

Moment of Madness: Shifting Sentiment and the Dynamics of Revolution in the Finnish Civil War

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Motivation



Revolutions of 1989

- ▶ *Glasnost*: Encouraged public dissent with the government
- ▶ Limited repression of opposition

Wagner Group Rebellion 2023

- ▶ Strict narrative control by the state: Putin's televised address 24th of June
- ▶ Heavy repression

This Paper

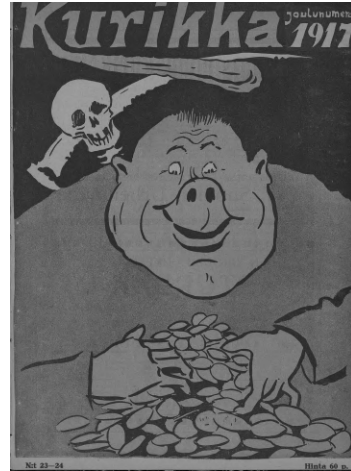
- ▶ **Research Question:** Can changes in media control and collective sentiment trigger mass mobilization?
- ▶ **Context:** After February Revolution of 1917, imperial censorship is dismantled in the Grand Duchy of Finland, resulting in a massive surge of public opposition in the newspapers
- ▶ **Empirical Strategy:** Difference-in-differences with shift-share exposure to a change in public opposition and spatial fuzzy RDD
- ▶ **Outcomes:** Several measures for mobilization in Finnish Civil War fought ten months post the uplifting of censorship

Preview of the Results

- ▶ **Mobilization effect:** Regions exposed to a greater change in pro-opposition rhetoric saw larger increases in conflict mortality
- ▶ **Reasons for growing opposition:**
 - ① Accumulation of suppressed dissent during censorship
 - ② Inspiration provided by the Bolshevik Revolution
- ▶ **Motives of mobilization:** > 40% rebels cited social pressure as a key motivation to take up arms. Public opposition did not change the reasons why people rebelled, only the perceived feasibility of success
- ▶ **Repression:** State crackdowns sharply reduced mobilization. Public opposition only weakly mitigated repression, suggesting belief shifts matter most in early mobilization, but not in sustaining rebellion

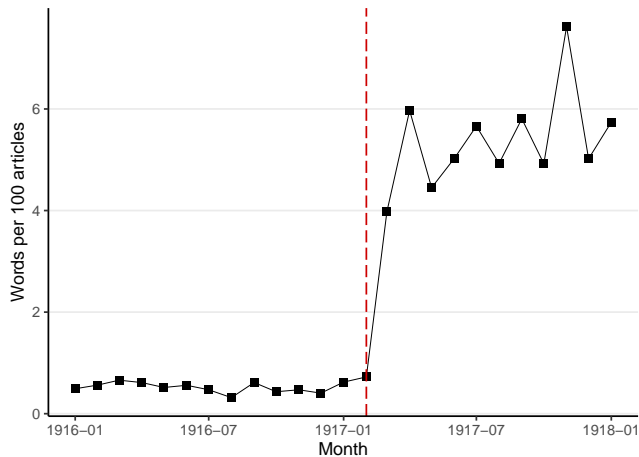
Russia Collapses, Finland Radicalizes: A Compressed Timeline

- ▶ **1914–16:** Imperial Russia imposes total wartime censorship—confiscated issues, fines, closures; popular narrative monitored by gendarmes, secret police and a network of espionages
- ▶ **Mar 20, 1917:** *February revolution* → censorship is abolished; overnight, inflammatory language floods the press
- ▶ **Jul 1917:** Russian Provisional Government dissolves socialist-majority parliament (*bourgeois coup d'état*)
- ▶ **Nov 1917:** Bolshevik Revolution inspires Finnish radicals; newspaper tone hardens
- ▶ **Jan–May 1918:** Civil War (socialist Reds vs. bourgeois Whites); Whites prevail



Kurikka, December 1917

Inflammatory Words in the Newspapers



- ▶ The set of inflammatory words are: “revolution”, “democracy”, “anarchy”, “oppression”, “freedom” and “butcher” (Turunen 2021). The red vertical line marks the month preceding the abolition of censorship.

▶ Individual words

▶ Manual audit

$$P(\text{at least one revolutionary article} \mid \text{pre}) \approx 0.04$$

$$P(\text{at least one revolutionary article} \mid \text{post}) \approx 0.77$$

Examples of Inflammatory Articles

► **Työmies** (10 Apr 1917):

*If anywhere, then in the Vihti parish of Uusimaa province, the air of **freedom** is truly needed, because I don't think there is a place on earth as dark as Vihti. The landowners in Vihti form such a horse-and-soil nobility that you should stay away. It is unlikely that the French nobility in the time of Louis XIV was like the Vihti landlords of recent times ...*

► **Åbo Underrättelser** (15 Dec 1917)

*(Special telegram to Å. U.) The commander of the **revolutionary** troops has announced that Robeleff, Rostov, Nashchitschevan and Taganrog are in the hands of the **revolutionaries**. The head of the **counter-revolutionary** troops, General Potovsky, has been arrested with his staff and taken on board a trawler.*

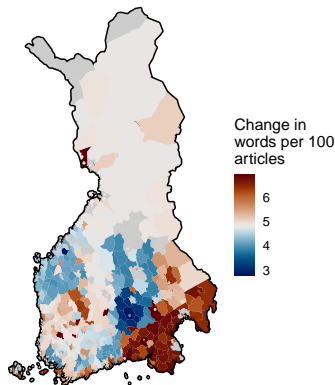
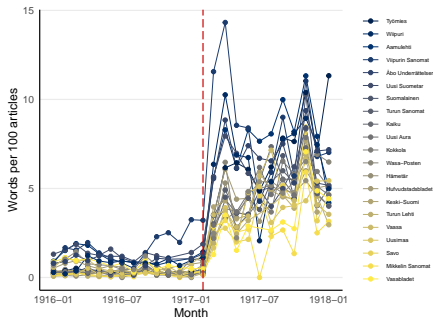
Local Change in Public Opposition

March 20, 1917: Censorship is abolished
 January 26, 1918: Civil War starts



$$\Delta PublicOpposition_m = \sum_d w_{md} \Delta InflammatoryWords_d$$

$$\Delta InflammatoryWords_d = ATF_{d,1} - ATF_{d,0}$$



- ▶ The universe of Finnish newspaper articles from January 1, 1916 through January 26, 1918
- ▶ **Change in public opposition:** Change in average term frequency of inflammatory words by journal
- ▶ **Censorship:** The fraction of articles carrying a censorship label by journal
- ▶ **Subscribers:** Geographical breakdown of journal subscriptions in Finland in early 20th century, constructed by combining Tommila, Raitio, and Aalto (1977), archival sources and local history books. Overall, the breakdown covers around 70% of total circulation
- ▶ **War mortality:** Open data from *WarVictimSampo*, which documents all war-related deaths in Finland in 1913–1922 [▶ Validation](#)
- ▶ **Mobilization motives:** Newly digitized interrogation records from 46,146 rebels

Difference-in-Differences Approach

$$y_{mt} = \alpha_m + \lambda_t + \sum_{\tau \neq -1} \beta_{\tau} \cdot \mathbb{1}\{t = \tau\} \cdot \Delta PublicOpposition_m + \mathbf{x}'_m \gamma_t + \varepsilon_{mt}$$

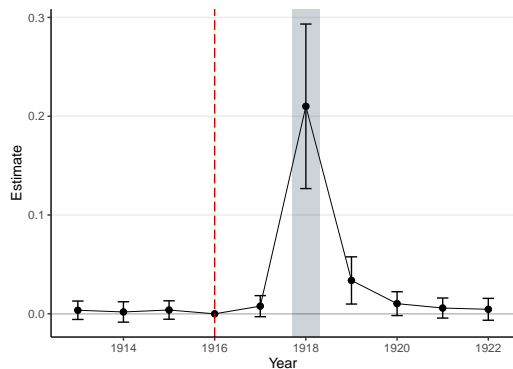
where

- ▶ y_{mt} is war mortality in municipality m in year t
 - ▶ Before 1917, this consists mostly of voluntary fighters in WWI, who were 13 times more likely to fight in the civil war than an average citizen (Hoppu 2006a,b). From 1919 onwards war mortality captures voluntary combatants in Russian civil war
- ▶ $\Delta PublicOpposition_m$ is the change in public opposition in municipality m

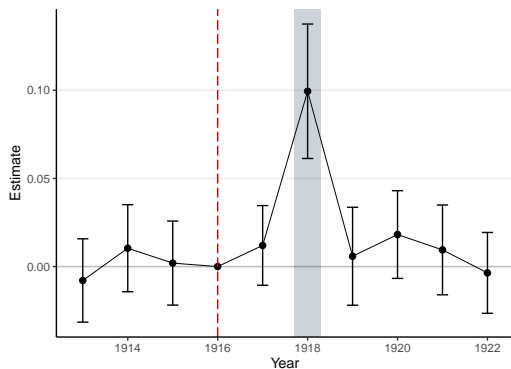
Identifying assumption:

- ▶ Average outcomes among more and less exposed municipalities would have evolved in parallel absent the change in public opposition (Goldsmith-Pinkham, Sorkin, and Swift 2020) ▶ Covariate balance

Effect on Mortality in 1918



(a) War Mortality



(b) Overall Mortality

- ① One-word (1 sd = 0.88 words) increase in inflammatory rhetoric → 20-log point (18-log point) increase in war mortality
- ▶ Table
 - ▶ Strikes
 - ▶ Other outcomes
 - ▶ Red Guards

What Explains the Rise in Public Opposition?

	Change in public opposition						In War mortality		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Censorship	8.0*** (1.4)	5.2*** (0.38)							
News on Russian Revolution			2.3*** (0.32)	2.5*** (0.15)					
Similarity to St Petersburg papers					7.9*** (1.3)	8.7*** (0.54)			
Censorship × Post							0.77** (0.37)		
News on Russian Revolution × Post								0.88*** (0.14)	
Similarity to St Petersburg papers × Post									2.1*** (0.59)
Municipality fixed effects							✓	✓	✓
Time fixed effects							✓	✓	✓
Controls		✓		✓		✓	✓	✓	✓
Observations	121	415	121	415	119	415	2,490	2,490	2,490
R ²	0.20	0.46	0.50	0.55	0.21	0.45	0.92	0.93	0.92

- 1 Lifting of censorship triggered a surge of bottled-up opposition within the press, which in turn lead to greater mobilization
- 2 Local populace with a clearer signal of Russian events felt more safe or persuaded to revolt

▸ Russian telegraph

Excerpt of Interrogation Records

The image displays two pages of handwritten interrogation records. The left page contains several sections with redacted information (blacked out) and labels pointing to them. The right page contains more handwritten text with labels pointing to specific sections.

Left Page Labels:

- Department no.
- When and where captured
- When and where the prisoner was sent
- Sick? Is it a contagious disease?
- Prisoner's occupation and name
- Where and when born
- Domicile and home address
- If unmarried, name and address of next of kin
- If married, wife's name, how many children and the age of the youngest
- What school did you attend, or can you read and write?
- Where and with whom for the longest time and last worked
- Which trade union and trade department did you join and when?
- When was the Red Guard founded in the prisoner's home place, who were the leaders?

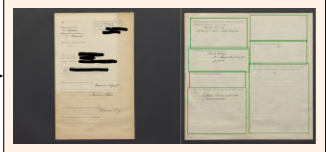
Right Page Labels:

- When did you join the Red Guard: which regiment, battalion, company, section, (platoon); names of commanders, staff members and other officers of the guard?
- What the prisoner knows about hidden caches or weapons.
- Why did you join the Red Guards, what salary was promised and received?
- What does the prisoner know about disarmament before and during the war (who e.g. lead them): about robberies, murders and arson during the great socialist strike last fall and later and who took part in them?
- Who do you know who are inciting war or the guard in your hometown?
- Where and when was in battles; where was in other activities; what weapons has been carried and where are the weapons today?

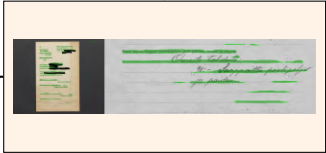
- ▶ This figure shows an excerpt of the interrogation records. Personal information is censored retrospectively by the author

Digitizing Interrogation Records

Image classification

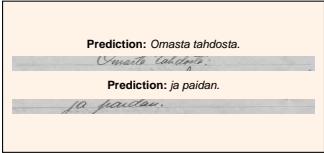


Layout detection
(LayoutParser)



Line segmentation
(DOC-UFCN)

HTR
(TROCR)

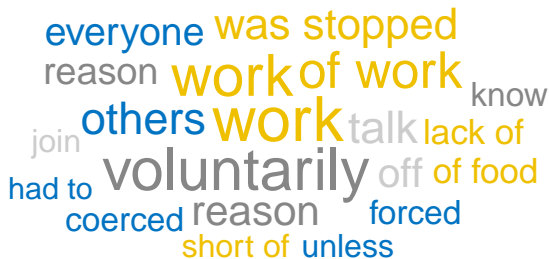


Snapshot of Mobilization Motives

Why did you join the Red Guards?

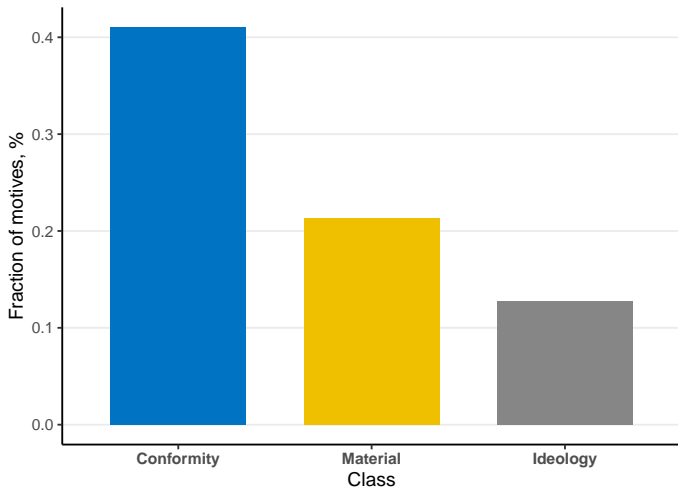
- ★ *At the encouragement of others.*
- ★ *Was forced to join.*
- ★ *Because there was no work.*
- ★ *Due to unemployment.*
- ★ *Voluntarily, in accordance with the spirit of the times.*
- ★ *Out of own will.*

▶ Lying



Most common words among the responses

Distribution of Motives



- ▶ According to a text classification model, 41% ($n = 19082$) cite social pressure as a key motivation for joining the rebellion

Enlistment Timing

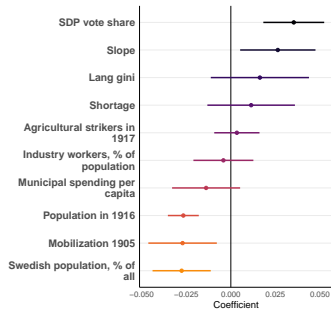
	Enlistment date			
	(1)	(2)	(3)	(4)
Ideology motive	-0.36*** (0.03)			-0.18*** (0.05)
Material motive		0.04** (0.02)		0.16*** (0.04)
Conformity motive			0.22*** (0.02)	0.25*** (0.04)
Municipality fixed effects	✓	✓	✓	✓
Observations	24,938	24,938	24,938	24,938
R ²	0.08	0.07	0.08	0.08

- 1 Ideological rebels mobilize around 0.36 months, or eleven days, earlier than others. Conformists mobilize last

Motives and Covariates



(a) Conformity



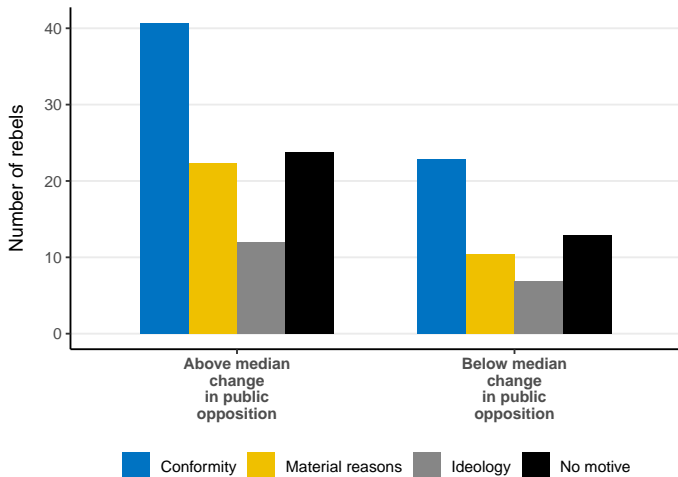
(b) Ideology



(c) Material Reasons

- Conformist rebels were more often rural, materialists were urban, while ideological rebels came from areas with strong socialist voter base

Public Opposition and Mobilization Motives



- Public opposition works as a rallying force for all rebels, regardless of their specific reasons for joining → affects beliefs (“safety in numbers”)

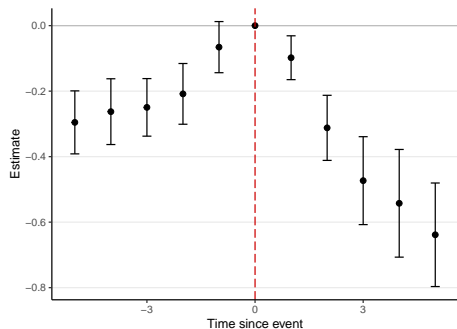
Safety in Numbers

	Joined rebellion			In War mortality	
	Logistic discrete-time hazard model (1)	Gaussian discrete-time hazard model (2)	Linear probability model (3)	OLS	
				(4)	(5)
Peer mobilization rate	1.0*** (0.18)	0.53*** (0.11)	0.06*** (0.02)		
Change in public opposition × Post × Subscribers				0.03** (0.01)	
Change in public opposition × Post × Strikers					0.05*** (0.01)
Change in public opposition × Post				0.22*** (0.04)	0.16*** (0.04)
Average partial effect	0.0513	0.0481	0.0639		
Observations	217,210	217,210	217,210	2,490	2,490
Mean Y	0.11	0.11	0.11	2.81	2.81
R ²	NA	NA	0.49	0.93	0.93
Fifth-order polynomial of duration	✓	✓			
Municipality fixed effects	✓	✓	✓	✓	✓
Time fixed effects			✓	✓	✓
Controls				✓	✓

- 1 Increasing peer mobilization rate from zero to one percent (\approx sample average) is associated with a 5 p.p. increase in individual mobilization probability
- 2 Dissent has a larger effect when it becomes more common knowledge

Repression

- ▶ Repression may deter participation or trigger backlash mobilization
- ▶ I examine the relationship between repression and mobilization by estimating event-study regression with staggered treatment (Callaway and Sant'Anna 2021)
- ▶ I find that mobilization declines dramatically after first local rebel casualty



Regression

	ln Rebels per capita			
	(1)	(2)	(3)	(4)
Lag of ln Rebel mortality	-0.50*** (0.03)	-0.58*** (0.04)		
Lag of ln Rebel mortality × Above median change in public opposition		0.06 (0.05)		
Lag of First battle			-0.36*** (0.04)	-0.43*** (0.06)
Lag of First battle × Above median change in public opposition				0.08 (0.07)
Municipality fixed effects	✓	✓	✓	✓
Time fixed effects	✓	✓	✓	✓
Observations	2,524	2,163	3,048	2,604
Mean Y	1.26	1.27	1.14	1.14
R ²	0.77	0.79	0.71	0.72

- 1 No conclusive evidence that dissent moderates the demobilizing effect of repression

Conclusion

- ▶ The dismantling of imperial censorship in 1917 precipitated a surge in public opposition within Finnish newspapers, which enticed the populace to rebel against the government

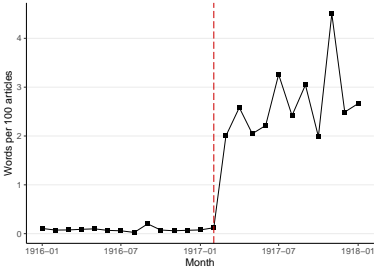
Lessons:

- 1 Disruptions to the enforcement of censorship can contribute to revolutionary movements
- 2 Revolutions emerge not just from deep grievances, but from moments of madness, when shifting public sentiment suddenly makes rebellion appear possible
- 3 Momentum may not overcome repression, suggesting that belief shifts matter most in early mobilization, but not in sustaining rebellion

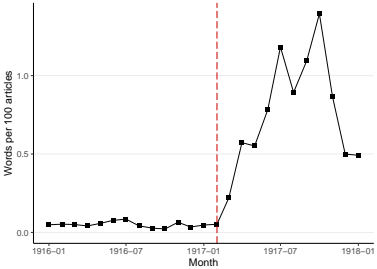
Robustness Checks

- ▶ Spatial RDD ▶ RDD
- ▶ Matching on preexposure characteristics ▶ Matching
- ▶ Conley SEs ▶ Conley SE
- ▶ Omitting the province of Viipuri ▶ Different sample
- ▶ Empirically constructed journal composition ▶ Empirical subscribers
- ▶ Additional controls, including e.g. food shortage, ethnic polarization, land gini & Russian troops ▶ Additional controls
- ▶ Placebo treatment ▶ Placebo

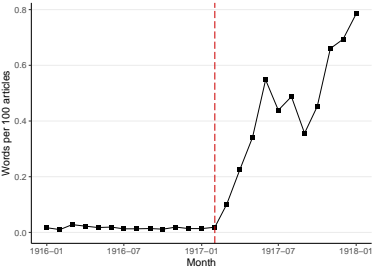
Inflammatory Words in the Newspapers



Word: Revolution

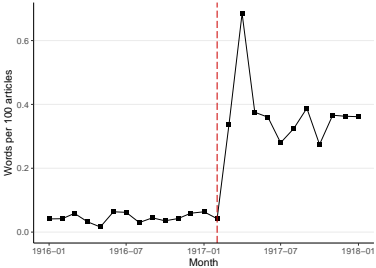


Word: Democracy

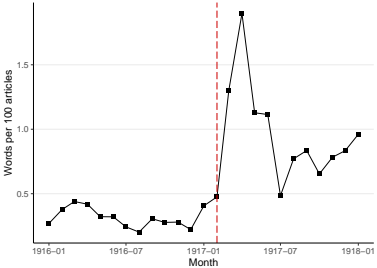


Word: Anarchy

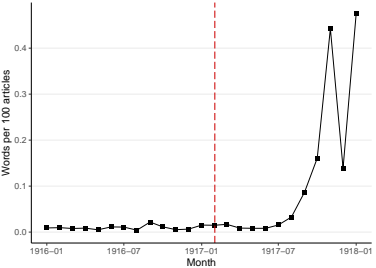
Inflammatory Words in the Newspapers



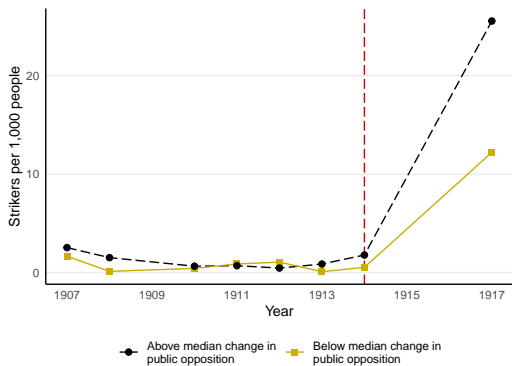
Word: Oppression



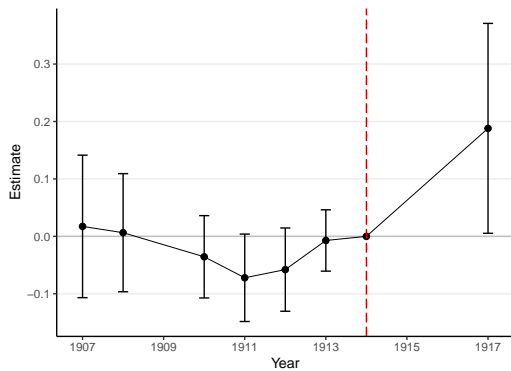
Word: Freedom



Effect on Striking in 1917



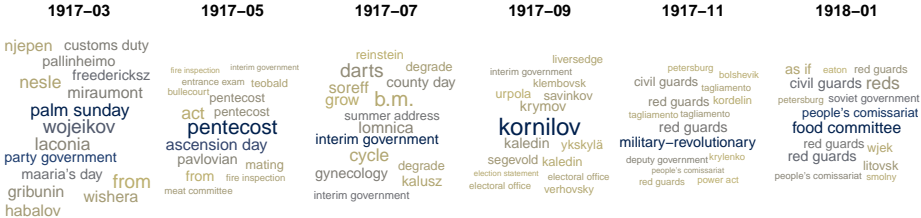
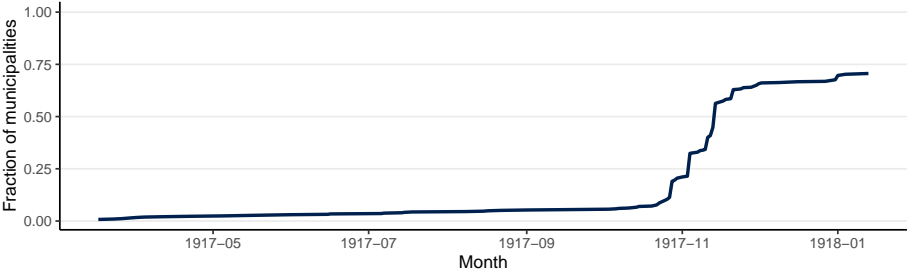
(a) Raw Data



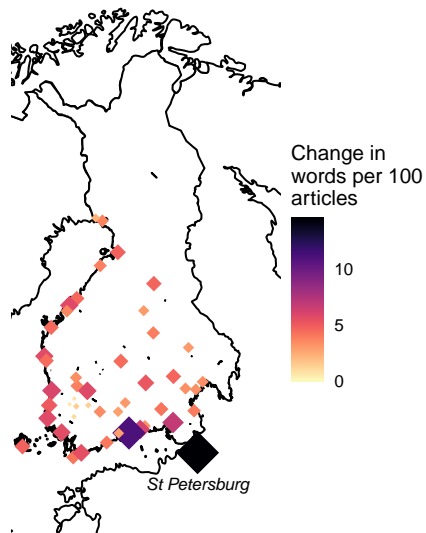
(b) Event-Study Plot

▶ Back

Foundation of Red Guards and Trending Terms



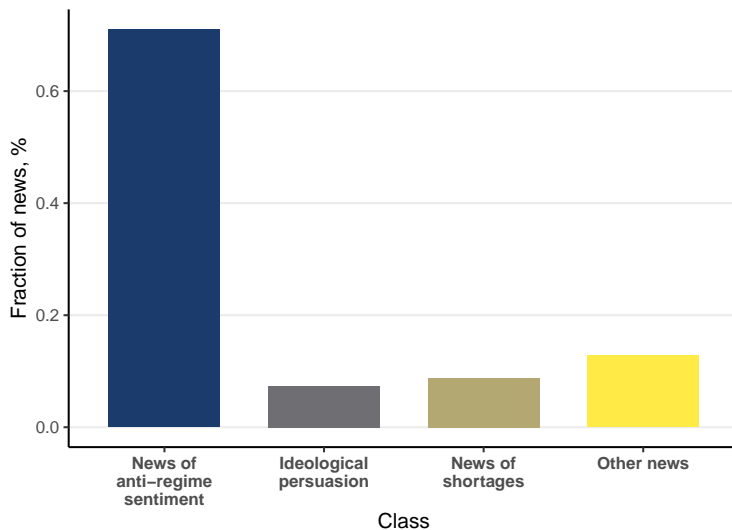
Public Opposition by Place of Publication



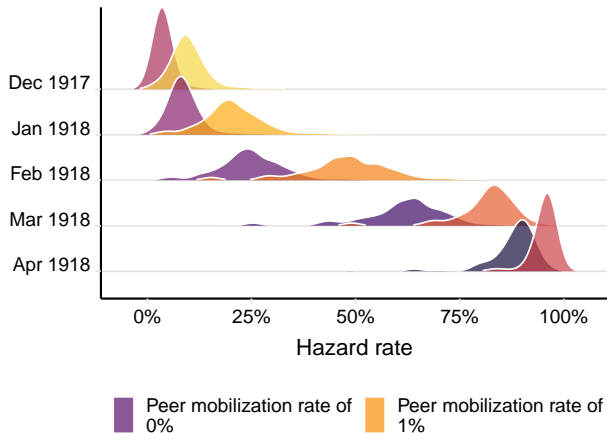
Heterogeneous Effects

	ln War mortality		
	(1)	(2)	(3)
Change in public opposition × Post × SDP vote share	0.13*** (0.01)		
Change in public opposition × Post × Gini		0.06*** (0.02)	
Change in public opposition × Post × Workers houses			0.06*** (0.02)
Change in public opposition × Post	0.13*** (0.04)	0.19*** (0.04)	0.16*** (0.04)
Municipality fixed effects	✓	✓	✓
Time fixed effects	✓	✓	✓
Controls	✓	✓	✓
Observations	2,490	2,256	2,490
R^2	0.92	0.93	0.93

Zero-Shot Classification of Inflammatory Newspaper Articles



Strategic Complementarity



- ▶ When mobilization was at its fastest in February 1918, the median predicted hazard rate was around 50% in municipalities with peer mobilization rate of 1%, in comparison to 25% in municipalities with total abstention

Performance Metrics from Manual Audit

Metric	Whole Sample	Before the Abolition	After the Abolition
Precision	0.51	0.17	0.85
Recall	0.94	0.94	0.94
False negative rate	0.06	0.06	0.06
F1 Score	0.66	0.29	0.89

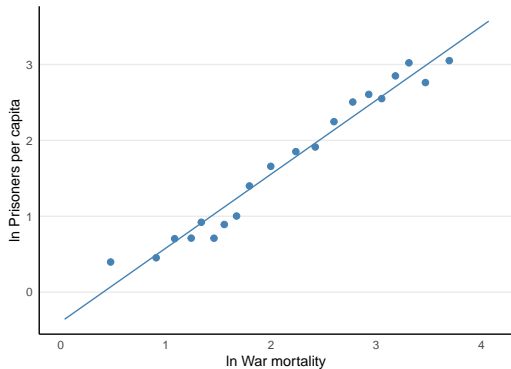
- ▶ Performance metrics based on a random sample of 400 news articles. The majority class of neutral news was drawn using random undersampling. Precision is the ratio of true positive predictions to the total predicted positives. Recall is the ratio of true positive predictions to all actual positives. False negative rate is the ratio of false negatives to the total actual positives. F1 score is the harmonic mean of precision and recall. [▶ Back](#)

Public Opposition in the Newspapers

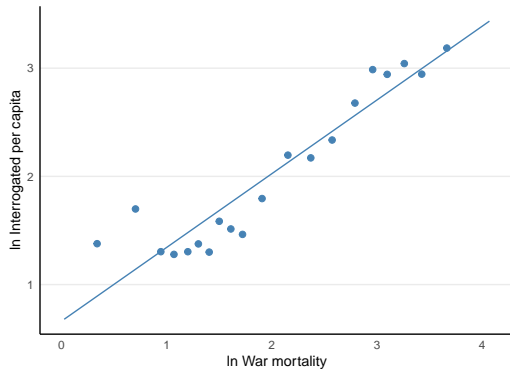
- ▶ Turunen (2021) describes the working class' ambience towards the end of 1917 as follows:

“‘No beast is as cruel as the bourgeois whose purse is touched.’ In the final stage of this evolution, during November and December, the beast began to pursue not only money for its bottomless purse but also proletarian blood, as the economically-motivated bourgeoisie became the militaristic butcher in the socialist imagination.”

Validating the Outcome Variable



(a) Prisoners Per Capita



(b) Interrogated Per Capita

▶ Back

Covariate Balance of Local Change in Public Opposition

	Mean	Observations	Coefficient
SDP vote share	0.44	415	-0.03** (0.01)
Mobilization 1905	0.19	437	0.02 (0.02)
ln Workers houses	1.93	437	0.01 (0.04)
Workers house	0.78	437	-0.03 (0.03)
Union members, % of population	0.02	437	0.00 (0.00)
Industry workers, % of population	0.08	420	0.01** (0.01)
ln Strikers	57.02	437	0.14 (0.10)
Strikes	0.18	437	0.03 (0.02)
Income gini	0.50	385	0.00 (0.01)
Land gini	0.60	395	-0.01 (0.01)
Shortage	1.04	437	-0.02 (0.04)
ln Population 1916	6827.57	437	0.05 (0.04)
Swedish population, % of all	0.12	436	0.02 (0.01)
ln Slope	4.04	436	-0.04*** (0.01)
ln Barley	4131.16	385	0.00 (0.01)
ln Rye	834.50	385	-0.01 (0.01)
ln Municipal spending per capita	13.03	399	0.00 (0.02)

Controls

Baseline controls include

- ▶ SDP vote share in 1916
- ▶ Historical mobilization in 1905
- ▶ Log population in 1916
- ▶ Latitude and longitude

Effect on Mortality in 1918

	ln War mortality		ln Mortality	
	(1)	(2)	(3)	(4)
Change in public opposition \times Post	0.21*** (0.04)		0.10*** (0.02)	
Above median change in public opposition \times Post		0.21*** (0.07)		0.09*** (0.03)
Municipality fixed effects	✓	✓	✓	✓
Time fixed effects	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	2,490	2,490	2,486	2,486
Mean Y	2.81	2.81	18.55	18.55
R^2	0.93	0.92	0.68	0.67

► Back

Public Opposition Before and After the Abolition of Censorship and Mortality in 1918

	ln War mortality	
	(1)	(2)
Public opposition before March 1917 \times Post	0.07 (0.07)	
Public opposition after March 1917 \times Post		0.13*** (0.03)
Municipality fixed effects	✓	✓
Time fixed effects	✓	✓
Controls	✓	✓
Observations	2,490	2,490
R^2	0.92	0.92

► Back

Effect on Various Mobilization Outcomes

	OLS						Cox PH
	In Red mortality	In White mortality	Red casualties, % of all	Red Guard casualties, % of Reds	White Guard casualties, % of Whites	In Investigations per capita	$h(t)$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Change in public opposition	0.26*** (0.05)	0.02 (0.03)	0.05*** (0.01)	0.05*** (0.02)	0.005 (0.02)	0.11*** (0.02)	1.18** (0.08)
Controls	✓	✓	✓	✓	✓	✓	✓
Observations	415	415	414	364	388	415	415
Mean Y	9.45	2.62	0.55	0.44	0.30	1.59	
R^2	0.62	0.11	0.55	0.28	0.05	0.26	

- 1 The shift in public opposition only affected mobilization of the insurgents
- 2 Positive effect on post-conflict investigations [▶ Back](#)

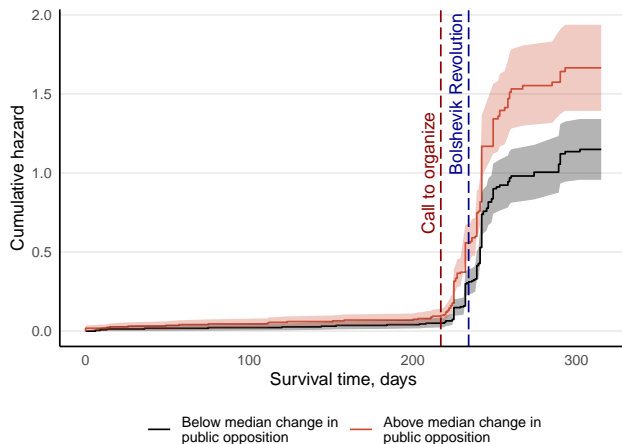
Foundation of Red Guards

- ▶ Using the carefully researched foundation dates for each existing Red Guard in Salkola (1985), I estimate cumulative hazard functions for municipalities with above or below median change in inflammatory words, respectively. I use the Nelson-Aalen estimator:

$$\hat{H}(t) = \sum_{t_i \leq t} \frac{d_i}{n_i}$$

where d_i is the number of Red Guards founded up to t_i , and n_i is the total municipalities at risk at t_i

Effect on the Foundation of Red Guards in 1917–1918

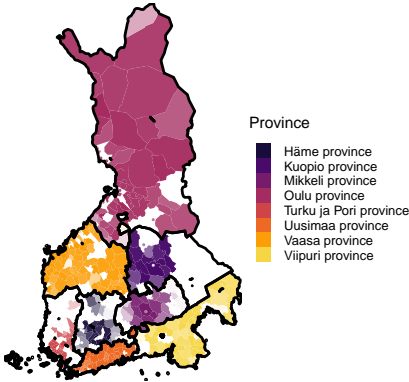


- Survival time measures the time passed since the foundation of the first guards in March 17, 1917 [► Back](#)

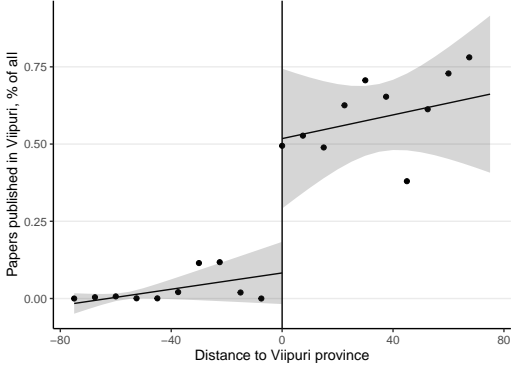
Endogeneity Concern: Demand-Based Selection

- ▶ If initially revolutionary regions were in higher demand of opposition-sided newspapers, estimates would suffer from upward bias
- ▶ I address the concern by exploiting a spatial fuzzy RDD, while utilizing a locality-based component of newspaper demand, in contrast to taste-based demand
- ▶ Identification exploits the simple idea, that the target audience of local newspapers is often province-based, and provinces had no political power
 - ▶ **Border exogeneity:** Following the 1809 annexation by the Russian Empire, Emperor Nikolai I initiated a reorganization of Finnish local administration in 1831 to unify imperial governance—a reform that was exogenous to domestic affairs
- ▶ I focus on Viipuri province, where the rhetorical change in local newspapers was unparallel to any other Finnish province

Local Saturation of News Markets

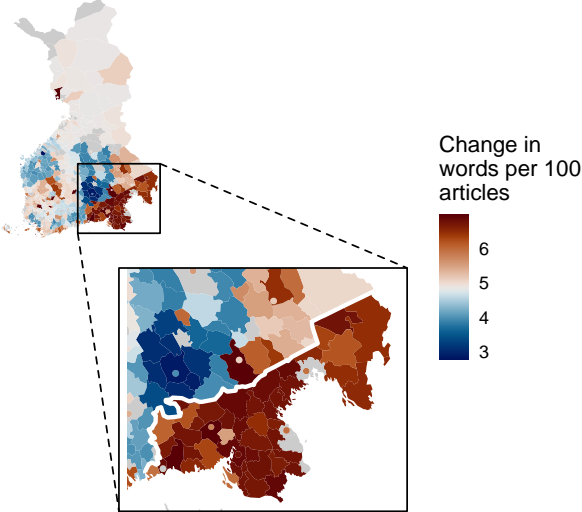


(a) Local News Consumption



(b) Papers Published in Viipuri, %

Spatial Fuzzy RDD



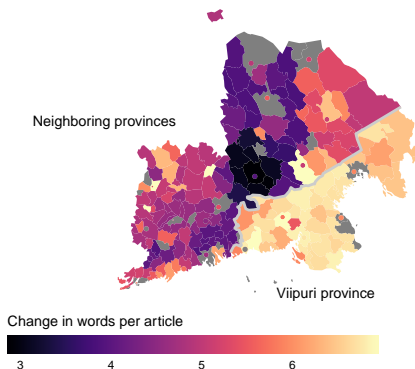
Spatial Fuzzy RDD

- ▶ The second stage equation is

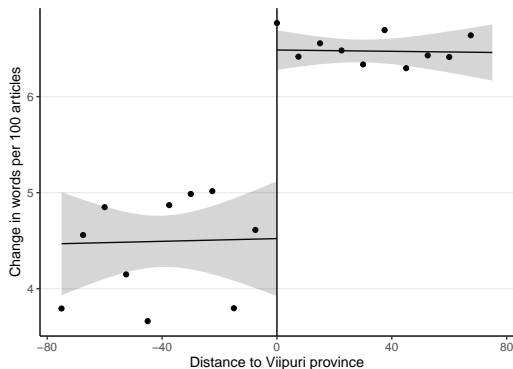
$$y_v = \alpha + \beta \Delta \widehat{PublicOpposition}_v + f(\text{location}_v) + \mathbf{x}'_v \boldsymbol{\gamma} + \varepsilon_v$$

where $f(\text{location}_v)$ is the RD polynomial. In the baseline specification, I use a local linear polynomial in longitude and latitude, with a sample of villages within 75 kilometres of the province border

RDD: First Stage



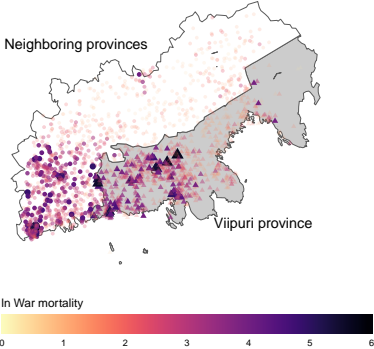
(a) Change in Public Opposition in 3D



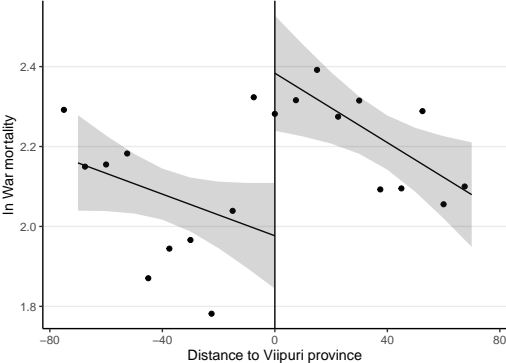
(b) Change in Public Opposition in 2D

- Usage of inflammatory rhetoric increased by about two words (or 40%) more per every 100 articles in Viipuri province in comparison to neighboring provinces.

RDD: Reduced Form



(a) War Mortality in 3D



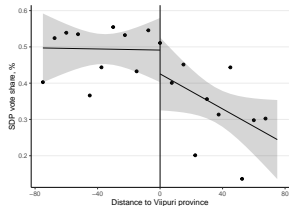
(b) War Mortality in 2D

RDD: Results

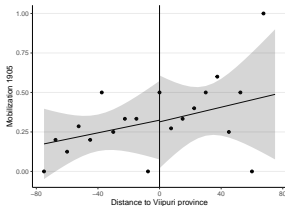
	In War mortality					
	Lat-Lon (1)	Dist (2)	Lat-Lon & Dist (3)	Quadratic Lat-Lon (4)	Baseline controls (5)	Segment FE (6)
<i>Panel A: Second stage</i>						
Change in public opposition	0.18*** (0.05)	0.24*** (0.05)	0.14*** (0.05)	0.24*** (0.05)	0.27*** (0.05)	0.22*** (0.05)
Observations	1408	1408	1408	1408	1379	1379
First-stage F	974.33	846.64	1047.7	1033.6	751.98	1145.8
<i>Panel B: Reduced form</i>						
Viipuri province	0.38*** (0.07)	0.41*** (0.10)	0.32*** (0.09)	0.48*** (0.08)	0.50*** (0.08)	0.48*** (0.09)
Observations	1540	1540	1540	1540	1505	1505

- Results are qualitatively and numerically very close to the ones found using difference-in-differences design.

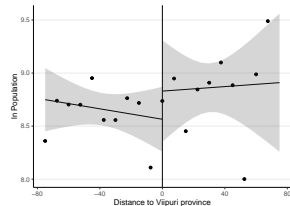
RDD: Covariate Balance



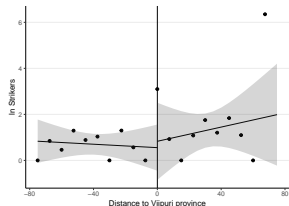
(a) SDP Vote Share



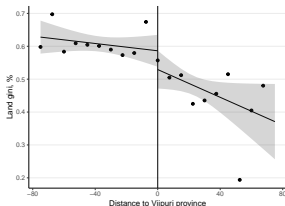
(b) Mobilization 1905



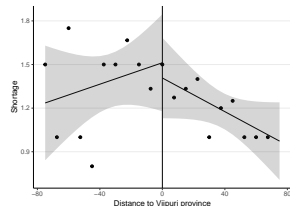
(c) ln Population 1916



(d) ln Strikers

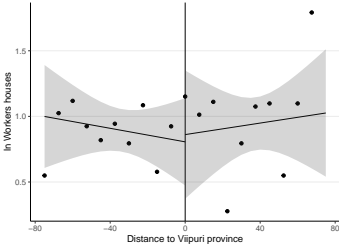


(e) Land Gini

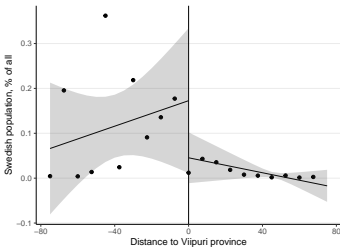


(f) Shortage

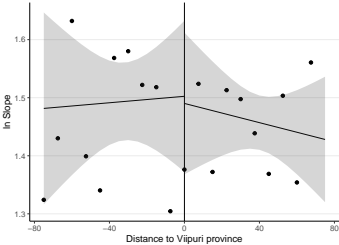
RDD: More Covariates



(a) In Workers' Houses

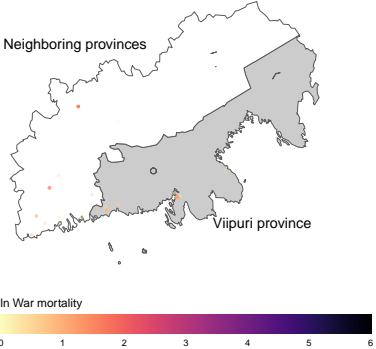


(b) Swedish Speakers, % of All

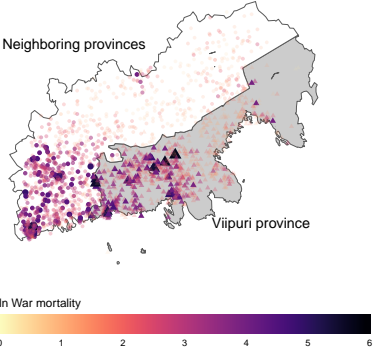


(c) In Slope

RDD: Reduced Form, Before and After March 1917

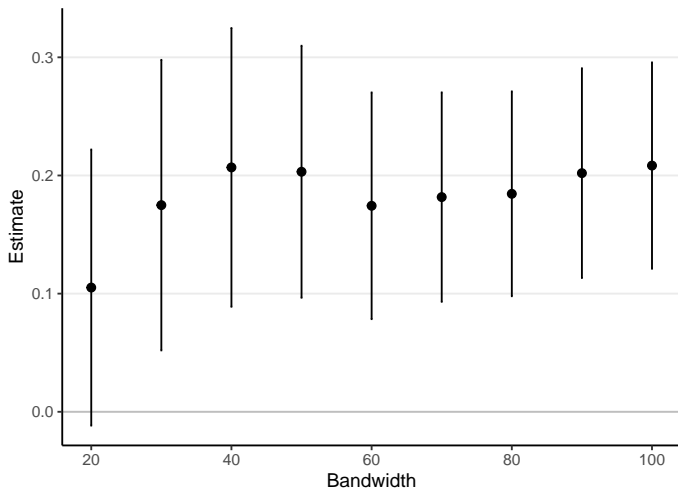


(a) War Mortality Before 3-1917



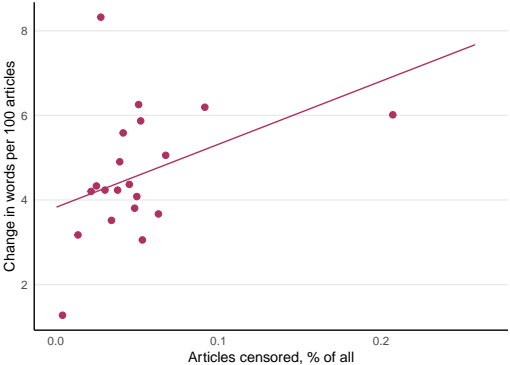
(b) War Mortality After 3-1917

RDD: Bandwidth sensitivity

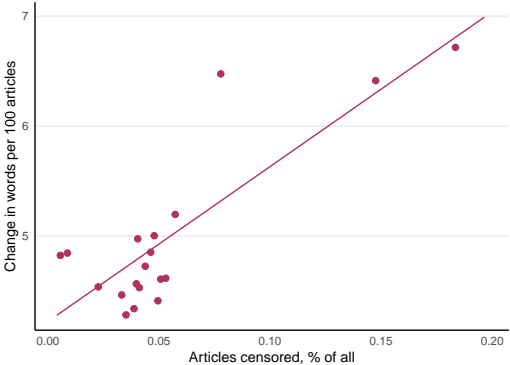


- ▶ The RD polynomial is local linear polynomial in coordinates. The model includes no additional controls. [▶ Back](#)

Censorship and the Change in Public Opposition



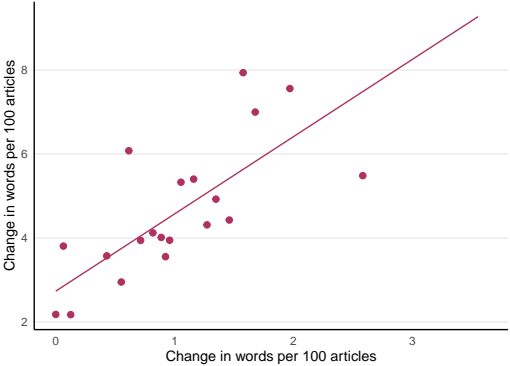
(a) Newspaper-level



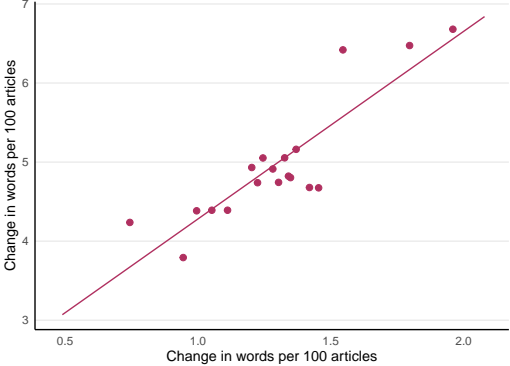
(b) Municipal Level

► Mediation analysis

News on Russian Revolution and the Change in Public Opposition



(a) Newspaper-level



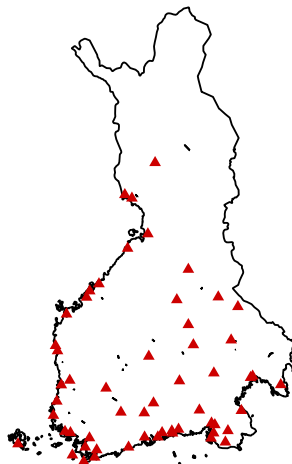
(b) Municipal Level

Mediation Analysis

	ln War mortality	
	(1)	(2)
Censorship \times Post	0.77** (0.37)	-0.45 (0.48)
Change in public opposition \times Post		0.23*** (0.05)
Municipality fixed effects	✓	✓
Time fixed effects	✓	✓
Controls	✓	✓
Observations	2,490	2,490
R^2	0.92	0.93

► Back

Russian Telegraph Stations in Finland



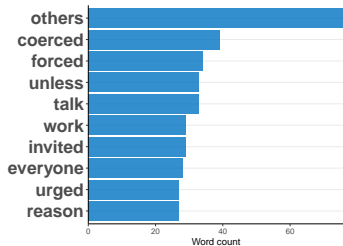
► *Source:* Suomen maantieteellinen seura (1899).

Russian Telegraph

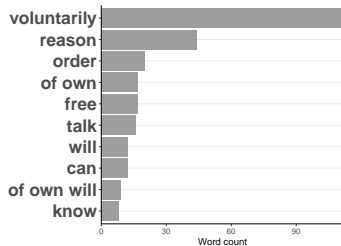
	News on Russian Revolution	Change in Public Opposition	In War mortality
	(1)	(2)	(3)
Telegraph	0.07** (0.04)	0.30** (0.13)	
Telegraph \times Post			0.17* (0.09)
Municipality fixed effects			✓
Time fixed effects			✓
Controls	✓	✓	✓
Observations	415	415	2,874
R^2	0.40	0.21	0.92

- Journals whose editors had closer ties to Russia either felt more safe or persuaded to publish more revolutionary news. [► Back](#)

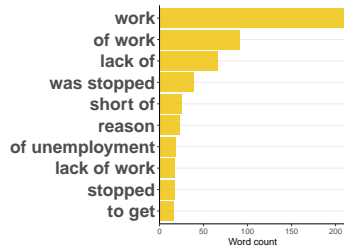
Text Classification



(a) Conformity

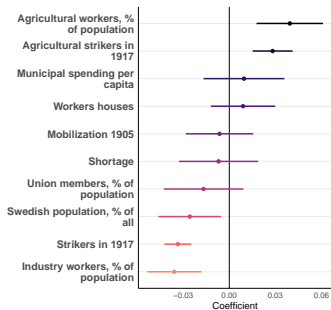


(b) Ideology

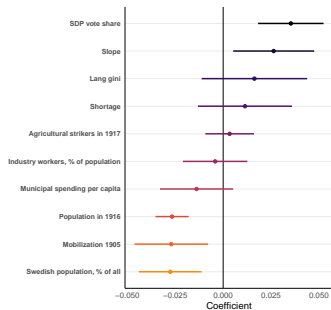


(c) Material Reasons

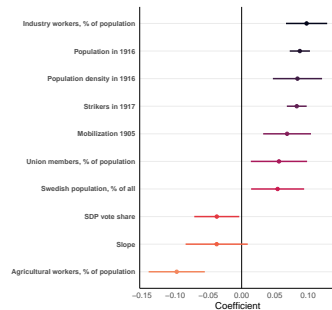
- The subfigures present most frequent words for each motive category in the training data



(a) Conformity



(b) Ideology



(c) Material Reasons

- This graph shows cross-sectional estimates from linear probability models for different covariates. [► Back](#)

Matching on Preexposure Characteristics

	In War mortality	
	Nearest neighbor (1)	Subclassification (2)
Above median change in public opposition \times Post	0.22*** (0.07)	0.36*** (0.11)
Municipality fixed effects	✓	✓
Time fixed effects	✓	✓
Controls	✓	✓
Observations	2,424	2,490
R^2	0.93	0.92

► Back

Alternative Specifications

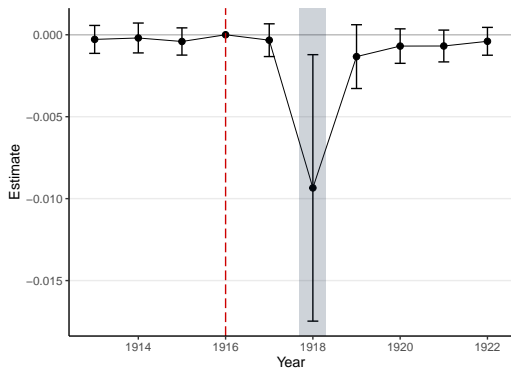
	In War mortality		
	Conley SE (1)	Omitting Viipuri province (2)	Empirical subscribership (3)
Change in public opposition \times Post	0.21*** (0.07)	0.15*** (0.05)	0.32*** (0.05)
Municipality fixed effects	✓	✓	✓
Time fixed effects	✓	✓	✓
Controls	✓	✓	✓
Observations	2,490	2,190	2,772
R^2	0.93	0.92	0.92

► Back

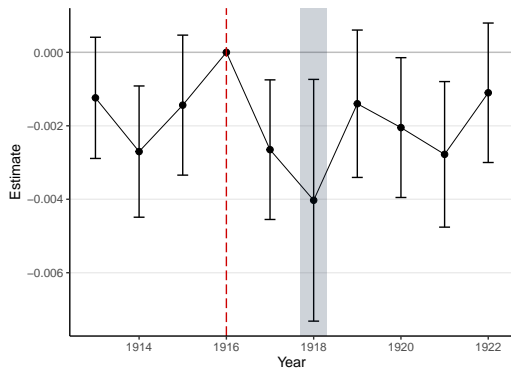
Additional Controls

	In War mortality						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Change in public opposition	0.19*** (0.04)	0.19*** (0.04)	0.19*** (0.04)	0.20*** (0.04)	0.21*** (0.04)	0.21*** (0.04)	0.17*** (0.04)
Municipality fixed effects	✓	✓	✓	✓	✓	✓	✓
Time fixed effects	✓	✓	✓	✓	✓	✓	✓
Baseline controls	✓	✓	✓	✓	✓	✓	✓
Strikers & workers houses	✓	✓	✓	✓	✓	✓	✓
Shortage		✓	✓	✓	✓	✓	✓
Swedish population, % of all			✓	✓	✓	✓	✓
Slope				✓	✓	✓	✓
Land gini					✓	✓	✓
Russian troops						✓	✓
Province-specific slopes							✓
Observations	2,490	2,490	2,490	2,484	2,256	2,256	2,256
R^2	0.93	0.93	0.93	0.93	0.93	0.93	0.94

Placebo treatment










(a) Stopwords and War Mortality






(b) Stopwords and Overall Mortality

- ▶ The figures show event-study estimates of a change in stopwords (“and”, “which” and “that”) on war mortality and overall mortality, respectively. [▶ Back](#)







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