

---

# A Semantic Map of the European Parliament

---

Giorgi Gogelashvili<sup>\*1</sup> Samia Haque<sup>\*2</sup> Jakob Kleine<sup>\*3</sup> Dennis Stroh<sup>\*4</sup> Quirin Unterguggenberger<sup>\*5</sup>

## Abstract

Motivated by the rise of populism in Europe since the late 1990s, this study investigates ideological shifts in European Parliament (EP) speeches using natural language processing. Drawing on the novel ParLawSpeech dataset (Schwalbach et al., 2025) which contains 574,199 speeches from 1999 to 2024 alongside metadata on speaker identity, we use sentence embedding models to examine the semantic content and emotional tone of parliamentary debates over time.

We expect that speech embeddings will form clusters reflecting party affiliation and ideological alignment. In step with recent political developments, we further hypothesize an increase in negative sentiment within the immigration debate among centrist and right-wing groups, accompanied by growing semantic similarity between these two factions over the past two decades. Finally, we test whether established migration-related narratives associated with right-wing populism can be identified in parliamentary discourse and how their prevalence has developed over time.

URL <https://link.springer.com/10.1007/s11109-021-09695-w>.

Hutter, S. and Kriesi, H. Politicising immigration in times of crisis. *Journal of Ethnic and Migration Studies*, 48(2):341–365, January 2022. ISSN 1369-183X, 1469-9451. doi: 10.1080/1369183X.2020.1853902. URL <https://www.tandfonline.com/doi/full/10.1080/1369183X.2020.1853902>.

Schwalbach, J. Talking to the populist radical right: A comparative analysis of parliamentary debates. *Legislative Studies Quarterly*, 48(2):371–397, 2023.

Schwalbach, J., Hetzer, L., Proksch, S.-O., Rauh, C., and Seßk, M. Parllawspeech. (Version 1.0.0) [Data set]. GESIS, Cologne. <https://doi.org/10.7802/2824>, 2025.

Subtil, H. and Verger, V. Emotional rhetoric and the rise of populism in the european parliament. Policy Brief 108, IPP, June 2024.

## 1. Introduction

The establishment of right-wing populist parties in 21st century Europe has significantly changed parliamentary discourse (Schwalbach, 2023). A recent report has identified a gradual increase in emotional rhetoric in the EP since 1999, with right-wing populist groups leading the trend and other parties adapting (Subtil & Verger, 2024).

Right-wing populist parties have also been a driving force in the increasing politicization of immigration (Hutter & Kriesi, 2022), which has become a salient topic in European election campaigns (Dekeyser & Freedman, 2023).

## References

Dekeyser, E. and Freedman, M. Elections, Party Rhetoric, and Public Attitudes Toward Immigration in Europe. *Political Behavior*, 45(1):197–209, March 2023. ISSN 0190-9320, 1573-6687. doi: 10.1007/s11109-021-09695-w.