

What Kinds of Emotions are Mobilised by Different Policy Fields?



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MORAL EMOTIONS IN POLITICS: HOW THEY UNITE, HOW THEY DIVIDE

Paper title: What kinds of emotions are mobilised by different policy fields? A text mining analysis of parliamentary speeches

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Abstract

Recently, the role of emotions in defining or influencing behaviour, including political behaviour, has been acknowledged, and research is increasingly addressing how affective processes shape our attitudes, actions, and decision-making. Policy studies have also started to analyse how emotions are reflected in policy discourses and how they influence policy change and support for policies. Most of these studies use qualitative methods. Our paper seeks to contribute to the field by conducting quantitative, text-as-data analysis to identify the emotional content of policy discourses. The aim is to give a descriptive analysis of which emotions are mobilised by different policy fields, which emotions are used by the government and the opposition when framing policies, and how the emotional patterns of policy discourses have changed over time. The parliamentary speech databases of the Hungarian Comparative Agendas Project are analysed using stateof-the-art large language models fine-tuned for emotion analysis. The time frame of the project covers the period 1998-2022. Preliminary findings of the computational analysis confirm the tendency of emotionalisation: the manifestations of emotions increase over time, which is especially true for joy and fear.

Keywords: Emotion Analysis, Large Language Models,

Public Policy

Introduction

The objectives of the paper are to develop and test a methodology of identifying emotions in political texts and to describe both the temporal and the policy field-specific patterns of emotionalised political language

There is a long tradition in social science of downplaying the role of emotions and, more specifically, viewing an emotional approach toward politics as extreme and unreasonable (Beichelt 2022: 13). However, recently, the role of emotions in defining or influencing behaviour has been acknowledged, as illustrated by concepts like "Homo sentimentalis" (Illouz 2015), "Homo sapiens emotionalis" (Ciompi and Endert 2011) or simply "Homo emotionalis" (Beichelt 2022). Some argue that values, identities and emotions have indeed become more important in today's societies (Scharfbillig et al. 2021), and in behavioural and cognitive sciences, we can even talk about "the era of affectivism", as it has become increasingly difficult to deny that "emotions, feelings, motivations, moods, and other affective processes (...) are not only linked to our well-being but also shape our behaviour and drive key cognitive mechanisms such as attention, learning, memory, and decision-making" (Dukes et al. 2021: 816). This era is marked by fast growth in terms of emotions-related research and publication, especially in the field of behavioural and cognitive sciences. It seems that social sciences, including political science, are lagging behind this trend.

While in the past decade, the importance of studying emotions has been recognised in political science as well, it seems too early to talk about a well-established field of research or a coherent research programme (Beichelt, 2022: 5). We lack solid empirical evidence as well as widely accepted theoretical models on the role of emotions in almost all aspects of politics. Conceptual and methodological problems abound, e.g., How to define, categorise and measure political emotions? What kind of emotions play the most important role in politics? How do we analyse the interplay of emotions with other political variables, like ideology, values and identity? What is the analytical model that best grasps the role of emotions in political action: should we consider them dependent, independent variables, or both? What types of methods and indicators are the most useful for studying the political role of emotions? (See Lynggaard 2019.) Obviously, dilemmas like these can never be discarded in research - but they are especially pressing in the early phase of the formation of a research programme when there is a lack of consensus about the most useful approaches.

The above questions are even more pressing in the field of policy studies. The preliminary results of our work-in-progress meta-analysis of the literature, based on 300 articles selected from the Web of Science and containing the search terms of both emotions and policy, suggest the following:

First, most of the empirical papers on the role of emotions in policy are seriously under-theorised. With some exceptions (e.g., Fullerton et al. 2023), they don't relate to the theories of the policy process, let alone more general psychological or sociological theories; instead, they make empirical analyses by taking emotions either as dependent variables (e.g., how people react emotionally to policy measures, policy frames and narratives), or independent (e.g., whether specific emotions, like anger or pride, predict supporting attitudes for policy measures or collective action). Other papers, using qualitative approaches, analyse the emotional content or framing of policy discourses in a rather descriptive way. Although our present paper will not live up to the expectation of providing solid theoretical grounding to our empirics, it is important to set the goal for future studies to better integrate the analysis of emotions into the theories of human action and motivation, on the one hand, and, more specifically, those of the policy process, on the other.

Second, the conceptualisation and operationalisation of emotions, quite naturally, show a wide variety of approaches. Many studies, especially the "older" ones (before 2020) using either survey methods or text mining techniques, rely on sentiment analysis, measuring only the positive or negative valence and the strength of emotions without differentiating between specific emotions. Textual analyses rely on the expressive manifestations of emotions, while surveys use the self-assessment of the respondents on their emotional state. In experimental design, the manipulations often seem to elicit instant moods rather than longer-lasting feelings that are linked to cognitive and evaluative contents of the mind. Some studies, however, use the concept of moral emotions, which are defined as those emotions that are linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent (Haidt, 2003). We do not mean that this diversity in conceptualisation and operationalisation of emotions would be a problem. This is, rather, a quite natural phenomenon given the relative novelty of the research field. However, it is important to note that the different papers using the term "emotions" do not necessarily mean the same thing – and the different approaches are sometimes incomparable and incompatible with each other.

Third, the papers almost without exception focus on individual cases, specific policy measures and policy fields, like COVID-19-related measures and their emotional reception (e.g., Ali et al. 2023, Sukhwal & Kankanhalli (2022), crisis management (e.g., Bagozzi et al. 2023), climate policy (Cruz et al. 2023), energy infrastructure development (Fink et al. 2023, Fullerton et al. 2023), or birth care (Durnová et al. 2022). Comparative studies are in short supply, and it seems that there hasn't been any attempt to





" The problem with the use of strong moralemotional discourses in politics is that they make it more difficult, or even impossible, to have meaningful dialogue on policy issues "

Zsolt Boda,

MORES's Project Leader, HUN-REN CSS

make a longitudinal analysis of emotions in public policy or to study large policy-related corpora from different policy fields and paint a "big picture" from this perspective. Although we have more and more knowledge on the affective dynamics in isolated policy cases and fields, research hasn't yet addressed fundamental questions like: Are there differences among policy fields in terms of their emotional character? Has the emotionality of policy discourses been increasing over the past decades? Are there differences between countries concerning the patterns of emotionalisation in policy discourses?

Our paper addresses some of these questions. We employ text mining methods on the corpora of Hungarian legislative speeches (1998-2022) coded by policy topics according to the Comparative Agendas Project's

methodology and analyse the occurrence of emotionalised language. Instead of the widely applied dictionary-based approaches, we developed a BERTbased language model trained on manually annotated Hungarian parliamentary pre-agenda

We are interested in the expression of emotions or in emotive language, not in the subjective psychological state of the speakers

speeches, which is suitable for the analysis of emotions at the sentence level. Our aim was to step over the sentiment- or valence-focused approach and identify distinct feelings using Ekman's (1992) categories of basic emotions (anger, fear, sadness, disgust, joy, and surprise). Given our focus on texts, we are interested in the expression of emotions or in emotive language, not in the subjective psychological state of the speakers.

The objectives of the paper are to develop and test a methodology of identifying emotions in political texts on the one hand and to describe both the temporal and the policy field-specific patterns of emotionalised political language on the other. Concerning the latter endeavour, we aimed specifically at testing the widespread assumption of growing emotionalisation of political discourse with a special focus on the practices of populist governance: since 2010, Hungary has had a government which is generally categorised as populist by the literature. While here we present our first results on Hungarian data, the next step will be to conduct similar analyses on French, German and Polish data in the framework of a comparative endeavour.

Emotions and policy-some theoretical considerations

Technocratic policymaking causes citizen disconnect, which "emotional entrepreneurs" exploit by manipulating policy-related emotions

Concerning emotions in politics, a fundamental question is whether the growing academic interest in this topic is due to a changing reality (that is, emotions are becoming more important in politics than before) or more to a paradigmatic shift in social sciences (recognising that the importance of emotions has been neglected in research). (Note that the two propositions are not mutually exclusive.)

Scharfbillig et al. (2021) argue that values, identities and emotions have indeed become more important in today's societies, and this development is reflected in politics as well. According to Boler and Daves (2018) the (supposed) growing emotionality of politics is explained by the trend of personalisation in politics or the increasing role of social media. Another factor may be the spread of populist logic and communication in today's politics. Mudde (2004) argued that we live in a "populist Zeitgeist", and, in fact, the

share of the populist vote has been increasing in the past two decades in Western democracies (Caiani & Graziano 2022).

Now, political science and communication scholars have identified the use of emotions as a key characteristic of populist communication (Canovan, 1999; Fieschi & Heywood, 2004). Populism is often associated with negative emotions such as fear, resentment, and Emotionalisation, in the context of political discourses, refers to the increasing reliance on emotional appeals, rhetoric, and personal attacks rather than substantive policy analysis

anger (Abadi et al., 2020; Rico et al., 2017). However, it has also been shown to elicit positive emotions under certain circumstances (Wirz, 2018). To sum up, there are good arguments to support the claim of the growing emotionalisation of politics.

EMOTIONS AND POLICY-SOME THEORETICAL CONSIDERATIONS

Emotionalisation, in the context of political discourses, refers to the increasing reliance on emotional appeals, rhetoric, and personal attacks rather than substantive policy analysis and emotionally neutral discourse. Emotionalisation techniques are widely observable in political debates and are often used to sway public opinion and garner support for a particular candidate or position. These techniques include the use of personal references, stories and anecdotes to create emotional connections with the audience. These narratives make abstract political issues more relatable and compelling (Polletta & Lee, 2006). Also, politicians use emotionally charged language and rhetorical devices to stir emotions. Words with affective connotations can evoke emotions (Wirth & Schramm, 2005) or emotionalise political rhetoric (Marcus, Neuman, & MacKuen, 2000). This is the focus of our investigation.Political actors use emotional framing to highlight certain aspects of an issue while downplaying others, thus shaping public perception. For instance, fear appeals are commonly used to underscore threats and dangers, mobilizing support for security policies or conservative agendas (Brader, 2006). Conversely, joy-based rhetoric is often invoked to inspire collective action and support for progressive initiatives. Emotionalisation is, therefore, a tendency that enhances the likelihood of political engagement through affective-communicative mechanisms (Salmela & von Scheve, 2017).

The trend of increased emotionalisation of political discourses, if so, certainly has an effect on governance and policymaking as well: policymakers are confronted with the emotional reactions of citizens to specific policy measures or policy styles (Scharfbillig et al. 2021). This is not a problem per se, but it may pose new challenges for evidence-based policymaking. While technocratic policymaking may lead to an affective disconnect of citizens from the government, "emotional entrepreneurs" (Maor 2016) may exploit this situation by strategically using and manipulating policy-related emotions. Experimental evidence shows that emotionally loaded narratives are more convincing than expert knowledge in creating support for policies, with a particularly strong effect on citizens with populist attitudes or voters of populist parties (Barbet et al. 2024). Maor (2016) argues that the strategic use of emotions by policy entrepreneurs may lead to "negative policy bubbles": "Self-reinforcing processes interact with the contagion of emotions, imitation, and herd behaviour to reinforce the lack of confidence in the policy, thereby creating a lock-in effect of systematic undersupply of policy" (Maor 2016: 191).

Another example of the strategic use of emotions is stressing issues of "morality politics" (see Engeli et al. 2012) by political actors to trigger moral emotions and reinforce political identities. Undeniably, policies on abortion, end-of-life decisions, transgender issues, immigration, genetic engineering, and climate change, just to name a few, raise serious moral questions and may trigger strong emotions. It is a real challenge for democratic governance to pursue deliberation on these issues and elaborate evidence-based policy solutions while dealing with the clash of values, identities and emotions. However, some political actors may capitalise on these issues and use them not necessarily with the ultimate goal of finding a feasible policy solu-





" Emotionally loaded narratives are more convincing than expert knowledge in creating support for policies "

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EMOTIONS AND POLICY-SOME THEORETICAL CONSIDERATIONS

tion but to whip up moral emotions and reinforce political identities. The policy practices of illiberal governments, like those of Hungary and Poland, provide convincing examples. For instance, Hungary's decision to oppose the EU's immigrant quota in 2016 aiming at redistributing refuge-seeking immigrants among the member states was not based on substantive policy considerations (Hungary would have had to deal with the asylum application of less than 3,000 people), but on identity politics and moral-emotional arguments about national sovereignty and the protection of national culture. Similarly, when from 2016 on, several US states led by Republicans enacted 'Bathroom Bill' legislation requiring transgender people to use public toilets which correspond to their original gender; the aim was certainly not to address a relevant policy problem but to convey the moral-emotional message that 'something is wrong with transgender people'. The problem with the use of such strong moral-emotional discourses in politics and policy is that they make it more difficult, or even impossible, to have meaningful dialogue on these issues, and instead of solving social problems (which should be the ultimate goal of policy-making), they make them worse and even create new ones.

To sum up, emotions play an important role in both politics and policy making. They may boost the importance and urgency of policies, thus influencing both agenda-setting dynamics and the process of decision-making, including policy formulation and the selection of policy tools and policy alternatives. Emotions probably affect policy implementation as well through creating or undermining support for specific policy measures. Although recently, there has been a burst of interest in research in the field, fundamental questions still need to be addressed regarding policy-specific and temporal patterns of policy-related emotions.





" The development of large language models allows their application in various social science tasks, providing a powerful tool for emotion analysis of text corpora "

> Orsolya Ring, MORES's researcher, HUN-REN CSS

Research questions

Besides formulating a general research question, this research explores expectations such as an increase in the emotionality of politics

The corpora of the Hungarian Comparative Agendas Project provided us with the opportunity to test the assumption of the growing emotionality of political discourses over time as they include the texts of three decades of parliamentary speeches. Our general research question, in an explorative vein, thus reads as follows:

What are the emotional patterns of parliamentary speeches over time, by policy topic, by emotions and by the political identity of the speaker (governing or oppo-sition party)?

More specifically, we formulated several expectations. First, following the strand of the literature that suggests a growth in emotional politics, we expected that this is indeed the case:

E1: The emotionality of political discourse is increasing over time.

Second, we assumed that the opposition is using more emotions than the MPs of the governing parties and that the opposition is using more negative emotions (like anger, fear, disgust) since it is criticising the government.

E2: The percentage of emotionally loaded sentences in the opposition's speeches is higher than in the governing party's speeches. Also, the share of negative emotions is higher in the opposition's speeches.

Third, in line with the arguments on the high emotional content of populist communication, we expected that the speeches of Viktor Orbán's party, the Fidesz, as well as other right-wing parties which have generally been labeled as populist in the scholarly literature, will be more emotional than those of the other parties'.

E3: The communication of right-wing populist parties is more emotionalised than that of other parties, whether in opposition or in government.

Fourth, without any specific expectations cowwncerning the emotions themselves, we assumed that different policy topics would show different levels of emotionality and different compositions of emotions. However, we expected that the policy topic-specific emotional load of the speeches is change over time with higher levels of emotionality during high political saliency of the specific topic.

E4: Policy topics show different levels and patterns of emotionality compared to each other and over time, and the emotionality of related political speeches increases during times of political saliency.

Data and methods

Using a large database, the research used Natural Language Processing techniques to analyse emotions in Hungarian political discourses

The corpus used for the study consisted of the full texts of parliamentary speeches from 1998 to 2022. Although the Hungarian Comparative Agendas Project databases contain data on interpellations (one form of parliamentary speeches) back to 1865, for technical reasons, we used only the speeches from 1998 but included all types of them (interpellations, oral questions, urgent questions, written questions). The texts were organised in a database containing various metadata, including the speaker's name, his party, the exact date of the speech, etc. This also contained the speeches' topics, which were automatically labelled according to the predefined topics of the Comparative Agendas Project¹ (CAP) using a purpose-built machine learning model. This task was performed using the publicly available CAP Babel Machine² classification model.

The next step was the emotion analysis of each speech. In Natural Language Processing (NLP), the emotion analysis of individual texts is possible at several levels, but it always requires a well-defined text unit. These lev-

els of granularity require different techniques and provide various levels of insight into the emotional content of the given textual units. The most coarse-grained level of analysis is at the text level, where each docu-

The moresBERT-model has a performance of 0.9 macro F1 for seven different categories (anger, fear, disgust, joy, surprise, sadness, and none of them)

ment (in this case, a parliamentary speech) is associated with one or even a few labels. This raises the issue that, in our experience, most texts are not homogeneous regarding emotional content, i.e., they do not contain just a

¹ https://www.comparativeagendas.net/

² https://babel.poltextlab.com/?__theme=light

single emotion. This is followed by the sentence level, where each sentence will have exactly one label. In our research, we used this sentence-level approach, which we considered detailed enough to examine the emotions that occur in a single speech. Therefore, in preparation, the speeches were segmented into sentences using automatic sentence segmentation. In the resulting data tables, we assigned the speech metadata to each sentence in which they appeared. The resulting database consists of 5178845 sentences (detailed see Table 1).

The emotion analysis was performed using a fine-tuned language model. This was carried out by training the Hungarian BERT base model³ (Nemeskey, 2020) by double-blind manually annotating training data (10500 sentences), which was used for fine-tuning and evaluating the model results. The training data was also based on political speeches collected in our previous projects. The annotation was performed by expert annotators based on the project's detailed codebook with a high level of inter-coder agree-

3 https://huggingface.co/SZTAKI-HLT/hubert-base-cc

CYCLE	SPEECH COUNT (ALL)	SENTENCE COUNT (ALL)		
1998–2002	60 434	804 067		
2002–2006	73 161	971 391		
2006–2010	54 986	785 106		
2010–2014	74 300	1 053 613		
2014–2018	54 260	857 598		
2018–2022	43 907	707 043		

Table 1.

Speech and sentence count by parliamentary cycle

ment. The resulting moresBERT-model ⁴ has a performance of 0.9 macro F1 for seven different categories (anger, fear, disgust, joy, surprise, sadness, and none of them). The none of them category mostly includes neutral sentences (e.g., "I will give the floor to the next speaker!"). In the same way, a smaller proportion of sentences that contain emotion but which do not fall into any of the six categories above are also included here.

After fine-tuning the model, we analysed the entire parliamentary speech data set. The resulting information was then added to the database, which now includes the emotion category of each sentence. We then selected a random sample and manually validated the results again. The validation confirmed that the emotional labels predicted by the model were 90% agreed by the human annotators. After the analysis, we can identify the public policy topic of each sentence (which is the topic of the speech containing the sentence), its emotional label, the parliamentary term in which the speech was delivered, the year in which it was given, and whether it belongs to the governing party or the opposition. The descriptive statistics of the emotions are in Table 2.

4 https://huggingface.co/ringorsolya/moresBERT_hu_7

CYCLE	ANGER	FEAR	DISGUST	YOL	SADNESS	SURPRISE	NONE
1998–2002	16 205	110 026	36	79 558	570	688	596 984
2002–2006	23 390	112 354	42	110 826	799	699	713 281
2006–2010	18 684	110 791	40	88 873	531	727	565 500
2010-2014	31 831	172 402	66	118 503	661	1 283	738 876
2014–2018	36 797	136 051	74	118 270	440	1 069	564 895
2018–2022	31 601	120 175	57	106 251	507	1 246	447 206

Table 2.

Count of emotion labels by parliamentary cycle

Analysis and Results

Immigration is the most emotionalized policy topic over the observed period. Before 2014, it was one of the least emotionally charged topics

Here we summarise some of the results of our preliminary analysis of the data, involving only descriptive statistics and visualisation.

As our first research question is whether parliamentary speech has become more emotionalised, we first examined the proportion of the analysed emotions in the whole database to get an initial idea of the number of emotions represented.

As the first figure shows, three emotions are dominant in Hungarian parliamentary speeches: fear, joy, and anger. Compared to these, the proportion of the others (disgust, sadness, and surprise) is negligible. It can also be seen that the proportion of emotions in the speech increases over time, and the proportion of none of them decreases by about 10% in parallel. The direction of the change is consistent over time. (See Figure 1.) Our first expectation is corroborated: the emotional content of political speeches has

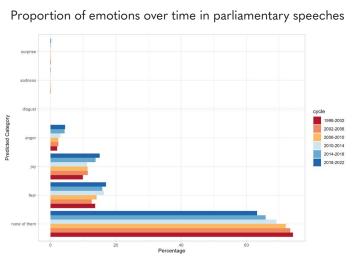


Figure 1.

been increasing in Hungary over time.

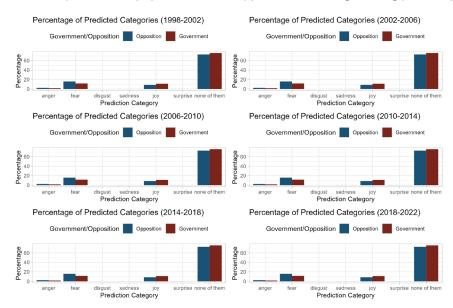
We then focused on the three most common emotions and observed how they changed over time. The most prominent negative and positive emotions moved quite closely together over time.

Concerning our second expectation, we found that in each of the governmental cycles, the share of sentences with emotional content was higher in the speeches of the opposition (see the smaller "None of them" data in Figure 2 for the opposition). It is also visible that, corroborating our expectation, the share of negative emotions (anger and fear) is higher in the case of the opposition, while the MP of the governing parties use more positive emotions (joy).

As for our third expectation, the descriptive data suggest that being in government or opposition is the most important factor influencing the emotionality of parliamentary speeches: party speakers in the opposition systematically use more emotions than those of the governing parties. However, some evidence appears to support the expectation that the populist nature of the parties also matters: some parties, like the centre-left Socialist Party or the liberal SZDSZ, used emotions only moderately even when in opposition, while members of the right-wing populist parties (MIÉP, FKGP, Jobbik) told the most emotionalised speeches. Interestingly, after 2014, the two new green parties (LMP and Párbeszéd) became leaders in terms of the emotional load of their speeches. More refined results should be expected by performing a regression analysis about the factors that predict the use of

Figure 2

Proportion of emotions in the parliamentary speeches of the opposition and the governing parties by governmental cycles



emotions by the MP.

Concerning our fourth expectation, we found that there are indeed variations in the emotionality of speeches coded under different policy codes, ranging from 25% to 40% of all sentences under a policy category (see Figure 4). It is not very surprising that the topic of "Immigration" leads the way, as it is a highly politicised and emotionalised topic, while "Transportation" is the least loaded with emotions. We found it more interesting that the second topic is actually "Macroeconomics". Probably discussions about austerity measures, the state of the economy, problems of unemployment, inflation, etc. stir up many emotions. Interestingly, joy is also present in the speeches about macroeconomics when "good news" is evoked mostly by governing party MPs.

The patterns of policy code-related emotions also show some minor variations. For instance, compared to other policy topics, anger is relatively important for "Law and crime" as well as "Immigration", while speeches about "Culture" and "Social welfare" invoke relatively less fear and more joy. We also checked some of the less used emotions, like sadness and disgust, to see which are the policy topics which exhibit more of these, otherwise only marginal, feelings. Turns out that both sadness and disgust are most often used in speeches under "Macroeconomics" and "Governmental operations" - note that the latter also includes budgeting (see Figures 5 and 6). Apparently, economic topics are among the most emotionalised ones in terms of both the intensity and diversity of emotions.

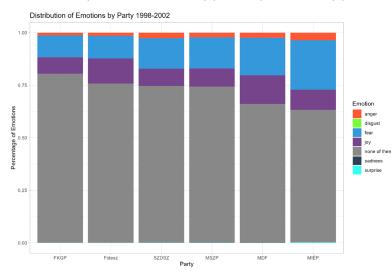
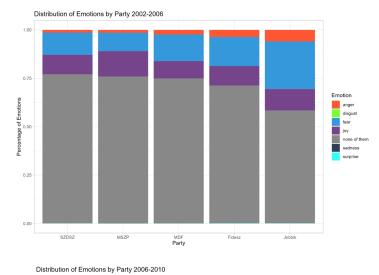
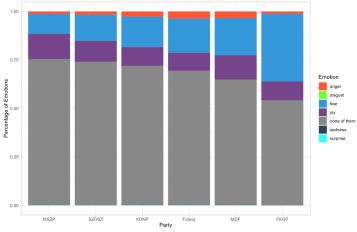


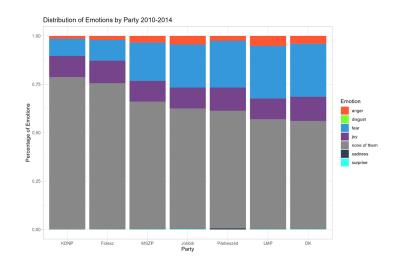
Figure 3

The share of emotionally loaded sentences by political parties and by parliamentary cycles

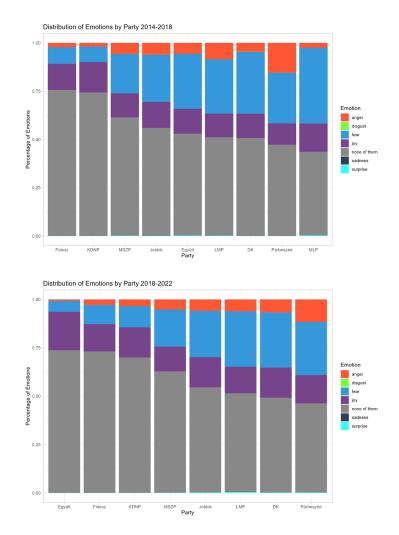












Finally, we also compared results by cycle, and observed that there are variations over time within policy topics. In the following we highlight only one example which is in line with our expectation concerning increased emotionalisation during saliency periods.

Above, we mentioned that "Immigration" is the most emotionalised policy topic over the whole observed period. However, this was not the case before 2014: it was actually one of the least emotionally charged categories until the 2014-2018 cycle and then came out on top of this cycle (see Figures 7 and 8).

It means that the emotional content of sentences on the immigration topic rose dramatically in 2015 related to the refugee crisis in Europe at that time and this increase was so significant that it counterweighted the low emotional scores of the topic during previous governmental cycles, making "Immigration" the most emotionally loaded policy topic over the whole observed period (see Figure 9). Apparently, the saliency of the topic had a positive effect not only on the number of parliamentary speeches concerning immigration but their emotional load as well. Further analysis will clarify whether this is a singular case or if issue saliency indeed contributes to a higher emotionalisation of political discourse in general.

> Domestic Commerce Defense Culture Civil Rights Agriculture

> > 2000

2005

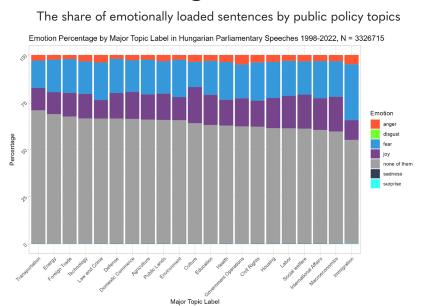


Figure 4



2010 Year 2015

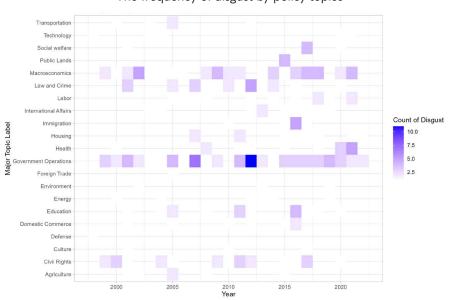
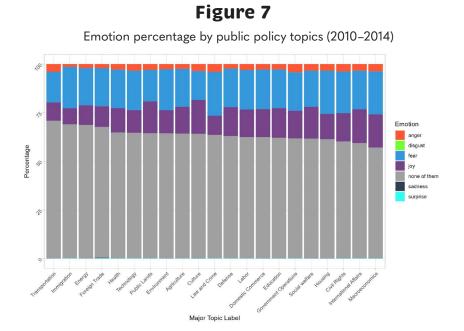


Figure 6 The frequency of disgust by policy topics



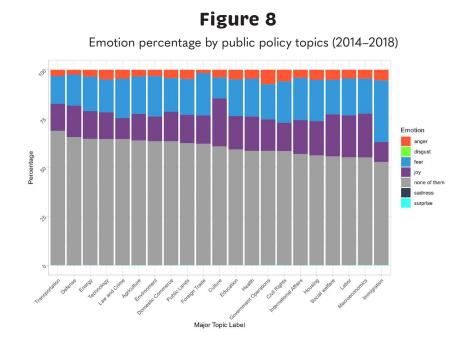
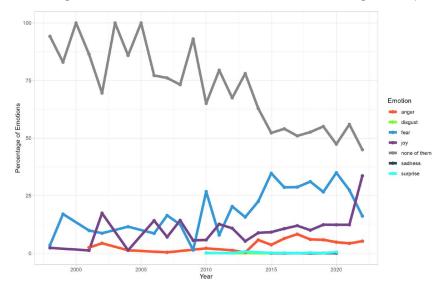


Figure 9

Changes in emotion over time in connection with the immigration topic



Discussion and conclusions

Three emotions dominate the affective landscape: fear, joy, and anger, with the first two being more significant. Other emotions were mostly nonexistent.

Our paper presents the first results of a text-mining exercise concerning the emotional patterns of policy discourses. We used the corpora of speeches at the Hungarian parliament between 1998 and 2022 coded according to the methodology of the Comparative Agendas Project. Instead of relying on the widespread dictionary approach in identifying emotional content in discourse, we developed a BERT-based language model trained on manually annotated political texts by the six basic emotions of anger, fear, sadness, disgust, joy, and surprise. We analysed the speeches at the sentence level, looking for the expressive manifestations of affects. Our approach at this stage was mostly explorative: applying a descriptive method, we aimed at unveiling the general trends of emotionalising policy discourses over time and shedding light on some alleged factors that may influence the use of affects in politics. At the same time, we formulated several expectations, most of which seem to be corroborated by the data.

It appears that, in line with the proposition of several studies, the share of emotionally loaded content has been consistently increasing in parliamentary discourse over the past decades. Further studies in other political contexts need to be done in order to ascertain whether or not this is a Hungarian specificity. For this, we intend to conduct comparative analyses in other European countries as well as part of the MORES project.

MPs of the opposition parties use more emotions in their parliamentary speeches than MPs of the governing parties, and, more specifically, they use more negative emotions (fear and anger). Although the effect of being in opposition seems to be quite strong, data suggest that the populist nature of the parties may also play a role in boosting the practice of emotionalisation. As a next step we plan to apply causal design in order to identify and assess the factors that are behind increased emotionalisation. These factors may include not only the variables of being in opposition to being a member of a populist party but also the policy field of the issue, their saliency, and whether or not the speech was delivered in times of electoral campaigns.

Concerning the emotional patterns of policy fields, first, we found that three emotions dominate the effective landscape: fear, joy and anger, with

the first two being more important than the third. The other emotions included in our analysis were almost nonexistent in the speeches. Note, however, that other emotions may also be present in political discourses. We are working on the training sets of other emotions as well, includ-

In line with our expectations, speeches related to different policy fields display somewhat, but not dramatically, different emotional patterns

ing moral emotions like guilt. The "none of them" category of our results published here includes not only sentences with no affective load but also those which use emotions other than the ones we looked for in the texts.

In line with our expectations, speeches related to different policy fields display somewhat, but not dramatically, different emotional patterns. While the fact that the topic of immigration is the most emotionalised and transportation is the least emotionalised topic is hardly surprising, we find it interesting that macroeconomics came up in second place. Further analyses using more emotions might better calibrate the affective content of field-specific policy discourses as well as the factors influencing them. Our expectation was that issue saliency might be one such factor, and the case of immigration provides support, or at least an illustration, to this claim. Immigration was a weakly emotionalised policy topic in the Hungarian parliament until the European immigration crisis of 2015-2016. The saliency of the issue boosted not only the number of parliamentary speeches on the topic but also contributed to their increased emotionalisation. Further analyses using a causal design can determine whether this a single case or issue saliency is indeed an important factor to emotionalise policy discourses.

References

Abadi, D., H. C. Pere-Lluis, J. W. Duyvendak, and A. Fischer (2020). Socioeconomic or Emotional Predictors of Populist Attitudes Across Europe. *PsyArXiv*, doi:10.31234/osf.io/gtm65.

Ali, M. F., Irfan, R., & Lashari, T. A. (2023). Comprehensive sentimental analysis of tweets towards COVID-19 in Pakistan: a study on governmental preventive measures. *PeerJ Computer Science*, 9, e1220.

Bagozzi, R. P., Mari, S., Oklevik, O., & Xie, C. (2023). Responses of the public towards the government in times of crisis. *British Journal of Social Psychology*, 62(1), 359-392.

Barbet, B., De Moragas, A. I., & Vidal, G. (2024). Stories beat experts: A survey experiment on political persuasiveness. *European Journal of Political Research*, 63(1), 383-394.

Beichelt, T. (2022). *Homo Emotionalis*. Springer Fachmedien Wiesbaden.
Boler, M., & Davis, E. (2018). The affective politics of the "post-truth" era:
Feeling rules and networked subjectivity. *Emotion, Space and Society*, 27, 75-85.

Brader, T. (2006). *Campaigning for Hearts and Minds: How Emotional Appeals in Political Ads Work*. University of Chicago Press.

Caiani, M., & Graziano, P. (2022). The three faces of populism in power: Polity, policies and politics. *Government and Opposition*, 57(4), 569-588.

Canovan, M. (1999). Trust the people! Populism and the two faces of democracy. *Political Studies*, 47(1), 2-16.

Ciompi, L., & Endert, E. (2011). *Gefühle machen Geschichte: Die Wirkung kollektiver Emotionen–von Hitler bis Obama*. Vandenhoeck & Ruprecht.

Cruz, S., Graça, M., Conceição, P., Neset, T. S., & Juhola, S. (2023). Exploring the affective dimension in citizen science to support urban climate adaptation: a conceptual framework. *Journal of Environmental Planning and Management*, On-line, 1-23, DOI: 10.1080/09640568.2023.2271162

Dukes, D. et al. (2021). The rise of affectivism. *Nature Human Behaviour*, 5(7), 816–820. https://doi.org/10.1038/s41562-021-01130-8

Durnová, A., Formánková, L., & Hejzlarová, E. (2022). Empowered or patronized? The role of emotions in policies and professional discourses on birth care. *Critical Social Policy*, 42(1), 129-149.

Ekman, P. (1992). Are there basic emotions? *Psychological Review*, 99 (3), 550-553.

Engeli, I., Green-Pedersen, C., & Larsen, L. T. (2012). *Morality politics in Western Europe: Parties, agendas and policy choices*. Springer.

Fieschi, C., & Heywood, P. (2004). Trust, cynicism and populist antipolitics. *Journal of Political Ideologies*, 9(3), 289-309.

Fink, S., Ruffing, E., Burst, T., & Chinnow, S. K. (2023). Emotional citizens, detached interest groups? The use of emotional language in public policy consultations. *Policy Sciences*, 56(3), 469-497.

Fullerton, A. H., Gabehart, K. M., Yordy, J., & Weible, C. M. (2023). Analysing emotional discourse among allies and opponents in the news media. *Emotions and Society*, 5(3), 296-314.

Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 852–870). Oxford University Press.

Illouz, Eva (2015). *Gefühle in Zeiten des Kapitalismus*. 5th ed. Suhrkamp: Frankfurt a. M.

Lynggaard, K. (2019). Methodological challenges in the study of emotions in politics and how to deal with them. Political Psychology, 40(6), 1201-1215.

Maor, M. (2016). Emotion-driven negative policy bubbles. *Policy Sciences*, 49, 191-210.

Marcus, G. E., Neuman, W. R., & MacKuen, M. (2000). *Affective intelligence and political judgment*. University of Chicago Press.

Mettler, S. (2018). *The Government-Citizen Disconnect*. Russel Sage Foundation.

Mudde, C. (2004). The populist zeitgeist. *Government and opposition*, 39(4), 541-563.

Polletta, F., & Lee, J. (2006). Is telling stories good for democracy? Rhetoric in public deliberation after 9/11. *American sociological review*, 71(5), 699-721.

Rico, G., M. Guinjoan, and E. Anduiza (2017). The Emotional Underpinnings of Populism: How Anger and Fear Affect Populist Attitudes. *Swiss Political Science Review*, 23 (4): 444–461. doi:10.1111/ spsr.12261.

Salmela, M., & von Scheve, C. (2018). Emotional dynamics of right-and left-wing political populism. *Humanity & Society*, 42(4), 434-454.

Scharfbillig, M., Smillie, L., Mair, D., Sienkiewicz, M., Keimer, J., Pinho Dos Santos, R., Vinagreiro Alves, H., Vecchione, E. and Scheunemann, L. (2021). *Values and Identities - a policymaker's guide*, EUR 30800 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-40966-3, doi:10.2760/022780, JRC126150.

Sukhwal, P. C., & Kankanhalli, A. (2022). Determining containment policy impacts on public sentiment during the pandemic using social media data. Proceedings of the National Academy of Sciences, 119(19), e2117292119.

Wirth, W., & Schramm, H. (2005). Media and emotions. *Communication research trends*, 24(3): 3-39.

Wirz, D. (2018). Persuasion through emotion? An experimental test of the emotion-eliciting nature of populist communication. *International Journal of Communication*, 12, 1114-1138.