

METHODS WORKSHOP ON LARGE LANGUAGE MODELS AND GENERATIVE AI: Advancing Policy Frame and Media Narrative Analysis

2025. 02. 14.

Schedule

13:00 - 13:10 Welcome and opening remarks

13:10 - 13:40 Michal Parizek - Jakub Stauber: Power and the Global Flows of Political Information

13:40 - 14:00 Jakub Szabo: Analyzing Sentiments towards the European Union in Slovak Parliamentary Speeches (1994–2023)

14:00 - 14:20 Štěpán Jabůrek: Parliamentary Discourse about the Left and Right in a Postcommunist Context: The Czech Case

14:20 - 14:40 Anna Takács: Crisis-Exploitation or Sticky Narratives? A Research Agenda for the Comparative Study of Policy Crises and Illiberal Policy Frames

14:40 - 15:00 Discussion

15:00 - 15:30 Coffe Break

15:30 - 15:50 Krzysztof Rybinski: Automated LLM-Based Analysis of SAI Performance Audit Standards Across 30+ Countries

15:50 - 16:10 Jaroslav Kopčan - Andrej Findor: "Bridging Human Expertise and LLMs in Content Analysis: Insights from Slovak Media Migration Coverage

16:10 - 16:30 István Üveges: Leveraging Synthetic Data for Multilingual Emotion Analysis in Low-Resource Languages

16:30 - 17:00 Discussion and closing remarks

18:00 Dinner

Abstracts

Michal Parizek - Jakub Stauber: Power and the Global Flows of Political Information

This article presents a novel theoretical model and the first comprehensive empirical account of the flows of political information across states globally. Existing studies that estimate quantitatively the intensity of the flows of information across nations typically focus on the Western states and highlight a range of predictors of the information flows. In contrast, we put the material power of states and their power status at the center of the theoretical inquiry. We formulate specific observable implications of our theorizing, concerning variability across topics news and news sentiment. We test the framework with the use of a uniquely sizable dataset of online news media content across more than 150 states and 61 languages, spanning close to 5 million news articles in the years 2018-2021. We use a combination of lexicons, fine-tuned deBERTa models, and generative AI-enabled tools to trace how frequently and how individual countries are reported on in news media in most other countries of the world. The results demonstrate that material power of the reported-on nations is by far the strongest predictor of information flows and that this pattern holds across all news topics, even more strongly in economics and science and technology reporting than in politics. This is further associated with an on-average poorer sentiment of reporting on weaker states, compared to the more powerful states. In the long-term, these patterns of information flows are likely to strengthen and reify the power asymmetries of the international system.

Jakub Szabo Analyzing Sentiments towards the European Union in Slovak Parliamentary Speeches (1994–2023)

The era of digitalisation has expanded opportunities for political science research. In recent years, the growing availability of political texts and advancements in computational tools have facilitated large-scale analyses of political speeches. However, such approaches remain underutilized in the Slovak context. This paper introduces a novel dataset comprising over 420,000 speeches from the National Council of the Slovak Republic (1994–2023), pre-processed for quantitative text analysis. In the second step, the paper examines Slovak politicians' sentiments toward the European Union, revealing that these sentiments peaked around Slovakia's accession and have steadily declined since. Following the 2010 euro crisis, EU-related sentiments reached historic lows and have continued to deteriorate. Lastly, structural topic models are applied to identify the topics most associated with positive and negative EU-related sentiments.

Štěpán Jabůrek: Parliamentary Discourse about the Left and Right in a Postcommunist Context: The Czech Case

How does political discourse about the left and right evolve in postcommunist countries? In this paper, we look at the case of the Czech Republic and analyze how the debate about left and right-wing politics evolved among political elites. We specifically focus on the theoretical expectation that parliamentary debates should exhibit a right-wing bias in the post-transition era, with the left being discussed in comparatively more negative terms. Using a novel dataset of plenary speeches from the Czech Chamber of Deputies from 1993 to 2023, we employ automated textual and sentiment analysis to analyze the evolution of political discourse about the left and right. We construct complex vocabularies to capture these topics and then measure their salience and sentiment over time and across parties. Building on an emerging literature in Political methodology, we unpack the sentiment black-box by differentiating between stance and emotional valence and focus on the latter. Apart from natural language processing, we also use a lexicon-based approach to sentiment analysis as a robustness check. Overall, we expand the current theoretical understanding of postcommunist legacies by incorporating a focus on parliamentary discourse. More generally, our approach offers a new theoretical and methodological framework that can be further extended to parliamentary discourse in other countries.

Anna Takács: Crisis-Exploitation or Sticky Narratives? A Research Agenda for the Comparative Study of Policy Crises and Illiberal Policy Frames

The pervasive and growing illiberal movement is, perhaps, the greatest global challenge to democracy today. Scholars argue that domestic and international crises have played an important role in perpetuating illiberalism among leaders and growing its support among their populace. In this paper, we analyse how illiberal leaders have used policy crises to communicate their policy ideas through illiberal policy frames (IPFs). Our analysis includes two steps. First, we define and measure IPFs in four countries (Austria, Germany, Hungary and the United States) regarding two policy issues (migration and COVID-19). Second, we assess the extent to which these frames are genuine proposals to address extant policy crises or are used to manufacture policy crises. In taking these steps, we develop a new methodology to tackle these questions based on a novel codebook of IPFs and state-of-the-art quantitative social science methods, including large language models.

Krzysztof Rybinski: Automated LLM-Based Analysis of SAI Performance Audit Standards Across 30+ Countries

This paper presents a pioneering application of large language models (LLMs) to systematically analyze Supreme Audit Institutions' (SAIs) compliance with ISSAI 3000 performance audit standards across more than 30 countries. Bridging gaps in existing literature—which often relies on survey data or manual content analysis—our approach utilizes an automated verification pipeline driven by generative AI. Specifically, we employ a GPT-based model to extract, summarize, and assess performance audit reports, producing quantitative compliance scores at the level of individual standards.

By mapping these scores onto geopolitical and developmental contexts, our findings illuminate a striking paradox: while certain high-income nations champion ISSAI 3000 internationally, they frequently demonstrate selective or partial adherence. Meanwhile, lower- and middle-income countries, supported by donor agencies, often showcase stronger formal alignment, presumably driven by capacity-building pressures and external funding requirements. Our results thereby offer empirical support for theories that highlight the role of power asymmetries in the diffusion of global norms, revealing how voluntary standards can become de facto obligatory in contexts of financial or reputational dependency.

Methodologically, the paper breaks new ground by employing generative AI in a large-scale comparative study of public-sector documents. We outline both the technical workflow—covering prompt engineering, iteration loops, and correlation analyses of model outputs—and the safeguards used to ensure reliability. The study concludes by discussing how LLM-based methods can enhance research in public administration and transnational governance, while also underscoring ethical considerations surrounding AI-driven policy evaluations.

Jaroslav Kopčan - Andrej Findor: "Bridging Human Expertise and LLMs in Content Analysis: Insights from Slovak Media Migration Coverage"

Media discourse plays a key role in shaping public opinion about migration, migrants and migration policies (Boomgaarden & Vliegenthart, 2009). Previous research shows that media-mediated information regarding migration and migrants and its negative or positive tone has at least as much influence on attitudes towards migration, migrants and migration policies as the actual numbers of migrants in each country (Eberl et al., 2018).

Nowadays, the use of supervised machine learning for purpose of content analysis is very popular (Barberá et al., 2021). While LLMs do the heavy lifting of processing large amounts of text very effectively, human experts who understand the subject and the nuanced content within the subject are just as essential (Song et al., 2020). Their role is particularly important for data annotations because they can understand the contextual nuances behind the text and interpret complex social content. Experts annotations are then used for fine-tuning the LLMs, which are then used for automated analysis.

We explore the challenges related to validation of expert annotations for automated stance detection in a large slovak media corpus (960,000) published between 2003 and 2024 related to migration. For automated content analysis we use, SlovakBERT (Pikuliak et al., 2021), fine-tuned with the expert annotations for specific task to our project, e.g. stance analysis towards migration.

We focused mainly on resolving discrepancies in how different researchers and systems define and measure concepts like sentiment or stance. Different interpretation systems might handle the same content differently. Which has direct impact on accuracy of content analysis (Bestvater & Monroe, 2022; Overbeck et al., 2023). We also addresses the complexity of dealing with multiple stance targets within a single text since media coverage often expresses different stances toward various aspects of migration simultaneously (Baden & Tenenboim-Weinblatt, 2018). Important factor is also the unit of analysis selection. This is a crucial decision not only because of the language model input size restriction but also because the stance can be expressed quite differently in distinct parts of media content.

István Üveges: Leveraging Synthetic Data for Multilingual Emotion Analysis in Low-Resource Languages

This study addresses the critical challenge of emotion analysis in low-resource languages, specifically focusing on Hungarian, Polish, Czech, and Slovak. While recent advances in Natural Language Processing (NLP) have revolutionized emotion detection in texts, languages with limited NLP resources continue to face significant barriers in implementing these technologies. We present a novel approach combining machine translation, data augmentation, and multilingual model fine-tuning to develop robust emotion classification systems for these four Central European languages. Using a German emotion dataset as our foundation, we experiment with direct and English-mediated translation pathways to create training data. Our results demonstrate that direct translation models consistently outperform English-mediated approaches across all target languages, particularly in detecting nuanced emotional categories. The study reveals that while 10-shot augmentation with GPT-4o improves performance for underrepresented emotional categories, the benefits of synthetic data augmentation are constrained by limited linguistic diversity. These findings provide valuable insights for developing emotion classification systems in low-resource languages and contribute to the broader understanding of multilingual model development. The resulting models, capable of classifying eight distinct emotions (anger, fear, disgust, sadness, joy, hope, pride, enthusiasm, and their absence), demonstrate practical utility for large-scale political discourse analysis in Visegrád Four countries.