POLEMIC: Politics and Emotions Investigated Comparatively.

Project Summary

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In 2016 with the surprise election of Trump and the Brexit referendum, there was widespread concern about how emotional and negative the rhetoric of politicians had become. Also, increasingly, media pointed to emotions such as anger and anxiety to explain what looked like a general, global democratic revolt against the establishment. The POLEMIC project was borne out of these concerns.[1] This report summarizes the key results of this research project that started in 2017.

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Hot Politics Lab.

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Politics is neither more emotional nor more negative

We systematically tracked the tone in speeches in 7 different parliaments over a period of 30 years (Pipal, Bakker, et al., 2024). As visualized in Figure 1A, we find no systematic trend towards more positive or more negative tone in these speeches. In some countries speeches became more positive, in others they became more negative. Also, factors such as ideology, gender, economic and cultural trends do not systematically explain the variation in tone (Pipal, Bakker, et al., 2024). We do find that government politicians strike a more positive tone than opposition politicians. Also, we have some tentative evidence that the personality of politicians shapes the tone of their speeches (Pipal, 2024a).

The method we used to computationally analyze tone in political texts is explained in Pipal, Schoonvelde, and Schumacher (2024). We also created an R-package based on this method for the wider research community to use (Pipal, 2024b).

Citizens want more positive emotions

Based on two representative surveys in the US and the Netherlands (each study with n=1200), citizens want more positive emotions in politics. We asked participants to indicate whether they want their party leader to use more or less of a series of positive and negative emotions. As Figure 1B shows participants overwhelmingly favor more positive emotions and fewer negative emotions. In two different surveys (also in the Us and Netherlands, with n=1200) we asked a series of survey items probing participants' general preference about the role of positive and negative emotions in politics. Approximately 7 out of 10 participants agree that positive emotions should have a role in politics, whereas negative emotions should not[2].

Also a series of experimental tasks shows that politicians showing positive facial expressions or using positive tone receive better evaluations than politicians with negative expressions or using negative tone (Homan & Schumacher, 2023). We have replicated these results in 10 different samples (with between 1200 and 2000 participants) in 4 countries: Netherlands, US, Greece and Poland. The results of 4 samples are summarized in Figure 1D.

Emotion is deeply involved in political decision-making

The experiment discussed in the previous paragraph demonstrates that positive emotions make political messages more persuasive. More so than negative or neutral tone and expressions do. Again Figure 1D visualizes these results.

A common model to explain the influence of emotions on citizen is the "emotional contagion" model. Hereby, speakers 'infect' listeners with their emotions, create shared understanding and increase the likelihood of persuasion. However, our results suggest that this is not a plausible mechanism in politics.

[2]The work discussed here is not yet written into a paper

First, people process arguments they agree or disagree with differently. That is, their physiological responses to such arguments differ. Using a lab-in-the-field design (n=100, Dutch convenience sample) we found that the corrugator muscle - associated with negative affect - is activated when people process arguments they disagree with (Bakker et al., 2021). Figure 1F also visualizes this result. This physiological activity was also associated with post-treatment attitudinal change. In another study we also find that agreeing or disagreeing with political messages influences how we process the emotional expressions of (unknown) politicians. The same study also shows that we pay more attention to politicians we agree with[3].

Second, people process faces of inparty and outparty politicians differently. For example, outparty politicians faces evoke more activity of facial muscles, in particular the zygomaticus muscle (Homan et al., 2023). This muscle is associated with positive affect. It seems outparty politicians amuse us or that we feel contempt for them. Figure 1C visualizes this result.

In the same figure we also show results from another study (n=40, Dutch convenience sample) in which we also exposed participants to inparty and outparty leaders but this time we measured neural activity instead using electroencephalogram (EEG) recording. Also this study showed more neural activity when exposed to the outparty leader, particularly in terms of processes associated with attention (measured by so-called alpha rhythm and perspective-taking (mu rhythm) (Homan et al., 2024). Finally, in a lab experiment with a slightly different design we also found that people have instantaneous disgust responses to outparty leaders, as shown by the activation of the so-called *levator labii* muscle (Bakker, Schumacher, & Homan, 2020).

A final piece of evidence here is that packaging emotions into political messages does not always work, even when there is no politician involved and people are neutral towards the message. In a series of survey experiments (two representative samples of approximately 1200 participants) we designed messages that should elicit anger or anxiety. We did this by manipulating descriptions of situations following the appraisal model, a well-established theory of emotions in psychology. Our participants did report more anger in the anger condition, but they also systematically report fear, both in the fear condition and in the other conditions. As such we were able to manipulate anger but not fear (Rebasso, 2023). This led to the broader question how distinctive emotions are in the context of politics.

Emotions about politics have a complex structure

Emotions in the political context are much harder to identify than emotions in general. In two surveys in the US (n=1000) we replicated the following paradigm: first ask survey participants to describe an emotional event they experienced and to label their emotion. Then ask them a series of questions about how they appraised that situation. With these appraisals we could predict the emotion people had indicated with relatively high accuracy. Yet, we asked half of our participants to think about an emotional event related to politics. In this condition the accuracy of our predictions

[3]These results are not yet written up

fell dramatically. In fact, we could no longer reliably distinguish between negative emotions such as anger, fear and sadness (Rebasso, 2023).

Also when we compare physiological activity related to emotions with self-reports of emotions we fail to find a connection. This is both the case for neutral (Bakker, Schumacher, Gothreau, & Arceneaux, 2020) and political stimuli (Bakker, Schumacher, & Homan, 2020; Bakker et al., 2021; Homan, 2024; Homan et al., 2023). This does not suggest that one of the two is invalid, rather it underlines the disconnection between unconscious and conscious processes (Arceneaux et al., in-press; Bakker et al., 2021; Schumacher et al., 2024). It raises the question whether we can be better in touch with the more unconscious, emotional processes. Put differently, are we physiologically dysregulated in politics?

Some people are more emotional about politics than others

Figure 1E shows characteristics of people who feel more and less emotions about politics. The more people are interested and feel they have political efficacy, the stronger the emotions they experience when they think about politics (Rebasso, 2023). These results are consistent across Dutch and American data. Factors such as knowledge, ideology and confidence are less consistently related to self-reported emotions. But there is also a big gender gap with women reporting more negative emotions and men more positive emotions.

Empathy has a surprising role in affective polarization. This is the degree to which you feel warm to your ingroup and cold to your outgroup. Empathic concern - a facet of empathy - is associated with being more affectively polarized. Perspective-taking - another facet of empathy - is associated with less affective polarization (Gillissen et al., 2024).

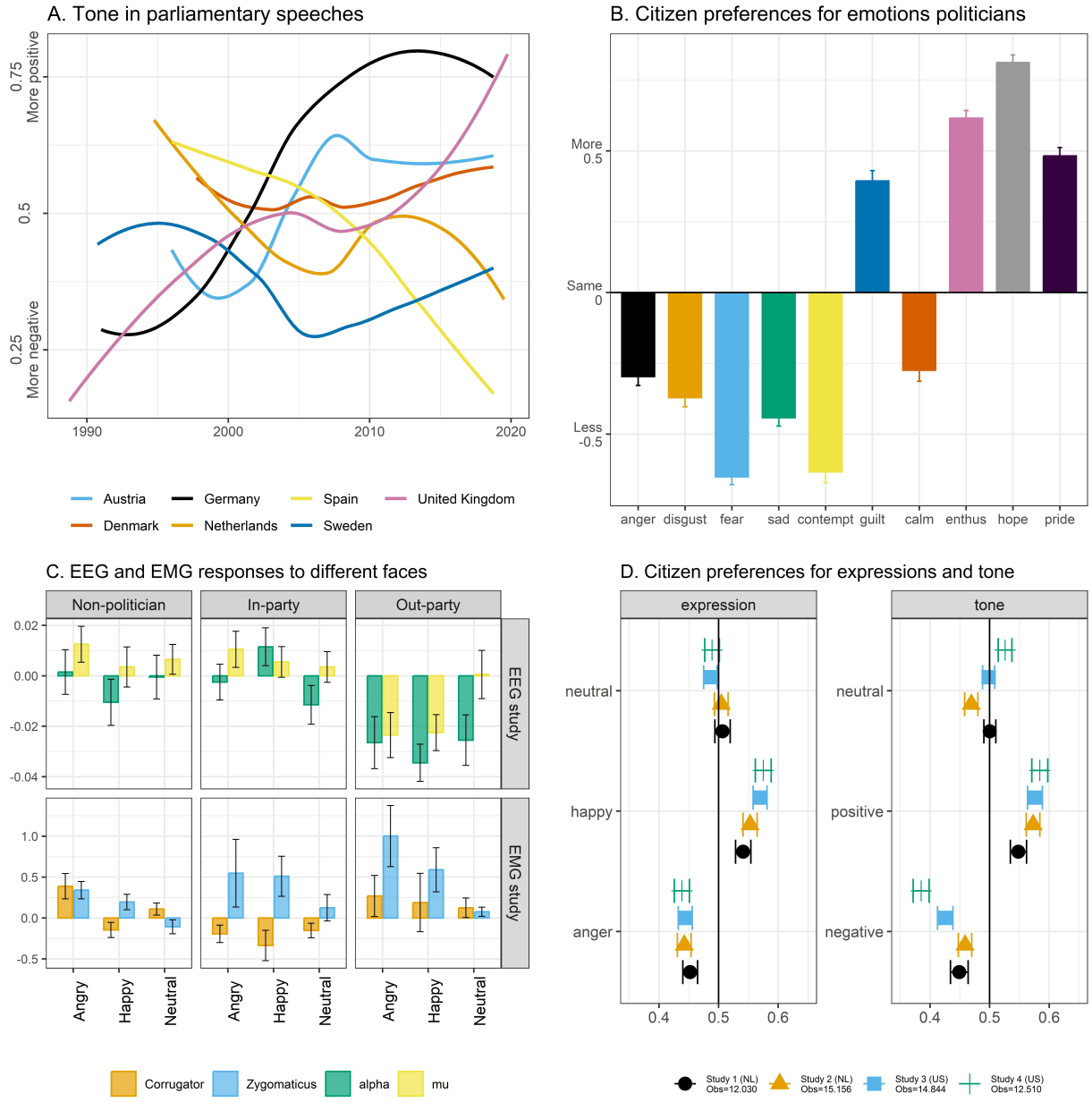
Finally, do left-wing and right-wing people differ in their emotions in general, and in politics? We found no evidence of differential processing of non-political stimuli between left-wing and right-wing people (Arceneaux et al., in-press; Bakker, Schumacher, Gothreau, & Arceneaux, 2020). We also find no evidence that left-wing politicians differ in tone compared to right-wing politicians (Pipal, Bakker, et al., 2024). Left-wing and right-wing people do also favor positive over negative emotions, although there are some level differences. In sum, there seems to be little so-called ideological asymmetry. However, intriguingly in the largest political neuroscience replication up to date, we do replicate the finding that right-wing people have slightly larger amygdalas than left-wing people (Petropoulos Petalas et al., in-press). As the amygdala is - among other things - responsible for processing fear, this may have further downstream consequences. Also, we do find some tentative evidence of differential processing of probabilistic assessments in left-wing and right-wing people (Petropoulos Petalas et al., 2022).

Conclusion

Our results suggest no need for alarmism about emotions. There is not a singular trend towards increasing negativity in politics. Tone and facial expressions affect people but the effect sizes we find are modest and also much lower than the effects of agreement with a politician on substantive terms. More worrying is perhaps the lack of connection between people's conscious experience of their emotions, the emotion labels they use, and the unconscious processes that drive emotions, information processing, and political behaviours (Homan, 2024; Rebasso, 2023).

Should politics be strictly rational, and emotions be banned from the domain? Although some have suggested this, turning off emotions means turning off the brain. That is, affective and cognitive processes are deeply interconnected. As such, the question ought to be: how can we use emotions to be a positive force for democracy?

Figure 1: Overview of project results



Explanation Figure

Figure 1A shows the development of tone in parliamentary speeches in 7 different European countries. Specifically, the lines are LOESS regression lines based on quarterly averages of tone per country. Tone is normalized per country so that 0 relates to the minimum observed value in a country and 1 relates to the maximum observed value in a country. Tone is calculated based on a sentiment analysis that takes into account the topic of the speech. This method is explained in more detail in Pipal, Schoonvelde, and Schumacher (2024).

Figure 1B shows survey responses to the question whether people wanted the leader of the party they vote for to use more or less anger, disgust, fear, sadness, contempt, guilt, calmness, enthusiasm, hope and pride. Figure 1B summarizes results from four independent samples (2 American, 2 Dutch). The pattern of wanting fewer negative emotions and more positive emotions replicates across the studies, the two countries and the different voter groups.

Figure 1C shows data from two different lab studies with a similar design. In both cases participants were shown the image of inparty leaders, outparty leaders and unknown people. These faces were manipulated to show neutral, happy or angry expressions. During this the EMG study measured activity of the corrugator muscle and (associated with negative affect), zygomaticus muscle in the face (associated with positive affect), and skin conductance (associated with arousal). The EEG study measured mu rhythm (associated with perspective-taking) and alpha rhythm (associated with attention). Strongest EMG and EEG activity is seen in the outparty leader condition, specifically there is stronger zygomaticus activity and stronger mu and alpha rhythm activation (the lower values visible in the figure, indicate more neural activation) .

Figure 1D shows the results of four experimental studies that use the same so-called election poster task (Homan & Schumacher, 2023). In this task participants are shown two election posters. These posters show two candidates. In these posters we manipulate the (angry, happy or neutral) expression of the candidate, the position the candidate expresses in a slogan and the tone of that slogan (positive, negative or neutral). Figure 1D shows the marginal means: the proportion of participants voting for candidates that have a particular expression or tone. These results show that participants consistently favor positive tone and happy expressions and dislike angry expressions and negative tone.

Figure 1E uses unique data from an American and Dutch survey in which people were asked to report how much anger, fear, hope and pride they felt about politics. In addition the survey asked participants about their gender, age, political interest, knowledge, perceived knowledge and efficacy. Using a linear regression model we set the emotion as dependent variable and the aforementioned variables as independent variables. The plot shows the regression coefficients and 95% confidence intervals.

Figure 1F is a collection of data from various studies (Bakker, Schumacher, Gothreau, & Arceneaux, 2020; Bakker, Schumacher, & Homan, 2020; Bakker et al., 2021; Homan et al., 2023; Schumacher et al., 2022). It shows again corrugator and zygomaticus activity as well as skin conductance. The results here are analyzed following the multilevel model specification discussed in Schumacher et al. (2024). In these models the physiological activity is the dependent variable and the experimental condition specified on the y-axis the independent variable. The results show that political words produce more negative affect and less arousal than similarly valenced non-political words. Politicians produce more skin conductance than non-politicians and in-party leaders generally produce much less corrugator and zygomaticus activity than non-politicians do. For outparty leaders it depends more on the expression. Populist vs non-populist rhetoric does not produce a clear effect. However all these effects are much more nuanced compared to non-political positive

and negative images.

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