Political spaces from texts - the rise of populism and the reconfiguration of the German political space

Eckehard Olbrich and Sven BanischMPI MiS Leipzig

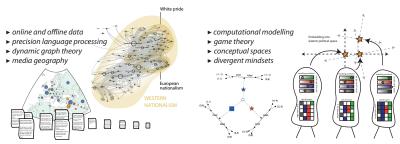
KAAS seminar

20.10.2021









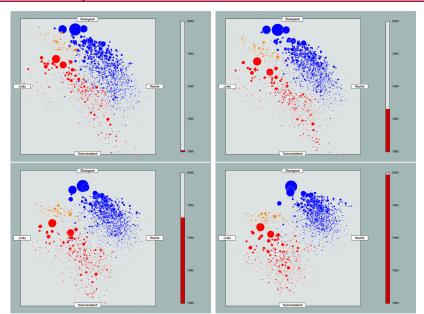
- European project in the Future Emerging Technologies program 2017 - 2021
- highly interdisciplinary, 8 institutions, ca. 40 scientists

https://www.odycceus.eu/

Political Spaces Olbrich and Banisch 2/29

Introduction





Political Spaces | Olbrich and Banisch | 4/29

Introduction | Political spaces



- Spatial metaphors are ubiquitous in political communication.
 One talks about political positions, political landscapes, and about the distances between opinions or positions of political actors.
- Thus on a first superficial level political spaces are spatial representations of political opinions.
- In political science: Hotellings (1929) economic model of spatial competition applied to political parties by Anthony Downs (1957)
 - Political preferences of the voters are formulated as a monotone function of the distance to their position in political.
 - Political parties or candidates try then to find a position that maximizes their share of votes. These models were originally formulated in an one dimensional space, but later extended to more dimensions (Stokes 1963).

Political Spaces Olbrich and Banisch 5/29

Introduction | Political spaces as conceptual spaces



- Downs explicitly thought about this political space as an ideological space along the left-right axis.
 - Collecting detailed information about the opinion of candidates or parties is costly.
 - Ideological positions of the parties or candidates can be used as a proxy, because the ideological position and the position on the single issues are usually correlated.
- Political spaces represent dependencies between the attitudes on different issues.
- Political spaces are conceptual spaces (Gärdenfors 2000) the corresponding domains are higher order properties, because they are representing correlations of political attitudes on a large set of issues.

Political Spaces Olbrich and Banisch 6/29

Introduction | Summary



- The main level of political discourse that can be observed directly is the level of political issues.
- 2 Attitudes of an actor on the large set of issues that are or could be debated represent a point in the large dimensional issue space.
- In a population these attitudes are correlated due to logical, psychological and social constraints, which allows to represent the political differences between these actors in low dimensional latent spaces that are called political spaces.

Political Spaces Olbrich and Banisch 7/29

Methods and data

The manifesto project database



- The Manifesto Research on Political Representation (MARPOR) project (Merz et al. 2016) collects electoral manifestos of political parties from all over the world and has their content encoded by trained native-language experts
- We used the version 4 of the coding scheme that comprises 56 substantial categories of political goals and one category for unencoded quasisentences that span a 56(57)-dimensional issue space.
- By counting the frequency of occurrences of certain political goals in one document, each electoral manifesto can be represented by the normalized counts that can be considered as empirical probabilities.

https://manifesto-project.wzb.eu/

Topic modeling



- An alternative way to construct the issue space in an unsupervised way is topic modeling:
 - Standard Latent Dirichlet Allocation (LDA) model (Blei et al. 2003)
 - Pre-processing (stop word removal and lemmatization) using SpaCy
 - Splitting the programs in documents with approximately 100 tokens each
 - Estimation using the collapsed variational Bayes algorithm from Matlab
 - Optimal number of topics was estimated using 10-fold cross validation

Political Spaces Olbrich and Banisch 10/29

Inferring political spaces



Issue space

- Supervised: Manifesto categories
- Unsupervised: Topic models

Political space

- Deductive: Projection on linear combinations of Manifesto categories (or topics)
- Inductive: Principal component analysis (PCA)

Our data set

- 89 electoral party manifestos from Germany between 1949 and 2017
- Topic model A with 60 topics for the whole data set
- Topic model B with 40 topics for the 33 manifestos between 1998 and 2017 (because only for them the encoding of the quasisentences was available)

The reconfiguration of the German political space

Representation Gap



A popular explanation for the latest wave of electoral successes of populist candidates, movements or parties is the idea of a representation gap.

- 1 The center-right parties moved to the left and created a "gap" on the conservative side of the political spectrum that was filled by new right parties.
- 2 For the center-left parties there are again two versions. In both versions the diagnosis is that they neglected the fight for the economic interests of the less privileged.
 - 1 The social democrats have moved to the right with respect to economic issues by adopting "neoliberal" politics (Clinton, Blair, Schröder).
 - 2 The left has changed their focus towards cultural issues and the so-called "identity politics" which had led to a loss of the "working class" voters (Brexit, Trump).

Can we find indications of a representation gap in our political spaces?

Deductive space The right left dimension (RILE)



Right	Left
Military: Positive (104)	Anti-imperialism (103)
Freedom and Human Rights (201)	Military: Negative (105)
Constitutionalism: Positive (203)	Peace (106)
Political Authority (305)	Internationalism: Positive (107)
Free Market Economy (401)	Democracy (202)
Economic Incentives (402)	Market Regulation (403)
Protectionism: Negative (407)	Economic Planning (404)
Economic Orthodoxy (414)	Protectionism: Positive (406)
Welfare State Limitation (505)	Controlled Economy (412)
National Way of Life: Positive (601)	Nationalisation (413)
Traditional Morality: Positive (603)	Welfare State Expansion (504)
Law and Order (605)	Education Expansion (506)
Civic Mindedness: Positive (606)	Labour Groups: Positive (701)

Table: Issues used for estimating the RILE index.



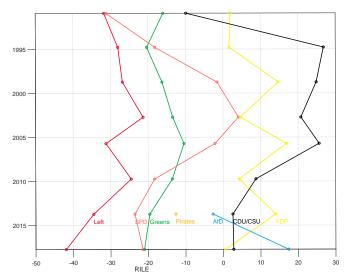


Figure: RILE index of the German parties between 1990 and 2017.

Political Spaces Olbrich and Banisch 15/29





Economic left	Economic right
Market Regulation (403)	Free Market Economy (401)
Economic planning (404)	Incentives: positive (402)
Corporatism: positive (405)	Protectionism: negative (407)
Protectionism: positive (406)	Economic growth positive (410)
Keynesian demand management (409)	Economic orthodoxy (414)
Controlled economy (412)	
Nationalization (413)	
Equality (503)	
Welfare state expansion (504)	Welfare state limitation (505)
Educational expansion (506)	Educational limitation (507)
Labour groups: positive (701)	Labour groups negative (702)
Socio-cultural left	Socio-cultural right
Democracy (202)	Political authority (305)
Environmental protection (501)	
Culture: positive (502)	
National way of life: negative (604)	National way of life: positive (601)
Traditional Morality: negative (604)	Traditional morality: positive (603)
	Law and order: positive (603)
	Civic mindedness: positive (606)
Multiculturalism: positive (607)	Multiculturalism: negative (608)
Underprivileged minority groups (705)	
Non-economic demographic groups (706)	

Table: Issues used to define an economic and a socio-cultural dimension in Ryan Bakker and Sara Hobolt. "Measuring party positions". In: *Political Choice Matters.* Ed. by Geoffrey Evans and Nan Dirk de Graaf. Oxford University Press Oxford, 2013, pp. 27–45.

Political Spaces Olbrich and Banisch 16/29



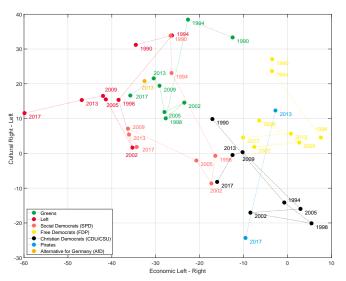


Figure: Projection on a 2-d political space with an economic and cultural for Germany between 1998 and 2017.

Political Spaces Olbrich and Banisch 17/29

Robustness of the right-left dimension



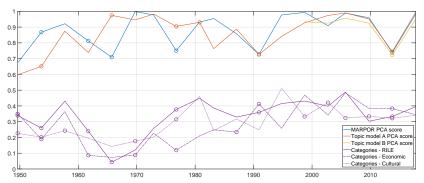


Figure: Blue, Orange, and yellow curves: Absolute values of correlations between the RILE score and the scores on principal components for single elections. Political spaces were estimated from MARPOR categories (orange), topic model A (yellow) and topic model B (purple). Circles indicate cases for which not the 1st component showed the strongest correlation. Purple curve: Maximal Correlation between the RILE axis and the economic and the cultural axis, respectively, and a principal component for single elections. The circle indicates if it is not the first principal component.

Political Spaces Olbrich and Banisch 18/29



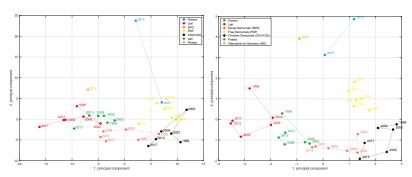


Figure: Political spaces spanned by the first and second PCA component from the MARPOR counts (left) and for the topic model B (right) for Germany 1998 - 2017.

⇒ AfD creates a new dimension, i.e. it changes the political space!



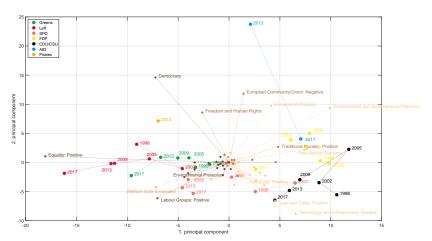


Figure: First two principal components for the political estimated from the MARPOR categories for Germany 1998 - 2017.

Political Spaces Olbrich and Banisch 20/29



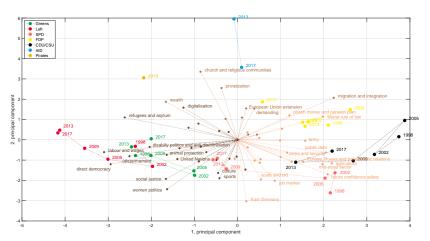


Figure: PCA using the topic log probabilities from topic model A.

Political Spaces Olbrich and Banisch 21/29



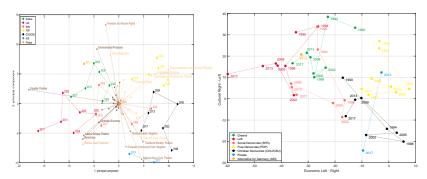
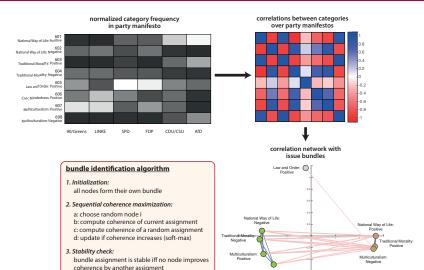


Figure: First and third principal component for the MARPOR categories for Germany 1998 - 2017 vs. the economic cultural space

Political Spaces Olbrich and Banisch 22/29

Understanding the political spaces | Issue bundles

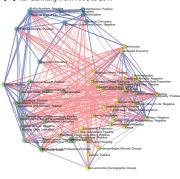




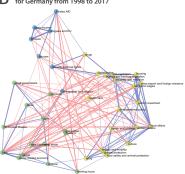
Civic Mindedness:



issue consistency network of MARPOR categories for Germany from 1998 to 2017

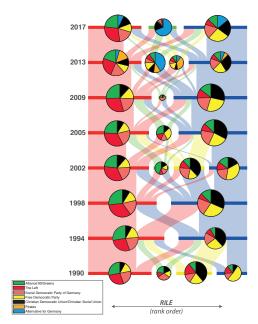


issue consistency network of topics (model B) for Germany from 1998 to 2017



Issue bundles over time

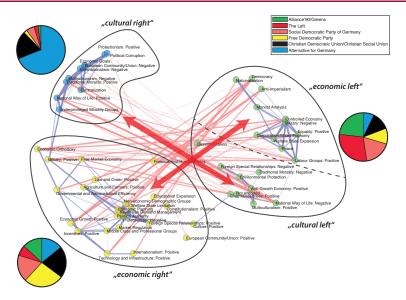




Political Spaces | Olbrich and Banisch | 25/29

Issue bundles 2017





Summary



- We demonstrated that it is possible to create political spaces in a fully unsupervised manner.
- There are no indications for a representation gap in the deductive political spaces.
- The AfD appears in a new dimension of the political space.
- The analysis using issue bundles showed that this new dimension is related to a splitting of the conservative bundle into an "economic right" and a more "cultural right" bundle.
- The latter finding is only preliminary and has to be validated using the 2021 results and also further analysing the results from topic modeling.

Political Spaces Olbrich and Banisch 27/29



Limitations

- Topic modeling identifies issues, but not attitudes. This can be the problem for polarized issues such as migration.
- We only studied the party positions, but not the positions of the voters.
- By looking only at the manifestos we do not considered which positions the political parties express during their election campaigns in speeches, public debates, advertisements or on social media outlets.

Further questions

- Do our results generalize to other countries? (It seems so.)
- How do the voters do the dimension reduction of the issue space? Is there a single political space or do we have to consider different ones?

The paper







https://www.frontiersin.org/articles/10.3389/fdata.2021.731349/full

Political Spaces Olbrich and Banisch 29/29