

Discourse network analysis – An overview

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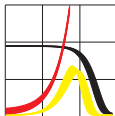


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Starting point

Current trends

- 1 Comeback of the role of ideas, norms and values in political science
- 2 Development of new methods of text and discourse analysis
- 3 Possibility of the seminal combination of qualitative discourse methods and quantitative relational methods
- 4 Goal: Micro-foundation of belief systems for empirical investigation

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The argumentative turn

Propositions

- 1 Perception of problems and planning of solutions is grounded on subjective factors
- 2 Call for interpretative and discursive methods

Implications for political scientists

- 1 Consideration of the narrative dimension of policy and politics
- 2 Reflection about the role of the policy analyst and planner

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Discourse components

- Stable and rule-governed systems which formulate relevant problems
- Ensemble of categories and practices, which provide arguments and interpretation schemes for actors
- Common knowledge for the instrumental solving of the perceived problem
- Different discourses meet in discourse arenas and compete for the sovereignty

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Materialisation of Policy discourse

- Terms of policy discourse
- i.e. storylines, vocabular, epistemic figures
- Principles and practices
- i.e. contextual embedded routines, which generate meaningful action
- Actors
- i.e. the acting entities which constitute the discourse through their actions)

Discourse coalitions

“The ensemble of a set of story-lines; the actors who utter these story-lines, and the practices in which this discursive activity is based” (Hajer 1995: 65)

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- Analytical tools for interpretation are vague and often inductive
- No consideration of the policy process
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Existing approaches

Implicit discourse network theories

- Advocacy Coalition Framework
- Punctuated Equilibrium Theory
- Civic Arena Approach
- Collective Symbolic Coping

Issues

- Endogenous vs. exogenous beliefs
- Temporal dimension
- Operationalisation

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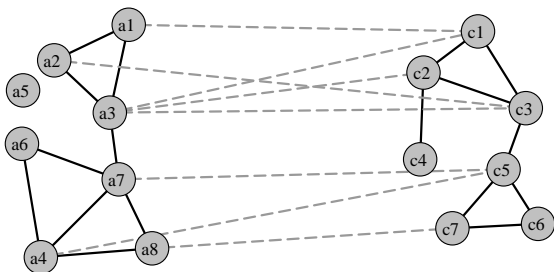
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Existing approaches



- Political actors: a1, a2 etc.
- Concepts: c1, c2 etc.
- Discrete time points: t1, t2 etc.

- Edges between
 - actors
 - concepts
 - actors and concepts
 - actors via common concept affiliations
 - concepts via common actor affiliations

Goals

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- Simultaneous analysis of the actor \times concept discourse network and the social interaction network
- Does one network affect the other one?
- Micro-foundation of preference coalitions by examining discourse coalitions
- How do the dynamics of a discourse affect preference or alliance formation?

But...

How should we measure the discourse network?

The co-occurrence approach

The approach

- Position papers (e.g. press releases)
- Identification of discriminating expressions (e.g. in the demographic discourse: fertility, immigration, pension entrance age)
- Frame analysis using a cluster analysis of an actor \times concept matrix

Evaluation

- Strengths:
 - Metric similarity between actors based on their beliefs
 - Discrete time points are possible
 - Little manual coding effort is needed
- Weakness: Selection of discriminating concepts

The co-occurrence approach

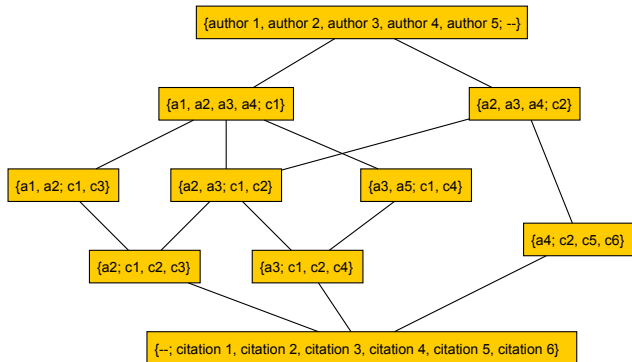
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Concept analysis



- Same logic as co-occurrence, but data analysis is different
- Not based on similarity measures, but maximal subsets of empirically observed actor-concept affiliations
- Strengths: Intuitive; little manual coding effort is needed
- Weakness: Selection of discriminating concepts

Category-based content analysis

The approach

- Inductive logic: Build categories when reading position papers and assign text elements
- Hypothesis testing: Pre-existing theory about frames; categories can be deduced
- Actor \times category affiliation matrix can be used for co-occurrence analysis or concept analysis
- Weakness: Manual coding takes lots of time and is ambiguous

Example

- Demographic change = {Pension age, pension rate, fertility, immigration, labour market reserves etc.}
- Fertility = {enhance fertility, number of children, childcare benefits, gender equity etc.}

Grammar-based approaches

The approach

- News articles
- Reduction of sentences to semantic schemes
- Relational database
- Representation and inference

Weaknesses

- software availability
- manual coding
- arbitrariness
- concept affiliation unclear

Example

- “The German chancellor visited Paris last weekend.”
- <subject> chancellor <country> Germany <action> visit <object> Paris <country> France

Text network analysis

The approach

- Text window of a certain length, e.g. 10 words
- Important words as nodes, connected by edges if within the same window
- Result: Graph representing the meaning of the text
- Improved approach: Centering Resonance Analysis (adjacency of nominal phrases)
- Analysis: Centrality analysis

Usage

- As input for co-occurrence approach
- As input for time-series analysis of centrality measures
- Dynamic Centering Resonance Analysis

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- Which approaches are more useful, which are less useful?
- Still too much manual coding or too many user decisions?
- Is it feasible to analyse **dynamic** policy networks using content analysis?
- Connection between social networks and discourse networks
- Other questions?