# Characterizing Twitter users who engage in Adversarial Interactions against Political Candidates

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Presentation for CHI 2020
Find the slides and paper on yiqing-hua.com

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- Connect with constituents
- Express opinions
- Campaign for the race

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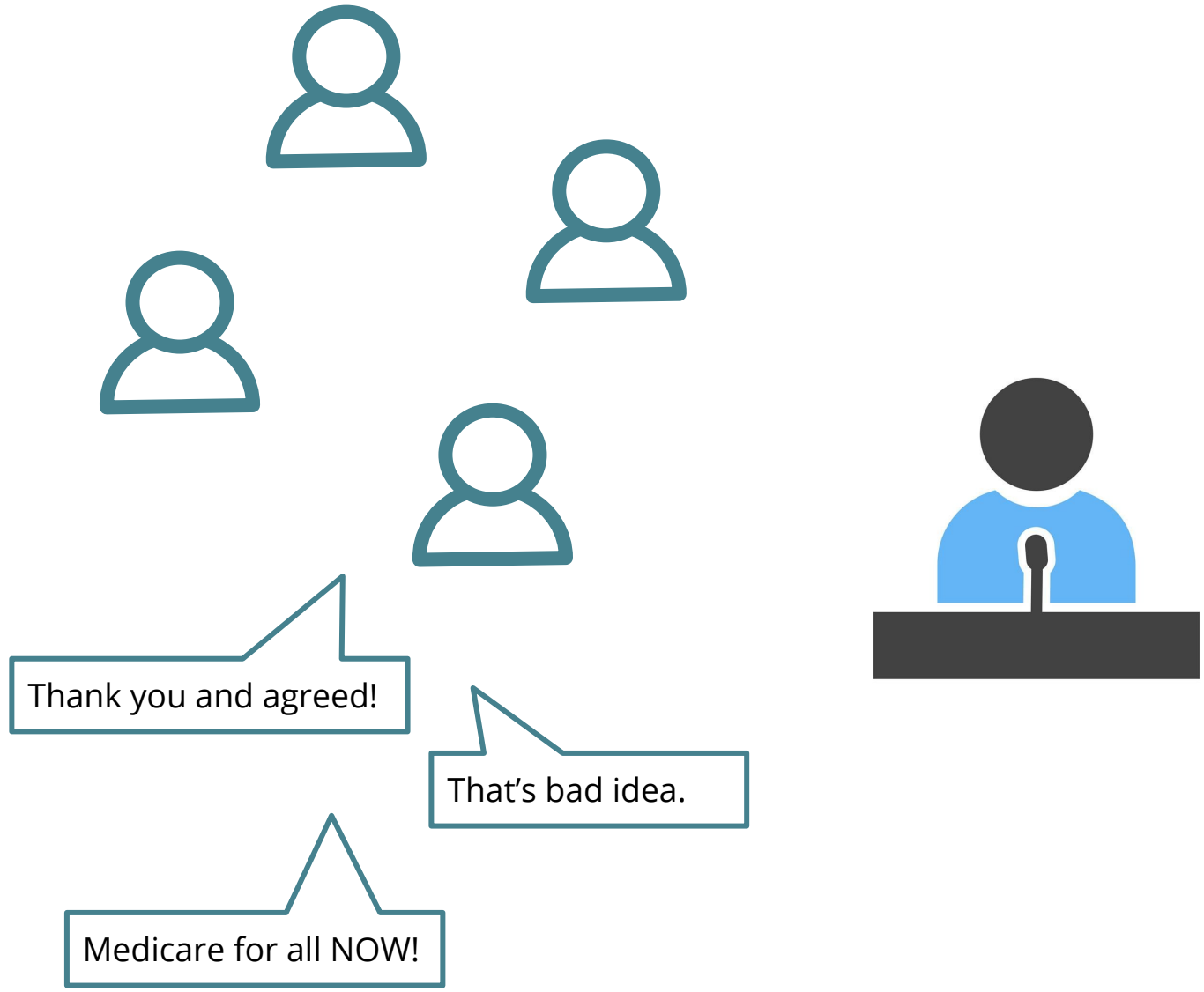
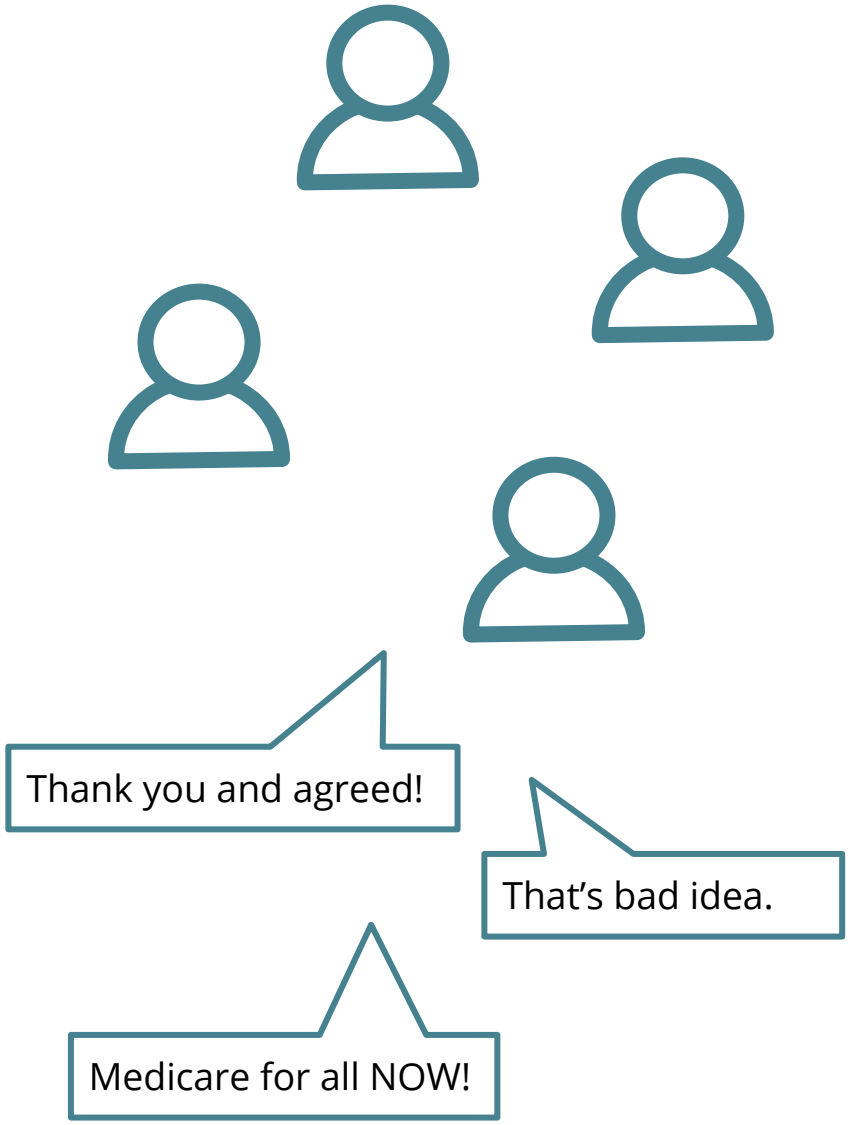

Thank you and agreed!
That’s bad idea.
Medicare for all NOW!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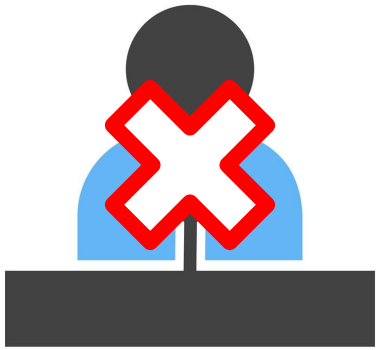
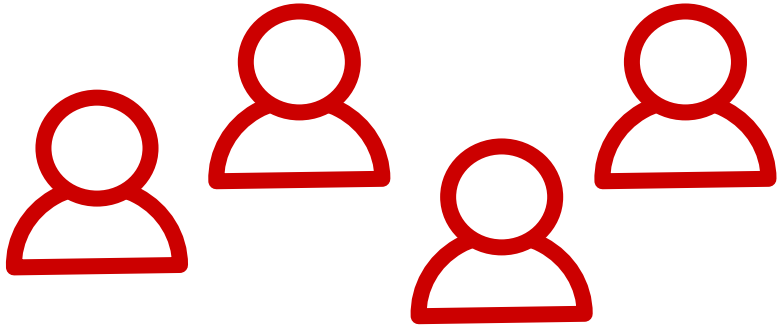



SHUT UP!
Most annoying woman ever…
Alexandria Occasionally-Coherent!



**10%** of the users created over **35%** of the adversarial interactions.

Adversarial users exhibit **different** behavioral patterns than normal user, showing a tendency to **seek out conflicts**.

They involve in **fewer supportive** interactions and pay more attention to **opponent** candidates.

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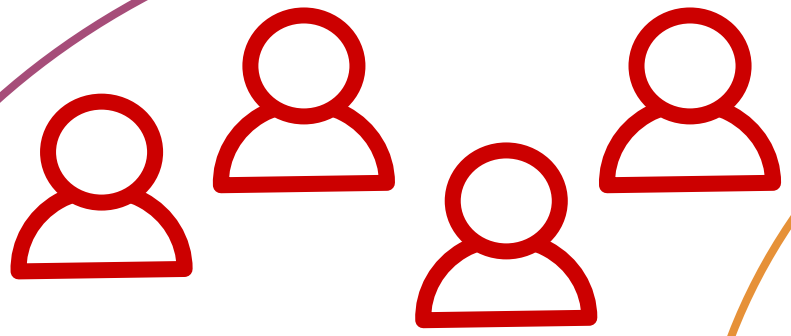

Chatzakou et al. (2017)
ElSherif et al. (2018)
Ribeiro et al. (2018)

Characterizing Adversarial Users

**Adversarial users in political context**

Gorrell et al. (2018)
Theocharis et al. (2020)

*Hua et al. (ICWSM 2020)*
*check it out on yiqing-hua.com*

Adversarial Interactions in political context

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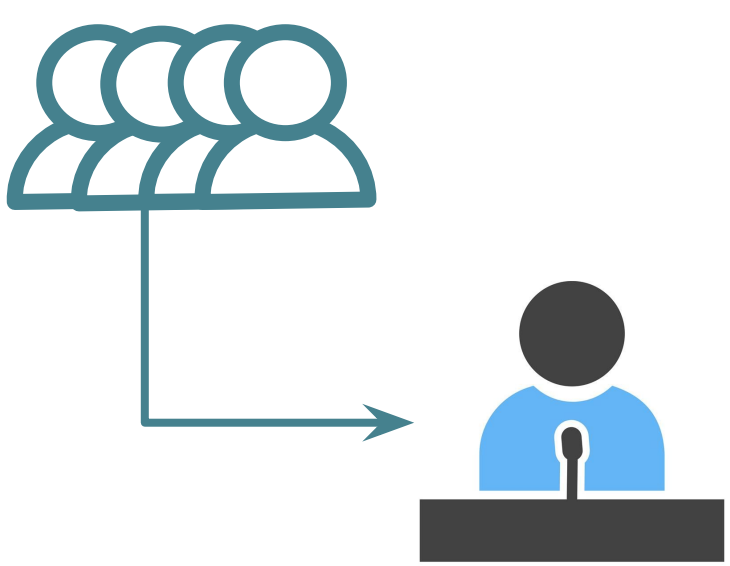

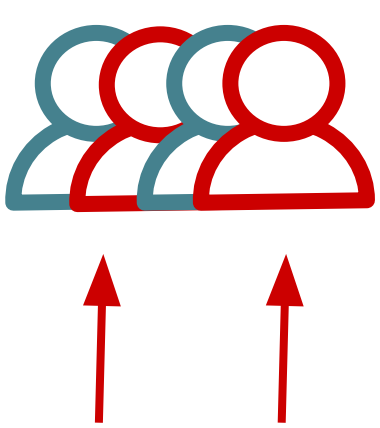

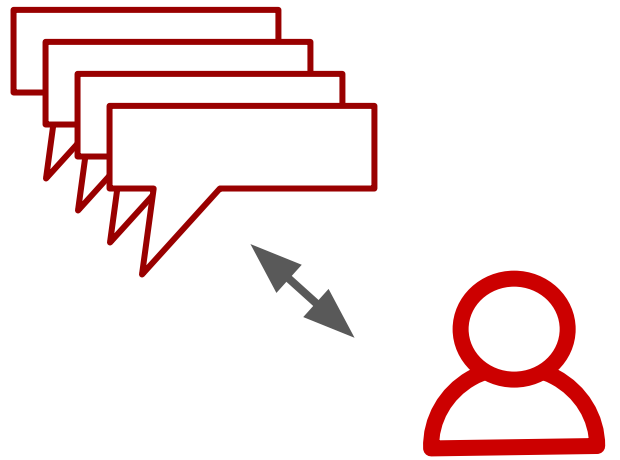

Data Collection

Identify Adversarial Interactions

Correlate *User Characteristics* with *Amount of Adversarial Interactions*

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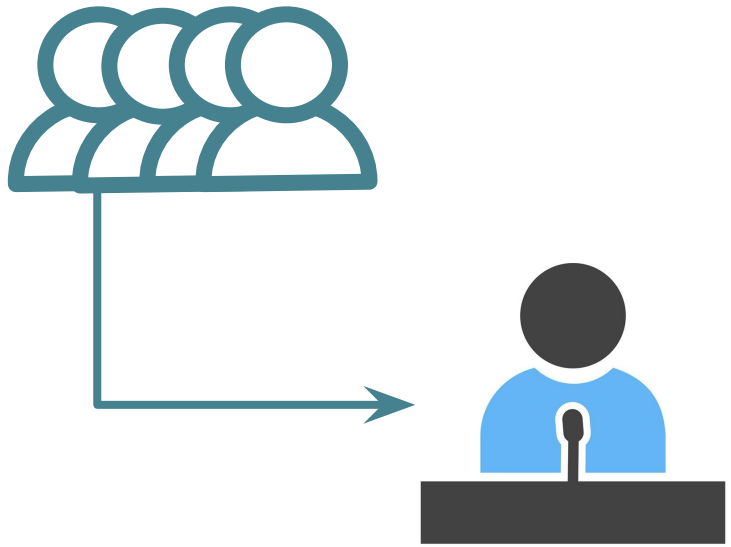
# U.S. Midterm Election Twitter Dataset 2018

**1.2M** user replies to **786** candidates running for U.S. House of Representatives (87%) between **September 17th, 2018** to **November 6th** from **0.4M** users



Dataset published on Figshare
Find the link at yiqing-hua.com

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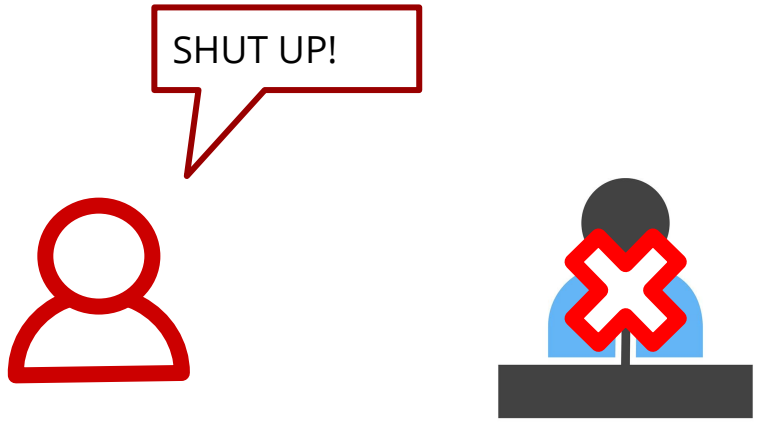
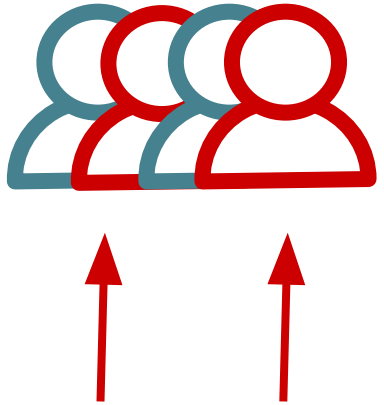
# Adversarial Interactions




Behaviors on social media that intended to **hurt, embarrass, or humiliate** a targeted individual.

# Identify Adversarial Interactions



Use **Toxicity** scoring from Perspective API to identify adversarial interactions

*"a rude, disrespectful, or unreasonable comment that is likely to make you leave a discussion."*

Please refer to the details regarding validating this approach in our paper.

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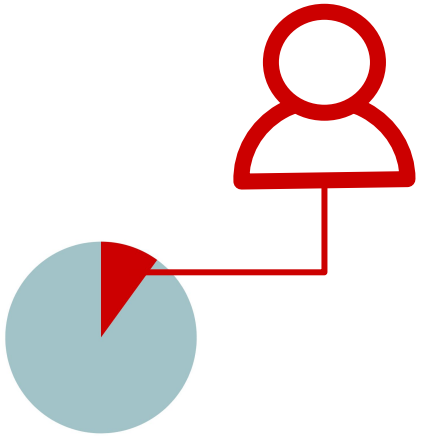
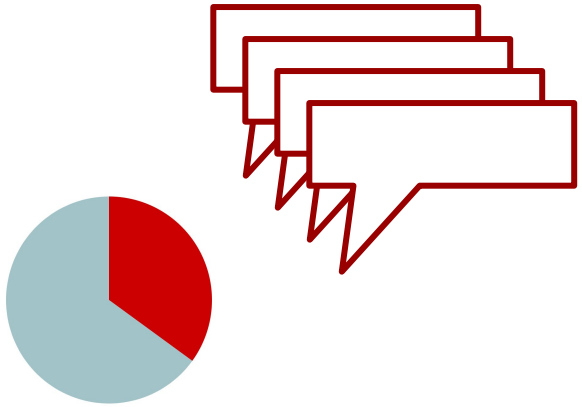
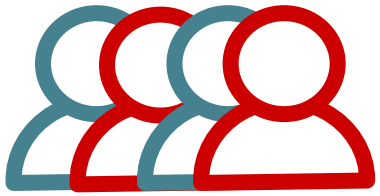




**10%** of the users created over **35%** of the adversarial replies.



# Moderately active users

posted more than **3**, no more than **30** interactions

**21%** of all users, contributed **50%** of all interactions and **52%** of the adversarial interactions.

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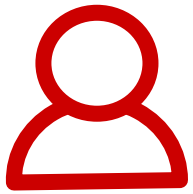
# Correlate *User Characteristics* with *Amount of Adversarial Interactions*

**Control**

Replies to Candidates

**Engagement in Political Activities**

Supportive interactions with candidates
Centrality in politically engaged crowd
Attention to opponent candidates
Partisan-ness in profile



**Basic User Features**

Number of Followers
Number of Days on Twitter
Verified on Twitter (to approximate anonymity)

**Adversarial Activities by Twitter Friends**

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# Correlate *User Characteristics* with *Amount of Adversarial Interactions*

**Control**

**+ Replies to Candidates**

**Engagement in Political Activities**

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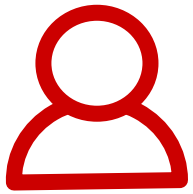
+ **Attention to opponent candidates**
+ **Partisan-ness in profile**



**Basic User Features**

- **Number of Followers**

Number of Days on Twitter
Verified on Twitter (to approximate anonymity)

$$R^2 = 0.231$$

- **Adversarial Activities by Twitter Friends**

Adversarial users exhibit **different** behavioral patterns than normal user.

# Correlate *User Characteristics* with *Amount of Adversarial Interactions*

**Control**

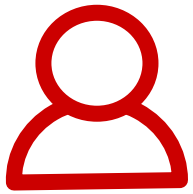
\+ **Replies to Candidates**

**Engagement in Political Activities**

- **Supportive interactions with candidates**
- **Centrality in politically engaged crowd**

\+ **Attention to opponent candidates**

\+ **Partisan-ness in profile**



**Basic User Features**

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\+ **Adversarial Activities by Twitter Friends**

## Tendency to seek out conflicts

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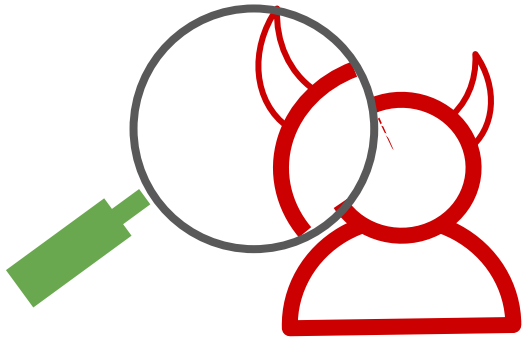


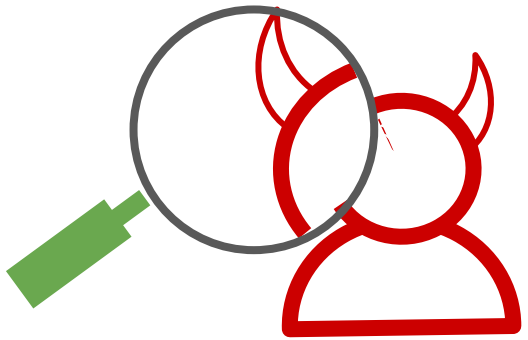
- **Supportive interactions with candidates**

  Measured using number of retweets and following

+ **Attention to opponent candidates**

  Measured using number of replies to opponent candidates

## What about the content of the interactions?

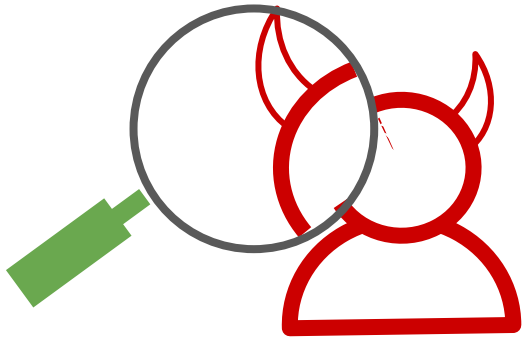


- **Supportive interactions with candidates**

  Do adversarial users post fewer supportive replies?

+ **Attention to opponent candidates**

  Are adversarial users more negative in their replies to candidates?



## Highly adversarial users

posted more than 10 adversarial interactions

**0.3%** of all the users.

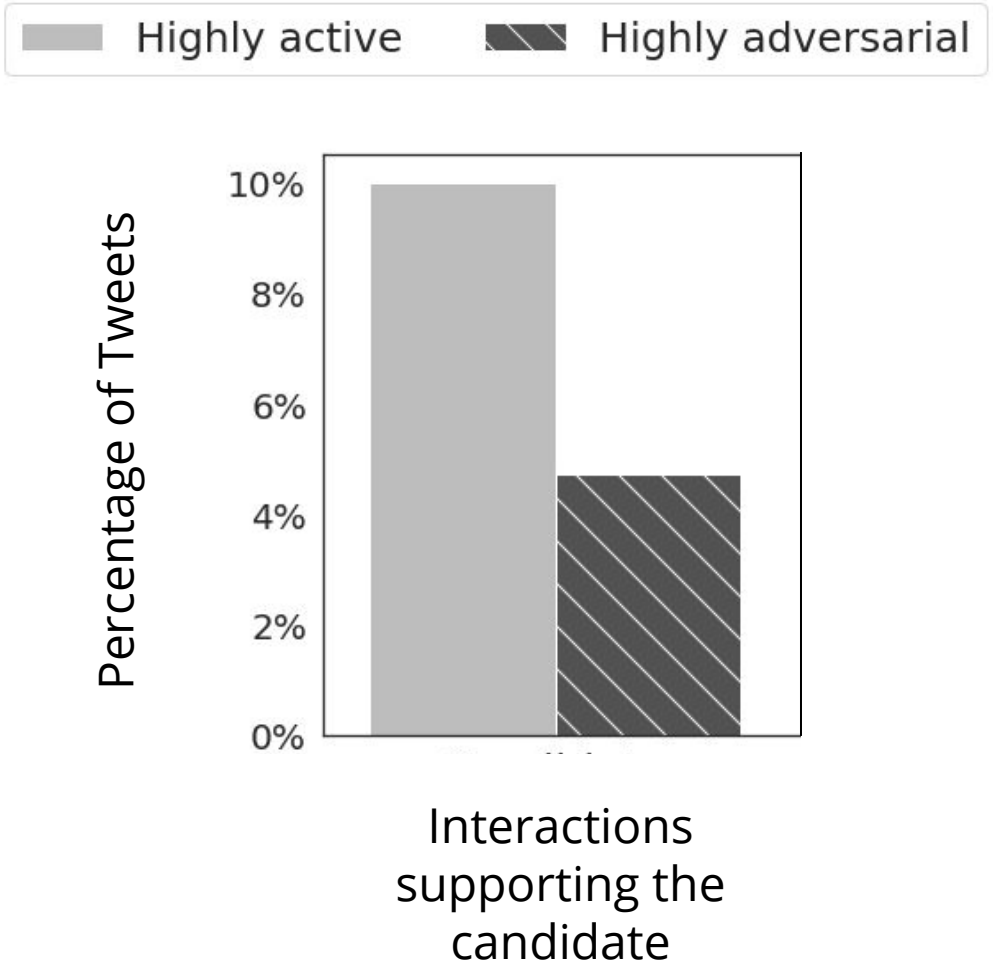
contributed **10%** of all adversarial interactions and **5.6%** of all interactions.

## Highly active users

posted more than 10 interactions

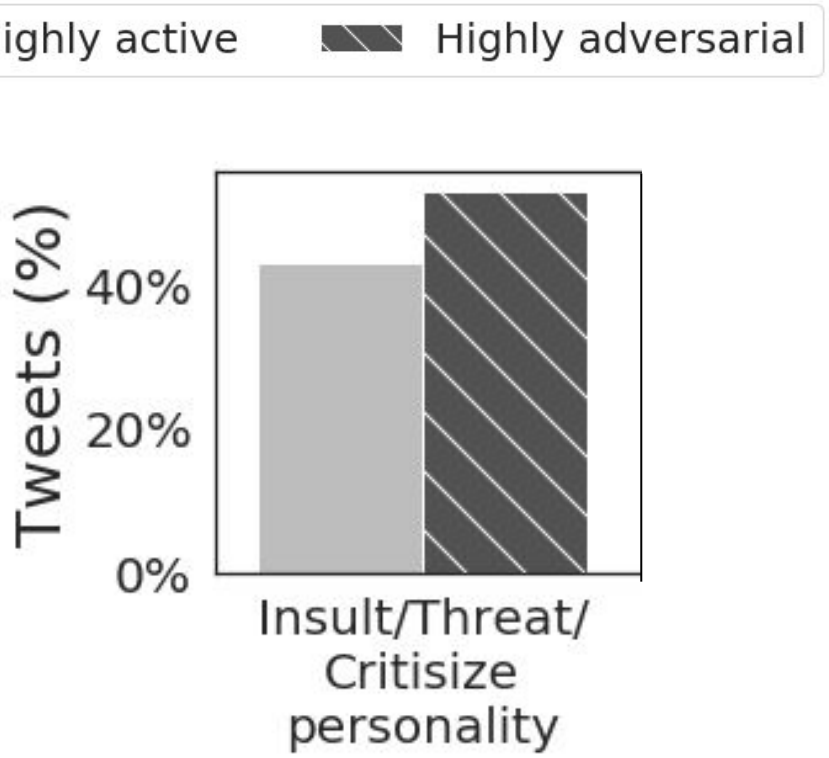
Randomly sample 200 adversarial and 200 non-adversarial interactions from each group. Perform manual labeling on the samples.

# Supportive Interactions

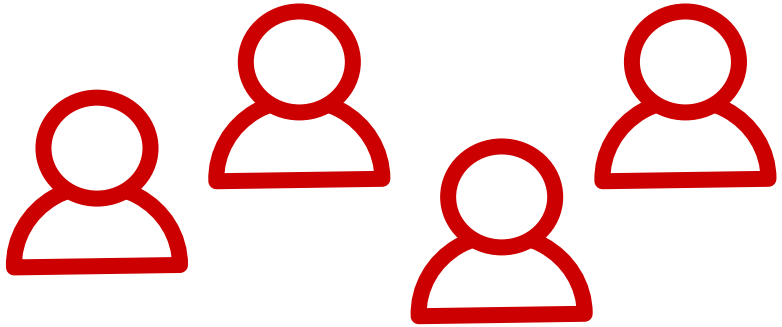



**Fewer** interactions **supporting** candidates themselves.

# Negative Interactions




**More negative** interactions at personal level.



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# Adversarial interactions with political candidates

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Towards Measuring Adversarial Twitter Interactions against Candidates in the US Midterm Elections. [ICWSM2020]

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