

Who is responsible?

A Model for Inference over Narrative Structure in Political Speech

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Outline

- 1 Background
- 2 Theory
- 3 Cases and Data
- 4 Results
 - Validation

Manufacturing irredentism?



Measuring Irredentism: Popular Narratives

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- ④ The person responsible for losing South Ossetia is Putin, he's the main culprit and it happened because he wanted it, it makes me angry.

Another perspective - media effects on mental maps



Research Questions

Primary Question:

What narrative structures are employed by elites in political communication regarding lost territory, and to what extent are these structures internalized by target audiences?

- In particular, how do these narratives vary
 - as time elapses after the initial loss?
 - with the political affiliation of the author?

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 - ...but struggle to identify features not well-captured by word co-occurrence, and are very context-dependent.

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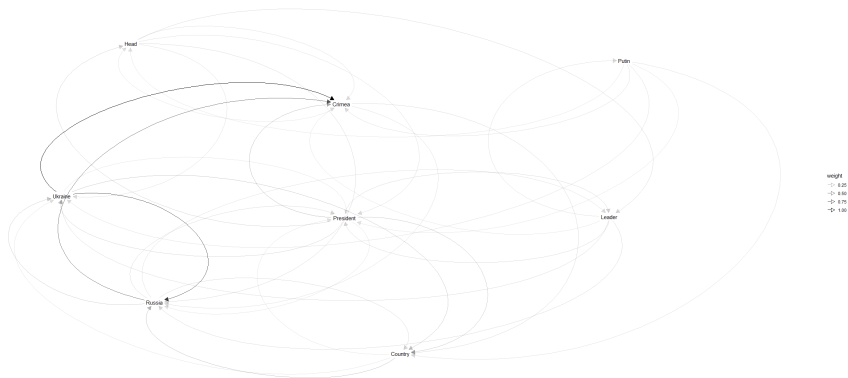
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Note that only emotion is well-captured by standard automated text analysis methods!

My solution: narrative graphs



Narrative graphs: Procedure

- ➊ Identify all named entities in the document.
- ➋ Tag parts of speech and form a dependency tree for each sentence.
- ➌ Use this information to extract subject-verb-object triplets.
- ➍ Aggregate triplets to a directed multigraph, where edges are weighted by
 - ➊ unique occurrences of a verb;
 - ➋ total occurrences of all verbs;
 - ➌ average sentiment of verbs;
 - ➍ temporality (verb tense)
- ➎ Estimate network formation from latent space model using document covariates and word embeddings (still WIP) to enable consistent inference.

Example

МИД России LOC обвинил Вашингтон LOC в стремлении помешать в борьбе с терроризмом в Сирии LOC .

Figure 1: Example of entity recognition [Translation: The **Russian Ministry of Foreign Affairs** accused **Washington** of attempting to interfere with the fight against terrorism in **Syria**]

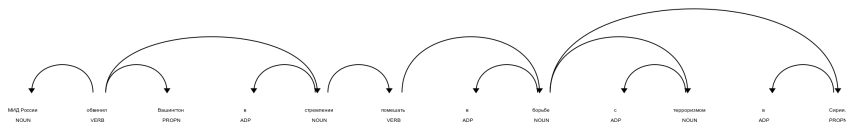


Figure 2: Example dependency parse

Data Sources

- Four major newspapers (Rezonansi, Kviris Palitra, Sakartvelos Respublika, Vostoka) in Georgia, as well as comprehensive transcripts of presidential speeches for 1993-2004.
 - Collected from archives in Tbilisi - still in the process of OCR and cleaning.
- Major online Russian news dailies Lenta.ru and Gazeta.ru, as well as liberal alternative Meduza for 1999-2020.
 - Scraped by hand from websites in early 2020 (no longer as straightforward).

Validation Approach: heavy-handed censorship in Russia

- In March 2014, Lenta.ru published an interview with a Ukrainian nationalist, and within 3 days over half of the staff had been replaced with Kremlin loyalists.

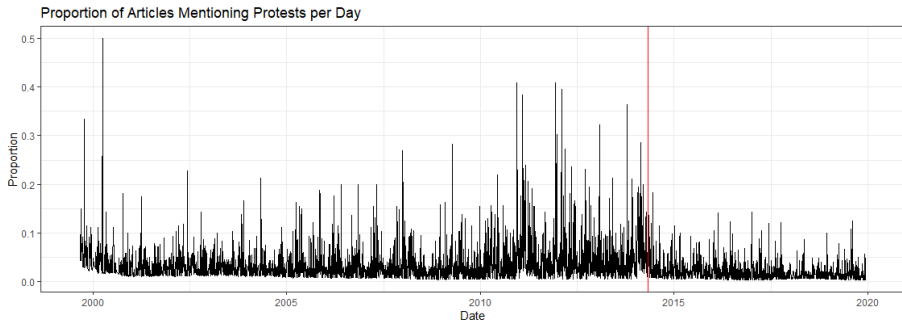
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- Unsurprisingly, independent content disappeared from the site essentially overnight – but fired staff went on to write for a new publication (Meduza) and Gazeta.ru, as the main beneficiary, was essentially unaffected.

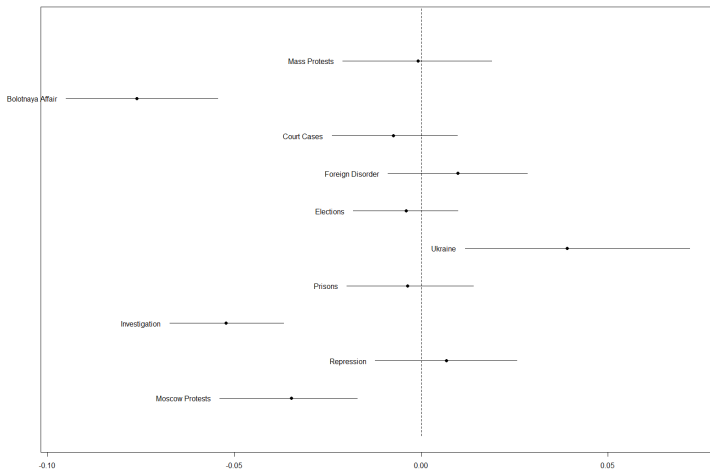
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- This is therefore an ideal validation exercise: test the ability of alternative approaches to recover the (approximately known) effect of censorship through event study (RDiT), DiD, and synthetic control specifications.
 - Focus on coverage of protest for now, as the most obviously sensitive topic.

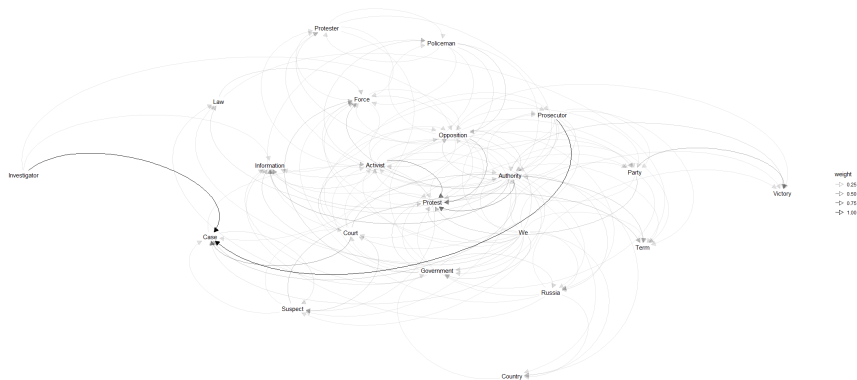
Protest coverage before and after censorship



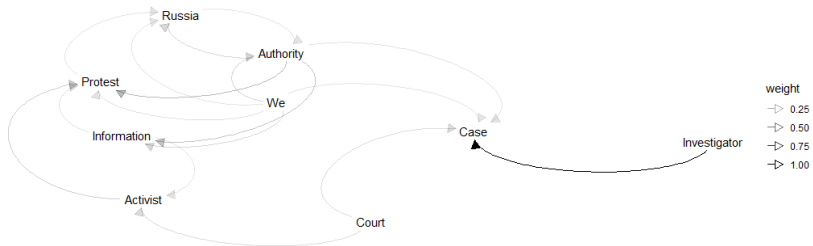
Censorship effects by topic



Narrative Graph Pre-censorship



Narrative Graph Post-censorship



Next Steps

- Extend validation to other network properties
- Finish proving statistical properties of narrative graphs.
- Conduct analysis of territorial loss narratives in newspapers and survey.
- Other validations?

Thank you!

Please send comments and suggestions by email to pjcarter@princeton.edu