

How Russian Pro-Government Trolls Influence Online Conversations

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UT Dallas



Cyber Escalation in Conflict
UCSD, Feb 2023

Roadmap

☐ **Paid Political Commentators**

- └ **Motivation**
- └ **Definition:** Troll VS Paid Troll | Troll VS Bot
- └ **Context:** Authoritarian & Foreign Policy

☐ **Challenges**

- └ **Flexibility:** Strategies & Goals
- └ **Accounts Identification**
- └ **Theorization:** Intentions, Behavior
Results
- └ **Causality**

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☐ Paper

- └ Data
- └ Measurement
- └ Design & Empirical Strategy
- └ Results

☐ Conclusions & Issues

- └ Threats to Identification
- └ Generalizability
- └ Further Research

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1 Trolls as a Cyber Weapon

**Flexibility &
Customization**

☐ **Levels**

- └ **Macro:** Manipulate platform algorithms
- └ **Micro:** Threaten users

☐ **Targets**

- └ Content-makers, commentators, readers
- └ Politicians, activists, dissidents, supporters

☐ **Easy to Switch Tactics**

- └ Flooding, Threats, Distraction, Persuasion
- └ Mix & Match

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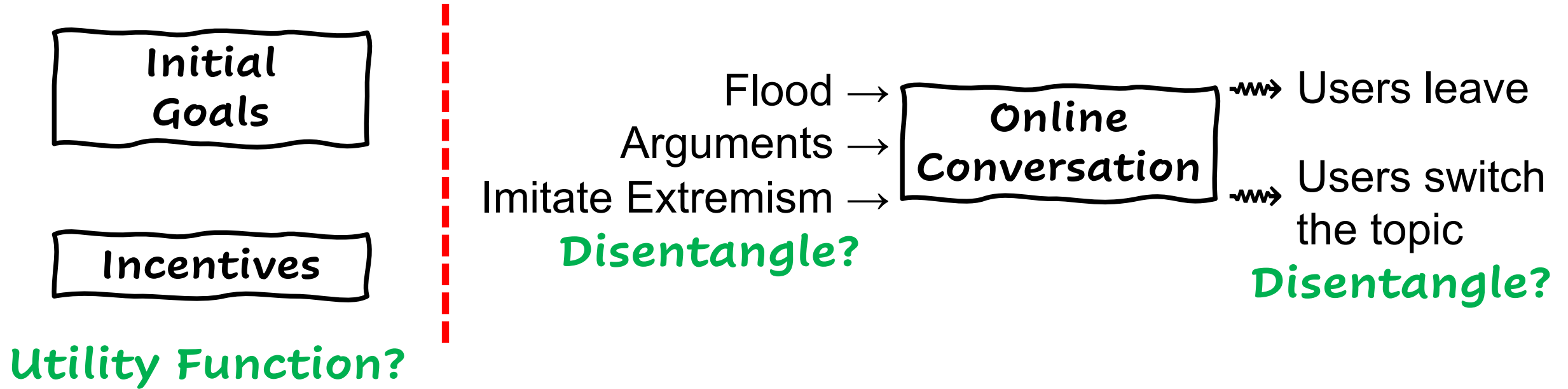
☐ **Masked Engagement**

- └ Hide Troll Identity
- └ Mimic Regular Users

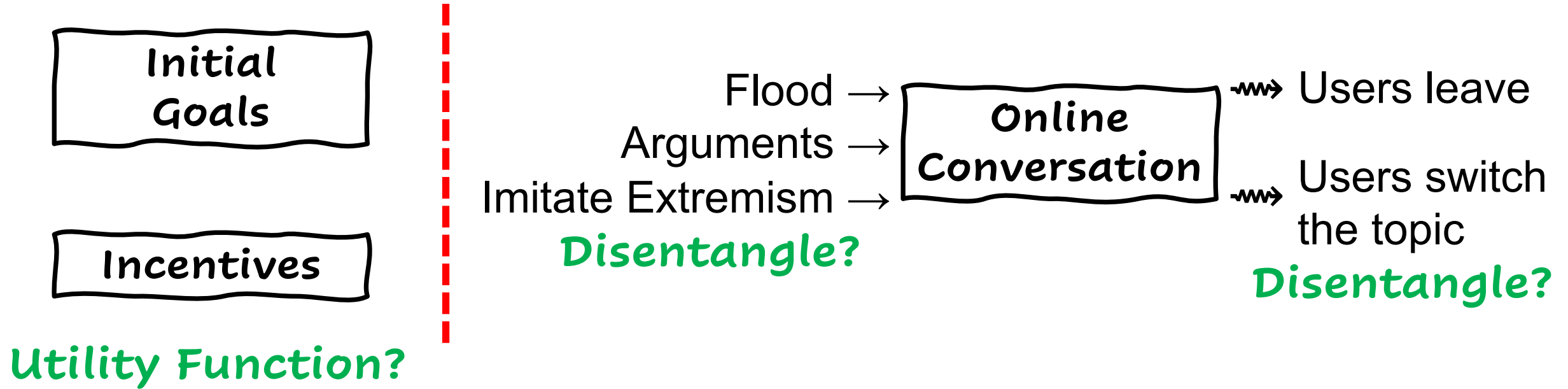
2 Evidence \rightsquigarrow Theory \rightsquigarrow Policy



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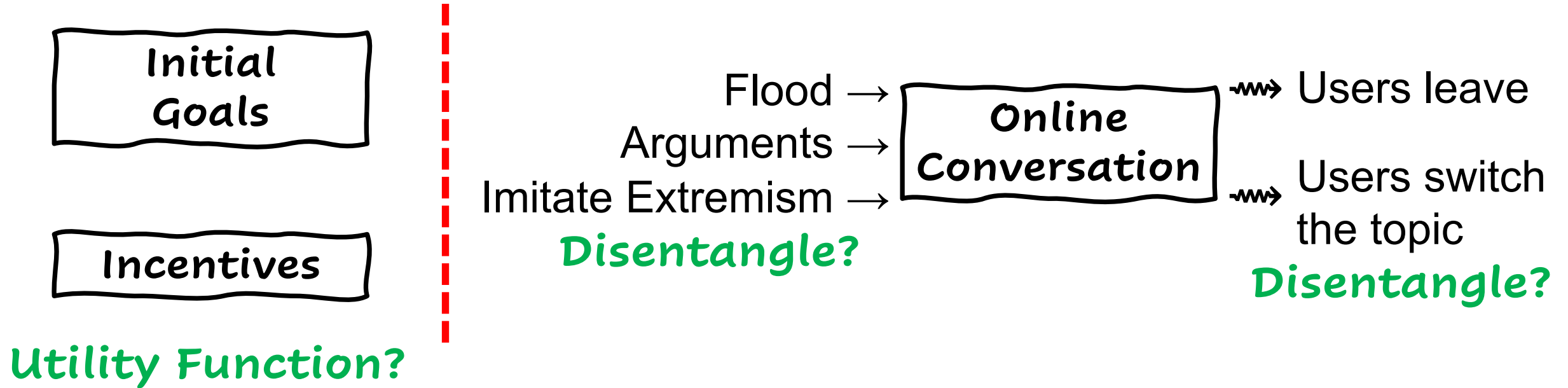


2 Evidence \rightsquigarrow Theory \rightsquigarrow Policy



Data Insights \rightsquigarrow Theory \rightsquigarrow Mechanism \rightsquigarrow Policy

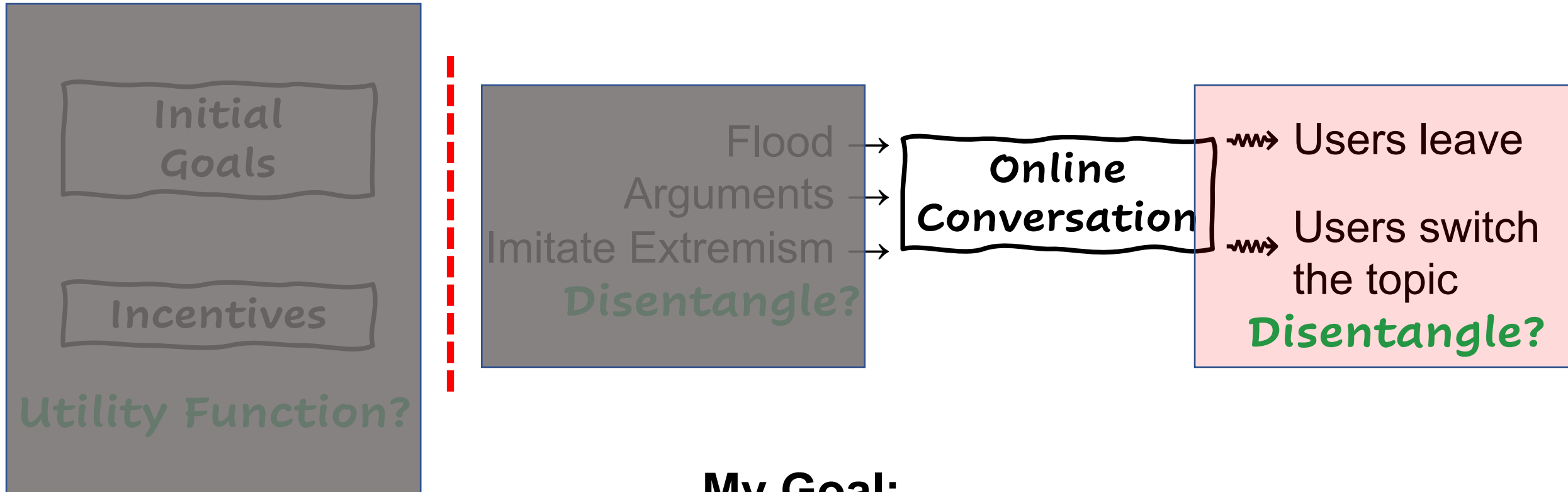
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This Paper



My Goal:

Estimate the overall observed effects of troll interventions

Data

☐ Troll Factory Data Leak

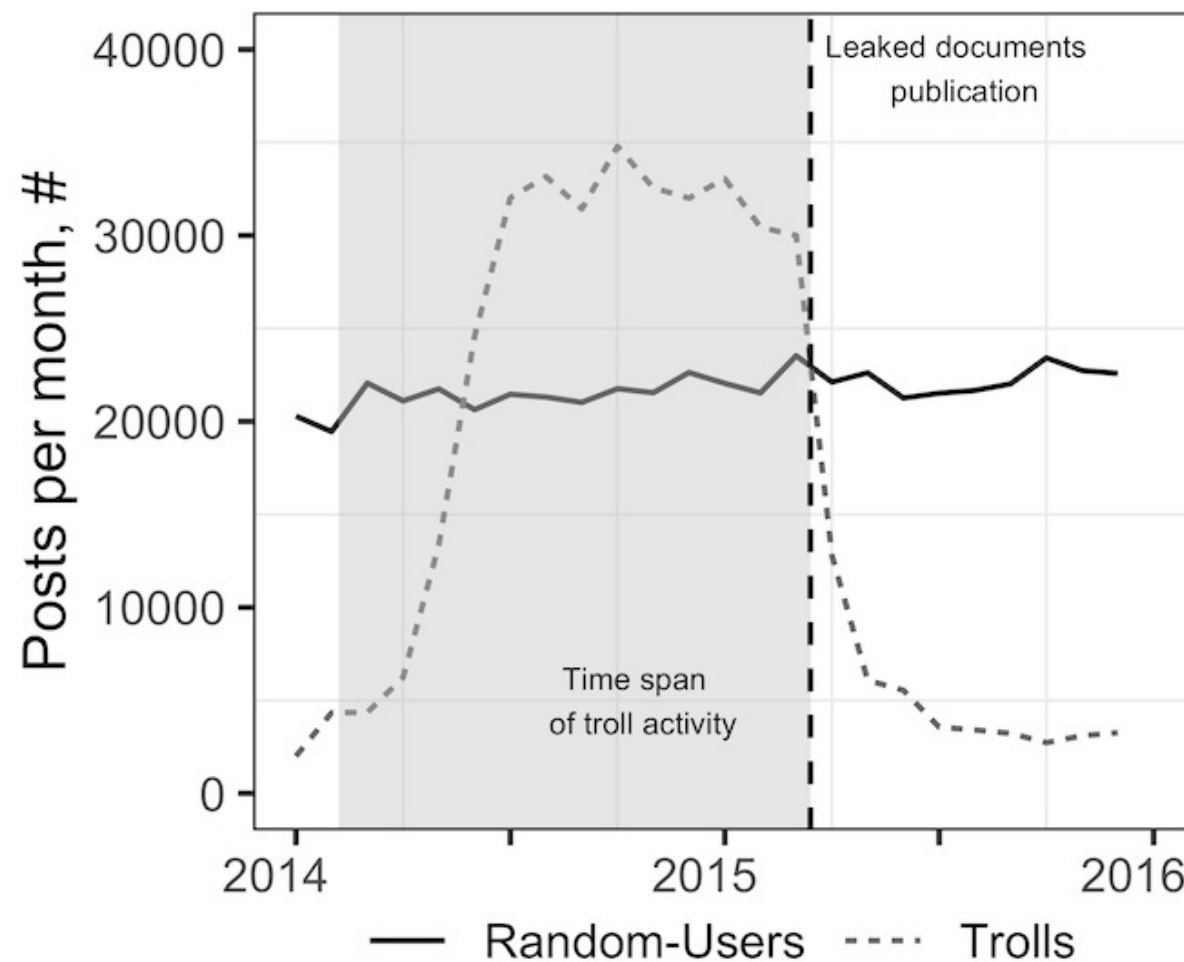
- └ 700 Leaked Accounts on *LJ*
- └ 2014-15
- └ 130k troll-infiltrated discussions

☐ Random *LJ* Users

- └ 4M Random Posts & Discussions

☐ Trolls' Target

- └ Russia's Domestic Audience





Activist A



LIVEJOURNAL

Putin annexed Crimea: What should we do?

Apr 10, 2014 21:01

Russian President annexed Crimea out of a long-standing desire to resuscitate the Soviet empire, and he may eventually go after the rest of Ukraine, as well as other countries in eastern Europe ([Read more...](#))

[#Putin](#) [#Politics](#)

[LEAVE A COMMENT](#)

Comments 142

kinofriend 20:49:23 UTC

His ambitions are too dangerous for Russia. What is next, **war**?

nep-glad 21:01:24 UTC

Agree. He'll get Russia into the new **war**

daslight 21:16:15 UTC

Probably he needs a **war** to distract the population

deputat 22:29:10 UTC

Looks like he sends **military** weapons to East Ukraine

ilyapetrov 22:30:10 UTC

You all are traitors!

ilyapetrov 22:31:11 UTC

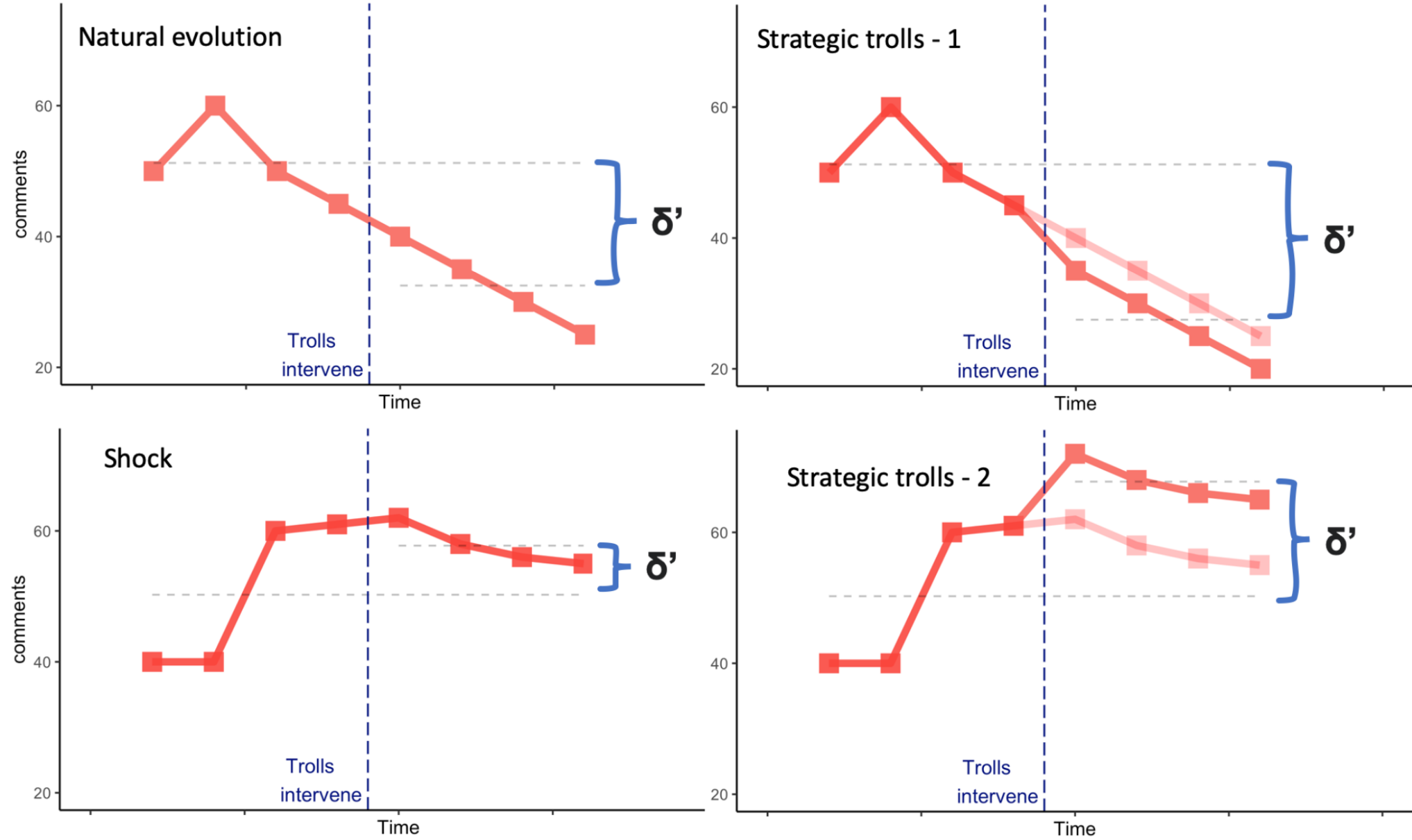
Only Putin can save Russia

yehu 22:32:10 UTC

Probably he wants a civil **war** in East Ukraine

Discussion ends here

Causal Inference Challenge



Empirical Strategy

☐ Observational Setting

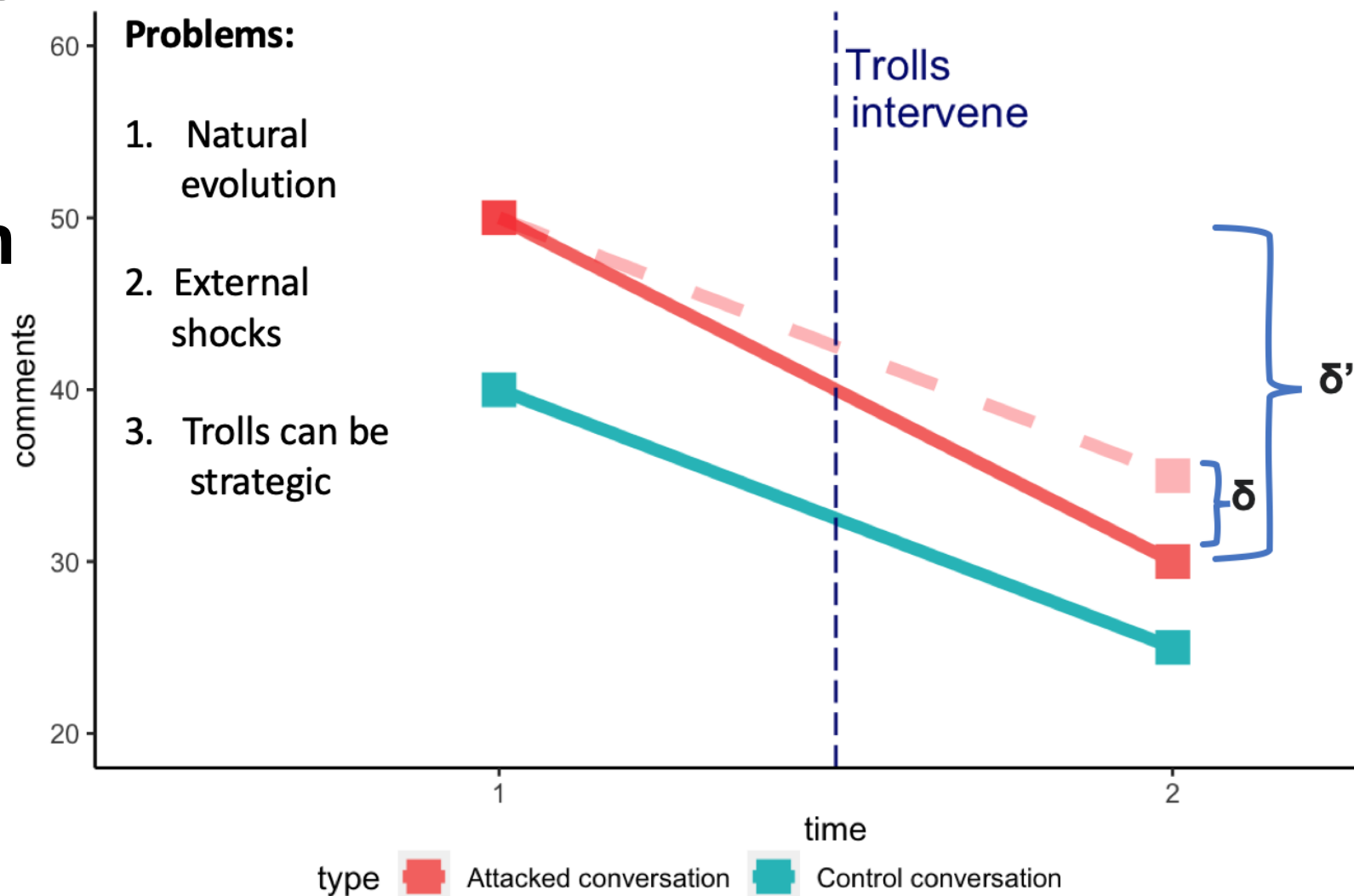
- └ DiD
- └ Matching

☐ Control Conversation

- └ Discuss the same topic
- └ High chance of attack
- └ Time overlap

☐ How?

- └ Approximate DGP
- └ Simplicity of LJ Platform



×
🔍


About 143 results (0.15 seconds)

Sort by:

Relevance
 ▾

On Murder of Boris Nemtsov: saradzhyan — LiveJournal

<https://saradzhyan.livejournal.com/50721.html>




Feb 27, 2015

... Any **murder** is a crime and a tragedy, but if it turns out that Boris **Nemtsov** has been killed for his political views, then it is also a very serious ...

Attacked

The fear/hatred that kills: talk_politics — LiveJournal

https://talk_politics.livejournal.com/1960499.html




Feb 27, 2015

.. If you're an opposition politician whose open agenda is to remove Putin from power, after **Nemtsov's murder** you should be extremely careful, ...

Control

Putinumer?: psychohist — LiveJournal

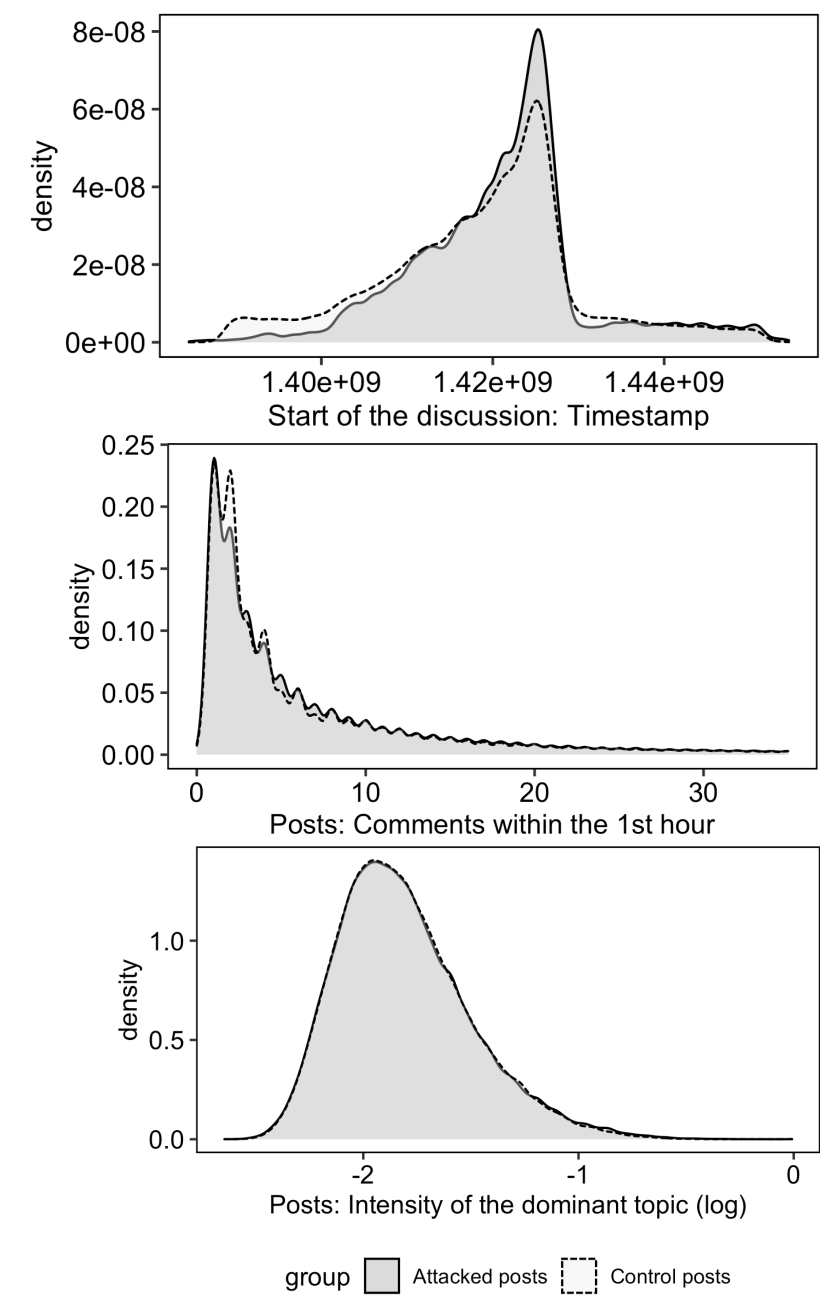
<https://psychohist.livejournal.com/76845.html>



Feb 27, 2015

... If the hardliners had murdered Nemtsov and Putin in preparation for a ... Putin being assassinated in retaliation for the **Nemtsov murder** would ...

Balance



Outcomes of Interest

□ Structural Outcomes

- └ **Intensity:** Comments & Threads
- └ **Engagement:** Users & Replies

□ Content Outcomes

- └ **Sensitive Topics**
Political Opposition, Economy
in Crisis, War in Ukraine
- └ **Agenda Promotion**
NATO Aggression
Putin's Foreign Policy Success

Initial post			Matched control post		
User 1	1:12	Comment 1	User A	1:01	Comment 1
User 2	1:14	+ Comment 2	User B	1:19	+ Comment 2
User 1	1:18	Comment 3	User A	1:21	Comment 3
User 3	1:19	Comment 4			
<i>Troll 1</i>	1:25	Comment 5	User C	1:30	Comment 4
User 2	1:30	Comment 6	User A	1:32	+ Comment 5
<i>Troll 2</i>	1:37	Comment 7	User B	1:42	Comment 6
User 1	1:39	Comment 8	User C	1:55	+ Comment 7
User 3	1:41	+ Comment 9			
User 2	1:43	++ Comment 10			
User 4	1:45	++++ Comment 11			

$$Y_{it} = \alpha + \beta \textit{Attacked}_i + \gamma \textit{Period}_t + \delta \textit{Attacked}_i \textit{Period}_t + \epsilon_{it}$$

Results–1: Structural Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Comments		Unique users		Replies		Threads	
Attacked discussions×Time	-26.01*** (0.61)	-21.89*** (2.19)	-6.57*** (0.15)	-4.95*** (0.70)	-20.15*** (0.42)	-17.64*** (1.58)	-12.90*** (0.37)	-11.73*** (1.10)
Time: Post-Treatment	-5.71*** (0.44)	-10.72*** (1.50)	-3.95*** (0.11)	-5.85*** (0.47)	-0.67** (0.30)	-3.77*** (0.98)	-0.29 (0.27)	-1.83*** (0.64)
Attacked discussions	-2.53*** (0.411)	-5.262*** (1.47)	-4.32*** (0.10)	-4.37*** (0.54)	2.50*** (0.28)	-1.17 (1.00)	4.51*** (0.25)	-0.13 (0.75)
Constant	39.57*** (0.29)		17.45*** (0.07)		21.91*** (0.20)		10.68*** (0.18)	
Author Fixed Effects		✓		✓		✓		✓
Clustered Standard Errors		✓		✓		✓		✓
Observations	510,935	510,935	510,395	510,935	510,395	510,935	510,395	510,935
R ²	0.02	0.15	0.04	0.28	0.01	0.14	0.01	0.08

Note: In models (2), (4), (6), (8) standard errors are clustered by authors of the initial posts. ***p < .01, **p < .05, *p < .1.

Results–2: Content Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Politically sensitive topics						Pro-government topics			
	Ukraine		History		Opposition		National economy		Putin's politics	
Attacked discussions × Time	-0.12*** (0.01)	-0.11*** (0.01)	-0.21*** (0.00)	-0.18*** (0.01)	-0.10*** (0.00)	-0.09*** (0.01)	-0.10*** (0.00)	-0.09*** (0.01)	0.02*** (0.00)	0.01 (0.01)
Time: Post-Treatment	-0.01** (0.00)	-0.02*** (0.00)	-0.06*** (0.00)	-0.09** (0.01)	-0.03*** (0.00)	-0.04*** (0.01)	-0.01** (0.00)	-0.02*** (0.00)	0.04*** (0.00)	0.05*** (0.01)
Attacked discussions	0.08*** (0.00)	0.09*** (0.01)	0.12*** (0.00)	0.2*** (0.01)	0.01* (0.00)	-0.03** (0.01)	0.07*** (0.00)	0.05* (0.02)	-0.02*** (0.00)	0.00 (0.01)
Constant	-3.62*** (0.00)		-2.72*** (0.00)		-3.01*** (0.00)		-3.347*** (0.00)		-3.40*** (0.00)	
Author Fixed Effects		✓		✓		✓		✓		✓
Clustered Standard Errors		✓		✓		✓		✓		✓
Observations	510,935	510,935	510,395	510,935	510,395	510,935	510,395	510,935	510,935	510,935
R ²	0.02	0.15	0.04	0.28	0.01	0.14	0.01	0.08	0.01	0.06

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Results

☐ **Structural Perspective**

- └ Infiltrated discussions degrade
- └ Users leave the conversation

☐ **Content Perspective**

- └ **Distraction:** Users shift away from sensitive topics
- └ **Agenda Promotion:** No evidence of the effect

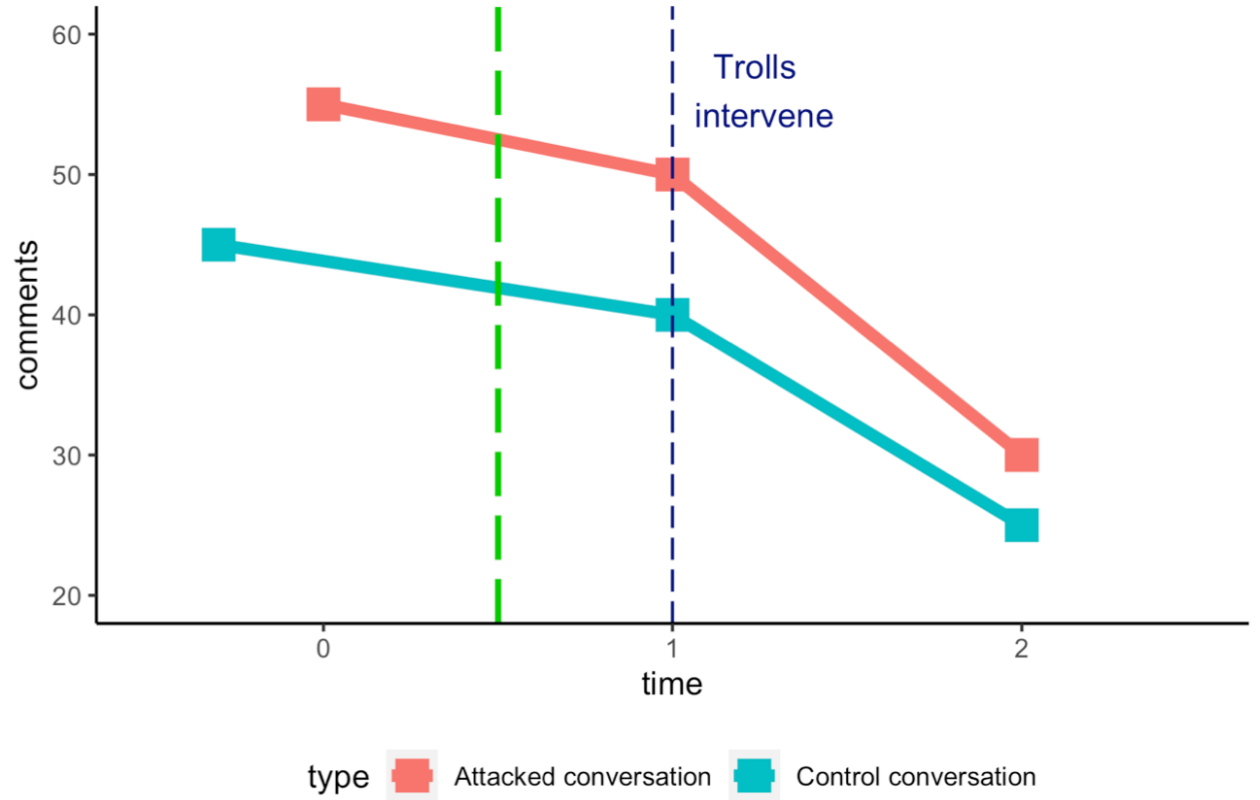
Threats to Validity

❑ Underlying parallel trends

❑ Effect of a new user

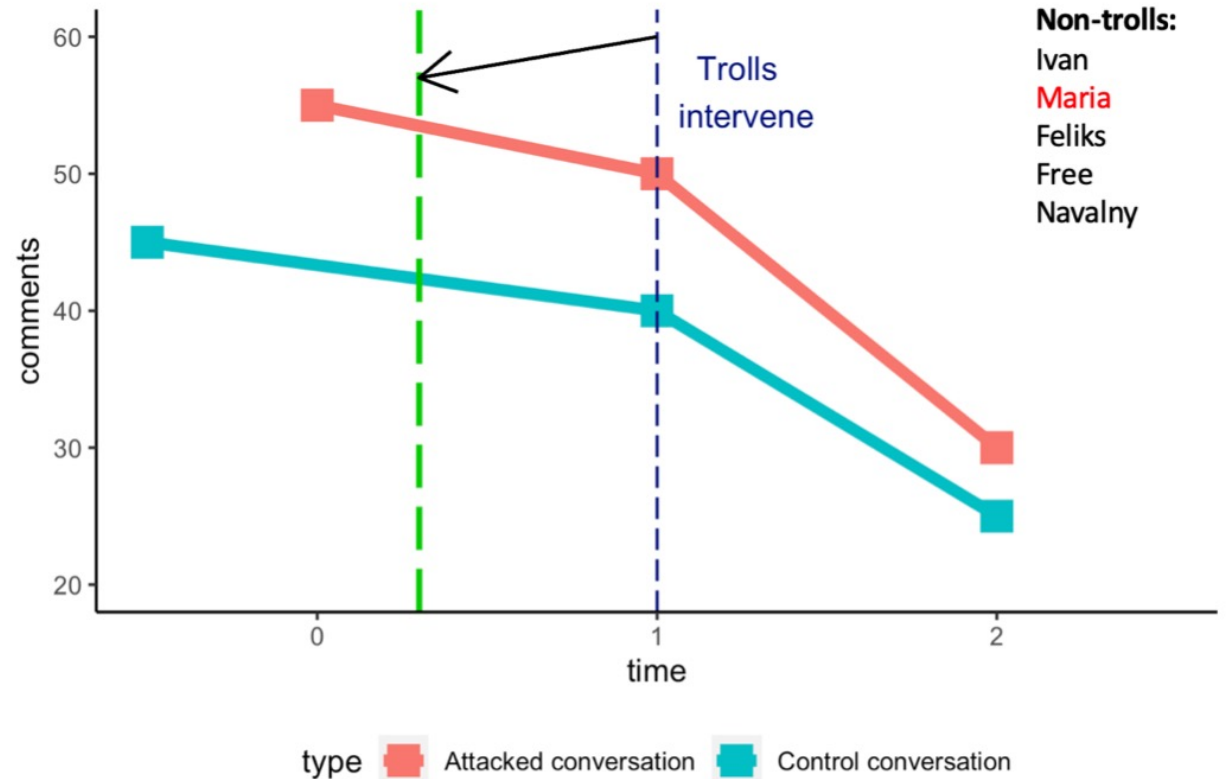
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dolboeb

Kadyrov will be the Next Putin

Feb 10, 2015 23:46

It is clear that Putin would be glad to rule Russia for 500 years. But there is no chance he can survive the next twenty years ... ([Read more...](#))

[#Corruption](#) [#Terror](#)

[LEAVE A COMMENT](#)

Comments 409

trykin 20:49:23 UTC

I am not that sure

nepeanois 21:01:24 UTC

It depends on us. We need to fight the corruption!

dasblinkenlight 21:16:15 UTC

Yes, other southern territories will soon be controlled by Chechens

(The comment has been removed)

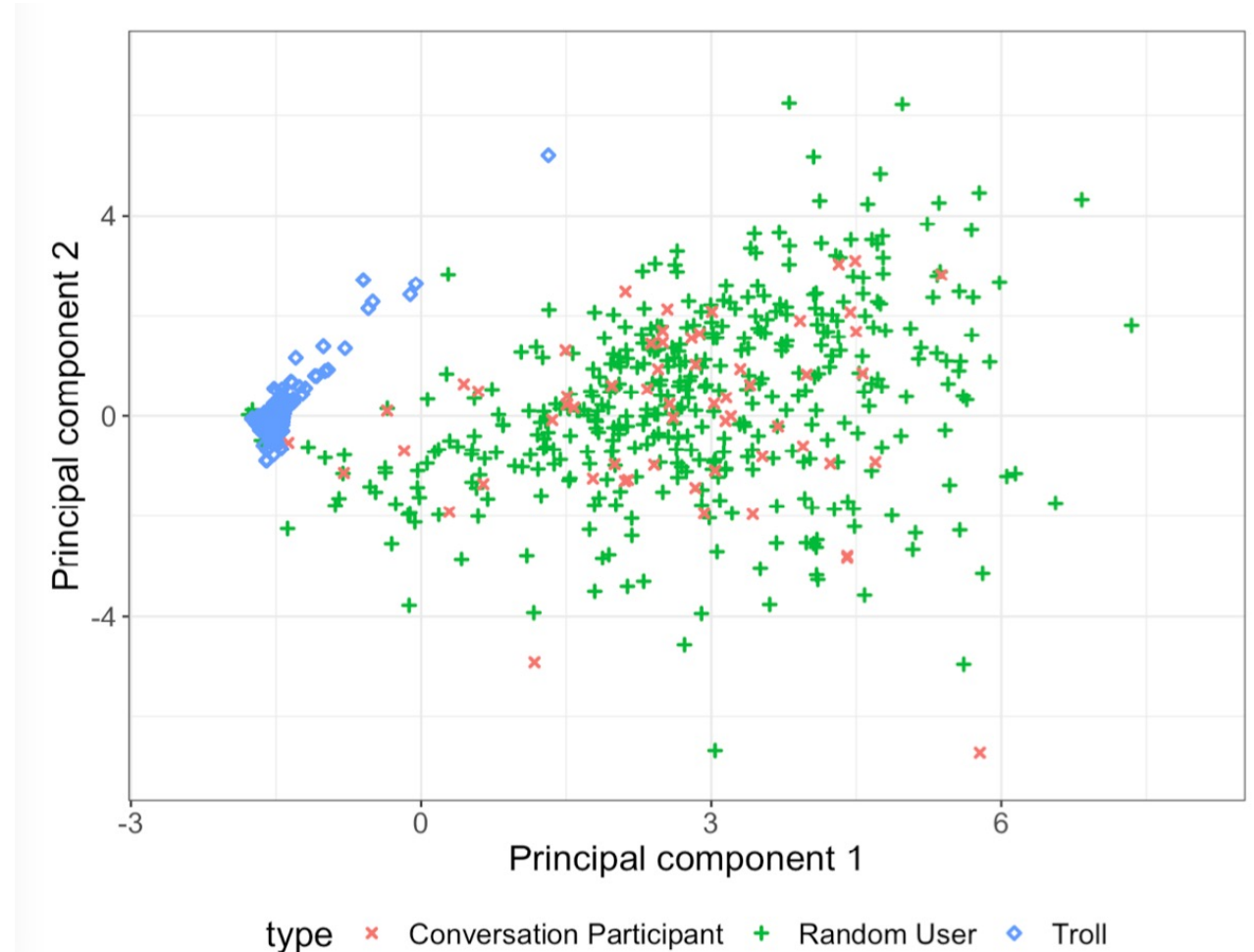
deputat_yehu 22:30:10 UTC

He will not say goodbye

Threats to Validity

- Underlying parallel trends
- Effect of a new user
- Deleted comments
- **Incomplete List of Trolls**

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Group 1	Group 3	Group 1	Group 3	Group 1	Group 3	Group 1
Group 2	Group 4	Group 2	Group 4	Group 2	Group 4	Group 2



Conlcusiosns

☐ **Identified Effects of Troll Interventions**

- └ Trolls prevent political communication
- └ No evidence on promotion of pro-government agenda

☐ **Generalizability**

- └ **LJ:** Common Social Media Platform
- └ Facebook, Instagram, VK

☐ **Approximation of DGP**

- └ Specifics of the Cyberspace
- └ Simplicity of LJ platform engine

Conclusions

❑ Identified Effects of Troll Interventions

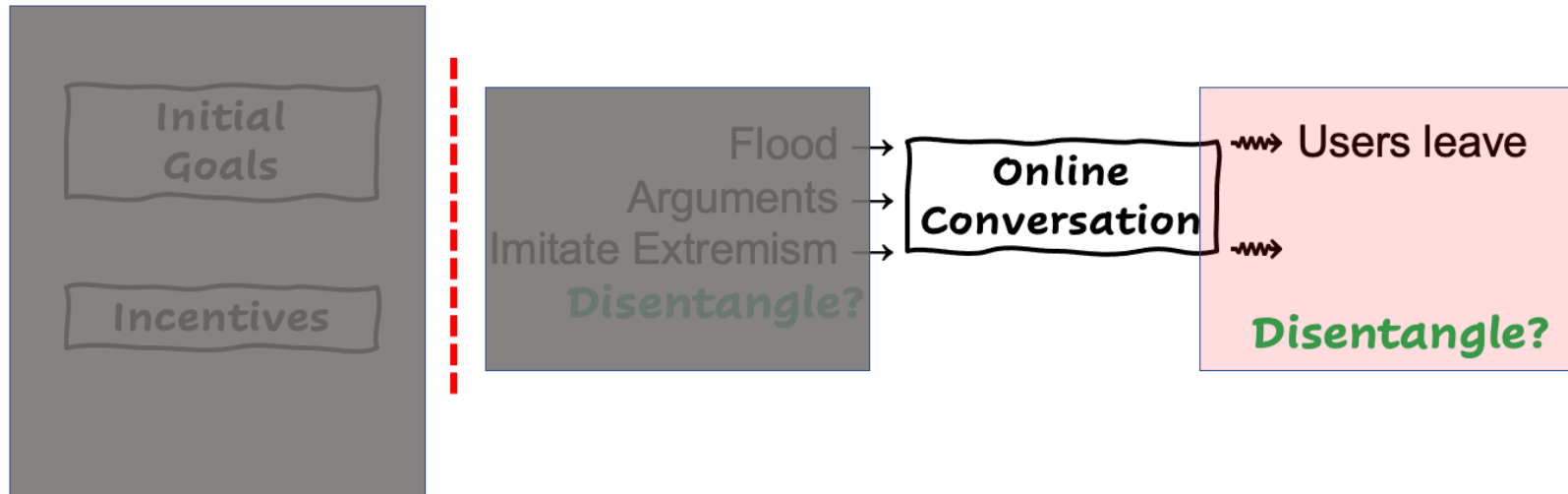
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THANK
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