

Modeling the evolution of political landscapes

First Step: Stylized Facts from the Data

Political Landscapes

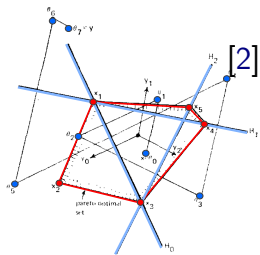
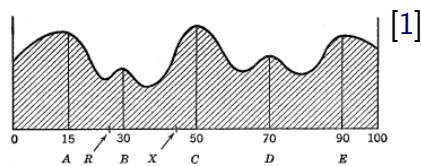
Definition: Frequency distribution of policy positions of voters.

Formats of policy positions:

Abstract or concrete, formatted as text or numbers. Examples:

	Text	Numbers
Concrete	Policy Proposal: Act, Bill, Law	In policy proposal: Tax Rate Budget Plan
Abstract	Party Manifesto Political Speech	Ideological Position: left—right pro-EU—anti-EU

Relevance: The central question of social choice theory is how to aggregate preferences of voters. Preferences can be embedded in numerical political landscapes. Consequently political landscapes of abstract ideological positions in numbers are at the heart of most models of strategic decision making of voters, candidates, and parties with respect to elections, positioning of manifestos, and coalition formation, with the Median Voter Theorem [1] in one dimension (A) and the "Chaos Theorem" [2] in multidimensional spaces as central results.



Research Questions: Most models of political behavior build on an underlying static political landscape. What is left out are the questions:

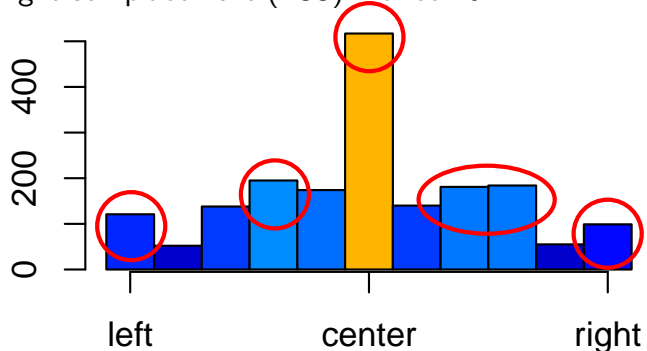
- How do voters form their ideological preferences?
- How do they change them when interacting with others?
- How do such interactions shape the political landscape?

Data:

Survey question about a self-placement on the ideological axes (left—right in Europe, liberal—conservative in the US) from the European Social Survey (ESS), American National Election Study (ANES), German General Social Survey (ALLBUS), and German Socio-Economic Panel (SOEP). Additionally, question if European Unification should go further or has already gone too far from ESS.

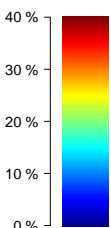
Static Landscapes

Left—Right self-placement (ESS) France 2012.



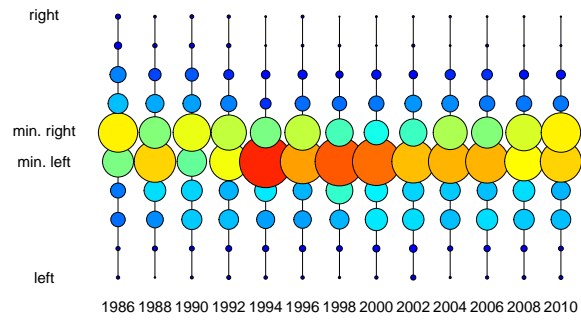
Stylized Facts:

- Never a standard distribution.
- Largest peak always central.
- Multiple peaks are almost ubiquitous.
- Very often extremal peaks.
- Often intermediate off-center peaks.

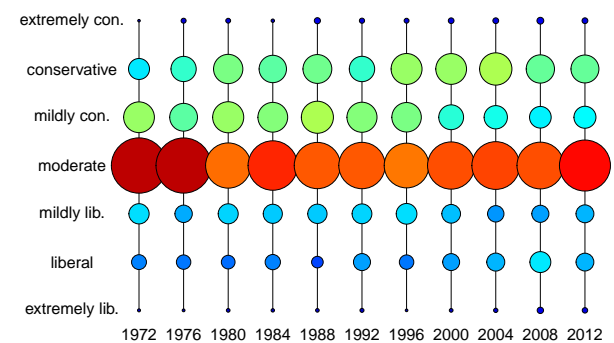


Evolution of Landscapes

Left—Right self-placement (ALLBUS) Germany.



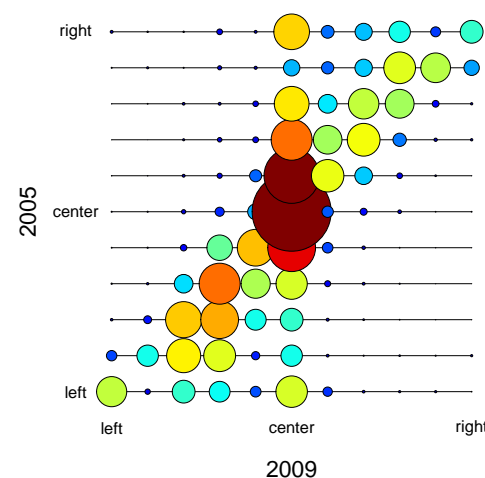
Liberal—Conservative self-placement (ANES) USA.



Stylized Facts: Location of central cluster can slowly move (ALLBUS). Location of off-central clusters can move (ANES).

Individual Changes of Positions

Transition matrix from a panel study: Individual probability of uttering a position in 2009 conditional on uttering a position in 2005 in SOEP. (No other years available.)



Stylized Facts: High probability to stay. Nevertheless, movements are frequent. Jumps are mostly in a limited range. Probability to cross the center is very low.

Conclusion

Shapes of opinion landscapes are non-trivial and can not be explained by simple distributions. This speaks for a social process underlying their evolution. A dynamic model needs to explain (i) the evolution of clusters at typical locations and their slow movements, (ii) the evolution of extremal peaks, (iii) a large central cluster of different sizes. First attempts to do it with the bounded confidence model have been performed with limited success [3].

[1] Anthony Downs. *An Economic Theory of Political Action in a Democracy*. *The Journal of Political Economy* 65 (2) (1957), 135–150.
 [2] Richard D. McKelvey. *Intransitivities in multidimensional voting models and some implications for agenda control*. *Journal of Economic Theory* 12 (3) (1976), 472–482.
 [3] Jan Lorenz. *How Clustered Ideological Landscapes Emerge Through Opinion Dynamics*. *ECPR General Conference Glasgow* (2014).

