Do Politicians Appeal to Discrete Emotions? The Effect of Wind Turbine Construction on Elite Discourse

Journal of Politics

Tobias Widmann

2024-03-02

Readme File

Session Info

```
R version 4.3.3 (2024-02-29)
Platform: aarch64-apple-darwin20 (64-bit)
Running under: macOS Sonoma 14.3.1

Matrix products: default
BLAS:   /Library/Frameworks/R.framework/Versions/4.3-arm64/Resources/lib/libRblas.0.dyli
LAPACK: /Library/Frameworks/R.framework/Versions/4.3-arm64/Resources/lib/libRlapack.dyli

locale:
[1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8

time zone: Europe/Copenhagen
tzcode source: internal

attached base packages:
[1] stats     graphics  grDevices utils     datasets  methods   base

loaded via a namespace (and not attached):
 [1] compiler_4.3.3    fastmap_1.1.1     cli_3.6.2         tools_4.3.3
 [5] htmltools_0.5.7   rstudioapi_0.15.0 yaml_2.3.8        rmarkdown_2.25
 [9] knitr_1.45        jsonlite_1.8.8    xfun_0.42         digest_0.6.34
[13] rlang_1.1.3       evaluate_0.23
```

Replication Material

This document describes the data sets and R scripts necessary to reproduce all plots and tables included in the paper and in the Online Appendix. In the beginning of each script, the necessary packages, the versions they were used in, and the necessary data files are listed.

I recommend that you set the working directory (using *setwd()*) to the folder that contains the data at the beginning of each script.

To replicate the analyses of the manuscript and the online appendix, first run the document "001_data_preparation.R", which creates all necessary files for the analysis. Then, run document "002_replication_main.R" for the main results and "003_replication_appendix" for the results in the online appendix. The scripts will automatically save all figures and tables in the folders "figures" and "tables" respectively. The final manuscript and online appendix are also provided, namely the pdf files "004_main.pdf" and "005_appendix.pdf".

Descriptions of R scripts

- **001_data_preparation.R**: This R script prepares all data sets used in the analysis. The script displayes how I applied the different tools to the data, and creates all necessary variables needed for the analysis. Please note, however, that the the electra model used to classify emotional appeals must be applied by using the Python script provided by Widmann & Wich (2022). The data preparation will also work without the python tool, since the results of the electra model are also provided and can be loaded into the R environment.

- **002_replication_main.R**: This R script replicates all tables and graphs included in the main text of the study. All tables and figures will be automatically saved in the respective folder ("figures" or "tables"). All necessary files are provided and will be loaded in automatically.

- **003_replication_appendix.R**: This R script replicates all tables and graphs included in the Online Appendix. All tables and figures will be automatically saved in the respective folder ("figures" or "tables"). All necessary files are provided and will be loaded in automatically.

Descriptions of data files

- **004_main.pdf**: Final version of the study manuscript (main text).
- **005_appendix.pdf**: Final version of the online appendix.
- **parl_speech_raw.Rdata**: Raw parliamentary speeches used in the main analysis of the study, including information on politicians (e.g. assigned electoral districts). Following vairables are included:
  - wkindirekt: indicating the electoral district
  - date
  - name: politician name
  - party
  - text
  - date2: numerical version of the date variable
  - plz: postal codes included in the electoral district
  - treat_indirect: binary treatment variable whether a wind turbine has been built in respective electoral district
  - count: count treatment variable indicating the number of wind turbines built in respective electoral district
  - twoabove7: binary variable indicating whether at least 8 keyword terms (in relation to green issues) are present in the parliamentary speech
  - 1 - 85: indicating the topic proportion for topic 1 to 85 per document
  - topic: indicate the number of the topic with the highest topic proportion per document
  - el.anger - el.hope: binary variables indicating the presence (or absence) of eight different emotions
  - purity.norm: normalized morality score based on Bos & Minihold (2022) counting words in relation to sanctity + degradation foundation
  - care_harm.norm: normalized morality score based on Bos & Minihold (2022) counting words in relation to care + harm foundation

  - fairness_care.norm: normalized morality score based on Bos & Minihold (2022) counting words in relation to two foundations: fairness/injustice and care/harm

- **parl_speech.Rdata**: Parliamentary speeches tokenized to the sentence level, applied emotion classifier, and topic information based on a structural topic model. Following vairables are included:

  - wkindirekt: indicating the electoral district
  - date
  - name: politician name
  - party
  - text
  - date2: numerical version of the date variable
  - plz: postal codes included in the electoral district

- **wind_tweets.Rdata**: Tweets with applied emotion classifier, and topic information based on a structural topic model. Following variables are included:

  - wkindirekt: indicating the electoral district
  - created_at: date
  - id: tweet ID
  - username: username of politician
  - el.anger - el.hope: binary variables indicating the presence of eight different emotions
  - party
  - plz: postal codes included in the electoral district
  - date
  - treat_indirect: binary treatment variable whether a wind turbine has been built in respective electoral district
  - count: count treatment variable indicating the number of wind turbines built in respective electoral district
  - 1 - 64: topic proportions of topic 1 to 64 per document
  - topic: indicate the number of the topic with the highest topic proportion per document

  - date2: numerical date based on ‘date’ variable

- **wind_data.Rdata**: Data set including information on all wind turbines being build during period of research with data on date, postal code, and electoral district.

  - date
  - plz: postal code of wind turbine
  - date: numerical date version
  - wahlkreis: indicating electoral district

- **wind_data_unique.Rdata**: Data set including information on the earliest wind turbine construction per electoral district.

  - date
  - date: numerical date version
  - wahlkreis: indicating electoral district

- **wind_data_approval.Rdata**: Same as “wind_data.Rdata” but date indicates the date of the wind turbine approval, not the date of the construction.

  - date
  - plz: postal code of wind turbine
  - date: numerical date version
  - wahlkreis: indicating electoral district

- **postal_codes.Rdata**: A dataframe including all electoral districts of the 19th legislative period and corresponding postal codes.

  - Wahlkreis-Nr: number of the electoral district
  - Landname: name of the federal state
  - plz: all postal codes included in the electoral district

- **twitter_replies.Rdata**: A dataframe that includes the emotional, aggregated scores of all replies to politicians’ tweets.

  - id: indicating the tweet ID of the parent tweet
  - replies_anger - replies_hope: aggregated emotion score of all replies to the parent tweet
  - replies_negative: all negative replies scores summed up and divided by 4
  - replies_positive: all positive replies scores summed up and divided by 4

- **afd_tweets/linke_tweets/spd_tweets/sz_tweets**: Dataframes including tweets from random samples of followers of political parties (AfD, The Left, SPD) and a random "attentive" sample (followers of *Süddeutsche Zeitung*, SZ), classified by emotion and topic.

  - created_at: date
  - id: tweet ID
  - anger - hope: binary variable indicating the presence (or absence) of eight different discrete emotions
  - environment_count2 - finance_count2: count variables indicating the number of terms in each document belonging to the topic keyword strings (Online Appendix K)

- **electra_ps_results.csv**: csv-file including the results from the electra model (Widmann and Wich 2022) classification for parliamentary speeches.

- **Geometrie_…**: Files necessary for creating the map of Germany displaying all 299 electoral districts. Based on Votta (2019).

- **btw_data.Rdata:** Information on electoral districts of the 19th legislative period used for mapping. Based on Votta (2019).

- **mrd_de_mb.yml**: Moral dictionary used in the Online Appendix. Included German words have been taken from Bos and Minihold (2022) and turned into a yml-file to be applicable within the quanteda environment.

References

Bos, Linda, and Sophie Minihold. 2022. "The Ideological Predictors of Moral Appeals by European Political Elites; an Exploration of the Use of Moral Rhetoric in Multiparty Systems." *Political Psychology* 43 (1): 4563.

Votta, Fabio. 2019. *German Elections Data*. https://github.com/favstats/btw_data.

Widmann, Tobias, and Maximilian Wich. 2022. "Creating and Comparing Dictionary, Word Embedding, and Transformer-Based Models to Measure Discrete Emotions in German Political Text." Rochester, NY. https://papers.ssrn.com/abstract=4127133.