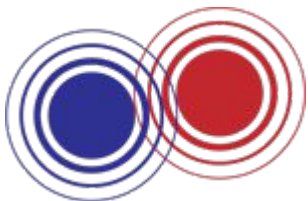


# Attention Brokers: Adapting the *Tertius lungens* to an Amplification Paradigm

Alyssa Smith



Lazer Lab



CoMM Lab



# Outline



- Intro: Main Idea & Case Studies
- Background & Concept
- Methods & Data
- Results
- Takeaways

# Main Idea



The *tertius iungens*\* (“third who joins”) is a third party who facilitates a tie between two previously separate individuals.

\*Obstfeld, *Social Networks, the Tertius iungens Orientation, and Involvement in Innovation*, 2005.

# Main Idea

The *tertius iungens*\* (“third who joins”) is a third party who facilitates a tie between two previously separate individuals.

I introduce the attention broker (*tertius amplificans* - “third who amplifies”) as a special case of the *tertius iungens*.

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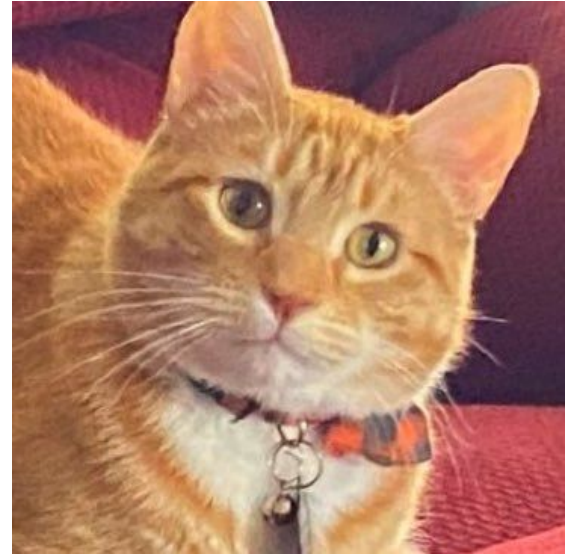
I introduce the attention broker (*tertius amplificans* - “third who amplifies”) as a special case of the *tertius iungens*.

I then show how attention brokers have measurable effects on tie formation through two case studies on Twitter.

\*Obstfeld, *Social Networks, the Tertius iungens Orientation, and Involvement in Innovation*, 2005.

# Introduction: Case Studies

- Jorts The Cat
  - Viral Reddit Am I The Asshole post
  - Now a popular Twitter account (in character as the cat)
  - 222.8k followers
  - **Makes & amplifies pro-labor, pro-union posts**



<https://twitter.com/JortsTheCat>

# Introduction: Case Studies

- J.K. Rowling
  - Wrote the *Harry Potter* series
  - 14 million followers
  - **Has espoused anti-trans (TERF) beliefs and amplified anti-trans rhetoric since 2020**



[https://twitter.com/jk\\_rowling](https://twitter.com/jk_rowling)

# Introduction: Common Ground



Jorts The Cat



J.K. Rowling

Originally...	A funny orange cat	A famous children's author
Amplifies...	Pro-union & pro-labor content	Anti-trans (TERF) content
Followers	222.8K	14 million



# Introduction: Common Ground



Jorts The Cat

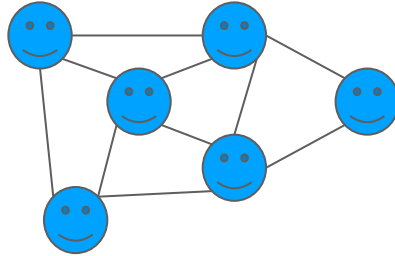


J.K. Rowling

Originally...	A funny orange cat	A famous children's author
Amplifies...	Pro-union & pro-labor content	Anti-trans (TERF) content
Followers	222.8K	14 million
Network Role	<b>Attention Broker??</b>	<b>Attention Broker??</b>

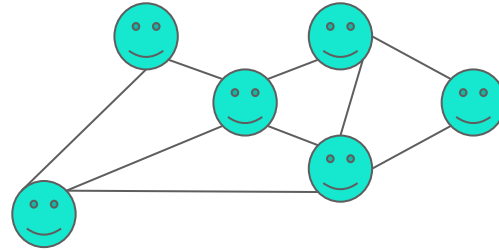
# Background: Structural Holes & Tertius Iungens

Accounting



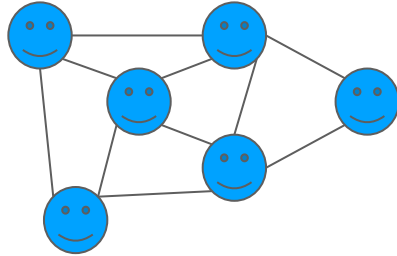
Gossip in  
Accounting...

Product



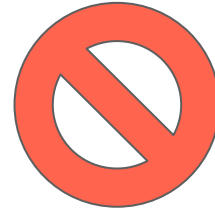
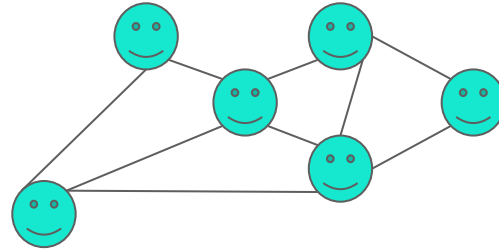
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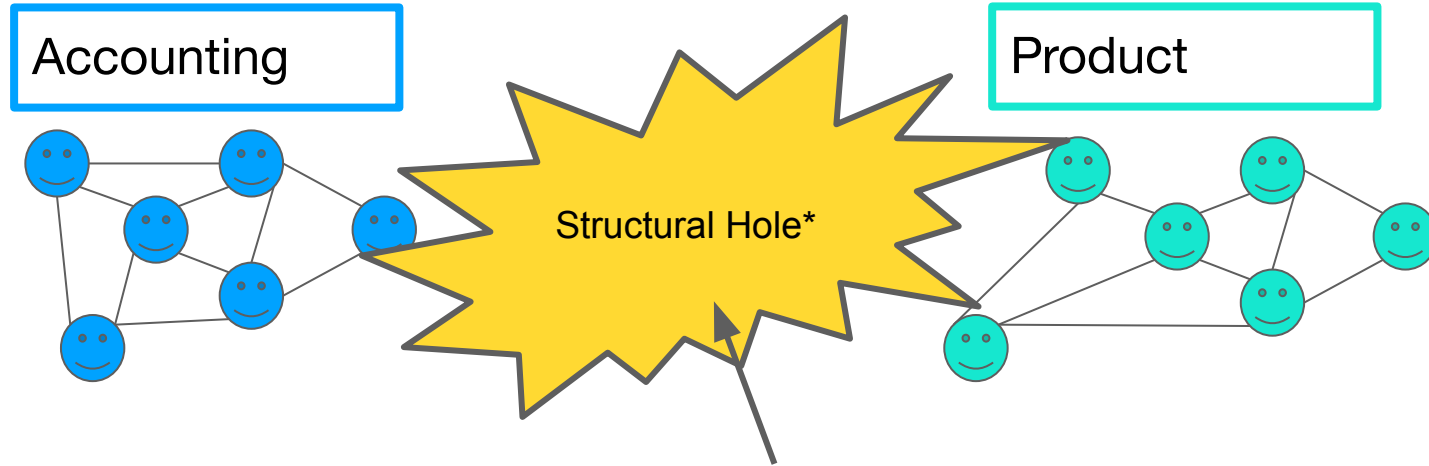
Gossip in  
Accounting...

Product



**...can't get to Product!!**

# Background: Structural Holes & Tertius Iungens

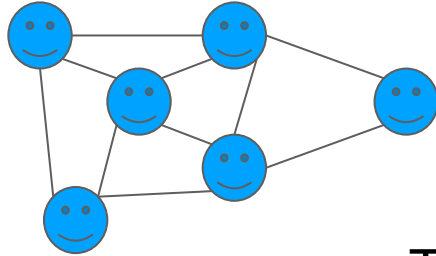


We have a gap in the network between  
Accounting and Product!

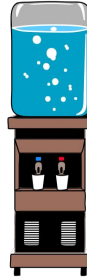
\*Burt, *Social Capital*, 2001

# Background: Structural Holes & Tertius Iungens

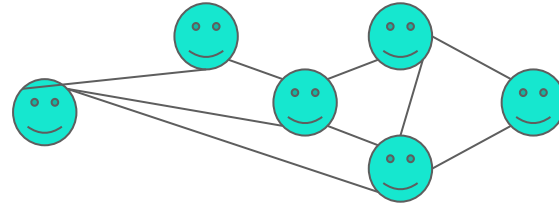
Accounting



Alice



Product



This is Alice. Alice lurks by the water cooler all day, chatting with people.

# Background: Structural Holes & Tertius Iungens



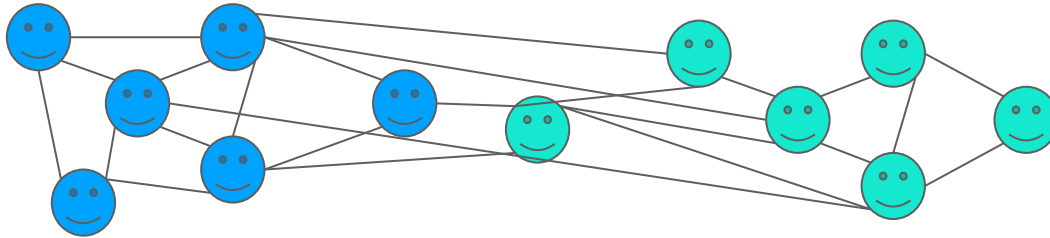
# Background: Structural Holes & Tertius Iungens



# Background: Structural Holes & Tertius Iungens

Accounting/Product  
Joint Kickball Team

Alice

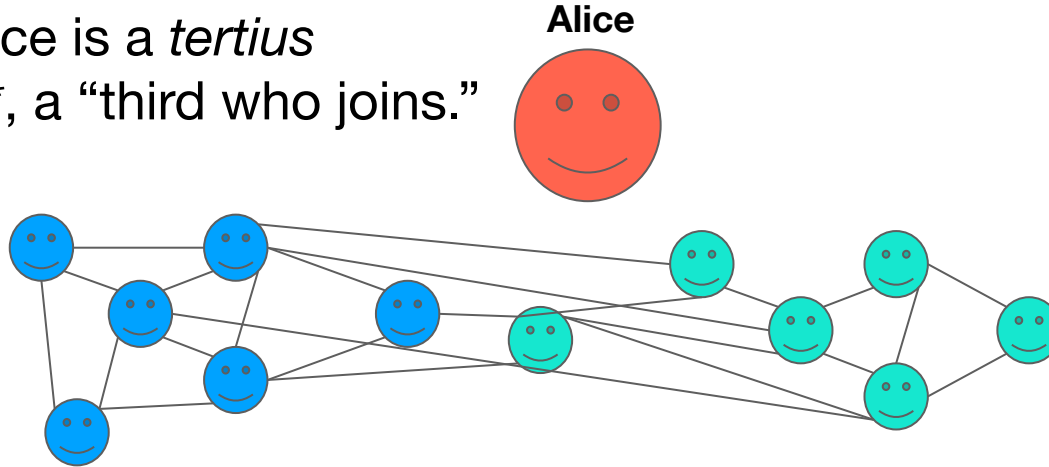


...and helps them form a  
championship-winning  
joint kickball team!



# Background: Structural Holes & Tertius Iungens

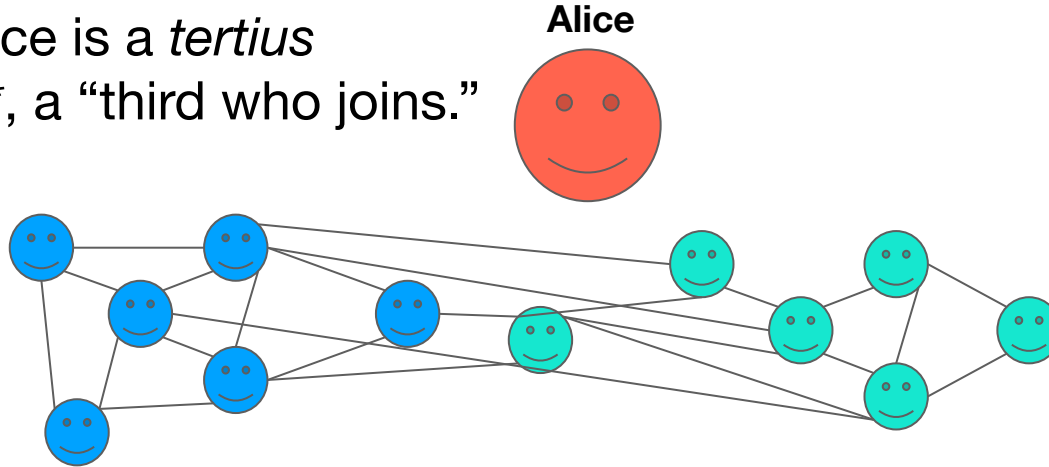
Here, Alice is a *tertius iungens*\*, a “third who joins.”



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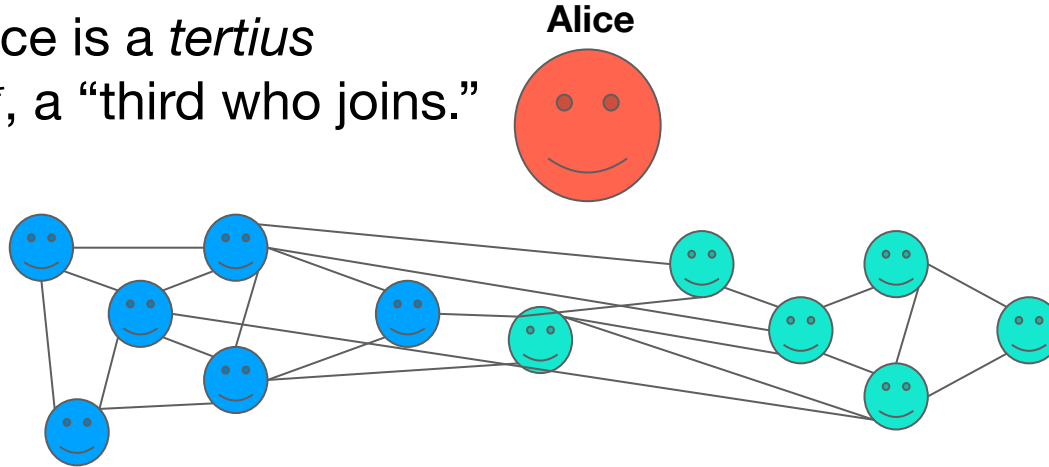


In organizations, people like Alice facilitate innovation.

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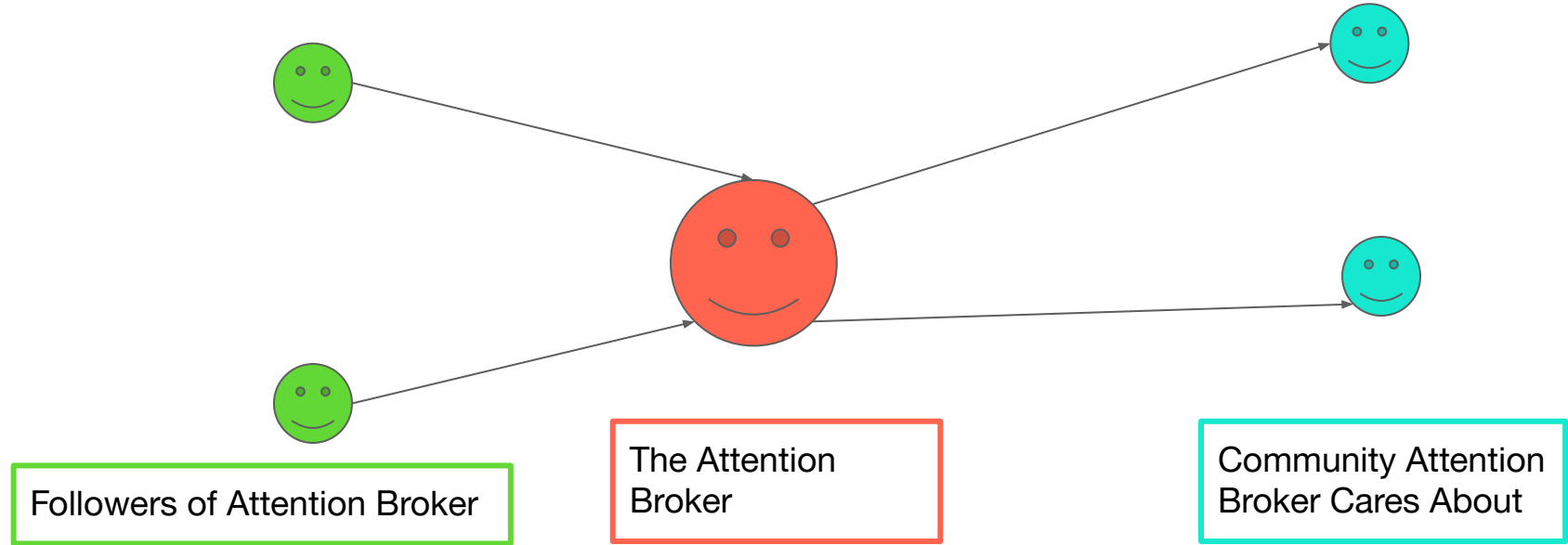


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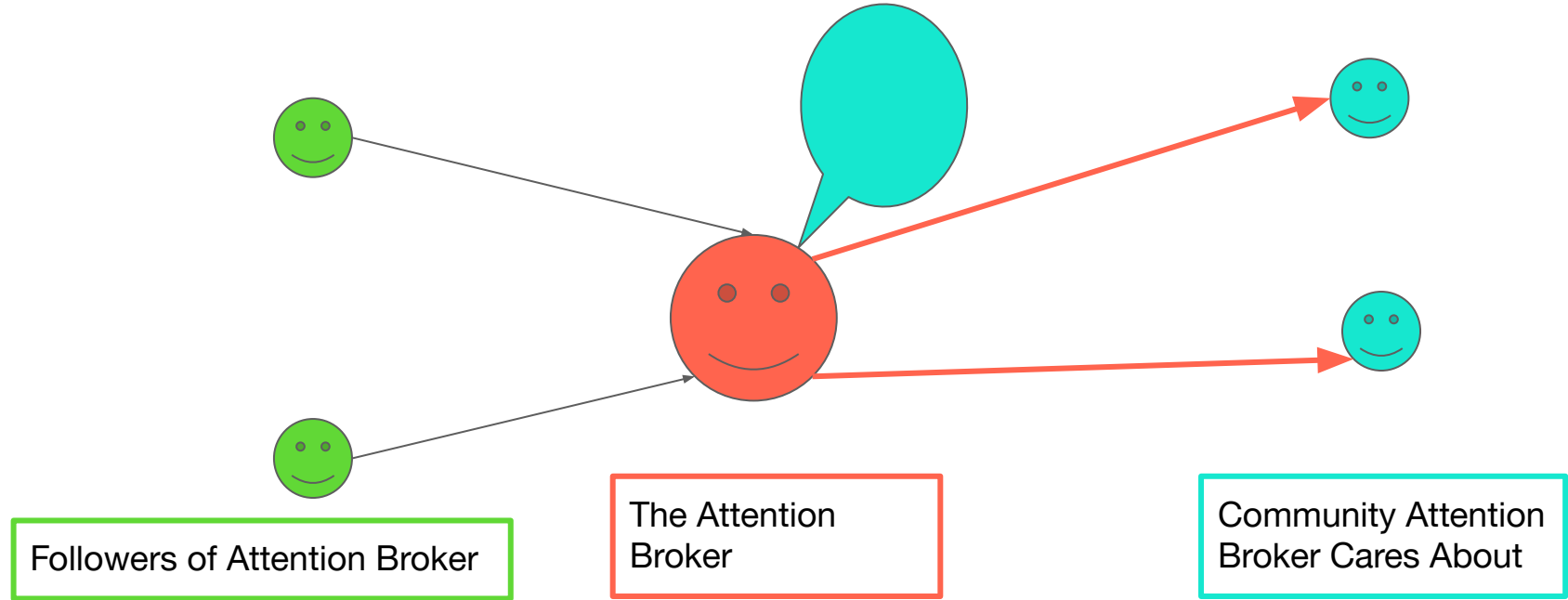
Now we'll talk about what happens when we give the Alices of the world a big platform and the means to amplify.

\*Obstfeld, *Social Networks, the Tertius Iungens Orientation, and Involvement in Innovation*, 2005.

# Concept: The Attention Broker

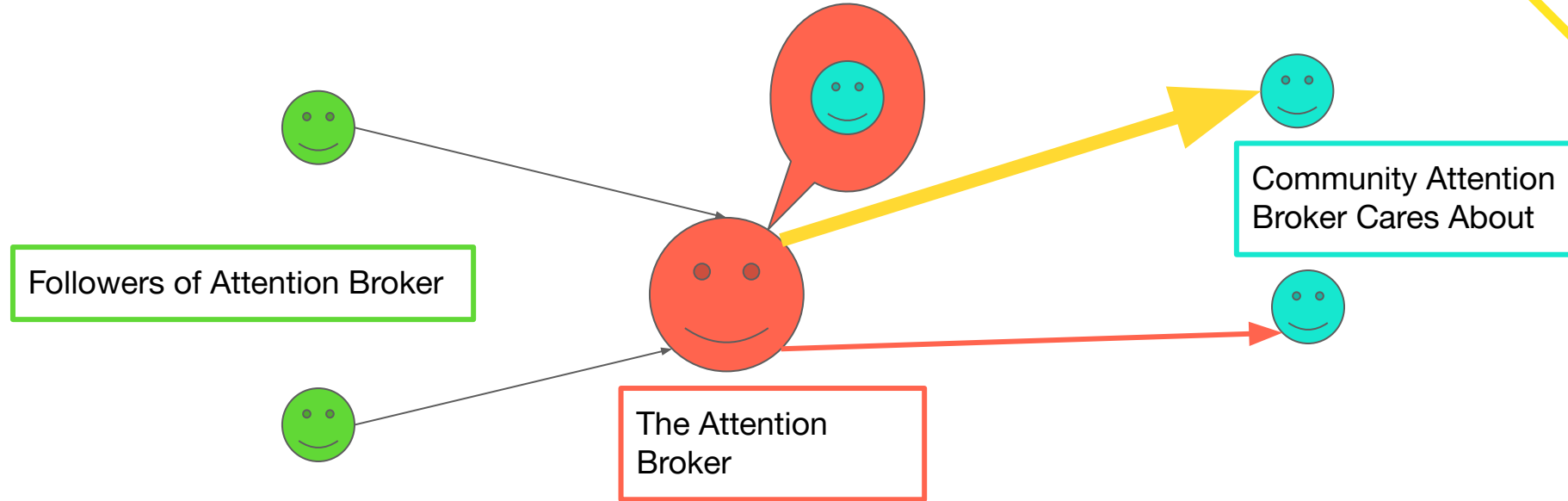


# Concept: The Attention Broker



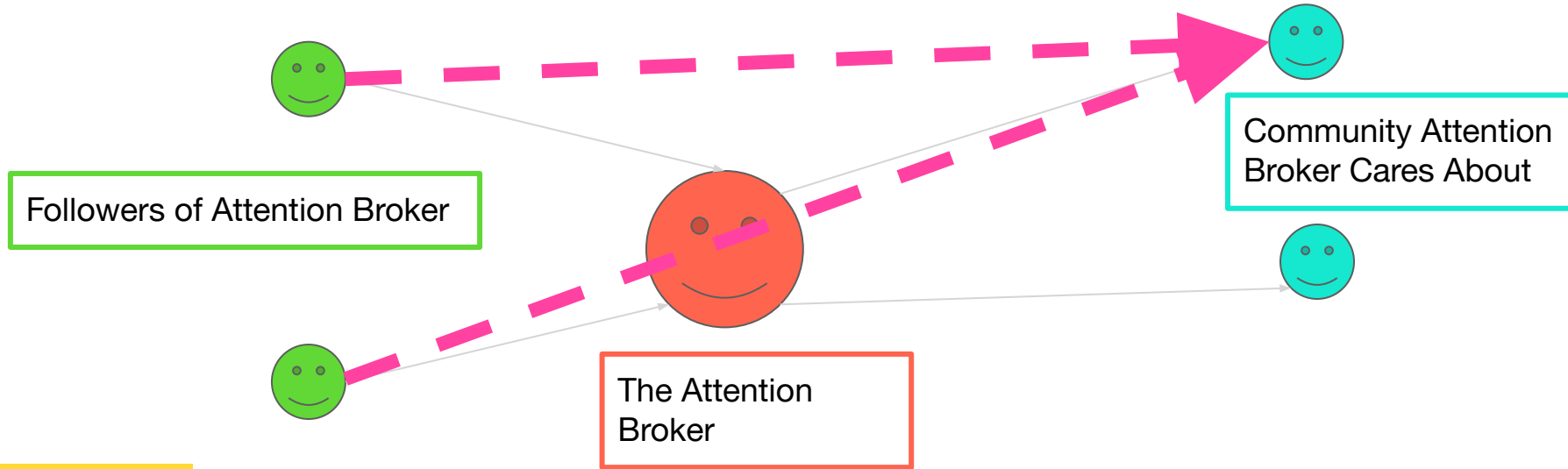
**Closure I:** The attention broker engages deeply with the community they care about

# Concept: The Attention Broker



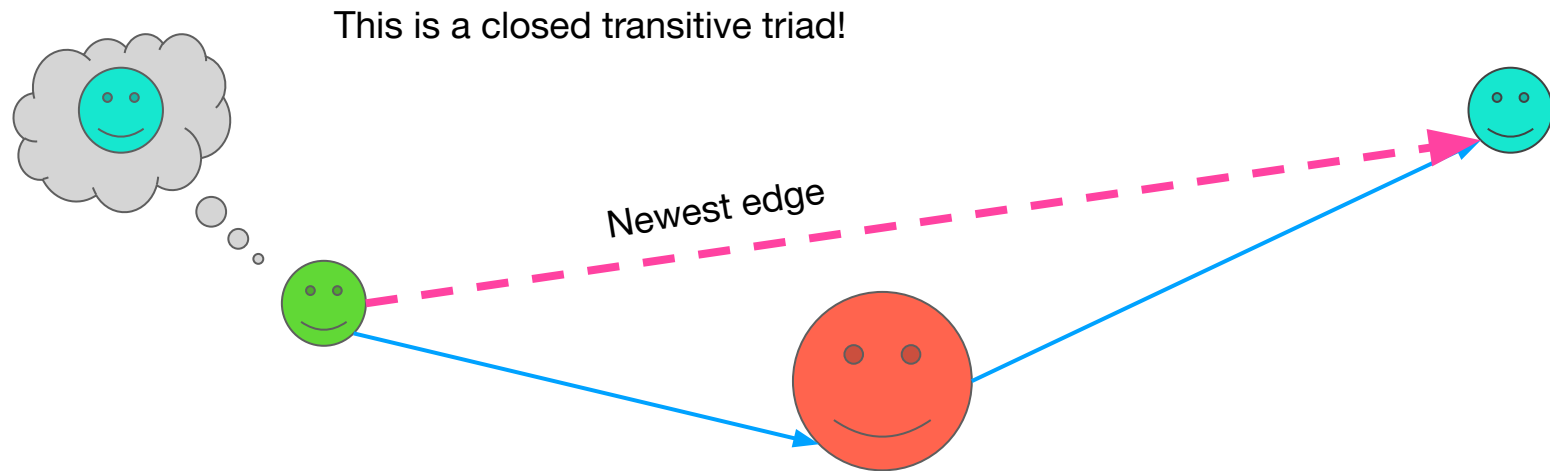
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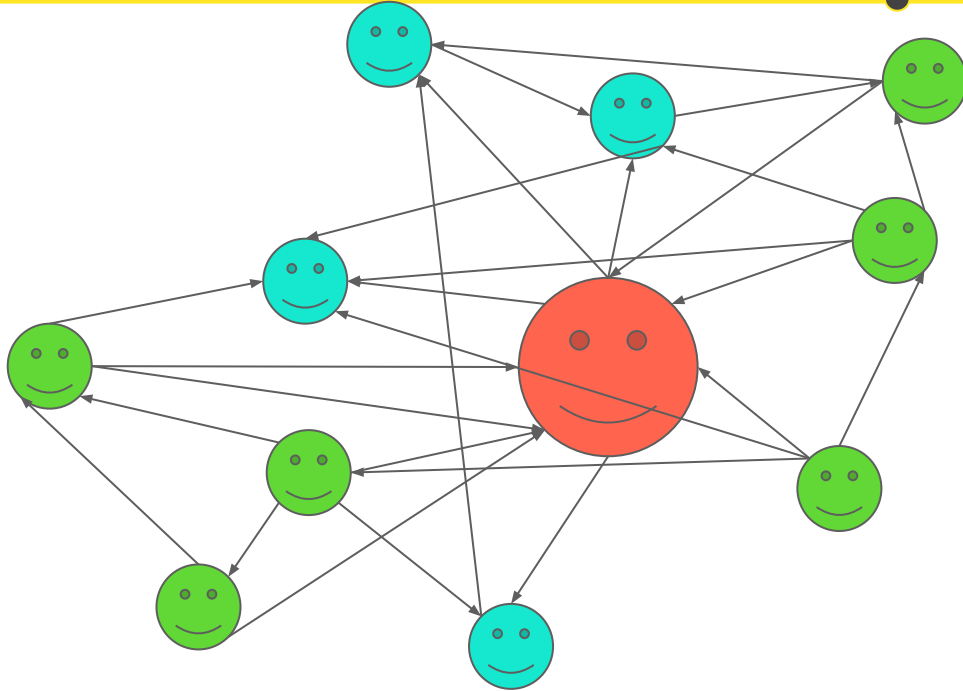
# Concept: The Attention Broker



**Brokerage:** The attention broker amplifies their community of choice to their followers. The followers follow the amplified community members.



# Concept: The Attention Broker



**Closure II:** The community of choice and the follower community grow more and more entwined. Many users engage deeply between both communities and have formed more dense connections.

# Who Gets Amplified?



- (at a macro level): social movements
- (at a micro level): interest actors, casual users, professionals, organizations...

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- (at a macro level): social movements
- (at a micro level): interest actors, casual users, professionals, organizations...

## **What is an interest actor???**

“...individuals who have relational stature with an online audience based on their expertise, authority, or professional position; engage in politics; and utilize the unique economy of sociality and popularity of social media” \*

\*Laura Moses, from an OSF preprint of “Conceptualizing and Identifying ‘Interest Actors’” <https://osf.io/zyva9>

# Hypotheses



H1: Jorts The Cat is an effective attention broker between his followers and labor activist accounts.

H2: J.K. Rowling is an effective attention broker between her followers and TERF accounts.

H3: The effects of amplification are heterogeneous by account type.

# Hypotheses

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H3: The effects of amplification are heterogeneous by account type.

## Effective???

Here, I'm using “effective” to mean that the effect of the attention broker's amplification on their followers is more than the effect we see from **just** virality (on non-followers).

# Why Do We Care?

- Confirms Burt & Merluzzi's theories\* about network oscillation (between brokerage and closure)
- Extends the concept of the *tertius iungens*\*\* beyond organizational innovation
- **Shows that an individual actor can impact network evolution.**

\*Burt & Merluzzi, *Network Oscillation*, 2016.

\*\*Obstfeld, *Social Networks, the Tertius iungens Orientation, and Involvement in Innovation*, 2005.



Structural holes are gaps in information flow. Weak ties, which span structural holes, are important sources of novel information.

Brokers control the flow of information through weak ties for individual or collective advantage.

However, closure is important for building trust/community; here, we're looking at triad transitivity to see how network structure evolves.

Attention brokers cause closure, but we don't account for individual agency in network evolution models.

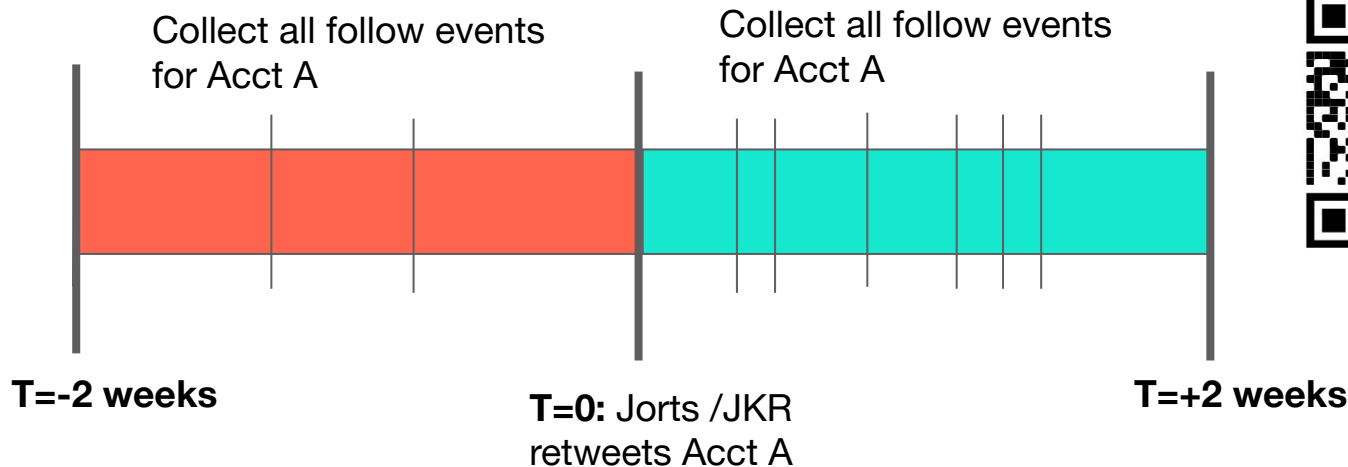
# Methods & Data

- **Goal:** Get a collection of amplification events by both Jorts and JKR. For each amplified account:
  - Who follows the account in the 2 weeks pre-amplification and was **already** following the amplifier (Jorts/JKR)?
  - Who follows the account in the 2 weeks post-amplification and was **already** following the amplifier?



# Methods & Data

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



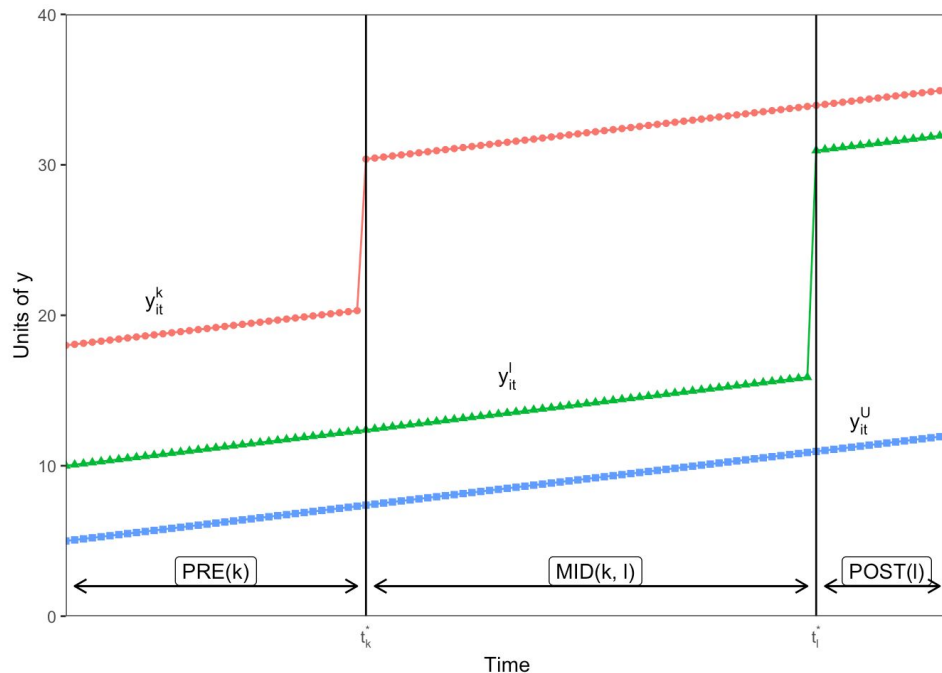
Time-bounded  
follower collection  
code snippet

# Methods & Data

- Categorize accounts according to the following binary decisions:
  - Interest Actor\*
  - TERF (JKR) or Pro-Labor (Jorts)
  - Professional Poster
  - Non-Professional Poster
  - Political Entity
  - Institution/Organization

*\*Moses, Conceptualizing and Identifying "Interest Actors", 2023*

# Methods & Data: Differences-in-Differences



Differences-in-differences analyses are good for figuring out how treatment changes the trajectory of a quantity (**what is the effect of amplification on following rate?**) when we don't have a true controlled experiment.

<https://andrewcbaker.netlify.app/2019/09/25/difference-in-differences-methodology/>

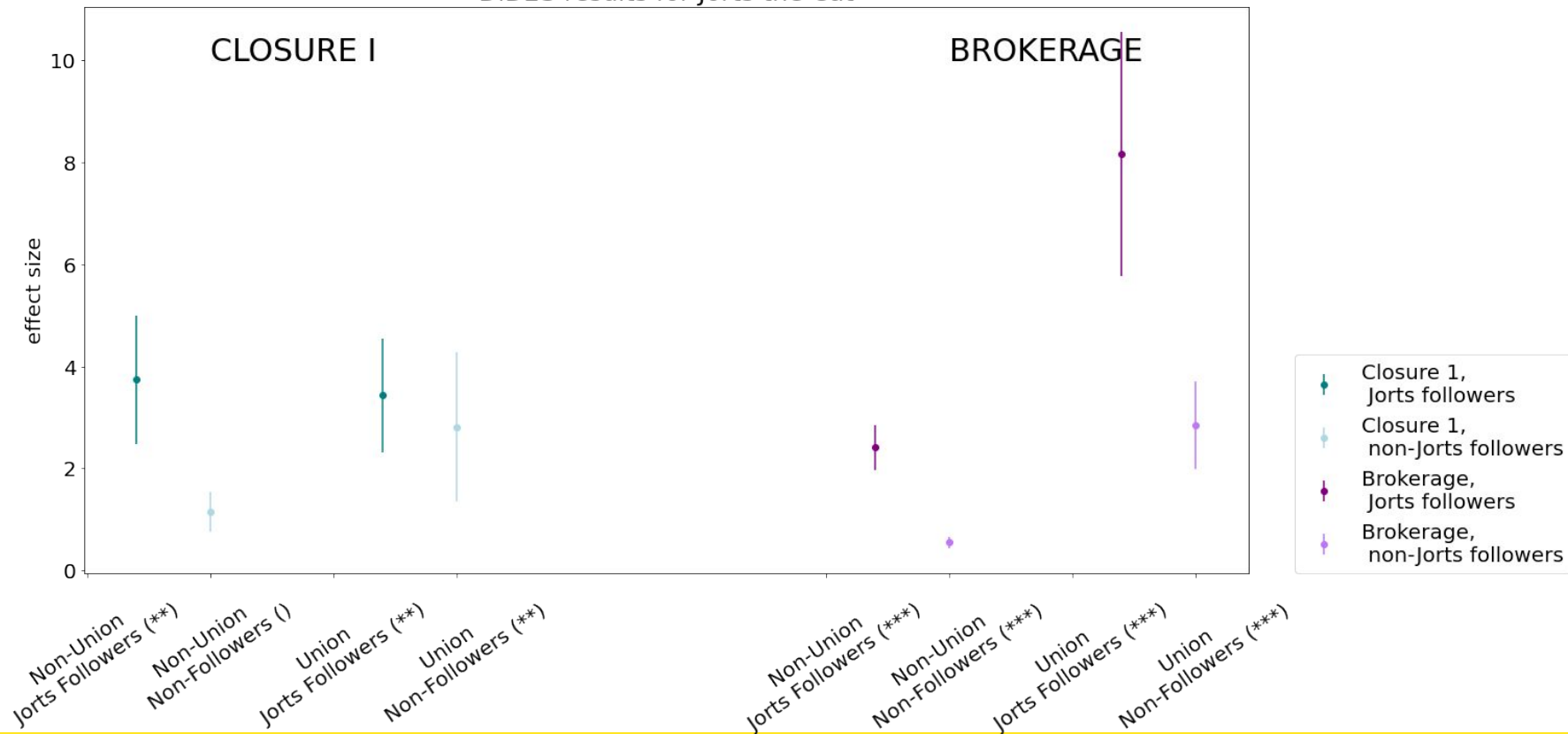
# Methods & Data



- Run 2-stage differences-in-differences analysis, interacting account type with the treatment variable.
- This will give us information on how different kinds of accounts are differentially affected by amplification.

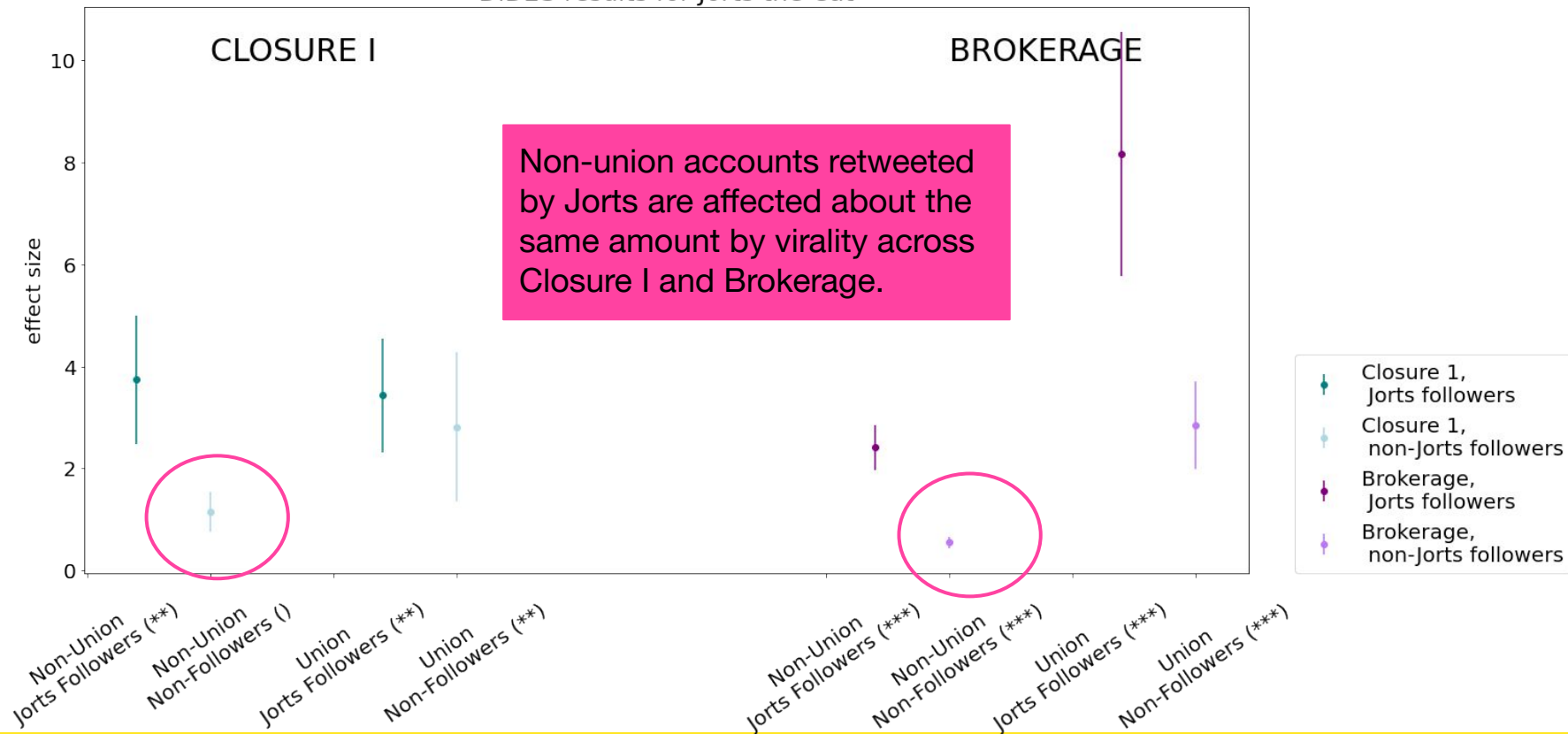
# Preliminary Results (Jorts)

DiD2S results for Jorts the Cat



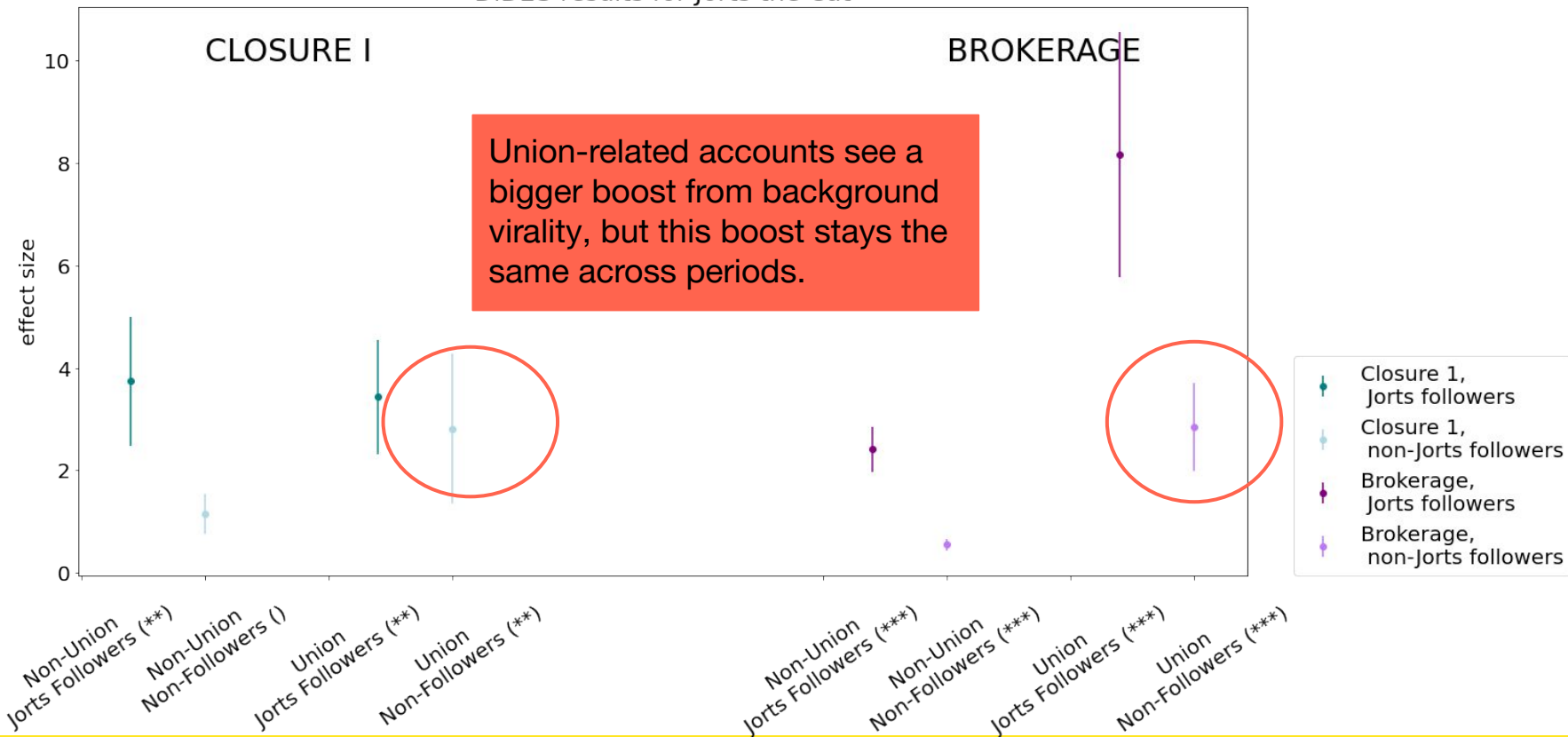
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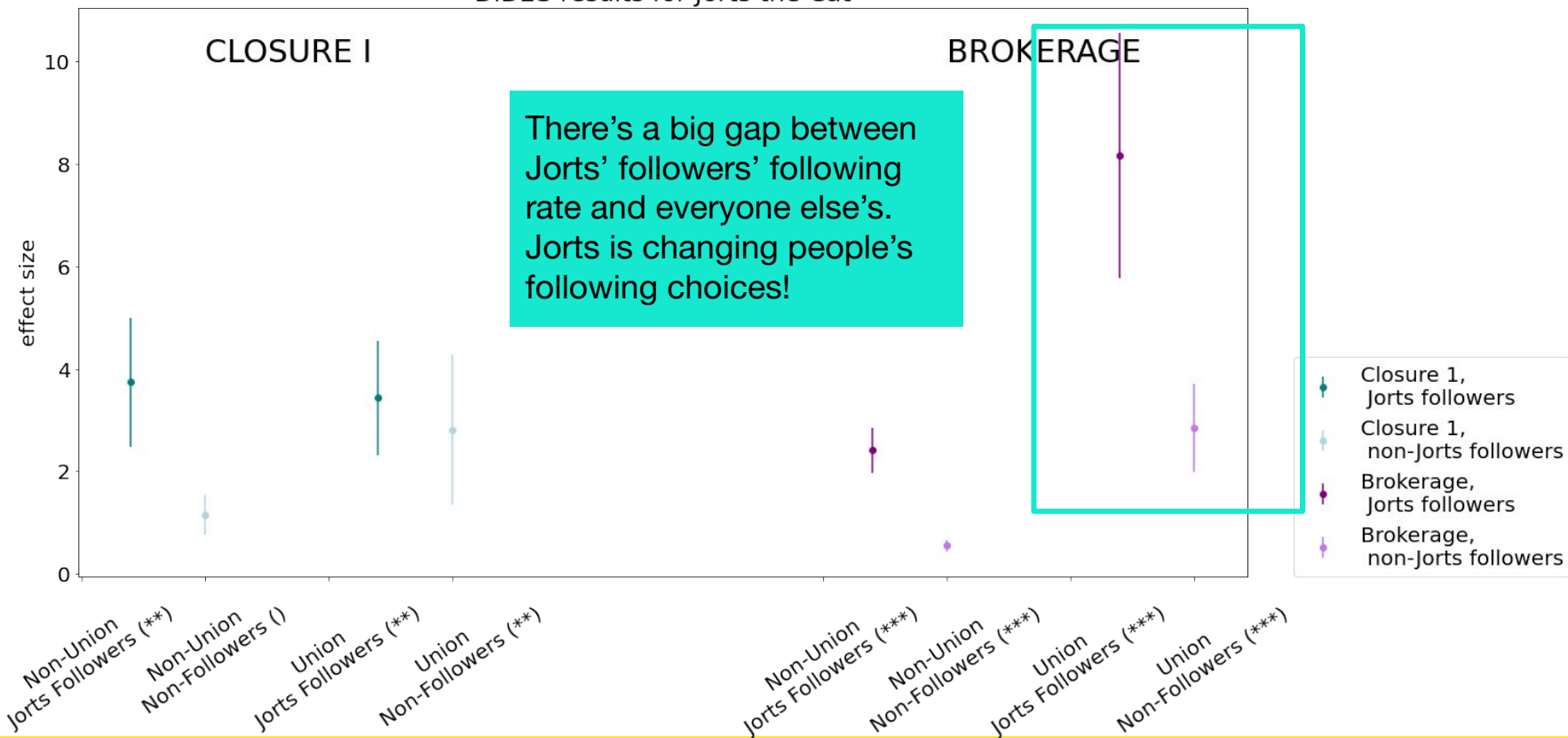
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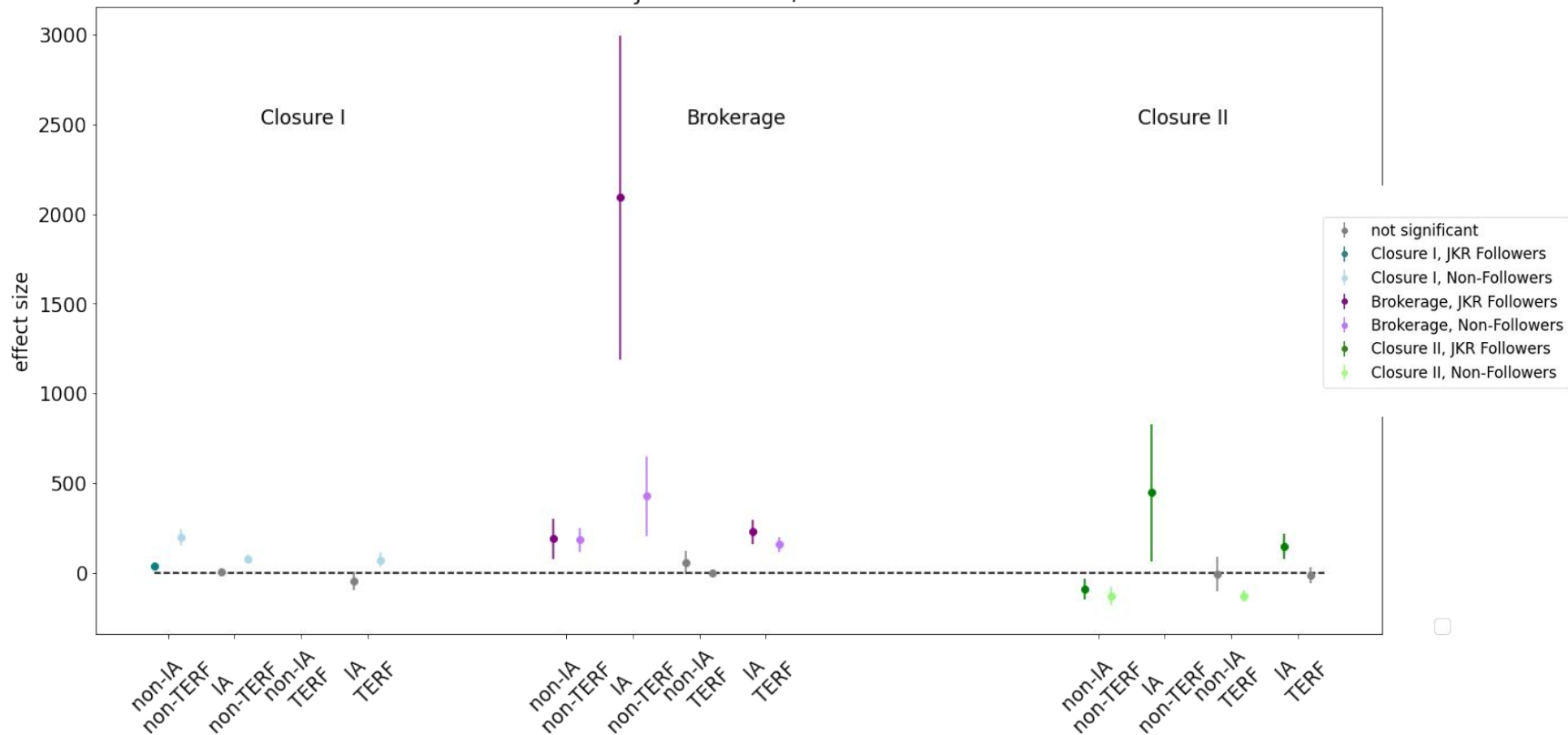


# What About Closure II?

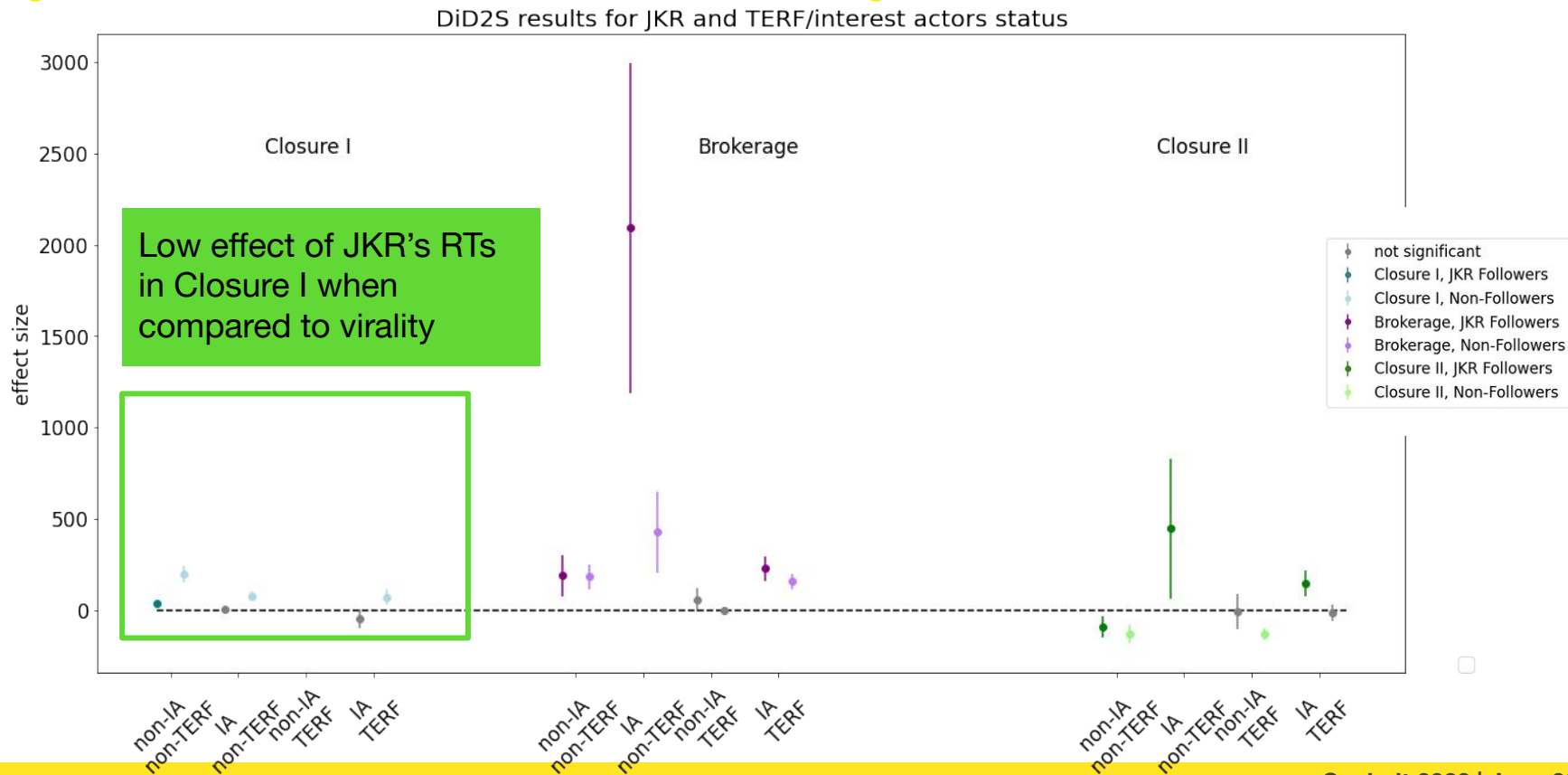
- With the Jorts data I have, I don't think we've gotten to Closure II yet.
- I tried sliding around the end of Brokerage to see how the effect size changed; it looks like it is not yet diminishing.
- TBD: Does attention brokerage continue indefinitely?

# Preliminary Results (JKR)

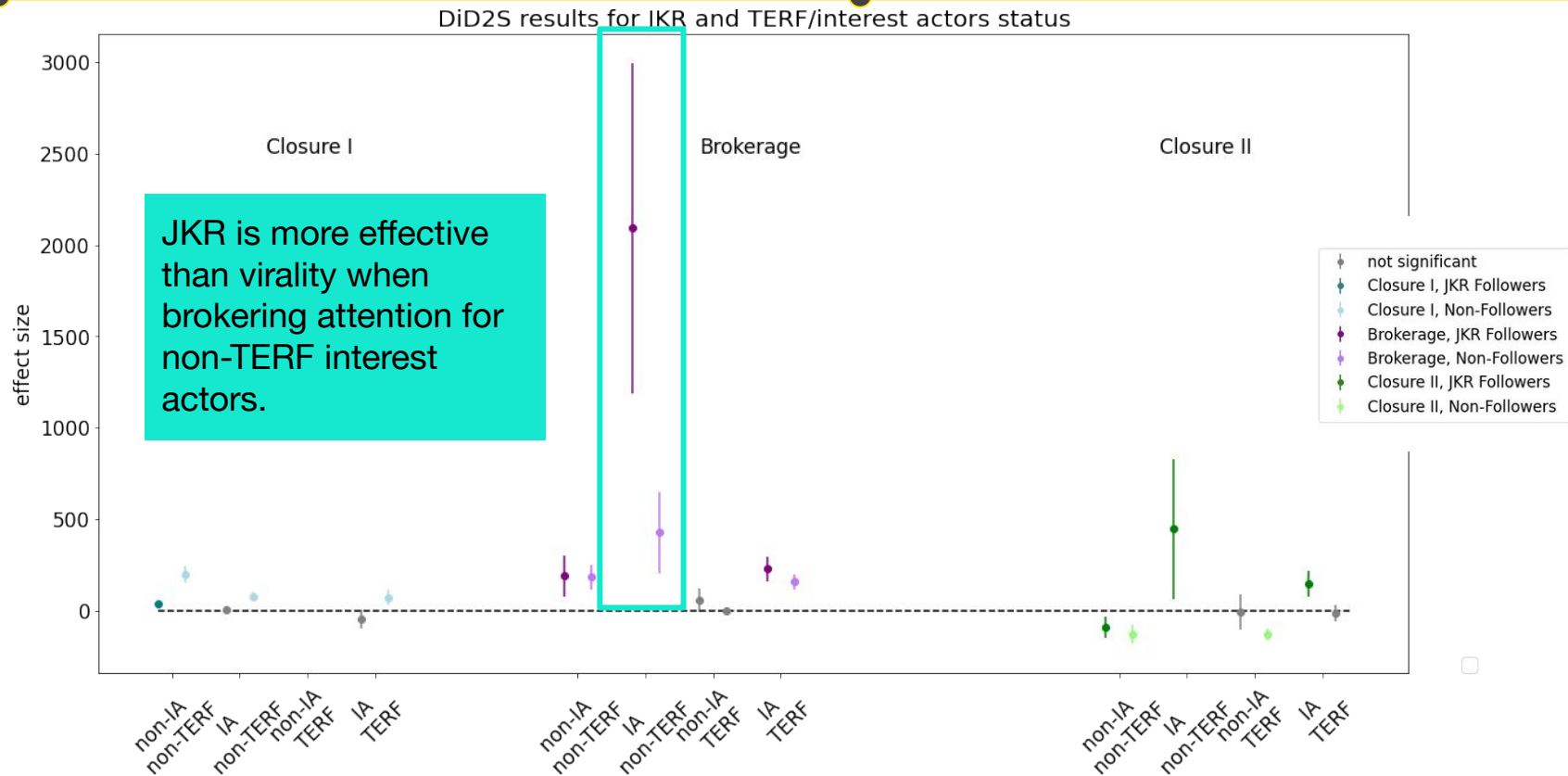
DiD2S results for JKR and TERF/interest actors status



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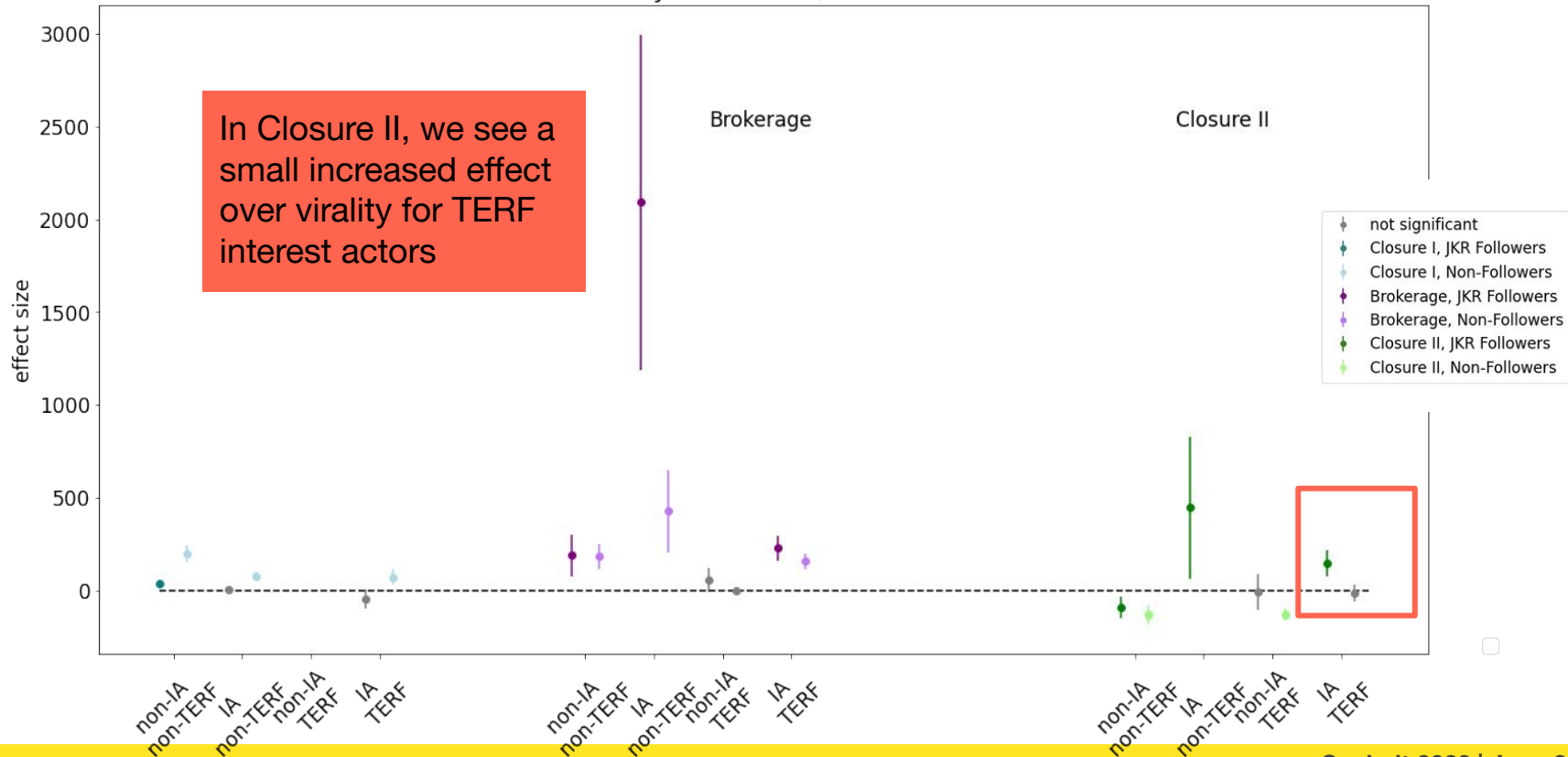


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# Takeaways: What We Know

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- Jorts' amplification has significant effects (beyond virality) on following rate. This effect is larger for labor-affiliated accounts during the brokerage phase. **H1: Checks out!**
- JKR's amplification has big effects for non-TERF interest actors during Brokerage and a small effect for TERF interest actors during Closure II. **H2: Checks out, but not like we expected!**
- We see different effects by (TERF, Interest Actor) categorization with JKR's RTs. **H3: Checks out!**



# Why Do We Care?



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- We have evidence for the closure → brokerage paradigm
- Evidence for closure → brokerage → closure is more fuzzy.
- We have shown *tertius amplificans* / attention broker behavior in two case studies.
- **Amplification by a third party can lead to changes in network structure.**

# Thank you!



Questions?  
Trash can mishaps?  
Tell me about them!

You can also email me!  
[smith.alyss@northeastern.edu](mailto:smith.alyss@northeastern.edu)

<https://twitter.com/JortsTheCat/status/1544796768113635328>

# Backup Slides

# Account Labeling



- 2 initial coders per account; accounts are sorted alphabetically by username.
- Coding assignments are staggered so that coding pairs aren't always the same.
- If there's disagreement on a characteristic, we bring in a third coder to resolve disputes.
- We ignore accounts that were inactive over the past year, private, deleted, or not in English (n=76).

# Coder Disagreement for Account Labeling

Account Characteristic	Percent Disagreed (n=534)
TERF	5.1%
Professional Poster	21.2%
Non-Professional Poster	11.2%
Political Entity	10.7%
Interest Actor	13.1%
Institution / Organization	2.1%

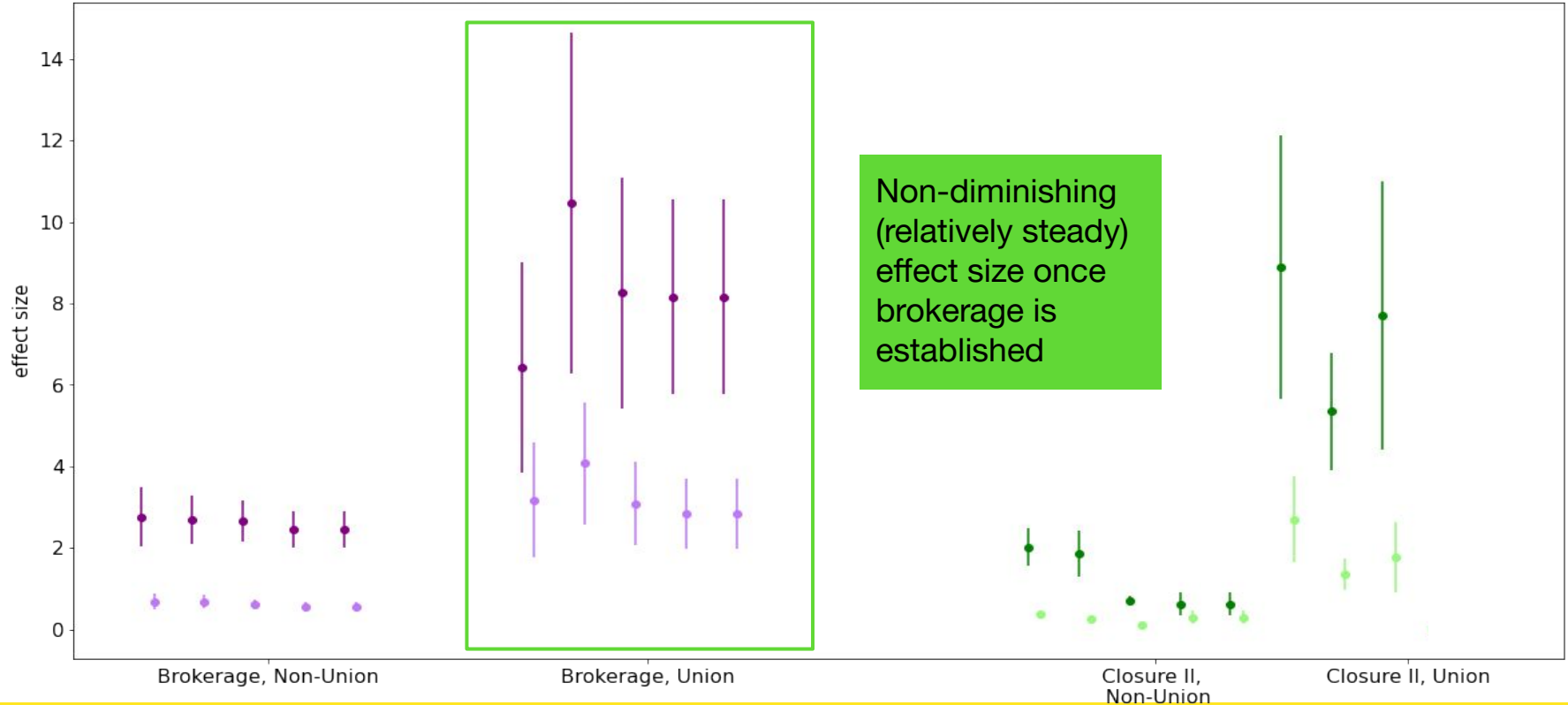


# Stages / Groups (JKR)

TERF/IA Status	Period	N
non-TERF/non-IA	Closure I (Jan 1, 2018 to June 6, 2019)	177
non-TERF/IA	Closure I	30
TERF/non-IA	Closure I	0
TERF/IA	Closure I	2
non-TERF/non-IA	Brokerage (June 6, 2019 to June 6, 2022)	99
non-TERF/IA	Brokerage	4
TERF/non-IA	Brokerage	36
TERF/IA	Brokerage	15
non-TERF/non-IA	Closure II (June 6, 2022 - March 13, 2023)	39
non-TERF/IA	Closure II	11
TERF/non-IA	Closure II	30
TERF/IA	Closure II	12

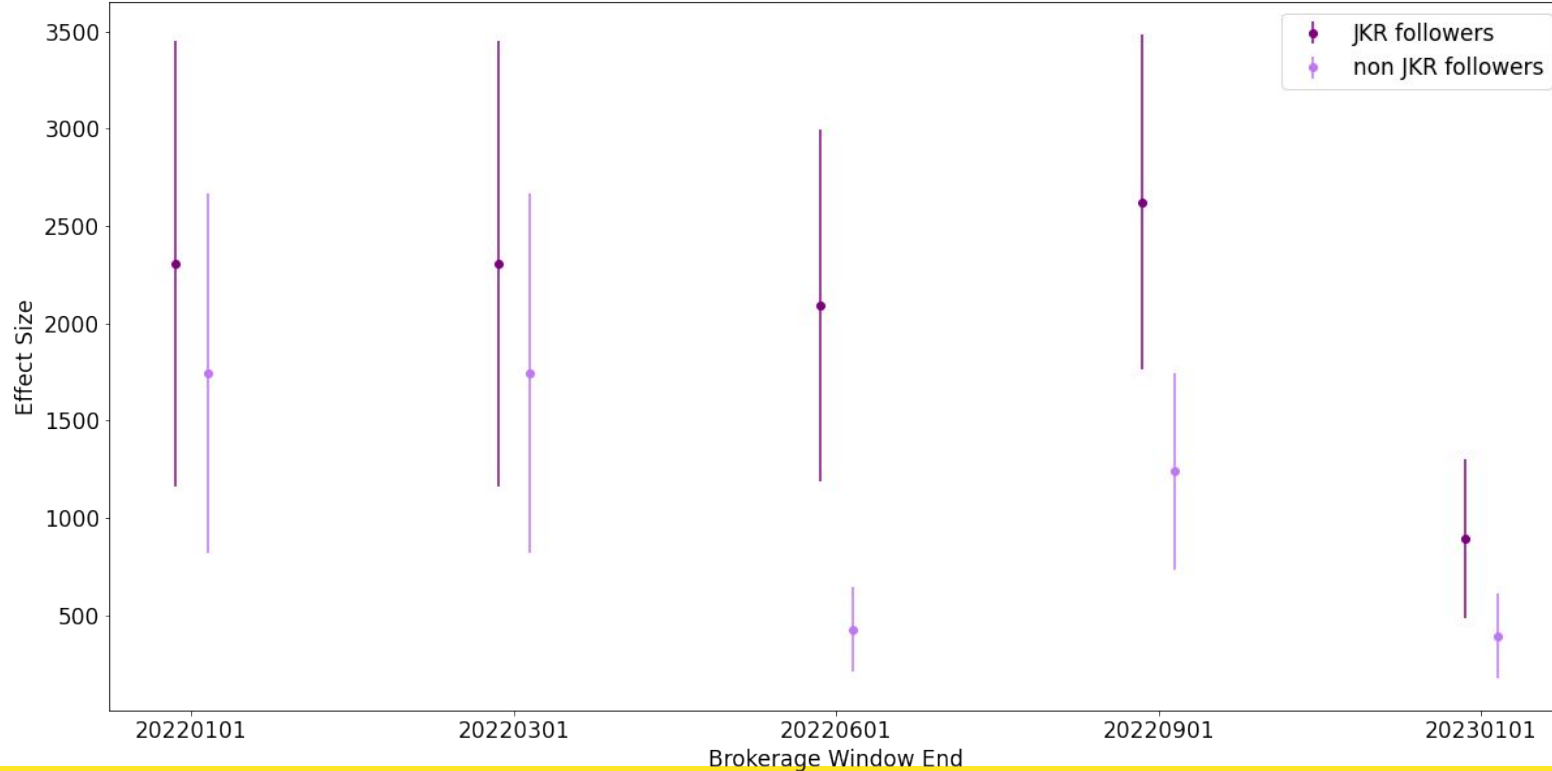
# Jorts: Sliding Brokerage End

Jorts Follower and Non-Follower Effect Size for Brokerage/Closure II  
With Brokerage Ending on 2/1/22, 2/15/22, 3/1/22, 3/15/22, and 4/1/22



# JKR Effect Size With Sliding Brokerage Window

Effect Size For Non-TERF Interest Actors  
With Shifting Brokerage End Window  
For JKR Followers and Non-Followers



# End Backup Slides

