

Online Appendix

It's Not Only What you Say, It's Also How You Say It: The Strategic Use of Campaign Sentiment

CHARLES CRABTREE¹
University of Michigan

MATT GOLDER²
Pennsylvania State University

THOMAS GSCHWEND³
University of Mannheim

INDRIDI H. INDRIDASON⁴
University of California, Riverside

Forthcoming in the *Journal of Politics*.

¹Ph.D. Candidate, Department of Political Science, University of Michigan, 505 South State Street, Ann Arbor, MI 48109. (ccrabtr@umich.edu).

²Professor, Department of Political Science, Pennsylvania State University, 306 Pond Lab, University Park, PA 16802 (mgolder@psu.edu).

³Professor, Department of Political Science, University of Mannheim, A 5, 6, D-68131, Mannheim, Germany (gschwend@uni-mannheim.de).

⁴Professor, Department of Political Science, 900 University Avenue, University of California, Riverside, CA 92521 (indridi.indridason@ucr.edu).

Online Appendix A: Finance Ministry Party

The *Prime Ministerial Party Hypothesis* states that prime ministerial parties use higher levels of positive sentiment in their campaign messages than their coalition partners. Voters are likely to hold the prime ministerial party more responsible for the state of the world than its coalition partners. This is because the prime minister is the most visible member of the government and because the prime ministerial party is widely recognized as the agenda setter (Glasgow, Golder and Golder, 2011; Fortunato, Lin and Stevenson, 2013; Duch and Stevenson, 2013). Consistent with this, empirical evidence shows that the economic vote for the prime ministerial party is disproportionately high compared to that of other governmental parties (Duch and Stevenson, 2008; Debus, Stegmaier and Tosun, 2014).

Some scholars have suggested that voters may also attribute responsibility for the state of the world to the finance ministry party, particularly when it comes to the state of the economy (Williams, Seki and Whitten, 2016). However, the empirical support for this claim is rather mixed. For example, Debus, Stegmaier and Tosun (2014) find that there is no economic vote for the finance ministry party in Germany. In their more comprehensive study, Duch and Stevenson (2008, 269) conclude that while the finance ministry party experiences some of the economic vote, “most of it goes to the prime ministerial party.” We claimed in the main text (see note 3) that, consistent with these previous studies, there is little evidence that parties controlling the finance ministry use higher levels of positive sentiment in their campaign messages than their coalition partners. We now turn to the basis for our claim.

In Table 1, we present the results from four different models where we examine the level of positive campaign sentiment found in the manifestos of incumbent parties, incumbent prime ministerial parties, and incumbent finance ministry parties. Data on incumbent finance ministry parties comes from Seki and Williams (2014). Model 1 in Table 1 acts as a baseline and simply reports the results from Model 2 in Table 2 in the main text. While the results in Model 2 in Table 1 indicate that the level of positive sentiment exhibited by finance ministry parties is not significantly different from that exhibited by its coalition partners as a whole, those in Model 3 indicate that finance ministry parties still do not exhibit higher levels of positive sentiment than their coalition partners even when we separate out prime ministerial parties. These inferences are based on the fact that the coefficients on *Incumbent Party* × *Finance Ministry Party* are not statistically significant in either Model 2 or Model 3.

Table 1: *Positive Sentiment* in European Party Manifestos

Dependent Variable: Level of Positive Sentiment in a Party Manifesto				
	Model 1	Model 2	Model 3	Model 4
<i>Incumbency</i>				
Incumbent Party	0.36*** (0.08)	0.48*** (0.08)	0.36*** (0.08)	0.39*** (0.10)
Incumbent Party × Prime Ministerial Party	0.28*** (0.07)	-	0.28*** (0.08)	0.23** (0.11)
Incumbent Party × Finance Ministry Party	-	0.08 (0.09)	-0.01 (0.09)	-0.09 (0.14)
Incumbent PM Party × Incumbent FM Party	-	-	-	0.12 (0.19)
Constant	1.56*** (0.15)	1.56*** (0.15)	1.56*** (0.15)	1.56*** (0.15)
Language Fixed Effects	Yes	Yes	Yes	Yes
Manifestos	421	421	421	421
Elections	70	70	70	70
Within R^2	0.11	0.10	0.11	0.11
Between R^2	0.08	0.004	0.08	0.09
Overall R^2	0.04	0.03	0.04	0.04
σ_u	1.34	1.35	1.34	1.34
σ_e	0.69	0.69	0.69	0.69
ρ	0.79	0.79	0.79	0.79

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$ (two-tailed).

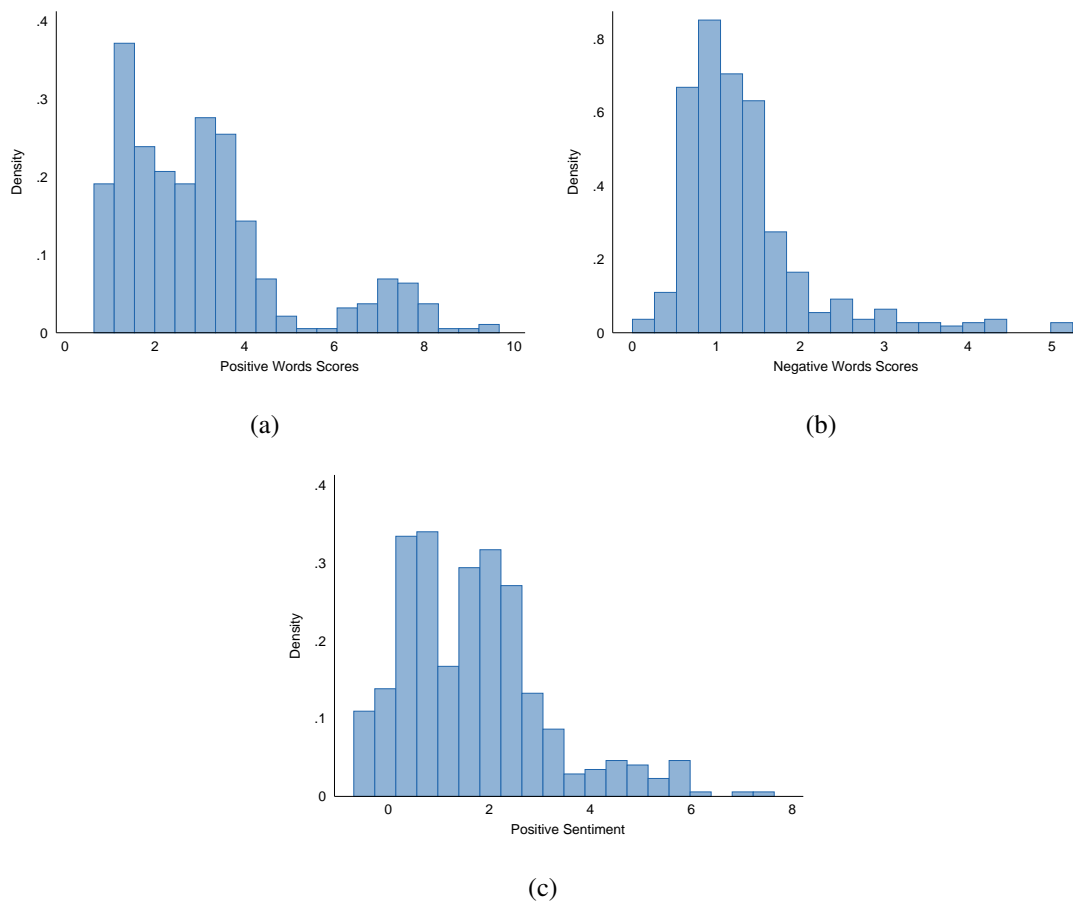
Note: Bootstrap standard errors clustered by election are shown in parentheses. Data come from 421 party manifestos in 70 national legislative elections in eight West European countries from 1980 to 2012. The dependent variable, *Positive Sentiment*, is calculated as the percentage of positive emotive words in a manifesto minus the percentage of negative emotive words in a manifesto. *Incumbent PM Party* is equal to *Incumbent Party × Prime Ministerial Party* and *Incumbent FM Party* is equal to *Incumbent Party × Finance Ministry Party*.

The additional interaction term in Model 4 allows us to examine whether the level of positive sentiment exhibited by a party in its manifesto depends on whether it controls both the finance ministry and the prime ministership or just the finance ministry but not the prime ministership. In our sample, there are 14 observations where a party controls the finance ministry but not the prime ministership and 21 observations where a party controls the prime ministership but not the finance ministry. The results in Model 4 show that controlling the finance ministry, either alone or in combination with the prime ministership, never changes the level of positive sentiment in a party's manifesto. This is indicated by the statistically insignificant coefficients on both *Incumbent Party × Finance Ministry Party* and *Incumbent PM Party × Incumbent FM Party*. Consistent with the *Prime Ministerial Party Hypothesis* and the discussion in the main text, though, the results presented in Table 1 indicate that prime ministerial parties always exhibit higher levels of positive sentiment in their manifestos than their coalition partners, even when they do not control the finance ministry. This is indicated by the positive and statistically significant coefficients on *Incumbent Party × Prime Ministerial Party*.

Online Appendix B: *Positive Sentiment* and Positive and Negative Words Scores

In Online Appendix B, we provide more descriptive information on our measure of positive campaign sentiment. Recall that *Positive Sentiment* is calculated as the *positive words score* for a manifesto minus that manifesto's *negative words score*. *Positive words scores* refer to the percentage of positive emotive words in a manifesto, while *negative words scores* refer to the percentage of negative emotive words in a manifesto. The observed range for *Positive Sentiment* in our sample is -0.68% to 7.60% ; the mean is 1.70% and the standard deviation is 1.45% . The observed range for *positive words score* is 0.64% to 9.62% ; the mean is 3.02% and the standard deviation is 1.91% . The observed range for *negative words score* is 0% to 5.22% ; the mean is 1.32% and the standard deviation is 0.79% .

Figure 1: Histograms of *Positive Sentiment* and Positive and Negative Words Scores



Note: Figure 1 shows a series of histograms for *positive words scores* (panel a), *negative words scores* (panel b), and *Positive Sentiment* (panel c) for 421 party manifestos in 70 national legislative elections in eight West European countries from 1980 to 2012. *Positive words scores* refer to the percentage of positive emotive words in a manifesto, while *negative words scores* refer to the percentage of negative emotive words in a manifesto. *Positive Sentiment* is calculated as the *positive words score* for a manifesto minus that manifesto's *negative words score*.

Online Appendix C: Fixed Effects

In Appendix C, we further examine the use of fixed effects in our model. In Table 2 in the main text, we present results from a model in which we employed language fixed effects and bootstrap standard errors clustered by election. The language fixed effects were included to take account of the fact that users of different languages differ in their underlying proclivity to employ positive and negative emotive words. We clustered the standard errors on elections to take account of the fact that the content and language used in party manifestos are unlikely to be independent within a given election. And we used bootstrap clustered standard errors as a conservative estimate of the size of the standard errors, as the literature is unclear as to when the number of clusters is sufficiently large to justify the asymptotic properties of traditional cluster-robust standard errors (Williams, 2000; Green and Vavreck, 2008; Esarey and Menger, 2018; Wooldridge, 2003, 135).¹

Language Fixed Effects

There are several different ways to estimate a fixed effects model that produce identical results with respect to the estimated coefficients and standard errors. In Table 2 in the main text, we presented results from the ‘within estimator’ version of the fixed effects model, which treats our language fixed effects as nuisance parameters and removes them through mean-differencing (Cameron and Trivedi, 2009, 251). Our models were specified so that the coefficients on the constant terms indicated the average language fixed effects. It is also possible, though, to estimate a least-squares dummy-variable (LSDV) version of the fixed effects model that provides the individual estimates for the language fixed effects (Cameron and Trivedi, 2009, 253). For those who are interested, we now present the results from an LSDV version of our fixed effects model in Table 2. The models are specified with no constant so that we can estimate the intercepts for each language. Consistent with the ‘language’ information displayed in Figure 2 in the main text, English and Portuguese have the two largest fixed effects, while Dutch and Italian have the two smallest fixed effects.

As expected, all of the slope coefficients and standard errors shown in Table 2 are identical to those shown in the main text in Table 2. These are our primary parameters of interest, as they allow us to test our hypotheses. You’ll notice, though, that the estimates of the R^2 differ across the two versions of the

¹As we note in the main text, our results are slightly stronger if we had employed traditional cluster-robust standard errors. Our inferences are also robust if we do not cluster our standard errors by election.

Table 2: *Positive Sentiment* in European Party Manifestos – Language LSDV Fixed Effects Model

	Dependent Variable: <i>Positive Sentiment</i>										
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
<i>Incumbency</i>											
Incumbent Party	0.53*** (0.07)	0.36*** (0.08)	0.15** (0.06)	0.26*** (0.08)	0.27*** (0.08)	0.24*** (0.07)	0.26*** (0.08)	0.05 (0.11)	0.34** (0.14)	0.23** (0.10)	0.14 (0.16)
Incumbent Party × Prime Ministerial Party	-	0.28*** (0.07)	0.24*** (0.07)	0.24*** (0.08)	0.21** (0.08)	0.24*** (0.08)	0.24*** (0.08)	0.23*** (0.08)	0.26*** (0.08)	0.24*** (0.08)	0.24*** (0.09)
<i>Ideology</i>											
Left-Right	-	-	0.41*** (0.07)	-	-	-	-	-	-	-	-
Left-Right ²	-	-	-0.04*** (0.01)	-	-	-	-	-	-	-	-
Extremist Party	-	-	-	-0.50*** (0.10)	-0.49*** (0.11)	-0.45*** (0.11)	-0.50*** (0.10)	-0.47*** (0.10)	-0.45*** (0.11)	-0.51*** (0.10)	-0.43*** (0.10)
<i>Economic Conditions</i>											
Inflation	-	-	-	-	-0.03** (0.01)	-	-	-0.04*** (0.01)	-	-	-0.04** (0.01)
Unemployment	-	-	-	-	-	-0.03** (0.01)	-	-	-0.02** (0.01)	-	-0.03** (0.01)
Growth	-	-	-	-	-	-	-0.001 (0.01)	-	-	-0.004 (0.01)	-0.02 (0.01)
<i>Economic Conditions and Incumbency</i>											
Incumbent Party × Inflation	-	-	-	-	-	-	-	0.04** (0.02)	-	-	0.03* (0.02)
Incumbent Party × Unemployment	-	-	-	-	-	-	-	-	-0.01 (0.02)	-	-0.01 (0.02)
Incumbent Party × Growth	-	-	-	-	-	-	-	-	-	0.01 (0.02)	0.01 (0.02)
<i>Language Fixed Effects</i>											
Dutch	0.27*** (0.06)	0.28*** (0.06)	-0.47*** (0.15)	0.41*** (0.06)	0.49*** (0.06)	0.54*** (0.08)	0.41*** (0.06)	0.55*** (0.07)	0.51*** (0.09)	0.42*** (0.06)	0.68*** (0.09)
English	2.24*** (0.11)	2.23*** (0.11)	1.35*** (0.17)	2.33*** (0.10)	2.41*** (0.11)	2.60*** (0.11)	2.33*** (0.11)	2.45*** (0.11)	2.57*** (0.12)	2.34*** (0.11)	2.76*** (0.14)
French	1.41*** (0.12)	1.40*** (0.12)	0.63*** (0.17)	1.58*** (0.13)	1.69*** (0.12)	1.80*** (0.16)	1.58*** (0.13)	1.73*** (0.12)	1.77*** (0.17)	1.58*** (0.13)	1.96*** (0.16)
German	1.58*** (0.10)	1.59*** (0.10)	0.78*** (0.20)	1.75*** (0.10)	1.82*** (0.15)	1.97*** (0.13)	1.75*** (0.11)	1.88*** (0.15)	1.95*** (0.14)	1.76*** (0.13)	2.11*** (0.18)
Italian	0.31*** (0.10)	0.32*** (0.10)	-0.52*** (0.17)	0.47*** (0.13)	0.65*** (0.13)	0.70*** (0.17)	0.47*** (0.13)	0.70*** (0.13)	0.67*** (0.18)	0.48*** (0.13)	0.94*** (0.19)
Portuguese	4.26*** (0.20)	4.25*** (0.20)	3.65*** (0.19)	4.46*** (0.17)	4.79*** (0.13)	4.73*** (0.17)	4.46*** (0.18)	4.86*** (0.13)	4.70*** (0.18)	4.47*** (0.18)	5.11*** (0.17)
Spanish	1.81*** (0.04)	1.79*** (0.04)	0.88*** (0.15)	1.90*** (0.05)	2.04*** (0.09)	2.34*** (0.20)	1.90*** (0.07)	2.09*** (0.10)	2.31*** (0.21)	1.91*** (0.07)	2.55*** (0.23)
Manifestos	421	421	382	412	391	405	412	391	405	412	388
Elections	70	70	69	70	64	68	70	64	68	70	63
R ²	0.91	0.91	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$ (two-tailed).

Note: Bootstrap standard errors clustered by election are shown in parentheses. Data come from 421 party manifestos in 70 national legislative elections in eight West European countries from 1980 to 2012. The dependent variable, *Positive Sentiment*, is calculated as the percentage of positive emotive words in a manifesto minus the percentage of negative emotive words in a manifesto.

fixed effects model. This simply reflects the fact that the R^2 is calculated differently in the LSDV and the within estimator models (Cameron and Trivedi, 2009, 258). Notably, the estimates of the ‘within R^2 ’ from the within estimator models are always smaller (never larger) than the equivalent estimates of the R^2 from the LSDV models. This is because the ‘within estimator’ models do not take account of the variance explained by the language fixed effects. There is a debate about the relative merits of the different R^2 statistics. We do not wish to take a position in this debate as we are more concerned with hypothesis testing and evaluating substantive effects than with prediction and model fit, and because there are reasons to question the informative value of all versions of the R^2 statistic (King, 1986, 1990, 1991). As a result, we report the R^2 from the within estimator models in Table 2 in the main text, and for those who are interested we provide the R^2 from the LSDV models in Table 2 here in [Online Appendix C](#).

The LSDV fixed effects model does not provide estimates of σ_u , σ_e , and ρ . Recall that σ_u indicates the standard deviation for the language fixed effects, while σ_e indicates the standard deviation for the idiosyncratic error terms associated with the party manifestos. ρ is the intraclass correlation coefficient and can be interpreted as the proportion of the total variance attributable to the language fixed effects.

Country Fixed Effects

In the main text (footnote 15), we noted that our results were robust to employing country fixed effects instead of language fixed effects. We now demonstrate this by reporting the results from a series of country fixed effects model specifications in Table 3. We employ the least-squares dummy-variable version of the fixed effects model with no constant so that we can estimate the intercepts for each country and compare our results to those shown in Table 2. The only change in the model specifications from the equivalent ones used in Table 2 is that we have separate fixed effects for Ireland and the United Kingdom; recall that in Table 2 the observations from Ireland and the United Kingdom shared the same English language fixed effect. The magnitude and statistical significance of the estimated coefficients in the country fixed effects models in Table 3 are qualitatively similar to the magnitude and statistical significance of the estimated coefficients in the language fixed effects model in Table 2. If anything, the magnitude of the coefficients on *Incumbent Party* is slightly larger in the country fixed effects model. The fact that the coefficients are similar across the language and country fixed effects models is not surprising given that the coefficients on the United Kingdom and Ireland country fixed effects are similar and that both sets of coefficients are similar to the English language fixed effects in Table 2.

Table 3: *Positive Sentiment* in European Party Manifestos – Country LSDV Fixed Effects Model

	Dependent Variable: <i>Positive Sentiment</i>											
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	
<i>Incumbency</i>												
Incumbent Party	0.55*** (0.07)	0.40*** (0.07)	0.20*** (0.07)	0.30*** (0.08)	0.30*** (0.08)	0.28*** (0.07)	0.30*** (0.08)	0.09 (0.11)	0.37*** (0.13)	0.27*** (0.10)	0.15 (0.16)	
Incumbent Party × Prime Ministerial Party	-	0.24*** (0.07)	0.20*** (0.08)	0.21*** (0.08)	0.18*** (0.08)	0.21*** (0.08)	0.21*** (0.08)	0.21*** (0.08)	0.23*** (0.08)	0.21*** (0.08)	0.23*** (0.08)	
<i>Ideology</i>												
Left-Right	-	-	0.39*** (0.07)	-	-	-	-	-	-	-	-	
Left-Right ²	-	-	-0.04*** (0.01)	-	-	-	-	-	-	-	-	
Extremist Party	-	-	-	-0.48*** (0.11)	-0.48*** (0.11)	-0.44*** (0.11)	-0.48*** (0.11)	-0.46*** (0.10)	-0.44*** (0.11)	-0.48*** (0.10)	-0.42*** (0.10)	
<i>Economic Conditions</i>												
Inflation	-	-	-	-	-0.03*** (0.01)	-	-	-0.04*** (0.01)	-	-	-0.03*** (0.01)	
Unemployment	-	-	-	-	-	-0.02* (0.01)	-	-	-0.02 (0.01)	-	-0.02 (0.01)	
Growth	-	-	-	-	-	-	0.004 (0.01)	-	-	0.001 (0.01)	-0.01 (0.01)	
<i>Economic Conditions and Incumbency</i>												
Incumbent Party × Inflation	-	-	-	-	-	-	-	0.04** (0.02)	-	-	0.03* (0.02)	
Incumbent Party × Unemployment	-	-	-	-	-	-	-	-	-0.01 (0.02)	-	-0.01 (0.02)	
Incumbent Party × Growth	-	-	-	-	-	-	-	-	-	0.01 (0.02)	0.01 (0.02)	
<i>Country Fixed Effects</i>												
United Kingdom	2.50*** (0.10)	2.49*** (0.10)	1.66*** (0.15)	2.53*** (0.09)	2.60*** (0.12)	2.68*** (0.12)	2.52*** (0.10)	2.64*** (0.12)	2.65*** (0.13)	2.53*** (0.10)	2.79*** (0.15)	
Ireland	1.99*** (0.12)	1.99*** (0.12)	1.19*** (0.18)	2.13*** (0.12)	2.25*** (0.14)	2.36*** (0.13)	2.11*** (0.13)	2.30*** (0.14)	2.34*** (0.14)	2.12*** (0.13)	2.59*** (0.18)	
Netherlands	0.27*** (0.06)	0.28*** (0.06)	-0.43*** (0.15)	0.40*** (0.06)	0.48*** (0.07)	0.49*** (0.08)	0.39*** (0.07)	0.53*** (0.07)	0.46*** (0.09)	0.39*** (0.07)	0.63*** (0.10)	
France	1.41*** (0.12)	1.40*** (0.12)	0.67*** (0.17)	1.57*** (0.13)	1.68*** (0.12)	1.72*** (0.15)	1.56*** (0.13)	1.72*** (0.12)	1.69*** (0.16)	1.56*** (0.13)	1.89*** (0.17)	
Spain	1.80*** (0.04)	1.79*** (0.04)	0.93*** (0.15)	1.89*** (0.05)	2.03*** (0.09)	2.20*** (0.18)	1.88*** (0.06)	2.08*** (0.10)	2.17*** (0.19)	1.89*** (0.06)	2.43*** (0.24)	
Portugal	4.25*** (0.20)	4.24*** (0.20)	3.67*** (0.19)	4.45*** (0.17)	4.77*** (0.13)	4.67*** (0.17)	4.43*** (0.18)	4.84*** (0.14)	4.64*** (0.17)	4.44*** (0.18)	5.03*** (0.18)	
Germany	1.57*** (0.10)	1.58*** (0.10)	0.81*** (0.19)	1.73*** (0.11)	1.81*** (0.15)	1.90*** (0.13)	1.72*** (0.11)	1.86*** (0.15)	1.87*** (0.14)	1.73*** (0.11)	2.04*** (0.18)	
Italy	0.31*** (0.10)	0.32*** (0.10)	-0.48*** (0.17)	0.45*** (0.13)	0.63*** (0.13)	0.62*** (0.17)	0.44*** (0.13)	0.68*** (0.13)	0.59*** (0.18)	0.45*** (0.13)	0.87*** (0.20)	
Manifestos	421	421	382	412	391	405	412	391	405	412	388	
Elections	70	70	69	70	64	68	70	64	68	70	63	
R ²	0.91	0.91	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$ (two-tailed).

Note: Bootstrap standard errors clustered by election are shown in parentheses. Data come from 421 party manifestos in 70 national legislative elections in eight West European countries from 1980 to 2012. The dependent variable, *Positive Sentiment*, is calculated as the percentage of positive emotive words in a manifesto minus the percentage of negative emotive words in a manifesto.

Online Appendix D: A Case Study of the 2013 Elections in Germany

To further evaluate our argument about the strategic use of campaign sentiment, we now briefly examine the September 22, 2013 German legislative elections. These elections occurred after the time period covered by the analyses in the main text and therefore represent a more rigorous ‘out-of-sample’ test of our argument (Gelman and Hill, 2006). At the time of the elections, there was an incumbent coalition government comprising the Christian Democrats (CDU/CSU) and Free Democrats (FDP). The prime ministerial position was held by Chancellor Angela Merkel of the Christian Democrats. The main opposition party was the Social Democrats (SPD), led by Peer Steinbrück. Of the remaining parties, the Greens, Alternative for Germany (AfD), the Left Party, and the Pirate Party were the most prominent. While the Greens might reasonably be considered a mainstream party, this is not the case for the other three parties. The Greens are a left of center environmental party promoting ecological and social sustainability. The AfD, which was founded in April 2013, is a right-wing populist party with strong anti-immigrant and eurosceptic tendencies. The Left Party is a left-wing populist party that traces its roots to the Party of Democratic Socialism (PDS), which governed communist East Germany during the Cold War. The Pirate Party, which was founded in 2006, is concerned with enhancing transparency and protecting civil rights in the age of the ‘digital revolution’ and does not fit easily onto the traditional left-right policy dimension.²

Party Manifestos

As indicated in the main text, party manifestos are the ideal form of campaign message for testing our hypotheses. This is because manifestos have several desirable properties that are not jointly shared by other types of campaign message. To summarize, manifestos provide parties with an opportunity to directly place their campaign strategy before voters in a carefully scripted way that is *unfiltered by the media*; they outline the *overarching campaign strategy* of parties in a way that, say, press releases, which often emerge irregularly throughout the campaign in response to ad hoc developments, might not; they are a type of campaign message that is used across Europe, thus *facilitating cross-national comparison*; and they are available for a *long period of time*, thereby allowing us to examine how the same parties change their use of campaign sentiment over time as they move in and out of office.

An analysis of the seven party manifestos used in the 2013 German elections provides strong support

²Our upcoming results are robust to the exclusion of the Pirate Party.

for our theory about the strategic use of campaign sentiment.³ In line with our *Incumbent Party Hypothesis*, the level of positive sentiment employed by incumbent parties (1.41%) is more than twice as high as that employed by opposition parties (0.68%).⁴ In line with our *Prime Ministerial Party Hypothesis*, the level of positive sentiment employed by the prime ministerial party (1.70%) is 53% higher than that employed by its coalition partner (1.11%), and the level of positive sentiment employed by the non-prime ministerial incumbent party is 62% higher than that employed by opposition parties. Finally, in line with our *Extreme Ideology Hypothesis*, the level of positive sentiment employed by mainstream parties (1.24%) is almost three times higher than that employed by the more ideologically extreme parties (0.43%).⁵

In what follows, we discuss the use of emotive language in some of the other types of campaign messages – televised election debates, party election broadcasts, and party websites – that were used during the 2013 German elections. We also elaborate on why these other types of campaign messages are not ideal for testing our theory. Despite our concerns, the results provide broad support for our theoretical argument.

Televised Election Debates

Many European countries hold televised election debates. While there is some cross-national variation, it is clear that these debates are major campaign events that are watched by a large number of voters. For example, the first TV election debate in the UK took place in 2010 and was watched by 9.4 million people on average, or 37% of the TV watching audience (Deans, 2010). The 2017 UK election debate drew a smaller, but not insignificant, peak audience of 4.7 million viewers (Shepherd, 2017). The presidential election debates that occur in France typically enjoy even higher TV audiences. For example, the 2017 presidential debate between Emmanuel Macron and Marine Le Pen drew an audience of 16.5 million viewers, more than 60% of the TV watching audience (Chrisafis, 2017). The 2013 German election debate between Angela Merkel and Peer Steinbrück was watched by an estimated 20 million viewers (Evans, 2013). Election debates offer political parties a good opportunity to present themselves and their policy platforms to the electorate in a partially unmediated way, and might be considered a ‘mini version’ of the election campaign.

³With the exception of the party manifesto published by Alternative for Germany (830 words), each of the manifestos in the 2013 German elections was quite long – the average word count for all seven manifestos was 40,635.

⁴Recall that the numbers in parentheses capture *Positive Sentiment*, which is calculated as the difference in the percentage of positive and negative words in a party manifesto. As indicated in the main text, the level of positive sentiment found in the party manifestos used in our statistical analyses ranges from –0.68% to 7.60%; the mean is 1.76% with a standard deviation of 1.45%. As a result, the levels of positive sentiment observed in the 2013 party manifestos in Germany are not unusual.

⁵As with the upcoming analyses, we do not examine our *Economic Performance Hypotheses* as the state of the economy was fixed for all parties in the 2013 German elections.

There are at least two reasons why using televised election debates to test our argument about the strategic use of emotive language in campaign messages is problematic, particularly in comparison to using party manifestos. First, the substantive content and style of election debates is rarely under the control of individual parties, and party leaders often find themselves responding on the fly to the issues and questions raised by, and language used by, debate moderators, their political opponents, and audience members. The face-to-face nature of campaign debates also encourages an active and confrontational approach that could reasonably cause candidates to adopt a different style of language to that used elsewhere in the campaign. Moreover, whereas parties can devote as much attention as they want to particular issues in their manifestos, election debates often force party leaders to talk about issues that are not central to their particular campaign. Each of the three election debates that took place in the UK in 2010, for example, focused on a different topic: domestic, international, and economic affairs. This format and these topics were the result of a negotiating process between the various political parties and media outlets involved in the 2010 debate.

Second, and more importantly, the heterogeneity in televised election debates, both within and across countries, as well as the relative novelty of these types of events in many European countries, makes drawing valid cross-national inferences difficult. Some countries have had televised election debates for many years. For example, France has held debates for every *presidential* election since 1974, while Germany has held them on and off for legislative elections since 1972. Other countries, though, have limited experience with election debates. The United Kingdom, for instance, has held election debates only since 2010. There is also significant variation in the number of debates per election and in the parties that are eligible, and who choose, to participate. Consider the case of the UK. There were three election debates prior to the 2010 elections in the UK, with only the Conservatives, Labour, and the Liberal Democrats allowed to participate. Prior to the 2015 elections, there were four debates, each with a different number of parties (ranging from seven to two) competing. Prior to the 2017 elections, there was just one election debate between the leaders of seven political parties; the incumbent Conservative prime minister, Theresa May, was absent after refusing to participate. The absence of incumbent or extremist parties in some of these UK debates means that it is difficult to test our *Incumbent Party*, *Prime Ministerial Party*, and *Extreme Ideology Hypotheses*.

Germany exhibits similar variation in the format of its election debates. From 1972, Germany started holding election debates, known as *Elefantenrunden*, in which all of the party leaders with legislative representation were eligible to participate (Anstead, Forthcoming, 9). These debates had no time limits and could last several hours. Election debates did not occur prior to the 1990, 1994, and 1998 elections, be-

cause Chancellor Helmut Kohl refused to participate. Election debates returned in 2002 but now as a ‘duel’ (*TV-Duell*) between the leaders of the two largest parties – the leaders most likely to become Chancellor. In 2013, a debate similar to the old *Elefantenrunden* was added in which the leaders of the remaining legislative parties were able to participate. In 2013, therefore, there was a *TV-Duell* between the incumbent Christian Democrat Chancellor, Angela Merkel, and the leader of the Social Democrats, Peer Steinbrück, as well as a three-way contest (*TV-Dreikampf*) between the leaders of the Free Democrats, the Left Party, and the Greens. As they lacked legislative representation, Alternative for Germany and the Pirate Party were not eligible to participate in this second debate, making it harder to test our *Extreme Ideology Hypothesis*.

Our discussion here has focused on election debates in the United Kingdom and Germany. However, similar variation in debate formats exists in other European countries. As previously indicated, these differences make it difficult to conduct the types of cross-national analyses that appear in the main text. Indeed, this helps to partially explain the lack of ‘comparative’ research on televised election debates in the existing literature more generally. In his recent Scopus literature search, Anstead (Forthcoming, 3) finds that 166 articles were published on televised election debates between 2000 and 2015. Fully 80 of these articles focused entirely on the United States. Of the remaining articles, only five were ‘comparative.’ All five of these articles compared only two countries, and in four cases the second country was the United States.

With these provisos in hand, we now briefly examine the strategic use of emotive language in the debates that took place prior to the September 22, 2013 German elections. The *TV-Duell* between the CDU/CSU and the SPD took place on September 1 and lasted 90 minutes. The *TV-Dreikampf* between the FDP, the Left Party, and the Greens took place the next day on September 2 and lasted 60 minutes. Both debates were broadcast on four networks: ARD, ZDF, RTL, and ProSieben. After recording both debates, we transcribed them, separating out the comments associated with each party. We then ran each set of party comments through the LIWC automatic sentiment analysis program. The average number of words used by the parties in the *TV-Duell* was 6,166; it was 2,754 in the *TV-Dreikampf*.

The results strongly support our hypotheses. In line with our *Incumbent Party Hypothesis*, the level of positive sentiment employed by incumbent parties (1.39%) was almost 60% higher than that employed by opposition parties (0.87%). In line with our *Prime Ministerial Party Hypothesis*, the level of positive sentiment employed by the prime ministerial party (1.67%) was about 50% higher than that employed by its coalition partner (1.11%), and the level of positive sentiment employed by the non-prime ministerial incumbent party was 27.6% higher than that employed by the opposition parties. These levels of positive

sentiment almost perfectly match those found in the party manifestos. Finally, in line with our *Extreme Ideology Hypothesis*, the level of positive sentiment employed by mainstream parties (1.25%) was over three times higher than that employed by the more ideologically extreme parties (0.39%). The magnitude of the difference in positive sentiment between the mainstream and extremist parties appears to be substantively larger during the election debates than in the party manifestos.

The Effect of the Election Debate?

In the main text, we took as our starting point the empirical observation in the existing literature that the emotive content of campaign messages has an impact on voter behavior (Marcus, Neuman and MacKuen, 2000; Brader, 2005, 2006; Brader and Marcus, 2013; Huddy and Gunthorsdottir, 2000; Roseman, Abelson and Ewing, 1986; Weber, Searles and Ridout, 2011; Utych, 2018). We also took as a our starting point the empirical observation that language can engender different emotions (Pennebaker, 1993; Pennebaker and Francis, 1996; Tausczik and Pennebaker, 2010) and thereby shape individual perceptions of the political world around them (Edelman, 1964, 1977). We did not seek to replicate these findings. Instead, we argued that if these empirical findings were correct, then parties should be strategic in their use of campaign sentiment. We then set out to test whether this is, indeed, the case.

We now take this opportunity, though, to reanalyze the results of an experiment conducted during the 2013 election debates in Germany that are consistent with previous empirical findings showing how campaign sentiment can influence how individuals evaluate the state of the world. The experiment, which we did not design, was done in the context of the [German Longitudinal Election Study](#) that accompanied the 2013 elections. Our data come from the first two waves of a panel study (ZA5709), which asked participants the same series of questions just prior to (wave 1) and just after (wave 2) the *TV-Duell* between the leaders of the CDU and SPD (Rattinger et al., 2015). Several of these questions pertained to the economy and the performance of the government. This setup can be considered a pre-post experimental design with the debate as the treatment.

If party leaders who use higher levels of positive sentiment engender a more positive outlook towards the world in their supporters than those who do not support them, then this would be consistent with the existing empirical literature discussing the impact of campaign sentiment on voter behavior. We know from the debate that Chancellor Angela Merkel (CDU) employed 25% more positive emotive language than her opponent, Peer Steinbrück (SPD). As a result, we might expect to see the prime minister's supporters increase

their evaluation of the economy and the government over the course of the debate more than supporters of her opponent. This is precisely what we find. Specifically, we ran the following regression model,

$$\text{Evaluation}_{t2} - \text{Evaluation}_{t1} = \beta_0 + \beta_1 \text{PM Supporter} + \epsilon, \quad (1)$$

where *Evaluation* refers to a respondent's evaluation of the economy or government performance and is coded so that higher values indicate a more positive evaluation, *t2* refers to the post-debate period, *t1* refers to the pre-debate period, and *PM Supporter* is a dichotomous variable, measured at *t1* prior to the debate, that equals one if the respondent supports Merkel and 0 if the respondent supports Steinbrück. For *Evaluation*, we use three different questions that get at retrospective, current, and prospective evaluations of the economy and three different questions that get at the respondent's retrospective, current, and prospective evaluations of their own economic well-being. As predicted, the coefficient on *PM Supporter*, β_1 , is positive in all six cases, indicating that Merkel's supporters improve their evaluation of the state of the world during the course of the debate. It is statistically significant when evaluating the state of the current economy, but does not quite reach conventional levels of statistical significance in the other cases.

We recognize that the design of this particular experiment is not ideal for testing the empirical claim that motivates our own statistical analysis, namely that the emotive content of campaign messages can influence voter behavior and their evaluation of the state of the world. For example, it may be the case that participants are responding to the content of what the two candidates are saying as opposed to the emotive language through which that content is conveyed. Nonetheless, the results are suggestive, and they are consistent with the underlying premise that motivates our interest in analyzing the strategic use of campaign sentiment.

Party Election Broadcasts

As noted in the main text, there is considerable cross-national variation in how political election broadcasts (PEBs) are regulated on television (Kaid and Holtz-Bacha, 2006). Some countries like Switzerland, for example, ban all forms of political advertising on television (and radio). PEBs are not officially banned in Denmark, but political actors have historically agreed not to use them for campaigning purposes (Kaid and Holtz-Bacha, 2006, 5). While some countries ban 'paid' political advertising on public *and* commercial television (France, Portugal, Spain, the United Kingdom), others allow it but only on commercial television (Germany, Italy, and the Netherlands). Many European countries provide 'free', but rationed, political

advertising, typically on public television, but there remains significant heterogeneity, both within and across countries, when it comes to things like the number of slots allocated to parties and the length of individual broadcasts. This variation makes it difficult to draw valid cross-national inferences about the strategic use of campaign sentiment from party election broadcasts. Note also that we are interested in the use of emotive *language* in campaign messages. As previous research has indicated (Huddy and Gunnthorsdottir, 2000; Brader, 2006), much of the emotive content in PEBs comes from the imagery and music that is employed. From a practical point of view, the limited number of words employed in a typical PEB also raises concerns about the reliability of automatic sentiment analysis programs like LIWC (see note 10 in the main text).

On the whole, party election broadcasts play only a limited role during German election campaigns. Indeed, each party typically releases only one broadcast of up to 90 seconds for the entire campaign (Schultheis, 2013). In 2013, the average number of words used in a party election broadcast for the seven parties under consideration here was just 195 ($\sigma = 53$). The word counts ranged from a low of 130 for the Pirate Party and Alternative for Germany to a high of 269 for the SPD.⁶ Each party is able to air their election broadcast for free on the two public television networks, ZDF and ARD. The number of times that each party can air their broadcast depends on their vote-share in the previous election and their status in the parliament, with a minimum of two for any party eligible to compete in the elections. In addition, the largest parties cannot have more than four times the number of election broadcasts as the smallest party. In 2013, this meant that the two largest parties, the Christian Democrats and the Social Democrats, were able to air their single broadcast eight times on both ZDF and ARD; the Free Democrats, the Greens, and the Left Party were able to air their election broadcast four times on each network; and Alternative for Germany and the Pirate Party were able to air their broadcast just twice on each network (Medienanstalten, 2013).⁷ Political parties in Germany, unlike those in France, Portugal, Spain, and the United Kingdom, can also purchase air time on commercial television. Typically, German parties run a shortened 30 – 60 second version of the same election broadcast that is aired on public television. Given their limited campaign budgets, German parties do not invest heavily in ‘paid’ television advertising, preferring to focus their resources on putting up campaign posters and billboards. The *Kölner Stadt-Anzeiger* estimates that the Social Democrats ran their PEB 176 times on commercial television during the 2013 campaign and that the Christian Democrats

⁶Recall that the average number of words in the party manifestos used in our statistical analyses in the main text was 21, 979.

⁷Party election broadcasts usually appear on television between 6pm and 11pm in the evening. The exact timing and sequence of the party election broadcasts is determined randomly by the public television networks. Each election broadcast is introduced by an official announcement to separate it from the normal broadcast content (Schweitzer, 2008, 240).

ran their PEB 140 times (Doemans, 2013). Given the costs, smaller parties ran considerably fewer election broadcasts on commercial television.

Despite our misgivings about using party election broadcasts to examine the strategic use of emotive language, we transcribed the 2013 PEBs of the CDU, the SPD, the FDP, the Greens, the Left Party, the Pirate Party, and AfD, and ran them through the LIWC automatic sentiment analysis program.⁸ The results strongly support our hypotheses. In line with the *Incumbent Party Hypothesis*, the level of positive sentiment employed by incumbent parties in their election broadcasts (5.1%) is almost three times higher than that employed by opposition parties (1.76%). In line with our *Prime Ministerial Party Hypothesis*, the level of positive sentiment employed by the prime ministerial party (5.82%) is one third higher than that employed by its coalition partner (4.37%), and the level of positive sentiment employed by the non-prime ministerial incumbent party is more than twice that employed by opposition parties. Finally, in line with our *Extreme Ideology Hypothesis*, the level of positive sentiment employed by mainstream parties (3.05%) is 34.4% higher than that employed by the more ideologically extreme parties (2.27%).

Party Websites

Internet campaigning provides parties with an opportunity to circumvent the filters of traditional media outlets and directly present their messages to voters. It also provides parties with an opportunity to try to shape how the traditional media outlets portray them. In this sense, internet campaign messages offer a potentially useful insight into the strategic decisions of political parties regarding campaign sentiment. However, there are a number of limitations associated with using internet campaign messages in this regard, particularly relative to using party manifestos. The first has to do with the novelty and rapidly evolving nature of internet campaigning. A consequence is that we have very few national-level elections, particularly in Europe, in which internet campaign messages have played a significant role. One can increase the number of available observations by examining individual party candidates (Zittel, 2009, 2015), but the focus here is on political *parties* acting at the national level. A second limitation is that there is significant variation, both across countries and within countries, with respect to the extent to which parties use tools such as websites and social media, even in their more recent election campaigns (Gibson, 2004; Gibson and Römmele, 2009; Obholzer and Daniel, 2016). A more practical limitation is that many uses of social media, such as Tweets, involve few words, making it difficult for automatic sentiment analysis tools to reliably capture the emotive

⁸Each of the party election broadcasts can be viewed online [here](#).

content of individual messages.

Despite these limitations, we now briefly examine the use of internet campaigning in Germany, and in particular, party websites during the 2013 federal elections. National parties in Germany began to develop their online presence in the mid-1990s. However, it was not until the 2002 elections that Germany had its “first professional online campaign” (Schweitzer, 2008, 242). Only in the 2009 elections, following the widely publicized success of Obama’s internet campaign in the United States in 2008, did German parties begin to incorporate web 2.0 tools, such as blogs, Twitter, and Facebook, into their online election campaigns (Jungherr, 2015). Digital tools were further integrated into party campaign strategies in the lead-up to the 2013 elections. The extent to which internet campaigning has been adopted and exactly how digital tools are used varies across different political parties (Jungherr, 2016).

Despite the increased availability and use of digital tools, there is a strong consensus that these methods have not fundamentally changed the traditional style of German election campaigns, which continues to focus on billboards, press coverage, and televised campaigning.⁹ In effect, internet campaigning is considered supplemental, rather than central, to the election campaigns of German parties. Consumption of internet campaigning in Germany also remains relatively low compared to the consumption of political news via more traditional media outlets. In the two months prior to the 2013 elections, for example, 60% of Germans used local and regional newspapers to keep abreast of the election campaign and 80% watched political developments on one of the two main public networks, ARD and ZDF. In contrast, only 10% of Germans claimed to follow the election campaign via social networking sites such as Facebook or Twitter (Partheymüller and Schäfer, 2013). The impact of internet campaigning on election outcomes has also been challenged. For instance, there is little evidence that internet campaigning is related to election outcomes at the federal, regional, or local levels in Germany (Marcinkowski and Metag, 2013). Some studies, though, suggest that internet campaigning in Germany can help mobilize voters indirectly by increasing media attention and by shaping media narratives (Flemming, Metag and Marcinkowski, 2013; Jungherr, 2016).

Drawing on in-depth interviews with key campaign personnel, Jungherr (2016) finds that websites were central to, and the most visible elements in, the online campaigns of German parties during the 2013 elections. His conclusion that “websites came to mirror the central narrative of each campaign” (365) is not surprising given that campaign personnel at the time saw no distinction between their traditional election

⁹This was the conclusion reached by analyses of internet campaigning in the 2002 and 2005 elections (Schweitzer, 2008), as well as the more recent 2009 (Jungherr, 2015) and 2013 (Jungherr, 2016) elections.

campaign tactics and their online activity. Given this, we now use party websites to examine the strategic use of emotive language in the internet campaigning of German parties. As German election campaigns are short, with much of the active campaigning occurring in the last few weeks, we chose to examine German party websites during the last four weeks of the 2013 election campaign.¹⁰

Before presenting our results, there are several things to note about our analysis of German party websites. The first is that our emphasis on the *text* found on party websites means that we are ignoring how the use of images and videos can engender particular emotions and shape campaign sentiment. This is quite pertinent as the CDU provided a large number of Youtube videos on its website and the SPD frequently used short video clips to highlight the activities of its party leader (Jungherr, 2016, 370). The second is that the websites sometimes contain interactive content, with the consequence that some of the archived text may not come from the parties. The third thing to note is that any analysis of party websites has to decide how much of the website to examine. How deep – how many mouse clicks from the homepage – should one go? Should we include the material that is directly linked to from each website? The variation in the structure of the different websites complicates these choices. Given our purposes here, we saw no principled theoretical criteria for making these types of choices. To achieve some minimal degree of comparability across the German party websites, we therefore decided to examine only the text that appeared on each party's main page about a month (August 24) before the election.¹¹ The average number of words on a party's main page was 855, ranging from a low of 394 words for the Left Party page to a high of 1886 words for the SPD page.

On the whole, the results of our analysis of party websites are supportive of our hypotheses. In line with our *Incumbent Party Hypothesis*, the level of positive sentiment employed by incumbent parties (2.00%) is almost five times higher than that employed by opposition parties (0.42%). Contrary to our *Prime Ministerial Party Hypothesis*, the level of positive sentiment employed by the prime ministerial party (1.55%) is less than that employed by its coalition partner (2.44%). However, as predicted, both incumbent parties exhibit more positive sentiment than each of the opposition parties. Finally, in line with our *Extreme Ideology Hypothesis*, the level of positive sentiment employed by mainstream parties on their website (1.30%) is over four times higher than that employed by the more ideologically extreme parties (0.30%).

¹⁰The websites were archived using GNU Wget (<https://www.gnu.org/software/wget/>). The raw .html files were then converted into .txt files using pandoc (<https://pandoc.org/>). Finally, the .txt files were then run through the LIWC automatic sentiment analysis program.

¹¹The parties should have had enough time to tailor their webpages to their electoral campaigns by this date. There appears to have been only marginal changes to the text found on the party main pages after this date.

Conclusion

In this brief case study of the 2013 German elections, we provided additional information to support our argument in the main text. First, reanalyzing individual-level experimental data from the 2013 German Longitudinal Election Study (GLES), we presented evidence consistent with the literature's claim that campaign sentiment can influence how individuals evaluate the state of the world. Second, we examined the campaign sentiment used in different types of campaign messages – party manifestos, televised election debates, party election broadcasts, and party websites. In almost every case, the results of our analyses provided support for our *Incumbent Party Hypothesis*, our *Prime Ministerial Party Hypothesis*, and our *Extreme Ideology Hypothesis*. These particular results, when taken together, are consistent with our claim that the language and campaign messages found in manifestos are repeated when parties “communicate to the public via other avenues, such as campaign advertisements, party elites’ campaign speeches, and media interviews” (Adams, Ezrow and Somer-Topcu, 2011, 372).

References

- Adams, James, Lawrence Ezrow and Zeynep Somer-Topcu. 2011. "Is anybody listening? Evidence that voters do not respond to European parties' policy statement during elections." *American Journal of Political Science* 55(2):370–382.
- Anstead, Nick. Forthcoming. "A different beast? Televised election debates in parliamentary democracies." *International Journal of Press/Politics* .
- Brader, Ted. 2005. "Striking a responsive chord: How political ads motivate and persuade voters by appealing to emotions." *American Journal of Political Science* 49(2):388–405.
- Brader, Ted. 2006. *Campaigning for Hearts and Minds: How Emotional Appeals in Political Ads Work*. New York: Cambridge University Press.
- Brader, Ted and George E. Marcus. 2013. Emotions and Political Psychology. In *The Oxford Handbook of Political Psychology*, ed. Leonie Huddy, David O. Sears and Jack S. Levy. Oxford: Oxford University Press pp. 165–204.
- Cameron, A. Colin and Pravin K. Trivedi. 2009. *Microeconometrics Using Stata*. College Station: Stata Press.
- Chrisafis, Angelique. 2017. "French election: Macron hailed as winner of bruising Le Pen TV debate." *The Guardian*, May 4.
- Deans, Jason. 2010. "Leaders' debate TV ratings: 9.4m viewers make clash day's biggest show." *The Guardian*, April 16.
- Debus, Marc, Mary Stegmaier and Jale Tosun. 2014. "Economic voting under coalition governments: Evidence from Germany." *Political Science Research and Methods* 2(1):49–67.
- Doemans, Von Karl. 2013. "Wahlwerbespots der Parteien: Viel Merkel, wenig Steinbrück." *Kölner Stadt-Anzeiger*, August 23.
- Duch, Raymond M. and Randolph T. Stevenson. 2008. *The Economic Vote: How Political and Economic Institutions Condition Election Results*. New York: Cambridge University Press.
- Duch, Raymond and Randolph T. Stevenson. 2013. "Voter perceptions of agenda power and attribution of responsibility for economic performance." *Electoral Studies* 32:512–516.
- Edelman, Murray. 1964. *The Symbolic Use of Politics*. Urbana: University of Illinois Press.
- Edelman, Murray. 1977. *Political Language: Words that Succeed and Policies that Fail*. London: Academic Press.
- Esarey, Justin and Andrew Menger. 2018. "Practical and effective approaches to dealing with clustered data." *Political Science Research and Methods* .
- Evans, Stephen. 2013. "German election: Merkel battles Steinbrück in TV duel." *BBC Online*, September 2.
- Flemming, Felix, Julia Metag and Frank Marcinkowski. 2013. "The interplay of mass media and online campaigning: Evidence from a German state election." Paper presented at the ECREA Conference "New Trends in Political Communication: Evidence, Theories, Implications, Opportunities", Milan, Italy.

- Fortunato, David, Nick Lin and Randolph Stevenson. 2013. "Political knowledge in coalitional democracies." Working paper, Rice University.
- Gelman, Andrew and Jennifer Hill. 2006. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge University Press.
- Gibson, Rachel. 2004. "Web campaigning from a global perspective." *Asia-Pacific Review* 11(1):95–126.
- Gibson, Rachel and Andrea Römmele. 2009. "Measuring the professionalization of political campaigning." *Party Politics* 15(3):265–293.
- Glasgow, Garrett, Matt Golder and Sona N. Golder. 2011. "Who 'wins'? Determining the party of the prime minister." *American Journal of Political Science* 55(4):937–954.
- Green, Donald P. and Lynn Vavreck. 2008. "Analysis of cluster-randomized experiments: A comparison of alternative estimation approaches." *Political Analysis* 16(2):138–152.
- Huddy, Leonie and Anna H. Gunnthorsdottir. 2000. "The persuasive effects of emotive visual imagery: Superficial manipulation or the product of passionate reason?" *Political Psychology* 21(4):745–778.
- Jungherr, Andreas. 2015. "The role of the internet in political campaigns in Germany." *German Politics* 24(4):427–434.
- Jungherr, Andreas. 2016. "Four functions of digital tools in election campaigns: The German case." *International Journal of Press/Politics* 21(3):358–377.
- Kaid, Lynda Lee and Christina Holtz-Bacha, eds. 2006. *The Sage Handbook of Political Advertising*. London: Sage Publications, Inc.
- King, Gary. 1986. "How not to lie with statistics: Avoiding common mistakes in quantitative political science." *American Journal of Political Science* 30(3):666–687.
- King, Gary. 1990. "Stochastic variation: A comment on Lewis-Beck and Skalaban's 'The R-squared'." *Political Analysis* 2(1):185–200.
- King, Gary. 1991. "'Truth' is stranger than prediction, more questionable than causal inference." *American Journal of Political Science* 35(4):1047–1053.
- Marcinkowski, Frank and Julia Metag. 2013. "Lassen sich mit dem Internet Wählerstimmen gewinnen?" *Publizistik* 58(1):23–44.
- Marcus, George E., W. Russell Neuman and Michael MacKuen. 2000. *Affective Intelligence and Political Judgment*. New York: Cambridge University Press.
- Medienanstalten, Die. 2013. "Rechtliche Hinweise der Landesmedienanstalten zu den Wahlsendezeiten für politische Parteien im bundesweit verbreiteten privaten Rundfunk." March 19.
- Obholzer, Lukas and William T. Daniel. 2016. "An online electoral connection? How electoral systems condition representatives' social media use." *European Union Politics* 17(3):387–407.
- Partheymüller, Julia and Anne Schäfer. 2013. "Das Informationsverhalten der Bürger im Bundestagswahlkampf 2013." *Media Perspektiven* 12:574–588.
- Pennebaker, James W. 1993. "Putting stress into words: Health, linguistic, and therapeutic implications." *Behaviour Research and Therapy* 31(6):539–548.

- Pennebaker, James W. and Martha E. Francis. 1996. "Cognitive, emotional, and language processes in disclosure." *Cognition and Emotion* 10(6):601–626.
- Rattinger, Hans, Sigrid Roßteutscher, Rüdiger, Bernhard Weßels, Christof Wolf, Thorsten Faas, Jürgen Maier and Michaela Maier. 2015. "TV Debate Analysis, Survey (GLES 2013)." GESIS Data Archive, Cologne. ZA5709 Data File Version 3.0.0, doi:10.4232/1.12287.
- Roseman, Ira J., Robert P. Abelson and M. F. Ewing. 1986. Emotions and political cognition: Emotional appeals in political communication. In *Political Cognition*, ed. Richard Lau and David O. Sears. Hillsdale, NJ: Lawrence Erlbaum pp. 279–294.
- Schultheis, Emily. 2013. "In Germany, one TV ad per candidate." *Politico*, September 13.
- Schweitzer, Eva Johanna. 2008. Germany: Online Campaign Professionalism in the 2002 and 2005 National Elections. In *Making a Difference: A Comparative View of the Role of the Internet in Election Politics*, ed. Richard Davis, Diana Owen and David Taras. New York: Rowman & Littlefield pp. 235–256.
- Seki, Katsunori and Laron K. Williams. 2014. "Updating the *Party Government* data set." *Electoral Studies* 34:270–279.
- Shepherd, Jack. 2017. "BBC Debate beaten by Britain's Got Talent in the ratings." *The Independent*, April 16.
- Tausczik, Yla R. and James W. Pennebaker. 2010. "The psychological meaning of words: LIWC and computerized text analysis methods." *Journal of Language and Social Psychology* 29(1):24–54.
- Utych, Stephen M. 2018. "Negative affective language in politics." *American Politics Research* 46(1):77–102.
- Weber, Christopher, Kathleen Searles and Travis N. Ridout. 2011. "More than a feeling: The strategic use and consequence of emotion in campaign advertisements." Paper presented at the 2011 Annual Meeting of the Midwest Political Science Association.
- Williams, Laron K., Katsunori Seki and Guy D. Whitten. 2016. "You've got some explaining to do: The influence of economic conditions and spatial competition on party strategy." *Political Science Research and Methods* 4(1):47–63.
- Williams, Rick L. 2000. "A note on robust variance estimation for cluster-correlated data." *Biometrics* 56:645–646.
- Wooldridge, Jeffrey. 2003. "Cluster-sample methods in applied econometrics." *American Economic Review* 2:329–341.
- Zittel, Thomas. 2009. "Lost in technology? Political parties and the online campaigns of constituency candidates in Germany's mixed member electoral system." *Journal of International Politics and Technology* 6(3-4):298–311.
- Zittel, Thomas. 2015. "Do candidates seek personal votes on the internet? Constituency candidates in the 2009 German federal elections." *German Politics* 24(4):435–450.