

Toeing the Party Line: Election Manifestos as a Key to Understand Political Discourse on Twitter

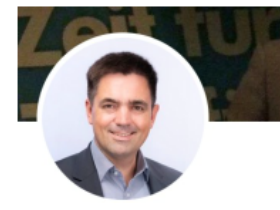
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Measuring Party Ideologies on Social Media?



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@Frank_Pasemann

Refugees do not receive multiple social benefits! Criminal foreigners do! #politicalchange #voteAfD #reimmigration



Dr. Malte Kaufmann
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#Köln shows: We need more and more effort to live our western lifestyle. A logical consequence of the blue-eyed #welcomeculture



Dietmar Bartsch 
@DietmarBartsch

We should not discuss this existential topic for our society talking over each other, but together. Urgently! #immigration #immigrationlaw #integration #escape



Sabine Leidig
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The #minimumsalary should hold for everyone! No reduction in minimumsalary for #refugees! No #salarydumping!

Measuring Party Ideologies on Social Media?

- Social media is unstructured, ever-evolving
 - Need for *coordinates* to assess ideological positions



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 - But: Manual annotation virtually impossible



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Can we use social media-specific signals to fine-tune models to capture meaningful ideological distances between parties?

Election Manifestos as Coordinates



Alternative für Deutschland (AfD), Manifesto, 2017

The concept of a multi-cultural society has failed. In order to live in peace with immigrants in the future, integration is indispensable. It is the only way to stop the further advance of counter-societies and parallel societies in our country.



Die Linke, Manifesto, 2017

A good coexistence is not without prerequisites. A society based on participation and recognition needs a social infrastructure that is committed not to private profit interests but to public needs. [...] We see integration as a task for the entire society

Manifestos are programs laying out the policy positions of parties before elections.

→ Idea: Use manifestos as *coordinates* for measuring ideological distances on social media

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Measuring Party Ideologies on Social Media?



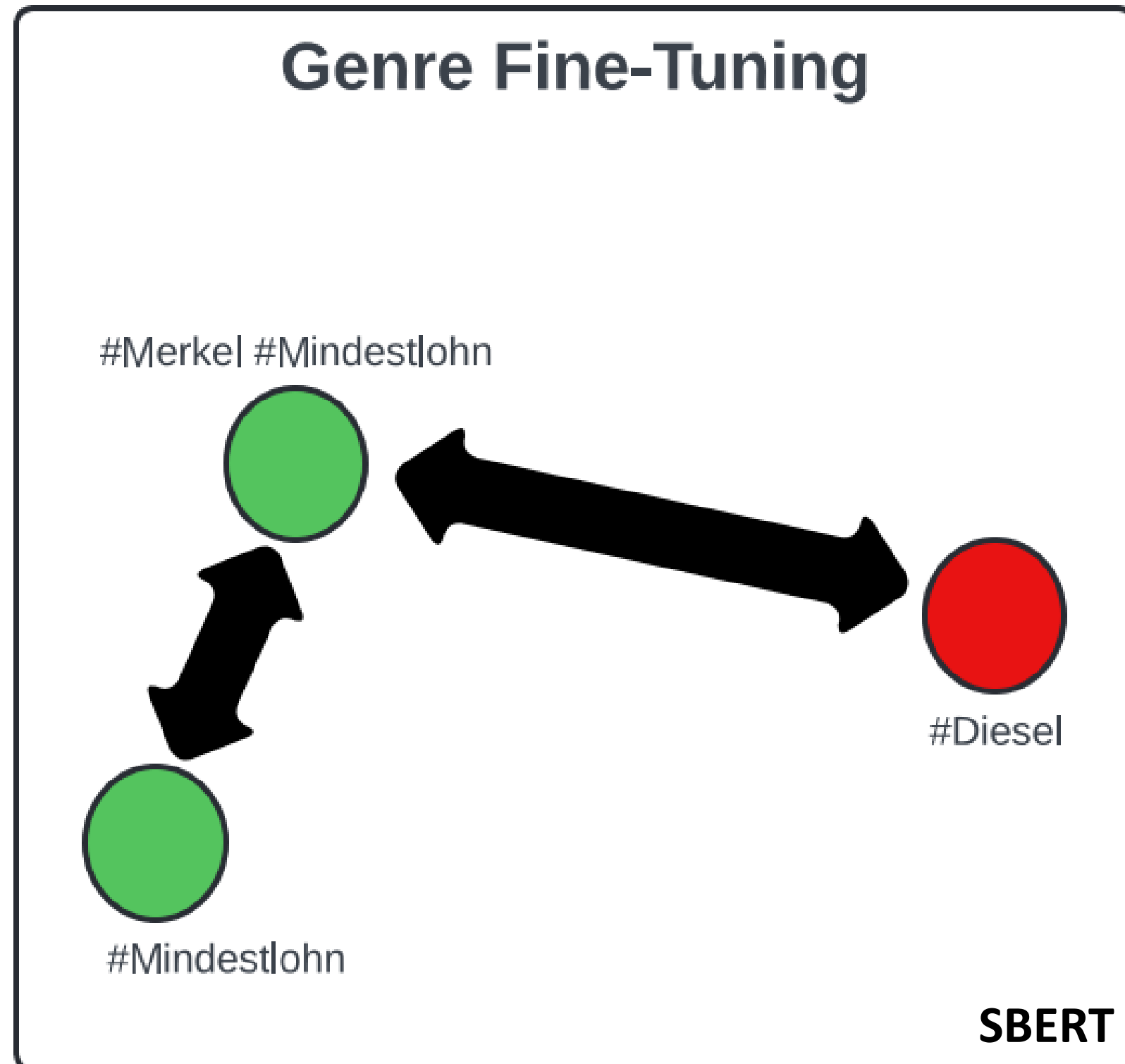
Politicians use **hashtags** as topical shorthands [1]

→ Idea: Use hashtags to fine-tune textual representations

Can we use **social media-specific signals** to fine-tune models to capture meaningful ideological distances between parties?

[1] Shapiro, M.A. and Hemphill, L. (2017), Politicians and the Policy Agenda: Does Use of Twitter by the U.S. Congress Direct *New York Times* Content?. *Policy & Internet*, 9: 109-132. <https://doi.org/10.1002/poi3.120>

Hashtag-guided Fine-Tuning

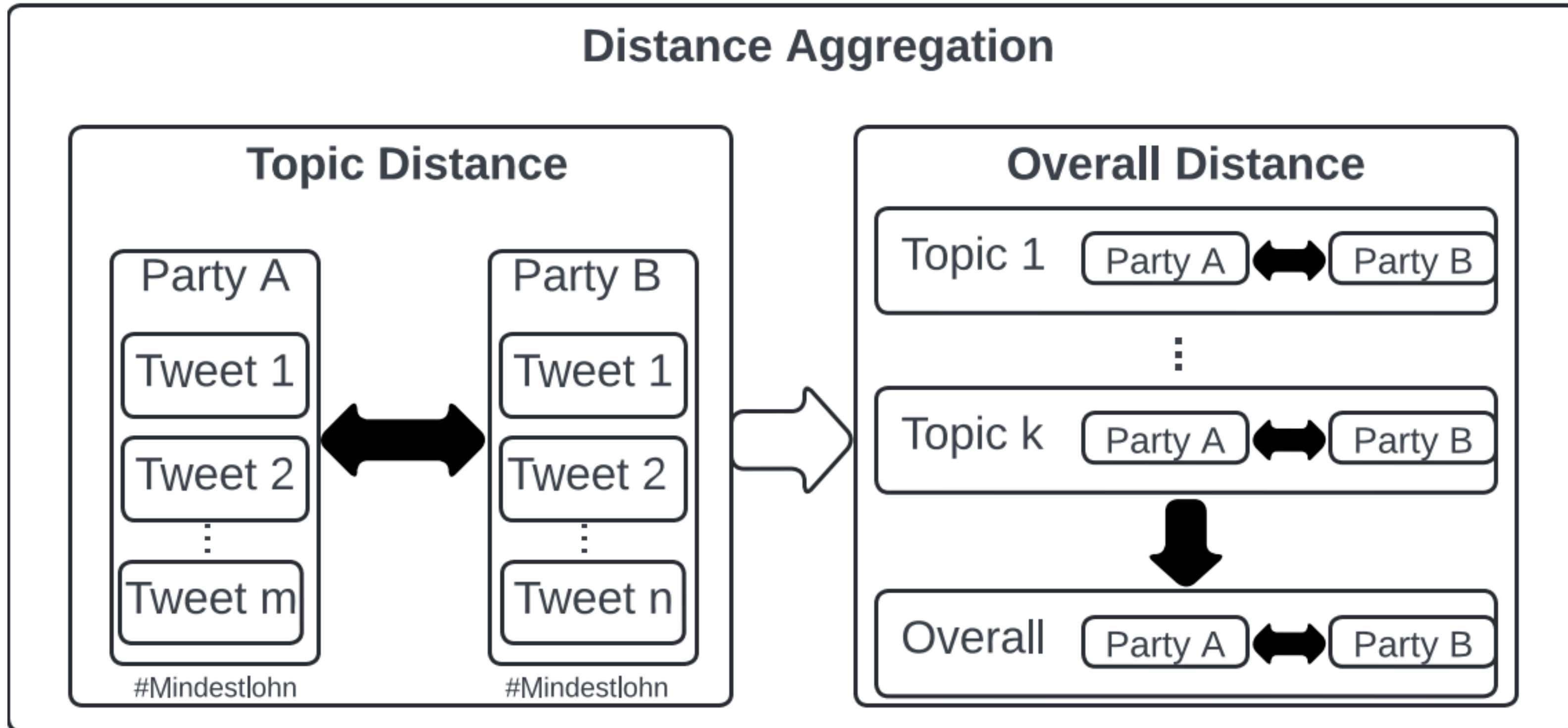


Minimize the distance between Tweets with **overlapping/the same hashtags.**

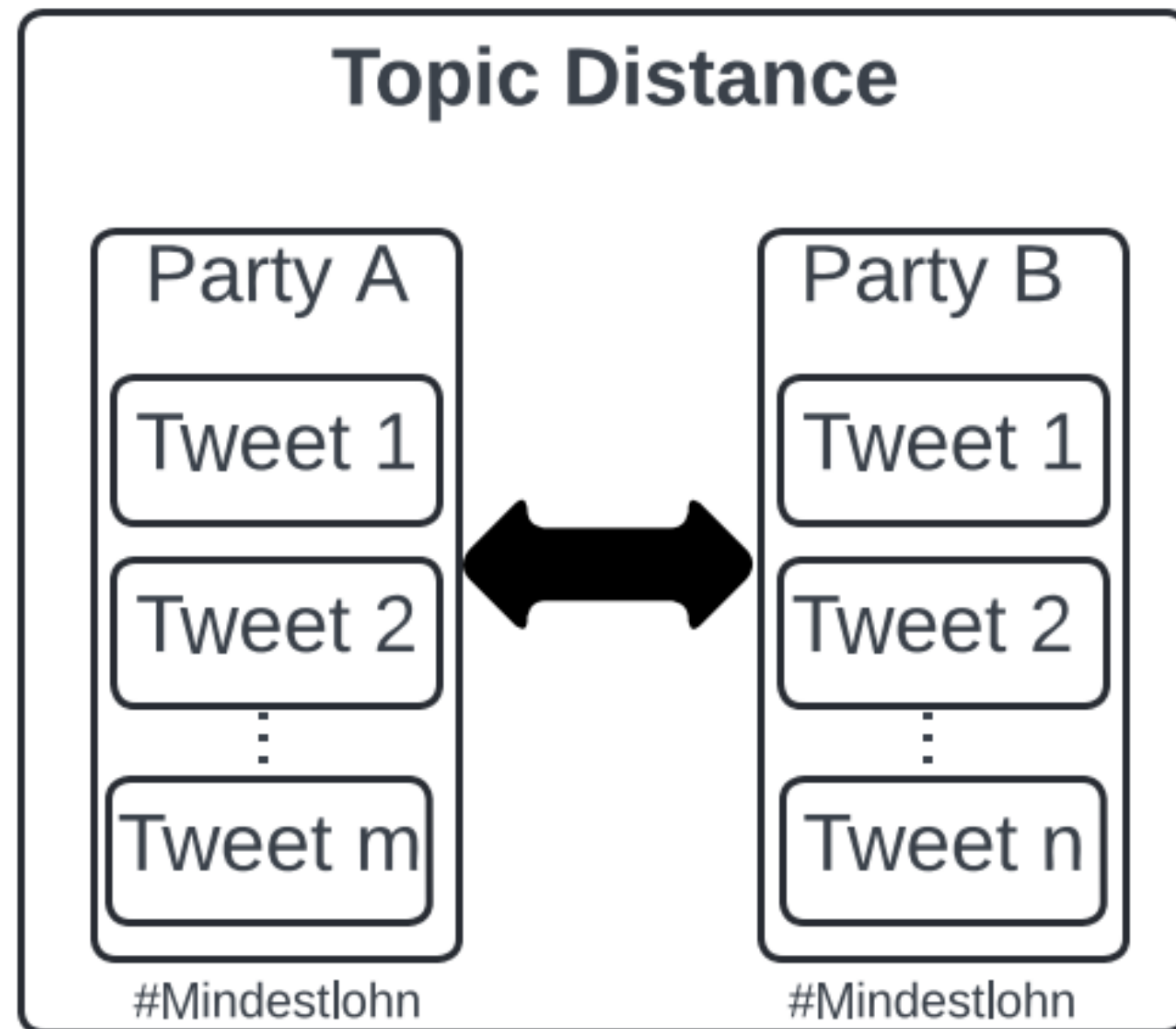
Maximize the distance between Tweets with **no hashtags that cooccur** anywhere in the corpus.

→ Topic-informed sentence representations

Topic-Informed Distance Aggregation



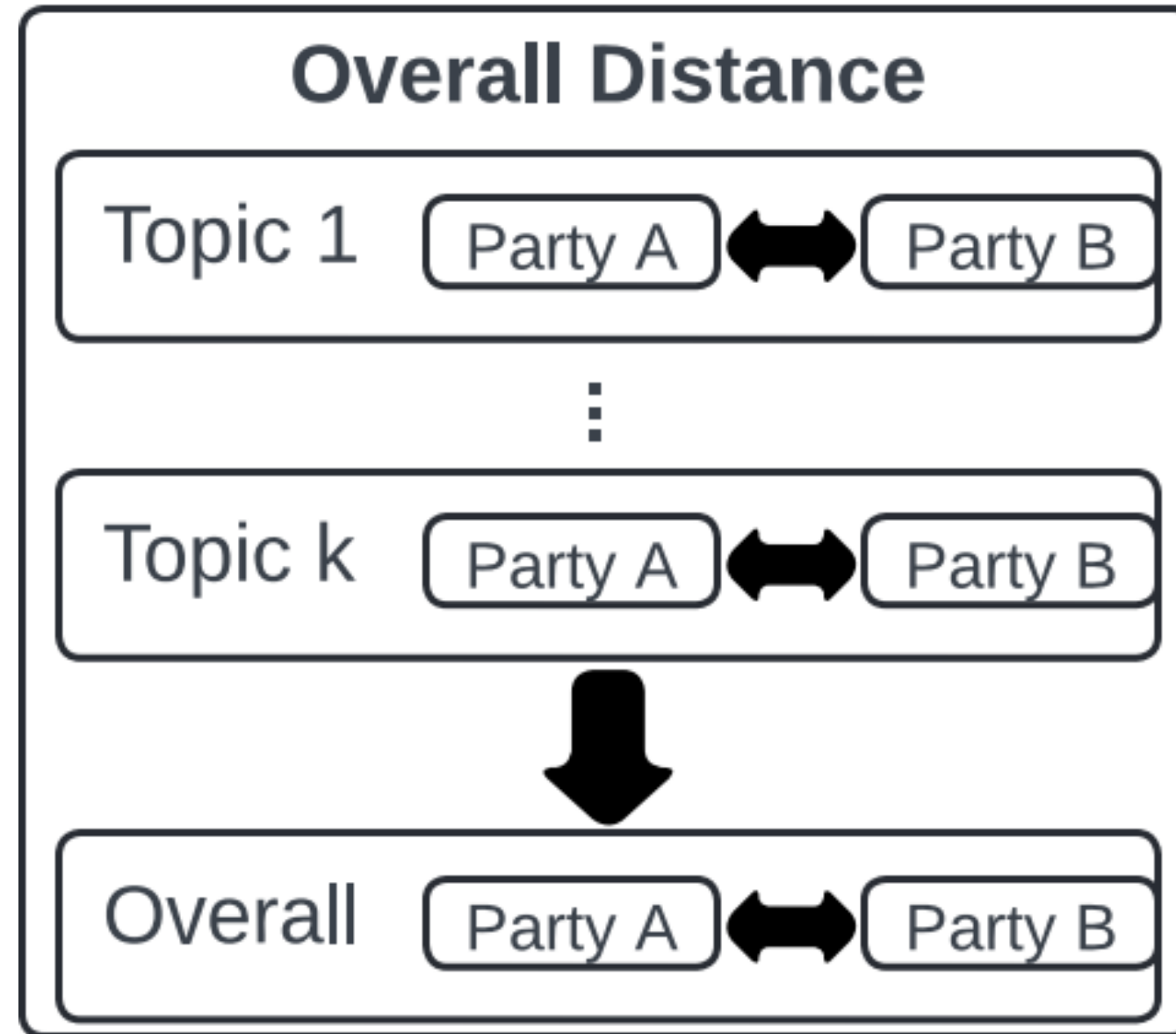
Topic-Informed Distance Aggregation



Gather the mean cosine distance of all possible pairs of Tweets of parties A and B with a given hashtag

Topic-Informed Distance Aggregation

Gather the average of the distances per topic

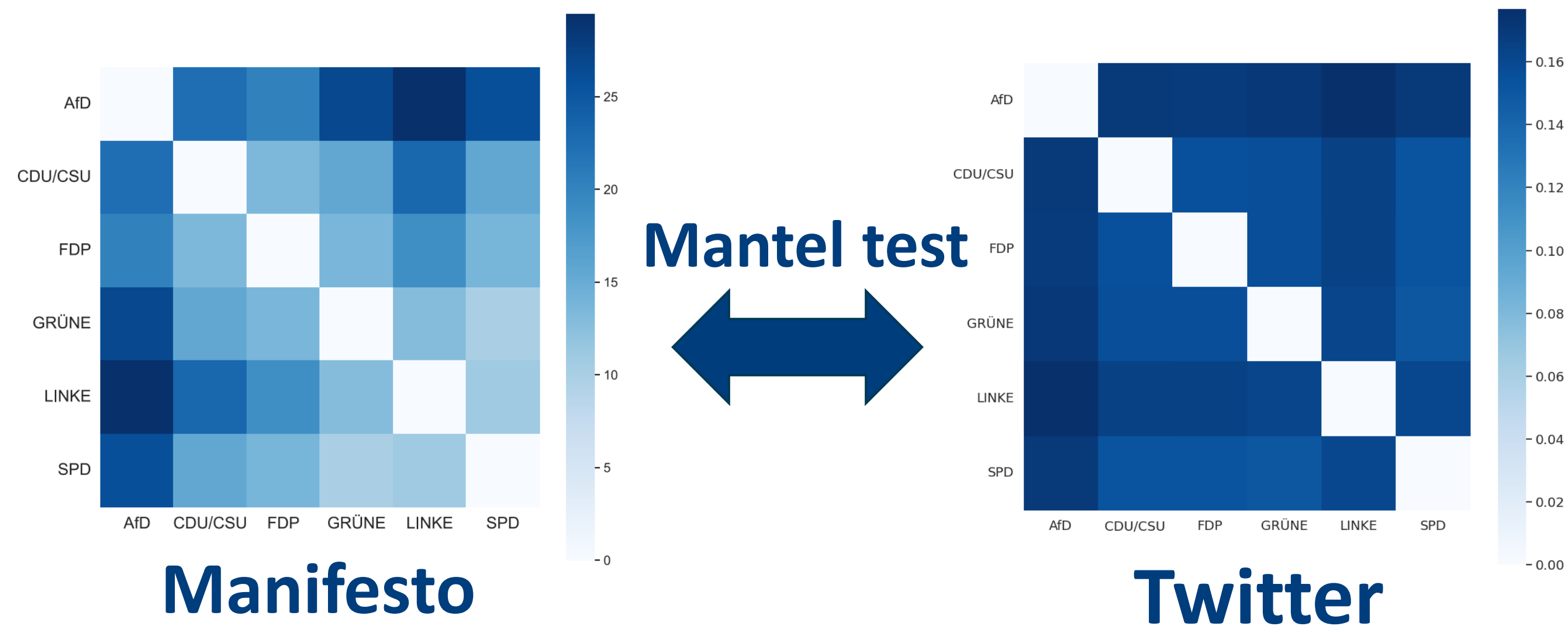


Does Hashtag-guided Fine-Tuning Work?

Data

- Tweets by German politicians of the current six parties in the parliament; from 2013-2021

Evaluation



Does Hashtag-guided Fine-Tuning Work?

Trained on policy domain →

Model	2017	2021
SBERT _{Vanilla}	-0.461	0.369
SBERT _{Domain}	-0.025	0.352
SBERT _{Party}	0.649	0.813*
SBERT _{Hashtag}	0.803*	0.817*

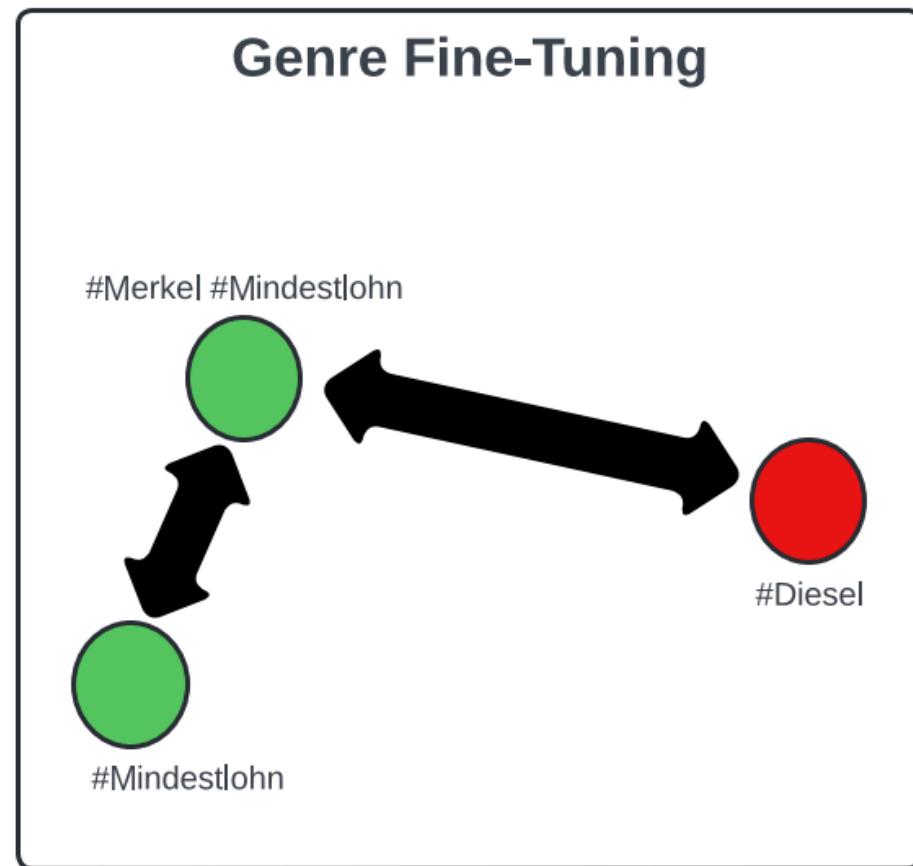
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Trained on party information

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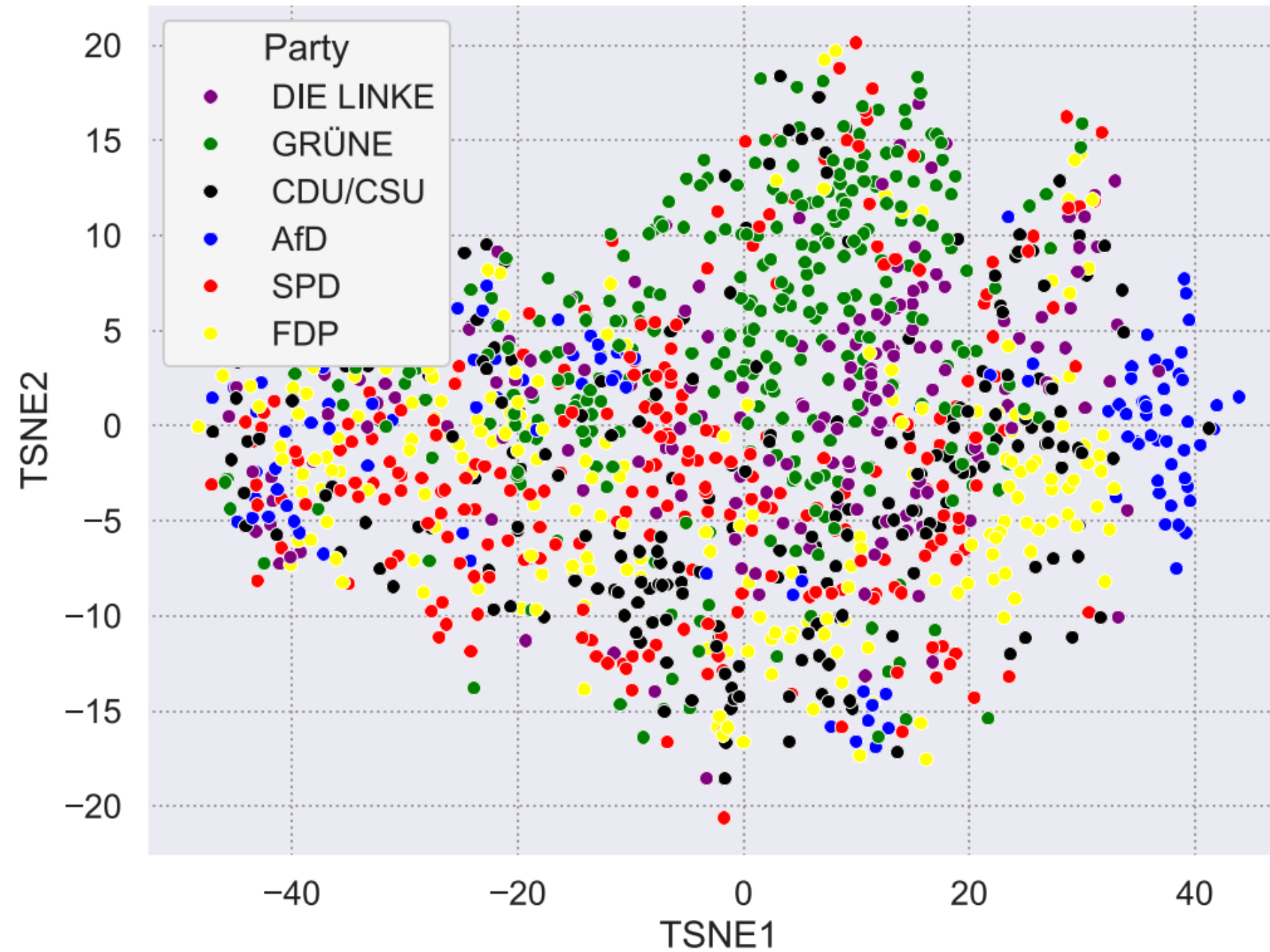
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Sentence encoders trained on hashtags outperform other models for extracting ideological distances between parties on Twitter

Does Hashtag-guided Fine-Tuning Work?



**Individual politicians of the same party
tend to cluster together.**

Conclusion

- Fine-tuning sentence encoders on hashtags enables capturing of ideological distances between parties on Twitter.
- Promising results on an aggregate level, potential for finer-grained investigations

More experiments assessing robustness over time, with less data and for different groups of politicians, and further analyses in the paper.