# Attentional Cat-pital: Jorts The Cat's Disruption of Triad Closure Processes in Social Networks
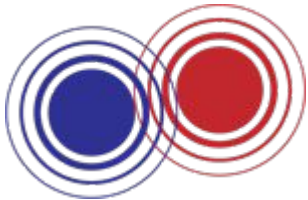
## **Alyssa Smith**, David Lazer
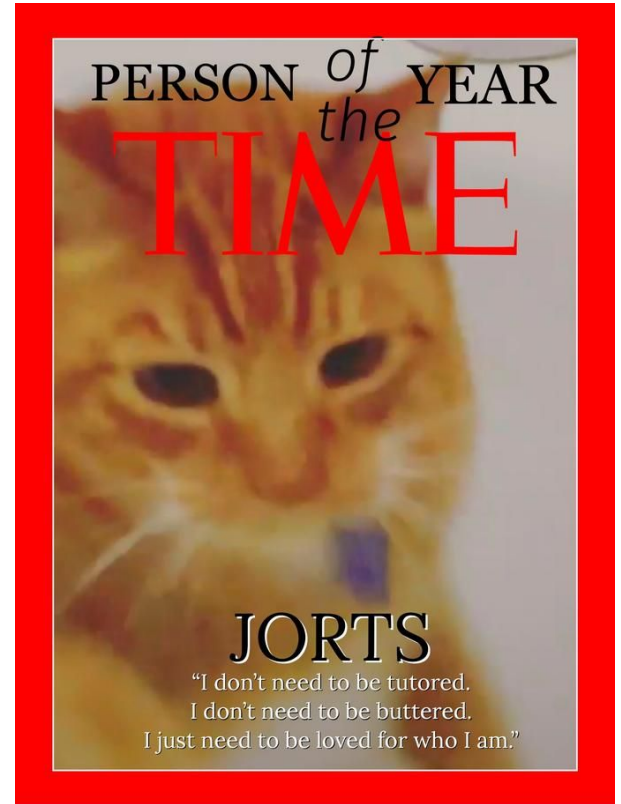
The Lazer Lab

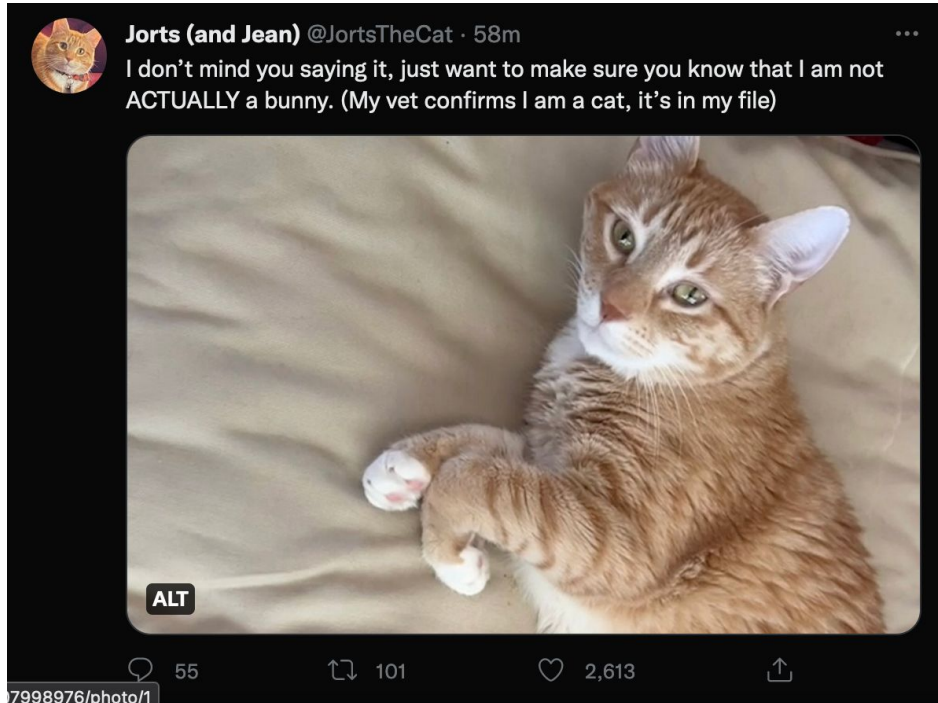network science institute

# Outline

- Intro: Who is Jorts? What is Triad Closure?

- Jorts the Cat: a case study in disruption

- Data collection methods and evidence of disruption

- Meaning of evidence

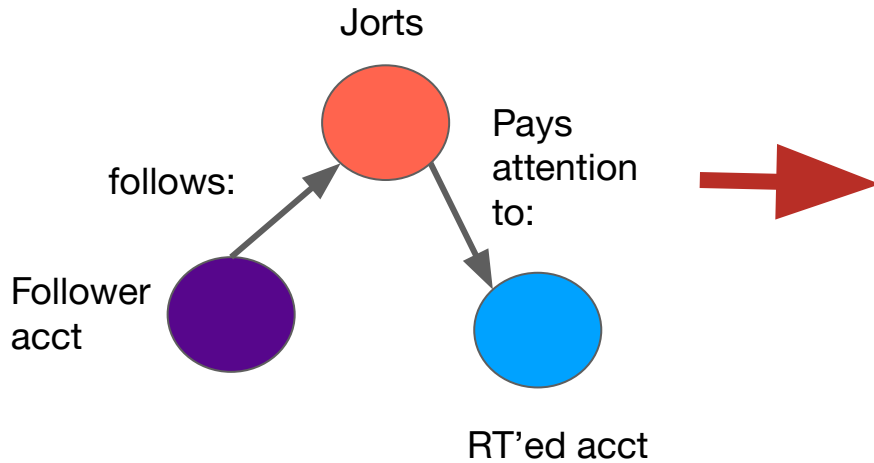- Conclusion and future work

# Background on Jorts

- Dec. 2021: Jorts the cat goes viral (reddit → Twitter)

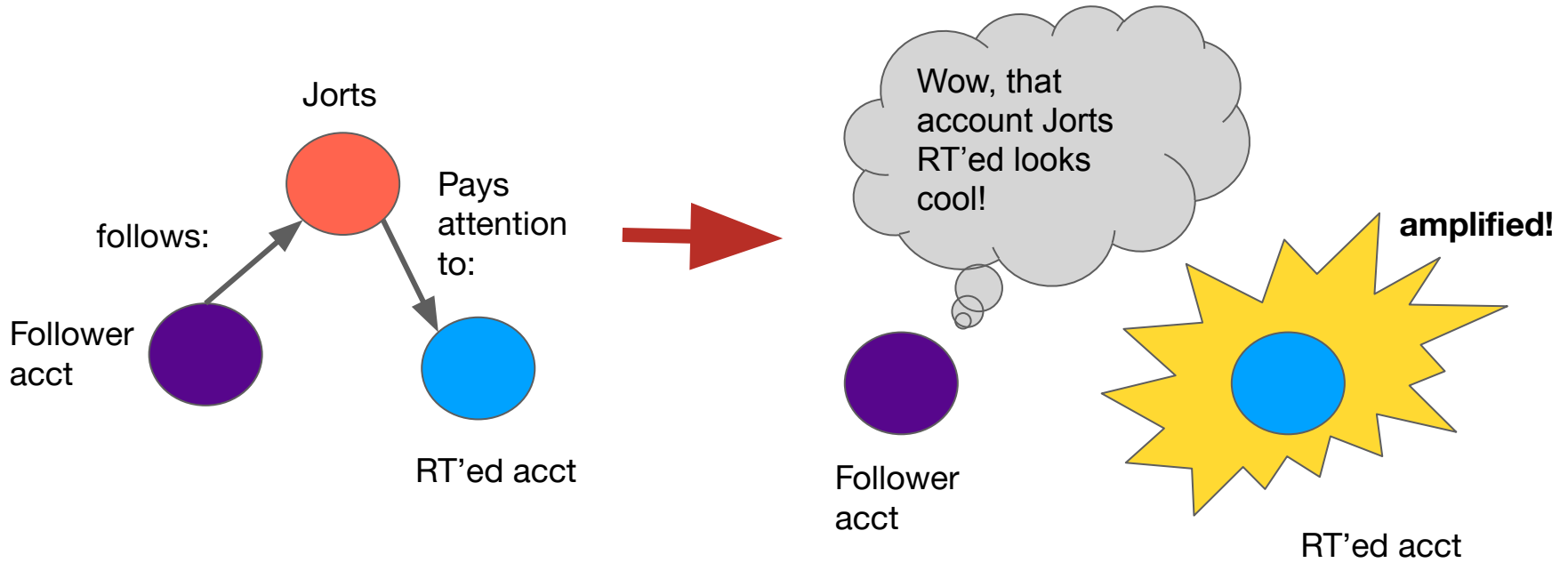- @JortsTheCat on Twitter currently has 185k followers



PERSON *of the* YEAR

TIME

JORTS

"I don't need to be tutored.
I don't need to be buttered.
I just need to be loved for who I am."

# Background on Jorts

# Triad Closure & Homophily in the Literature

# Triad Closure & Homophily in the Literature

Jorts

follows:

Pays attention to:

Follower acct

RT'ed acct

Wow, that account Jorts RT'ed looks cool!

**amplified!**

Follower acct

RT'ed acct

# Triad Closure & Homophily in the Literature

- Transitivity: if A follows B and B follows C, then the graph is transitive if A also follows C (Holland & Leinhardt, 1971) [1]

Jorts

follows:

Pays attention to:

Follower acct

RT'ed acct

Jorts

Follower acct

RT'ed acct

follows:
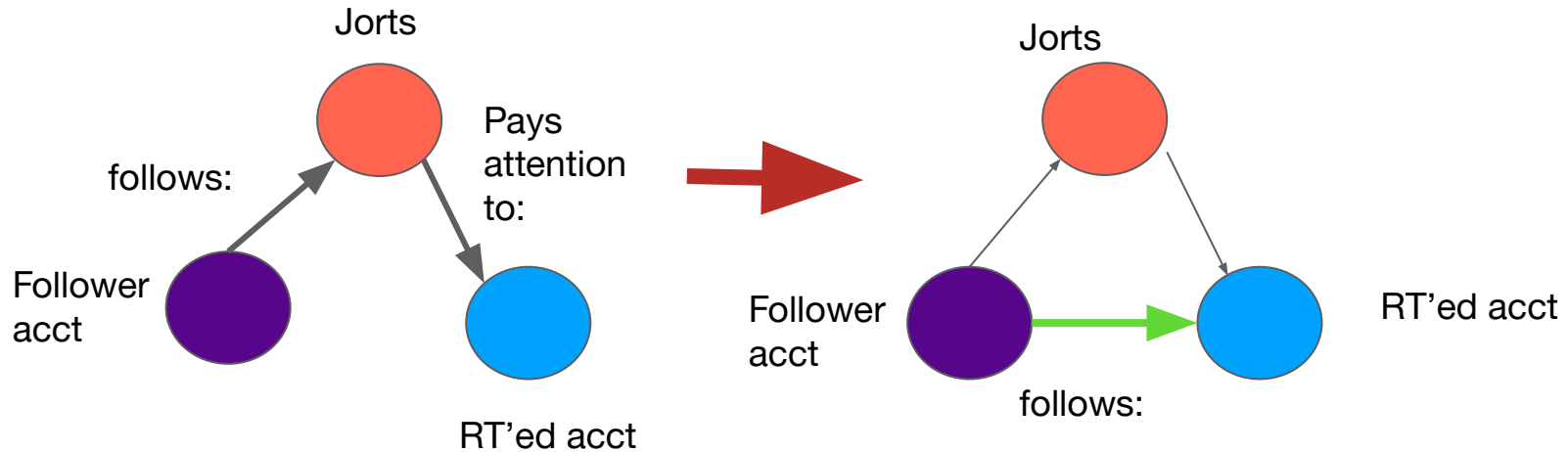
[1]: Holland, P. W., & Leinhardt, S. (1971). *Transitivity in Structural Models of Small Groups. Comparative Group Studies, 2(2), 107–124.* doi:10.1177/10464964710020020

# Triad Closure & Homophily in the Literature

- Triad closure in the literature is an undirected generalization of transitivity.
- Open triads + social foci → opportunities for homophily (Feld, 1981), (Kossinets & Watts, 2009) ([1] [2]
- **What endogenous & exogenous processes shape network formation?**
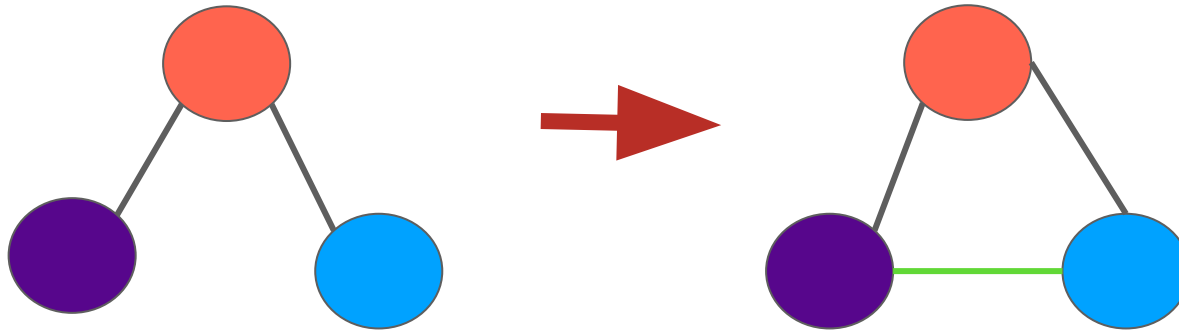
[1]: Feld, S. L. (1981). The Focused Organization of Social Ties. *American Journal of Sociology*, *86*(5), 1015–1035. http://www.jstor.org/stable/2778746
[2]: Kossinets, G., & Watts, D. J. (2009). Origins of Homophily in an Evolving Social Network. *American Journal of Sociology*, *115*(2), 405–450. https://doi.org/10.1086/599247

# What Are We Doing?

- 2 main opportunities for triad closure on Twitter:

  - **Algorithmic Foci** (semi-exogenous)

  - **Amplification by Accounts** (endogenous)

- Both give *opportunities* and individuals make *choices*

- ***What can we learn about Twitter through Jorts' effects on network formation?***

# What Are We Doing?

- Jorts' network roles

    - ***Bridge between communities*** (encouraging inter-community triad closure)

    - ***Social capital broker*** (leveraging latent attention)

    - ***Algorithmic focus*** (synergistic w/ Jorts' own influence)

# Proving Jorts' Network Roles

- **Bridge between communities**

  - Who is Jorts amplifying?

- **Social Capital Broker**

  - RT → more triad closure?

  - Can we predict triad closure?

- **Algorithmic Focus**

  - Amplification influences following choices?

# Dynamic Network Data

- Time-bounded following events → sequences of triad closure
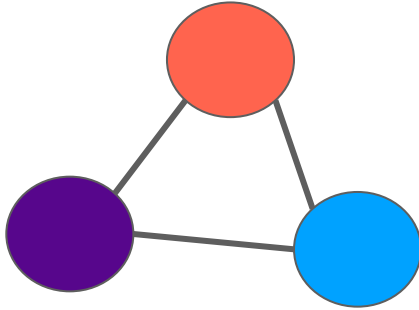


Which edge existed first?

- Dynamic networks are hard to come by, but….

# Dynamic Network Data

- Time-bounded following events → sequences of triad closure

- Dynamic networks are hard to come by, but….

**We made one!!!**

# Time-Bounded Following Dataset

Twitter API V1 + cursor time bounds → time-bounded sets of follow events

Who is following @JortsTheCat?

List of accounts that have followed @JortsTheCat…..and a nanosecond Unix timestamp **(the cursor)**

Time-bounded follower collection code snippet

# Time-Bounded Following Dataset

Twitter API V1 + cursor time bounds → time-bounded sets of follow events



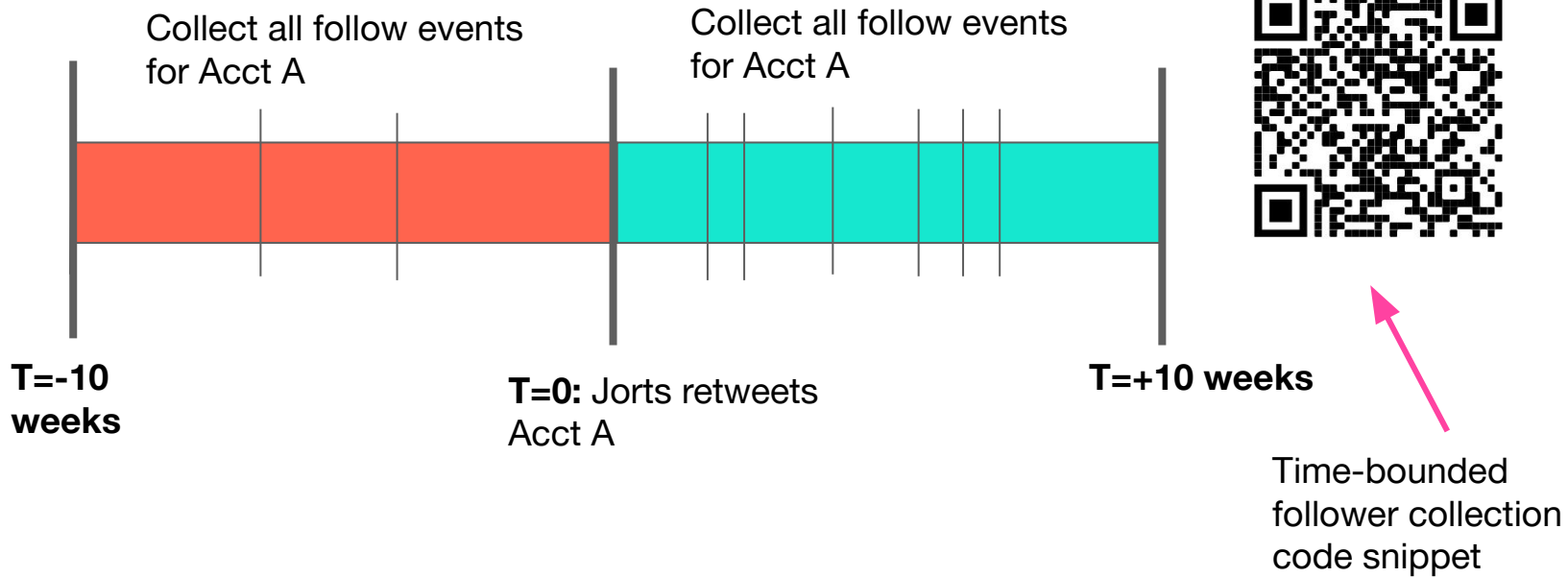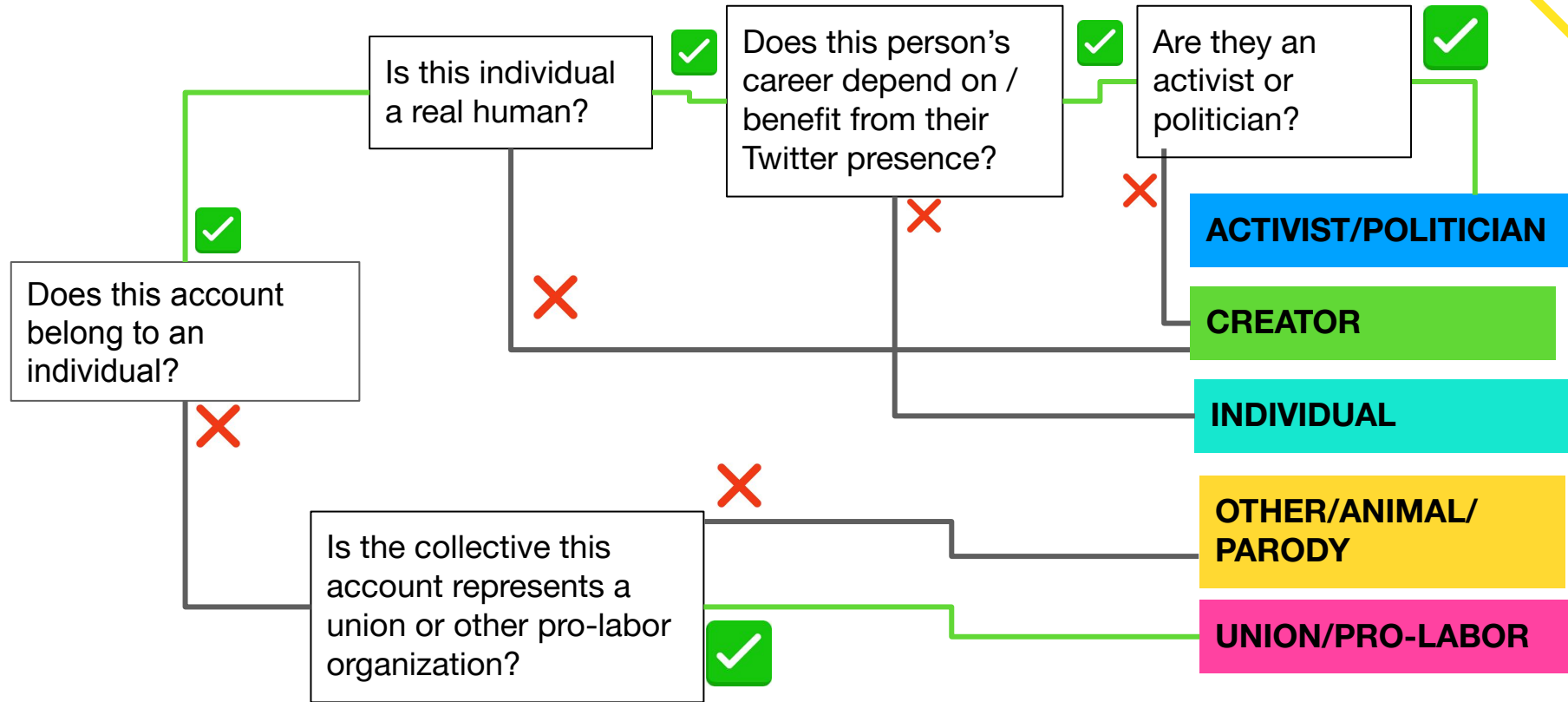Who is following @JortsTheCat? **Cursor = [long unix timestamp]**

List of accounts that have followed @JortsTheCat…..and they all occurred **after** the given timestamp.

Time-bounded follower collection code snippet

# Time-Bounded Following Dataset

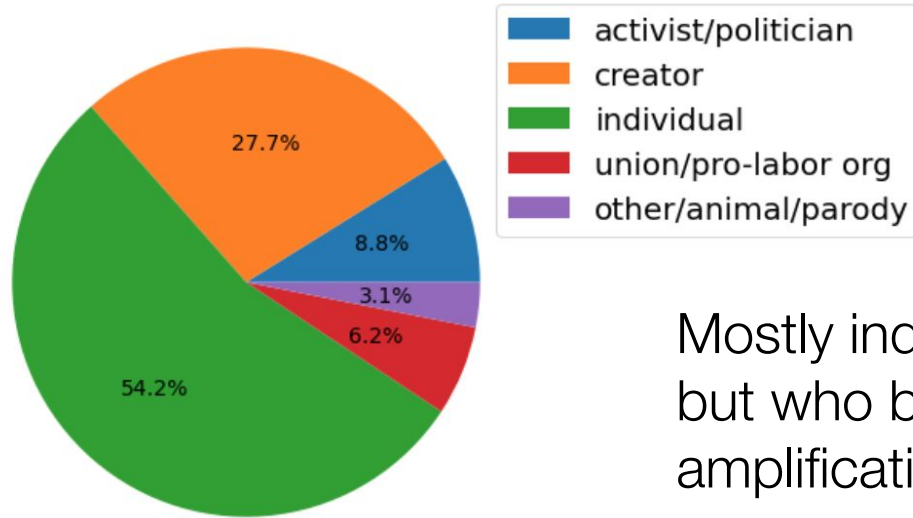Twitter API V1 + cursor time bounds → time-bounded sets of follow events



Collect all follow events for Acct A

Collect all follow events for Acct A

**T=-10 weeks**

**T=0:** Jorts retweets Acct A

**T=+10 weeks**

Time-bounded follower collection code snippet

**Alyssa Smith | @cetacean_needed**

# Flowchart for Categorizing Accounts



Is this individual a real human?

Does this person's career depend on / benefit from their Twitter presence?

Are they an activist or politician?

Does this account belong to an individual?

Is the collective this account represents a union or other pro-labor organization?

**ACTIVIST/POLITICIAN**

**CREATOR**

**INDIVIDUAL**

**OTHER/ANIMAL/ PARODY**

**UNION/PRO-LABOR**

# Who is Jorts Amplifying?

## Distribution of Retweeted Account Types



- activist/politician
- creator
- individual
- union/pro-labor org
- other/animal/parody

27.7%
8.8%
3.1%
6.2%
54.2%

5% of Jorts' tweets are retweets; 6% are quote tweets

Mostly individuals and creators – but who benefits the most from amplification?

Alyssa Smith | @cetacean_needed

# Who Sees More Triad Closure Post-Amplification?



triad closure before & after jorts RTs

average per-account triad closure

- avg pre-jorts 2-week triad closure
- avg post-jorts 2-week triad closure

Unions & pro-labor organizations get a big boost from Jorts' amplification!
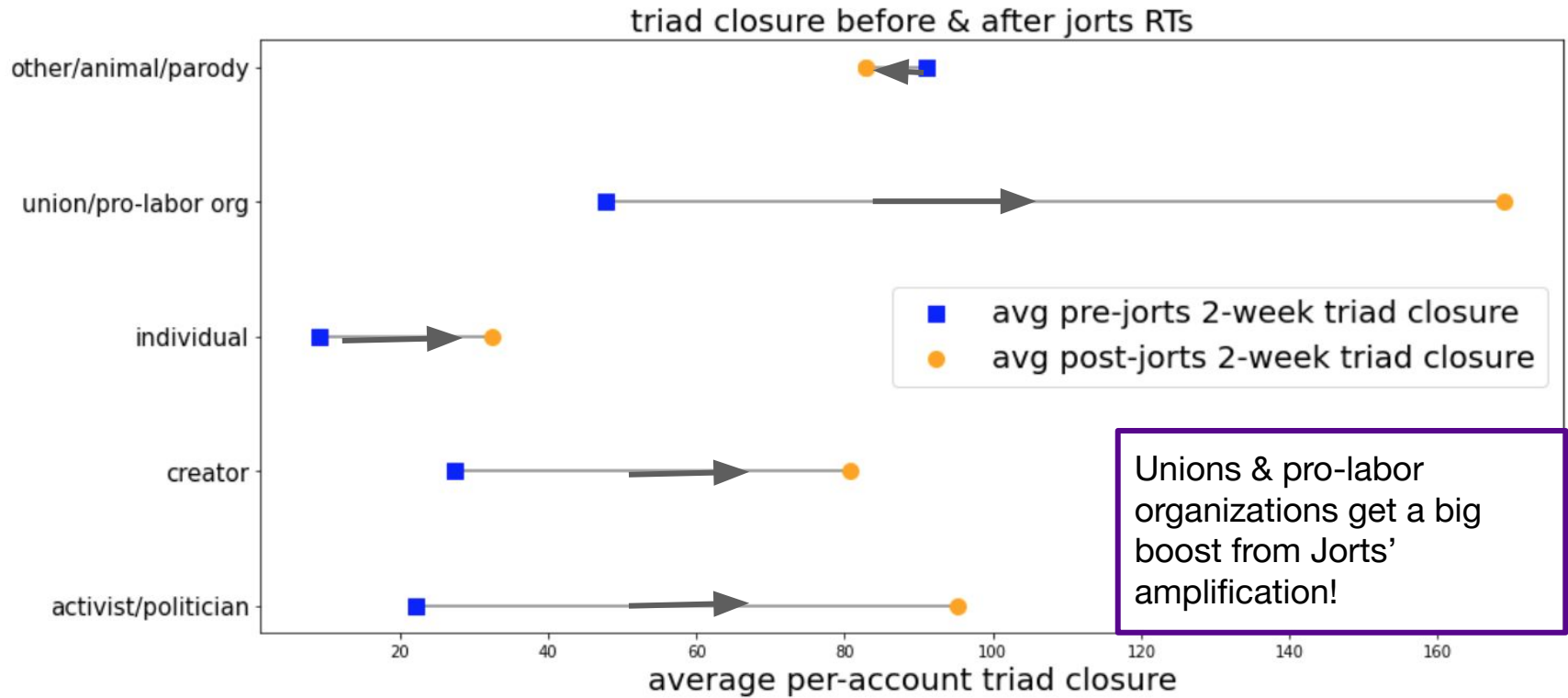
# Who Has Lots of Followers In Common With Jorts?


Fractional Follower Overlap with Jorts by Account Category
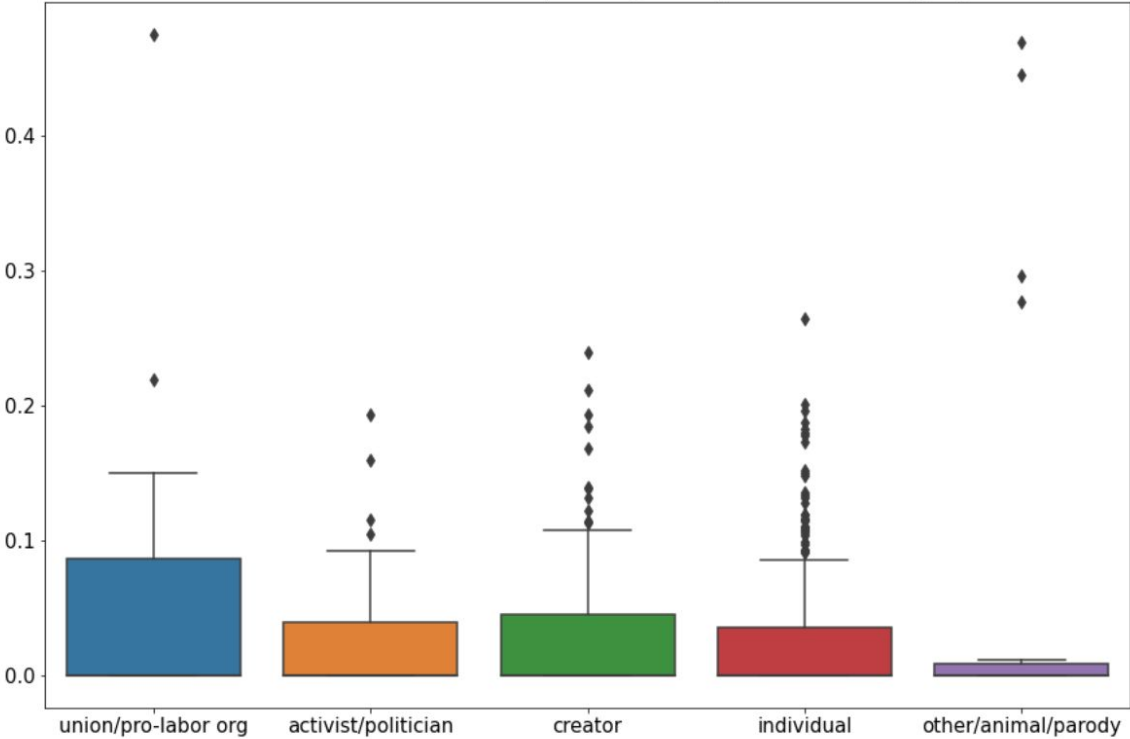
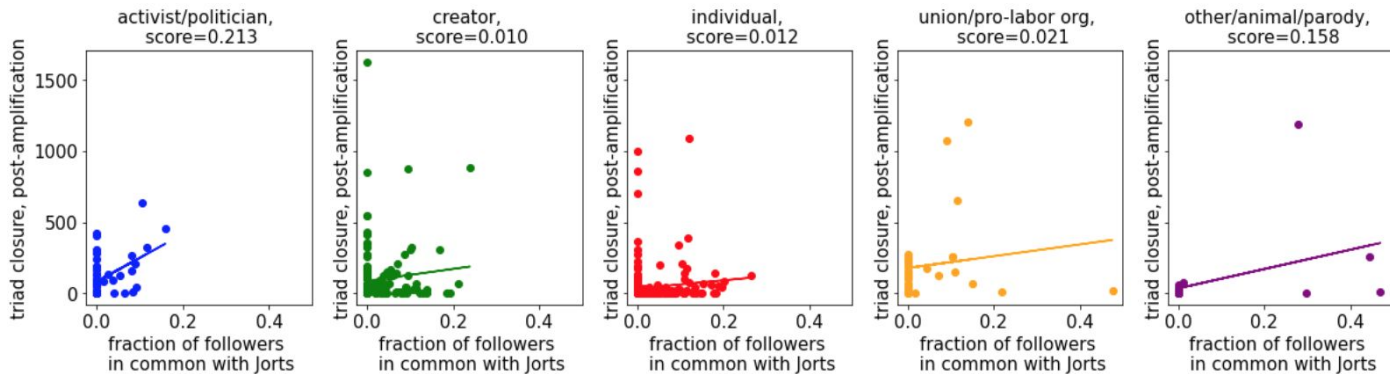High overlap expected for union/pro-labor orgs; overlap partially drives triad closure.

Alyssa Smith | @cetacean_needed

# Follower Overlap and Triad Closure



Regressions Relating Fractional Follower Overlap to Pre- and Post- Amplification Triad Closure

Pre-amplification correlation (better!)
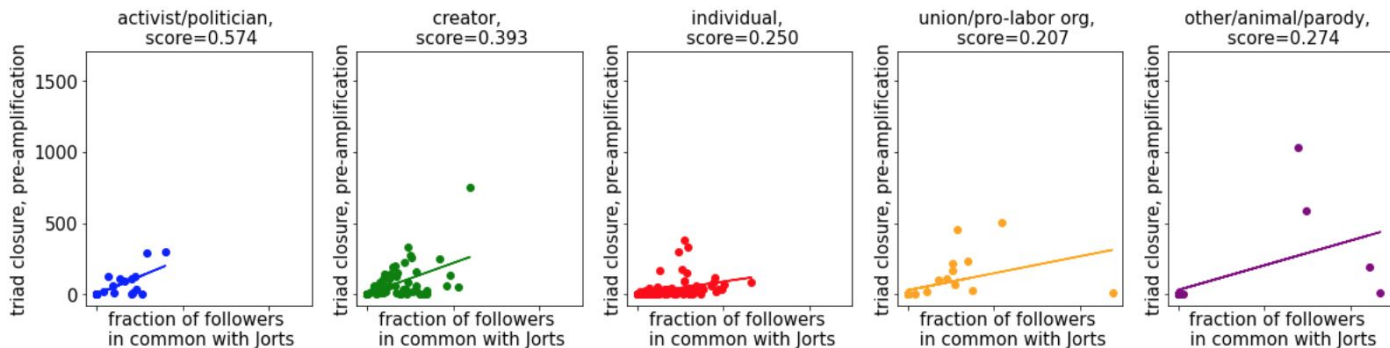
Post-amplification correlation (worse :( )

# What Can Follower Overlap Tell Us?

Pre-amplification correlation (better!)

Post-amplification correlation (worse :()

Something happens when Jorts amplifies an account; this **something** disrupts the mechanisms by which triad closure occurs



Regressions Relating Fractional Follower Overlap to Pre- and Post-Amplification Triad Closure

# How is Amplification Disruptive?



Post-Retweet Following Choices of Users With Homogenous Pre-Retweet Follows
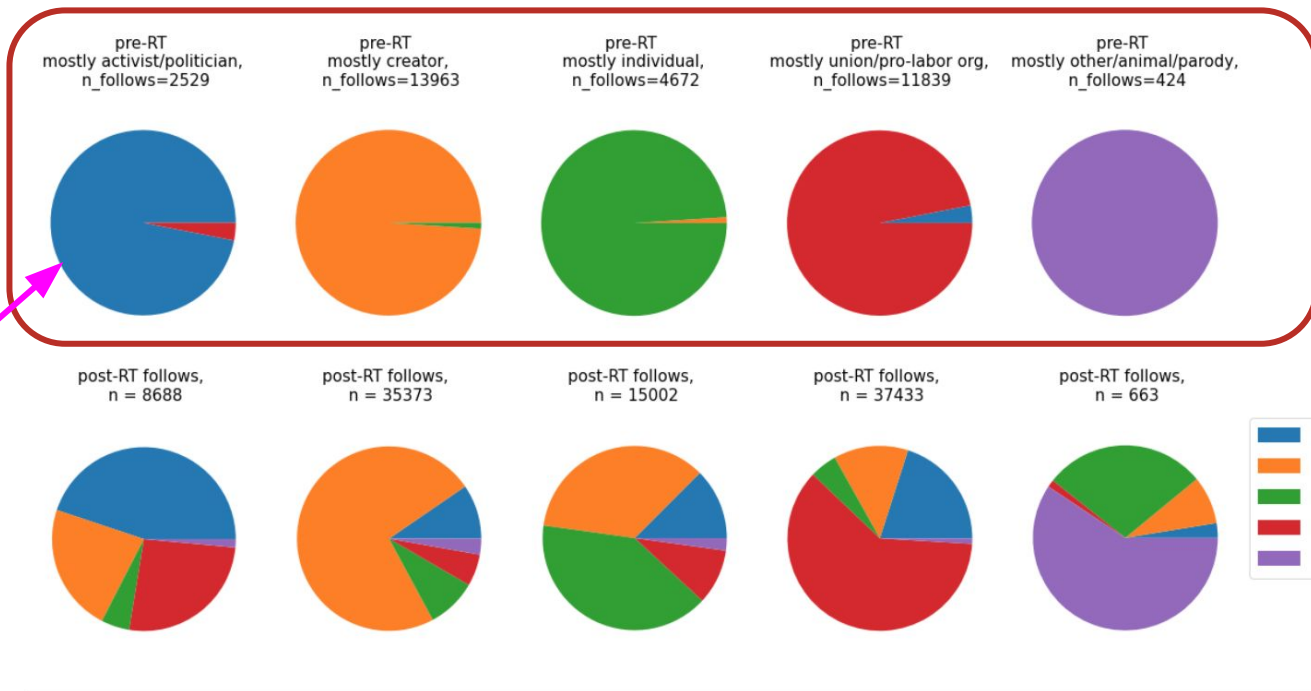
Find people who make homogenous following choices…

# How is Amplification Disruptive?



Post-Retweet Following Choices of Users With Homogenous Pre-Retweet Follows
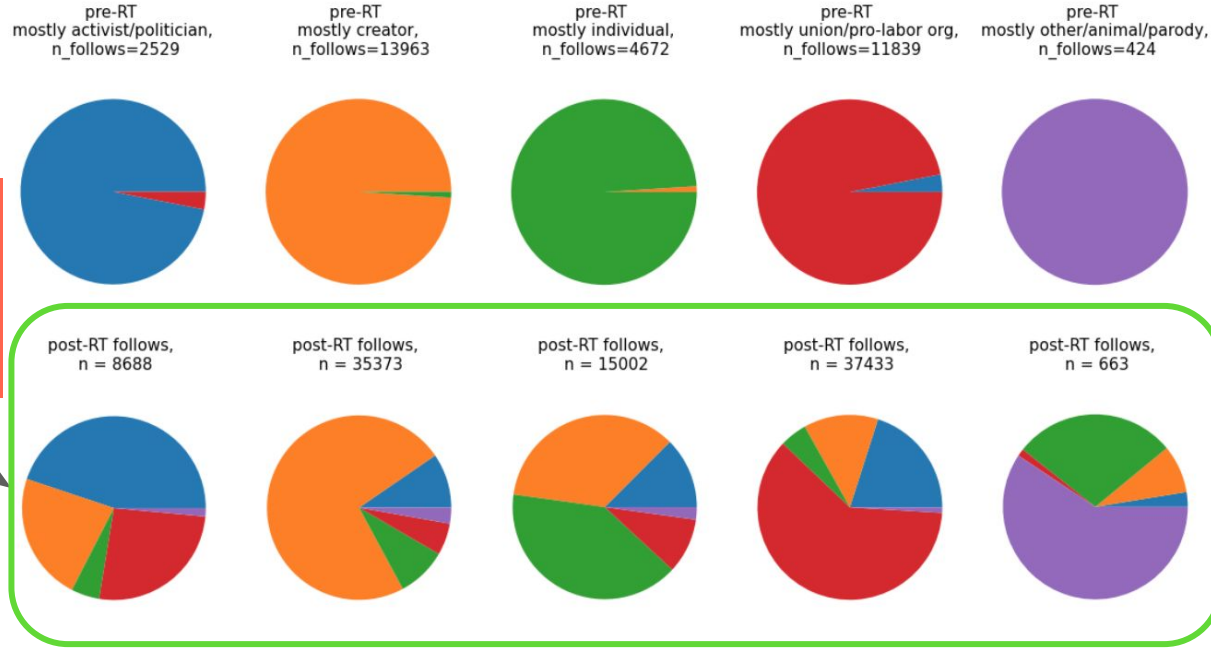
....but what happens post-amplification?

# How is Amplification Disruptive?

Pre-amplification: homogenous triad closure choices

Post-amplification: more diverse triad closure choices
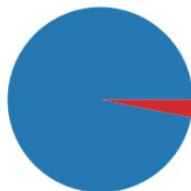


Post-Retweet Following Choices of Users With Homogenous Pre-Retweet Follows
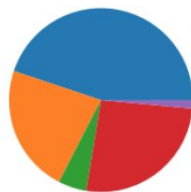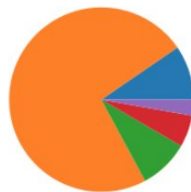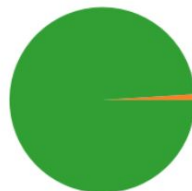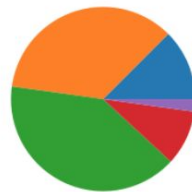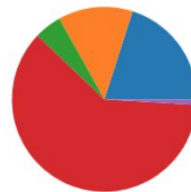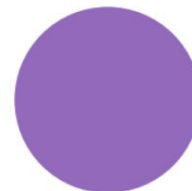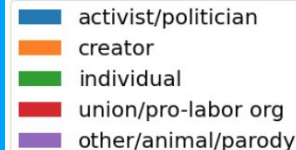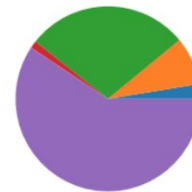
# Results of Jorts' Amplification

- ***Bridge between communities:***
  - Jorts amplifies different types of users
- ***Social Capital Broker:***
  - RTs → more triad closure
  - harder to predict triad closure rate once Jorts amplifies
- ***Social Focus:***
  - Post-amplification following choices in homogenous followers become more diverse

# Conclusion: The Flow of Social Cat-pital

- Latent attention → reallocate social capital

- Disruption of triad closure processes = localized disruption of attention economy

  - Disrupts choice homophily processes

  - Presents novel triad closure opportunities

# Future Work

- Bridging ties don't usually remain bridges [1] → If Jorts is a bridge, what will happen long-term?

- Quote Tweets, stance, and "ratioing" behavior

- Determining causality

- Comparison to other types of accounts

[1] Kossinets, Gueorgi, and Duncan J. Watts. 2006. "Empirical Analysis of an Evolving Social Network." *Science* 311(5757): 88–90.

# Thank you!



@JortsTheCat/TWITTER