Vermont EPSCoR
March 29, 2024

# Parler Games

*Conspiracy Theory, Conspiracy, and Insurrection*

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UC Berkeley

# A story…

About a witch who hops around in the shape of a bunny in a small rural village in 19th century Jutland (Denmark) stealing milk

Ane Husted up here could also do witchcraft and turn herself into a hare. She went out on people's fields at night and in their stalls and in their kitchens. But she finally met her bane because of that. They shot at her many times, but it never bit. Finally they shot the hare lame in one of its back legs, and then Ane Husted got really hurt in one of her legs, and lay for quite a while before she died. They finally got fire under her at last, and it is fourteen or fifteen years since she died. She had her money in stockings and pots that were buried in the kitchen.

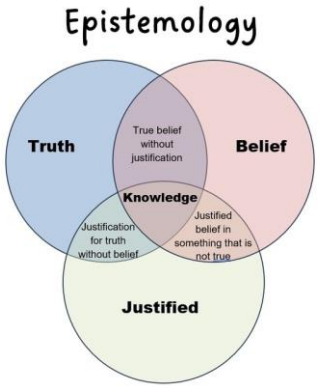
- Images by Dall-E after being given this story and a description of milk hares as a prompt

# Storytelling, Folklore and Belief

# Folkloristics and folk narrative

- Folkloristics is the study of vernacular (informal) culture, and its circulation on and across social networks
  - In contemporary culture it has a lot in common with social media where informal dimensions of everyday culture are created, circulated and negotiated
- Folklorists are interested in dynamic processes of variation and stability
  - How and why do ideas “persist”?
  - How do these ideas support/create beliefs?
- Folklorists are also interested in the relationship between cultural expressive forms, groups, and the dynamics of group membership
- Folklore is remarkably efficient at
  - Encapsulating & communicating cultural ideology
    - Norms, beliefs, values

# Belief



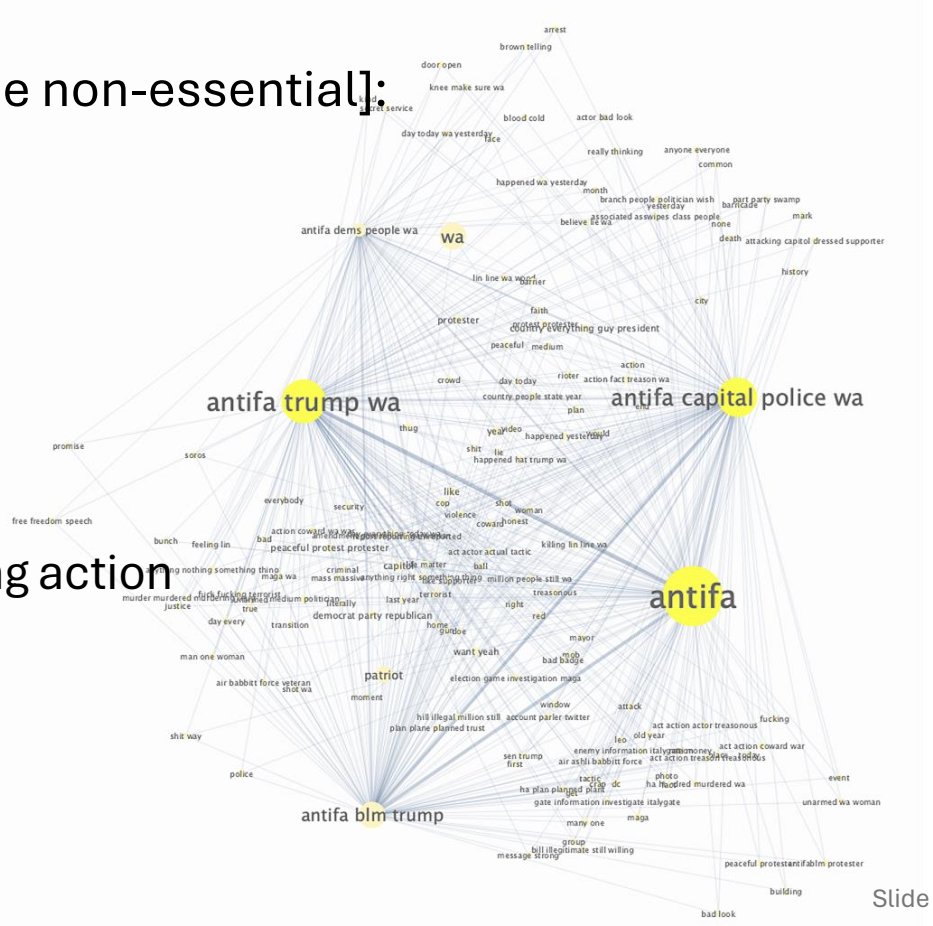

- Should not be confused with truth (whether justified or unjustified)
  - Cf Elliot Oring and his work on “Legendry and the Rhetoric of Truth”
- Belief is a social construct and can influence in profound ways how we interpret facts, our understanding of how the world works
  - The truth claims of a story are believed in the context of a community in which it circulates
  - There is a feedback loop where stories that make these claims reinforce belief, and existing belief reinforces these claims
- Since belief is often related to causal claims, it can profoundly influence the decisions that we make

# Stories told as true: Legends and Rumors

- Legends and rumors are sources of information that thrive in low-trust, or low-information environments
- Legend is a short, believable, mono-episodic narrative, told as true, in an informal setting, often conversationally
- Rumor is a hyperactive transmission state of legend
  - it says, “here’s a threat, what are you going to do about it?”

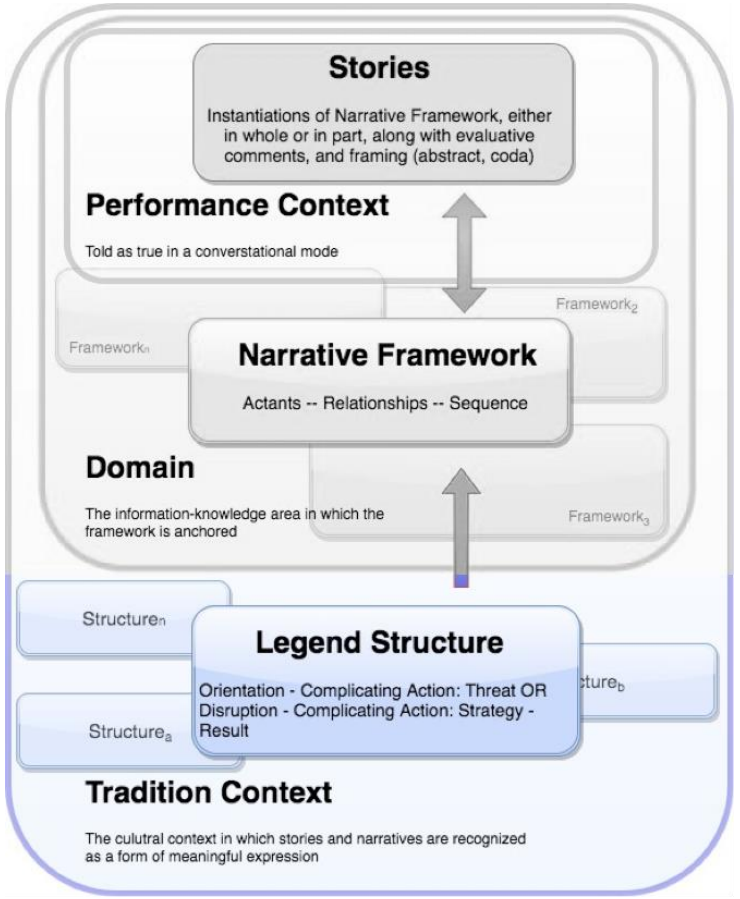
# A model of legend structure

- From Labov and Waletzky, we have an excellent model of personal experience narrative (1967)
- Six main structural components — three essential [three non-essential]:
  - [Abstract] — story summary
  - Orientation — who, where, when
  - Complicating Action — what happened
  - [Evaluation] — commentary on the story
  - Result — what happened as a result of the complicating action
  - [Coda] — what finally happened



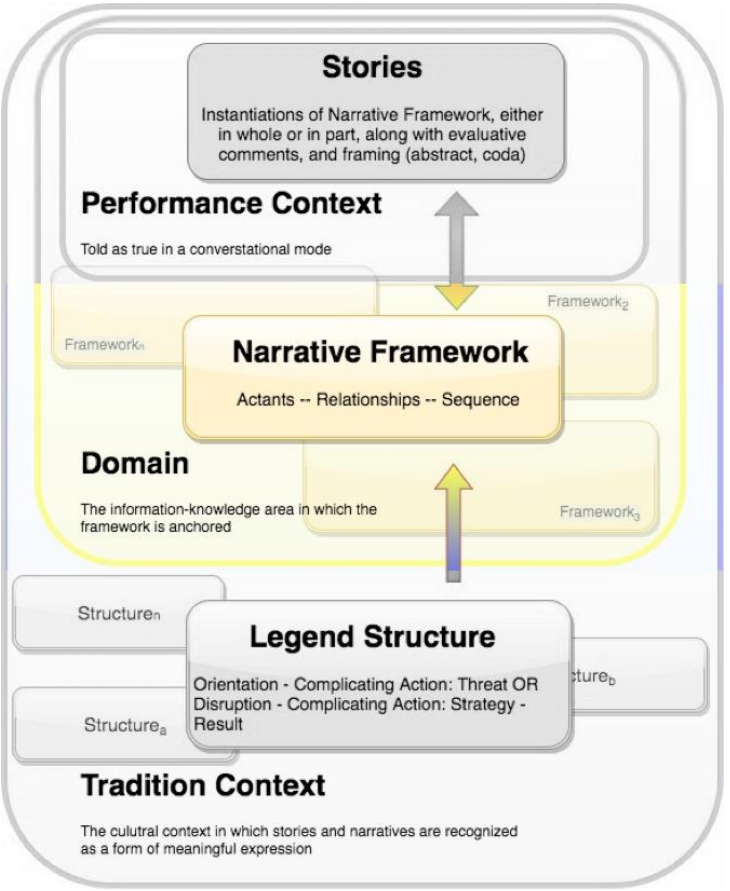
# Macroscale: Tradition / Structure

- The fundamental level of genre and genre structures
- Tradition context:
  - cultural context in which stories are recognized as meaningful
  - multiple, possible overlapping genres
- Genre structure embedded in tradition context



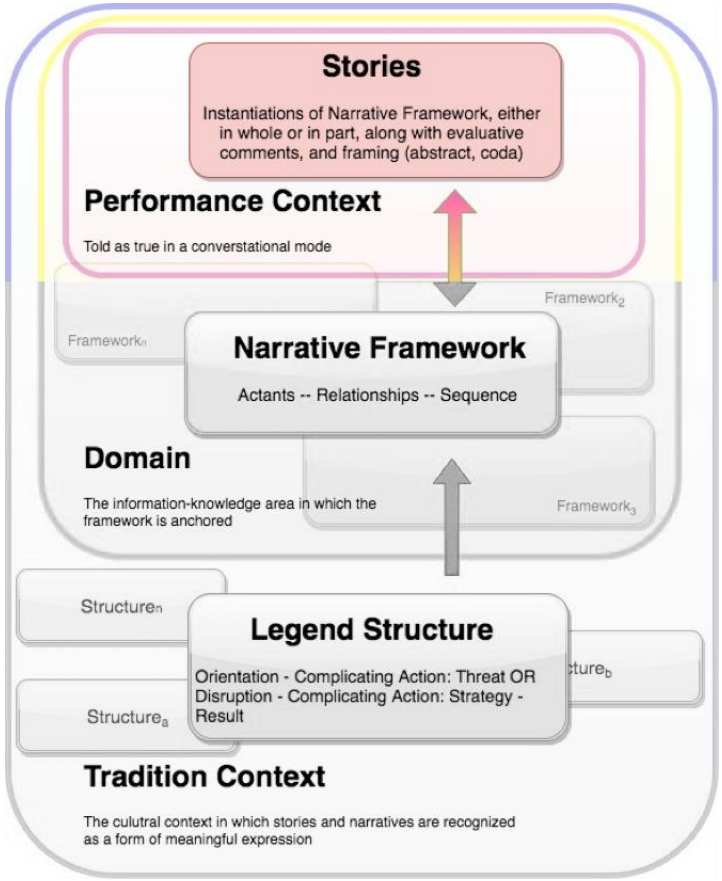
# Mesoscale: Domain/Framework

- Domain:
  - information-knowledge area in which the framework is anchored
- Narrative framework:
  - based on the underlying structure
  - actants-relationships-sequence



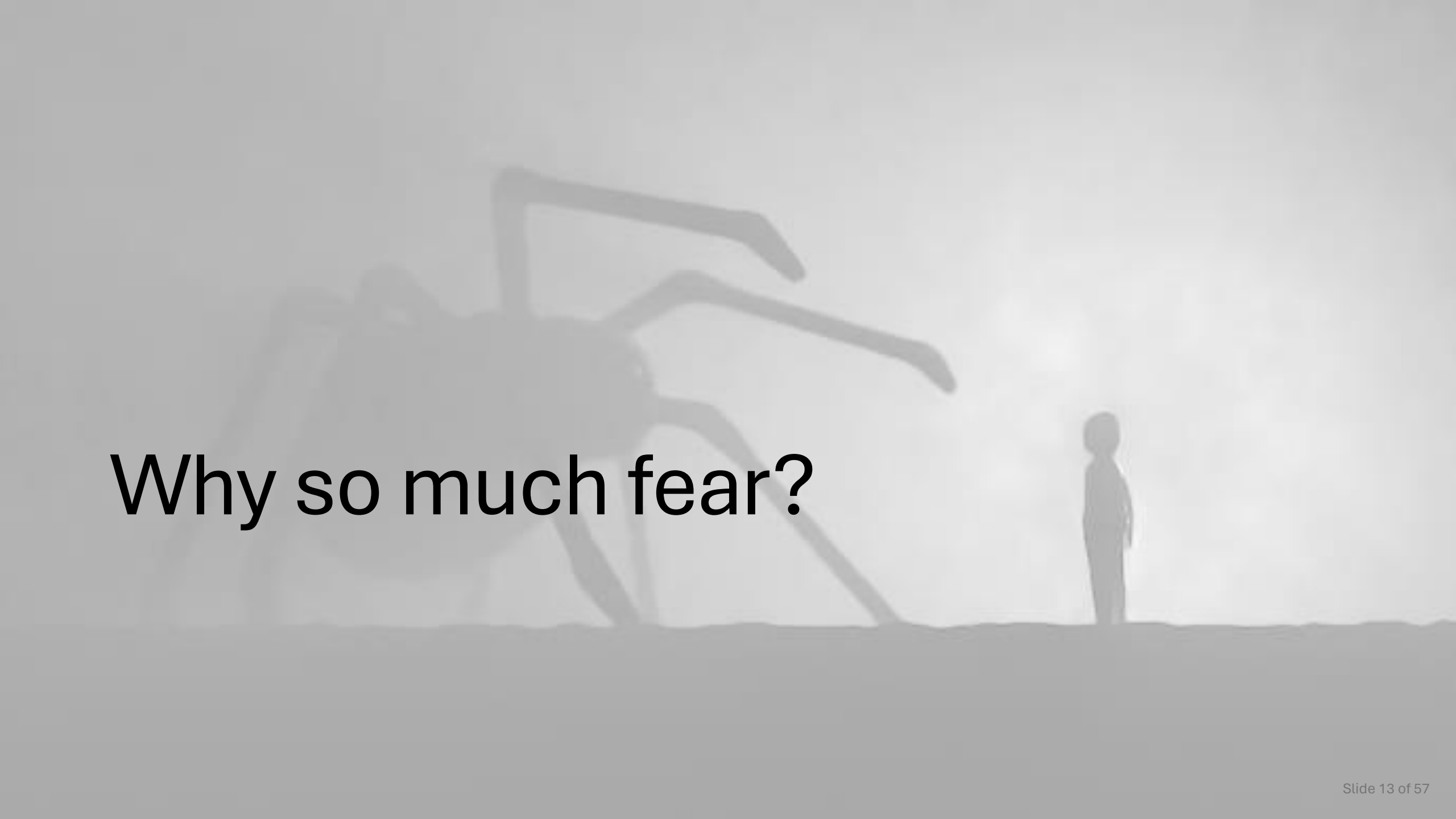
# Microscale: Performance/Story

- Performance context:
  - context in which story appears
- Stories:
  - instantiations of framework in whole or in part
  - includes evaluation and framing (abstract & coda)



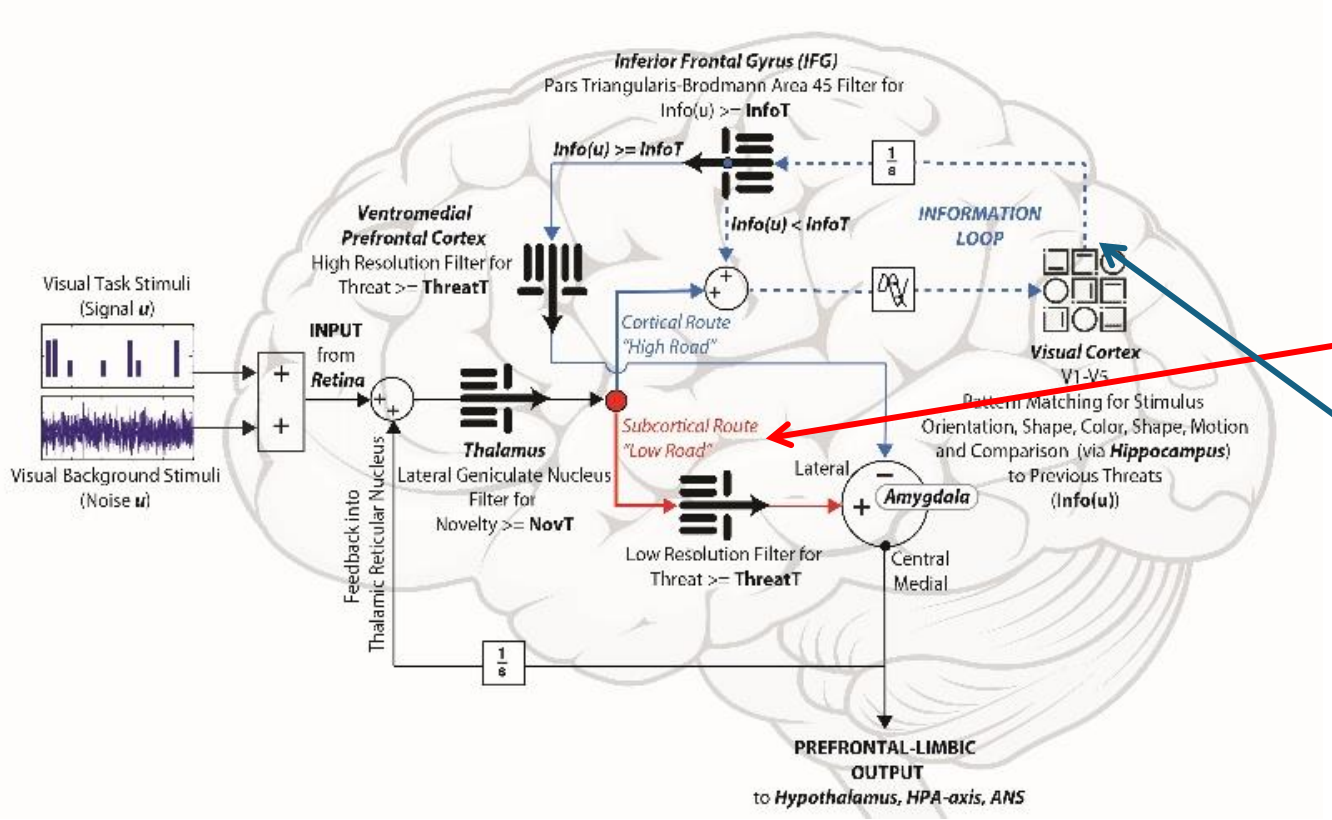
# Narratives of threat and the role of fear

- An interesting aspect of these stories told as true is that the complicating action often proposes:
  - A threat or disruption
  - A strategy to deal with that threat or disruption
- By cataloging/ranking
  - the various sources of threat or disruption
  - the various strategies proposed for dealing with those threats or disruptions
  - their eventual outcomes
- We learn a great deal about the group in which those stories circulate



# Why so much fear?

# Neural Fear Circuits and Uncertainty – The neurological response to incomplete information




- Human fear circuits appear to have two paths
  - ”low road”
  - “high road”
- At the first perception of threat, the low road circuit is activated
- The information loop on the high road keeps asking for more info
  - And may turn off the reaction if the information determines no threat

Mujica-Parodi LR, Cha J, Gao J. From Anxious to Reckless: a control systems approach unifies prefrontal-limbic regulation across the spectrum of threat detection. *Frontiers in Systems Neuroscience*. 2017 April 7; 11:18.

# Neurophysiological basis for threat narratives?

- Do narrative stimuli, if they present a potential threat, activate a similar circuit to the threat/fear circuit activated by visual stimuli?
  - (cf Sambuco et al 2022)
- Not necessarily a new idea, but now we might be able to measure this

# Social Media and Storytelling

Social impacts of virtual communities

# Social Media and Partial Stories

- posts can be notoriously fragmentary, alluding to conversations in earlier threads or on other forums and platform
- in the aggregate, these posts and discussions constitute a collaborative storytelling process resting on a narrative framework (discursive arena- cf Boole 1854)
  - assignment of story actants to inside or outside status
  - negotiations over “what happened”
  - deliberation of the origin and status of potential threats
  - consideration of possible strategies
  - retrospective evaluation of end results

# Stories and action

- Michel de Certeau proposes that stories present “repertoires of schemas of action” (1984:23)
  - Social media offers an opportunity for a collective exploration of those schemas
- Anne Swidler mentions that stories “present a‘tool kit’ of habits, skills, and styles,” (1986:273)
  - Social media allows group members to “construct ‘strategies of action”

# Social Media and Virtual Communities

- The illusion of close homogeneous communities
  - Brought together by shared beliefs, values, norms (ideology)
  - Communities are, both online and in real life, marked by elements of homophily
  - Real life communities may, however, require more give and take
  - Real life communities are also marked by social brakes
    - Communication can be slowed down
  - One does not sit down to share a pizza and beer with robots in real life communities

Dall-E generated after prompt: Sharing a pizza and beer with robots

# Experimental Computational Folkloristics

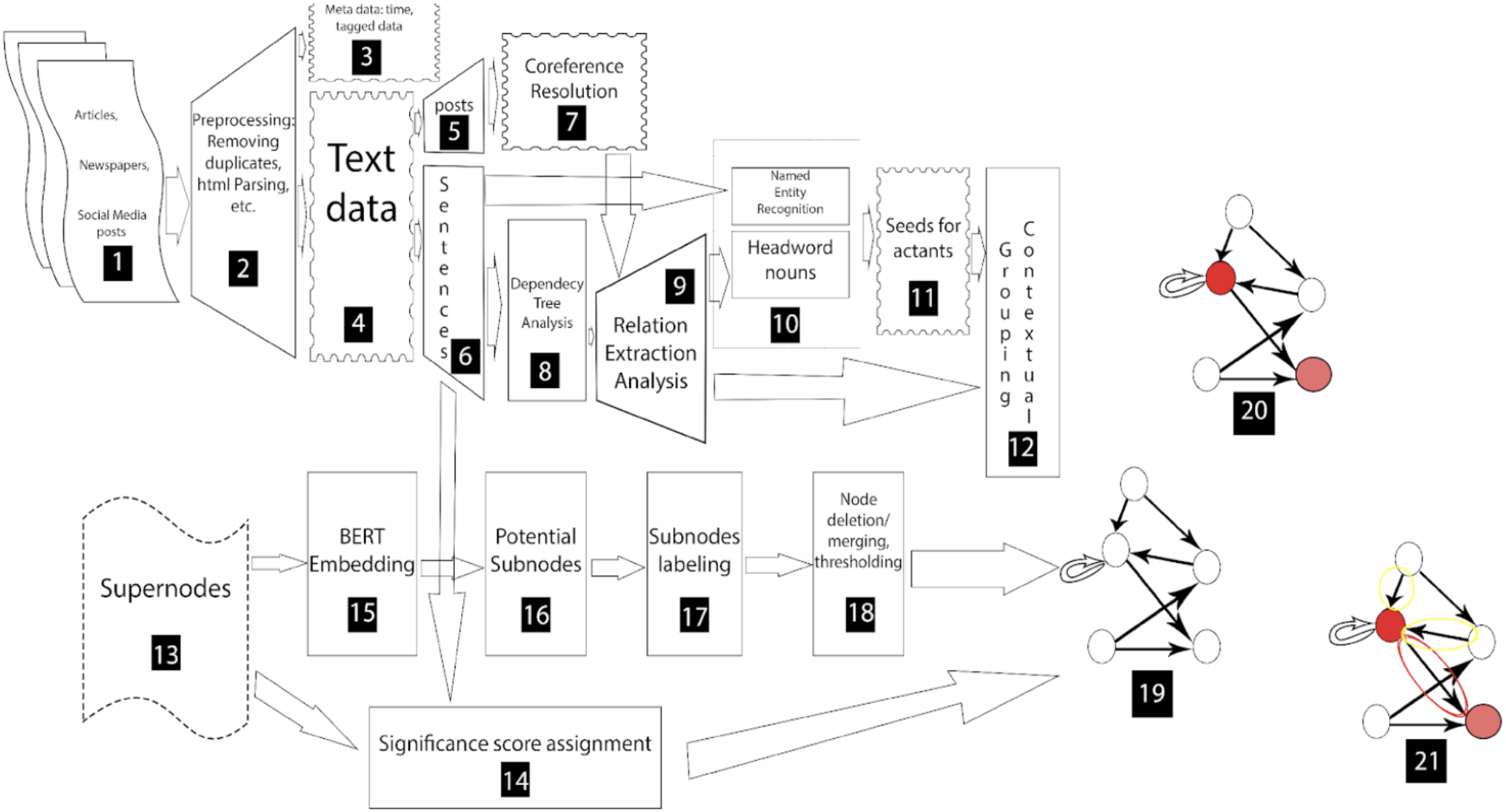
Unraveling narrative at internet scale

Computational Folklore Lab Berkeley

# Narrative framework structures

- Simple threat narratives can be linked together to form complex representations of threatening groups and their interconnection(s)
- These frameworks appear to have considerable stability across time once they are established
- How are these networks held together? Are there certain topological features of the narrative framework that tell us something about narrative, belief and community?
- Are there certain features of narrative framework topologies that are more important in solidifying ideology?

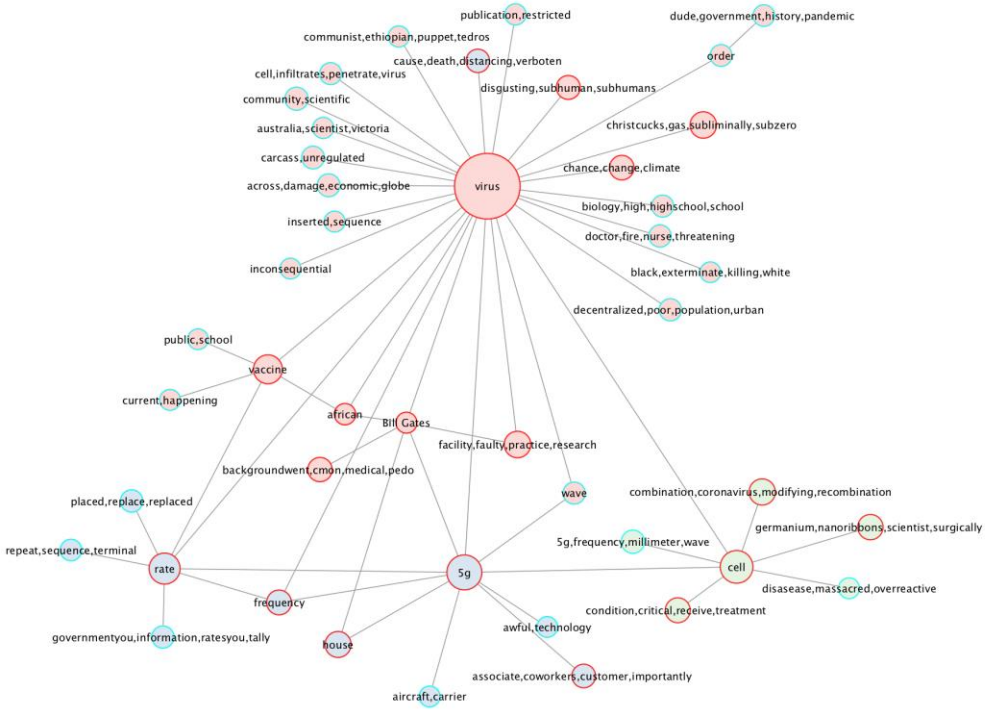
# Bird's Eye view of our computational pipeline for extracting frameworks

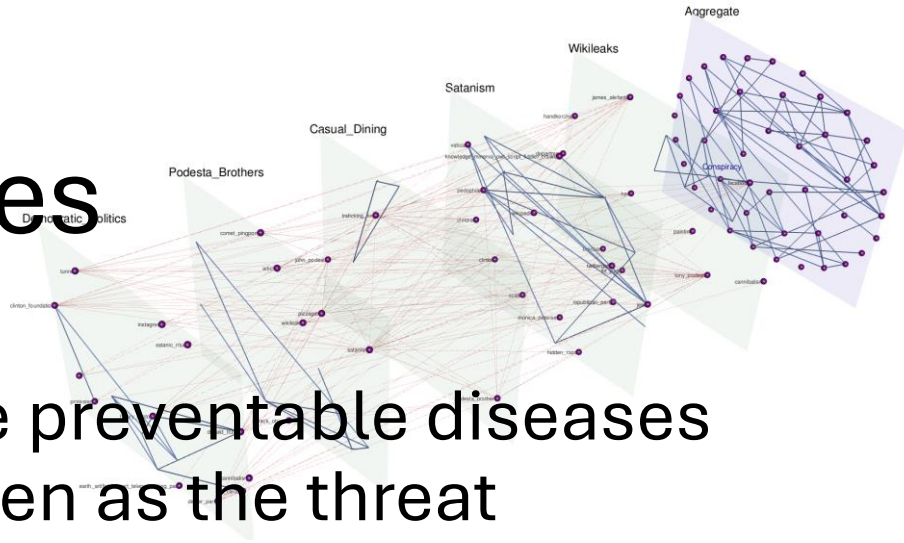


# A series of experiments

- Anti-vaccination movements
- The rise of Qanon
- Conspiracy in the time of CoViD-19

# And some tentative discoveries

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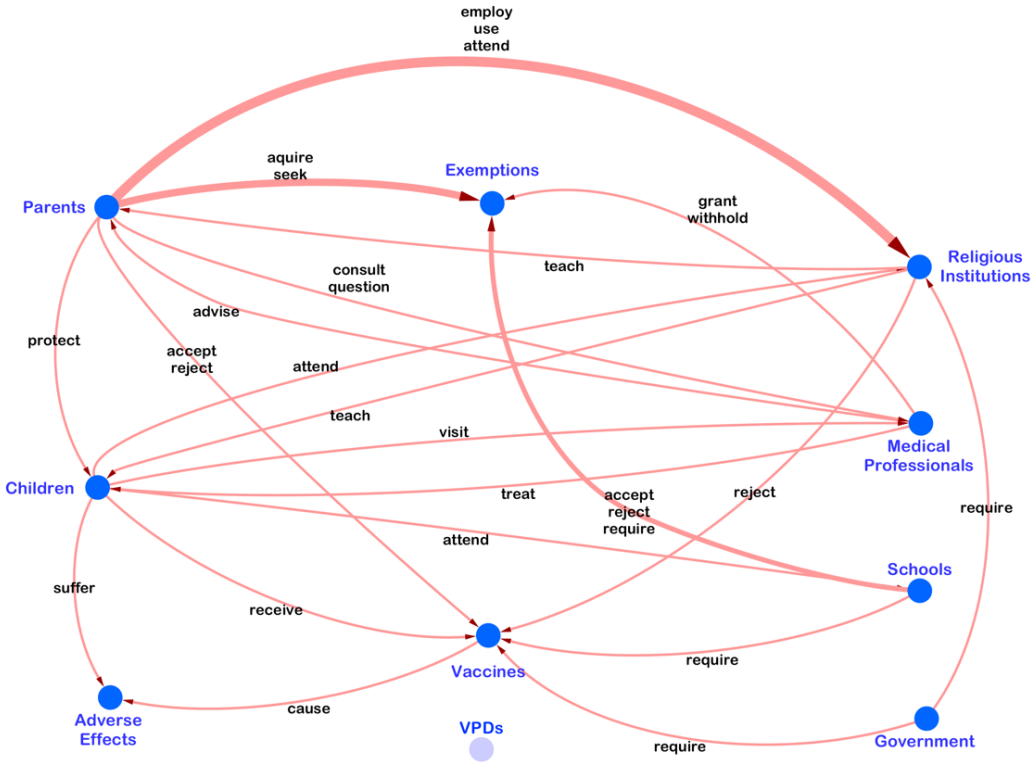



- During CoViD-19, disparate narrative f
together into an umbrella narrative, la
align masks with the deep state and g
technology-as-threat

# January 6th and Parler

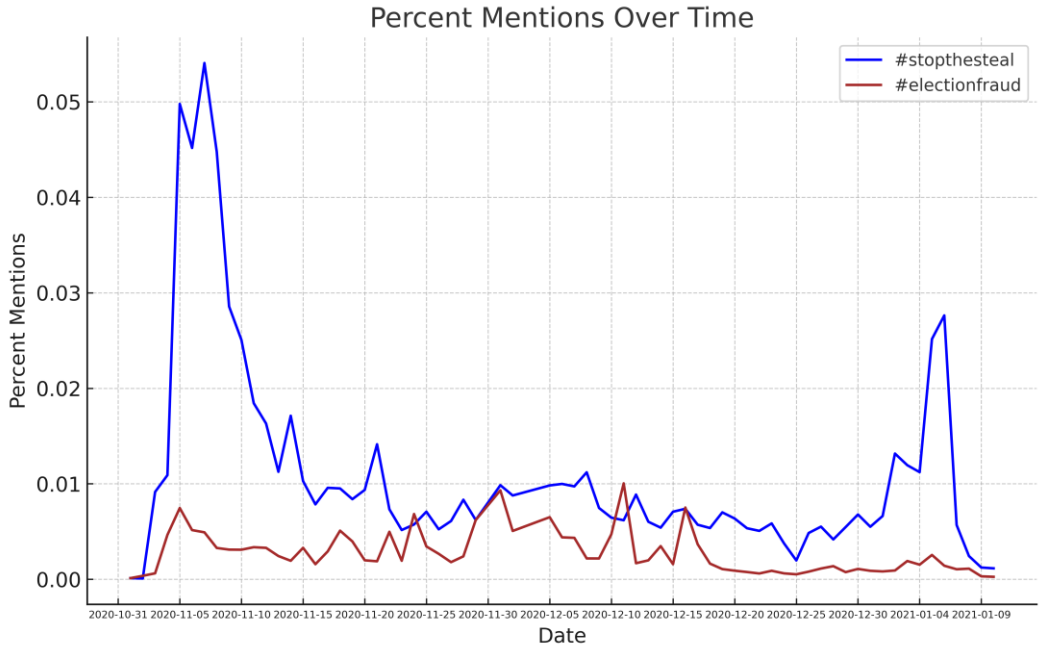
A Conspiracy to Combat a Conspiracy Theory

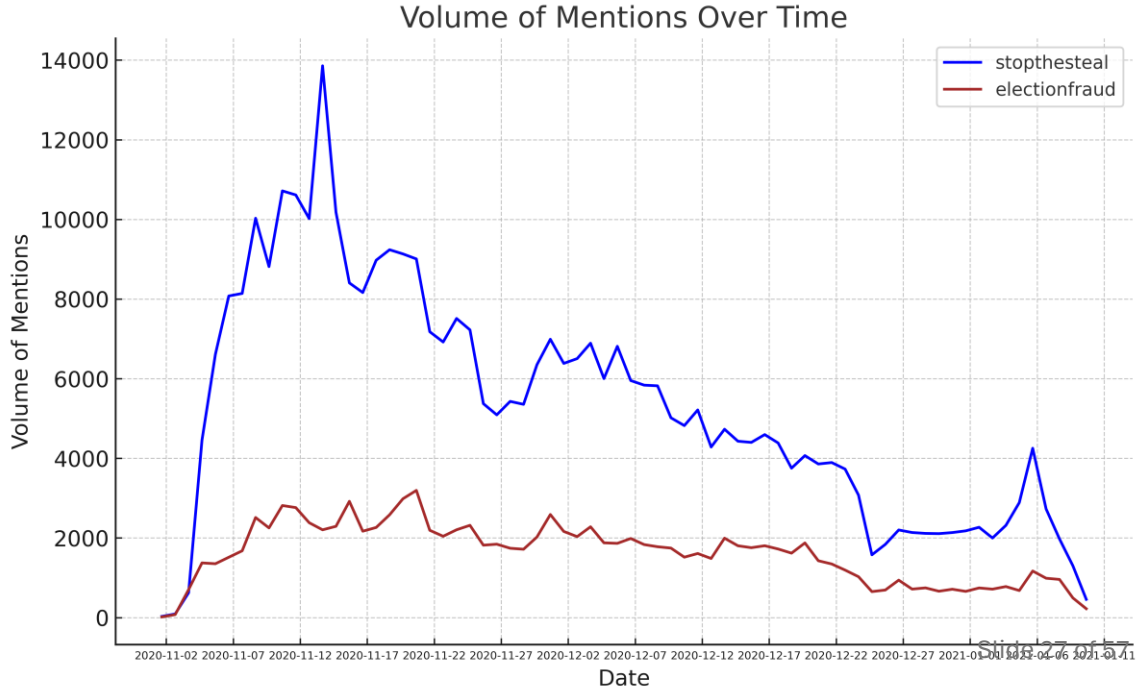
# January 6: A refresher

- Jan 6: “Save America” rally
  - Official park services application by “Women for America First”
  - March to the Capital / subsequent attack
- Jan 4: Capitol police report warning of violence
- Dec 28: Clark sends letter to Georgia falsely asserting DoJ investigation of irregularities
- Dec 18: Trump announces the January 6th rally
- Dec 12: Proud Boys march on Washington DC
- Dec 1: Barr announces no election fraud
- Nov 23: Women for America First file application for rally
- Nov 14: Million MAGA march
- Nov 10: Twitter, Facebook and others bar #Stopthesteal and other election deniers from platforms
- Nov 4: Election

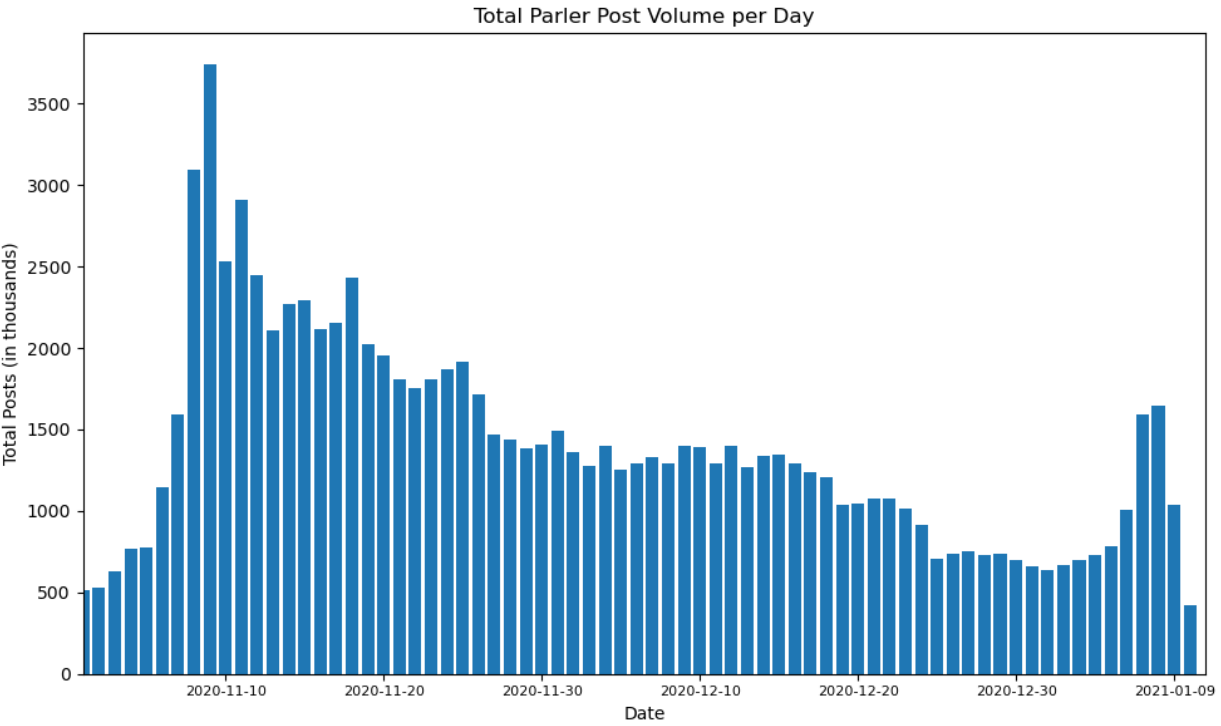
# Parler and “patriots”

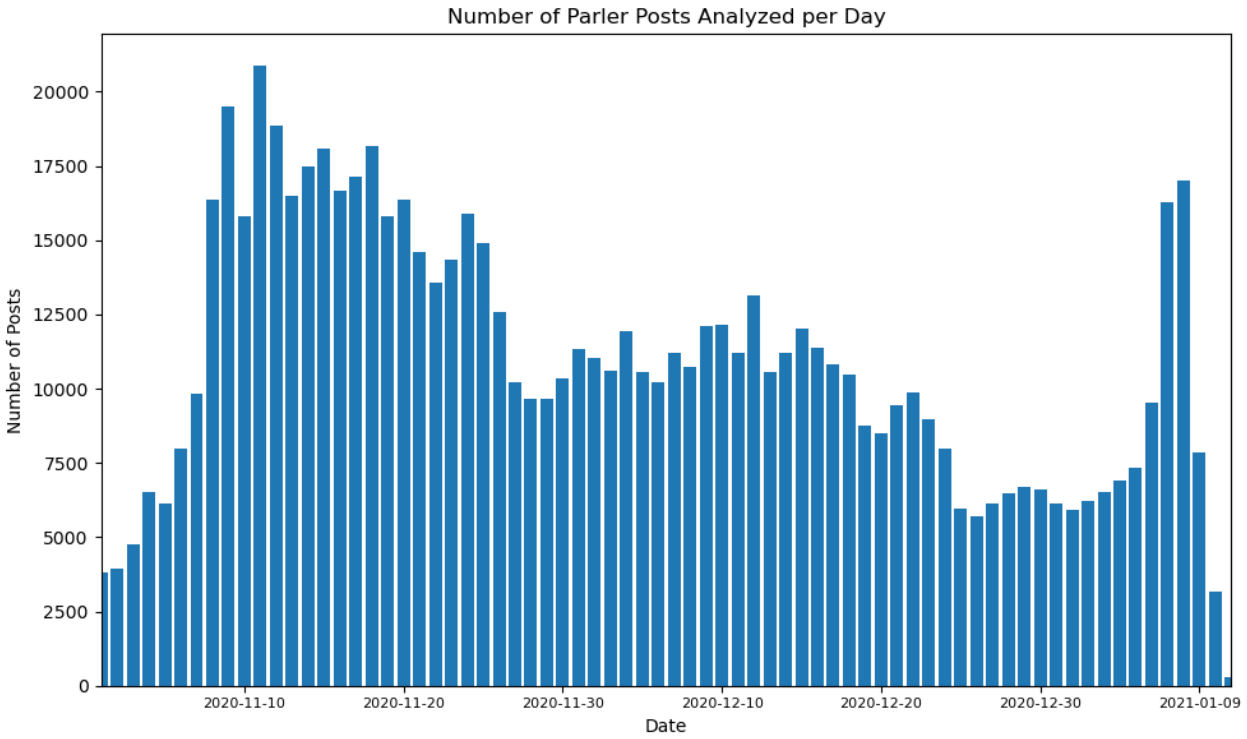
- A haven for self-described “patriots” – enormous change in userbase after November 10th
- Platform presents itself as a safe harbor for “free speech”
- Posts (parley) of up to 1000 characters
- Platform went abruptly offline on January 10
  - Entire platform was scraped on January 10 and made publicly available
  - We did not work with user data/network



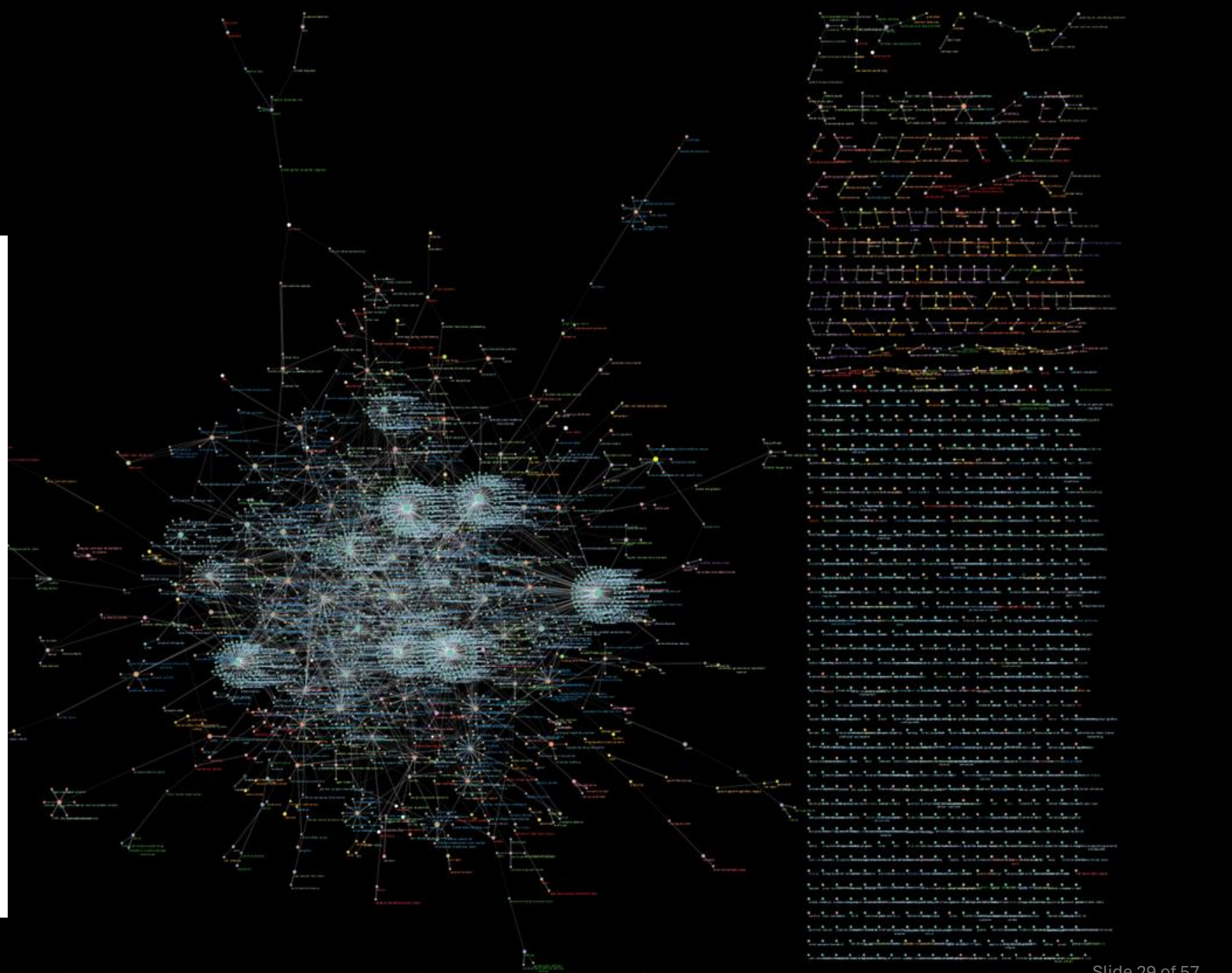
# Posts per day / Posts analyzed per day



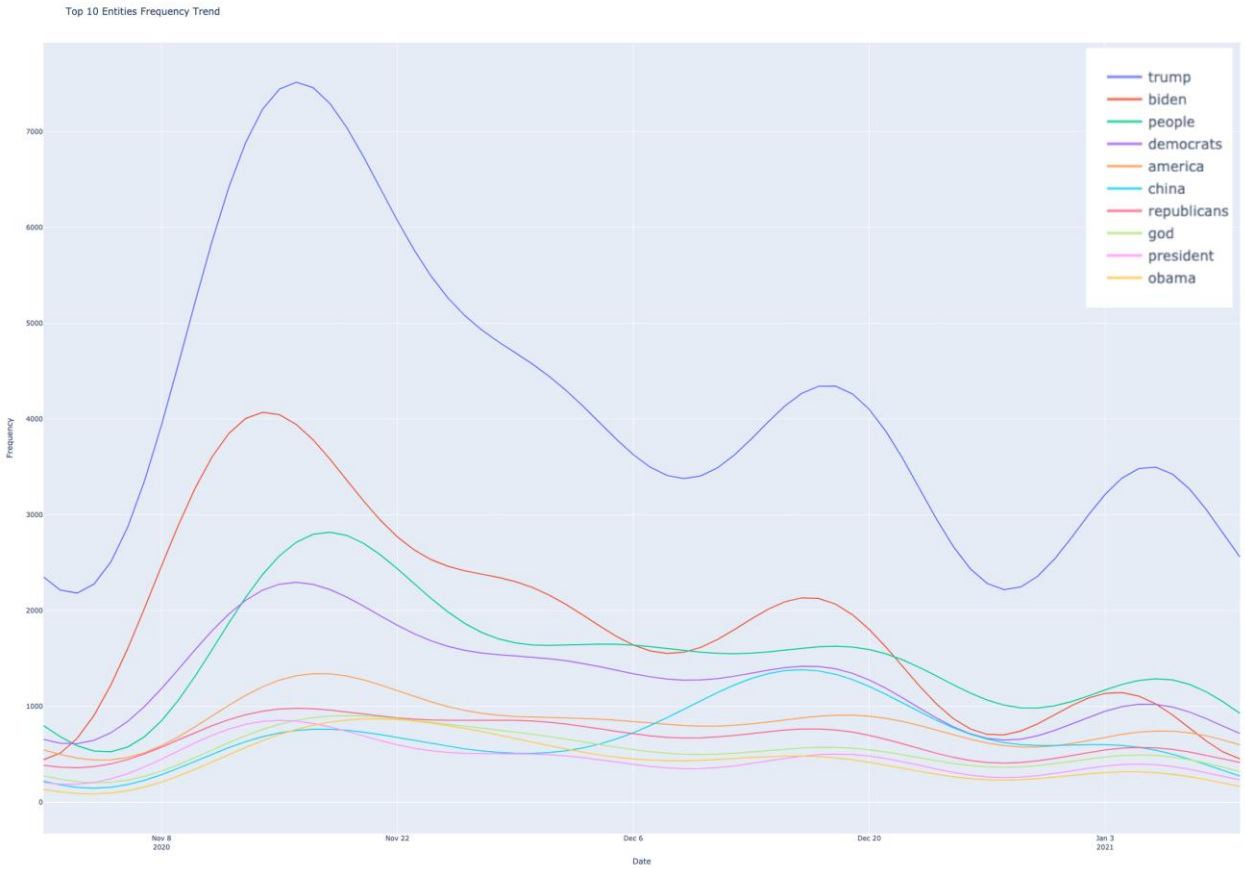



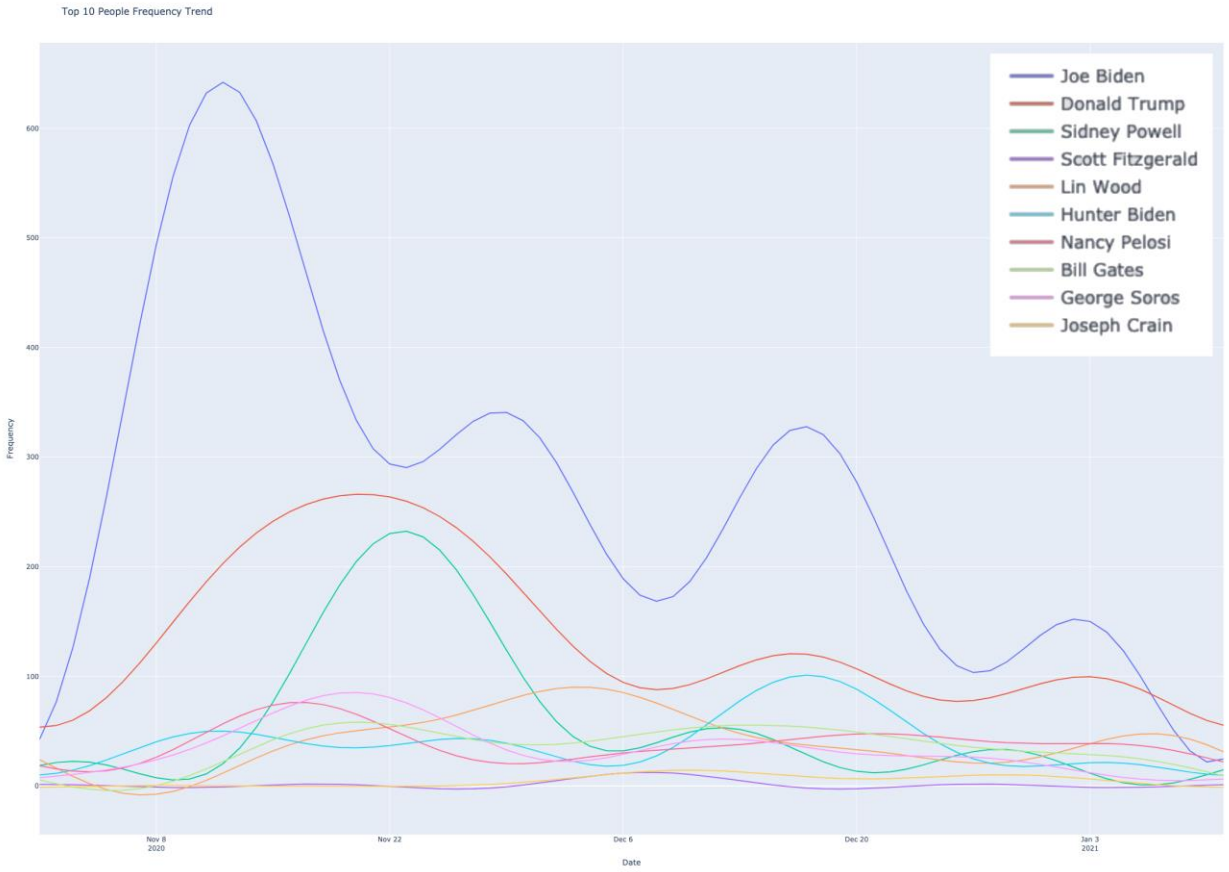
# What? How?

- Download the Parler dataset
- Use our pipeline to:
  - Discover actants and their relationships
  - Map their semantic roles
  - Consolidate the nodes into “supernodes”
  - Model the edges using BERTopic
- Generate a series of narrative framework graphs
  - Use change detection to find meaningful bins based on external events
  - Use modular decompositions to find the narrative communities
  - Generate labels on these communities and explore topic-labeled edges within and between them



# Main actants and their persistence



# An overview of the bins

- Based on simple change detection in the ranking of supernodes

| Event | Event range | Automatic changepoint (top 10 supernodes / 5 changes; in brackets top 15 entities / 5 changes) | Intersection | BIN # |
|---|---|---|---|---|
| Pre-Election | 11/1-11/3 | 11/1 [11/1] | | 1 |
| Election to Immediate Post-Election | **11/4**-11/13 | 11/4 [11/5] | 11/5 | 2 |
| Million Maga March, Nov 14 | **11/14**-11/22 | [11/12] | | 3 |
| Women for America First permit app 11/24, Flynn pardon 11/25 | **11/23**-11/30 | 11/23 [11/22] | 11/25 | 4 |
| No election fraud (Barr 12/1) | **12/1**-12/11 | 11/30 [11/30] | 11/30 | 5 |
| | | 12/6 | 12/7 | |
| Proud boys march Dec 12 | **12/12**-12/18 | 12/15 [12/14] | 12/15 | 6 |
| Trump announces Jan 6 (Dec 18) | **12/19**-12/27 | 12/18 [12/18] | 12/18 | 7 |
| Clark sends letter to Georgia **Dec 28** | **12/28**-1/3 | 12/29 [12/27] | 12/29 | 8 |
| Capitol police report **Jan 4** | 1/4 – 1/11 | 1/4 [1/4] | 1/4 | 9 |

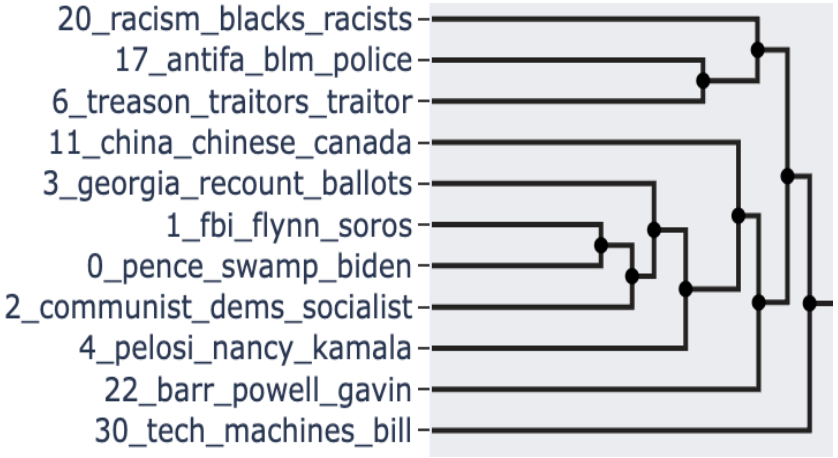
# Topic modeling

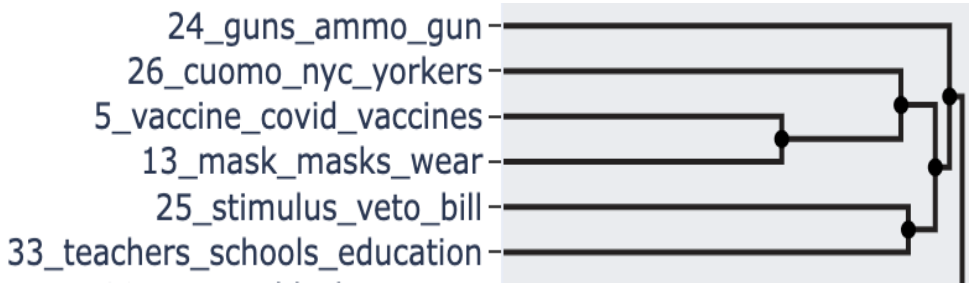
- Super nodes / subnodes give us the who and where
- Topics / relationships give us the how and what
- We use a slightly relaxed version of BERTopic
  - We restrict the number of topics to 150 (left to its own devices, we get > 3500 topics)
  - We use a probabilistic method to assign outliers to topics, but let +/- 10% appear in multiple topics
  - We limit the Reimann manifold to 5 dimensions
- We labeled the topics using “Maximal Marginal Relevance”
- We assign the topics to the edges (as opposed to covering nodes+edges)
  - Assignment to frames was too sparse and was largely uninterpretable

# Top ~14 topics

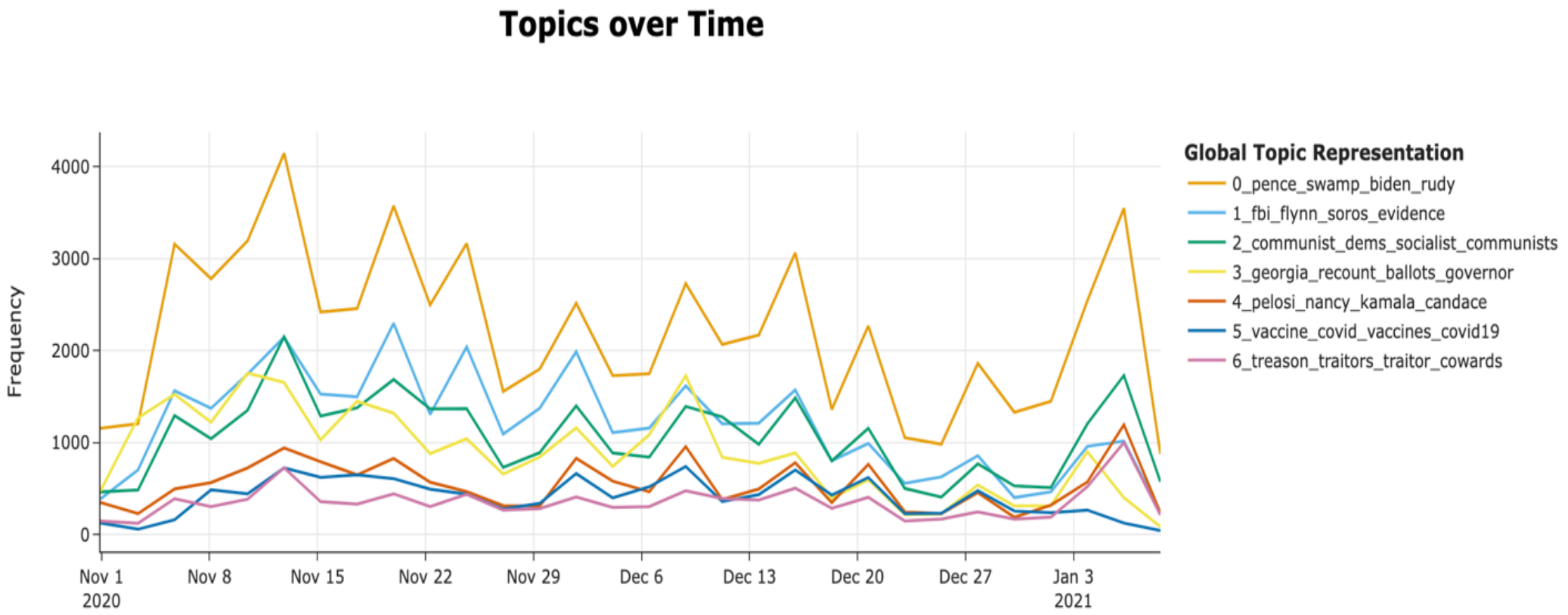
| Top | # docs | Label | Sample post |
|---|---|---|---|
| 0 | 66439 | pence, swamp, biden, rudy | PLEASE Listen to the WARRIORS not the politicians This is the path for Trump to control the Presidency he rightfully won, as well as the Senate To we need to abandon voting on rigged machines and boycott all RINOs have faith! |
| 1 | 35884 | fbi, flynn, soros, evidence | I am very well aware of what I am saying. First, the Democrats had 4 years to set this up. Second, ask yourself why the Pelosi family, Schumer, and other Democrat politicians were financially vested in Dominion systems with millions of dollars. |
| 2 | 31990 | communist, dems, socialist, communists | That Is why I surprised at people more than this Dem crook. People who voted for him should know how to avoid socialist and communist ideas only bring destruction to the country. |
| 3 | 26370 | georgia, recount, ballots, governor | Where are those Georgia Senators and establishment Republicans? Why are they not standing with the people of Georgia on the streets to Because they take their constituents for granted No more. |
| 4 | 16323 | pelosi, nancy, kamala, candace | Follow me as we get cops to investigate Stacy Abrams. she is at it again, sending 750k mail in ballots. They will steal This from Loeffler they are not stopped. |
| 5 | 12217 | vaccine, covid, vaccines, covid19 | Say NO to the covid vaccine.', 'COVID VACCINES Covid19 is the new name of the regular flu, which fabricated the world economic collapse and the new normal Every year, new flu vaccines come out to the market. |
| 6 | 10653 | treason, traitors, traitor, cowards | After almost eight months of rioting including seizing and burning of police precincts, attacking Federal buildings and officers, murdering officers, trying to seize the White House, etc etc Democratic politicians are finally joining conservatives and condemning it. |
| 8 | 8776 | fauci, clown, snowflake, trolls | So, RR. Where did you go to law school and what makes you so smart? I think YOUR combined idiocy deserves little to no attention by anyone with intelligence WHY? |
| 9 | 8447 | wallace, kyle, dorsey, matt | Dan, I have been a follower of yours since before the Russian collusion Hoax. Your growth has been nothing shy of amazing. Your tenacity for the truth and what is right should be the hallmarks of every person who has a platform. |
| 10 | 6774 | fb, twitter, facebook, censorship | You might want to go back to Facebook and Twitter. |
| 11 | 6739 | china, chinese, canada, ccp | VERY DAMNING! BIDEN HARRIS WILL NOT FIGHT AGAINST CHINAS TOTALITARIAN RULE, EVEN IF THEY GET IN THE WHITE HOUSE, WHICH THEY WILL NOT! WE THE PEOPLE MUST SEND THE DEMOCRATS, CHINA AND ALL OTHER TOTALITARIAN LEADERS OF THE WORLD A CLEAR MESSAGE! |
| 13 | 6497 | mask, masks, wear, mandates | If you could see what is filtered just from the air you breathe without a mask, you would probably hold your breath. Our sinuses, cilia, and mucus were designed to protect us from particulates. |
| 14 | 6434 | cnn, newsmax, news, magazine | CNN, Corrupt News Network! Truth always comes out. News to CNN!', 'CNN, FOX, MSNBC, CBS, ABC, NBC, etc are all entertainment news, and should be considered on the same level as the National Enquirer. |
| 16 | 6345 | catholic, church, satan, bible | Praying for his protection 1 Chronicles 162223 KJV 22 Saying, Touch not mine anointed, and do my prophets no harm. 23 Sing unto the Lord, all the earth; shew forth from day to day his salvation. |

# Some topic relationships





# Topics over time

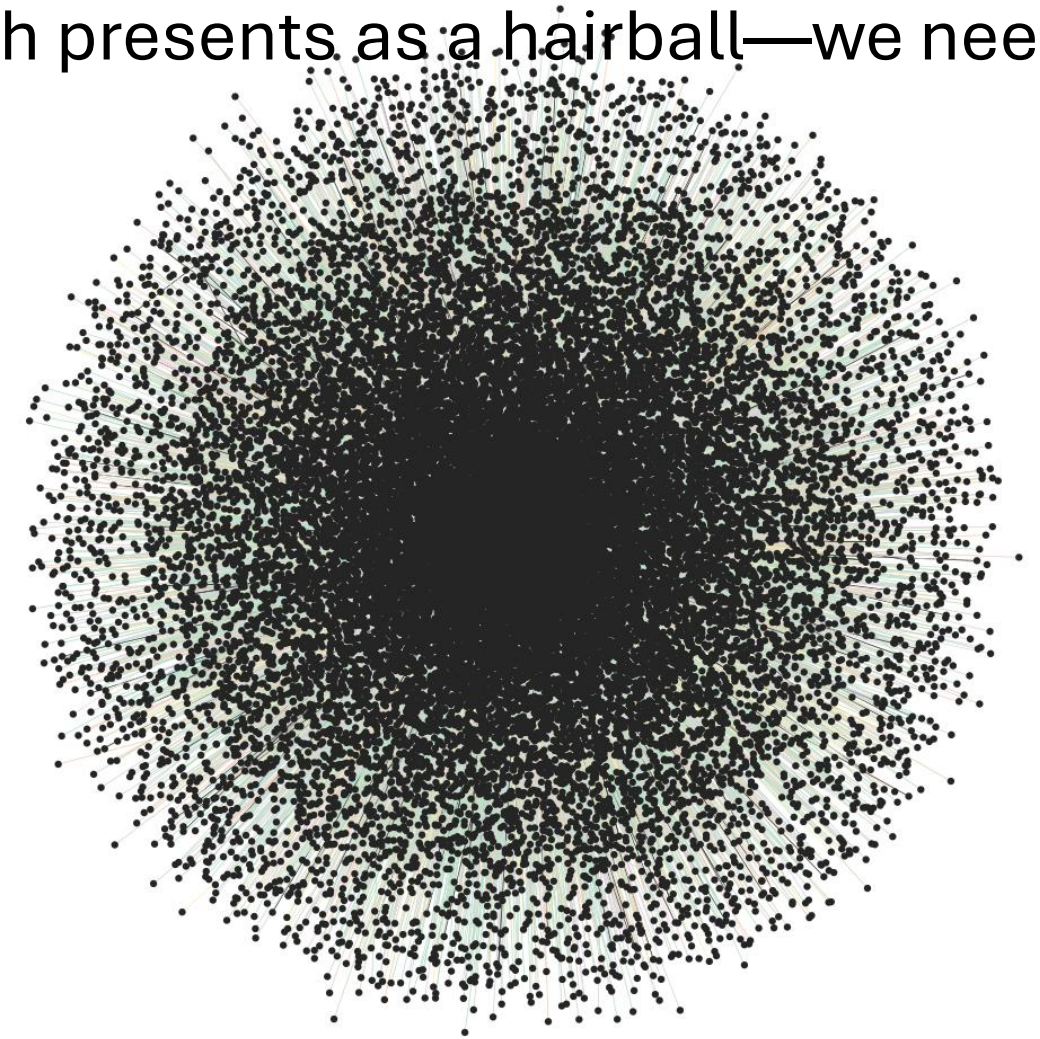


# Graphs and their communities

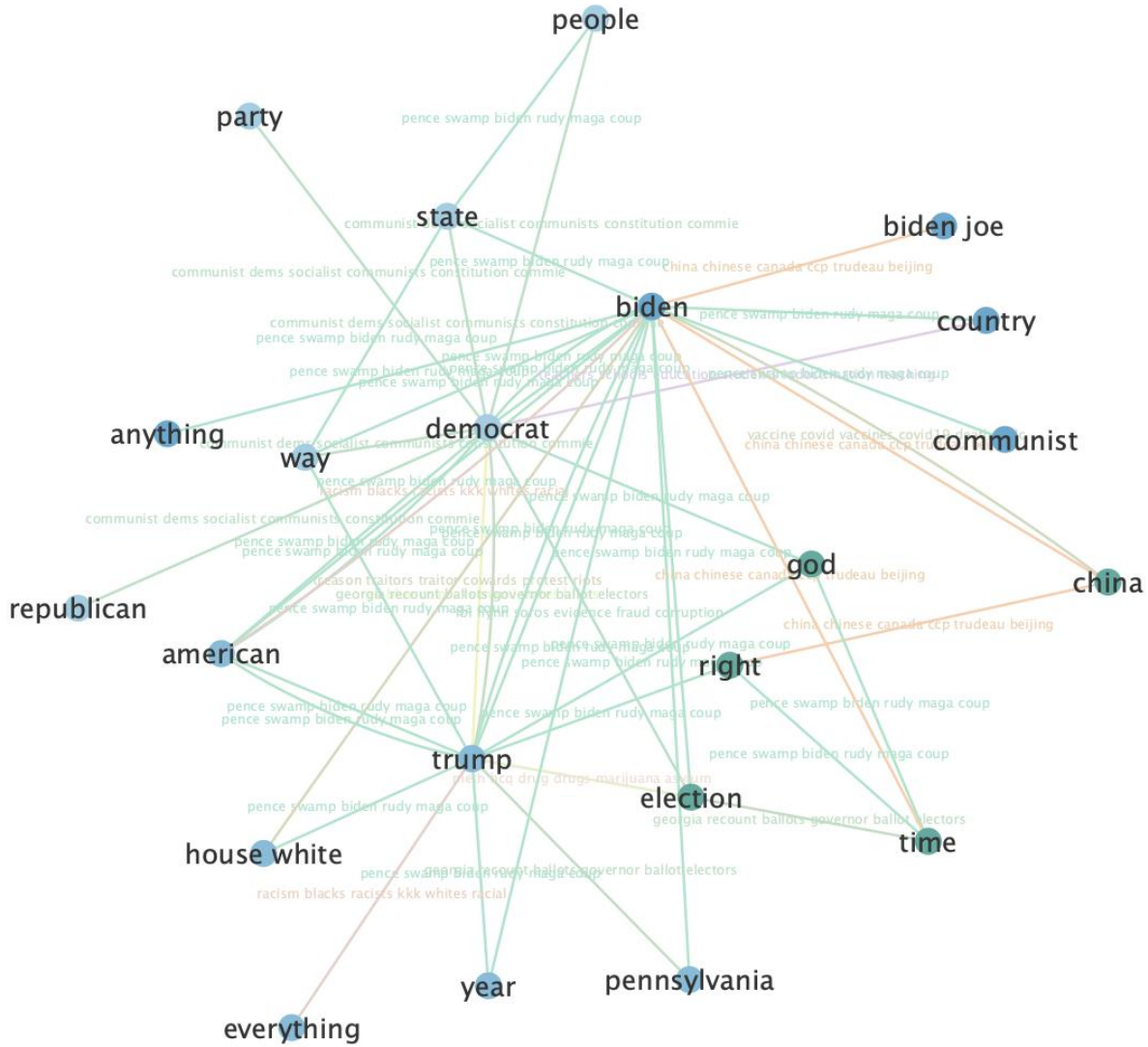
- For each bin, we create a narrative network graph, which we then partition into communities using a modularity detection algorithm
- This finds densely connected communities of actants
  - Allows for actants to appear in multiple communities since we use subnodes instead of supernodes
  - Allows us to find predominant edge topics within and across communities
  - Is not yet attuned to stance, or insider/outsider inference
- We also create an intersection graph for each bin, to find the persistent nodes across days in the extractions

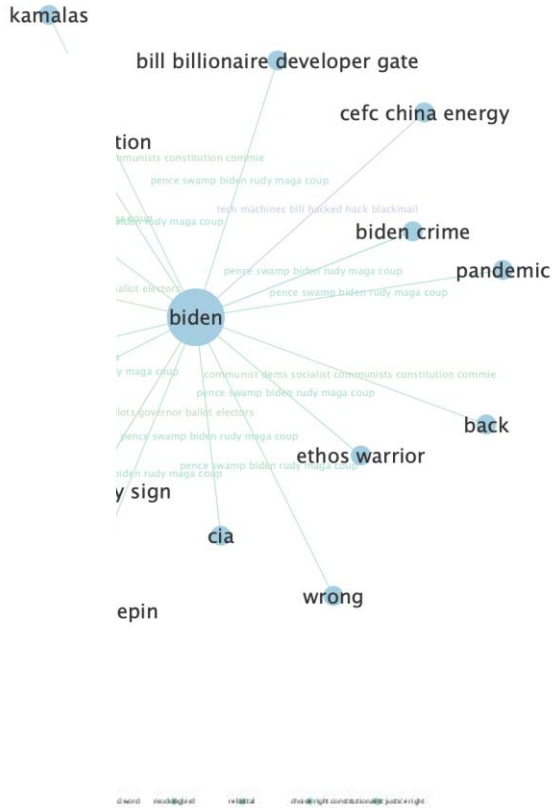
# Why do this?

- The entire graph presents as a hairball—we need to disentangle it

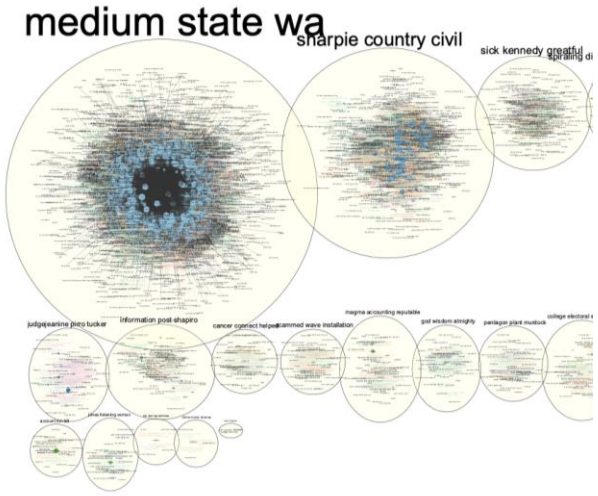


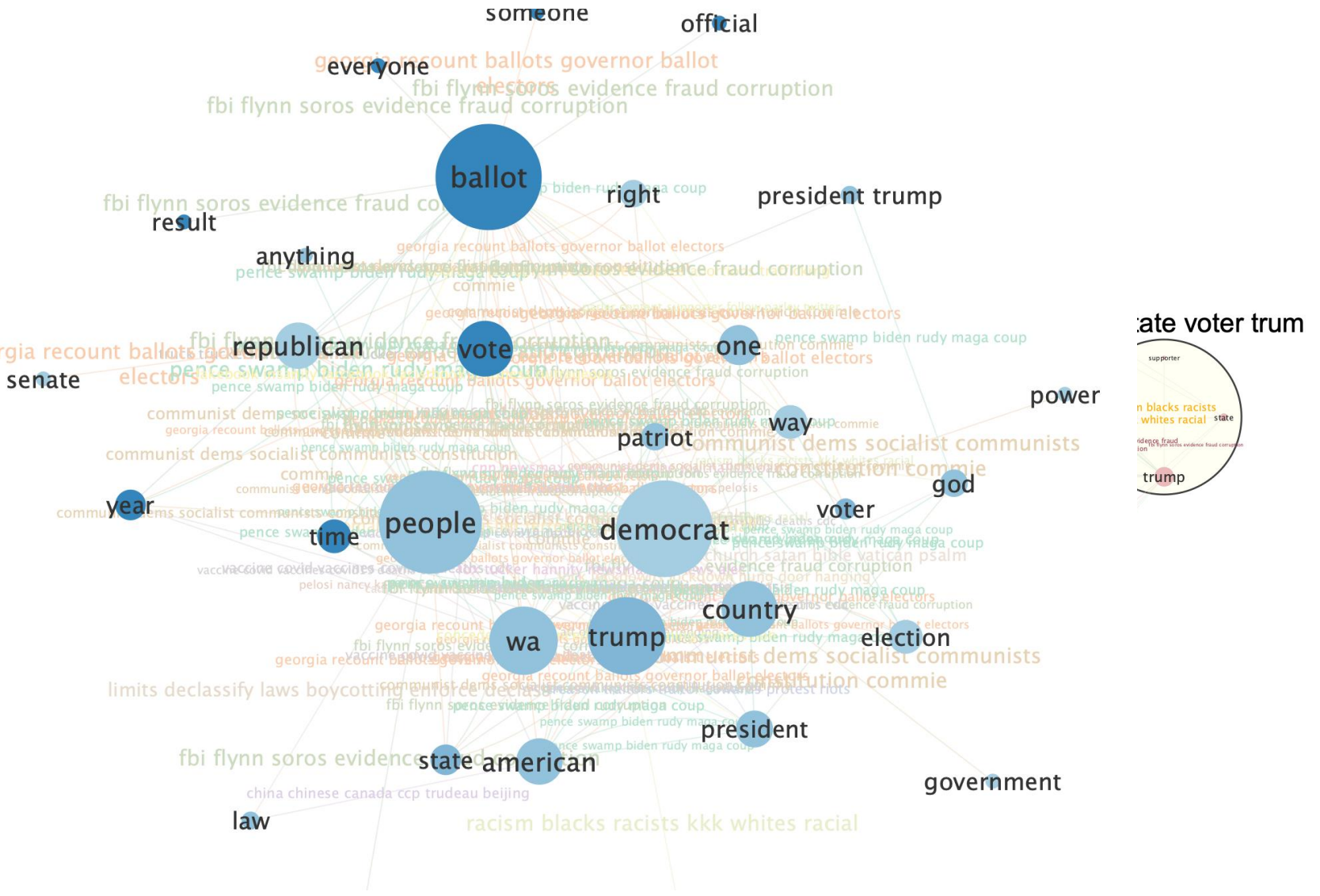
# The early days – Bin 01



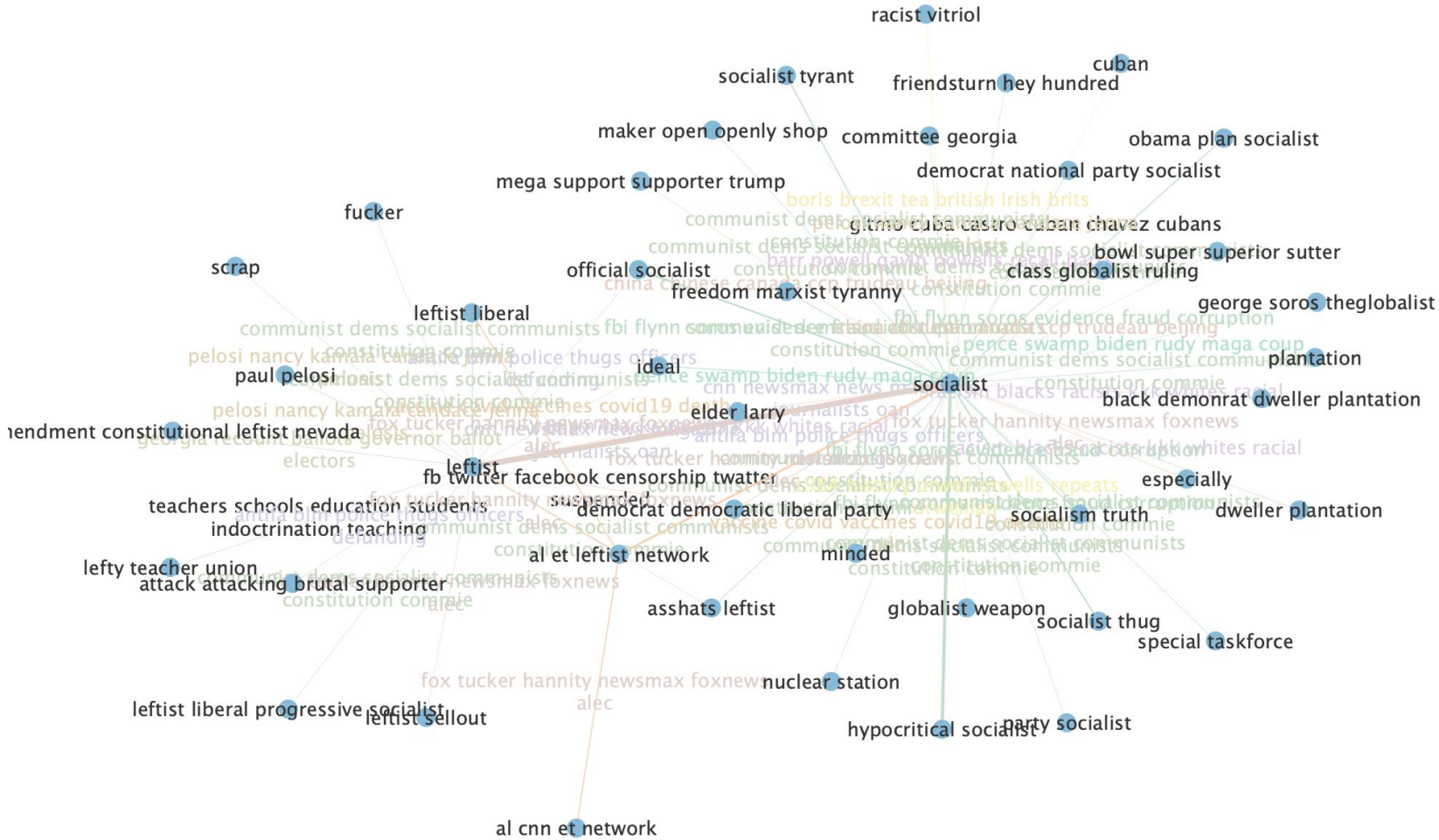



# Bin 2 (11-4 to 11-13:
# God, Fraud, Dems, Communists

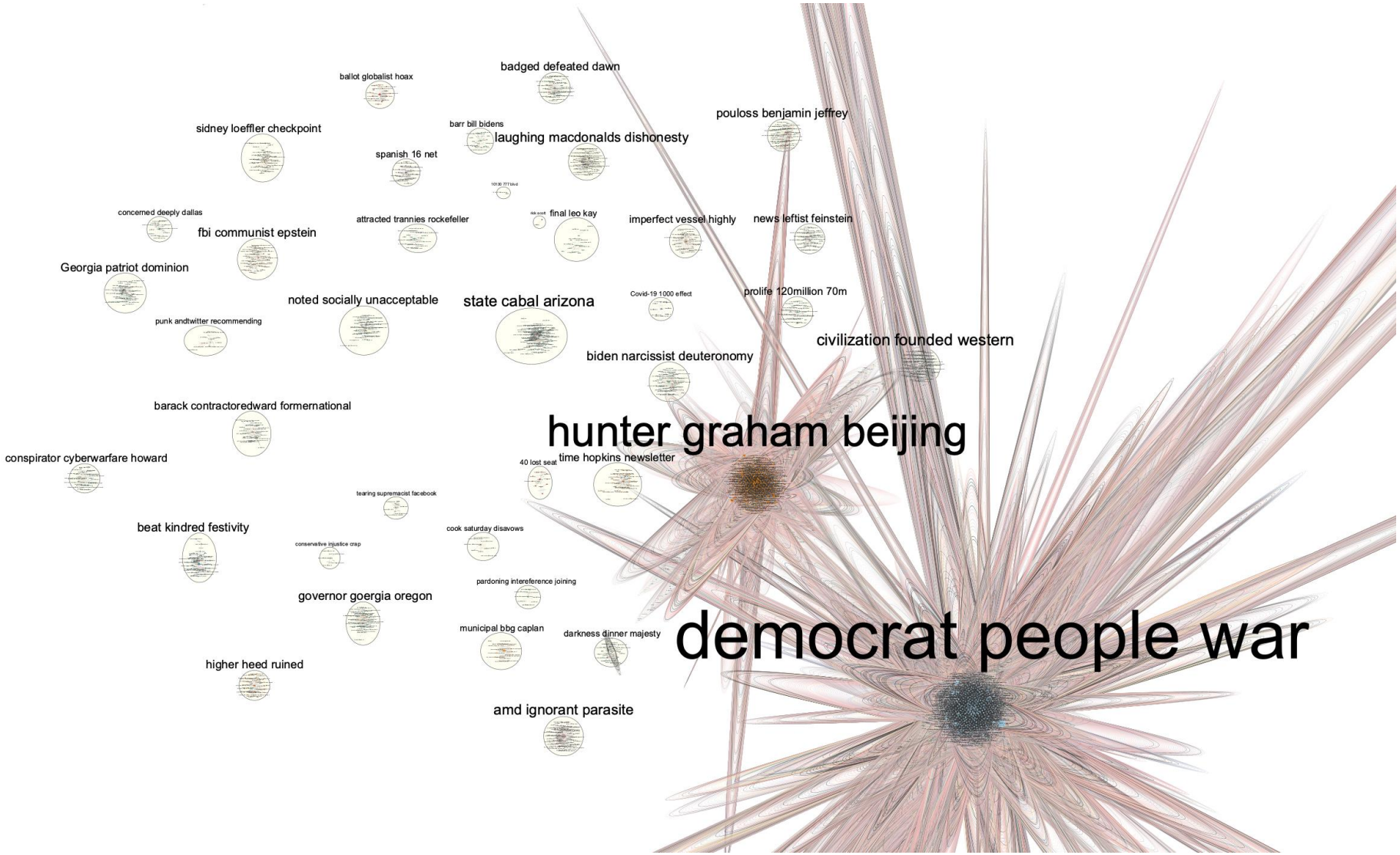


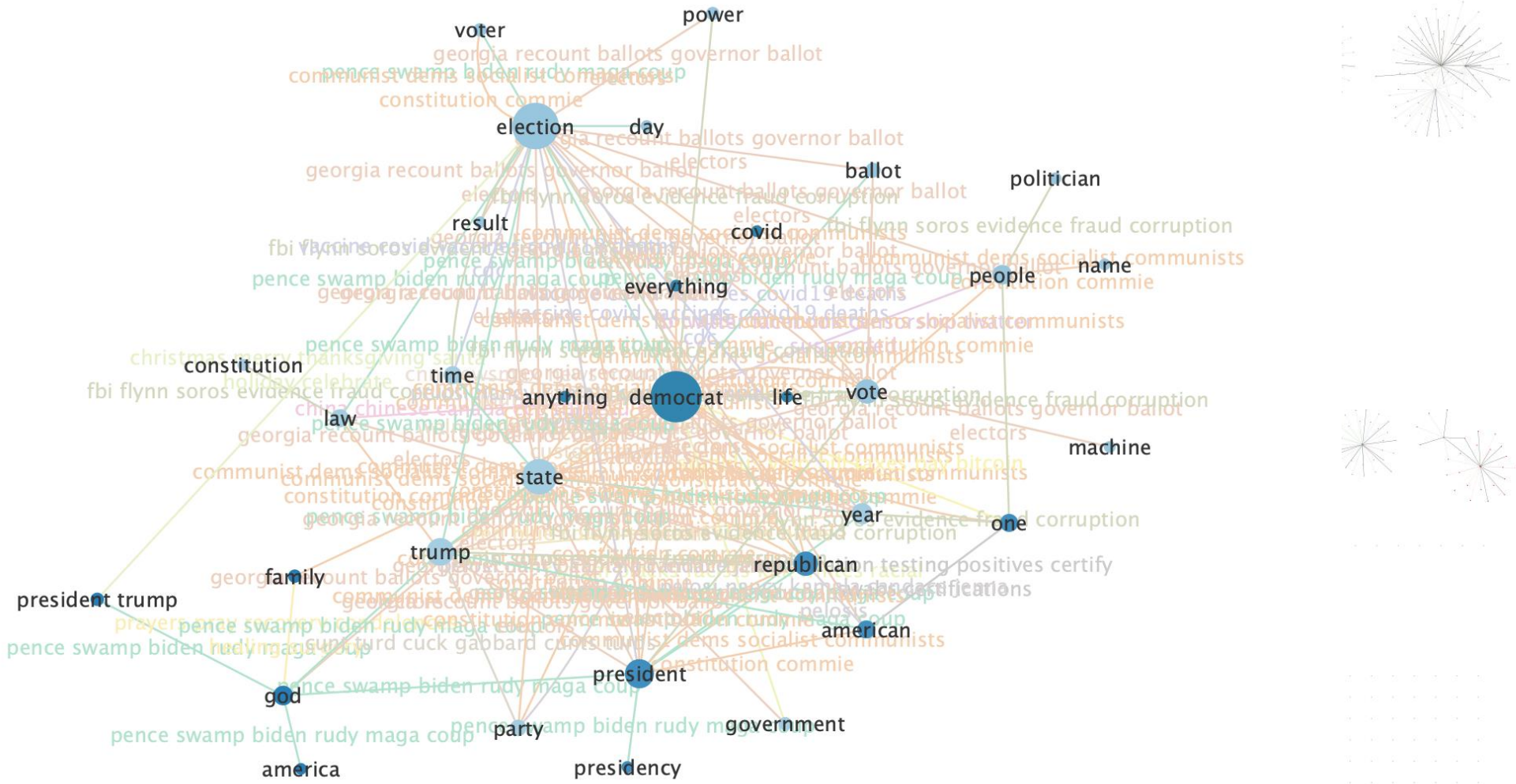
# Bin 3 (Million Maga March): Democrats as communist threat



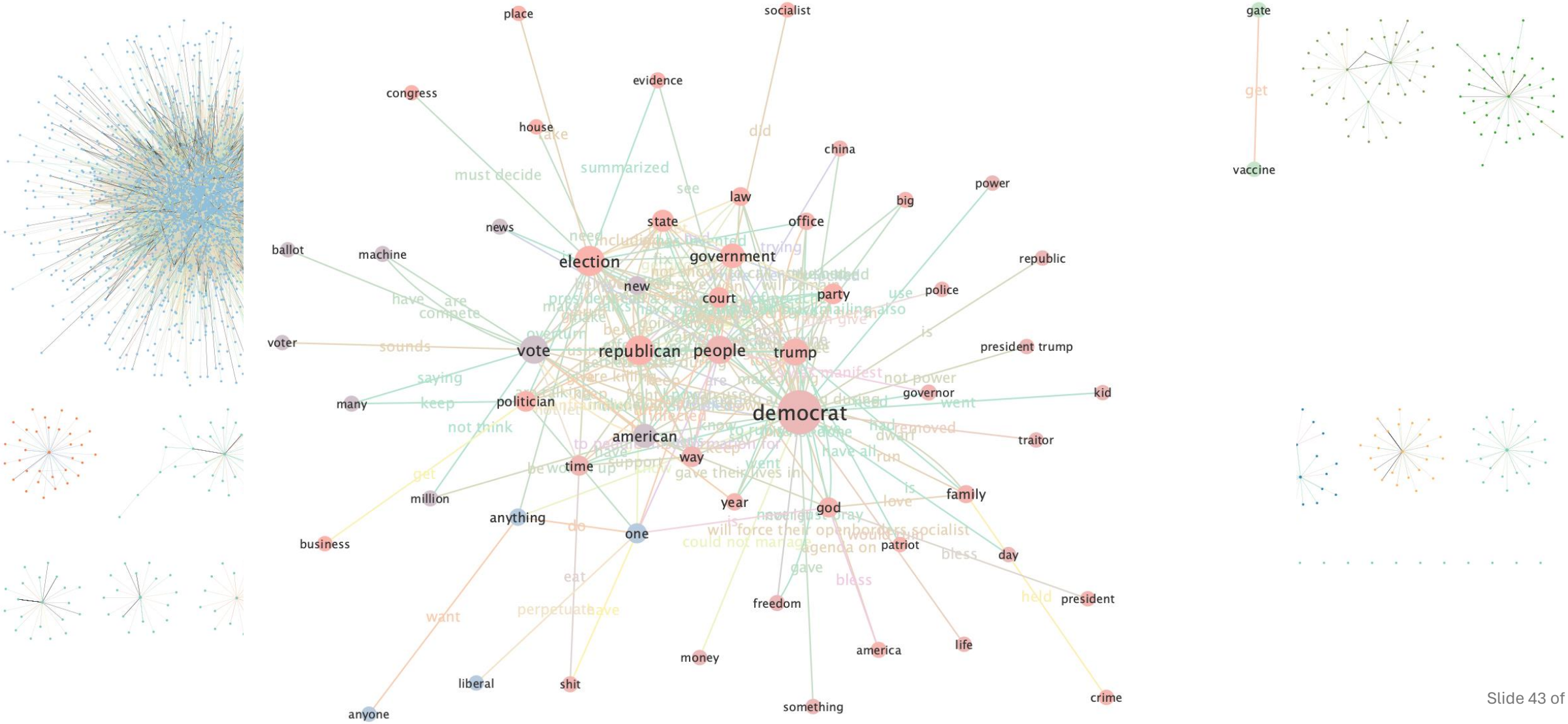
# Bin 4: Plans for rally; Flynn pardon



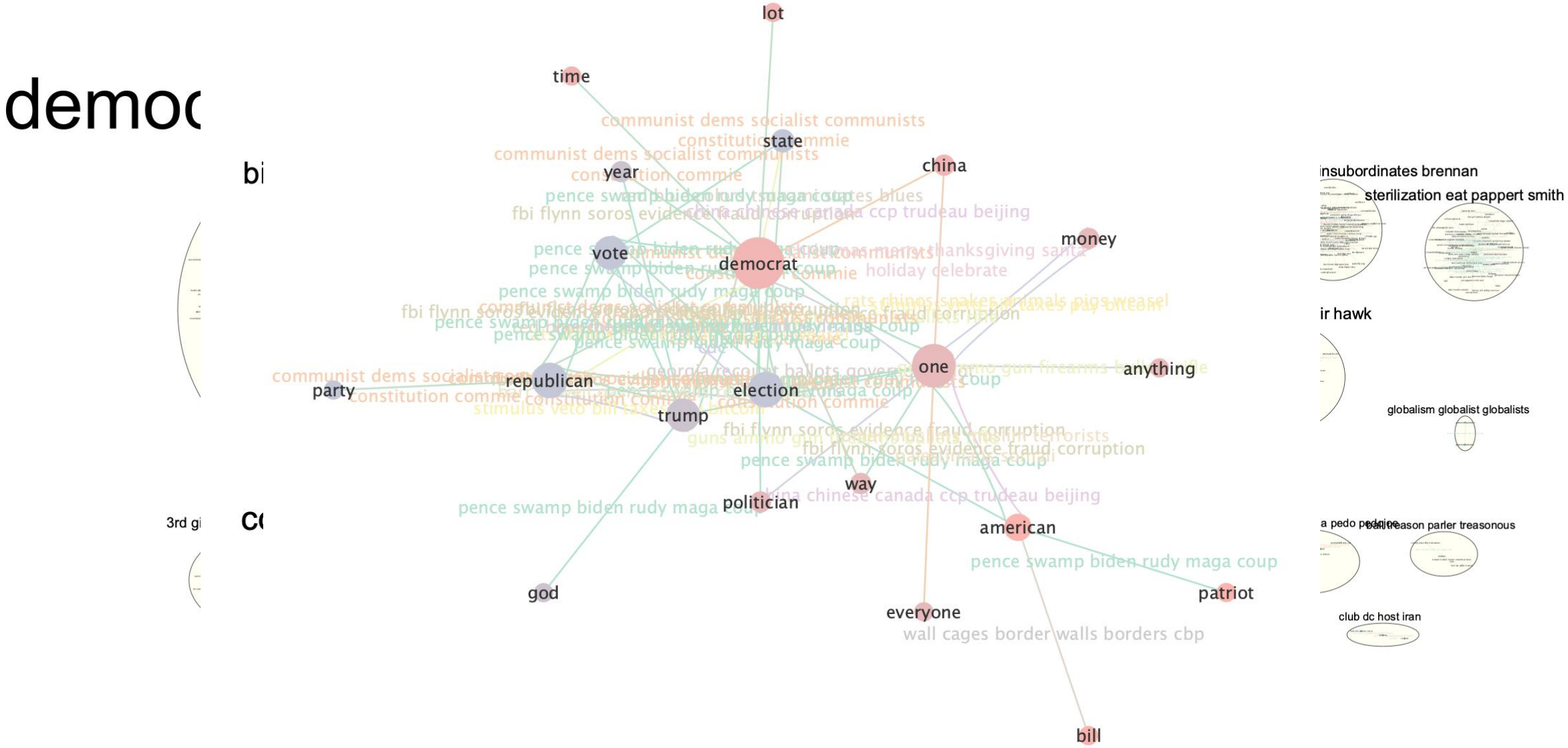
# Bin 5: Barr—no election fraud



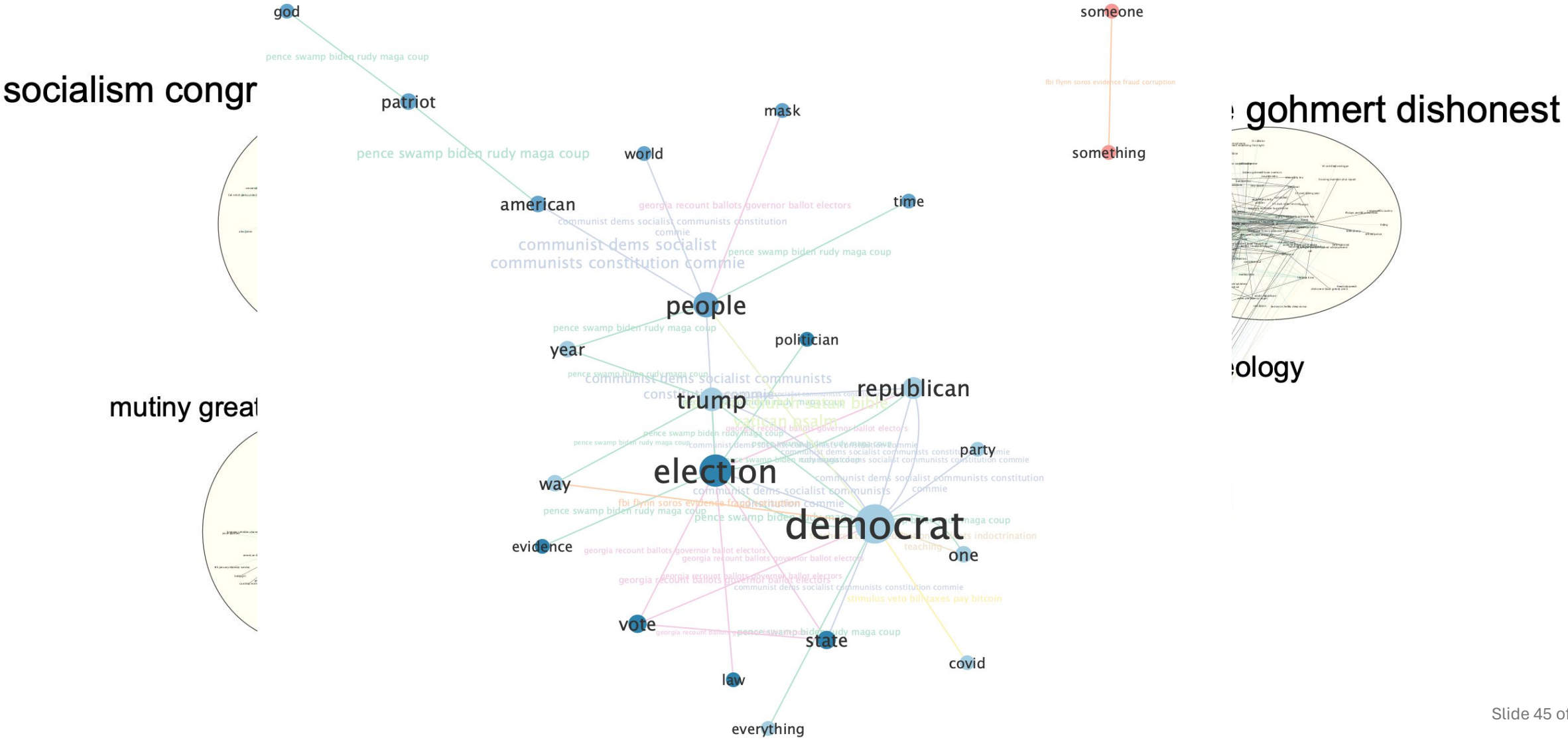
# Bin 6: Proud Boys March



# Bin 7: Announcing January 6 rally

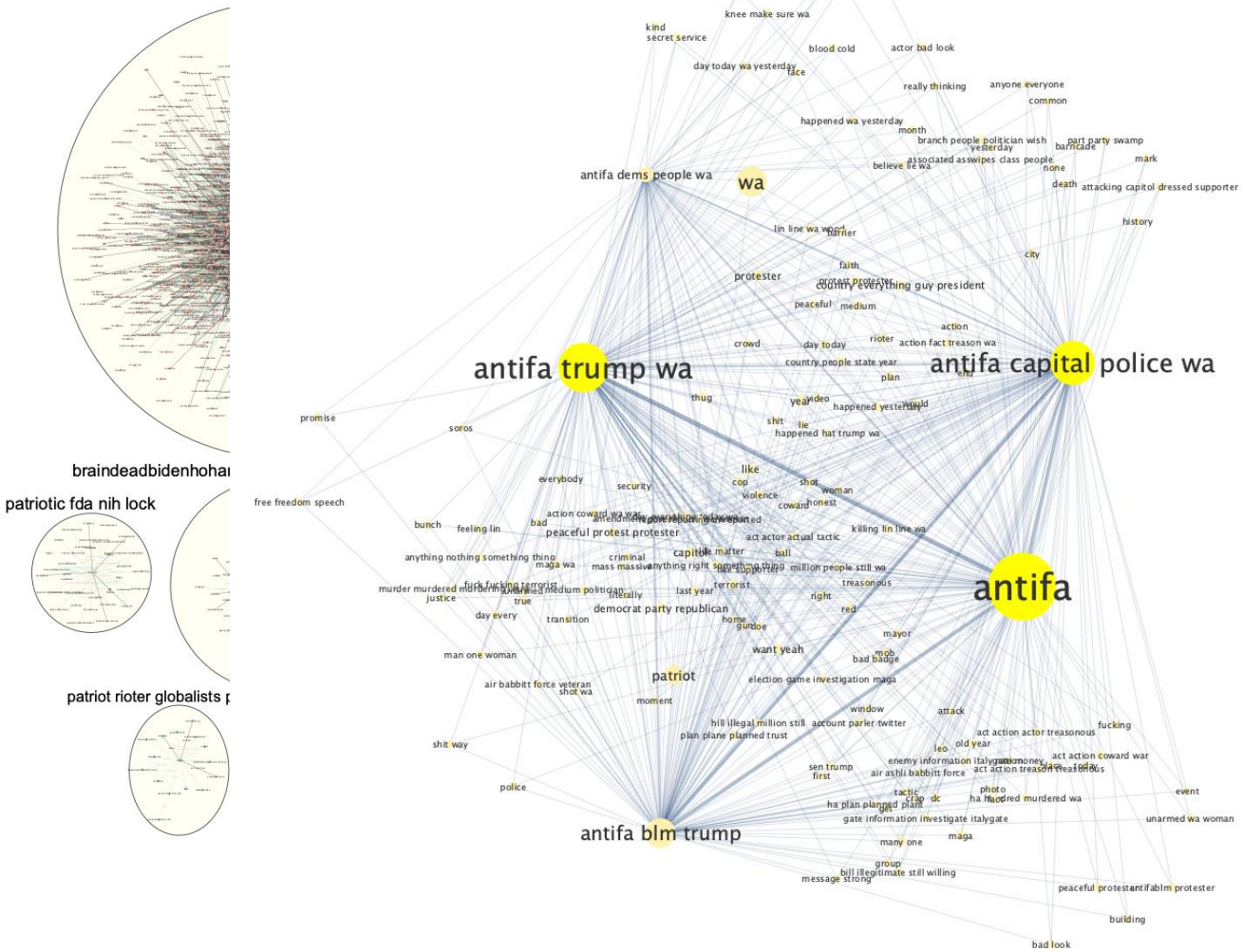


# Bin 8: Clark's letter to Georgia

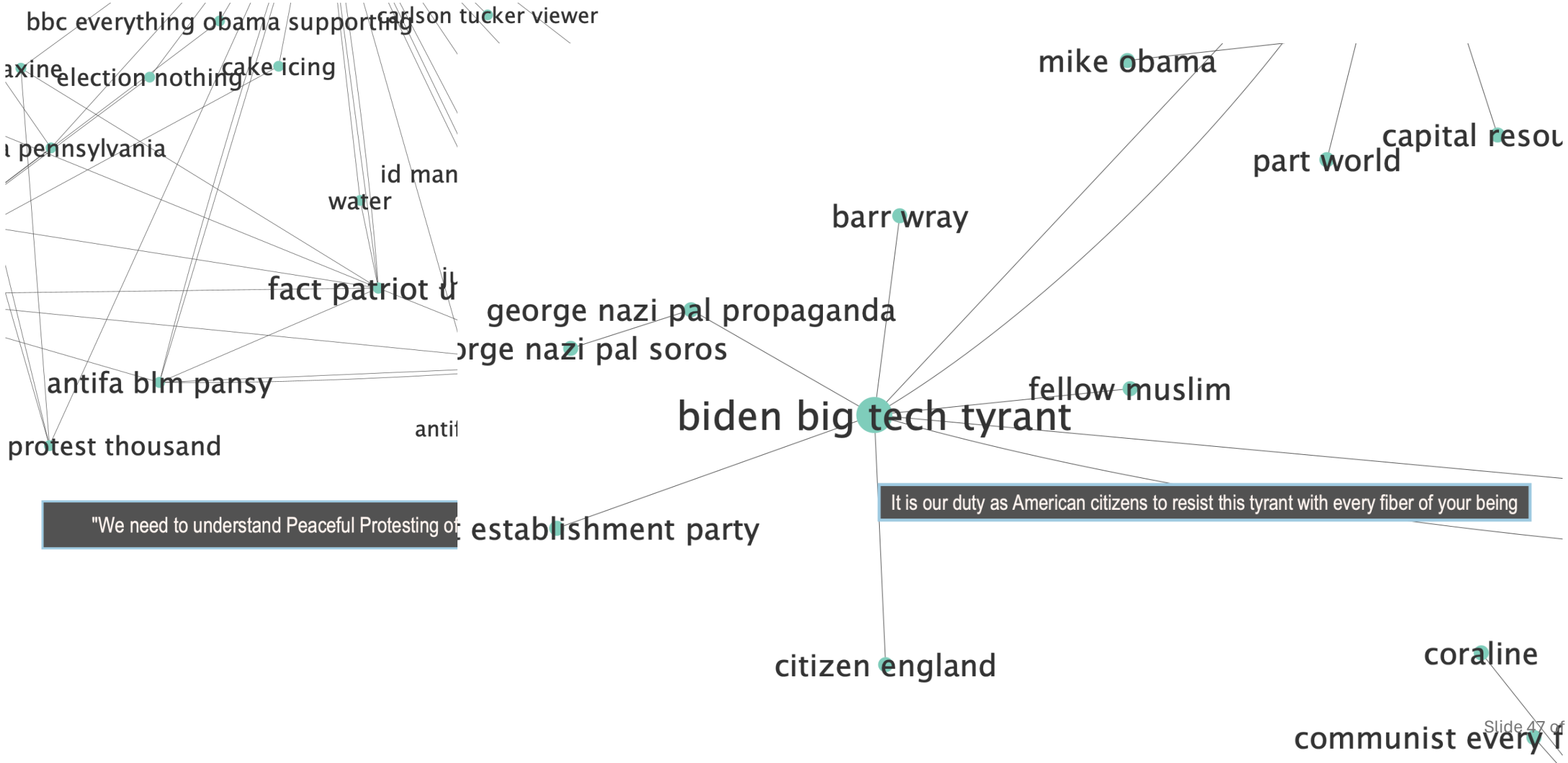


# Bin 9: Insurrection and Aftermath

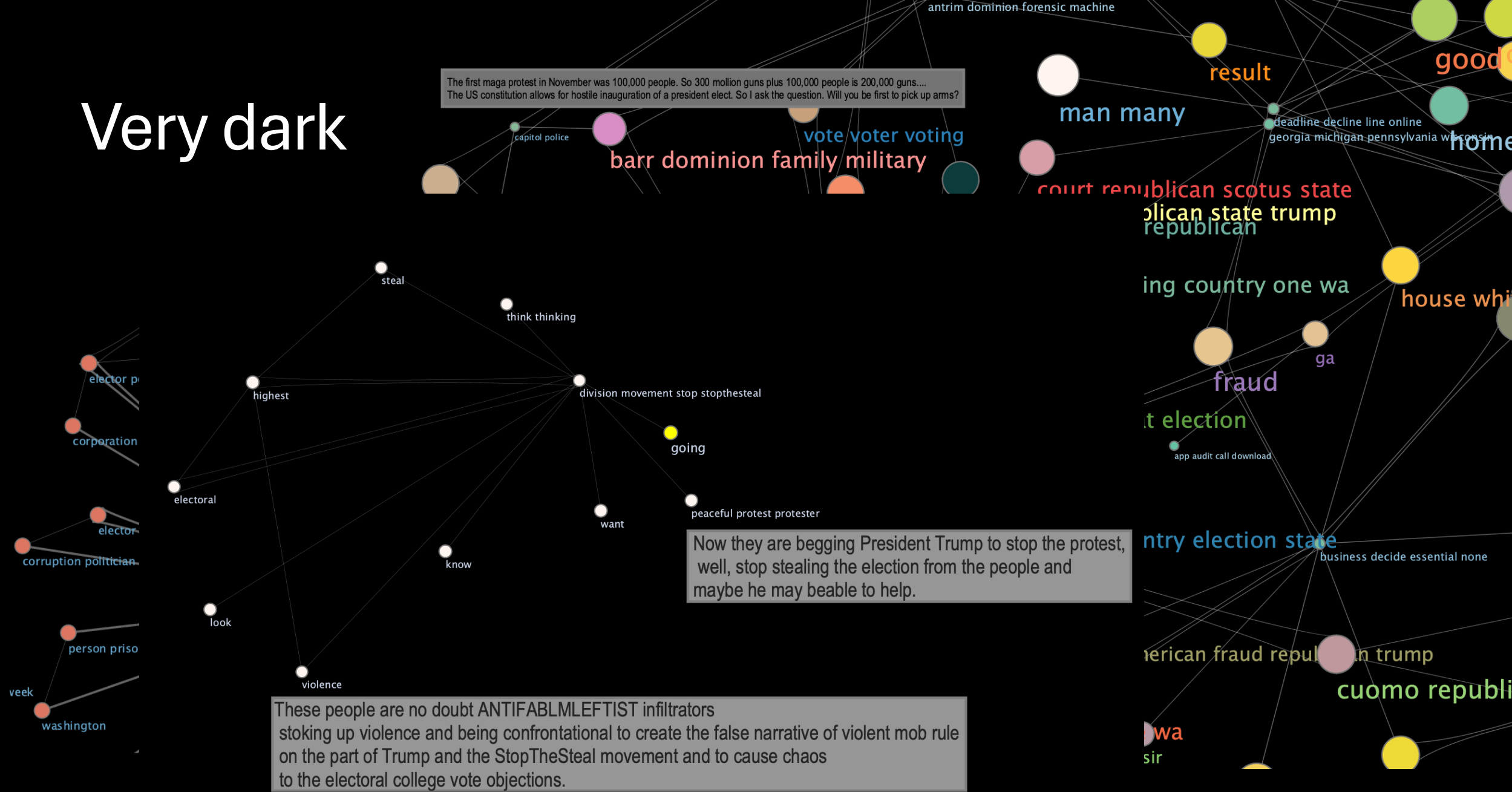
## wa politician



# Some alarming findings



# Very dark


antrim dominion forensic machine
The first maga protest in November was 100,000 people. So 300 mollion guns plus 100,000 people is 200,000 guns....
The US constitution allows for hostile inauguration of a president elect. So I ask the question. Will you be first to pick up arms?
capitol police
vote voter voting
barr dominion family military
result
man many
deadline decline line online
georgia michigan pennsylvania wisconsin
court republican scotus state
republican
ing country one wa
house whi
ga
fraud
t election
app audit call download
steal
think thinking
highest
division movement stop stopthesteal
going
electoral
want
peaceful protest protester
know
look
violence
elector p
corporation
elector
corruption politician
person priso
veek
washington
Now they are begging President Trump to stop the protest, well, stop stealing the election from the people and maybe he may beable to help.
These people are no doubt ANTIFABLMLEFTIST infiltrators stoking up violence and being confrontational to create the false narrative of violent mob rule on the part of Trump and the StopTheSteal movement and to cause chaos to the electoral college vote objections.
ntry election state
business decide essential none
erican fraud repul n trump
cuomo republi
wa
sir

# What did we learn?

- Conversations on Parler were ideologically consistent throughout
  - Very little room for dissent
  - Echo platform
- New events were fit into the existing belief framework, and the existing belief framework drove real world actions (Million MAGA march, Georgia/Michigan, January 6)
  - There was an escalation to organizing for violent intervention from the start
- Democrats were seen as an existential threat from the start
  - Bringing in fears of technology, communism, socialism, and race
  - Trump and the patriots were aligned with God
  - The actions were seen as patriotic, supported by Trump/God, and violence was justified / necessary

# Future refinements

# Limitations

- The data is extremely noisy and our resources meant that we needed to sample the enormous data
- We did not include emojis, videos or images, all of which were part of the eco-system and play a considerable role in not only generating stories but supporting beliefs and providing interpretations
- The graph generation, particularly the edges, continue to present a considerable difficulty for this approach
  - We mitigated the worst problems by proposing that edges carried with them topics, and used a slightly relaxed version of BERTopic to provide a first pass over the groupings of subnodes in this topic space

We need help from this guy!

# Future directions

- Implement our stance detection (SENT2IMP) and insider/outsider (NP2IO) alignment methods
  - alignment propagation methods (INCANT and TAMPA)
- We did not implement ousiometrics or telegnomics, approaches that are particularly apt for this work (Dodds et al. 2021)
- We have yet to apply aspects of computational timelining, including considerations of turbulence and chronopathy (Dodds et al. 2021)
  - ideas of narrative control and consensus are essential to understanding echo platforms such as Parler

# Positive directions?

Alternate strategies? Alternate resolutions?

# Can we use this knowledge for good?

- We can use it for bad… (ChatGPT + sampling over the graph = valid posts) + robots = end of the world?
- A great deal of attention has been focused on improbable connections / misinformation
- Is it possible to focus on
  - Strategies?
  - Results / Outcomes?
- What would this look like?
  - Experiences from talk therapy / narrative therapy

Thank you!
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# Collaborators

Center for
Cultural Analytics

- Narrative Modeling Group (UCLA—Vwani Roychowdhury, PI)
  - Pavan Holur, Shadi Shahsavari, Ehsan Ebrahimzadeh
- Parler research group (UC Berkeley undergraduates—Alexandre Miller, Jasmin Kongsberg, Dominic Stephenson, Chandini Dialani, Megan X. Leng, Olivia Kris)
- Networks and Folklore group (Rutgers—James Abello and Haoyang Zhang)
- Computational folkloristics group (Stanford—Peter M. Broadwell)
- Center for Cultural Analytics (Berkeley—David Bamman)

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