

# Valence attacks in multi-party elections\*

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## Abstract

When do political parties attack each other in multi-party systems? While voters in these systems respond to attacks on the honesty, integrity, and competence of political actors, it is unclear if and how political parties use these valence attacks strategically. I argue that valence attacks are more likely to occur when they appear legitimate to voters. I connect the vast literature on spatial party competition with the one on valence attacks to argue that incumbency and issue ownership increase the public perception of attack legitimacy, making attacks more likely and frequent. Using data from 30 recent elections in ten European countries, I show that valence attacks in multi-party systems focus on incumbents and are predominantly connected to substantive issues. This has important implications for our understanding of how parties compete against each other in elections.

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# 1 Introduction

In the final hours of the 2013 election campaign, a sitting member of the German Bundestag insisted that there were so few valence attacks in German elections because “in post-reunification German culture, the attacker would always turn out to be the loser” (Khazan, 2013). At their 2017 election convention, the leader of the German Social Democratic Party (SPD), Martin Schulz, proved this point. In an attempt to revitalize his failing campaign he directly attacked the character of chancellor Merkel, calling her governing style an assault on democracy. The resulting backlash in the media drowned out any policy impulse that could have come from the release of the party’s manifesto. The SPD had hoped to set the agenda of the election with its policy proposals, but suddenly found itself on the back foot defending the attack on Merkel (Feldenkirchen, 2018).

One would expect such valence attacks – defined in this article, similar to Abney et al. (2013), as character-based attacks on the issue or non-issue related honesty, integrity or competence of parties and their leaders – to be rare events in German elections. After all, Schulz himself went back and forth about attacking Merkel and voiced concerns regarding potential backlash to his campaign staff just minutes before he took the stage (Feldenkirchen, 2018). However, the opposite is true. For the 2009 and 2013 elections in Germany, the *Comparative Campaign Dynamics Project* (CCDP) (Debus, Somer-Topcu and Tavits, 2018) coded 157 and 159 valence attacks by German political parties, respectively. This means German newspapers reported, on average, five attacks per day for these campaigns. Other multi-party systems in Europe record even higher numbers.<sup>1</sup> This leaves us with conflicting information. On the one hand, we have common knowledge among candidates and journalists (e.g. Blake, 2012) and anecdotal evidence from campaigns that valence attacks in multi-party systems do not work and are risky for political parties (e.g. Campbell, 2015). On the other hand, we have the empirical reality that newspapers across countries and elections regularly document valence attacks by parties and candidates. This apparent contradiction between common knowledge and empirical reality raises the question of how political parties in multi-party systems engage in these attacks.

Valence attacks can give political parties a substantial electoral advantage, but they are also associated with substantial risks, such as backlash and spoiler effects, that can negatively affect their public perception (Clark, 2009; Clark and Leiter, 2013; Lau, Sigelman and Rovner, 2007). I argue that the large number of parties and the post-election bargaining process of coalition government formation in multi-party systems increase the electoral uncertainty. This makes it difficult for parties to assess the consequences of their strategic behavior and increases the risk of unintended consequences (Budge, 1994). Since parties need

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<sup>1</sup>Table 1 shows the total number of valence attack for every one month election campaign period in this study. The number ranges from 136 to 499, between 4.5 and 16.6 attacks per day. The mean is 268 which equals nine attacks per day. More details on the data can be found in the Data section.

to weigh the costs and benefits of valence attacks, they will only use attacks in situations that minimize unintended consequences (Downs, 1957; Skaperdas and Grofman, 1995). I demonstrate that this risk is minimized through attacks that appear *legitimate* to voters.

Three factors increase the perceived legitimacy of a valence attack. First, the target should be an incumbent. Incumbents implemented policies and set the governments priorities over the previous legislative period. A discussion of their record in office is arguably what elections are about. Voters read and hear critical assessments of incumbents all the time and hence valence attacks on them are more likely to appear legitimate. Second, the target should be attacked on issues and not on her character. Electoral competition in multi-party systems is historically centered around spatial competition about ideology and issues. Issue valence attacks that follow this logic of electoral competition are more likely to be perceived as legitimate than non-issue valence attacks that focus on the character and personality of candidates or party leaders. Third, a party's attack should be focused on issues that it owns. Parties can leverage the credibility they have with issues they own to make attacks appear more legitimate. Their track record of attention to that issue makes them a credible advocate for it and can lend the appearance of legitimacy to attacks.

Extant research has focused on valence attacks in the two-party case of the United States but we know very little about valence attacks in multi-party systems (see Lau, Sigelman and Rovner, 2007; Nai and Walter, 2016, for an assessment). Studies in multi-party settings are less common and focus almost exclusively on case studies (e.g. Dolezal, Ennser-Jedenastik and Müller, 2016*b*). The predominance of single-country and election studies can explain the lack of consistent findings about valence in multi-party competition so far. For example, two key findings from the U.S., the role of incumbency and partisanship in attacks, have not been tested conclusively in multi-party systems (Djupe and Peterson, 2002; Lau and Pomper, 2004). Studies found that challengers are more likely to use valence attacks in Denmark (Hansen and Pedersen, 2008) or the Netherlands (Walter and van der Brug, 2013) but found the opposite in the United Kingdom (Walter, van der Brug and van Praag, 2013). Similarly, research examining the attack behavior of European parties has found that the party family matters sometimes (Elmelund-Præstekær, 2010) but not always (Scammell and Langer, 2006). Conclusions from existing research may be an artifact of specific elections, countries, or conceptualizations of valence attacks.

I build on this literature and use a new dataset covering valence discussions of parties in thirty elections in ten countries (Debus, Somer-Topcu and Tavits, 2018) to test my hypotheses. I find that parties do in fact frequently attack each other in multi-party systems and that incumbents are more likely to receive attacks than opposition parties. The attack behavior of political parties is concentrated on valence characteristics connected to issue discussions and not the non-issue valence image of incumbents. This evidence suggests that attack behavior in Europe is not separate from the programmatic electoral competition but conducted

in close connection with the spatial position taking (Downs, 1957; Clark, 2009).

This study advances our understanding of election campaigns by establishing conditions under which parties are more or less likely to attack each other. It contributes to the growing literature examining strategic attack behavior by parties in multi-party systems (see Nai and Walter, 2016). Previous research has mostly focused on the consequences of valence attacks, not on their causes (Lau, Sigelman and Rovner, 2007; Nai and Walter, 2016; Jung and Tavits, 2018; Somer-Topcu and Weitzel, 2020). A systematic examination of the dynamic determinants of valence attacks across a variety of multi-party systems and over time is lacking. This article also connects the large and well-developed literature on strategic ideological and issue competition of political parties with the literature on valence attacks. In two- and multi-party competition, the study of valence attacks has been detached from the rest of the electoral competition, without connections between issue positions and attack behavior (but see Clark and Leiter, 2013). I identify a link between policies and issues, which have been shown to be central in party competition, and the strategic use of valence attacks by parties. Lastly, the findings from this study also speak to the literature on negative campaigning in the two-party case of the United States. A comparative study illustrates the system-specific components of attack behavior, highlighting the rather minimal influence of ideology and electoral performance on attack behavior in other party systems.

## 2 Valence Attacks in Multi-Party Competition: A Question Of Legitimacy

According to spatial models, parties compete for votes, office, and influence over policy (Strøm and Müller, 1999) based on their ideological positions and specific issue concentrations (Downs, 1957; Adams, Merrill III and Grofman, 2005; Adams and Somer-Topcu, 2009; Pereira, 2019). However, a continued criticism of these models is that they neglect a second dimension of voter evaluations that goes beyond programmatic politics and focuses on valence traits (Enelow and Hinich, 1982; Stokes, 1992; Clark, 2009).

These public perceptions of the so-called valence image of political parties and candidates can be central for turnout (Ansolabehere, Iyengar and Simon, 1999; Brooks, 2006), voters' perception of their own efficacy (Ansolabehere and Iyengar, 1995) and even affect how much they trust political parties (Brader, 2005; Whiteley et al., 2015) or the political system (Leiter, Clark and Clark, 2019). All this influences the evaluation of parties and candidates and thereby their electoral performance (Adams et al., 2011; Abney et al., 2013; Green and Jennings, 2017; Johns and Kölln, 2019; Jung and Tavits, 2018; Somer-Topcu and Weitzel, 2020).

Parties accordingly have an incentive to not only appeal to the voters with their ideology and policy

proposals but also try to shape the public perception of their own and their competitors valence image. Findings from cognitive psychology show that negative messages are especially strong in their impact on individuals. They are more likely than positive messages to be noticed, elicit cognitive responses, be stored in memory, and affect behavior (Rozin, Berman and Royzman, 2010; Rozin and Royzman, 2001; Soroka and McAdams, 2010). Parties hence have a strong incentive to attack the valence image of competitors with negative messages. In this article I focus on attacks that are targeted at the honesty, integrity, and competence of parties and candidates. I differentiate between valence attacks that connect the valence traits of an individual or party with its issue statements (issue related valence attacks such as “Party  $i$  is dishonest about its pension plans”) and attacks that solely focus on valence traits of an individual or party (non-issue related valence attacks such as “Party  $i$  is dishonest”).

Valence attacks, while likely influential, can be a risky strategy in multi-party systems. A higher number of parties compete for votes and seats and this offers voters electoral options (Dalton and Flanagan, 2017; Polk and Kölln, 2017). Voters do not have to abstain from voting if they get alienated from their preferred party because it is actively or passively involved in valence attacks. Instead of not voting in the election they can support a viable third party that also is ideologically proximate to their own ideological position but not involved in the attacks. These third parties can benefit from attacks between two parties without ever paying the potential costs that are associated with them (Lau, Sigelman and Rovner, 2007; Nai and Walter, 2016). Attacking parties in two-party competition can accept alienating some of their own voters by using attacks as long as they push more supporters away from their competitor. In multi-party competition, this tactic does not work and can inadvertently strengthen another competitor at the expense of the attacked as well as the attacking party.

The increased risk of valence attacks could suggest that they are uncommon in multi-party systems. The numbers from the CCDP for thirty elections in ten countries, though, indicate that parties across Europe are surprisingly willing to take this risk and attack each other regularly during elections. Table 1 shows the total number of valence attacks reported in the two highest circulating broad sheet newspapers during the one month campaign period in every election available in the CCDP.

Political parties take a calculated risk when they attack each other in multi-party systems. Due to the strategic complexity and high uncertainty of elections with more than two competitors it is difficult to assess the costs and benefits of valence attacks in advance. However, parties can make use of valence attacks that systematically minimize the potential costs. This is the case when an attack is perceived by voters and the media to be legitimate and hence backlash, boomerang, and spoiler effects are less likely to occur.<sup>2</sup>

<sup>2</sup>Valence attacks on parties or leaders that are engulfed in a scandal can also be perceived as legitimate and credible. However, scandals during elections are an exception and not the norm. For example, Puglisi and Snyder (2011) report only 32 scandals over a period of one decade in the entire United States and Hirano (2012) found that only 2.8% of all congressional

**Table 1** – Valence Attacks Totals in the Campaign Periods Coded by the CCDP

Election	Attacks	Election	Attacks	Election	Attacks
CZ 2010	166	ES 2008	283	UK 2005	299
CZ 2013	141	ES 2011	211	UK 2010	318
CZ 2017	149	ES 2015	271	UK 2015	364
DE 2009	157	ES 2016	412	UK 2017	67
DE 2013	159	ES 2019	340	NL 2010	175
DE 2017	50	HU 2006	412	NL 2012	163
DK 2007	167	HU 2010	152	NL 2017	213
DK 2011	136	HU 2014	97	PO 2009	353
DK 2015	80	HU 2018	68	PO 2011	499
PL 2007	209	PL 2015	196	PO 2015	284
PL 2011	152	PL 2019	167	PO 2019	337

*Legitimate attacks* are within the bounds of normal electoral behavior of political parties. Voters are used to this type of behavior and might even come to expect it from parties. This reduces the potential of unintended consequences and electoral penalties.

I argue that three factors increase the perceived legitimacy of a valence attack: first, the target should be an incumbent. Incumbents implemented policies and set the government’s priorities over the last legislative period. Incumbents need to justify to voters why they deserve another term in office and will do so by outlining their vision for the next term, but also by highlighting their track record in office. A substantial literature on retrospective voting puts these evaluations of incumbent performance at the center of voter considerations when it comes to casting their ballot (e.g. Woon, 2012; Dassonneville and Lewis-Beck, 2013; Healy and Malhotra, 2013). An incumbent will therefore campaign on her achievements, stressing the obstacles she overcame and the goals she reached over the last term. Dutch prime minister Mark Rutte’s 2017 re-election campaign, for example, was decidedly build around his ability to steer the country out of the financial crisis and reduce the Dutch unemployment rate (Serhan, 2017). The incumbents performance in office is, however, subject to debate. Voters constantly witness a public discourse about the state of the economy, public policy, and the incumbent’s performance in government from a variety of different actors (Seeberg, 2018). For example, in 2013 the conservative government of Rajoy in Spain was heavily criticized by opposition parties and members of the civil society for implementing a law with tougher penalties for protesters. Members of the opposition called the law a “kick in the teeth for democracy” (O’Leary and González, 2013). Similarly, in 2017 England’s National Audit Office publicly criticized the state of the education system. A critique that was echoed by the school governors, who described the most recent education budget as “diabolic” and “catastrophic” (BBC, 2017).

Voters are used to these critical assessments of the policies and performance of incumbents and hence incumbents between 1978 and 2008 were involved in scandals. I argue that scandals are not a regular and strategic element of party competition and hence not the focus of this paper.

valence attacks on them are more likely to appear legitimate. A discussion and evaluation of the incumbents track record in office is fundamentally what elections in democratic systems are about (Powell, 2000). Attacks on the incumbent party are more likely to appear legitimate than attacks on non-incumbents. This leads to the first hypothesis that in multi-party competition incumbent parties should receive more valence attacks than non-incumbents.

**H1:** *Incumbents are more likely to receive valence attacks than opposition parties.*

Second, the target should be attacked on issues and not on her character. Not every attack on an incumbent is perceived as legitimate. In the 2017 German federal elections Schulz attacked Merkel, who was the incumbent chancellor at that time, but received an enormous wave of backlash. I argue that this was because it was not an attack on her governing record or specific policies she implemented while in office. Schulz's attack was ad hominem, he publicly questioned her character. The immediate backlash in the media shows that these types of attacks are not well received in multi-party competition.

Valence attacks in multi-party competition follow the dominant logic of spatial competition about ideology and policy that characterize these systems in Europe. They are an extension to the existing mode of party competition, not an additional way to compete for votes. Political parties and candidates should therefore not attack each other on their individual traits but on the traits associated with policies that are being discussed during the election. The multi-party systems of Europe are characterized by electoral competition that has predominantly focused on ideology, issues, and policy (Downs, 1957; Adams, Merrill III and Grofman, 2005). While elections in these party-focused systems are also experiencing a tendency to presidentialize, individuals and their personal traits are still not as central (Samuels and Shugart, 2010). The ideological positions and policies parties emphasize remain at the core of elections and parties have an incentive to campaign on them (Green, 2007).

Hence, valence attacks must appear legitimate to minimize the risk of unintended consequences such as backlash and spoiler effects. While incumbents get attacked more, parties are aware of the consequences they face when attacking the person and not the content. Specifically, this means that issue valence attacks – that is attacks on an actors valence characteristics related to a specific issue or policy – appear more legitimate than non-issue valence attacks that focus on the individual valence traits of the party or candidate. This also ties together the opening quote that valence attacks are so rare in Germany with the empirical reality of frequent attacks. They are clearly not rare. Attacks are just rarely issued on individual candidates or parties alone but mostly connected with issues or policy and thereby appear as legitimate conduct in electoral competition. When politicians, the media, or the public condone valence attacks, as the member of *Die Linke* did, they condone non-issue valence attacks on individuals. It is not all attack behavior that is

risky for political parties, it is attack behavior that is not connected to issues and thereby lacks legitimacy. Hence, my second hypothesis is that incumbents get attacked more on issue valence and not on non-issue valence.

**H2:** *Incumbents are more likely than opposition parties to get attacked on issue than on non-issue valence.*

Third, the attacking party should issue its attacks on issues that *it owns*. Parties can leverage the credibility they have with issues that they own to make attacks appear more legitimate. A party owns an issue when voters consistently establish a connection between that issue and the political party (Petrocik, 1996; Riker, 1996). This can be done through a long-standing history of policy initiative, interest, and innovation by that party with respect to that issue. It is a connection that is developed over time and does not just depend on the position a political party takes on that issue. Issue ownership stems from a party's track record of focus and attention to the issue. If a party owns an issue it can take advantage of its higher credibility with this issue in the election. A party's past commitments, policies, and priorities with respect to a given issue make it a legitimate and trusted advocate for that issue (Budge and Farlie, 1983; Seeberg, 2017). Research has shown that issue ownership can have a significant impact on voter behavior (Bellucci, 2006; Nyhuis, 2016) and associative issue ownership is stable and not easily stolen or transferred by other parties (Tresch, Lefevere and Walgrave, 2013; Seeberg, 2017). The attacking party can use this credibility and trust with respect to the issue to legitimize the attack on the opponent and reduce the risk of backlash, boomerang, or spoiler effects. The attack statement is backed up and supported by years of expertise and voters will hence be more likely to trust and believe the party. Attacks on issues that the opponent owns are riskier because the attacking party does not have the history of expertise and problem solving that may enhance the credibility and legitimacy of statements that it is making. Furthermore, these attacks not only lack the expertise that provides legitimacy, they are also a message that is unfamiliar to voters and that can contradict the behavioral expectations they have for the parties (Tresch, Lefevere and Walgrave, 2013). As soon as voters encounter messages that do not match their preconceived expectations they are more likely to question and reject them (Ansolabehere and Iyengar, 1994; Holian, 2004; Franchino and Zucchini, 2014). This can fundamentally increase the likelihood of unintended consequences and end up costing a political party support. My third hypothesis is therefore that political parties will attack incumbents on issues that they own themselves.

**H3:** *Incumbents are more likely than opposition parties to get attacked on issues that the attacking party owns.*



### 3 Empirical Analysis

I test my three hypotheses about the determinants of valence attacks in multi-party systems in two stages. First, I examine what explains variation in whether a political party attacks another party. Second, I focus on parties that received attacks and model variation in attack intensity. This analysis is done with data about valence discussions by political parties in 18 elections in ten countries.

#### 3.1 Data

These data come from the *Comparative Campaign Dynamics Project* (CCDP) (Debus, Somer-Topcu and Tavits, 2018) and include valence statements from over 60 parties in elections between 2005 and 2019. The CCDP is a new dataset with a comprehensive collection of party valence discussions in the one month period before election day for 37 election campaigns in 10 advanced industrialized multi-party democracies.<sup>3</sup> In this paper I use data from 30 of these 37 elections to test my hypotheses.<sup>4</sup> For every one of the campaigns, Debus, Somer-Topcu and Tavits had research assistants code between 60-100 election-related articles each from the highest circulating center-left and center-right newspaper. The data consist of all election relevant front page articles as well as a 5% random sample of all other election relevant articles from the newspaper.<sup>5</sup> The relevant observations in the CCDP are not articles or sentences, but valence statements made by political actors. The collection of daily newspaper articles is broken down to valence statement instances (did party  $i$  make a valence statement about party  $j$ ). The coders evaluated each article by determining the sender (that is, the party that is speaking) and the receiver (that is, the party being addressed) of all valence statements in the article and coded whether the sender talked about the receiver in a positive or negative way. The data structure of the CCDP follows predominant attack patterns and is inherently dyadic (Poast, 2010, 2016). A more detailed description of the dataset can be found in Debus, Somer-Topcu and Tavits (2018).

These data are combined with data on the ideological positions and electoral performance of political parties from the *Comparative Manifesto Project* (CMP) (Volkens et al., 2019) and data on party government participation from the *Parliaments and Governments Database* (ParlGov) (Döring and Manow, 2019). The unit of analysis in the resulting dataset is a *weekly* directed party dyad for the one month period before election day. Table 2 illustrates this structure for two parties in two election weeks. In this case, both versions of the directed dyad between Labour and the Conservatives in the 2015 British General Election are shown for the second and the third week of the campaign. It includes monadic attributes of both sender

<sup>3</sup>Country experts in Portugal recommended that the campaign period in Portugal is reduced to two weeks.

<sup>4</sup>The country-elections included in the analysis are listed in Table 1. Differences between the 37 available country-elections in the CCDP are due to the availability of polling data. Missing are, among others, Hungary 2010, Netherlands 2010, and Poland 2007.

<sup>5</sup>The newspapers the CCDP collected the articles from are listed in Table A2 in the Appendix and the survey used by the CCDP can be found in Section A3.

and receiver (whether or not they were the incumbent party before the election) as well as dyadic attributes describing their relationship. All of the dyadic variables presented in Table 2 are measuring valence attacks, the dependent variables explained in the next section. The binary variable indicates whether the sender attacked the receiver in the week. The aggregated count version represents a total of all valence attacks, which can be further separated into issue and non-issue valence attacks. In this example from the dataset, the Labour Party attacked the Tories 25 times in week two of the 2015 British general election. Of those 25 attacks, 12 were issue related and 13 were non-issue related attacks. In this election, Labour was an opposition party and the Tories were the governing incumbent.

**Table 2** – Dataset structure

Election	Week	Sender	Receiver	Valence Attacks (DV)				Incumbent	
				Binary	Agg.	Issue	Non-issue	Sender	Receiver
UK 2015	2	Labour	Tories	1	25	12	13	0	1
UK 2015	3	Labour	Tories	1	16	3	13	0	1
UK 2015	2	Tories	Labour	1	30	12	18	1	0
UK 2015	3	Tories	Labour	1	28	12	16	1	0

### 3.2 Dependent Variable

Based on this dataset structure, the generalized linear model used throughout my empirical analysis can more formally be represented as:

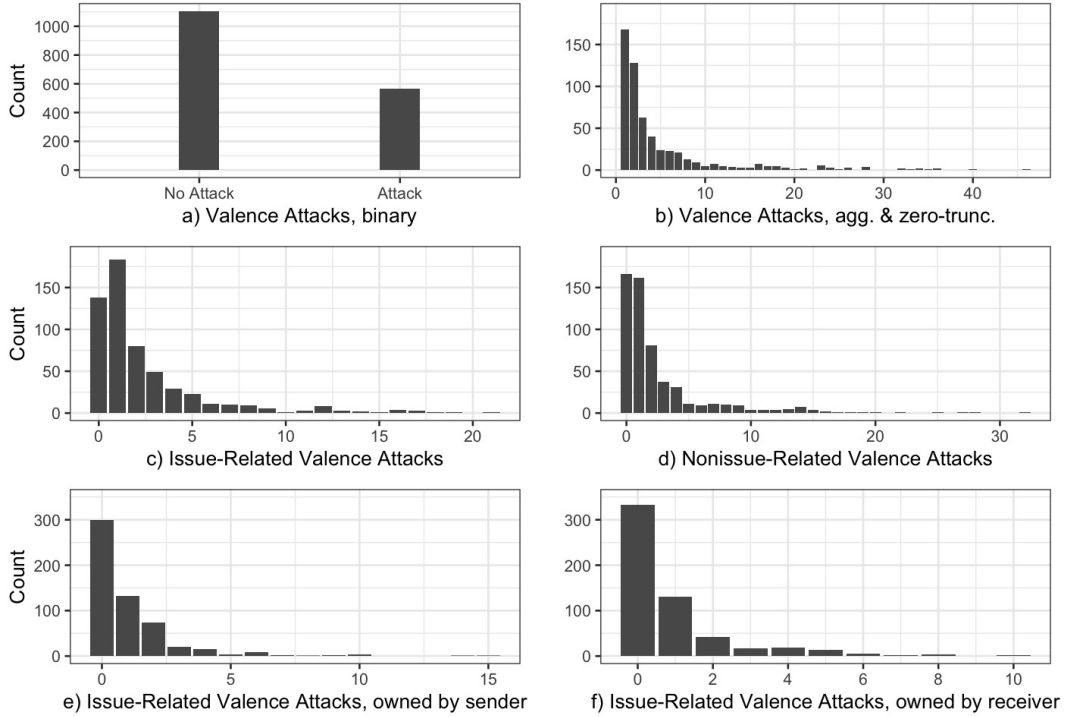
$$y_{i,j,c,t} = \alpha + \beta \mathbf{Z}_{j,c,t} + \gamma \mathbf{V}_{i,c,t} + \delta \mathbf{X}_{i,j,c,t} \quad (1)$$

where  $y_{i,j,c,t}$ , the dependent variable, is a vector of dyadic outcomes. Since I examine directional party-dyads in election weeks, this variable consists of the valence attacks party  $i$  (the sender) used against party  $j$  (the receiver) in country  $c$  at week  $t$  in a given election. I conduct my analysis with six models that differ in how  $y_{i,j,c,t}$  is constructed. Hypothesis 1 is tested with a two-stage hurdle model (Mullahy, 1986). In its first stage the model uses a binary dependent variable to test whether or not incumbents are more likely to receive an attack in a given election week. As Figure 1a shows, the dependent variable in this case is 1 if an attack happened in an election week and 0 otherwise. The dependent variable in the second stage of the hurdle model is a zero-truncated valence attack count variable used to test whether the attacked incumbents also receive more attacks (see Figure 1b). It aggregates all valence attacks from party  $i$  used against party  $j$  in a given campaign week for instances where valence attacks actually occurred. Hypothesis 2 is tested with versions of  $y_{i,j,c,t}$  that differentiate the attacks party  $i$  used into issue (Figure 1c) and non-issue (Figure 1d) valence attacks. The CCDP provides this classification in its dataset. When the coders enter a valence

discussion into the coding questionnaire they also indicate whether this specific discussion was associated with an issue or not and classify it according to the CCDP issue categories.<sup>6</sup>

In both cases the dependent variable is a count of the types of attacks. Finally, Hypothesis 3 is tested with the subset of issue related valence attacks. As can be seen in Figure 1e and Figure 1f, I separated the issue related attacks into variables that count the attacks related to issues that the sender owns and related to issues that the receiver owns. I follow Seeberg (2017) and adopt a weak version of issue ownership that does not assign issues to parties specifically but separates them across the ideological spectrum as issues that more closely belong to political parties on the left or on the right.<sup>7</sup> The dependent variables in Figure 1b through Figure 1f are subsets of the entire dataset. They only include counts when attacks actually occurred.

**Figure 1** – Distributions of the Valence Attacks Dependent Variables



### 3.3 Predictor Variables

Equation 1 shows that three sets of predictor variables are included in the model.  $Z_{j,c,t}$  is a matrix of characteristics of the receiving party. Hypothesis 1 formulates expectations about the role of incumbency and party's attack behavior, which Hypotheses 2 and 3 build on. In order to test these three Hypotheses, the main predictor variable in all of my models is *Target is Incumbent*. It is a binary variable indicating

<sup>6</sup>A list of issue categories and images of the CCDP coding questionnaire can be found in the Section A2 of the Appendix.

<sup>7</sup>The mapping of CCDP issues listed in Section A4 of the Appendix to Seeberg (2017) ownership classification is shown in Section A5.

whether the political party receiving the valence attacks in the dyad was in government right before the election or not. Since almost every country in the data had coalition governments during the time under study I code all parties in a coalition as incumbent parties.

$\mathbf{Z}_{j,c,t}$  and the other two sets of covariate matrices include further control variables. An additional characteristic of the receiving party that can influence the attack behavior is its party type. It is possible that mainstream and niche parties experience different levels of attack behavior. Mainstream parties are usually larger parties, both with regard to their vote share and the issues or ideological space they cover (e.g. Somer-Topcu, 2014; Abou-Chadi and Orlowski, 2016). This makes them more central actors in the electoral competition. Research has shown that there exists significant variation in electoral strategies and behavior between mainstream and niche parties (Meguid, 2005; Meyer and Wagner, 2013). In order to control for this variation I include *Target is Niche*, a dummy indicating whether the receiver of attacks is a niche party.

The second set of predictor variables with controls is  $\mathbf{V}_{i,c,t}$ , a matrix of characteristics of the sender or attacking party. First, following Jung and Tavits (2018), who show that voters on the left are more likely to respond to valence attacks than voters on the right, I control for the ideological position of the attacking party in the current election, *Ideology of Sender*. The variable is based on the CMP ideology scores of the attacking party in the given election. Second, a valence attack is most likely not an isolated campaign event, but embedded in a history of reciprocity (Dolezal, Ennser-Jedenastik and Müller, 2016a). I control for this potentially interactive nature by including a lagged version of the number of attacks the attacking party received from the dyad partner in the week before, *Attacks received<sub>t-1</sub>*.

Finally,  $\mathbf{X}_{i,j,c,t}$  is a matrix with dyad specific characteristics. The advantage of a research design with directed dyads is the ability to model dynamics between and characteristics of the relationship of the sender and receiver in the dyad. While this approach is frequently used in the study of inter-state conflict (for example Danilovic and Clare, 2007) inter-party conflict, such as valence attacks in campaigns, has so far not been studied comparatively in this way (but see Dolezal, Ennser-Jedenastik and Müller, 2016b). I use the dataset structure to measure expected electoral performance and ideological differences between parties in a dyad.  $\Delta Poll$ , *dyad* measures the difference in the expected electoral performance between the attacking and the attacked party in the current week.  $\Delta Poll$  *change*, *dyad* measures the change in the difference between the two parties since the last week. The polling data come from (Jennings and Wlezien, 2015) and (Pereira, 2019).  $\Delta Ideology$ , *dyad*, measures the ideological distance between the attacking and the attacked party. The variable is based on the CMP ideology scores of each party for this election.

Lastly, coalition governments are the norm in almost all multi-party systems. Parties know going into elections that they will have to rely on the electoral performance and willingness of other parties to form a government. I include *Coalition Potential*, a dummy variable taking the value 1 if voters in that election

could have reasonably expected that the two parties form a government and 0 otherwise.<sup>8</sup>

### 3.4 Estimation Strategy

The first stage model for Hypothesis 1 has a binary dependent variable indicating attack occurrence for a party dyad in an election week. The five other dependent variables are different counts for the attack intensity in the subset of the data in which valence attacks happened. This approach follows the two-step logic of a hurdle model (Mullahy, 1986). In the first step, event occurrence is modeled with logistic regression. In the second step count models are used to model event intensity in case of event occurrence. Hurdle models are particularly useful in situations with excess zeros and overdispersion (Ridout, Demétrio and Hinde, 1998). As Figure A6 in the Appendix shows this is the case with the valence attack data collected.

To control for country and party system specific variation in the propensity to use valence attacks, I include country fixed effects in all models. Since I am using panel data for the four weeks of campaigning prior to election day, I include a variable controlling for the current campaign week. This variable also has an additional theoretical motivation. If risk assessment factors into a party's decision to go negative, then proximity to election day should increase the likelihood that parties in trouble resort to attacks to turn around their failing election campaign. As other, less risky campaign efforts bring no results, parties become more willing to accept the potential risks of a valence attack (Damore, 2002; Ridout and Holland, 2010).

Since I am using directed dyadic data, I need to control for the dependency structure between party observations. I follow Aronow, Samii and Assenova (2015) and apply a non-parametric sandwich estimator for dyadic clustering in generalized linear models. Lastly, I model directed dyad specific characteristics with several temporally stable variables in  $\mathbf{X}_{i,j,c,t}$  that are theoretically motivated. In this case, the inclusion of dyad fixed effects in addition to country fixed effects and the weeks to election control would introduce multi-collinearity problems (Bennett and Stam, 2000; Beck and Katz, 2001; King, 2001; Gilardi and Füglistler, 2008).

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<sup>8</sup>Country experts were given a list of all party dyads in each elections and coded whether it was reasonable for voters to expect that the pair would prefer to form a government after the given election. For example, even though the Conservatives and the Liberals were in a coalition government in the UK from 2010-15 this was not a coalition voters would have expected prior to the negotiations. Hence the parties were coded as 0.

## 4 Results

To reiterate the expectations formulated in the theory section, incumbents should be more likely to receive valence attacks. Specifically, they should be attacked with issue related valence statements and receive attacks related to issues that the attacking party owns.

Table 3 tests Hypothesis 1 about the effect of incumbency on valence attacks a party receives. Model 1 uses logistic regression for a more general examination of this relationship. The dependent variable is binary and indicates whether a party attacked another party in a given election week. The variable takes the value 1 if an attack happened and is 0 otherwise. The coefficients reported are log-odds. Should incumbency have an effect on a party's likelihood of receiving an attack in an election, we should observe coefficients greater than zero. Model 1 finds preliminary support for Hypothesis 1. The incumbency status of the target does indeed have a substantively and statistically significant effect on attacks received. Exponentiating the coefficient we find that the odds of getting attacked are 63% higher for incumbents than opposition parties. Parties that are in government are significantly more likely to get attacked during an election than their counterparts.

Model 2 in Table 3 builds on this and tests Hypothesis 1 with regard to the intensity of attacks for the subset of instances where attacks happened. The dependent variable counts the weekly valence attacks in party dyads given that attacks occurred and excludes all observations where no attacks happened between parties. Since this variable is a count with unequal mean and variance that excludes zeros I am estimating a zero-truncated negative binomial model. Model 2 finds further support for Hypothesis 1: The expected log count of incumbency is 0.279. In other words, the incident rate ratio of valence attacks for incumbents is 32% higher for incumbents than for opposition parties. The effects of incumbency in models 1 and 2 are statistically and substantively meaningful. Incumbents are more likely to be attacked and, conditional on being attacked, the intensity of attacks is also higher.

The models in Table 4 test the second and third hypotheses. Models 3 and 4 compare the role of issue and non-issue related attacks, while models 5 and 6 examine issue-ownership and valence attacks. All four models have the same general specification as the models in Table 3. The variance for the count variable in the first two models is in both cases substantially larger than the mean and I estimate negative binomial regression models. For models 5 and 6 the mean and the variance are roughly equal and I use poisson regression.

The first two columns provide evidence in support of Hypothesis 2. The dependent variable for model 3 are all issue related valence attacks a political party used against a competitor. The coefficient for the key independent variable, *Target is Incumbent* shows that parties are significantly more likely to attack

**Table 3** – Valence Attacks and Incumbency

	(1)	(2)
	Attacks (1 = yes)	Attacks, number of
	<i>Logit</i>	<i>Neg. Bin., trunc.</i>
Target is Incumbent	0.487*	0.279*
	(0.227)	(0.132)
$\Delta$ Poll, dyad	-0.005	-0.012*
	(0.007)	(0.004)
$\Delta$ Poll change, dyad	0.007	-0.031
	(0.054)	(0.017)
Ideology of Sender	0.007	-0.005
	(0.006)	(0.007)
$\Delta$ Ideology, dyad	0.008	-0.00004
	(0.007)	(0.003)
Target is Niche	-1.155*	-0.704*
	(0.267)	(0.119)
Coalition Potential	-0.965*	-0.582*
	(0.397)	(0.196)
Weeks to Election	0.012	-0.063
	(0.071)	(0.058)
Attacks received <sub>t-1</sub>	0.325*	0.070*
	(0.093)	(0.016)
Constant	1.090	1.402*
	(0.717)	(0.311)
Country Fixed Effects	Yes	Yes
Dyad Robust SE	Yes	Yes
N	2,134	848
Log Likelihood	-822.267	-1,183.354
AIC	1,682.533	2,404.708

\*p < .05, Reported are log odds for model 1 and expected log counts for model 2.

incumbents with valence statements they connected to issues. The expected log count of issue related valence attacks for incumbents is 0.316, which means that the incident rate ratio of these issue related valence attacks is 37% higher for them than for opposition parties. However, when it comes to non-issue related attacks there is no difference between incumbents and opposition parties. Model 4 shows that the coefficient for attacks is substantively very small and statistically not significant at any of the conventional levels. Parties attack incumbents more frequently and they do so with issue related valence attacks.

Finally, models 5 and 6 test Hypothesis 3 about the role of issue ownership in attack behavior. I find support for my expectations that parties attack their opponents with valence statements they connected to issues that they themselves own. The effect of incumbency in model 5, the model using sender-owned issues, is statistically and substantively significant. The expected log count for attacks on incumbents with sender-owned issue attacks is 0.539. The incident rate of valence attacks in this instance is 71% higher. While this is the case for sender-owned issues the same does not hold for receiver-owned issue attacks. Here incumbents are not distinguishable from opposition parties.

Table 3 and Table 4 also present further insight into the dynamics of valence attacks in multi-party systems. Niche parties and parties with future coalition potential are substantially less likely to receive attacks. It seems to be the case that political parties keep coalition bargaining costs in mind during their campaigns. There is also a strong component of reciprocity to attack behavior in all models. Parties that were attacked in one week are more likely to retaliate in the next week. Both performance variables as well as proximity to elections and ideology appear to have no consistent significant impact on a party's decision to attack or not.

To conclude, I have found empirical support for all three of my hypotheses. The first two models showed that incumbents are more likely to be attacked and to receive a higher volume of attacks. The last four models demonstrated that these attacks are designed with a purpose. Political parties concentrate their attacks on incumbents with statements related to issues. More specifically, parties attack the governing parties on issues that they themselves own.<sup>9</sup>

I run several models to test the robustness of my findings to alternative specifications of key independent variables and the estimation strategy. In the models in Table 3 and 4 I code incumbency for all members of

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<sup>9</sup>The mechanism underlying the theoretical argument is legitimacy. In Table A8 in the Appendix I present the results of linear regression models testing the effect of different types of attacks on the polling performance of the attacking political party. If legitimacy is a concern of political parties we should observe positive effects of valence attacks that are more likely to be perceived legitimate on the party's polling performance in the second week. We should also observe negative effects on polling performance for attacks that are less likely to be perceived legitimate. The results show that issue attacks are associated with an increase in polling performance in the next week. The same goes for issue attacks that are owned by the sender, albeit the effect is not statistically significant in this model. Non-issue attacks and attacks on issues that the receiver owns (attacks that have lower levels of legitimacy) have no statistical effect on the future polling performance of a party. Given that Somer-Topcu and Weitzel (2020) and Jung and Tavits (2018) have demonstrated that the effects of valence attacks on vote choice are highly conditional on partisanship and ideology, this is strong evidence in support of the legitimacy argument.



**Table 4** – Valence Attacks and Issue Ownership

	(3)	(4)	(5)	(6)
	Issue Related	Non-issue Related	Sender Owned	Receiver Owned
	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Poisson</i>	<i>Poisson</i>
Target is Incumbent	0.316*	0.049	0.539*	0.178
	(0.118)	(0.128)	(0.054)	(0.218)
$\Delta$ Poll, dyad	-0.015*	-0.006	-0.017*	-0.015
	(0.005)	(0.004)	(0.006)	(0.009)
$\Delta$ Poll change, dyad	-0.033*	-0.021	-0.005	-0.016
	(0.012)	(0.021)	(0.020)	(0.030)
Ideology of Sender	-0.002	-0.008	-0.0004	0.011
	(0.004)	(0.008)	(0.006)	(0.009)
$\Delta$ Ideology, dyad	0.002	-0.005	0.005	0.009
	(0.002)	(0.004)	(0.003)	(0.006)
Target is Niche	-0.704*	-0.633*	-0.589*	-0.793*
	(0.181)	(0.163)	(0.121)	(0.243)
Coalition Potential	-0.329*	-0.359*	-0.065	0.039
	(0.158)	(0.158)	(0.300)	(0.211)
Weeks to Election	-0.004	-0.071	-0.224*	0.178*
	(0.036)	(0.061)	(0.045)	(0.080)
Attacks received <sub>t-1</sub>	0.105*	0.103*	0.089*	0.121*
	(0.024)	(0.018)	(0.016)	(0.029)
Constant	0.099	1.319*	-1.195*	-1.716*
	(0.308)	(0.348)	(0.561)	(0.297)
Country Fixed Effects	Yes	Yes	Yes	Yes
Dyad Robust SE	Yes	Yes	Yes	Yes
N	848	848	848	848
Log Likelihood	-1,008.337	-996.001	-737.371	-650.140
AIC	2,054.673	2,030.002	1,512.741	1,338.280

\*p &lt; .05, Reported are expected log counts.

the government for coalition governments. In Tables A9 and A10 in the Appendix I use a stricter measure of incumbency and code only the party with the prime minister or chancellor as the incumbent party. The results remain the same. The issue ownership coding in this article is based on Seeberg (2017) and the mapping of the CCDP issues to Seeberg's issue ownership is explained in Section A4 of the Appendix. In Table A11 of the Appendix I use an alternative coding of the issues that changes the coding for Internationalism and Foreign Intervention. Changing the coding of these issues that might not be clearly assigned to parties across all party systems does not change the results. The models in this manuscript are estimated with country/political system fixed effects. It is possible that the relevant unobserved heterogeneity is not necessarily at the system- but at the campaign-level. Tables A12 and A13 show that replacing the country fixed effects with campaign fixed effects yields identical results. It is also possible that attack behavior is driven by the ideology of the receiver and not the sender. Tables A14 and A15 in the Appendix replace the ideology control variable and show that this is not the case. An alternative approach to a hurdle model for Models 1 and 2 in in Table 3 is a single zero-inflated negative binomial regression models. Table A16 in the Appendix shows the results using this approach remain similar. Lastly, the dependency structure in directed dyadic data can also be taken into account with hierarchical models (e.g. Gelman and Hill, 2012). Tables A17 and A18 replicate the six models in this article as hierarchical models using the dyad ID as grouping variable. Once more, the results remain robust.

## 5 Conclusion

When Martin Schulz took the stage in 2017 to issue the attack on Merkel described in the introduction, he knew that he was playing with fire. On his way to the podium he discussed, once more, with his staff whether the attack was a good idea (Feldenkirchen, 2018). The SPD's campaign needed a boost and was hoping that a valence attack would give them just that. However, at that point in the campaign Schulz was too focused on Merkel and launched an attack too much out of the ordinary. It was a nonissue-related valence attack on Merkel as a person, uncommon in the multi-party systems of Europe and not perceived to be legitimate conduct by parties in an election. The concerns Schulz had about the attack make clear that he was aware of this and anticipated possible backlash.

Parties, candidates, and pundits might claim that attacks like that are a rare occurrence in multi-party systems and fundamentally frowned upon. However, my results show that attacks are used frequently and systematically in a broad variety of different electoral and party systems across Europe. While pure ad hominem attacks are indeed rare, parties frequently attack the valence image of their competitors in connection with issue discussions. Using data about valence attacks in 18 campaigns, I demonstrate how parties attack each other: in Europe they are likely to use valence attacks when these attacks appear legitimate. Attacks focused on incumbents and issues, especially issues that the attacking party owns, match the predominant style of programmatic electoral competition in these systems and are less likely to face unintended consequences. For example, Schulz not only attacked Merkel personally but also issued several attacks against the policy proposals of the CDU, FDP, and AfD during his speech. At no point in the election campaign did these types of attacks spark outrage, because they were issue-related. The attacks were not perceived to be out of the ordinary and accepted by competitors, journalists, and voters as normal conduct in an election.

My findings contribute to the growing literature on valence attacks in multi-party competition (e.g. Nai and Walter, 2016). Furthermore, I connect this literature with the extensive literature on spatial and issue competition by highlighting that parties can not only attack each other on issues or valence but also use valence attacks that are explicitly connected with issue discussions. Defining valence attacks in a way that only includes incivility, profanity, or ad hominem attacks might miss key elements of strategic party behavior in multi-party competition. With up to 16 valence attacks per day parties incorporate valence attacks into their electoral strategies regularly. This article demonstrates how political parties are doing it.

A natural extension of this research is an examination of the electoral consequences of valence attacks. Both Jung and Tavits (2018) as well as Somer-Topcu and Weitzel (2020) use the *CCDP* data to examine the conditional responsiveness of voters to valence attacks, finding that voter behavior is conditional on

ideology (Jung and Tavits, 2018) or co-partisanship (Somer-Topcu and Weitzel, 2020). Still, my differentiation between issue- and nonissue-related attacks is novel, and voter responsiveness to attacks might also be conditional on attack legitimacy. Several of my results demand further attention. The strong element of reciprocity in attack behavior is an interesting dynamic. Social Relations Models could determine if this reciprocity is sender- or receiver-initiated. Another consistent relationship that was established in this analysis is the difference in attacks received between niche and mainstream parties. Research has shown that niche and mainstream parties differ in how they compete spatially (Meguid, 2005; Adams et al., 2006). My results suggest that they also differ systematically in their attack behavior. Key predictors of valence attacks in the two-party case of the United States, such as ideology and polling performance, appear to have no consistent effect on attack behavior. This raises questions about system-specific variation in valence attacks and the applicability of findings from the U.S. research to multi-party systems.

## 6 Appendix

### A1 Summary Statistics

**Table A1** – Summary Statistics

Statistic	N	Mean	Median	St. Dev.	Min	Max
Valence attack, binary	1,672	0.339	0	0.473	0	1
Valence attack, aggregated	1,672	1.721	0	4.632	0	46
Valence attack, nonzero	566	5.085	2	6.806	1	46
Issue valence attacks	566	2.433	1	3.349	0	21
Nonissue valence attacks	566	2.652	1	4.197	0	32
Sender-owned issue attacks	566	1.037	0	1.797	0	15
Receiver-owned issue attacks	566	0.876	0	1.537	0	10
Valence attacks, received	1,672	1.717	0	4.632	0	46
Issue valence attacks, received	1,672	0.821	0	2.262	0	21
Nonissue valence attacks, received	1,672	0.895	0	2.744	0	32
Target is Incumbent	1,672	0.325	0	0.468	0	1
Target is PM	1,672	0.120	0	0.325	0	1
Target is Niche	1,672	0.678	1	0.468	0	1
Dyad Poll, dist.	1,672	0.053	0	16.826	−45.418	45.418
Dyad Poll, change	1,672	−0.002	−0	1.651	−12.444	12.444
Ideology of Sender	1,672	−7.800	−7.789	18.265	−52.670	51.724
Ideological dist., dyad	1,672	−0.014	−0.254	25.039	−97.142	97.142
Coalition Potential	1,672	0.250	0	0.433	0	1
Weeks to Election	1,672	2.481	2	1.059	1	4

### A2 Newspapers in the CCDP

**Table A2** – Newspapers in the CCDP

Country	Years	Left-Leaning Daily	Right-Leaning Daily
Czech Republic	2010, 2013	Právo	Mladá fronta Dnes
Denmark	2007, 2011	Politiken	Jyllands-Posten
Germany	2009, 2013	Süddeutsche Zeitung	Frankfurter Allgemeine
Hungary	2006, 2010	Népszabadság	Magyar Nemze
Netherlands	2010, 2012	de Volkskrant	De Telegraaf
Poland	2007, 2011	Gazeta Wyborcza	Rzeczpospolita
Portugal	2009, 2011	Público	Jornal de Notícias
Spain	2008, 2011	El País	El Mundo
Sweden	2010, 2014	Dagens Nyheter	Aftonbladet
UK	2005, 2010, 2015	The Guardian	The Daily Telegraph

## A3 The Comparative Campaign Dynamics Survey

The following three images show the survey used by the CCDP. Coders indicated party, issue, issue type, issue direction, and issue- and nonissue-related valence.

Figure A1 – CCDP Survey Image 1

<p><b>Does the subject of the article you identified discuss any issue positions or valence characteristics of another party, of the government or of the establishment?</b></p> <p>* must provide value</p>	<p> <input checked="" type="radio"/> Yes  <input type="radio"/> No         </p> <p>reset</p> <p>Note that if the subject discusses another party's leader or member of the parliament etc. you should still code this as "Yes" and code the party of that leader/member in the next question. If the subject refers to the "government" determine who was in government that year and code the party accordingly.</p>
<p><b>If the subject talks about another party or the government, identify the first (or the only) other actor it talks about?</b></p>	<p> <input checked="" type="radio"/> Labour Party  <input type="radio"/> Liberal Democratic Party  <input type="radio"/> Conservative Party  <input type="radio"/> UKIP  <input type="radio"/> Scottish National Party  <input type="radio"/> Establishment         </p> <p>reset</p>
<p><b>Does the subject refer to an issue position of this other actor?</b></p> <p>* must provide value</p>	<p> <input checked="" type="radio"/> Yes  <input type="radio"/> No         </p> <p>reset</p>
<p><b>What is the first (or the only) issue the subject refers to for the other actor?</b></p>	<p> <input checked="" type="radio"/> Taxes  <input type="radio"/> Social Policy/Public Services  <input type="radio"/> Inflation  <input type="radio"/> Unemployment  <input type="radio"/> Other Economic Performance  <input type="radio"/> Centralization vs. Regional Autonomy  <input type="radio"/> Environment  <input type="radio"/> Immigration, Asylum  <input type="radio"/> Justice System  <input type="radio"/> Law and Order, Security, Terrorism  <input type="radio"/> National Way of Life, Patriotism  <input type="radio"/> Traditional Morality, Family Values, Religion  <input type="radio"/> Europe/European Union  <input type="radio"/> Internationalism (not EU)  <input type="radio"/> Foreign Intervention  <input type="radio"/> Agriculture/Rural Affairs  <input type="radio"/> Other Issue         </p> <p>reset</p> <p>"Social policy/public services" is an umbrella category on welfare state related policies that includes (but is not limited to) sub-issues such as: Social services, Education, Social security, Health care, Public housing, Public transportation, Childcare, Family policies (e.g., maternity leave, Elderly care, Minimum wage)</p>
<p><b>Issue direction</b></p>	<p> <input checked="" type="radio"/> -1  <input type="radio"/> 0 (status quo; no clear position taken/vague; or just mentions the issue)  <input type="radio"/> 1  <input type="radio"/> 99 (takes a contradictory position)         </p> <p>reset</p> <p>Refer to your notes to decide how to code this variable</p>
<p><b>How confident are you with your answer to the questions so far about the issue you identified above?</b></p> <p>* must provide value</p>	<p> <input checked="" type="radio"/> Fully confident  <input type="radio"/> Somewhat confident  <input type="radio"/> Not confident         </p> <p>reset</p>

Figure A2 – CCDP Survey Image 2

<p>When the subject discusses the other actor's position on the issue you identified above, does the subject refer to any valence characteristics of this other actor?</p>	<p> <input checked="" type="radio"/> Yes  <input type="radio"/> No         </p> <p>Valence includes references to party/leader honesty, integrity, character, competence, performance; party unity; leader charisma. You should answer this question "yes" only if the subject is clearly and openly saying that they are the competent, unified, honest etc. party/leader to deal with that issue. If they do not clearly discuss their competence, integrity etc. when discussing this specific issue, say no.</p> <p>reset</p>
<p>What is the valence content?</p>	<p> <input type="radio"/> Party/Govt/Est honesty/integrity/character  <input type="radio"/> Party/Govt/Est (past, current, future) competence/performance  <input type="radio"/> Party/Govt/Est unity  <input type="radio"/> Party/Govt/Est other valence dimension  <input checked="" type="radio"/> Leader honesty/integrity/character  <input type="radio"/> Leader (past, current, future) competence/performance  <input type="radio"/> Leader charisma  <input type="radio"/> Leader other valence dimension  <input type="radio"/> Other target actor (e.g., an MP of the party, the deputy leader, a minister etc.)         </p> <p>reset</p>
<p>Is the valence category referred to in a negative or positive light?</p>	<p> <input checked="" type="radio"/> negative direction  <input type="radio"/> neutral  <input type="radio"/> positive direction         </p> <p>reset</p>
<p>When the subject discusses the position of the other actor on the issue you identified above, does the subject refer to a second valence characteristic of the party/government/establishment?</p>	<p> <input type="radio"/> Yes  <input checked="" type="radio"/> No         </p> <p>Valence includes references to party/leader honesty, integrity, character, competence, performance; party unity; leader charisma. You should answer this question "yes" only if the subject is clearly and openly saying that they are the competent, unified, honest etc. party/leader to deal with that issue. If they do not clearly discuss their competence, integrity etc. when discussing this specific issue, say no.</p> <p>reset</p>
<p>How confident are you with your answers to the issue-related valence questions? * must provide value</p>	<p> <input checked="" type="radio"/> Fully confident  <input type="radio"/> Somewhat confident  <input type="radio"/> Not confident         </p> <p>reset</p>

Figure A3 – CCDP Survey Image 3

<p>Does the subject talk about the other actor's valence (the actor you identified above) without any specific reference to an issue position? * must provide value</p>	<p> <input checked="" type="radio"/> Yes  <input type="radio"/> No         </p> <p>Note that if the subject is saying that the other party is (in)competent/(dis)unified etc. to deal with a particular issue, you should have already coded it above as an issue category. This question should be answered as "yes" only if the subject says that the other actor is (in)competent, (dis)unified, (dis)honest, (not) charismatic etc. WITHOUT a reference to any specific issue positions</p> <p>reset</p>
<p>First (or Only) Valence Content</p>	<p> <input type="radio"/> Party/Govt/Est honesty/integrity/character  <input checked="" type="radio"/> Party/Govt/Est (past, current, future) competence/performance  <input type="radio"/> Party/Govt/Est unity  <input type="radio"/> Party/Govt/Est other valence dimension  <input type="radio"/> Leader honesty/integrity/character  <input type="radio"/> Leader (past, current, future) competence/performance  <input type="radio"/> Leader charisma  <input type="radio"/> Leader other valence dimension  <input type="radio"/> Other target actor (e.g., an MP of the party, the deputy leader, a minister etc.)         </p> <p>reset</p>
<p>Is the valence category referred to in a negative or positive light?</p>	<p> <input checked="" type="radio"/> negative direction  <input type="radio"/> neutral  <input type="radio"/> positive direction         </p> <p>reset</p>
<p>How confident are you with your answer for identifying the questions related to this valence content? * must provide value</p>	<p> <input checked="" type="radio"/> Fully confident  <input type="radio"/> Somewhat confident  <input type="radio"/> Not confident         </p> <p>reset</p>

## A4 CCDP Issue Categories

The two figures below show the issue classifications from the *Comparative Campaign Dynamics Project*. The classification is taken from Debus, Somer-Topcu and Tavits (2018).

Figure A4 – CCDP Issue categories

Variable	Identification
<i>subject</i>	Party making statements on its issue positions, issue-related valence, and general valence (country-specific party code, see Appendix, Table A1)
<i>statement_type</i>	Type of statement made <ul style="list-style-type: none"> <li>- <i>SelfIssue</i> (purely issue-related standpoint)</li> <li>- <i>SelfIssueVal</i> (issue-related valence)</li> <li>- <i>SelfVal</i> (general valence)</li> <li>- additional country-specific values (see 6.3)</li> </ul>
<i>var_value</i> <sup>a</sup>	Content of statement, dependent on <i>statement_type</i> . For <i>statement_type</i> == <ul style="list-style-type: none"> <li>- <b>(Self-/Other)Issue</b>: Policy area <ul style="list-style-type: none"> <li>1 – Taxes</li> <li>2 – Social Policy/Public Services</li> <li>3 – Inflation</li> <li>4 – Unemployment</li> <li>5 – Other Economic Performance</li> <li>6 – Centralization vs. Regional Autonomy</li> <li>7 – Environment</li> <li>8 – Immigration, Asylum</li> <li>9 – Justice System</li> <li>10 – Law and Order, Security, Terrorism</li> <li>11 – National Way of Life</li> <li>12 – Traditional Morality, Family Values, Religion</li> <li>13 – Europe/EU</li> <li>14 – Internationalism (not EU)</li> <li>15 – Foreign Intervention</li> <li>16 – Agriculture/Rural Affairs</li> <li>99 – Other Issue</li> </ul> (for additional country-specific issue domains see Table 11) </li> <li>- <b>IssueVal</b>: (issue-related) Valence category <ul style="list-style-type: none"> <li>1 – Party/government honesty/integrity</li> <li>2 – Party/govt (past, current, future) competence/performance</li> <li>3 – Party/government unity</li> <li>4 – Leader honesty/integrity/character</li> <li>5 – Leader (past, current, future) competence/performance</li> <li>6 – Leader charisma</li> <li>7 – Other</li> </ul> </li> <li>- <b>SelfVal</b>: Valence category <ul style="list-style-type: none"> <li>1 – Party/government honesty/integrity</li> <li>2 – Party/govt (past, current, future) competence/performance</li> <li>3 – Party/government unity</li> <li>4 – Leader honesty/integrity/character</li> <li>5 – Leader (past, current, future) competence/performance</li> <li>6 – Leader charisma</li> <li>7 – Other</li> </ul> </li> <li>- additional country-specific values (see 6.3)</li> </ul>
<i>direction</i>	Direction of statement made <ul style="list-style-type: none"> <li>-1 – negative</li> <li>0 – neutral</li> <li>1 – positive</li> <li>99 – contradictory statement</li> </ul>
<i>valen_issue</i>	Issue/policy area related to issue valence statements: See codes for <i>var_value</i> if <i>statement_type</i> == <i>Issue</i> (only applicable for <i>statement_type</i> == <i>IssueVal</i> )



**Figure A5** – CCDP Social Policy Issue categories

Variable	Identification
<i>socialPol</i>	Social policy issue/area sub-code (only applicable for statements on social policy, i.e., <i>issue area==2</i> ) <ul style="list-style-type: none"> <li>- 1 – Education</li> <li>- 2 – Health Care</li> <li>- 3 – Elderly care/pensioners</li> <li>- 4 – Public Housing</li> <li>- 5 – Public Transportation</li> <li>- 6 – Minimum Wage</li> <li>- 7 – Social Security</li> <li>- 8 – Childcare</li> <li>- 9 – Youth</li> <li>- 10 – Other family policies</li> <li>- 99 – Other social policy/public services</li> </ul> (for country-specific issue domains see Table 11)
<i>socialPol_spend_dir</i>	Direction of social policy statement (only applicable for statements on social policy, i.e., <i>issue area==2</i> ) <ul style="list-style-type: none"> <li>- -1 – decrease spending</li> <li>- 0 – neutral</li> <li>- 1 – increase spending</li> <li>- 99 – contradictory statement</li> </ul>
<i>dominant_issue</i>	Dominant issue in the article, i.e., the issue an article focuses on. The issue categories are identical to those of the parties' statements; see above
<i>dominant_issue_social</i>	Dominant issue in the article, in the case of a social policy issue being the main issue ( <i>dominant_issue==2</i> ); for issue categories, see above

## A5 Matching CCDP and Seeberg Issue Categories

The following five tables categorize the issues and issue codes from the *Comparative Campaign Dynamics Project* into left- and right-wing issues based on Seeberg (2017). The tables show the issue codes used by the CCDP.

**Table A3** – Left-wing CCDP Issues

Issue Category	Issue Code		
	All Campaigns	UK0510	UK15
Social Policy/Public Services	2	2	2
Unemployment	4	4	4
Environment	7	6	7
Education	2	2	2
Health Care	2	2	2
Elderly care/pensioners	2	2	2
Public Housing	2	2	2
Public Transportation	2	2	2
Minimum Wage	2	2	2
Social Security	2	2	2
Childcare	2	2	2
Youth	2	2	2
Other family policies	2	2	2
Other social policy/public services	2	2	2
Gender Equality (Sweden only)	17	NA	NA

**Table A4** – Left-wing CCDP Issues - Alternative Coding

Issue Category	Issue Code		
	All Campaigns	UK0510	UK15
Social Policy/Public Services	2	2	2
Unemployment	4	4	4
Environment	7	6	7
Internationalism (not EU, not Intervention)	14	13	14
Education	2	2	2
Health Care	2	2	2
Elderly care/pensioners	2	2	2
Public Housing	2	2	2
Public Transportation	2	2	2
Minimum Wage	2	2	2
Social Security	2	2	2
Childcare	2	2	2
Youth	2	2	2
Other family policies	2	2	2
Other social policy/public services	2	2	2
Gender Equality (Sweden only)	17	NA	NA

**Table A5** – Right-wing CCDP Issues

Issue Categories	Issue Codes		
	All Campaigns	UK0510	UK15
Taxes	1	3	1
Inflation	3	1	3
Immigration/Asylum	8	7	8
Justice System	9	8	9
Law and Order	10	9	10
National Way of Life	11	10	11
Traditional Morality	12	11	12
Europe/EU	13	12	13
Foreign Intervention	15	NA	NA
Agriculture/Rural Affairs	16	14	15

**Table A6** – Right-wing CCDP Issues - Alternative Coding

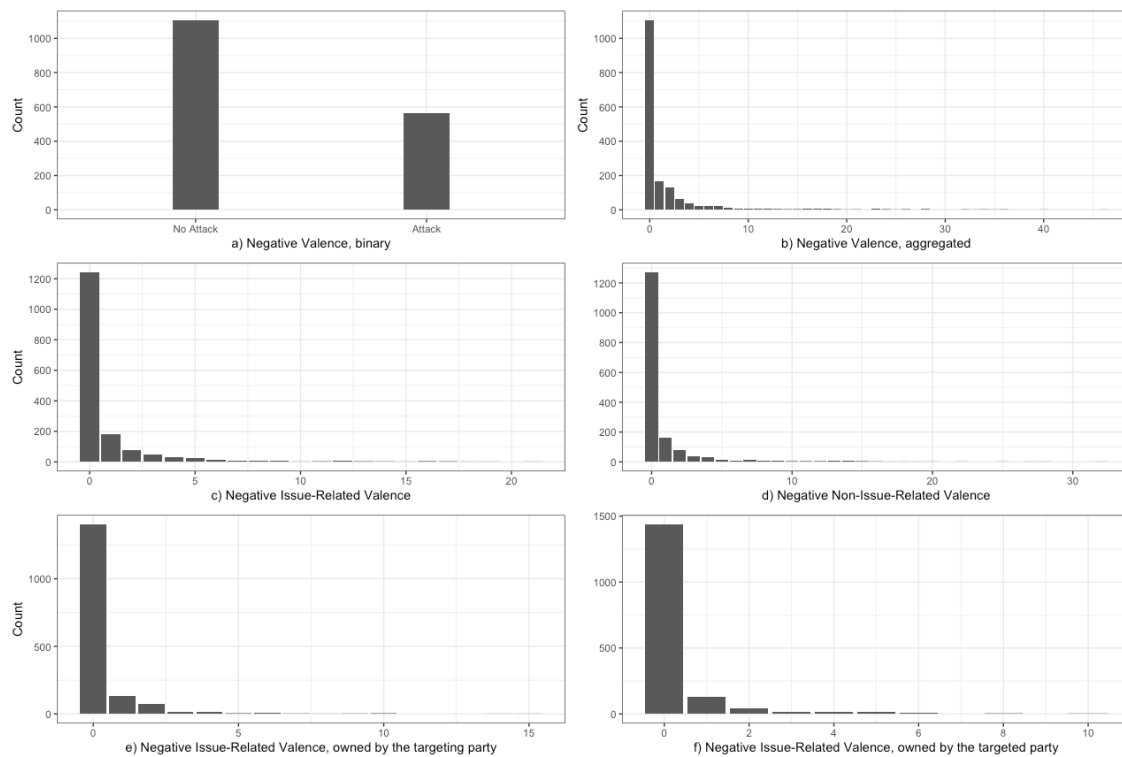
Issue Categories	Issue Codes		
	All Campaigns	UK0510	UK15
Taxes	1	3	1
Inflation	3	1	3
Immigration/Asylum	8	7	8
Justice System	9	8	9
Law and Order	10	9	10
National Way of Life	11	10	11
Traditional Morality	12	11	12
Europe/EU	13	12	13
Agriculture/Rural Affairs	16	14	15

**Table A7** – Issues in the CCDP that were not assigned left- or right-wing ownership

Issue Categorie	Issue Code		
	All Campaigns	UK0510	UK15
Other Econ. Performance	5	NA	5
Centralization/Regional Autonomy	6	NA	6
Other Issue	99	99	99
Corruption	CZ 17, PL 19, PT 17		

Several country-specific issues were not classified on the left-right dimension. They are listed with country and issue code: Hungarians outside the country (Hungary 18), Constitutional changes (Czech Republic 18), Communist Past (Poland 17), Smolensk Accident (Poland 18), Bailout/austerity measures (Portugal 18).

## A6 Figures of the dependent variables including zeros

**Figure A6** – Distribution of Valence Attacks with zeros

## A7 Testing the mechanism

Table A8 presents a preliminary test of the mechanism of legitimacy. The dependent variable is polling performance of a political party and the key independent variable is the number of valence attacks issued by that political party in the week before. The standard errors are clustered at the party-level.

**Table A8** – Testing the mechanism of legitimacy

	Change in polling performance			
	Issues	Nonissues	Sender Owned	Receiver Owned
<b>Issue attacks</b>	0.043* (0.020)	0.011 (0.019)	0.044 (0.038)	−0.001 (0.033)
Poll, lag	−0.023* (0.010)	−0.017 (0.009)	−0.016 (0.010)	−0.015 (0.009)
Delta Poll, lag	0.110 (0.065)	0.124 (0.065)	0.133* (0.066)	0.126 (0.065)
Attacks received	0.004 (0.009)	0.006 (0.009)	0.005 (0.009)	0.008 (0.009)
Weeks to Election	0.038 (0.091)	0.033 (0.092)	0.036 (0.096)	0.027 (0.091)
Constant	0.372 (0.478)	0.290 (0.486)	0.333 (0.489)	0.325 (0.483)
N	228	228	221	228
R <sup>2</sup>	0.054	0.036	0.040	0.034

\*p < .05, The DV is change in polling performance and estimated with OLS.

## A8 Replication with Prime Minister Coding

This section demonstrates that the results in the manuscript are robust to changing the definition of incumbency. In the manuscript all parties in a governing coalition were included in the incumbency coding. The two tables use a incumbency variable that only includes the prime minister or chancellor party as the incumbent. The results remain similar.

**Table A9** – Valence Attacks and Incumbency with PM coding

	(1)	(2)
	Attacks (1 = yes)	Attacks, number of
	<i>Logit</i>	<i>Neg. Bin., trunc.</i>
Target is PM	0.647* (0.281)	0.367* (0.151)
Controls	Yes	Yes
Country Fixed Effects	Yes	Yes
Dyad RSE	Yes	Yes
N	1,672	566
Log Likelihood	−823.171	−1,182.477
AIC	1,684.341	2,402.954

\*p < .05, Reported are log odds for model 1 and expected log counts for model 2. All controls from main models included.

**Table A10** – Valence Attacks and Issue Ownership with PM coding

	(3)	(4)	(5)	(6)
	Issue Related	Nonissue Related	Sender Owned	Receiver Owned
	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>
Target is PM	0.353* (0.149)	0.208 (0.115)	0.527* (0.064)	0.462 (0.287)
Controls	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
Dyad RSE	Yes	Yes	Yes	Yes
N	566	566	566	566
Log Likelihood	−1,009.398	−994.308	−698.496	−647.368
AIC	2,056.796	2,026.615	1,434.992	1,332.736

\*p < .05, Reported are expected log counts. All controls from main models included.

## A9 Replication with different issue codings

The effect of alternative issue codings is tested in the table below. The table replicates models 5 and 6 in Table 4. Now issues that were included in the CCDP but are not listed in Seeberg (2017) classification are changed to alternative classifications. Coding Internationalism as a left-wing issue and dropping Foreign Intervention from the right-wing issues does not change the substantive conclusions of the models in the text.

**Table A11** – Valence Attacks and Issue Ownership With Different Issue Classifications

	Version 2	
	Sender Owned	Receiver Owned
	(1)	(2)
Target is Incumbent	0.586* (0.061)	0.120 (0.214)
Controls	Yes	Yes
Country Fixed Effects	Yes	Yes
Dyad RSE	Yes	Yes
N	566	566
Log Likelihood	−732.896	−635.056
AIC	1,503.791	1,308.112

\*p < .05. Reported are expected log counts.

## A10 Replication with Campaign-Fixed Effects

All models in the manuscript are estimated with country fixed effects that control for unobserved country or party system variation. The models can also be estimated with fixed effects that control for unobserved heterogeneity in elections. The results are presented below and the conclusions remain the same.

**Table A12** – Valence Attacks and Incumbency with Campaign Fixed Effects

	(1)	(2)
	Attacks (1 = yes)	Attacks, number of
	<i>Logit</i>	<i>Neg. Bin., trunc.</i>
Target is Incumbent	0.539* (0.221)	0.285* (0.137)
Controls	Yes	Yes
Campaign Fixed Effects	Yes	Yes
Dyad RSE	Yes	Yes
N	1,672	566
Log Likelihood	−809.788	−1,171.075
AIC	1,673.576	2,396.150

\*p < .05, Reported are log odds for model 1 and expected log counts for model 2. All controls from main models included.

**Table A13** – Valence Attacks and Issue Ownership with Campaign Fixed Effects

	(3)	(4)	(5)	(6)
	Issue Related	Nonissue Related	Sender Owned	Receiver Owned
	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Poisson</i>
Target is Incumbent	0.306* (0.126)	0.071 (0.129)	0.459* (0.080)	0.117 (0.233)
Controls	Yes	Yes	Yes	Yes
Campaign Fixed Effects	Yes	Yes	Yes	Yes
Dyad RSE	Yes	Yes	Yes	Yes
N	566	566	566	566
Log Likelihood	−1,000.527	−981.839	−676.635	−670.542
AIC	2,055.053	2,017.679	1,407.271	1,395.083

\*p < .05, Reported are expected log counts. All controls from main models included.

## A11 Ideology of Receiver

The following two tables replicate Table 3 and Table 4 in the manuscript. They replace the variable controlling for the ideology of the sender of the valence attacks with the ideology of the receiver of the valence attack. The results remain similar and the substantive conclusions do not change. All controls from the initial model are included.

**Table A14** – Valence Attacks and Incumbency with Receiver Ideology

	(1)	(2)
	Attacks (1 = yes)	Attacks, number of
	<i>Logit</i>	<i>Neg. Bin., trunc.</i>
Target is Incumbent	0.487*	0.279*
	(0.227)	(0.132)
Ideology of Receiver	0.007	−0.005
	(0.006)	(0.007)
Controls	Yes	Yes
Country Fixed Effects	Yes	Yes
Dyad RSE	Yes	Yes
N	1,672	1,672
Log Likelihood	−822.267	−1,183.354
AIC	1,682.533	2,404.708

\*p < .05

**Table A15** – Valence Attacks and Issue Ownership with Receiver Ideology

	(1)	(2)	(3)	(4)
	Issue Related	Nonissue Related	Sender Owned	Receiver Owned
	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Poisson</i>	<i>Neg. Bin.</i>
Target is Incumbent	0.316*	0.049	0.539*	0.178
	(0.118)	(0.128)	(0.054)	(0.218)
Ideology of Receiver	−0.002	−0.008	−0.0004	0.011
	(0.004)	(0.008)	(0.006)	(0.009)
Controls	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
Dyad RSE	Yes	Yes	Yes	Yes
N	566	566	566	566
Log Likelihood	−1,008.337	−996.001	−737.371	−650.140
AIC	2,054.673	2,030.002	1,512.741	1,338.280

\*p < .05



## A12 Zero-inflated negative binomial regression

Table 3 in the manuscript estimates a hurdle model with a logit and a zero-truncated negative binomial regression. Alternatively, it is possible to estimate the same model with a zero-inflated negative binomial model. The results remain similar.

**Table A16** – Valence Attacks with zero-inflated negative binomial regression

	Attacks, number of (1)
Target is Incumbent	0.315* (0.101)
Country Fixed Effects	Yes
Dyad Robust SE	No
N	1,672
Log Likelihood	−1,983.567

\*p < .05. Reported are expected log counts.

# A13 Replication with Multi-level Models

The two tables below replicate the analysis in the manuscript with generalized linear multilevel models. In order to account for the dependency structure of the dyadic data I use the dyad indicator as the group-level variable. The results remain very similar and the conclusions from the analysis stay the same.

**Table A17** – Valence Attacks and Incumbency in Multi-Level Models

	(1)	(2)
	Attacks (1 = yes)	Attacks, number of
	<i>Logit</i>	<i>Neg. Bin., trunc.</i>
Target is Incumbent	0.656* (0.171)	0.231* (0.099)
N	1,672	566
Log Likelihood	−830.652	−1,038.395
AIC	1,683.303	2,100.790
BIC	1,742.943	2,152.853

\*p < .05

**Table A18** – Valence Attacks and Issue Ownership in Multi-Level Models

	(3)	(4)	(5)	(6)
	Issue Related	Nonissue Related	Sender Owned	Receiver Owned
	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>	<i>Neg. Bin.</i>
Target is Incumbent	0.317* (0.091)	−0.021 (0.097)	0.610* (0.102)	0.181 (0.144)
N	566	566	566	566
Log Likelihood	−1,038.395	−1,033.118	−741.174	−654.401
AIC	2,100.790	2,090.237	1,504.347	1,332.803
BIC	2,152.853	2,142.300	1,552.072	1,384.866

\*p < .05

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