low' and 10 'Very high'.
[a] Western countries are European countries (including Southern and Northern European countries) plus the USA, Australia, and New Zealand. Non-Western countries are the remaining ones.
*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Table 4. Negativity by candidate profile and characteristics of the context (by candidate profile)

	Negative campaigning M1			Fear appeals M2		
	Coef	Se	Sig	Coef	Se	Sig
Female	1.62	(2.73)		-0.85	(4.46)	
Incumbent	-7.86	(1.91)	***	-4.42	(3.18)	
Extremism	0.23	(0.90)		0.81	(1.51)	
Left-right position	0.17	(0.04)	***	0.33	(0.07)	***
Year born	-0.01	(0.01)		-0.02	(0.01)	†
Female representation	-1.30	(1.09)		-1.69	(1.75)	
Democracy index	-0.12	(0.07)		-0.03	(0.12)	
Presidential system	0.17	(0.20)		0.42	(0.32)	
Polarization	3.71	(2.83)		8.08	(4.53)	†
Media personalization	0.00	(0.25)		0.03	(0.41)	
Presidential election	-0.53	(0.23)	*	-0.49	(0.37)	
Non-Western country [a]	0.09	(0.32)		0.30	(0.52)	
Female * Female Representation	2.23	(2.51)		6.52	(4.15)	
Female * Democracy index	-0.43	(0.24)	†	-0.50	(0.39)	
Female * Presidential system	0.54	(0.47)		1.06	(0.78)	
Female * Polarization	-1.67	(5.30)		0.11	(8.75)	
Female * Media personalization	0.83	(0.51)		1.22	(0.85)	
Female * Presidential election	-0.76	(0.43)	†	-1.17	(0.72)	
Female * Non-Western country	-0.17	(0.74)		0.64	(1.22)	
Incumbent * Female Representation	-0.35	(2.02)		1.69	(3.36)	
Incumbent * Democracy index	0.08	(0.12)		0.06	(0.21)	
Incumbent * Presidential system	-0.73	(0.43)	†	-1.46	(0.71)	*
Incumbent * Polarization	15.36	(5.38)	**	1.99	(8.96)	
Incumbent * Media personalization	1.19	(0.51)	*	0.82	(0.86)	
Incumbent * Presidential election	-0.02	(0.46)		0.62	(0.76)	
Incumbent * Non-Western country	0.50	(0.61)		0.96	(1.02)	
Extremism * Female Representation	-0.35	(1.35)		-0.57	(2.25)	
Extremism * Democracy index	0.16	(0.08)	*	0.31	(0.13)	*
Extremism * Presidential system	-0.13	(0.24)		-0.23	(0.40)	
Extremism * Polarization	-2.85	(3.05)		-7.56	(5.08)	
Extremism * Media personalization	-0.21	(0.26)		-0.43	(0.43)	
Extremism * Presidential election	0.49	(0.24)	*	0.85	(0.39)	*
Extremism * Non-Western country	-0.23	(0.35)		-0.25	(0.59)	
Intercept	22.44	(11.60)	†	36.41	(19.24)	†
N(candidates)	248			248		
N(elections)	50			50		
R2	0.443			0.405		
Model Chi2	162.3			146.2		

Note: All models are random-effect hierarchical linear regressions (HLM) where candidates are nested within elections. The dependent variable in M1 (negative campaigning) varies between 1 'Very positive' and 7 'Very negative', whereas the dependent variable in M2 (fear appeals) varies between 0 'Very low' and 10 'Very high'.
[a] Western countries are European countries (including Southern and Northern European countries) plus the USA, Australia, and New Zealand. Non-Western countries are the remaining ones.
*** $p<0.001$, ** $p<0.01$, * $p<0.05$, † $p<0.1$

Table 5. Negativity by candidate profile and characteristics of the context (by region)

	Negative campaigning M1			Fear appeals M2		
	Coef	Se	Sig	Coef	Se	Sig
Female	-0.13	(0.23)		-0.26	(0.36)	
Incumbent	-0.59	(0.27)	*	-0.42	(0.43)	
Extremism	0.78	(0.14)	***	1.32	(0.23)	***
Left-right position	0.23	(0.06)	***	0.49	(0.10)	***
Year born	-0.03	(0.01)	**	-0.05	(0.02)	**
Female representation	-1.45	(2.57)		-3.65	(3.59)	
Democracy index	-0.43	(0.19)	*	-0.77	(0.27)	**
Presidential system	-0.51	(0.46)		-1.74	(0.64)	**
Polarization	9.37	(7.48)		32.81	(10.35)	**
Media personalization	0.72	(0.55)		2.03	(0.75)	**
Presidential election	-0.78	(0.36)	*	-1.14	(0.50)	*
Non-Western country [a]	-55.08	(23.81)	*	-94.06	(37.50)	*
Non-Western country * Female	0.50	(0.34)		0.70	(0.54)	
Non-Western country * Incumbent	0.24	(0.35)		0.60	(0.55)	
Non-Western country * Extremism	-0.47	(0.19)	*	-0.87	(0.30)	**
Non-Western country * Left-right position	-0.10	(0.08)		-0.21	(0.13)	
Non-Western country * Year born	0.03	(0.01)	*	0.05	(0.02)	**
Non-Western country * Female representation	0.23	(2.79)		2.69	(3.91)	
Non-Western country * Democracy index	0.46	(0.20)	*	1.00	(0.29)	***
Non-Western country * Presidential system	0.60	(0.51)		2.03	(0.72)	**
Non-Western country * Polarization	-4.16	(7.96)		-29.25	(11.03)	**
Non-Western country * Media personalization	-0.59	(0.60)		-2.12	(0.83)	*
Non-Western country * Presidential election	0.27	(0.44)		1.04	(0.61)	†
Intercept	60.94	(19.29)	**	97.07	(30.46)	**
N(candidates)	248			248		
N(elections)	50			50		
R2	0.384			0.417		
Model Chi2	124.8			154.2		

Note: The model is a random-effect hierarchical linear regression (HLM) where candidates are nested within elections. The dependent variable in M1 (negative campaigning) varies between 1 'Very positive' and 7 'Very negative', whereas the dependent variable in M2 (fear appeals) varies between 0 'Very low' and 10 'Very high'.
[a] Western countries are European countries (including Southern and Northern European countries) plus the USA, Australia, and New Zealand. Non-Western countries are the remaining ones.
*** p<0.001, ** p<0.01, * p<0.05, † p<0.1

Figure 1. Geographical coverage
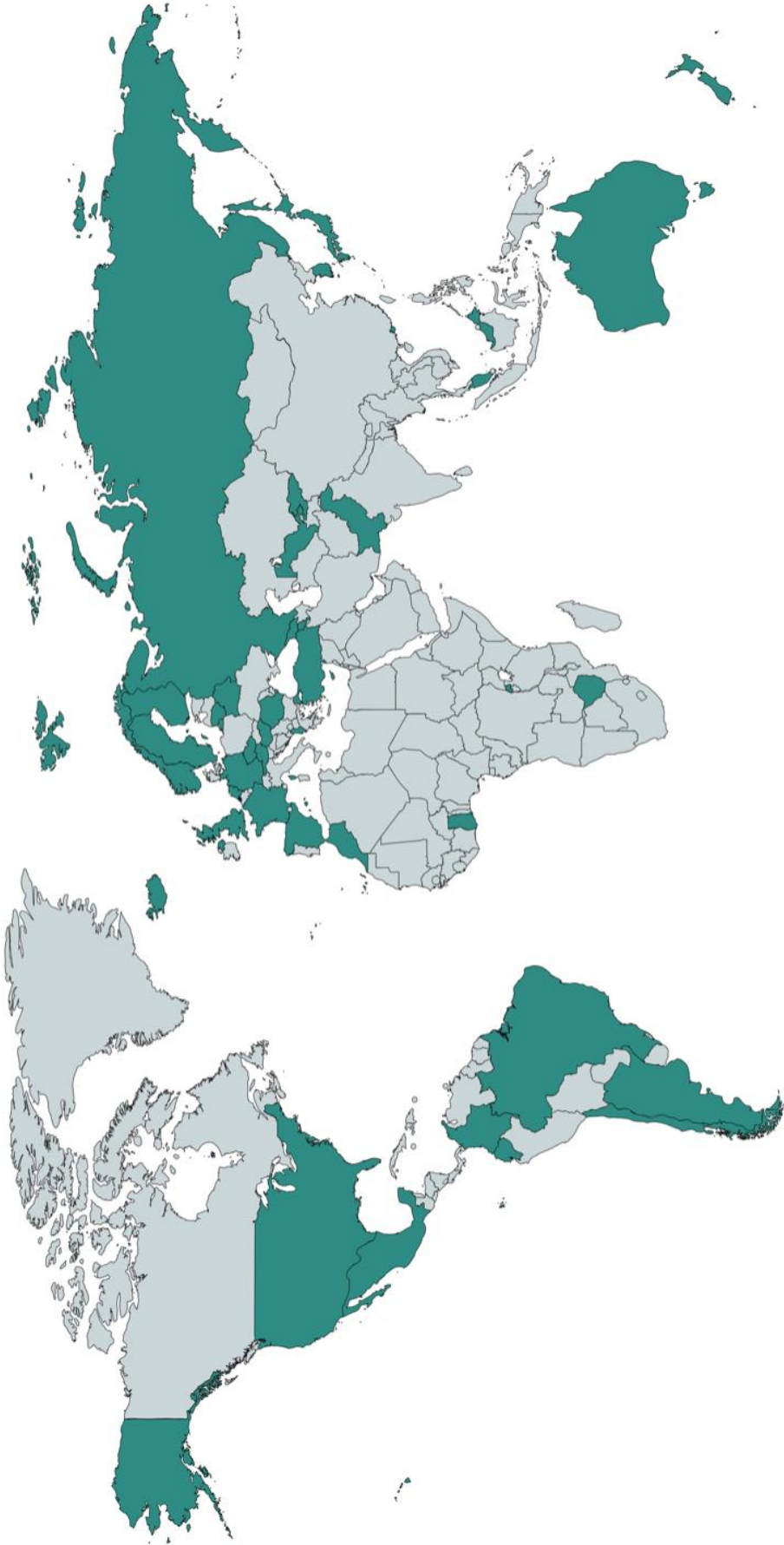
Figure 2. Negative campaigning and fear appeals, by candidate
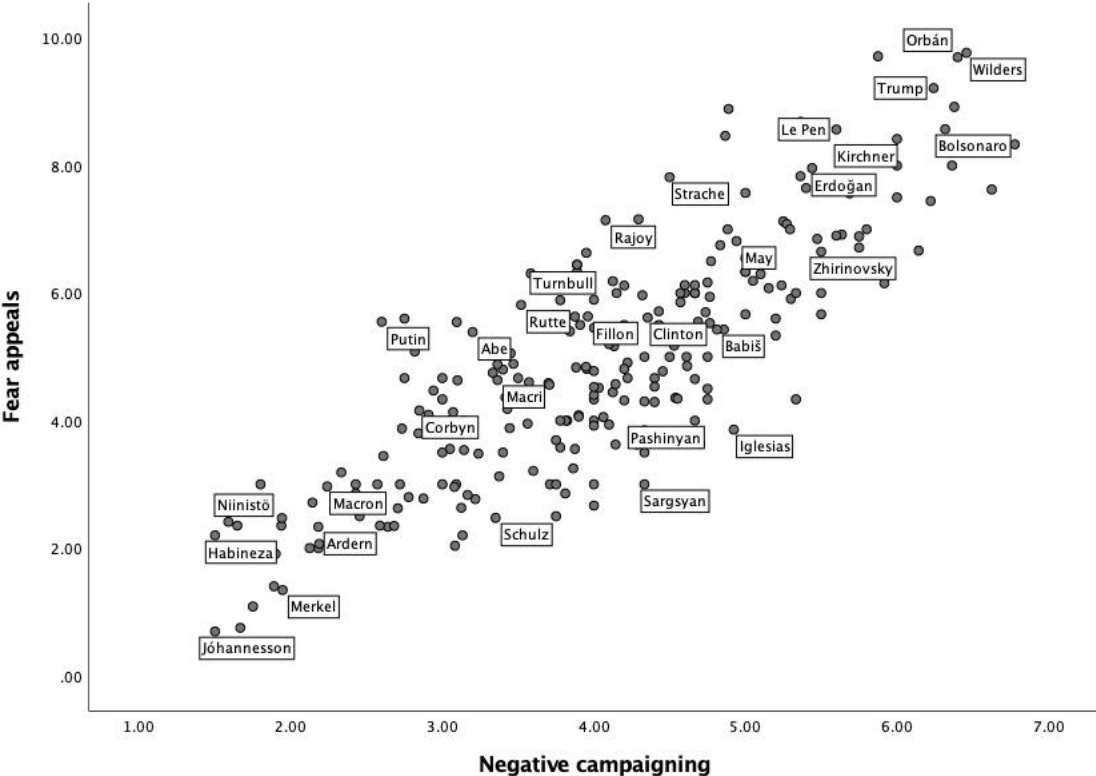
Figure 3. Fear appeals, by gender * female representation
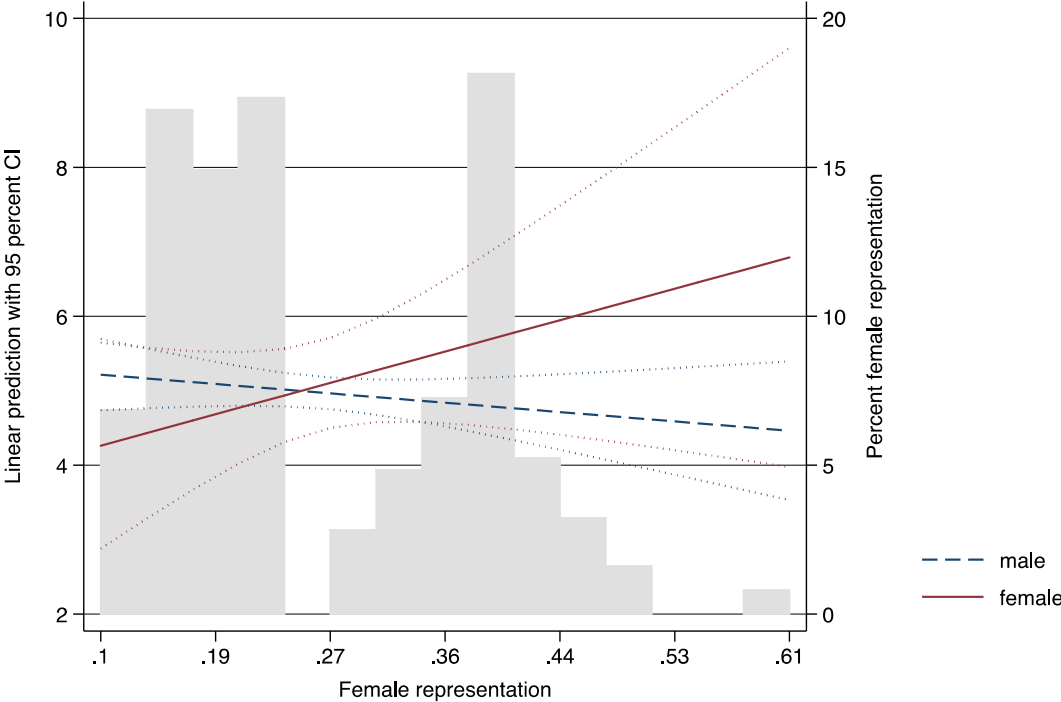
Marginal effects with 95% Confidence Intervals, based on coefficients in Table 4 (M2)

Figure 4. Negative campaigning, by incumbent * polarization

Marginal effects with 95% Confidence Intervals, based on coefficients in Table 4 (M1)

Figure 5. Fear appeals, by extremism * Region
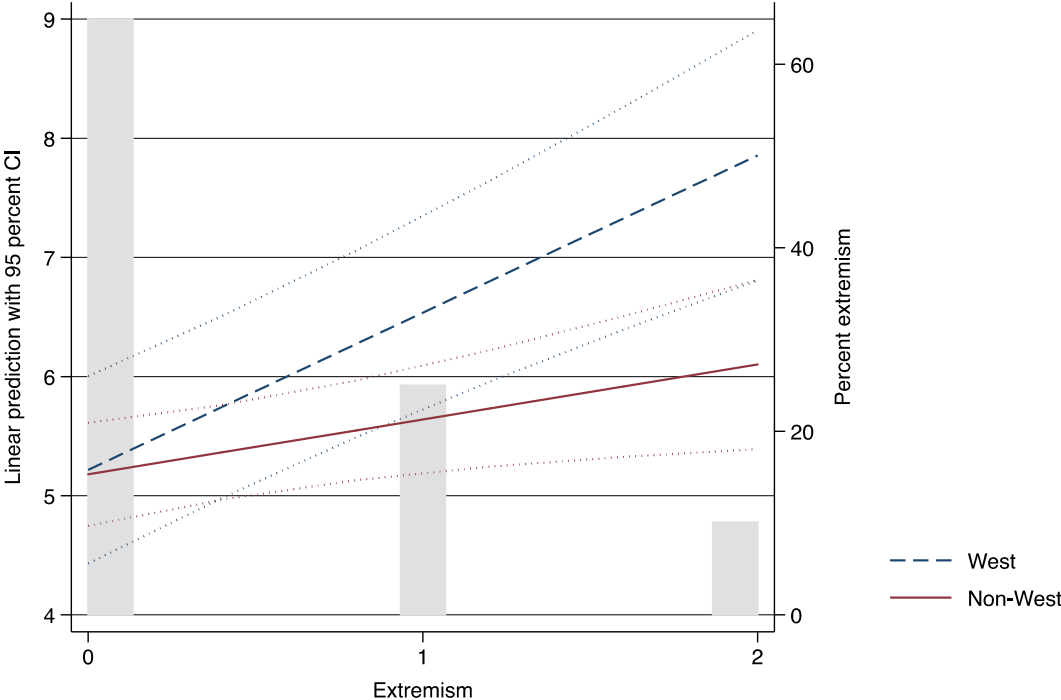
Marginal effects with 95% Confidence Intervals, based on coefficients in Table 5 (M2)

Figure 6. Fear appeals, by polarization * Region

Marginal effects with 95% Confidence Intervals, based on coefficients in Table 5 (M2)

Appendix

Table A1. Elections

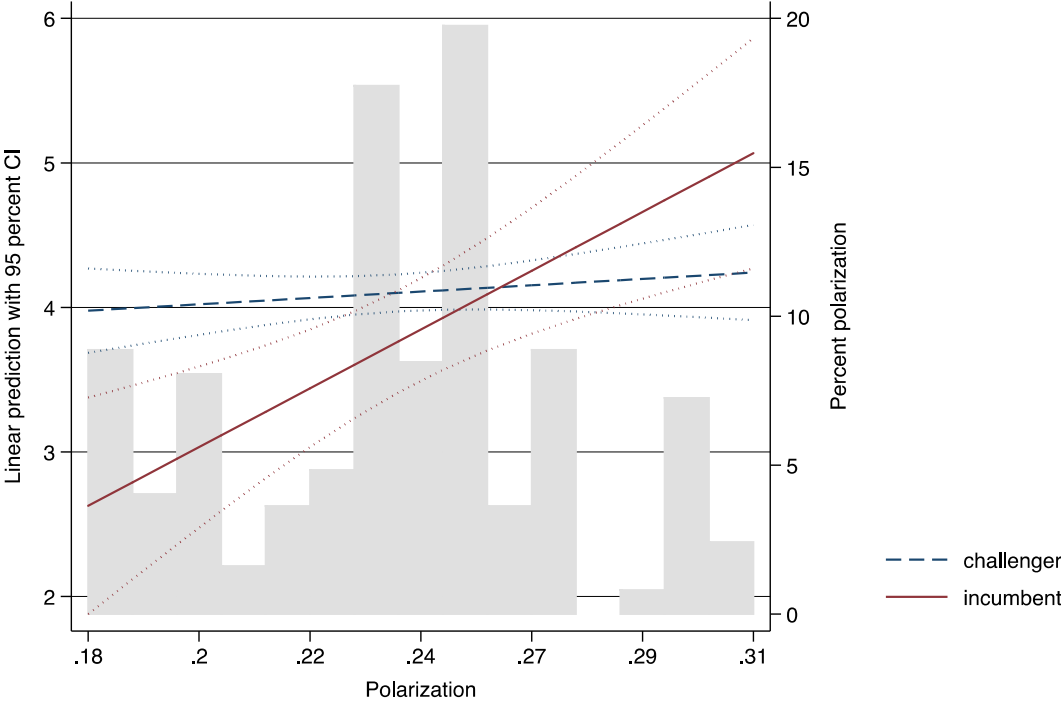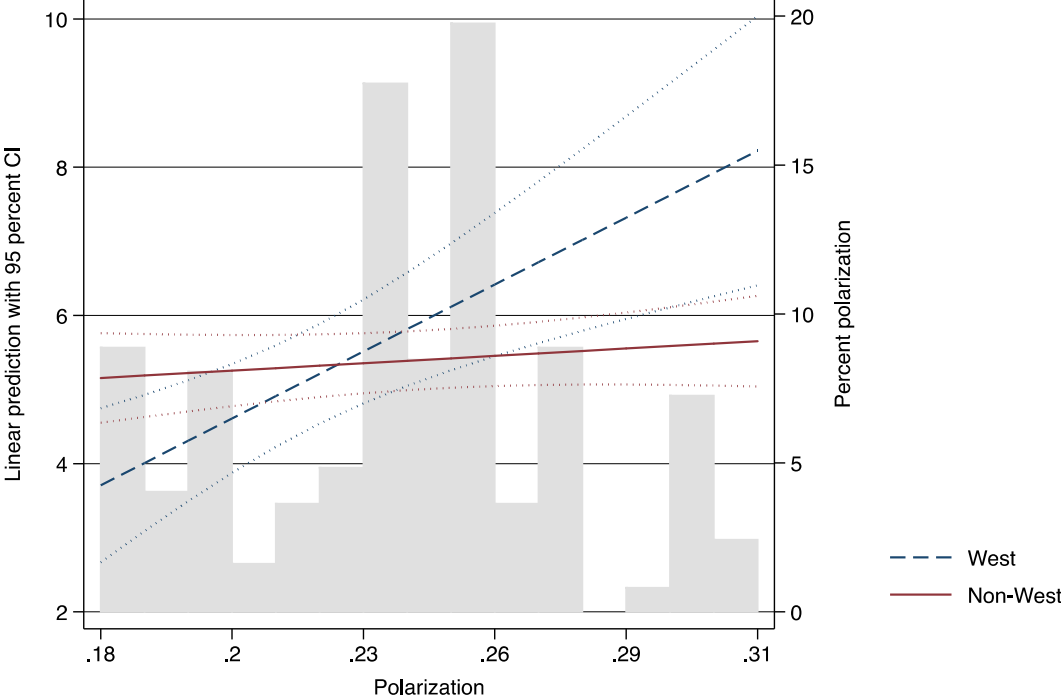| Country	Election	Date	Election ID
Albania	Parliamentary election	25-Jun-17	ALB_L_20170625
Argentina	Legislative election	22-Oct-17	ARG_L_20171022
Armenia	Parliamentary election	2-Apr-17	ARM_L_20170402
Armenia	Parliamentary election	9-Dec-18	ARM_L_20181209
Australia	Federal election	2-Jul-16	AUS_L_20160702
Austria	Presidential election	4-Dec-16	AUT_P_20161204
Austria	Legislative election	15-Oct-17	AUT_L_20171015
Belarus	Election of the Chamber of the Representatives	11-Sep-16	BLR_L_20160911
Brazil	Presidential election (first round)	7-Oct-18	BRA_P_20181007
Chile	Presidential election (first round)	19-Nov-17	CHL_P_20171119
Colombia	Presidential election (first round)	27-May-18	COL_P_20180527
Cyprus	Presidential election (first round)	28-Jan-18	CYP_P_20180128
Czech Republic	Legislative election	20-Oct-17	CZE_L_20171020
Czech Republic	Presidential election (first round)	12-Jan-18	CZE_P_20180112
Ecuador	Presidential election	19-Feb-17	ECU_P_20170219
Finland	Presidential election (first round)	28-Jan-18	FIN_P_20180128
France	Presidential election	23-Apr-17	FRA_P_20170423
France	Election of the National Assembly (round 1)	11-Jun-17	FRA_L_20170611
Georgia	Parliamentary election	8-Oct-16	GRG_L_20161008
Georgia	Presidential election	28-Oct-18	GRG_P_20181028
Germany	Federal elections	24-Sep-17	DEU_L_20170924
Ghana	Presidential election	7-Dec-16	GHA_P_20161207
Hong Kong	Election of the Legislative Council	4-Sep-16	HKG_L_20160904
Hungary	Parliamentary elections	8-Apr-18	HUN_L_20180408
Iceland	Presidential election	25-Jun-16	ICE_P_20160625
Iceland	Election for the Althing	29-Oct-16	ICE_L_20161029
Iceland	Election for the Althing	28-Oct-17	ICE_L_20171028
Japan	House of Councillors election	10-Jul-16	JAP_L_20160710
Japan	Election of the House of Representatives	22-Oct-17	JAP_L_20171022
Kyrgyzstan	Presidential election	15-Oct-17	KGZ_P_20171015
Lithuania	Parliamentary election	9-Oct-16	LTH_L_20161009
Malaysia	Malaysian House of Representatives	9-May-18	MYS_L_20180509
Mexico	Presidential election	1-Jul-18	MEX_P_20180701
Morocco	Election of the Chamber of Representatives	7-Oct-16	MRC_L_20161007
New Zealand	General election	23-Sep-17	NZL_L_20170923
Norway	Parliamentary election	11-Sep-17	NOR_L_20170911
Pakistan	General elections	25-Jul-18	PAK_L_20180725
Romania	Legislative election	11-Dec-16	ROU_L_20161211
Russia	Election of the State Duma	18-Sep-16	RUS_L_20160918
Russia	Presidential election (first round)	18-Mar-18	RUS_P_20180318
Rwanda	Presidential election	4-Aug-17	RWA_P_20170804
South Korea	Presidential election	9-May-17	KOR_P_20170509
Spain	General election	26-Jun-16	ESP_L_20160626
Sweden	General election	9-Sep-18	SWE_L_20180909
The Netherlands	General elections	15-Mar-17	NLD_L_20170315
Turkey	Presidential election (first round)	24-Jun-18	TUR_P_20180624
UK	Election of the British House of Commons	8-Jun-17	GBR_L_20170608
USA	Presidential election	8-Nov-16	USA_P_20161108
Uzbekistan	Presidential election	4-Dec-16	UZB_P_20161204
Zimbabwe	Presidential election (first round)	30-Jul-18	ZWE_P_20180730

Table A2. Candidates

Name	Party	Country	Election ID	N experts
Lulzim Basha	Democratic Party of Albania	Albania	ALB_L_20170625	7
Ben Blushi	Libra Party	Albania	ALB_L_20170625	7
Edi Rama	Socialist Party of Albania	Albania	ALB_L_20170625	7
Hermes Binner	Frente Amplio Progresista	Argentina	ARG_L_20171022	14
Cristina Fernández de Kirchner	Frente para la Victoria	Argentina	ARG_L_20171022	14
Mauricio Macri	Cambiemos	Argentina	ARG_L_20171022	14
Sergio Massa	Unidos por una Nueva Argentina	Argentina	ARG_L_20171022	14
Artur Baghdasaryan	Armenian Renaissance	Armenia	ARM_L_20170402	6
Hrant Markarian	Armenian Revolutionary Federation	Armenia	ARM_L_20170402	6
Hrant Markarian	Armenian Revolutionary Federation	Armenia	ARM_L_20181209	6
Edmon Marukyan	Way out alliance	Armenia	ARM_L_20170402	6
Edmon Marukyan	Bright Armenia	Armenia	ARM_L_20181209	6
Nikol Pashinyan	My Step Alliance	Armenia	ARM_L_20181209	6
Serzh Sargsyan	Republican Party of Armenia	Armenia	ARM_L_20170402	6
Serzh Sargsyan	Republican Party of Armenia	Armenia	ARM_L_20181209	6
Levon Ter-Petrosyan	Congress-People's Party Alliance	Armenia	ARM_L_20170402	6
Gagik Tsarukyan	Tsarukyan alliance	Armenia	ARM_L_20170402	6
Gagik Tsarukyan	Prosperous Armenia Party	Armenia	ARM_L_20181209	6
Richard Di Natale	The Greens	Australia	AUS_L_20160702	26
Bill Shorten	Australian Labor Party	Australia	AUS_L_20160702	26
Malcolm Turnbull	Liberal Party of Australia / Nationals	Australia	AUS_L_20160702	26
Nick Xenophon	Nick Xenophon Team	Australia	AUS_L_20160702	26
Norbert Hofer	Freedom Party of Austria	Austria	AUT_P_20161204	37
Christian Kern	Social Democratic Party of Austria	Austria	AUT_L_20171015	27
Sebastian Kurz	Austrian People's Party	Austria	AUT_L_20171015	27
Ulrike Lunacek	The Greens	Austria	AUT_L_20171015	27
Heinz-Christian Strache	Freedom Party of Austria	Austria	AUT_L_20171015	27
Matthias Strolz	The New Austria and Liberal Forum	Austria	AUT_L_20171015	27
Alexander Van der Bellen	Independent candidate / The Greens	Austria	AUT_P_20161204	37
Sergei Gaidukevich	Liberal Democratic Party	Belarus	BLR_L_20160911	13
Anatoly Lebedko	United Civic Party of Belarus	Belarus	BLR_L_20160911	13
Geraldo Alckmin	Brazilian Social Democracy Party	Brazil	BRA_P_20181007	27
João Amoêdo	New Party	Brazil	BRA_P_20181007	27
Jair Bolsonaro	Social Liberal Party	Brazil	BRA_P_20181007	27
Ciro Gomes	Democratic Labour Party	Brazil	BRA_P_20181007	27
Fernando Haddad	Workers' Party	Brazil	BRA_P_20181007	27
Marina Silva	Sustainability Network	Brazil	BRA_P_20181007	27
Alejandro Guillier	Indep. candidate / The Force of the Majority	Chile	CHL_P_20171119	11
Ricardo Lagos	Partido por la Democracia	Chile	CHL_P_20171119	11
Manuel José Ossandón	Renovación Nacional	Chile	CHL_P_20171119	11
Sebastián Piñera	Independent candidate / Chile Vamos	Chile	CHL_P_20171119	11
Humberto de La Calle	PLC-ASI	Colombia	COL_P_20180527	16
Iván Duque Márquez	Grand Alliance for Colombia	Colombia	COL_P_20180527	16
Sergio Fajardo	Colombia Coaliion	Colombia	COL_P_20180527	16
Gustavo Petro	List of Decency	Colombia	COL_P_20180527	16
Germán Vargas Lleras	Mejor Vargas Lleras	Colombia	COL_P_20180527	16
Nicos Anastasiades	Democratic Rally	Cyprus	CYP_P_20180128	9
Christos Christou	National Popular Front	Cyprus	CYP_P_20180128	9

Giorgos Lillikas	Citizens' Alliance	Cyprus	CYP_P_20180128	9
Stavros Malas	Progressive Party of Working People	Cyprus	CYP_P_20180128	9
Nikolas Papadopoulos	Democratic Party	Cyprus	CYP_P_20180128	9
Andrej Babiš	ANO	Czech Republic	CZE_L_20171020	23
Ivan Bartoš	Czech Pirate Party	Czech Republic	CZE_L_20171020	23
Jiří Drahoš	Independent candidate	Czech Republic	CZE_P_20180112	18
Petr Fiala	Civic Democratic Party	Czech Republic	CZE_L_20171020	23
Vojtěch Filip	Communist Party of Bohemia and Moravia	Czech Republic	CZE_L_20171020	23
Pavel Fischer	Independent candidate	Czech Republic	CZE_P_20180112	18
Marek Hilšer	Independent candidate	Czech Republic	CZE_P_20180112	18
Michal Horáček	Independent candidate	Czech Republic	CZE_P_20180112	18
Jiří Hynek	Realists	Czech Republic	CZE_P_20180112	18
Miroslav Kalousek	TOP 09	Czech Republic	CZE_L_20171020	23
Tomio Okamura	Freedom and Direct Democracy	Czech Republic	CZE_L_20171020	23
Mirek Topolánek	Independent candidate	Czech Republic	CZE_P_20180112	18
Lubomír Zaorálek	Czech Social Democratic Party	Czech Republic	CZE_L_20171020	23
Miloš Zeman	Party of Civic Rights	Czech Republic	CZE_P_20180112	18
Dalo Bucaram	Fuerza Ecuador	Ecuador	ECU_P_20170219	22
Guillermo Lasso	Creando Oportunidades	Ecuador	ECU_P_20170219	22
Paco Moncayo	Acuerdo Nacional por el Cambio	Ecuador	ECU_P_20170219	22
Lenín Moreno	Alianza PAIS	Ecuador	ECU_P_20170219	22
Cynthia Viteri	Partido Social Cristiano	Ecuador	ECU_P_20170219	22
Tuula Haatainen	Social Democratic Party	Finland	FIN_P_20180128	18
Pekka Haavisto	Green League	Finland	FIN_P_20180128	18
Laura Huhtasaari	Finns Party	Finland	FIN_P_20180128	18
Merja Kyllönen	Left Alliance	Finland	FIN_P_20180128	18
Sauli Niinistö	Independent candidate	Finland	FIN_P_20180128	18
Nils Torvalds	Swedish People's Party	Finland	FIN_P_20180128	18
Matti Vanhanen	Centre Party	Finland	FIN_P_20180128	18
Paavo Väyrynen	Independent candidate	Finland	FIN_P_20180128	18
François Baroin	Les Républicains	France	FRA_L_20170611	12
Bernard Cazeneuve	Parti Socialiste	France	FRA_L_20170611	12
François Fillon	Les Républicains	France	FRA_P_20170423	34
Benoît Hamon	Parti Socialiste	France	FRA_P_20170423	34
Marine Le Pen	Front National	France	FRA_P_20170423	34
Marine Le Pen	Front National	France	FRA_L_20170611	12
Emmanuel Macron	En Marche	France	FRA_P_20170423	34
Emmanuel Macron	La République En Marche	France	FRA_L_20170611	12
Jean-Luc Mélenchon	La France Insoumise	France	FRA_P_20170423	34
Jean-Luc Mélenchon	La France insoumise	France	FRA_L_20170611	12
Irakli Alasania	Free Democrats	Georgia	GRG_L_20161008	18
Davit Bakradze	United National Movement	Georgia	GRG_L_20161008	18
Davit Bakradze	Movement for Liberty - European Georgia	Georgia	GRG_P_20181028	20
Paata Burchuladze	State for a People	Georgia	GRG_L_20161008	18
Nino Burjanadze	Democratic Movement – United Georgia	Georgia	GRG_L_20161008	18
Irma Inashvili	Alliance of Patriots of Georgia	Georgia	GRG_L_20161008	18
Zurab Japaridze	New Political Center - Girchi	Georgia	GRG_L_20161008	18
Giorgi Kvirikashvili	Georgian Dream – Democratic Georgia	Georgia	GRG_L_20161008	18
Shalva Natelashvili	Georgian Labour Party	Georgia	GRG_L_20161008	18
Shalva Natelashvili	Georgian Labour Party	Georgia	GRG_P_20181028	20
David Usupashvili	Development Movement	Georgia	GRG_P_20181028	20
Grigol Vashadze	United National Movement	Georgia	GRG_P_20181028	20
Salome Zurabishvili	Independent candidate	Georgia	GRG_P_20181028	20
Alexander Gauland	Alternative for Germany	Germany	DEU_L_20170924	44
Katja Kipping	Die Linke	Germany	DEU_L_20170924	44
Christian Lindner	Free Democratic Party	Germany	DEU_L_20170924	44

Angela Merkel	CDU/CSU	Germany	DEU_L_20170924	44
Simone Peter	The Greens	Germany	DEU_L_20170924	44
Martin Schulz	SPD	Germany	DEU_L_20170924	44
Nana Akufo-Addo	New Patriotic Party	Ghana	GHA_P_20161207	13
John Dramani Mahama	National Democratic Congress	Ghana	GHA_P_20161207	13
Paa Kwesi Nduom	Progressive People's Party	Ghana	GHA_P_20161207	13
Vincent Fang	Liberal Party	Hong Kong	HKG_L_20160904	14
Regina Ip	New People's Party	Hong Kong	HKG_L_20160904	14
Emily Lau	Democratic Party	Hong Kong	HKG_L_20160904	14
Nathan Law	Demosistō	Hong Kong	HKG_L_20160904	14
Starry Lee	Dem. All. for the Betterment and Prog. of HK	Hong Kong	HKG_L_20160904	14
Alan Leong	Civic Party	Hong Kong	HKG_L_20160904	14
Andrew Leung	Business and Professionals All. for Hong HK	Hong Kong	HKG_L_20160904	14
Lam Suk-yee	Hong Kong Federation of Trade Unions	Hong Kong	HKG_L_20160904	14
Suzanne Wu	Labour Party	Hong Kong	HKG_L_20160904	14
Erica Yuen	People Power–League of Social Democrats	Hong Kong	HKG_L_20160904	14
Ferenc Gyurcsány	Democratic Coalition	Hungary	HUN_L_20180408	12
Gergely Karácsony	MSZP-Dialogue	Hungary	HUN_L_20180408	12
Viktor Orbán	Fidesz	Hungary	HUN_L_20180408	12
Bernadett Szél	Politics Can Be Different	Hungary	HUN_L_20180408	12
Gábor Vona	Jobbik	Hungary	HUN_L_20180408	12
Bjarni Benediktsson	Independence Party	Iceland	ICE_L_20161029	14
Bjarni Benediktsson	Independence Party	Iceland	ICE_L_20171028	7
Logi Már Einarsson	Social Democratic Alliance	Iceland	ICE_L_20171028	7
Þorgerður Katrín Gunnarsdóttir	Viðreisn	Iceland	ICE_L_20171028	7
Sigm. Davíð Gunnlaugsson	Centre Party	Iceland	ICE_L_20171028	7
Oddný Guðbjörg Harðardóttir	Social Democratic Alliance	Iceland	ICE_L_20161029	14
Katrín Jakobsdóttir	Left-Green Movement	Iceland	ICE_L_20161029	14
Katrín Jakobsdóttir	Left-Green Movement	Iceland	ICE_L_20171028	7
Guðni Th. Jóhannesson	Independent candidate	Iceland	ICE_P_20160625	14
Sigurður Ingi Jóhannsson	Progressive Party	Iceland	ICE_L_20161029	14
Sigurður Ingi Jóhannsson	Progressive Party	Iceland	ICE_L_20171028	7
Birgitta Jónsdóttir	Pirate Party	Iceland	ICE_L_20161029	14
Birgitta Jónsdóttir	Pirate Party	Iceland	ICE_L_20171028	7
Sturla Jónsson	Sturla Jónsson Party	Iceland	ICE_P_20160625	14
Andri Snær Magnason	Independent candidate	Iceland	ICE_P_20160625	14
Davíð Oddsson	Independence Party	Iceland	ICE_P_20160625	14
Óttarr Proppé	Bright Future	Iceland	ICE_L_20161029	14
Halla Tómasdóttir	Independent candidate	Iceland	ICE_P_20160625	14
Shinzō Abe	Liberal Democratic Party of Japan	Japan	JAP_L_20160710	21
Shinzō Abe	Liberal Democratic Party of Japan	Japan	JAP_L_20171022	20
Yukio Edano	Democratic Party of Japan	Japan	JAP_L_20160710	21
Yuriko Koike	Kibō no Tō	Japan	JAP_L_20171022	20
Ichirō Matsui	Nippon Ishin no Kai	Japan	JAP_L_20171022	20
Kazuo Shii	Japanese Communist Party	Japan	JAP_L_20160710	21
Kazuo Shii	Japanese Communist Party	Japan	JAP_L_20171022	20
Natsuo Yamaguchi	Komeito	Japan	JAP_L_20160710	21
Natsuo Yamaguchi	Komeito	Japan	JAP_L_20171022	20
Ömürbek Babanov	Independent candidate	Kyrgyzstan	KGZ_P_20171015	5
Sooronbay Jeenbekov	SDPK	Kyrgyzstan	KGZ_P_20171015	5
Temir Sariyev	Akshumar	Kyrgyzstan	KGZ_P_20171015	5
Linas Balsys	Lithuanian Green Party	Lithuania	LTH_L_20161009	28
Algirdas Butkevičius	Social Democratic Party of Lithuania	Lithuania	LTH_L_20161009	28
Ramūnas Karbauskis	Lithuanian Peasant and Greens Union	Lithuania	LTH_L_20161009	28
Gabrielius Landsbergis	Homeland Union – Lith. Christian Democrats	Lithuania	LTH_L_20161009	28
Valentinas Mazuronis	Labour Party	Lithuania	LTH_L_20161009	28

Rolandas Paksas	Party Order and Justice	Lithuania	LTH_L_20161009	28
Remigijus Šimašius	Liberal Movement	Lithuania	LTH_L_20161009	28
Valdemar Tomaševski	Electoral Action of Poles in Lithuania	Lithuania	LTH_L_20161009	28
Jonas Varkala	The Way of Courage	Lithuania	LTH_L_20161009	28
Hadi Awang	Gagasan Sejahtera	Malaysia	MYS_L_20180509	9
Mahathir Mohamad	Pakatan Harapan	Malaysia	MYS_L_20180509	9
Najib Razak	Barisan Nasional	Malaysia	MYS_L_20180509	9
Ricardo Anaya	National Action Party	Mexico	MEX_P_20180701	27
Jaime Rodríguez Calderón	Independent candidate	Mexico	MEX_P_20180701	27
Andrés Manuel López Obrador	National Regeneration Movement	Mexico	MEX_P_20180701	27
José Antonio Meade	Institutional Revolutionary Party	Mexico	MEX_P_20180701	27
Mohamed Nabil Benabdallah	Party of Progress and Socialism	Morocco	MRC_L_20161007	10
Abdelilah Benkirane	Justice and Development Party	Morocco	MRC_L_20161007	10
Abdelhamid Chabat	Istiqlal Party	Morocco	MRC_L_20161007	10
Ilyas El Omari	Authenticity and Modernity Party	Morocco	MRC_L_20161007	10
Mohand Laenser	Popular Movement	Morocco	MRC_L_20161007	10
Salaheddine Mezouar	National Rally of Independents	Morocco	MRC_L_20161007	10
Jacinda Ardern	Labour	New Zealand	NZL_L_20170923	16
Bill English	National	New Zealand	NZL_L_20170923	16
Winston Peters	New Zealand First	New Zealand	NZL_L_20170923	16
James Shaw	Green Party	New Zealand	NZL_L_20170923	16
Siv Jensen	Progress Party	Norway	NOR_L_20170911	26
Audun Lysbakken	Socialist Left Party	Norway	NOR_L_20170911	26
Erna Solberg	Conservative Party	Norway	NOR_L_20170911	26
Jonas Gahr Støre	Labour Party	Norway	NOR_L_20170911	26
Trygve Slagsvold Vedum	Centre Party	Norway	NOR_L_20170911	26
Imran Khan	Pakistan Tehreek-e-Insaf	Pakistan	PAK_L_20180725	17
Fazl-ur-Rahman	Muttahida Majlis–e–Amal	Pakistan	PAK_L_20180725	17
Shehbaz Sharif	Pakistan Muslim League	Pakistan	PAK_L_20180725	17
Bilawal Bhutto Zardari	Pakistan Peoples Party	Pakistan	PAK_L_20180725	17
Traian Băsescu	Alliance of Liberals and Democrats	Romania	ROU_L_20161211	23
Nicuşor Dan	Save Romania Union	Romania	ROU_L_20161211	23
Liviu Dragnea	Social Democratic Party	Romania	ROU_L_20161211	23
Alina Gorghiu	National Liberal Party	Romania	ROU_L_20161211	23
Hunor Kelemen	Democr. Alliance of Hungarians in Romania	Romania	ROU_L_20161211	23
Călin Popescu-Tăriceanu	Alliance of Liberals and Democrats	Romania	ROU_L_20161211	23
Pavel Grudinin	Communist Party	Russia	RUS_P_20180318	20
Dmitry Medvedev	United Russia	Russia	RUS_L_20160918	28
Sergey Mironov	A Just Russia	Russia	RUS_L_20160918	28
Vladimir Putin	Independent candidate	Russia	RUS_P_20180318	20
Ksenia Sobchak	Civic Initiative	Russia	RUS_P_20180318	20
Grigory Yavlinsky	Yabloko	Russia	RUS_P_20180318	20
Vladimir Zhirinovsky	LDPR	Russia	RUS_L_20160918	28
Vladimir Zhirinovsky	Liberal Democratic Party	Russia	RUS_P_20180318	20
Gennady Zyuganov	Communist Party	Russia	RUS_L_20160918	28
Frank Habineza	Democratic Green Party of Rwanda	Rwanda	RWA_P_20170804	5
Paul Kagame	Rwandan Patriotic Front	Rwanda	RWA_P_20170804	5
Ahn Cheol-soo	People's Party	South Korea	KOR_P_20170509	8
Hong Jun-pyo	Liberty Korea Party	South Korea	KOR_P_20170509	8
Moon Jae-in	Democratic Party	South Korea	KOR_P_20170509	8
Sim Sang-jung	Justice Party	South Korea	KOR_P_20170509	8
Yoo Seong-min	Bareun Party	South Korea	KOR_P_20170509	8
Pablo Iglesias	Unidos Podemos	Spain	ESP_L_20160626	19
Mariano Rajoy	Partido Popular	Spain	ESP_L_20160626	19
Albert Rivera	Ciudadanos	Spain	ESP_L_20160626	19
Pedro Sánchez	Partido Socialista Obrero Español	Spain	ESP_L_20160626	19

Jimmie Åkesson	Sweden Democrats	Sweden	SWE_L_20180909	18
Jan Björklund	Liberals	Sweden	SWE_L_20180909	18
Ulf Kristersson	Moderate Party	Sweden	SWE_L_20180909	18
Stefan Löfven	Swedish Social Democratic Party	Sweden	SWE_L_20180909	18
Annie Lööf	Centre Party	Sweden	SWE_L_20180909	18
Isabella Lövin	Green Party	Sweden	SWE_L_20180909	18
Jonas Sjöstedt	Left Party	Sweden	SWE_L_20180909	18
Ebba Busch Thor	Christian Democrats	Sweden	SWE_L_20180909	18
Lodewijk Asscher	Labour Party	The Netherlands	NLD_L_20170315	40
Jesse Klaver	GroenLinks	The Netherlands	NLD_L_20170315	40
Alexander Pechtold	Democrats 66	The Netherlands	NLD_L_20170315	40
Emile Roemer	Socialist Party	The Netherlands	NLD_L_20170315	40
Mark Rutte	People's Party for Freedom and Democracy	The Netherlands	NLD_L_20170315	40
Gert-Jan Segers	Christian Union	The Netherlands	NLD_L_20170315	40
Marianne Thieme	Party for the Animals	The Netherlands	NLD_L_20170315	40
Sybrand van Haersma Buma	Christian Democratic Appeal	The Netherlands	NLD_L_20170315	40
Geert Wilders	Party for Freedom	The Netherlands	NLD_L_20170315	40
Meral Akşener	İyi Party	Turkey	TUR_P_20180624	26
Selahattin Demirtaş	Peoples' Democratic Party	Turkey	TUR_P_20180624	26
Recep Tayyip Erdoğan	Justice and Development Party	Turkey	TUR_P_20180624	26
Muharrem İnce	Republican People's Party	Turkey	TUR_P_20180624	26
Jeremy Corbyn	Labour Party	UK	GBR_L_20170608	48
Tim Farron	Liberal Democrats	UK	GBR_L_20170608	48
Theresa May	Conservative Party	UK	GBR_L_20170608	48
Paul Nuttall	UK Independence Party	UK	GBR_L_20170608	48
Hillary Clinton	Democratic Party	USA	USA_P_20161108	75
Gary Johnson	Libertarian Party	USA	USA_P_20161108	75
Jill Stein	Green Party	USA	USA_P_20161108	75
Donald Trump	Republican Party	USA	USA_P_20161108	75
Shavkat Mirziyoyev	Liberal Democratic Party	Uzbekistan	UZB_P_20161204	6
Nelson Chamisa	MDC Alliance	Zimbabwe	ZWE_P_20180730	11
Emmerson Mnangagwa	ZANU–PF	Zimbabwe	ZWE_P_20180730	11

Notes

i   https://www.alessandro-nai.com/negative-campaigning-comparative-data

ii   As discussed in Nai (2018), we define an expert as a scholar who has worked and or published on the country's electoral politics, political communication (including political journalism) and/or electoral behaviour, or related disciplines. Expertise is established by existing relevant academic publications (including conference papers), membership of a relevant research group, professional network, or organized section of such a group, and/or explicit self-assessed expertise in professional webpage. Experts were contacted in the direct aftermath of the election (usually 1-2 days after election day) and provided a unique link towards an anonymous survey in Qualtrics; two reminders were automatically sent to experts having not yet completed the survey, respectively after one and two weeks.

iii   "I care about people", "Inflation dropped during my term in office", "Unemployment dropped during my term in office, whereas under my opponent it increased", "Under my opponent's administration the economy has stagnated", "You cannot trust my opponent", "My opponent is dishonest and corrupt". Although this is of course not mentioned in the questionnaire, these vignettes can be easily ranked from the most "positive" (the first) to the most "negative" (the last). See Nai (2018) for a discussion about how experts rated these vignettes in a comparative perspective.

iv   https://www.cia.gov/library/publications/the-world-factbook/fields/299.html

v   https://www.eiu.com/topic/democracy-index

vi   A detailed description of the four types of regimes is available through The Economist Intelligence Unit's index.

vii   Both surveys used the standard question about the participants' ideological self-placement on a left to right scale. The individual scores of the ISSP that derived from an 11-point scale were divided by 10. Because the WVS used a scale from 1 to 10, we subtracted 1

from each individual score and divided them by 9. This enabled us to merge the two sources. The standard deviation of ideology was calculated for each country. In cases where countries overlapped, we used the more recent data for our analysis.

viii https://www.idea.int/data-tools/data/gender-quotas