Parties' Parliamentary Attack Behaviour throughout the Electoral Cycle

Željko Poljak
University of Antwerp
zeljko.poljak@uantwerpen.be

Annemarie S. Walter
University of Nottingham
annemarie.walter@nottingham.ac.uk

Manuscript accepted by *Party Politics*

Date of acceptance: 29 June 2023

Abstract

Studies examining parties' attack behaviour, also called negative campaigning, largely neglect temporal dynamics. Therefore, this paper examines how the electoral cycle, the period between two elections, impacts parties' attack behaviour in parliaments. We argue that parties attack all the time but that the (i) level, (ii) type, and (iii) nature of attacks are affected by the electoral cycle as parties adapt their objectives. Analysing longitudinal data on parties' attacks in the parliaments of Belgium, Croatia, and the UK (2010-2020), we find that when elections draw closer parties' use of attacks, trait attacks, and uncivil attacks increases. We also find support for the notion that not all parties' attack behaviour is equally impacted by the electoral cycle, as parties differ in sensitivity to the electoral cycle based on risk acceptance. Overall, the impact of the electoral cycle on parties' strategic choices in general, and attack behaviour specifically, should not be ignored.

Keywords: Attacks; Electoral Cycle; Negative Campaigning; Parliaments; Party Behaviour

Introduction

In their fight to win votes, political parties frequently resort to negative campaigning. Negative campaigning is a strategy parties use to diminish the electoral attractiveness of the political opponent(s) by criticising them both on policy as well as traits.[1] The opposite strategy is positive campaigning where parties praise themselves to increase their electoral attractiveness (Geer, 2006). Negative campaigning can have unintended electoral consequences for the attacking party, such as alienating (part of) their voter base and electorally benefitting other (third) parties, respectively referred to as backlash and second-preference boost effects (e.g. Walter and Van der Eijk, 2019; Galasso et al., 2020). In addition, negative campaigning can deteriorate the relationship between the attacking and the targeted party. Consequently, this diminishes cooperative behaviour between parties in parliament, such as supporting each other's legislative proposals or government cooperation in party systems with a practice of coalition government (Dodd and Schraufnagel, 2012; Walter and Van der Brug, 2013; Walter et al., 2014). Thus, as negative campaigning is not without risks, parties engage in a cost-benefit analysis before attacking an opponent (Nai and Walter, 2015).

Research explaining the use of negative campaigning has primarily focused on characteristics of politicians, parties, elections, and systems but has not paid much attention to the temporal dimension of attacks, in particular the election cycle, i.e. the time between two consecutive elections.[2] The practice of studying parties' attack behaviour in a relatively static way stems from the scholarly emphasis on negative campaigning in the context of (official) election campaigns, often examining attack behaviour in the weeks preceding election day. This emphasis is somewhat surprising considering the popular notion of permanent campaigning, which assumes that parties increasingly "pursue actions consistent with election campaigning in non-electoral periods to maintain a positive image among the public and thus enable future electoral successes" (Joathan and Lilleker, 2023, 68). Therefore, we assume that political parties also attack opponents at other moments in the electoral cycle.

Moreover, work in the field of party politics increasingly shows that parties' behaviour changes throughout the electoral cycle. For instance, at different moments within the electoral cycle parties have different issue strategies, levels of responsiveness to past election losses, and varying levels of cooperative behaviour (Berz and Kroeber, 2023; Seeberg, 2022; Schwalbach, 2022; Somer-Topcu, 2009). The changes

[1] We use the terms negative campaigning and attack behavior interchangeably throughout the manuscript.
[2] Notable exceptions are studies examining within the time frame of an official election campaign how proximity to election day affects parties' use of negative campaigning (e.g. Damore, 2002; Nai and Sciarini, 2018; Walter et al., 2014).

in parties' behaviour reflect parties' shifting priorities throughout the electoral cycle (e.g. Müller and Louwerse, 2020; Schwalbach, 2022; Seeberg, 2022). Therefore, it is likely that parties' attack behaviour also varies throughout the electoral cycle. To fully understand negative campaigning, we should thus examine the impact of the electoral cycle on parties' attack behaviour.

We argue that the electoral cycle is an important characteristic of the institutional context in which parties operate. The electoral cycle impacts parties' objectives, i.e. *vote*, *office,* and *policy*. Consequently, the moment in the electoral cycle affects the strategic choices parties make, including parties' usage of negative campaigning. Negative campaigning is generally considered a *vote*-seeking strategy (e.g. Walter and Van der Brug, 2013; Somer-Topcu and Weitzel, 2022). We theorise that as time since the last election elapses, parties' behaviour is increasingly motivated by *vote*-seeking objectives, thereby stimulating parties' use of negative campaigning. However, not all parties are equally influenced by electoral incentives and willing to take risks to win votes (Meyer and Wagner, 2013; Walter and Van der Brug, 2013). In addition, the costs and benefits of negative campaigning vary for different types of attacks. Compared to policy attacks and civil attacks, trait attacks and uncivil attacks are generally considered costlier as they are more disliked both by voters and political elites (Hopmann et al., 2018; Fridkin and Kenney, 2011). Therefore, as the end of the electoral cycle draws closer, we expect all parties, but in particular risk-acceptant parties, to increase their attacks and use more trait and uncivil attacks.

We test these expectations by examining parties' attack behaviour during Question Time sessions in the Belgian, Croatian, and UK parliament between 2010 and 2020. We find that the electoral cycle significantly impacts parties' use of negative campaigning, the level as well as the types and the nature of attacks. Later in the electoral cycle, when parties are more *vote*-seeking, their overall use of negative campaigning increases, parties' use of policy attacks decreases while parties' use of trait attacks and uncivil attacks increases. We find partial evidence for the notion that not all parties are equally affected by electoral incentives and willing to take risks to gain votes. The electoral cycle has a significantly larger impact on parties that are losing in the public approval polls than on parties that are gaining in the polls. The results also show that party characteristics explain the significant differences in base levels of attack behaviour throughout the electoral cycle. Opposition parties use more attacks overall, more policy attacks, and more uncivil attacks than government parties. Ideologically radical parties use more uncivil attacks than mainstream parties.

This study contributes to both the field of political campaigning as well as legislative studies. First of all, this study shows that the electoral cycle significantly impacts parties' attack behaviour and that the

electoral cycle cannot be ignored in the process of building a general theory on negative campaigning. Second, the study brings more empirical evidence suggesting that parties' objectives are not stable and that parties' priorities shift throughout the electoral cycle affecting the strategic choices that they make, including the decision-making calculus regarding negative campaigning. Third, we show that the electoral cycle does not affect all parties' attack behaviour equally, indicating the importance of exploring heterogeneous effects. Finally, we show that the integration of both lines of literature provides a strong theoretical approach to the examination of parties' attack behaviour in parliament.

Party Objectives, Electoral Cycle and Attack Behaviour

Parties' strategic behaviour is guided by three political objectives, namely, *office*, *policy*, and *votes* (Strøm and Müller, 1999).[3] *Votes* refers to maximizing the share of votes won in an election and vote maximisation has no intrinsic value but is an instrument to fulfil *office*- and *policy*-seeking objectives. *Policy* refers to influencing public policy and *office* refers to the goods and status received when in office. Although *policy* and *office* can be the end goal, they are also means for gaining access to office or policy influence. Scholars agree that no party is purely *office*-, *policy*-, or *vote*-seeking and that these objectives are conflicting at times, consequently, parties must make trade-offs (Strøm, 1990).

Parties' objectives are also not stable and are affected by numerous factors, including the institutional setting in which parties operate, such as the party system and the electoral cycle (Strøm and Müller, 1999). For instance, in party systems with a majoritarian government, a party that wins the elections gains access to office and policy influence. In party systems with a practice of coalition government, winning votes does not always guarantee government participation and policy influence. In a party system with minority governments, governing parties share policy influence with opposition parties more than in a party system with majority governments, and thus gaining office is less of a prerequisite for policy influence (Strøm, 1990). Parties' objectives are also affected by the electoral cycle. Closer to the elections parties tend to be mainly driven by *vote*-seeking objectives to obtain office and policy influence, and it is in routine periods within the electoral cycle that parties are more policy-seeking. Consequently, the extent to which parties are *office*-, *policy,* and *vote*-seeking differs across parties, throughout the electoral cycle, and across party systems (Pedersen, 2012).

[3] We acknowledge that some scholars criticize this framework of Strøm and Müller (1999) and argue that parties are also driven by other political objectives such as intraparty democracy (Harmel and Jande, 1994).

A widely used party strategy is negative campaigning. We define negative campaigning as any type of critique, both policy- and trait-based, directed towards political opponents (Geer, 2006), which can include coalition partners (Martin and Vanberg, 2004; Martin and Whitaker, 2019) and party colleagues (Kam, 2009; Proksch and Slapin, 2012). These attacks can be civil or uncivil (Brooks and Geer, 2007). We define uncivil attacks as attacks that defy social norms on interactions in the domain of politics (Walter, 2021). Please note that trait-based attacks are not necessarily targeting the traits of an individual politician but can target the traits of a party. In addition, both policy and trait attacks can be civil or uncivil.

First of all, parties engage in negative campaigning to diminish the electoral attractiveness of a political opponent. By diminishing the electoral attractiveness of a political opponent parties hope to decrease the opponent's voter support and sometimes indirectly increase their own voter support. In this first scenario, parties generally attack political opponents that are ideologically close and with whom they share a voter base (Walter, 2014a; Walter and Van der Eijk, 2019).

Second, parties engage in negative campaigning to strengthen their ideological profile by clarifying to voters how they are ideologically different from political opponents (Walter, 2014a). In this second scenario, parties not only attack ideological neighbours but also parties that are positioned at the other end of the ideological spectrum, i.e. so-called ideological enemies (Walter, 2014a). Although in multiparty systems with a practice of coalition government, government parties might generally present themselves as a united front, in the runup to elections they often engage in attack behaviour to signal to voters their ideological differences as cross-party cooperation can blur the lines between parties in the mind of voters (Fortunato, 2021; Haselmayer and Jenny, 2018). Recent work also suggests that the coalition mood, i.e. the working atmosphere among coalition parties, declines over the electoral cycle (Imre et al., 2023).

Third, parties engage in negative campaigning to gain media coverage to communicate their campaign messages to voters or influence the campaign agenda (Van Aelst and Walgrave, 2016; Walter and Vliegenthart, 2010; Dolezal et al., 2017). Negative campaigning helps parties to secure media attention due to the negativity bias in the press (Soroka and McAdams, 2015; Haselmayer et al., 2019). Parties' use of negative campaigning to gain media coverage is affected by the overall importance of free publicity relative to paid publicity in the context they operate and the other resources available to these parties to communicate to voters or gain media access (Dolezal et al., 2017). Parties always strive for media coverage, but in particular in the run-up to the elections.

The use of negative campaigning is also inherently linked to specific parties due to their role and nature (Dolezal et al., 2017; Walter and Van der Brug, 2013; Cassell, 2021). Opposition parties are expected to oppose the government and thus criticise the government (Hix and Noury, 2016). In addition, populist parties originated out of discontent with the status quo, so their supporter base expects them to criticise the establishment (Cassell, 2021). Populist parties also have less respect for established social norms of interaction and official rules or practices of engagement in parliaments and are therefore more likely to make use of uncivil attack behaviour (Marien et al., 2020). As elections are never truly out of sight (Joathan and Lilleker, 2020) and negative campaigning not only serves to materialise *vote*-seeking objectives (Otjes and Louwerse, 2018), attack behaviour is never completely absent, i.e. a baseline level of attack behaviour. However, we will argue that the (i) level (ii) type and (iii) nature of these attacks are likely to differ throughout the electoral cycle.

An abundance of studies has examined negative campaigning and its various forms during official election campaigns showing how such behaviour is driven by *vote*-seeking objectives and sometimes limited by *office*-seeking and *policy*-seeking objectives (Walter et al., 2014; Hansen and Pedersen, 2008; Haselmayer and Jenny, 2018). Regardless of the large body of work examining the use of negative campaigning, not much attention has been paid to the temporal dynamics of attack behaviour, specifically the effect of the electoral cycle (see footnote 2). Most research studies parties' attack behaviour in a relatively static fashion during (official) campaigns, which generally last a couple of weeks in a non-U.S. setting. The field of negative campaigning thereby neglects that parties also attack in-between elections and thus outside of official campaigns (e.g. Ketelaars, 2019) and the impact of the electoral cycle on negative campaigning. Several recent studies indicate that the electoral cycle may affect parties' attack behaviour, suggesting that parties clash on the same issues more towards the end of the electoral cycle (Seeberg, 2022) or that in systems with a practice of minority governments opposition parties use more negative sentiment closer to the elections (Schwalbach, 2022). Please note that we do not consider sentiment of speech (e.g. the use of negative words) the same as negative campaigning (critique directed at a political opponent).

Building upon this work, our central argument is that parties' attack behaviour evolves throughout the electoral cycle in response to changes in the priority of their goals. Precisely, we expect that the importance of seeking *votes* increases as the time during the electoral cycle elapses. This makes parties employ different cost-benefit analyses on (i) whether to attack and what (ii) type and (iii) nature of attacks to use. We also expect that the impact of the electoral cycle on parties' negative campaigning decision

calculus differs across parties as not all parties are equally affected by electoral incentives and risk acceptance. In the following paragraphs, we outline our expectations in greater detail.

With recent elections in mind and the next elections far ahead, parties' behaviour is less *vote*-seeking and subsequently less focused on party competition early in the electoral cycle. Parties can focus on cooperating on policy and be responsive to real-world problems (Ansolabehere and Iyengar, 1994). Naturally, parties' policy success in the early days of the cycle can be used to achieve re-election later in the cycle. As time during the electoral cycle elapses, all parties' behaviour becomes more *vote*-seeking. To diminish the opponent's electoral attractiveness, strengthen their ideological profile, and/or gain media coverage, parties can decide to make (more) use of negative campaigning. Closer to the elections the potential benefits of negative campaigning become more important to parties and increase their willingness to risk the potential costs of negative campaigning, i.e. losing voter support, unintended increase in voter support for a 'third' party, or limiting chances of elite cooperation (Walter and Van der Eijk, 2019; Galasso et al., 2020; Dodd and Schraufnagel, 2012). Consequently, we formulate the following hypothesis:

Attack Level Hypothesis (H1): Parties attack more at the end than at the beginning of the electoral cycle.

As elections draw closer we also expect a change in the type and nature of attacks that parties use to target opponents. The costs and benefits vary for different types of attacks. Compared to policy attacks and civil attacks, trait attacks and uncivil attacks are generally considered costlier as they are more disliked both by voters and political elites (Hopmann et al., 2018; Fridkin and Kenney, 2011). These attacks are more likely to cause voter backlash or deteriorate the relationship between the attacking and the targeted party (Dodd and Schraufnagel, 2012; Walter and Van der Brug, 2013; Hansen and Pedersen, 2008). Given that the potential benefits of negative campaigning increase closer to the election, as does the willingness to take risks, parties are more willing to engage in riskier attack behaviour, i.e. use more trait and uncivil attacks.

In the run-up to elections when political parties engage in all kinds of media attention-seeking behaviour, including attack behaviour, the need to stand out increases. Despite the media's negativity bias, the use of negative campaigning closer to an election may be insufficient to secure media coverage as attack behaviour is too widespread. Therefore, parties might resort to attacks that are less common

and perceived as more aggressive by both the public and elites as they yield more media attention (Mutz, 2015). Mechanisms that provide media access to politicians are significantly different in routine compared to campaign times (Van Aelst and De Swert, 2009; Falasca, 2014).

In addition, at elections, voters not only vote for a party on their future or past policy plans, but also for the traits of that party, such as competence and integrity. Furthermore, voters may also vote for a politician representing a party. Although the need and room for personalised campaigning towards election day is strongly related to institutional characteristics, such as the electoral system and party system institutionalisation, we expect towards the end of the electoral cycle more discussion on whether the party and/ or party representative is suitable for the job at the cost of policy dialogue. Consequently, increasing the use of trait attacks and decreasing the use of policy attacks. Thus, we formulate the following three hypotheses on the impact of the electoral cycle on the type and the nature of attacks.

Policy Attack Hypothesis (H2): Parties use less policy attacks at the end of the electoral cycle than at the beginning of the electoral cycle.

Trait Attack Hypothesis (H3): Parties use more trait attacks at the end of the electoral cycle than at the beginning of the electoral cycle.

Nature of Attack Hypothesis (H4): Parties use more uncivil attacks at the end of the electoral cycle than at the beginning of the electoral cycle.

Although all parties towards the end of the electoral cycle are expected to engage in more *vote*-seeking behaviour, not all parties are equally influenced by electoral incentives and risk acceptance (e.g. Meyer and Wagner, 2013; Walter and Van der Brug, 2013). Some parties are more risk-acceptant than others and therefore more likely to use attack behaviour in the face of elections. According to prospect theory, risk behaviour is more likely when an actor is at a loss (Kahneman and Tversky, 1979). Parties that are more affected by electoral incentives and are prone to risk can include parties losing in the public approval polls (Skaperdas and Grofman, 1995), opposition parties, and ideologically radical parties (Walter et al., 2014).

Risk Acceptant Parties Hypothesis (H5): The impact of the electoral cycle on parties' attack behaviour, i.e. level, type, and nature of attacks, is larger for risk-acceptant parties than for risk-averse parties.

Methodology

Cases

This study examines parties' attack behaviour in Belgium, Croatia, and the United Kingdom (UK) throughout several electoral cycles in the period from January 2010 to December 2020 (2021 for Croatia).[4] This period captures 4 electoral cycles in Belgium and 5 electoral cycles in Croatia and the UK (see more details in Supplementary Materials - Appendix A). Our case selection is based on party-system differences which affect parties' trade-off between *vote-*, *office-,* and *policy*-seeking objectives and thus their strategic behaviour, including attack behaviour (Strøm and Müller, 1999). Several studies suggest that parties attack more in two-party systems than in multiparty systems as negative campaigning is a less risky strategy in two-party systems due to parties having to make less of a trade-off between their political goals (Walter, 2014b; Walter et al., 2014).

Furthermore, different party systems bring about different parties, such as the presence or absence of an anti-establishment party. We argue that party characteristics matter for the use of negative campaigning and the impact of the electoral cycle on attack behaviour. Therefore, by selecting different party systems we enable drawing conclusions that travel to other party systems. Belgium has a multi-party system, that has multiple (and stable) competing parties and a practice of coalition government (see Casal Bértoa and Enyedi, 2021). This also includes radical right and radical left parties that are present in parliament. In direct contrast to this is the British party system (see Lijphart, 2012) which has two major competing parties and most of the time a single-party government. This makes it difficult for third parties, including ideologically extreme ones, to participate as equals in parliamentary party competition (see e.g. Thompson, 2018). Finally, the Croatian party system is a case between these two extremes where multiple parties are grouped in two competing blocks, generally resulting in a coalition government consisting of parties within one of these blocks (see Nikić Čakar and Krašovec, 2021). Consequently, third parties in

[4] We include an extra year for Croatia case due to the low frequency of QTs. However, while 2021 is included in all main models reported in this paper, we repeated all tests excluding 2021 from Croatia. Sensitivity analyses show that including or excluding 2021 is not impacting our main results and findings in any way.

Croatia, primarily mainstream ones, can play a significant role within parliamentary venues as major parties need them to form a government.

We examine attack behaviour in parliamentary question time sessions (QTs), specifically *Vragenuur* in Belgium, *Aktualno prijepodne* in Croatia, and *Prime Minister's Questions* (PMQs) in the UK. In all three countries, QTs are an established regular (weekly or quarterly) format of parliamentary debates during which Members of Parliament (MPs) of all parties can question the government[5], which allows for a systematic examination of parties' attack behaviour in election cycles across countries and across time. In addition, QTs receive the most media coverage of all parliamentary debates (Salmond, 2014) and the questions asked are largely symbolic (Van Aelst and Vliegenthart, 2014). Various scholars perceive QTs as a permanent campaign forum (Otjes and Louwerse, 2018; Osnabrügge et al., 2021; Seeberg, 2020; Soontjens, 2021) that also reflect what parties debate about in other communication venues, such as in the traditional news or on social media (Peeters et al., 2021; Soontjens, 2021).

Data collection and operationalisation

We sampled QTs by randomly selecting one for each month. The sample of 261 QTs consists of 103 QTs for Belgium, 115 QTs for the UK, and 43 QTs for Croatia. The sample includes approximately a third of the complete QT population for Belgium and the UK, respectively, 30.4% and 32.7%. The sample for Croatia includes the full population of QTs due to their low frequency (see footnote 5). The selected QTs were analysed using transcripts scraped from official parliamentary websites. Each *speech act* in these transcripts counts as an observation. A speech act starts the moment a person begins to speak and finishes when this person ends or is interrupted. The data collection includes all questions, answers, points of order, Speaker's interventions, and interruptions, but excludes protocol speeches, such as the Speaker

[5] The structure of these QTs differ across parliaments. In Belgium, every week all parties are granted slots to ask questions to the cabinet members. These questions are grouped based on a topic and are answered by the responsible cabinet member. Once the answer to a particular group of questions is given, all MPs who asked questions in this group are also granted the opportunity to respond. In Croatia, parliamentary size determines the number of questions a party can ask a cabinet member every quarter (i.e. four times per year). As such, in Croatia, QTs are dominated by the two main parties in which questions are asked individually by MPs to a specific cabinet member who responds immediately and receives a rebuttal from the MP who posed a question. Finally, in the UK, the distribution of questions is decided by a random shuffle which generally favours the two largest parties. Questions are asked to the PM every week, and once the PM answers the question, no rebuttal is possible except for the Leader(s) of the Opposition who can ask questions on every QT and rebuttal the PM's answers (Serban, 2020).

giving the floor in Croatia and MPs asking the Prime Minister (PM) to list her/his engagements at the start of every PMQ in the United Kingdom. In total, the dataset consists of 20,044 observations.

Each of these observations was manually coded. All coders were trained for six weeks, which resulted in satisfactory Krippendorff's alpha scores (see Supplementary Materials - Appendix B). Coders indicated for each speech act whether (i) the politician attacks, and if yes, whether the attack (ii) includes policy criticism, (iii) trait criticism, and (iv) uncivil criticism. Attacks are operationalised as any instance of a political actor criticising another political actor, including actors from the same group.[6] We coded attacks targeting formal individual and group actors, such as PMs, Party Leaders, Ministers, parties, coalitions, and governments. We did not code attacks targeting informal actors, such as foreign politicians, unions, and non-governmental organizations. We operationalise policy attacks as criticising the opponent's prospective or retrospective policy plans, and the realisation and execution of these policy plans. We operationalise trait attacks as criticising the opponent's traits, such as competence and integrity. Political incivility was operationalised as any attack including name-calling (e.g. calling a minister Grinch), mocking (e.g. comparing a policy to Pinocchio's nose), or insulting language (e.g. saying that someone is disgusting). See Table 1 for examples illustrating the coding scheme while descriptive statistics of parties' average attack behaviour in a QT session are reported in Appendix D.

Table 1. Coding scheme examples

ATTACK TYPE	SPEECH ACT
Policy Civil	*The Prime Minister will also know that this House passed legislation that excludes those injured by their own hand.* ***But the innocent victims have not yet been able to benefit from this scheme, not least because of the actions of Sinn Féin, who are blocking the next steps to implementation.*** Jeffrey Donaldson, DUP, 10.6.2020
Policy Uncivil	*I was thinking of raising with the Prime Minister* ***the Conservatives' so-called long-term economic plan—like Pinocchio's nose, it grows longer and less attractive by the day (…)*** David Blunkett, Lab, 11.3.2015
Trait Civil	***One word can sum up that answer: weak. It is not advice that is required, but some leadership. (…)*** David Cameron, Con, 17.3.2010
Trait Uncivil	*(…) I have had a quick scan of the Radio Times.* ***Which of these films would he fancy: "The Grinch Who Stole Christmas", starring the Chancellor of the Exchequer; "The Muppet Christmas Carol", starring the Lib Dem members of the Cabinet; or "It's Not a Wonderful Life for the Poor", starring himself?*** Kevin Brennan, Lab, 19.12.2012

[6] Intra-party attacks constitute less than 1 per cent of all attacks in Belgium and Croatia and in the UK they make up 2.5 per cent of all attacks.

Policy and Trait Civil	*The Times Educational Supplement recently published a feature article stating how effective the pupil premium would be. Does the Deputy Prime Minister share* ***my frustration at the fact that the Labour party appears to be more interested in scoring partisan points than in supporting the coalition Government's serious attempts***— Stephen Lloyd, LD, 10.11.2010
Policy and Trait Uncivil	*This is the* ***height of arrogance from a Government set on running the clock down. Just 44 days from a no-deal scenario, the Prime Minister is hamstrung by her own party and rejected by European leaders. The Prime Minister must stop playing fast and loose. Businesses are begging for certainty; the economy is already suffering. Prime Minister, you have come to the end of the road, rumbled by your own loose-lipped senior Brexit adviser.*** Ian Blackford, SNP, 13.2.2019

Note: All examples displayed are from the UK. For examples from Belgium and Croatia, see Supplementary Materials - Appendix C.

For the purpose of hypotheses testing, we constructed four binary dependent variables indicating: (i) whether a politician attacks (1=Yes; 0=No) and if yes, whether this attack included (ii) policy criticism (1=Yes; 0=No), (iii) trait criticism (1=Yes; 0=No) and (iv) uncivil criticism (name-calling, mocking or insulting language) (1=Yes; 0=No). Our main independent variable is proximity to the end of the electoral cycle which is measured as the number of months since the last election. For example, number 12 is assigned to a QT observation 12 months after the last elections (for a similar measurement see Borghetto and Belchior, 2020; Pardos-Prado and Sagarzazu, 2019; Seeberg, 2022).[7]

To test our risk acceptance hypothesis (H5), our data also includes variables on party's status (0=Opposition; 1=Government), ideological extremity (adaptation of the variable *lrgen* from the Chapel Hill Expert Survey[8]; see Jolly et al., 2022), and public approval in polls[9]. Opposition parties that lack incumbency perks of *office* and *policy* success throughout the electoral cycle find themselves in a loss situation as proximity to elections increases. This makes them particularly prone to risk-taking by employing different strategies at elections (e.g. Crabtree, 2020) and potentially attacking retrospective decisions taken by governing and mainstream parties that enjoyed gains throughout the electoral cycle (Müller, 2022). Furthermore, parties that are losing in public approval polls might be more willing to

[7] The variable proximity to the end of the electoral cycle can also be operationalised as proximity to the end of the parliamentary term or the actual election date. These alternative measures are used to assess the robustness of our results (see Appendix G).

[8] We created a new variable measuring a party's ideological distance from the centre, using the standard left-right scores that range from 0 (radical left) to 10 (radical right). Thus, the higher the value the more ideologically extreme the party.

[9] This is a lagged variable that measures parties' public approval ratings on the basis of aggregated voters' voting intentions a month before a sampled QT (e.g. public approval in April is attributed to parties for QT in May). For Belgium, we use data from opinion polls that were conducted by various agencies (mostly Ipsos) and reported by TV networks in Belgium (VRT; RTBF; VTM; RTL). For Croatia, we include public approval ratings for the two main parties (HDZ and SDP) based on polls from PromocijaPlus which are regularly reported on RTL news. Finally, for the UK, we include data for the two largest parties (Conservative Party and Labour Party) from Ipsos MORI polls that were reported in the *Evening Standard* newspaper.

engage in negative campaigning regardless of its potential backlash effect (Skaperdas and Grofman, 1995). Ideologically extreme parties are at a loss as they are unlikely to be part of the government, and might be more willing to take the risks of negative campaigning. In addition, the cost in terms of voter backlash will be lower for these ideologically extreme parties as their voter base expects them to criticize the established parties.

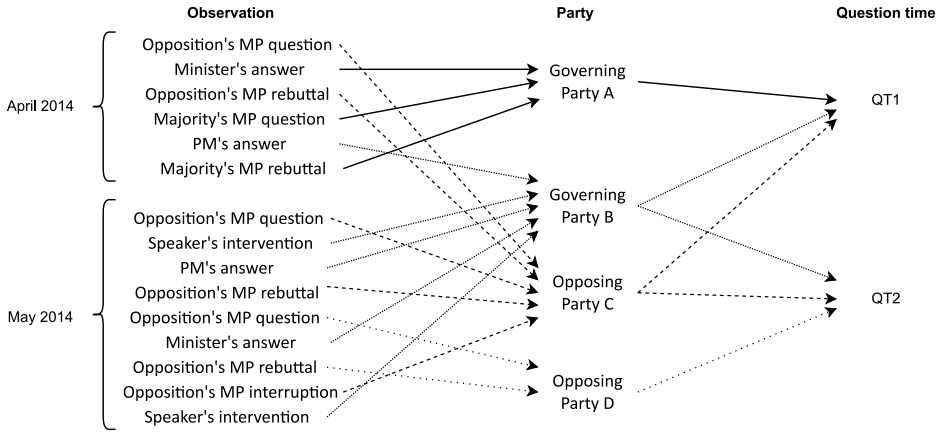
Method

We analyse our data using multilevel logistic regressions given the hierarchical structure of data and binary dependent variables. Since our observations are politicians' speech acts (one speech unit = one observation) nested within parties and QTs, the model consists of two levels: parties (e.g. speech unit belongs to party A; N = 39) and QTs (e.g. speech unit spoken in QT 1; N = 261). To control for the fact that parties reappear and are not unique observations for each QT, we employ a multi-membership modelling strategy (appropriate for panel data; see Chung and Beretvas, 2012) which crosses parties with QTs in which they participate (see Figure 1 for a visual representation of the modelling strategy). We dropped observations of parties not included in the CHES dataset.[10] Depending on the dependent variable, the number of observations in the analyses varies between 18,612 speech units and 6,218 attacks. The main models presented in the manuscript do not include the control variable public approval. Including the variable public approval reduces the number of observations substantially and even drops parties from the model.[11] The extended models including the variable public approval are reported in Supplementary Materials - Appendix E. Lastly, all our models include variables on the politician's gender (0=Man; 1=Woman), and year dummies.

[10] With this approach, we lose 1,432 (7,14%) observations out of 20,044. These observations usually included speech acts made by independent MPs and MPs from (short-lived) parties with low share of seats in the parliament (e.g. MLD in Belgium, HGS in Croatia or UUP in the UK). Sensitivity analyses show that including or excluding these observations is not impacting our main results and findings in any way.

[11] Including the public approval variable results in a drop of 6,074 (32.6%) observations out of 18,612 as we lack public approval data in Belgium between 2010 and 2014 while for Croatia and the UK we do not have approval data for small parties in the parliament (see also footnote 9).

Figure 1. A multi-level model crossing levels of parties with QTs



Note: A hypothetical scenario of two governing, two opposing parties, and two QTs. Parties A and D only participate in one QT and parties B and C participate in both QTs.

Results

To what extent and in what way does the electoral cycle affect parties' attack behaviour? The results of our multilevel logistic regression analyses are reported in Table 2. The findings show significant changes in parties' use of attacks, trait attacks, and uncivil attacks throughout the electoral cycle. As time elapses throughout the electoral cycle, the probability of parties' overall use of attacks, trait attacks, and uncivil attacks in QTs increases. We do not find a significant effect of the electoral cycle on the use of policy attacks, i.e. parties' use of policy attacks does not significantly increases or decreases throughout the electoral cycle. The latter also suggests that the rise of trait attacks does not come at the cost of policy attacks. The results support H1, H3, and H4, but not H2.

Overall, we find empirical evidence that the electoral cycle affects parties' attack behaviour in parliaments, which we argue reflects changes in the importance of parties' goals. The closer to elections parties and their representatives are, the more *vote*-seeking they become. Furthermore, similar to previous work on negative campaigning, we find that party characteristics affect the base levels of parties' attack behaviour (e.g. Elmelund-Præstekær, 2010; Walter and Van der Brug, 2013; Goovaerts and Turkenburg, 2022). Opposition parties have higher overall use of attacks and uncivil attacks than governing parties consistently through time while ideologically extreme parties use more uncivil attacks compared to mainstream parties.

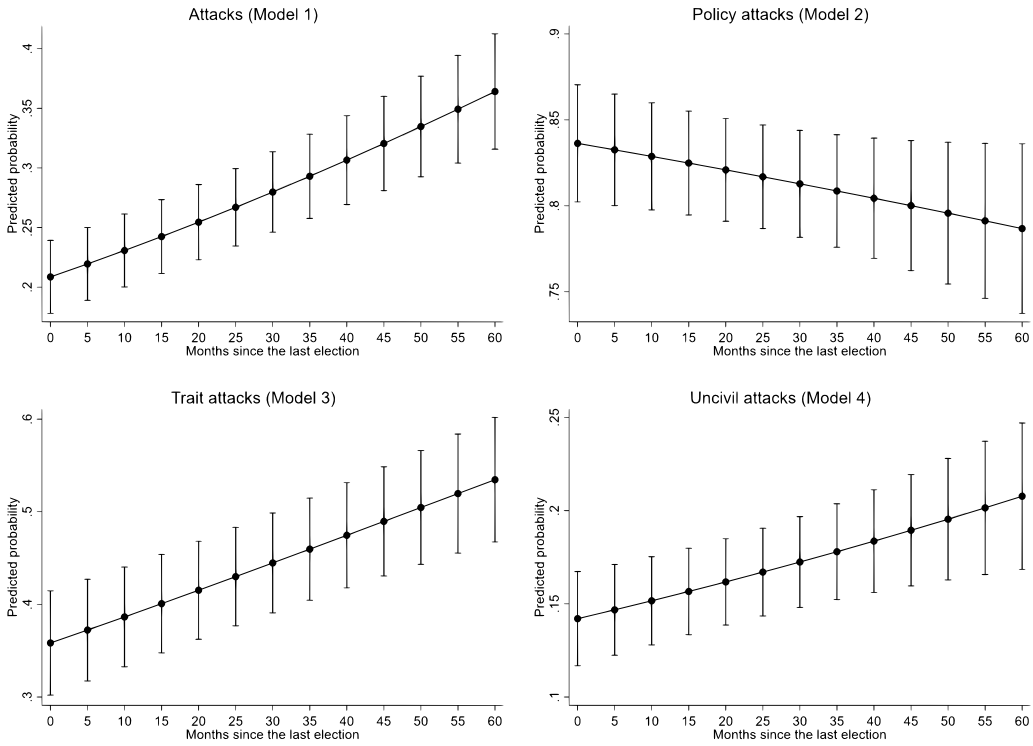
Table 2. The effect of the electoral cycle on parties' use of attacks, trait attacks, policy attacks, and uncivil attacks in QTs

	MODEL 1 DV1: Use of attacks (1=Yes)	**MODEL 2 DV2: Use of policy attacks(1=Yes)**	**MODEL 3 DV3: Use of trait attacks(1=Yes)**	**MODEL 4 DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
Electoral cycle	**.012 (.002) *****	-.005 (.003)	**.012 (.002) *****	**.007 (.002) ****
Opposition (ref.)				
Government	-2.044 (.056) ***	-.692 (.093) ***	.014 (.084)	-.438 (.099) ***
Ideological extremity	.362 (.758)	-.186 (.928)	1.023 (.967)	2.511 (.730) ***
Man MP (ref.)				
Woman MP	-.197 (.043) ***	.289 (.083) **	-.358 (.068) ***	-.452 (.086) ***
Belgium (ref.)				
Croatia	.181 (.202)	-.094 (.276)	.044 (.268)	-.699 (.224) **
UK	-.061 (.250)	-.597 (.301) †	.206 (.320)	-.037 (.232)
Constant	.110 (.251)	1.961 (.348) ***	-.908 (.326) **	-1.897 (.285) ***
Variance (Parties)	.437 (.082)	.475 (.104)	.554 (.107)	.343 (.080)
Variance (QTs)	.349 (.026)	.548 (.051)	.399 (.041)	.338 (.054)
N (total)	18,612	6,218	6,218	6,218
N (QTs)	261	261	261	261
N (min. per QT)	29	7	7	7
N (max. per QT)	168	82	82	82
AIC (empty model)	20.338 (0= 22.385)	6.416 (0= 6.726)	8.218 (0= 8.538)	6.085 (0= 6.405)

*Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. Models with the variable public approval included are available in Supplementary Materials - Appendix E. †p<0.1; *p<0.05; **p<0.01; ***p<0.001*

The findings are clearly visible in Figure 2, which presents the post-estimated predicted probabilities of our regression analyses. Firstly, the top left graph shows that a party's probability of attacking in a speech act increases by 74.5% (from .209 to .364) throughout the electoral cycle when comparing their behaviour in the first QT after an election with the last QT before an election. Secondly, the probability of using policy attacks decreases by only 5.9% (from .836 to .787), while the probability of trait attacks and uncivil attacks increases respectively by 49.2% (from .358 to .535) and 46.3% (from .142 to .208) comparing parties' behaviour in QTs at the start with the end of the electoral cycle. Overall, Figure 2 shows that these shifts in parties' use, type, and nature of attacks throughout the electoral cycle are not only significant but also substantial in size.

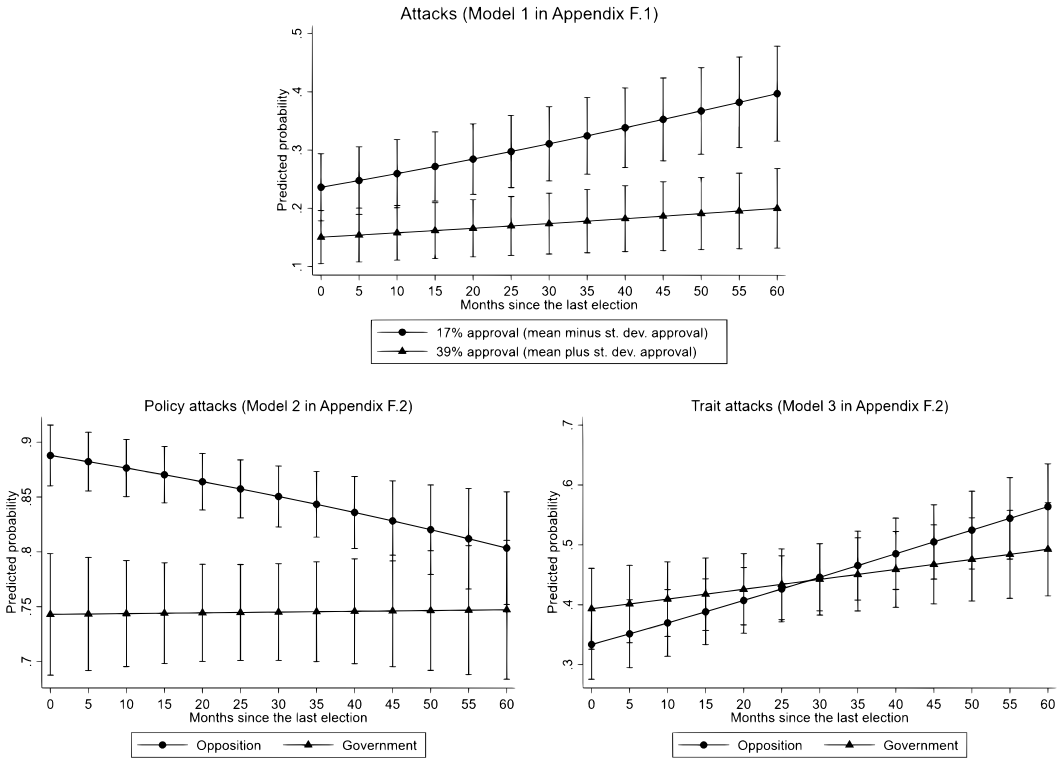
Figure 2. Predicted probabilities of parties' use of attacks and their types (policy/trait) and nature (incivility) during the electoral cycle



Note: Vertical lines indicate 90% confidence intervals holding all other variables at their mean

Furthermore, we find some evidence for H5, the notion that not all parties' attack behaviour is equally affected by the electoral cycle and that the electoral cycle affects risk-acceptant parties' attack behaviour more than risk-averse parties (Supplementary Materials - Appendix F.1; F.2; F.3). Namely, parties losing in polls are more prone to attack closer to an election (top in Figure 3). Interestingly, both governing and opposing parties show an increase in attack behaviour, but the effect is significantly stronger for governing parties. This may be attributed to the need for coalition parties to differentiate themselves from each other (Imre et al., 2023; Fortunato, 2021). Moreover, both governing and opposing parties increase their use of trait attacks towards the end of the electoral cycle, but the effect is significantly stronger for opposition parties (right-bottom in Figure 3). This increase in trait attacks comes at the expense of policy attacks for opposing parties (left-bottom in Figure 3). Lastly, when it comes to parties' ideological extremity, we do not find that the electoral cycle has a different effect on parties' attack behaviour, conditional on their level of ideological extremity.

Figure 3. Predicted probabilities of attacks when interacting electoral cycle with public approval (above) and probabilities of policy/trait attacks when interacting electoral cycle with party status (below)



Note: The full regression output for all graphs is available in Appendix F.1 and Appendix F.2 (for above: Table F.1; for below: Table F.2). Vertical lines indicate 90% confidence intervals holding other variables at their mean.

We also conducted sensitivity analyses to check the robustness of our findings (Supplementary Materials - G.1; G.2; G3; G4). We found that the effects of the electoral cycle on parties' attack behaviour are consistent across different operationalisations of the electoral cycle variable and that the electoral cycle of second-order elections during the study period did not affect the impact of the first-order election cycle on parties' negative campaigning in parliament. We also performed jack-knifing, dropping one country and electoral cycle at a time. The results supported hypotheses H1, H3, and H4 across all countries and electoral cycles, including H2 when the period of Michel government in Belgium (2014-2019) is omitted. Moreover, when we include the control parties' standing in public approval polls in our main models using the smaller dataset, the effect of the electoral cycle on parties' attack behaviour is similar, including for parties' use of policy attacks (H2). The probability of using policy attacks significantly

decreases by 11.5% (from .845 to .747) comparing parties' behaviour in QTs at the start with the end of the electoral cycle (see Supplementary Materials - Appendix E).

However, it is worth noting two country exceptions. Firstly, in Belgium, incivility was generally used consistently regardless of the electoral cycle. We posit that two factors account for this finding. On the one hand, the substantial presence of populist and extremist parties in parliament, including both the right and left of the ideological spectrum, contribute to the persistent use of uncivil rhetoric, as their usage of incivility does not come with significant repercussions. On the other hand, the necessity for mainstream parties to form and maintain broad coalitions contribute to their minimal use of incivility throughout the electoral cycle. Secondly, in the UK, public approval did not impact parties' use of attacks throughout the electoral cycle. Instead, it was the opposition parties that predominantly took risks by increasing trait attacks closer to elections. We attribute this to the importance of *office* goals, which can be achieved by winning an election in the UK unlike in Croatia and Belgium (see also Walter et al., 2014).

Conclusion

This study brings a better understanding of how institutional characteristics such as the electoral cycle, i.e. the period between two consecutive elections, affects parties' attack behaviour in parliament and helps to build a general theory on negative campaigning. Firstly, this study makes a theoretical contribution as it provides grounds for understanding parties' incentives to engage in negative campaigning from a longitudinal time frame. In doing so, we built upon previous studies that claim that parties' objectives shift throughout the electoral cycle affecting parties' strategic behaviour (Müller and Louwerse, 2020; Schwalbach, 2022; Seeberg, 2020). Specifically, we argued that *vote*-seeking goals become increasingly important to parties closer to elections, which affects parties' decision calculus on negative campaigning, which is generally considered a *vote*-seeking strategy. Closer to the elections the potential benefits of attack behaviour increase as well as parties' willingness to take a risk. Therefore, when the election draws closer parties not only engage more in negative campaigning but also in riskier attack behaviour, especially parties that are more affected by electoral incentives and risk acceptance. Secondly, this study contributes to the literature on negative campaigning and parliamentary behaviour as it is one of the first studies to empirically examine parties' attack behaviour throughout multiple electoral cycles. Work on attack behaviour often ignores temporal dynamics, including the electoral cycle, and tends to analyse parties' behaviour in short-term and static campaign periods.

The research results suggest that parties indeed become more *vote*-seeking and not only attack more but engage in riskier attack strategies, such as trait attacks and uncivil attacks towards the end of the electoral cycle. In addition, this demonstrates that the notion of permanent campaigning is not consistently present throughout the electoral cycle in parliamentary question time sessions, despite their high media coverage and exposure to citizens. That is, parties exhibit less campaigning-oriented behaviour in the early stages of the electoral cycle. Lastly, not all parties are equally affected in their attack behaviour by the electoral cycle. We find evidence that risk-averse parties, especially those losing in the public approval polls and parties in the opposition, are more likely to engage in riskier attack behaviour towards the end of the electoral cycle.

Still, our study is not without shortcomings. Firstly, we focused on a specific set of parliamentary sessions, namely QTs. It is plausible that parties' attack behaviour in these sessions differs from broader plenary debates and committee sessions (see Karlsson et al., 2022). We do not expect the impact of the electoral cycle on parties' attack behaviour to disappear if different parliamentary sessions are examined, but studying QTs potentially overestimates parties' use of attack behaviour: QTs are designed to scrutinise the government and are the parliamentary sessions which receive the most media attention. The field would furthermore benefit from examining the impact of the electoral cycle on parties' attack behaviour in other venues such as press releases or social media. In addition, we only examined parties' attack behaviour in three different countries. To further advance the theory on negative campaigning, it is crucial to examine parties' attack behaviour in electoral cycles across a wider range of countries. More cases could shed light on how other contextual characteristics, apart from the electoral cycle, affect parties' use of negative campaigning or interact with the electoral cycle.

References

Ansolabehere, S. and Iyengar, S. (1994). Riding the Wave and Claiming Ownership over Issues. *Public Opinion Quarterly*, 58, 335–357.

Berz, J., & Kroeber, C. (2023). Walking the line: Electoral cycles and the shift in legislative priorities among German parliamentarians. *Electoral Studies*, 83.

Borghetto, E., & Belchior, A. M. (2020). Party manifestos, opposition and media as determinants of the cabinet agenda. *Political Studies*, 68(1), 37-53.

Brooks, D. J., & Geer, J. G. (2007). Beyond negativity: The effects of incivility on the electorate. *American Journal of Political Science*, 51(1), 1-16.

Casal Bértoa, F. & Enyedi, Z. (2021). *Party System Closure: Party Alliances, Government Alternatives, and Democracy in Europe*. Oxford: Oxford University Press.

Cassell, K. J. (2021). The Populist Communication Strategy in Comparative Perspective. *The International Journal of Press/Politics*.

Crabtree, C., Golder, M., Gschwend, T., & Indriđason, I. H. (2020). It is not only what you say, it is also how you say it: The strategic use of campaign sentiment. *The Journal of Politics*, 82(3), 1044-1060.

Chung, H., & Beretvas, S. N. (2012). The impact of ignoring multiple membership data structures in multilevel models. *British Journal of Mathematical and Statistical Psychology*, 65(2), 185-200.

Damore, D. F. (2002). Candidate strategy and the decision to go negative. *Political Research Quarterly*, 55(3), 66.

Dodd, L. C. & Schraufnagel, S. (2012). Congress and the Polarity Paradox. *Congress & the Presidency*, 39 (2), 109-132.

Dolezal, M., Ennser-Jedenastik, L., & Müller, W. C. (2017). Who will attack the competitors?. *Party Politics*, 23(6), 666-679.

Elmelund-Præstekær, C. (2010). Beyond American negativity: Toward a general understanding of the determinants of negative campaigning. *European Political Science Review*, 2(1), 137-156.9-685.

Falasca, K. (2014). Political news journalism: Mediatization across three news reporting contexts. *European Journal of Communication*, 29(5), 583-597.

Fortunato, D. (2021). *The cycle of coalition: How parties and voters interact under coalition governance.* Cambridge University Press.

Fridkin, K. L., & Kenney, P. (2011). Variability in citizens' reactions to different types of negative campaigns. *American Journal of Political Science*, 55(2), 307-325.

Galasso, V., Nannicini, T., & Nunnari, S. (2020). Positive spillovers from negative campaigning. *American Journal of Political Science*.

Geer, J. G. (2006). I*n Defense of Negativity*. Chicago: University of Chicago Press.

Goovaerts, I., & Turkenburg, E. (2022). How Contextual Features Shape Incivility Over Time. *Communication Research*.

Hansen, K. M., & Pedersen, R. T. (2008). Negative campaigning in a multiparty system. *Scandinavian Political Studies*, 31(4), 408-427.

Harmel, R., & Janda, K. (1994). An integrated theory of party goals and party change. *Journal of theoretical politics*, 6(3), 259-287.

Haselmayer, M., & Jenny, M. (2018). Friendly fire? Negative campaigning among coalition partners. *Research & Politics*, 5(3), 2053168018796911.

Haselmayer, M., Meyer, T. M., & Wagner, M. (2019). Fighting for attention: Media coverage of negative campaign messages. *Party Politics*, 25(3), 412-423.

Hix, S., & Noury, A. (2016). Government-opposition or left-right?. *Political Science Research and Methods*, 4(2), 249-273.

Hopmann, D. N., Vliegenthart, R., & Maier, J. (2018). The effects of tone, focus, and incivility in election debates. *Journal of Elections, Public Opinion and Parties*, 28(3), 283-306.

Imre, M., Ecker, A., Meyer, T. M., & Müller, W. C. (2023). Coalition mood in European parliamentary democracies. *British Journal of Political Science*, 53(1), 104-121.

Joathan, Í., & Lilleker, D. G. (2023). Permanent Campaigning: a meta-analysis and framework for measurement. *Journal of Political Marketing*, 22(1), 67-85

Jolly, S., Bakker, R., Hooghe, L., Marks, G., Polk, J., Rovny, J., Steenbergen, M., & Vachudova, M. A. (2022). Chapel Hill Expert Survey trend file, 1999–2019. Electoral Studies, 75.

Kahneman, D. & Tversky A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263–92.

Kam, C. J. (2009). *Party discipline and parliamentary politics*. Cambridge University Press.

Karlsson, C., Persson, T., & Mårtensson, M. (2022). Do Members of Parliament Express More Opposition in the Plenary than in the Committee?. *Parliamentary Affairs*.

Ketelaars, P. (2019). Position, Preference and Personality: A Microlevel Explanation of Negativity in Day-To-Day Politics. *Political Psychology*, 40(5), 1019-1038.

Lijphart, A. (2012). *Patterns of Democracy, 2nd edition*. New Haven & London: Yale University Press.

Marien, S., Goovaerts, I., & Elstub, S. (2020). Deliberative qualities in televised election debates: the influence of the electoral system and populism. *West European Politics*, 43(6), 1262-1284.

Martin, L. W., & Vanberg, G. (2004). Policing the bargain: Coalition government and parliamentary scrutiny. *American Journal of Political Science*, 48(1), 13-27.

Martin, S., & Whitaker, R. (2019). Beyond committees: parliamentary oversight of coalition government in Britain. *West European Politics*, 42(7), 1464-1486.

Meyer, T. M., & Wagner, M. (2013). Mainstream or niche? Vote-seeking incentives and the programmatic strategies of political parties. *Comparative Political Studies*, 46(10), 1246-1272.

Mutz, D. C. (2015). *In-Your-Face Politics.* Princeton University Press.

Müller, S., & Louwerse, T. (2020). The electoral cycle effect in parliamentary democracies. *Political Science Research and Methods*, 8(4), 795-802.

Müller, S. (2022). The temporal focus of campaign communication. *The Journal of Politics*, 84(1), 585-590.

Nai, A. & Walter, A. S. (2015). How Negative Campaigning Impinges on the Political Game: A Literature Overview. In: Nai, A. & Walter, A. S. (eds.) New Perspectives on Negative Campaigning: Why Attack Politics Matters, pp. 235-248. Studies in European Political Science. Colchester: ECPR Press

Nai, A., & Sciarini, P. (2018). Why "going negative?" Strategic and situational determinants of personal attacks in Swiss direct democratic votes. *Journal of Political Marketing*, 17(4), 382-417.

Nikić Čakar, D., & Krašovec, A. (2021). Coping with the new party challenge: patterns of prime ministerial survival in Croatia and Slovenia. *East European Politics*, 37(3), 417-431.

Osnabrügge, M., Hobolt, S. B., & Rodon, T. (2021). Playing to the gallery: Emotive rhetoric in parliaments. *American Political Science Review*, 115(3), 885-899.

Otjes, S., & Louwerse, T. (2018). Parliamentary questions as strategic party tools. *West European Politics*, 41(2), 496-516.

Pardos-Prado, S., & Sagarzazu, I. (2019). Economic performance and center-periphery conflicts in party competition. *Party Politics*, 25(1), 50-62.

Pedersen, H. (2012). What do parties want? Policy versus office. *West European Politic*s, 35(4), 896-910.

Peeters, J., Van Aelst, P., & Praet, S. (2021). Party ownership or individual specialization? A comparison of politicians' individual issue attention across three different agendas. *Party Politics*, 27(4), 692-703.

Proksch, S. O., & Slapin, J. B. (2010). Position taking in European Parliament speeches. *British Journal of Political Science*, 40(3), 587-611.

Schwalbach, J. (2022). Going in circles? The influence of the electoral cycle on the party behaviour in parliament. *European Political Science Review*, 14(1), 36-55.

Seeberg, H. B. (2020). The impact of opposition criticism on the public's evaluation of government competence. *Party Politics*, 26(4), 484-495.

Seeberg, H. B. (2022). First avoidance, then engagement: Political parties' issue competition in the electoral cycle. *Party Politics*, 28(2), 284-293.

Serban, R. (2020). How are prime ministers held to account? Exploring procedures and practices in 31 parliamentary democracies. *The Journal of Legislative Studies,* 1-24.

Skaperdas, S., & Grofman, B. (1995). Modeling negative campaigning. *American Political Science Review*, 89(1), 49-61.

Somer-Topcu, Z. (2009). Timely decisions: The effects of past national elections on party policy change. *The Journal of Politics*, 71(1), 238-248.

Somer-Topcu, Z., & Weitzel, D. (2022). Negative Campaigning and Vote Choice in Europe. *Comparative Political Studies*, 55(13), 2283-2310.

Soontjens, K. (2021). The awareness paradox:(Why) politicians overestimate citizens' awareness of parliamentary questions and party initiatives. *Representation*, 57(1), 75-94.

Soroka, S., & McAdams, S. (2015). News, politics, and negativity. *Political communication*, 32(1), 1-22.

Strøm, K. (1990). A behavioral theory of competitive political parties. *American journal of political science*, 565-598.

Strøm, K., & Müller, W. C. (1999). Political parties and hard choices. *Policy, office, or votes*, 1-35.

Thompson, L. (2018). Understanding third parties at Westminster: The SNP in the 2015 parliament. *Politics*, 38(4), 443-457.

Van Aelst, P., & Vliegenthart, R. (2014). Studying the tango: An analysis of parliamentary questions and press coverage in the Netherlands. *Journalism Studies*, 15(4), 392-410.

Van Aelst, P., & Walgrave, S. (2016). Information and arena: The dual function of the news media for political elites. *Journal of Communication*, 66(3), 496-518.

Van Aelst, P., & De Swert, K. (2009). Politics in the news: Do campaigns matter?. *Communications*, 34(2) 149-168.

Walter, A. S. (Ed.). (2021). *Political Incivility in the Parliamentary, Electoral and Media Arena: Crossing Boundaries*. Routledge.

Walter, A. S. (2014a). Choosing the enemy: Attack behaviour in a multiparty system. *Party Politics*, 20(3), 311-323.

Walter, A. S. (2014b). Negative Campaigning in Western Europe: Similar or Different?. *Political Studies,* 62, 42-60.

Walter, A. S., & Van der Brug, W. (2013). When the gloves come off: Inter-party variation in negative campaigning in Dutch elections, 1981–2010. *Acta Politica*, *48*(4), 367-388.

Walter, A. S., Van der Brug, W., & van Praag, P. (2014). When the stakes are high: Party competition and negative campaigning. *Comparative Political Studies*, 47(4), 550-5.

Walter, A. S., & van der Eijk, C. (2019). Unintended consequences of negative campaigning. *The British Journal of Politics and International Relations*, 21(3), 612-629.73.

Walter, A. S. & Vliegenthart, R. (2010). Negative Campaigning across Different Communication Channels: Different Ballgames?. *Harvard International Journal Press/Politics*, 15(4), 441-461.

Parties' Parliamentary Attack Behaviour throughout the Electoral Cycle

Supplementary materials

Appendix A: Descriptive information on electoral cycles and parties 2

Appendix B: Coder training and readability scores 5

Appendix C: Coding scheme examples 7

Appendix D: Descriptive information and graphs 9

Appendix E: Main models with public approval control 14

Appendix F: Interaction effects 15

- **Appendix F.1:** Electoral cycle X public approval 15
- **Appendix F.2:** Electoral cycle X government vs. opposition 16
- **Appendix F.1:** Electoral cycle X ideology 18

Appendix G: Sensitivity Analyses 19

- **Appendix G.1:** Different measures of electoral proximity 19
- **Appendix G.2:** Second-order elections 23
- **Appendix G.3:** Country differences 25
- **Appendix G.4:** Electoral cycle 30

Appendix A: Descriptive information on electoral cycles and parties

Table A.1 Electoral cycles and parties examined

Country	Electoral Cycle Length	Electoral Cycle Type	Parties Examined
Belgium	January 2010 – June 2010	Incomplete - Snap elections	CD&V; DéFI; Ecolo; Groen; LDD; MR; N-VA; Open Vld; PS; VB; cdH; sp.a
	June 2010 – May 2014	Complete - Regular elections	CD&V; DéFI; Ecolo; Groen; LDD; MR; N-VA; Open Vld; PS; VB; cdH; sp.a
	May 2014 – May 2018	Complete - Regular elections	CD&V; DéFI; Ecolo; Groen; MR; N-VA; Open Vld; PP; PS; PVDA-PTB; VB; cdH; sp.a
	May 2018 - December 2020	Unknown	CD&V; DéFI; Ecolo; Groen; MR; N-VA; Open Vld; PS; PVDA-PTB; VB; cdH; sp.a
Croatia	January 2010 – December 2011	Complete - Regular elections	HDSSB: HDZ; HNS; HSLS; HSP; HSS; HSU; Hrvatski laburisti; IDS; SDP; SDSS
	December 2011 – November 2015	Complete - Regular elections	HDSSB; HDZ; HNS; HSP AS; HSS; HSU; Hrvatski laburisti; IDS; OraH; Reformisti; SDP; SDSS
	November 2015 – September 2016	Incomplete - Snap elections	HDSSB; HDZ; HNS; HSLS; HSP AS; HSS; HSU; Hrvatski laburisti; IDS; MOST; SDP; SDSS
	September 2016 - July 2020	Complete - Regular election	365 MB; HDSS; HDZ; HNS; HSS; HSU; IDS; MOST; SDP; SDSS; Živi zid;
	July 2020 – December 2021	Unknown	HDZ; HKS; HNS; HSLS; HSS; HSU; IDS; MOST; Reformisti; SDP; SDSS
UK	January 2010 – May 2010	Complete - Regular election	Con; Lab; LD; PC; SNP
	May 2010 – May 2015	Complete - Regular election	Con; Green; Lab; LD; PC; SNP; UKIP
	May 2015 – June 2017	Incomplete - Snap election	Con; Green; Lab; LD; PC; SNP; UKIP
	June 2017 – December 2019	Incomplete - Snap election	Con; Green; Lab; LD; PC; SNP
	December 2019 – December 2020	Unknown	Con; Green; Lab; LD; PC; SNP; UKIP

Note: The table provides descriptive information on the electoral cycles and parties examined. We examined the attack behaviour of all parties that had seats in parliament in an electoral cycle and are also part of the CHES dataset. The abbreviation list for parties is available in Table A.2.

Table A.2 Parties' abbreviations

Country	Abbreviation	Party Name	Party Name (English)
Belgium	CD&V	Christen-Democratisch en Vlaams	Christian Democratic and Flemish
	DéFI	Démocrate, Fédéraliste, Indépendant	Democratic, Federalist, Independent
	Ecolo	-	Ecologist
	Groen	-	Green
	MR	Mouvement Réformateur	Reformist Movement
	N-VA	Nieuw-Vlaamse Alliantie	New Flemish Alliance
	Open Vld	Open Vlaamse Liberalen en Democraten	Open Flemish Liberals and Democrats
	PP	Parti populaire	People's Party
	PS	Parti socialiste	Socialist Party
	PVDA-PTB	Parti du Travail de Belgique	Workers' Party of Belgium
	VB	Vlaams Belang	Flemish Interest
	cdH (now Les Engagés)	Centre Démocrate Humaniste	Humanist Democratic Centre
	sp.a (now Vooruit)	Socialistische Partij Anders	Socialist Party Differently
Croatia	364 MB	Bandić Milan 365 - Stranka rada i solidarnosti	Bandić Milan 365 – Labour and Solidarity Party
	HDSSB	Hrvatski demokratski savez Slavonije i Baranje	Croatian Democratic Alliance of Slavonia and Baranja
	HDZ	Hrvatska demokratska zajednica	Croatian Democratic Union
	HSLS	Hrvatska socijalno-liberalna stranka	Croatian Social Liberal Party
	HSP	Hrvatska stranka prava	Croatian Party of Rights
	HSP AS	Hrvatska stranka prava dr. Ante Starčević	Croatian Party of Rights — Dr. Ante Starčević
	HSS	The Croatian Peasant Party	Croatian Peasant Party
	HSU	Croatian Party of Pensioners	Hrvatska stranka umirovljenika
	Hrvatski laburisti	-	Croatian Labourists
	IDS	Istarski demokratski sabor	Istrian Democratic Assembly
	ORaH	Održivi razvoj Hrvatske	Sustainable Development of Croatia
	Reformisti	Narodna stranka - reformisti	People's Party - Reformists

	SDP	Socijaldemokratska partija Hrvatske	Social Democratic Party of Croatia
	SDSS	Samostalna Demokratska Srpska Stranka	Independent Democratic Serb Party
UK	Con	The Conservative Party	-
	Lab	The Labour Party	-
	LD	The Liberal Democrats	-
	Green	The Green Party	-
	PC	Plaid Cymru	-
	SNP	Scottish National Party	-
	UKIP	UK Independence Party	-

Appendix B: Coder training and readability scores

The content analysis was conducted by four MA political science students who successfully completed a six-week training program with one of the authors. During the first five weeks of the training, the coders coded approximately 15% of the UK data (150-200 speech acts per week) as they were all fluent in English. Krippendorff's alpha was used to measure inter-coder reliability, and noticeable improvements were observed every week (see tables below). In addition to coding, the coders attended joint meetings with the author during the training to discuss coding issues. Each coder received individual written feedback on their coding, highlighting any mistakes made during the previous week. The codebook was updated every week during the training. In the final week, after high-reliability scores were achieved for the UK data, the coders were also tested for coding Belgian and Croatian data. The average Krippendorff's alpha score for coding attacks was .97 (Table B.1), for the content of these attacks was .74 (Table B.2), and for the (in)civility of these attacks was .82 (Table B.3). The Krippendorff's alpha score for coding all variables reached a value of .82 in the final week (Appendix A.2).

Table B.1 Krippendorff's alpha scores per coder for identifying attacks in speech acts

	Coder A	**Coder B**	**Coder C**	**Coder D**	**Average**
Week 1	0,956759	0,985354	0,8924272	0,9855864	**0,9550318**
Week 2	0,946835	0,960117	0,9867105	0,9468444	**0,9601268**
Week 3	0,959027	0,979513	0,9795263	0,9692968	**0,9718408**
Week 4	0,986921	0,986921	0,9869206	0,9607619	**0,9803809**
Week 5	1	1	0,9861051	0,9721845	**0,9895724**
Week 6	0,916365	1	1	1	**0,9790912**
Average	**0,960984**	**0,985318**	**0,9719483**	**0,9724457**	**0,972674**

Table B.2 Krippendorff's alpha scores per coder for identifying trait and issue attacks

	Coder A	Coder B	Coder C	Coder D	Average
Week 1	0.5964859	0.62116	0.435146	0.596364	**0.562289**
Week 2	0.4508566	0.459559	0.452599	0.546455	**0.477367**
Week 3	0.4220226	0.745086	0.771564	0.718106	**0.664195**
Week 4	0.6160338	0.578392	0.484491	0.60233	**0.570312**
Week 5	0.797964	0.774903	0.828961	0.72031	**0.780534**
Week 6	0.7676552	0.645321	0.777612	0.807207	**0.749449**
Average	**0.608503**	**0.637403**	**0.625062**	**0.665129**	**0.634024**

Table B.3 Krippendorff's alpha scores per coder for identifying uncivil attacks

	Coder A	Coder B	Coder C	Coder D	Average
Week 1	0,188718	0,261438	0,388937	0,639362	**0,369614**
Week 2	0,443441	0,783232	0,678759	0,809672	**0,678776**
Week 3	0,485256	0,700893	0,55497	0,604348	**0,586367**
Week 4	0,630542	0,60771	0,674899	0,793348	**0,676625**
Week 5	0,626781	0,490421	0,745211	0,744639	**0,651763**
Week 6	0,929263	0,800964	0,779221	0,790607	**0,825013**
Average	**0,550667**	**0,607443**	**0,636999**	**0,730329**	**0,631359**

Table B.4 Krippendorff's alpha scores per coder for all variables

	Coder A	Coder B	Coder C	Coder D	Average
Week 1	0,65007332	0,643619	0,646304	0,56962	**0,627404**
Week 2	0,597234094	0,68818	0,685905	0,692417	**0,665934**
Week 3	0,594976804	0,684221	0,672337	0,752718	**0,676063**
Week 4	0,663424565	0,669457	0,701644	0,724657	**0,689796**
Week 5	0,746810338	0,765724	0,836624	0,803619	**0,788194**
Week 6	0,80209381	0,808271	0,848942	0,843965	**0,825818**
Average	**0,675768822**	**0,709912**	**0,731959**	**0,731166**	**0,712202**

Appendix C: Coding scheme examples

Table C.1 Coding scheme examples from Belgium

ATTACK TYPE	SPEECH CONTRIBUTION
Policy Civil	***You say that you will provide supervision to the scenario. Nope! What is requested is to have the worst scenario evaluated,*** *the one that costs the most, by the Ondraf. Then Engie Electrabel would pay the necessary funds, even if they are reimbursed afterwards.* Jean-Marc Nollet, Ecolo, 12.7.2018
Policy Uncivil	*Second, Prime Minister, on prisons, I hear you repeat what you said last week. How much did we advance? Zero centimeter. This is the reality!* ***After three weeks of strike in the prisons, we did not advance in a centimeter! The prison union manager says this government destroys public services. You are not a rogue state, but a thug state.*** Marco Van Hees, PVDA, 19.5.2016
Trait Civil	***Madam minister, your answer was one of the strangest answers I heard in this parliament. "I thought so." "It was just an idea." "Maybe that could be a good thing." You are a minister, you should not think, you have to do!*** Kristof Calvo, Goren, 16.1.2014
Trait Uncivil	*Mr Di Rupo, I must confess that I have a certain admiration for you. After a pleiade of MPs here ask you questions, you manage to say nothing (…)* ***You proclaim blah blah blah and don't answer any specific question except the one about 0.7%.*** Jan Jambon, N-VA, 8.11.2012.
Policy and Trait Civil	*Dear colleagues of the N-VA,* ***I understand that you are getting nervous, because this week the N-VA communicated that the content of the migration pact was very problematic. However, the N-VA has abstained during the discussions in the European Parliament. It was so problematic that people did not even want to vote against it. Friends, if you have problems with the pact, act as drivers. Sit down at the table, pronounce it, because all other people of the majority have apparently read something else. Stop your quarrel. Act as drivers.*** Meryame Kitir, sp.a, 22.11.2018
Policy and Trait Uncivil	***Mr. State Secretary, I call you a kamikaze pilot, because you are launching a new escape route plan this week without consulting the Flemish Region, without consulting the Brussels Region, even without consulting the Brussels Airport airport,*** *who nevertheless an interested party in the file seems.* Tanguy Veys, VB, 19.7.2012

Table C.2 Coding scheme examples from Croatia

ATTACK TYPE	SPEECH CONTRIBUTION
Policy Civil	***I followed the statements given by the respected Mr. Marić*** *(…). However,* ***the answer that it is difficult to think about the alternative is not an answer that is acceptable to the workers, nor to the inhabitants of Istria or Pula, because I believe that none of us is not a goal to extinguish production in Uljanik, as well as in other shipyards and that another marina has been coined in their place. Thank you very much.*** Peđa Grbin, SDP, 17.1.2019
Policy Uncivil	*Škegrina's policies from the 1990s were remembered for the citizens in that it brought to the depletion of workers and enormous enrichment, the rich in small number of people, the so-called, tycoon.* ***They remained remembered for the idea of 200 wealthy families and the people as a livestock of a small tooth. Is the reduction of income tax rates from 45% to 40% for those with the highest incomes Mrs. Prime Minister's return to that policy?*** Marin Jurjević, SDP, 19.5.2010
Trait Civil	*Do not allow these escapades* ***by the Prime Minister who is now taking the right to interpret the Rules of Procedure, though no law, nor this Rules of Procedure allow. And I think the Rules of Procedure have been injured there too. He should holds his legal opinion for himself.*** Davorin Mlakar, HDZ, 10.4.2013
Trait Uncivil	*Unfortunately,* ***I have to say that you were really limpid, I knew exactly what you would say.*** *(…)* ***I think you will all soon pray to God, that we are not real, and not just Gordan Jandroković to prevent us from coming to Vinkovci Autumn, so that you could dancing a fir wheel in peace.*** Bruna Esih, NHR, 19.9.2018
Policy and Trait Civil	***The right of a serious country is to have one serious prime minister. Unfortunately, Croatia does not have this. (…) I am sorry that this government has no will and strength and responsibility to release one law in a parliamentary procedure that had to be improved and it was not a big job. Thank you very much.*** Anka Mrak-Taritaš, GLAS, 24.4.2019
Policy and Trait Uncivil	*Namely, three weeks ago you also announced new public investment projects this time worth HRK 12.8 billion.* ***And instead of using these projects to correct the injustice to Slavonia and Baranja, with these projects, you put salt on the early impoverished and neglected Slavonia. (…) I would say our people, so where your soul Mrs. Prime Minister. What did Slavonia and Baranja deserve such a stepmother relationship?*** Dinko Burić, HDSSB, 6.4.2011

Appendix D: Descriptive information and graphs

Descriptive statistics of parties' average attack behaviour in a QT session are available in Table D.1. On average, approximately one-third of speech acts in a QT session consist of attacks. Across all three countries, over 70% of parties' attacks in QT sessions are focused on policy criticism. However, there are notable differences in the average use of trait and uncivil attacks among the three countries. Trait attacks on average make up 40% of the attacks in a QT session in Belgium and the UK, while in Croatia, they account for over 60%. Additionally, although all three countries' parties employ uncivil attacks less frequently, the average usage of incivility in a QT is higher in Belgium, with 25% of attack speech acts including incivility, compared to 17% in the UK and 18% in Croatia.

Table D.1 Parties' average attack behaviour in QT (in %)

Country		Mean	Std. Dev.	Min	Max
Belgium (N=103)	**Attacks**	**33.23**	**8.85**	**10.60**	**68.96**
	- Policy attacks	83.77	12.59	37.5	100
	- Trait attacks	42.29	16.51	0	75
	- Uncivil attacks	25.33	11.58	0	61.9
Croatia (N=43)	**Attacks**	**36.73**	**8.53**	**22.88**	**58.57**
	- Policy attacks	72.29	11.47	49.23	95.55
	- Trait attacks	60.85	12.54	37.03	87.30
	- Uncivil attacks	17.76	6.99	0	34.92
UK (N=115)	**Attacks**	**30.95**	**8.91**	**9.43**	**50.79**
	- Policy attacks	72.05	13.64	25	100
	- Trait attacks	47.29	14.97	8.33	84.61
	- Uncivil attacks	17.09	10.54	0	52.38

Figure D.1 Share of attacks, policy attacks, trait attacks, and uncivil attacks per QT over time

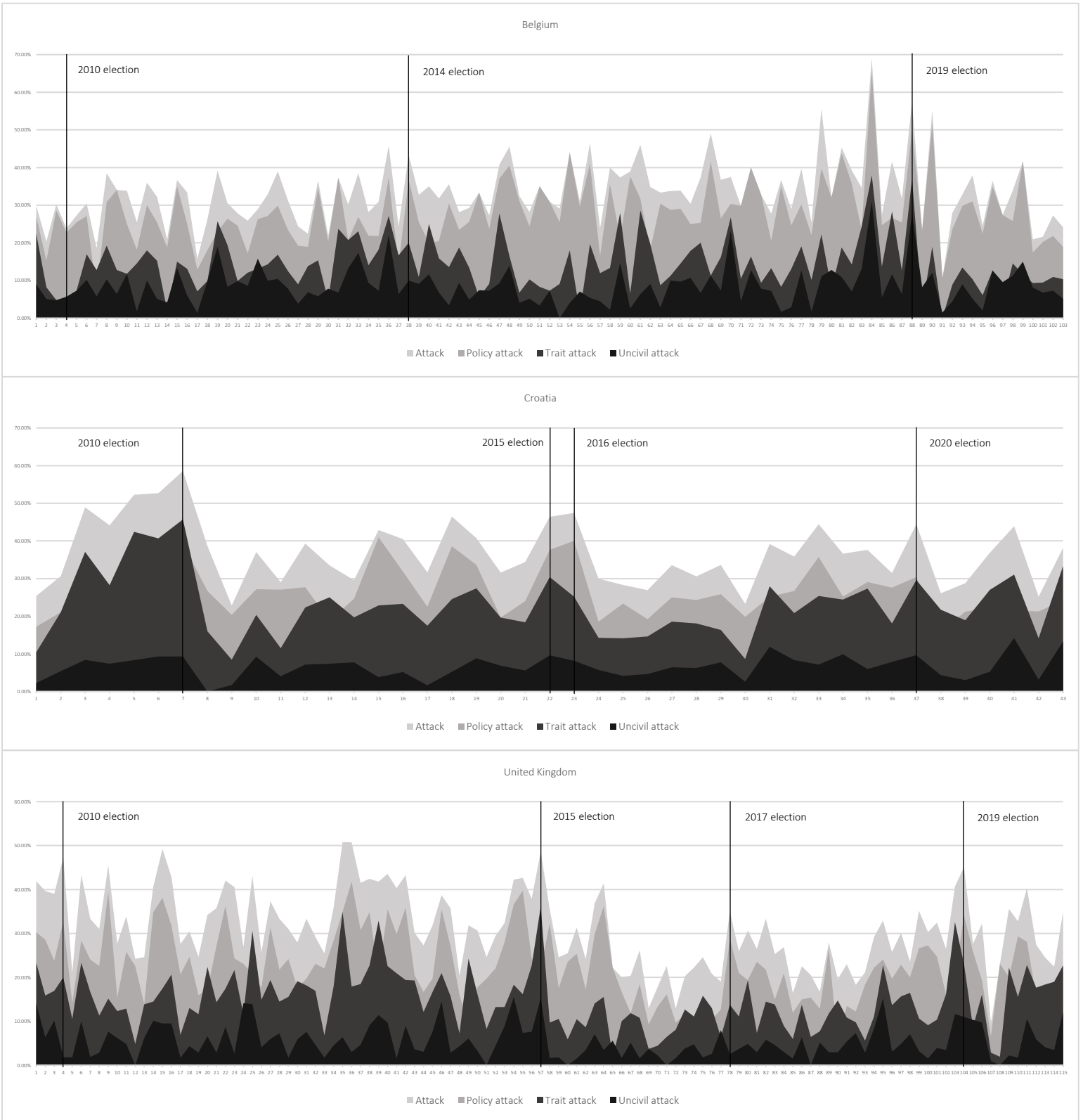
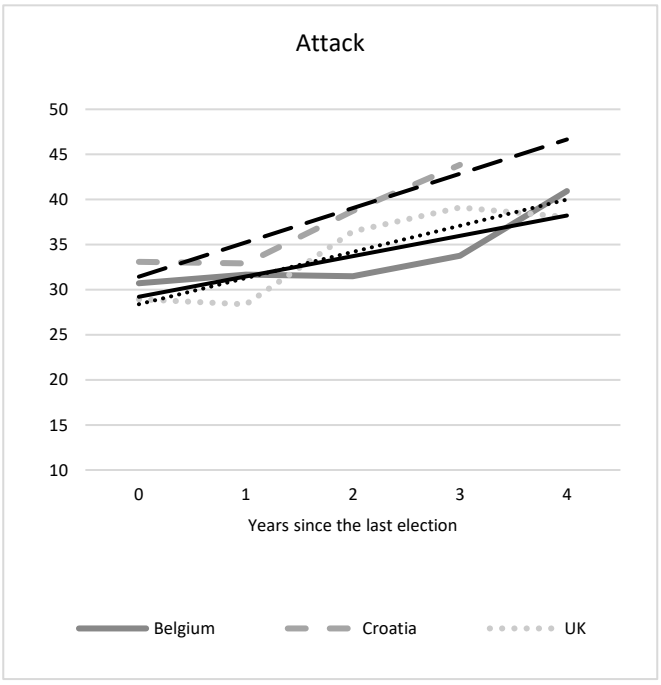
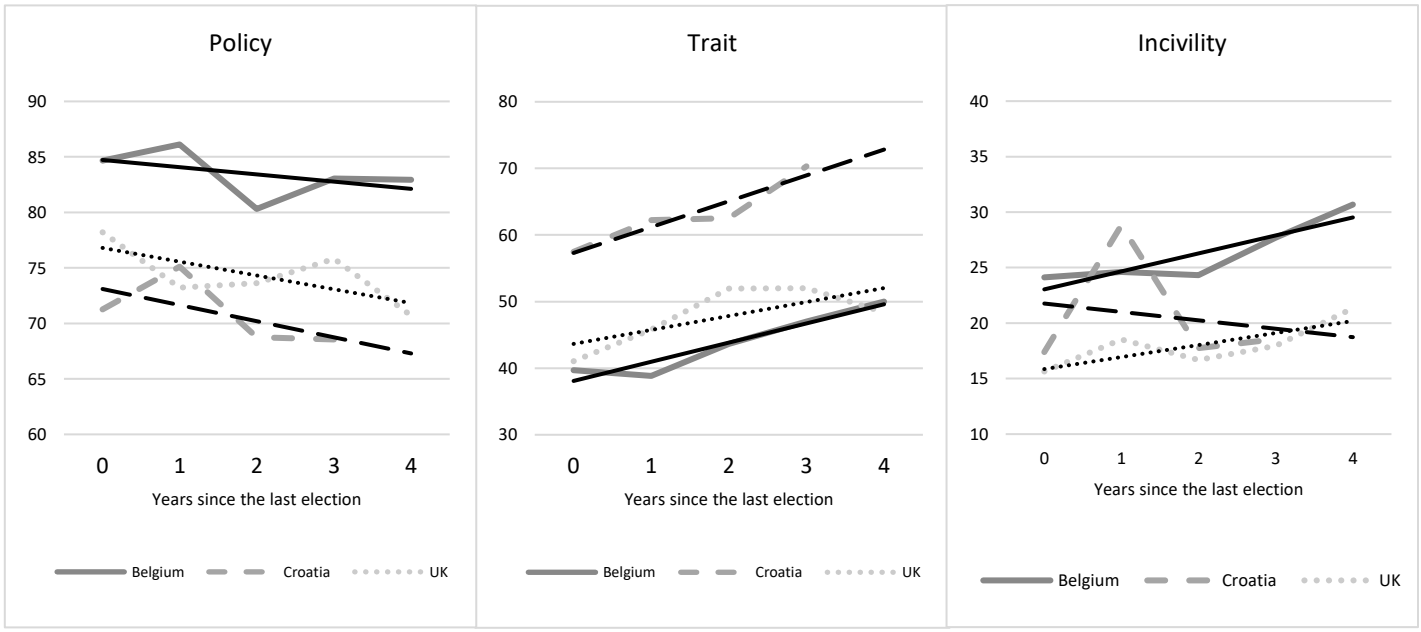


Figure D.2 Share of attacks in all speeches (y-axis) per year since the last election



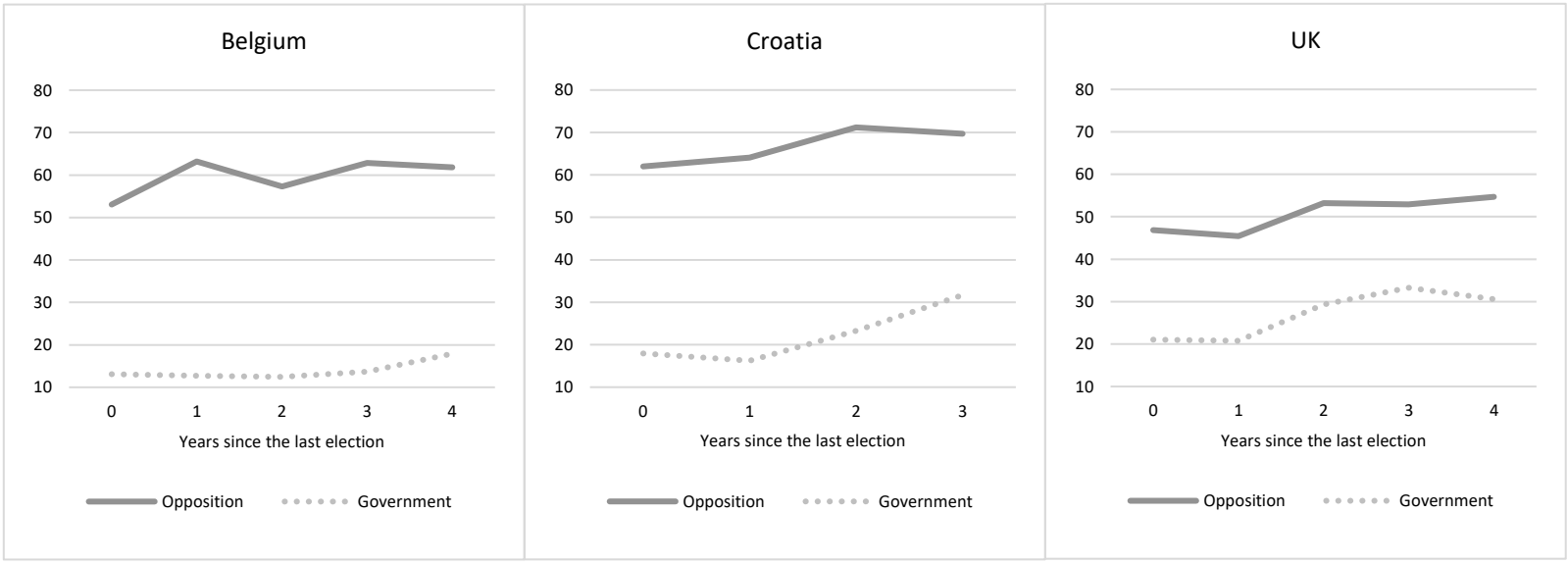
Note: Trend lines are indicated in black and represent countries' patterns (e.g. dotted black trend line represents the UK)

Figure D.3 Share of policy, trait, and uncivil criticism in all attacks (y-axis) per year since the last election



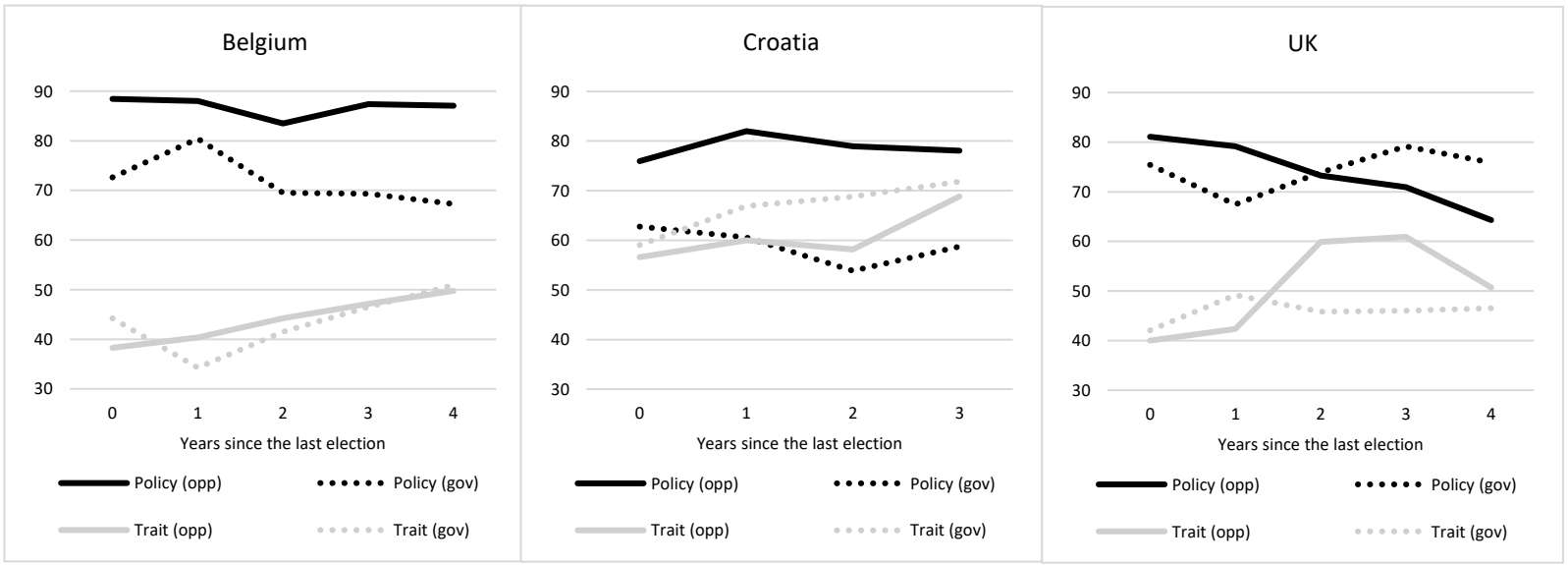
Note: Trend lines are indicated in black and represent countries' patterns (e.g. dotted black trend line represents the UK)

Figure D.4 Government and opposition parties' share of attacks in all speech acts (y-axis) per year since the last election



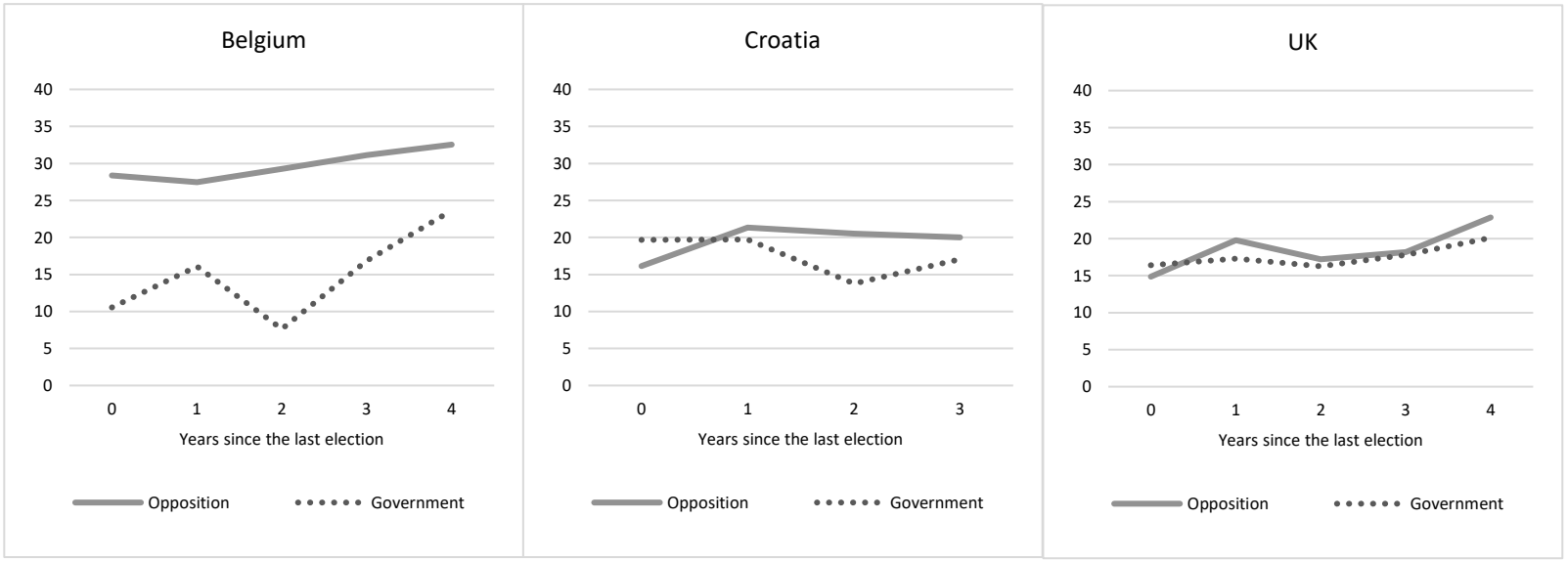
Note: A completed electoral cycle lasts 4 years in Croatia and 5 years in Belgium and the UK. The length of the electoral cycle is displayed on the x-axis.

Figure D.5 Government and opposition parties' share of policy and trait attacks in all attacks (y-axis) per year since the last election.



Note: A complete electoral cycle lasts 4 years in Croatia and 5 years in Belgium and the UK. The length of the electoral cycle is displayed on the x-axis.

Figure D.6 Government and opposition parties' share of incivility in all attacks (y-axis) per year since the last election



Note: A complete electoral cycle lasts 4 years in Croatia and 5 years in Belgium and the UK. The length of the electoral cycle is displayed on the x-axis.

Appendix E: Main models with public approval control

Table E.1 The effect of the electoral cycle on the use of attacks, trait attacks, policy attacks, and uncivil attacks in QTs controlling for public approval

	MODEL 1 DV1: Use of attacks (1=Yes)	**MODEL 2 DV2: Use of policy attacks(1=Yes)**	**MODEL 3 DV3: Use of trait attacks(1=Yes)**	**MODEL 4 DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
Electoral cycle	**.009 (.002) *****	**-.012 (.004) ****	**.014 (.003) *****	**.009 (.003) ****
Public approval (t-1)	-3.960 (.553) ***	-3.019 (.564) ***	2.949 (.684) ***	2.430 (.773) **
Opposition (ref.)				
Government	-1.961 (.070) ***	-.695 (.090) ***	.097 (.099)	-.454 (.121) ***
Ideological extremity	.480 (.963)	.907 (.687)	.697 (.836)	3.543 (.912) ***
Man MP (ref.)				
Woman MP	-.268 (.052) ***	.177 (.097) †	-.253 (.084) **	-.567 (.110) ***
Belgium (ref.)				
Croatia	-.195 (.272)	-.665 (.209) **	.557 (.251) *	-.271 (.251)
UK	.550 (.381)	.090 (.224)	-.241 (.313)	-.101 (.328)
Constant	.831 (.327) *	2.415 (.338) ***	-1.459 (.339) ***	-2.750 (.392) ***
Variance (Parties)	.530 (.102)	.049 (.088)	.365 (.109)	.330 (.103)
Variance (QTs)	.290 (.029)	.513 (.059)	.370 (.050)	.271 (.076)
N (total)	12.538	4.306	4.306	4.306
N (QTs)	180	180	180	180
N (min. per QT)	23	5	5	5
N (max. per QT)	162	82	82	82
AIC (empty model)	14.139 (0=15.135)	4.665 (0=4.720)	5.668 (0=5.691)	4.076 (0=4.125)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Appendix F: Interaction effects

Appendix F.1: Interaction effects: Electoral cycle X public approval

In this analysis, we test whether risk-acceptant parties that are losing in the polls are more likely to engage in attack behaviour closer to elections (H5). We find that parties that are losing in the public approval polls are more likely to attack compared to parties that are doing well in the polls, especially closer to elections, at a significance level of p<0.1 (Table F.1). There is no effect of public approval and electoral cycle interaction on parties' use of policy, trait and uncivil attacks.

Table F.1 The effect of the electoral cycle in interaction with public approval on parties' use of attacks, trait attacks, policy attacks, and uncivil attacks in QTs

	MODEL 1 DV1: Use of attacks (1=Yes)	**MODEL 2 DV2: Use of policy attacks (1=Yes)**	**MODEL 3 DV3: Use of trait attacks (1=Yes)**	**MODEL 4 DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
Electoral cycle	.017 (.005) **	-.005 (.010)	.012 (.007)	.009 (.008)
Elect. X approval (t-1)	**-.031 (.017) †**	-.021 (.032)	.008 (.025)	.000 (.029)
Public approval (t-1)	-2.534 (.657) ***	-2.494 (1.369) **	2.772 (.880) **	2.415 (1.024) *
Opposition (ref.)				
Government	-1.980 (.071) ***	-.708 (.092) ***	.101 (.099)	-.454 (.122) ***
Ideological extremity	.465 (.988)	.913 (.691)	.696 (.833)	3.543 (.913) ***
Man MP (ref.)				
Woman MP	-.265 (.052) ***	.179 (.097) †	-.254 (.084) **	-.567 (.110) ***
Belgium (ref.)				
Croatia	-.205 (.279)	-.654 (.209) **	.556 (.251) *	-.271 (.251)
UK	.558 (.391)	.090 (.224)	-.241 (.312)	.101 (.328)
Constant	.670 (.345) †	2.266 (.401) ***	-1.411 (.371) ***	-2.746 (.432) ***
Variance (Parties)	.199 (.057)	.052 (.085)	.363 (.109)	.331 (.104)
Variance (QTs)	.304 (.031)	.513 (.059)	.370 (.050)	.271 (.076)
N (total)	12.538	4.306	4.306	4.306
N (QTs)	180	180	180	180
N (min. per QT)	23	5	5	5
N (max. per QT)	162	82	82	82
AIC (empty model)	14.301 (0=15.135)	4.667 (0=4.720)	5.670 (0=5.691)	4.078 (0=4.125)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Appendix F.2: Interaction effects: Electoral cycle X government vs. opposition

We furthermore test H5 by examining whether the effect of the electoral cycle on negative campaigning differs between government and opposition parties. We consider opposition parties to be more risk-acceptant than government parties and we, therefore, expect that these parties change their attack behaviour the most the closer we move to the elections. We identify a significant party heterogeneity in the effect of the electoral cycle on government and opposition parties' overall use of attacks, policy, and trait attacks (Table F.2). Contrary to our hypothesis, we find that it is governing parties' that are impacted more by the electoral cycle in their overall attack behaviour than opposition parties. However, both government and opposition parties attack more towards the end of the electoral cycle, but in doing so, it is the opposition parties that take more risk by reducing their use of policy attacks (Figure F.2). Furthermore, it is opposing parties that predominantly take the risk by relying on trait attacks significantly more as parties reach the end of the electoral cycle compared to the government (Figure F.2).

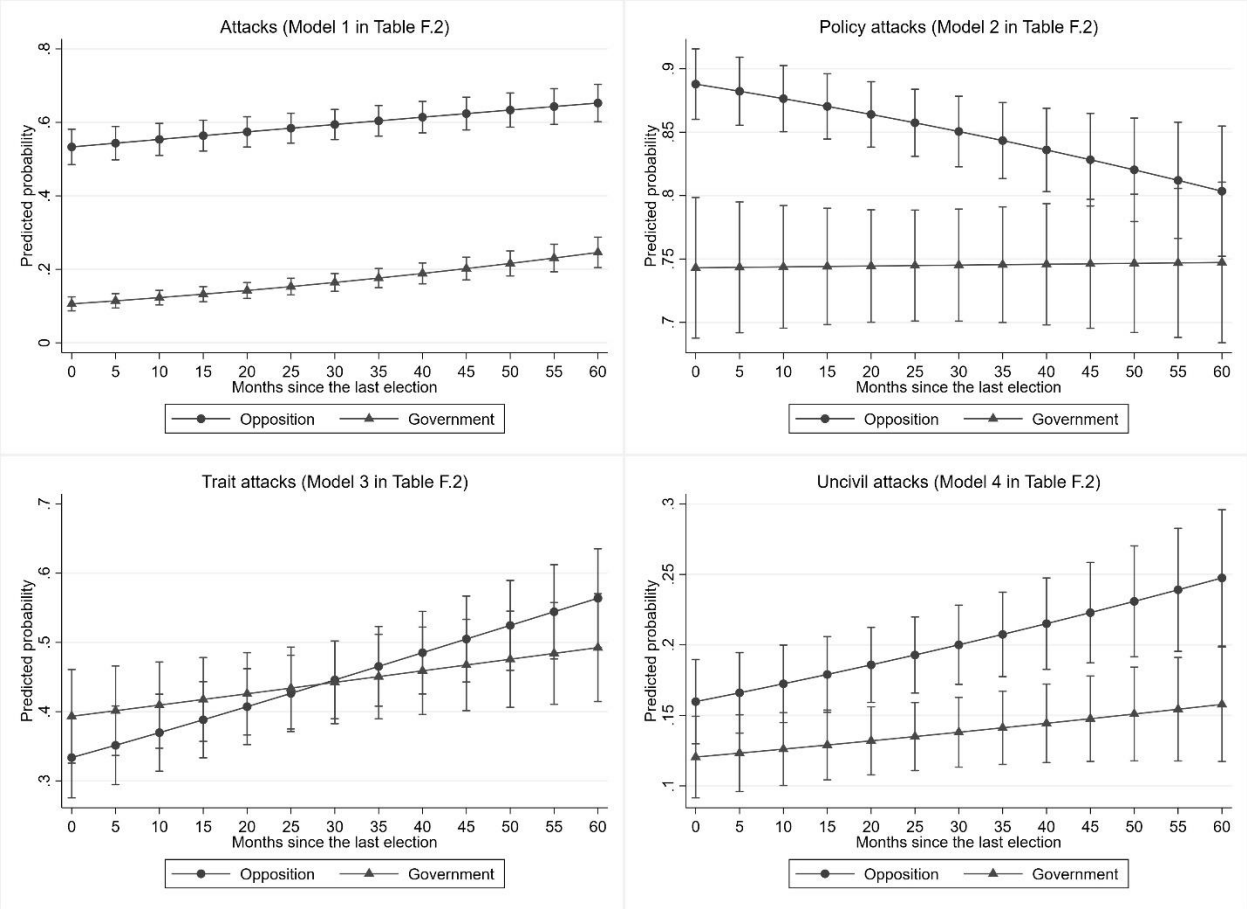
Table F.2 Estimating the effect of the electoral cycle in interaction with government vs. opposition on attacks, policy attacks, trait attacks, and uncivil attacks

	MODEL 1 DV1: Use of attacks (1=Yes)	**MODEL 2 DV2: Use of policy attacks(1=Yes)**	**MODEL 3 DV3: Use of trait attacks(1=Yes)**	**MODEL 4 DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
Electoral cycle	**.008 (.002) ****	**-.011 (.004) ****	**.015 (.003) *****	**.009 (.003) ****
Elect. cycle X Opp (ref.)				
Government	**.009 (.002) *****	**.011 (.004) ****	**-.009 (.003) ***	-.003 (.004)
Opposition (ref.)				
Government	-2.258 (.083) ***	-.998 (.150) ***	.262 (.130) *	-.335 (.158) *
Ideology	.378 (.760)	-.056 (.943)	1.022 (.985)	2.641 (.748) ***
Man MP (ref.)				
Woman MP	-.194 (.042) ***	.294 (.083) ***	-.365 (.068) ***	-.451 (.085) ***
Belgium (ref.)				
Croatia	.173 (.203)	-.073 (.279)	.047 (.277)	-.681 (.228) **
UK	-.076 (.251)	-.513 (.305) †	.271 (.331)	.062 (.236)
Constant	.195 (.256)	2.055 (.357) ***	-1.061 (.337) **	-2.011 (.292) ***
Variance (Parties)	.450 (.080)	.487 (.103)	.580 (.111)	.357 (.082)
Variance (QTs)	.344 (.026)	.553 (.051)	.397 (.041)	.328 (.054)

N (total)	18,612	6,218	6,218	6,218
N (QTs)	261	261	261	261
N (min. per QT)	29	7	7	7
N (max. per QT)	168	82	82	82
AIC (empty model)	20.328 (0= 22.385)	6.411 (0= 6.726)	8.214 (0= 8.538)	6.086 (0= 6.405)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Figure F.2 Predicted probabilities of attacks, policy attacks, trait attacks, and uncivil attacks when interacting electoral cycle and government vs. opposition



Note: Vertical lines indicate 90% confidence intervals holding other variables at their mean

Appendix F.3: Interaction effects: Electoral cycle X ideology

More ideologically extreme parties are less likely to get into office. The support base of ideologically radical parties expects these parties to attack and might therefore have a higher tolerance for negative campaigning than the support base of more mainstream parties, which reduces the risk of voter backlash. Thus, ideologically extreme parties are likely to be more risk-acceptant. At the same time, they can be less sensitive to electoral incentives, as for these parties increasing their supporter base is only possible at the cost of becoming more moderate over time. When we interact the variable electoral cycle with the variable ideological extremity, we do not find any significant results (Table F.3.1). The effect of the electoral cycle on parties' attack behaviour does not differ between mainstream and ideologically extreme parties.

Table F.3.1 The effect of the electoral cycle in interaction with ideology on parties' use of attacks, policy attacks, trait attacks, and uncivil attacks

	MODEL 1 DV1: Use of attacks (1=Yes)	**MODEL 2 DV2: Use of policy attacks(1=Yes)**	**MODEL 3 DV3: Use of trait attacks(1=Yes)**	**MODEL 4 DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
Electoral cycle	.009 (.003) **	-.014 (.006) *	.014 (.004) **	.011 (.005) *
Elect. cycle X Ideological extremity	.023 (.014)	.047 (.026) †	-.015 (.018)	-.017 (.021)
Opposition (ref.)				
Government	-2.038 (.057) ***	-.685 (.093) ***	.012 (.084)	-.440 (.099) ***
Ideological extremity	-.193 (.832)	-1.220 (1.136)	1.421 (1.084)	3.096 (.941) **
Man MP (ref.)				
Woman MP	-.196 (.042) ***	.292 (.083) ***	-.361 (.068) ***	-.451 (.085) ***
Belgium (ref.)				
Croatia	.183 (.202)	-.071 (.273)	.046 (.273)	-.684 (.228) **
UK	-.065 (.250)	-.506 (.297) †	.271 (.325)	.067 (.237)
Constant	.180 (.261)	2.104 (.368) ***	-1.023 (.343) **	-2.059 (.311) ***
Variance (Parties)	.448 (.081)	.467 (.101)	.568 (.109)	.357 (.082)
Variance (QTs)	.345 (.026)	.552 (.051)	.398 (.041)	.328 (.054)
N (total)	18,612	6,218	6,218	6,218
N (QTs)	261	261	261	261
N (min. per QT)	29	7	7	7
N (max. per QT)	168	82	82	82
AIC (empty model)	20.337 (0= 22.385)	6.414 (0= 6.726)	8.220 (0= 8.538)	6.086 (0= 6.405)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Appendix G: Sensitivity Analyses

Appendix G.1: Different measures of electoral proximity

We examined whether the found results are dependent on a specific operationalisation of the electoral cycle variable. We ran analyses with alternative measures. The first alternative operationalisation measures the moment in the electoral cycle as the remaining months until the actual (regular or snap) elections (Table G.1.1) and the second alternative operationalisation measures the moment in the electoral cycle as the remaining months to the end of the parliamentary term, i.e. the maximum possible tenure of the parliamentary term (Table G.1.2). For both alternative measures a significant negative coefficient indicates an increase in the probability of using (specific) attacks. We find using these alternative measures that throughout the electoral cycle parties' use of attacks, trait attacks, and uncivil attacks increases. We do not find an effect of the electoral cycle on parties' use of policy attacks. In addition, we also examine potential non-linearities by incorporating a categorical variable indicating the number of years since the previous election (Table G.1.3). Our findings indicate a gradual rise in the likelihood of employing attacks, trait attacks, and uncivil attacks as we move farther away from the previous election, which supports the linearity of the effects across all models. Thus, we can conclude that the main findings are not conditional on a specific operationalisation of the electoral cycle.

Table G.1.1 The effect of the electoral cycle on parties' use of attacks, policy attacks, trait attacks, and uncivil attacks using an alternative measure (number of months until the actual election date)

	MODEL 1 **DV1: Use of attacks (1=Yes)**	**MODEL 2** **DV2: Use of policy attacks(1=Yes)**	**MODEL 3** **DV3: Use of trait attacks(1=Yes)**	**MODEL 4** **DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
Election date (months until)	**-.005 (.002) ***	.003 (.004)	**-.007 (.003) ***	**-.006 (.003) †**
Opposition (ref.)				
Government	-2.091 (.060) ***	-.694 (.096) ***	.044 (.088)	-.500 (.104) ***
Ideological extremity	.212 (.770)	-.260 (.921)	1.161 (.907)	2.584 (.767) **
Man MP (ref.)				
Woman MP	-.208 (.045) ***	.225 (.087) *	-.330 (.072) ***	-.459 (.092) ***
Belgium (ref.)				
Croatia	.105 (.204)	-.010 (.270)	-.015 (.254)	-.702 (.228) **
UK	-.164 (.250)	-.451 (.293)	.133 (.301)	.055 (.238)
Constant	.663 (.255) **	1.638 (.341) ***	-.352 (.311)	-1.550 (.284)
Variance (Parties)	.441 (.080)	.453 (.099)	.509 (.100)	.353 (.083)
Variance (QTs)	.357 (.028)	.553 (.053)	.402 (.042)	.322 (.059)
N (total)	16,359	5,579	5,579	5,579
N (QTs)	229	229	229	229
N (min. per QT)	29	7	7	7
N (max. per QT)	168	82	82	82
AIC (empty model)	18.096 (0= 19.453)	5.802 (0= 5.845)	7.435 (0= 7.447)	5.401 (0= 5.457)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. In these analyses, the number of observations is lower than the number of observations in the main analyses presented in the manuscript. We dropped all observations from the current electoral cycle, as we do not know when the next elections will be held. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table G.1.2 The effect of the electoral cycle on parties' use of attacks, policy attacks, trait attacks, and uncivil attacks using an alternative measure (number of months until the regular end of the parliamentary term)

	MODEL 1 **DV1: Use of attacks (1=Yes)**	**MODEL 2** **DV2: Use of policy attacks(1=Yes)**	**MODEL 3** **DV3: Use of trait attacks(1=Yes)**	**MODEL 4** **DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
End of the term (months until)	**-.013 (.002) *** **	.005 (.003)	**-.012 (.002) *** **	**-.007 (.002) ** **
Opposition (ref.)				
Government	-2.045 (.056) ***	-.691 (.093) ***	.012 (.084)	-.439 (.099) ***
Ideological extremity	.363 (.757)	-.012 (.912)	1.021 (.966)	2.637 (.747) ***
Man MP (ref.)				
Woman MP	-.197 (.042) ***	.291 (.083) ***	-.360 (.068) ***	-.450 (.085) ***
Belgium (ref.)				
Croatia	.033 (.202)	-.013 (.271)	-.090 (.272)	-.772 (.228) **
UK	-.053 (.250)	-.499 (.295) †	.275 (.325)	.064 (.236)
Constant	.839 (.250) **	1.561 (.335) ***	-.239 (.323)	-1.516 (.277) ***
Variance (Parties)	.447 (.081)	.463 (.101)	.566 (.109)	.356 (.081)
Variance (QTs)	.343 (.026)	.550 (.051)	.395 (.041)	.328 (.054)
N (total)	18,612	6,218	6,218	6,218
N (QTs)	261	261	261	261
N (min. per QT)	29	7	7	7
N (max. per QT)	168	82	82	82
AIC (empty model)	20.337 (0= 22.385)	6.416 (0= 6.726)	8.218 (0= 8.538)	6.084 (0= 6.405)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table G.1.3 The effect of the electoral cycle on parties' use of attacks, policy attacks, trait attacks, and uncivil attacks using an alternative measure (years since the last election)

	MODEL 1 DV1: Use of attacks (1=Yes)	**MODEL 2 DV2: Use of policy attacks(1=Yes)**	**MODEL 3 DV3: Use of trait attacks(1=Yes)**	**MODEL 4 DV4: Use of uncivil attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs				
Election year = 0 (ref.)				
= 1	.070 (.079)	.004 (.141)	.093 (.106)	.111 (.113)
= 2	**.298 (.094) ****	-.202 (.160)	**.320 (.122) ****	.056 (.128)
= 3	**.444 (.101) *****	-.229 (.172)	**.448 (.131) ****	**.248 (.134) †**
= 4	**.533 (.122) *****	-.226 (.209)	**.515 (.158) ****	**.465 (.163) ****
Opposition (ref.)				
Government	-2.046 (.056) ***	-.697 (.093) ***	.015 (.084)	-.427 (.099) ***
Ideological extremity	.365 (.758)	-.027 (.914)	1.033 (.967)	2.642 (.751) ***
Man MP (ref.)				
Woman MP	-.196 (.042) ***	.292 (.083) ***	-.361 (.068) ***	-.444 (.085) ***
Belgium (ref.)				
Croatia	.152 (.202)	-.059 (.271)	.021 (.273)	-.681 (.228) **
UK	-.066 (.250)	-.511 (.296) †	.272 (.325)	.037 (.237)
Constant	.190 (.253)	1.879 (.343) ***	-.871 (.329) **	-1.864 (.287) ***
Variance (Parties)	.447 (.081)	.465 (.101)	.567 (.109)	.359 (.082)
Variance (QTs)	.349 (.026)	.546 (.051)	.395 (.041)	.317 (.055)
N (total)	18,612	6,218	6,218	6,218
N (QTs)	261	261	261	261
N (min. per QT)	29	7	7	7
N (max. per QT)	168	82	82	82
AIC (empty model)	20.343 (0= 22.385)	6.420 (0= 6.726)	8.224 (0= 8.538)	6.088 (0= 6.405)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Appendix G.2: Second-order elections

Furthermore, we examine whether the effect of the electoral cycle on parties' use of attack behaviour in parliament holds when we consider that other electoral cycles are taking place parallel to the parliamentary electoral cycle, respectively local (Belgium, Croatia, UK), European (Croatia, UK), and presidential (Croatia) elections. All variables measuring the effect of the electoral cycle of these second-order elections on parties' use of negative campaigning in parliament operationalising the electoral cycles as the number of months that are left until these elections take place. All these second-order elections are fixed in time, unlike parliamentary elections that can take place at any moment in time. Belgium is omitted from the analyses in which we also model the effect of the European elections as they took place on the same dates as parliamentary elections during the study period (2014; 2019). Only Croatia has presidential elections. The analyses reveal no significant impact for any of the other electoral cycles on parties' attack behaviour in parliament and that while controlling for the effect of the second-order electoral cycles the effect of the electoral cycle of the first-order elections on parties' use of negative campaigning in parliament remains.

Table G.2 The effect of the local, EU, and presidential electoral cycle on parties' attack behavior

	LOCAL (Belgium, Croatia, UK)		EU (Croatia, UK)		PRESIDENTIAL (Croatia)	
	MODEL 1: DV1: Use of attacks (1=Yes)	**MODEL 2: DV1: Use of attacks (1=Yes)**	**MODEL 3: DV1: Use of attacks (1=Yes)**	**MODEL 4: DV1: Use of attacks (1=Yes)**	**MODEL 5: DV1: Use of attacks (1=Yes)**	**MODEL 5: DV1: Use of attacks (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
Local elections	-.003 (.002)	-.001 (.002)	-	-	-	-
EU elections	-	-	.001 (.003)	-.001 (.003)	-	-
Presidential elections	-	-	-	-	-.007 (.015)	.004 (.013)
Parliament elections	-	**.012 (.002) *****	-	**.012 (.002) *****	-	**.030 (.008) *****
Opposition (ref.)						
Government	-1.815 (.037) ***	-1.813 (.037) ***	-1.626 (.050) ***	-1.629 (.050) ***	-2.163 (.075) ***	-2.163 (.075)
Ideological extremity	1.960 (.215) ***	1.975 (.215) ***	2.078 (.436) ***	2.140 (.435) ***	.120 (.615)	.133 (.615)
Man MP (ref.)						
Woman MP	-.154 (.042) ***	-.142 (.042) **	-.236 (.055) ***	-.234 (.055) ***	.062 (.087)	.068 (.087)
Constant	.092 (.152)	-.378 (.161) *	.388 (.209) †	.182 (.198)	1.267 (.875)	-.288 (.883)
N (total)	17.645	17.645	10.769	10.769	4.599	4.599
N (QTs)	248	248	139	139	39	39
N (min. per QT)	29	29	40	40	72	72
N (max. per QT)	168	168	168	168	168	168
AIC (empty model)	19.529 (0=20.779)	19.496 (0=20.779)	12.469 (0=13.273)	12.449 (0=13.273)	5.053 (0=58.76)	5.044 (0=58.76)

Note: Models are multilevel logistic regression analyses. N is smaller and different due to the availability of observations. E.g. the 2020 local elections in the UK were postponed indefinitely due to the COVID pandemic and Croatia was not a member of the EU until 2013. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year and country dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Appendix G.3: Country differences

Additionally, we ran the main models from the manuscript omitting each country (Table G.3.1). As was the case in the main text, we confirm H1, H3, and H4 in all models. However, we do see that the impact of the electoral cycle on the use of incivility (H4) is less significant in models that include Belgium. We furthermore test our findings regarding opposition vs. government differences from Appendix F.2, i.e. that opposition is more prone to risk-taking by attacking more on traits and less on policy closer to elections (Table G.3.2). Namely, we identify that it is predominantly in the UK that the opposition parties take a risk by increasing trait and decreasing policy attacks as proximity to elections increases. The effect of the government increasingly using attacks closer to elections (Appendix F.2) appears to be driven by Croatia. Finally, we also test our findings regarding the impact of public approval and the electoral cycle on the overall use of attack (Appendix F.1). We identify that the effect of public approval in interaction with the electoral cycle is particularly present when the UK is omitted (Table G.3.3 – Model 1-3). See the visualisation of these findings in Figure G.3.

Table G.3.1. The effect of the electoral cycle on parties' use of attacks, policy attacks, trait attacks, and uncivil attacks in QTs omitting one country at a time.

	CROATIA AND THE UK (Belgium omitted)				BELGIUM AND THE UK (Croatia omitted)				BELGIUM AND CROATIA (UK omitted)			
	MODEL 1 DV1: Attack	**MODEL 2 DV2: Policy**	**MODEL 3 DV3: Trait**	**MODEL 4 DV4: Incivility**	**MODEL 5 DV1: Attack**	**MODEL 6 DV2: Policy**	**MODEL 7 DV3: Trait**	**MODEL 8 DV4: Incivility**	**MODEL 9 DV1: Attack**	**MODEL 10 DV2: Policy**	**MODEL 11 DV3: Trait**	**MODEL 12 DV4: Incivility**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs												
Electoral cycle	**.013 (.002) *****	**-.011 (.004) ****	**.017 (.003) *****	**.013 (.004) ****	**.010 (.002) *****	-.003 (.004)	**.007 (.003) ***	**.006 (.003) †**	**.014 (.003) *****	-.005 (.005)	**.016 (.004) *****	**.007 (.004) †**
Opposition (ref.)												
Government	-2.022 (.071) ***	-.613 (.109) ***	.064 (.101)	-.369 (.122) **	-1.790 (.078) ***	-.351 (.140) *	-.195 (.114) †	-.567 (.136) ***	-2.219 (.062) ***	-.953 (.102) ***	.116 (.094)	-.415 (.111) ***
Ideo. Extremity	-1.337 (1.225)	-1.743 (2.004)	1.286 (1.953)	1.567 (1.598)	1.576 (.744) *	.754 (.844)	.546 (.651)	2.754 (.654) ***	.354 (.812)	.072 (.862)	1.080 (1.105)	2.903 (.841) **
Man MP (ref.)												
Woman MP	-.312 (.054) ***	.179 (.099) †	-.166 (.088) †	-.742 (.123) ***	-.263 (.049) ***	.213 (.103) *	-.437 (.080) ***	-.422 (.100) ***	-.001 (.054)	.528 (.107) ***	-.484 (.084) ***	-.286 (.099) **
Constant	.713 (.306) *	2.347 (.532) ***	-1.228 (.477) *	-2.616 (.457) ***	-.182 (.251)	1.725(.361) ***	-.701 (.278) *	-1.909 (.254) ***	-.343 (.295)	1.765 (.420) ***	-1.065 (.400) **	-2.136 (.342) ***
Variance (Parties)	.493 (.104)	.700 (.187)	.814 (.187)	.436 (.150)	.349 (.088)	.331 (.090)	.264 (.074)	.241 (.080)	.468 (.094)	.401 (.121)	.645 (.134)	.401 (.098)
Variance (QTs)	.306 (.030)	.455 (.056)	.316 (.051)	.282 (.075)	.333 (.029)	.579 (.059)	.410 (.047)	.362 (.061)	.343 (.035)	.598 (.071)	.387 (.053)	.285 (.069)
N (total)	12.151	4.147	4.147	4.147	13.550	4.346	4.346	4.346	11.523	3.943	3.943	3.943
N (QTs)	158	158	158	158	218	218	218	218	146	146	146	146
N (min. per QT)	40	7	7	7	29	7	7	7	29	7	7	7
N (max. per QT)	168	82	82	82	104	39	39	39	168	82	82	82
AIC (empty model)	13.832 (14.812)	4.689 (4.717)	5.461 (5.471)	3.867 (3.909)	14.840 (15.416)	4.279 (4.279)	5.867 (5.894)	4.304 (4.345)	11.960 (13.421)	3.852 (3.949)	5.093 (5.125)	4.003 (4.035)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year and country dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table G.3.2 The effect of the electoral cycle in interaction with government vs. opposition on parties' attacks, policy attacks, trait attacks, and uncivil attacks in QT omitting one country at a time.

	CROATIA AND THE UK (Belgium omitted)				BELGIUM AND THE UK (Croatia omitted)				BELGIUM AND CROATIA (UK omitted)			
	MODEL 1 DV1: Attack	MODEL 2 DV2: Policy	MODEL 3 DV3: Trait	MODEL 4 DV4: Incivility	MODEL 5 DV1: Attack	MODEL 6 DV2: Policy	MODEL 7 DV3: Trait	MODEL 8 DV4: Incivility	MODEL 9 DV1: Attack	MODEL 10 DV2: Policy	MODEL 11 DV3: Trait	MODEL 12 DV4: Incivility
	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)
IVs												
Electoral cycle	.005 (.003)	-.022 (.005) ***	.024 (.004) ***	.016 (.004) **	.008 (.002) **	-.010 (.005) *	.011 (.003) **	.006 (.004) †	.011 (.003) **	-.001 (.006)	.016 (.004) ***	.008 (.004) *
Elect. cycle X Opp												
Government	**.012 (.002) *** **	**.018 (.004) *** **	**-.013 (.004) ** **	-.006 (.005)	**.004 (.002) †**	**.015 (.005) ** **	**-.010 (.004) * ***	-.002 (.005)	**.007 (.003) * ***	-.008 (.006)	-.000 (.005)	-.004 (.006)
Opposition (ref.)												
Government	-2.316 (.101) ***	-1.119 (.174) ***	.413 (.115) **	-.180 (.191)	-1.933 (.110) ***	-.844 (.213) ***	.107 (.170)	-.486 (.206) *	-2.393 (.102) ***	-.735 (.184) ***	.139 (.162)	-.298 (.199)
Ideo. Extremity	-1.244 (1.223)	-1.709 (.2.078)	1.200 (1.997)	1.539 (1.594)	1.546 (.750) *	.655 (.886)	.588 (.668)	2.768 (.652) ***	.368 (.809)	.089 (.847)	1.078 (1.106)	2.911 (.842) **
Man MP (ref.)												
Woman MP	-.306 (.054) ***	.177 (.099) †	-.169 (.088) †	-.742 (.123) *	-.259 (.049) ***	.240 (.104) *	-.452 (.080) ***	-.424 (.101) ***	-.001 (.054)	.547 (.107) ***	-.484 (.084) ***	-.282 (.099) **
Constant	.884 (.309) **	2.668 (.554) ***	-1.418 (.490) **	-2.714 (.463) ***	-.102 (.256)	1.994 (.380)***	-.845 (.287) **	-1.948 (.305) ***	-.266 (.296)	1.658 (.424) ***	-1.071 (.402) **	-2.169 (.344) ***
Variance (Parties)	.493 (.102)	.746 (.194)	.840 (.191)	.436 (.151)	.353 (.088)	.356 (.091)	.274 (.075)	.239 (.080)	.467 (.093)	.390 (.120)	.646 (.134)	.401 (.098)
Variance (QTs)	.308 (.030)	.459 (.056)	.313 (.051)	.279 (.075)	.334 (.029)	.584 (.059)	.410 (.047)	.361 (.061)	.340 (.035)	.598 (.072)	.387 (.053)	.282 (.069)
N (total)	12.151	4.147	4.147	4.147	13.550	4.346	4.346	4.346	11.523	3.943	3.943	3.943
N (QTs)	158	158	158	158	218	218	218	218	146	146	146	146
N (min. per QT)	40	7	7	7	29	7	7	7	29	7	7	7
N (max. per QT)	168	82	82	82	104	39	39	39	168	82	82	82
AIC (empty model)	13.817 (14.812)	4.677 (4.717)	5.454 (5.471)	3.867 (3.909)	14.834 (15.416)	4.272 (4.279)	5.863 (5.894)	4.307 (4.345)	11.952 (13.421)	3.851 (3.949)	5.095 (5.125)	4.005 (4.035)

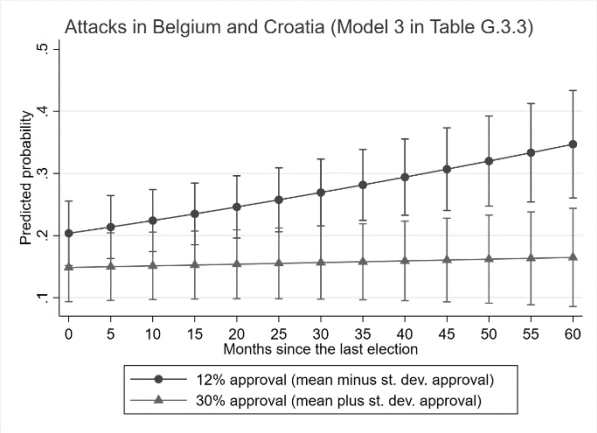
Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year and country dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table G.3.3 The effect of the electoral cycle in interaction with public approval on parties' use of attacks in QTs omitting one country at a time

	MODEL 1 Use of attacks (Belgium omitted) (1=Yes)	**MODEL 2 Use of attacks (Croatia omitted) (1=Yes)**	**MODEL 3 Use of attacks (UK omitted) (1=Yes)**
	Coef. (S.E.)	**Coef. (S.E.)**	**Coef. (S.E.)**
IVs			
Electoral cycle	.021 (.006) **	.009 (.006)	.018 (.006) **
Elect. X Public approval (t-1)	**-.036 (.020) †**	-.012 (.020)	**-.056 (.027) ***
Public approval (t-1)	-2.843 (.726) ***	-1.904 (.749) *	-2.121 (1.048) *
Opposition (ref.)			
Government	-2.015 (.075) ***	-1.312 (.137) ***	-2.218 (.085) ***
Ideological extremity	-.150 (2.054)	1.259 (.967)	.062 (1.051)
Male politicians (ref.)			
Female politicians	-.296 (.057) ***	-.419 (.066) ***	-.029 (.074)
Constant	.458 (.478)	.396 (.338)	.489 (.423)
Variance (Parties)	.812 (.191)	.405 (.102)	.578 (.132)
Variance (QTs)	.294 (.032)	.213 (.038)	.273 (.044)
N (total)	10.899	7.926	6.251
N (QTs)	148	139	73
N (min. per QT)	38	23	23
N (max. per QT)	162	73	162
AIC (empty model)	11.137 (0=13.342)	9.147 (0=9.299)	6.682 (0=7.633)

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include year/country dummies, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001

Figure G.3. Predicted probabilities of attacks when interacting electoral cycle and public approval in Croatia and Belgium



Note: Vertical lines indicate 90% confidence intervals holding other variables at their mean. The length of the electoral cycle is displayed on the x-axis.

Appendix G.4: Electoral cycle

Lastly, we test whether our results are driven by specific electoral cycles. We do so by omitting from our models one electoral cycle at a time (see Table G.4). We show that in or exclusion of specific electoral cycles does not impact our findings. Across all models, we find positive and significant coefficients for the effect of the electoral cycle on parties' use of attacks (H1), trait attacks (H3), and uncivil attacks (H4). In addition, the size of our effects does not seem to deviate when excluding certain electoral cycles, further showing the consistency of our main findings. However, when we exclude the electoral cycle of government Michel (2014-2019) in Belgium, we also find support for the expectation of parties' decreasing usage of policy attacks (H2) closer to elections. The inclusion of the observations of the period of government Michel in our analyses seems to suppress this relationship.

Table G.4 The effect of the electoral cycle on parties' use of attacks, policy attacks, trait attacks, and uncivil attacks in QT by omitting one electoral cycle at a time

Omitted electoral cycle		MODEL GROUP 1 DV1: Use of attacks (1=Yes)	MODEL GROUP 2 DV2: Use of policy attacks(1=Yes)	MODEL GROUP 3 DV3: Use of trait attacks(1=Yes)	MODEL GROUP 4 DV4: Use of uncivil attacks (1=Yes)
	IV:	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)
All included	**Electoral cycle**	**.012 (.002) *****	**-.005 (.003)**	**.012 (.002) *****	**.007 (.002) ****
Leterme (N=316)	**Electoral cycle**	.013 (.002) ***	-.005 (.003)	.012 (.002) ***	.007 (.002) **
Di Rupo (N=2.078)	**Electoral cycle**	.012 (.002) ***	-.006 (.003) †	.012 (.002) ***	.007 (.003) *
Michel (N=3.117)	**Electoral cycle**	.013 (.002) ***	-.011 (.004) **	.017 (.003) ***	.014 (.003) ***
Wilmes/De Croo (N=821)	**Electoral cycle**	.012 (.002) ***	-.005 (.003)	.011 (.002) ***	.007 (.002) *
Kosor (N=947)	**Electoral cycle**	.010 (.002) ***	-.004 (.003)	.009 (.002) **	.007 (.003) *
Milanović (N=1.728)	**Electoral cycle**	.012 (.002) ***	-.003 (.003)	.010 (.009) ***	.005 (.003) †
Orešković (N=112)	**Electoral cycle**	.013 (.002) ***	-.005 (.003)	.011 (.002) ***	.007 (.002) **
Plenković I (N=1.593)	**Electoral cycle**	.012 (.002) ***	-.005 (.003)	.011 (.002) ***	.008 (.003) *
Plenković II (N=682)	**Electoral cycle**	.012 (.002) ***	-.005 (.003)	.012 (.002) ***	.007 (.009) **
Brown (N=195)	**Electoral cycle**	.012 (.002) ***	-.006 (.003)	.013 (.002) ***	.007 (.003) *
Cameron I (N=3.248)	**Electoral cycle**	.016 (.002) ***	-.005 (.004)	.013 (.003) ***	.007 (.003) *
Cameron II/May I (N=1.203)	**Electoral cycle**	.012 (.002) ***	-.003 (.003)	.011 (.002) ***	.006 (.002) *
May II/Johnson I (N=1.822)	**Electoral cycle**	.012 (.002) ***	-.006 (.003)	.013 (.002) ***	.008 (.003) **
Johnson II (N=621)	**Electoral cycle**	.012 (.002) ***	-.005 (.003)	.011 (.002) ***	.007 (.002) **

Note: Models are multilevel logistic regression analyses. The dependent variables are all dichotomous (1=Yes; 0=No). All models include all controls from the main models in the manuscript, but these are not displayed. †p<0.1; *p<0.05; **p<0.01; ***p<0.001