Intergroup Contact in the Wild: Characterizing Language Differences between Intergroup and Single-Group Members in NBA-related Discussion Forums

Jason Zhang
University of Colorado Boulder
@darkblue_jason, jasonzhang@colorado.edu
jasondarkblue.com
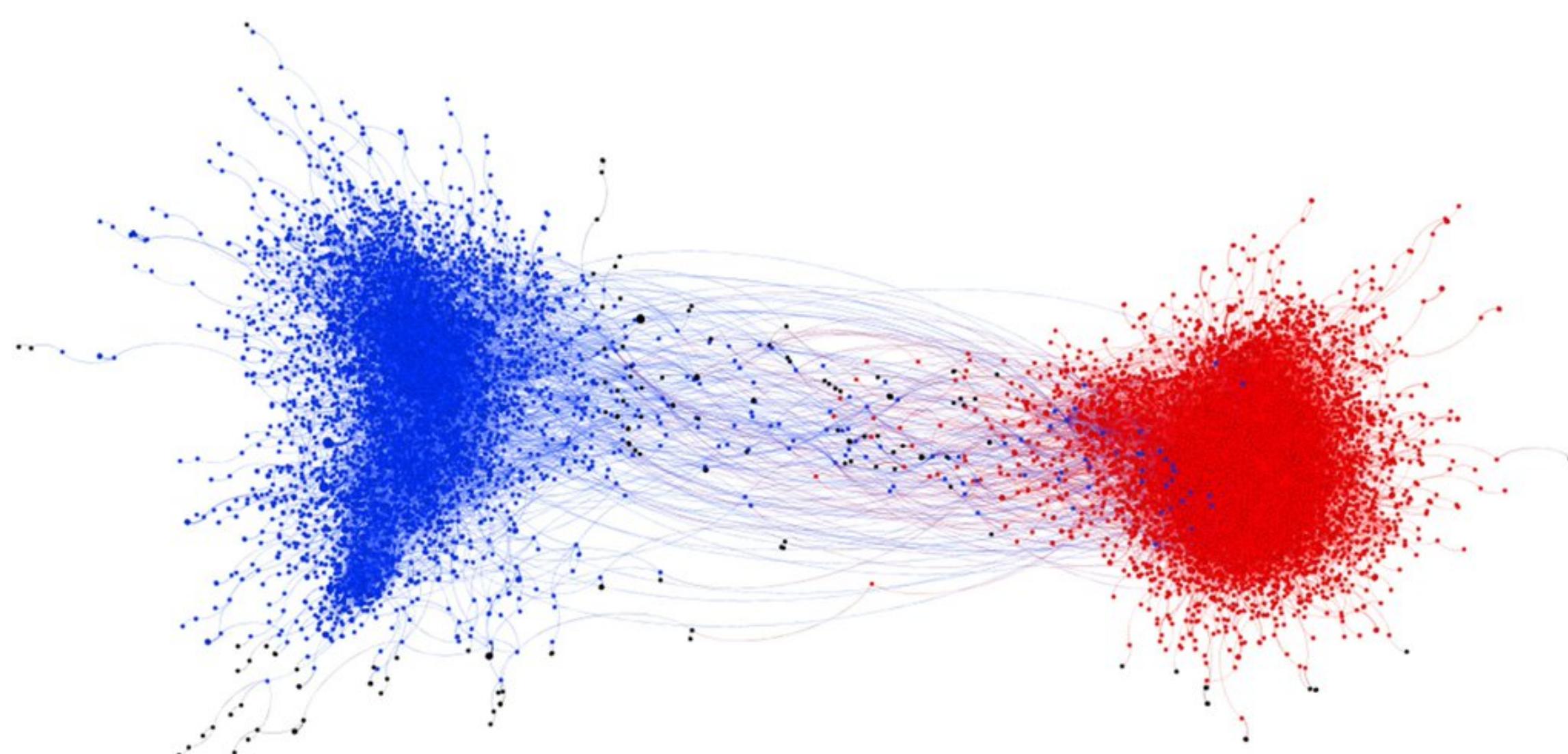
Joint work with Chenhao Tan and Qin Lv
University of Colorado Boulder
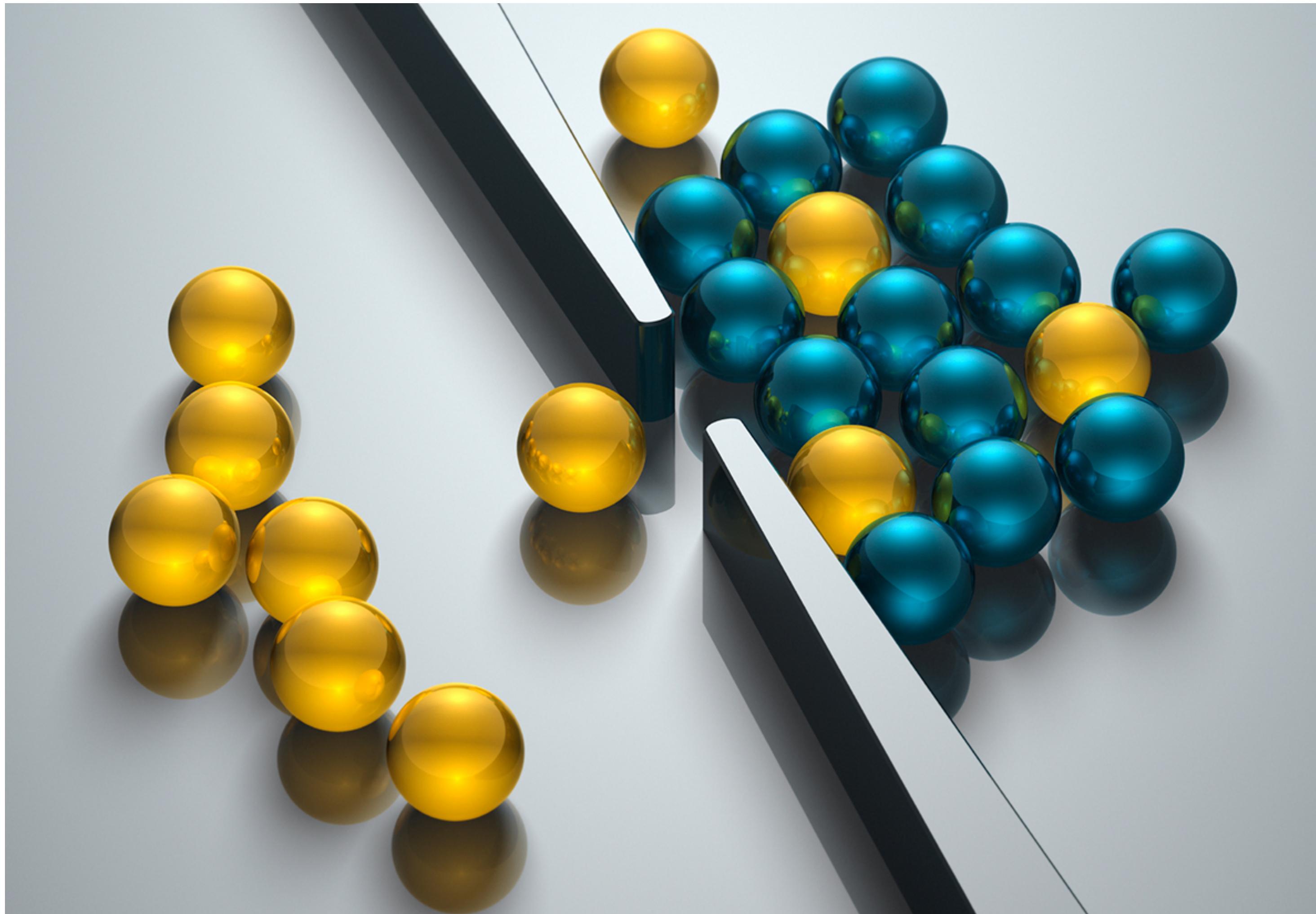
Tribalism

Brady et al. (2017).

Intergroup Contact

Conflicting Results

Positive: (White et al. 2015, Kim et al. 2018)
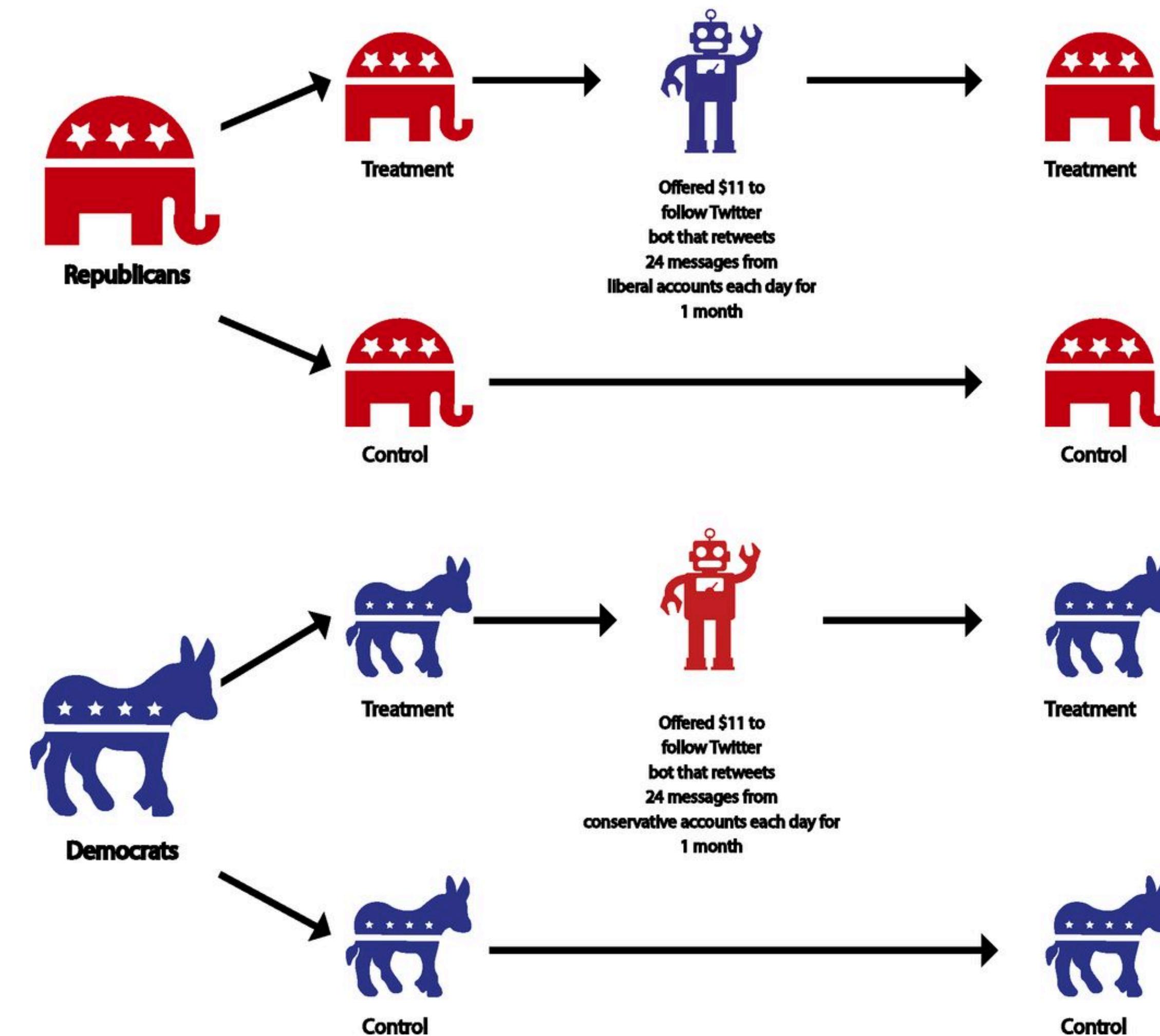
Negative: (Bail et al. 2018, Lee et al. 2018)
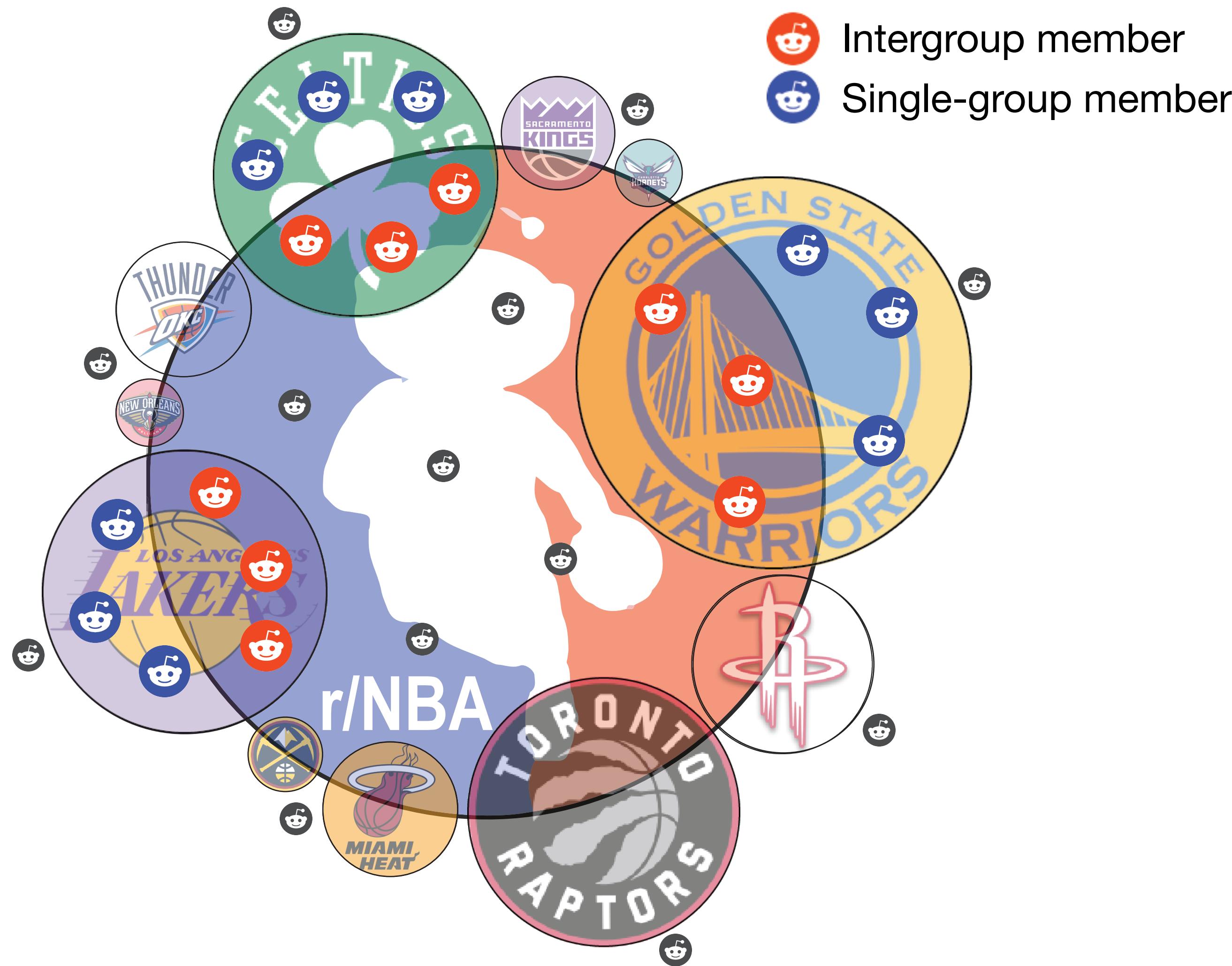
https://earthenergyreader.files.wordpress.com/2013/01/diversitysymbol.jpg

https://thefederalist.com/wp-content/uploads/2017/04/Us-Vs-Them.jpg

Backfire

Bail et al. 2018. Exposure to opposing views on social media can increase political polarization. Proceedings of the National Academy of Sciences (2018).

Observational vs. Experimental

- Large-scale

- Long observation period

- Deep and regular contact

An observational study to characterize intergroup contact in online NBA discussion forums

The Structure of NBA Subreddits

Intergroup member

Single-group member

r/NBA

Team Flair in /r/NBA

ShamusJohnson13 1103 points 1 day ago

I mean, if they think LeBron is wrecking the team you could always send him to the Jazz for a second round pick to test that theory.

You know, for science.

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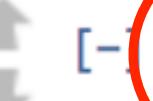
zeo11 174 points 1 day ago

But Lebron doesnt win when playing in the vivit arena

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TannAlbinno 185 points 1 day ago

we'll take our chances and hope for an outrageous road record

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minimumhatred 104 points 1 day ago

See what happens is you guys go 41-0 on the road but 3-38 at home (those 3 games were LeBron rest days. You sneak into the playoffs and because you have the worst record you manage to win the first two series in 7 games losing every home game but easily winning every away game, it's a great story and everyone enjoys it. Then the warriors who have entered playoff mode destroy the team in 3 games.
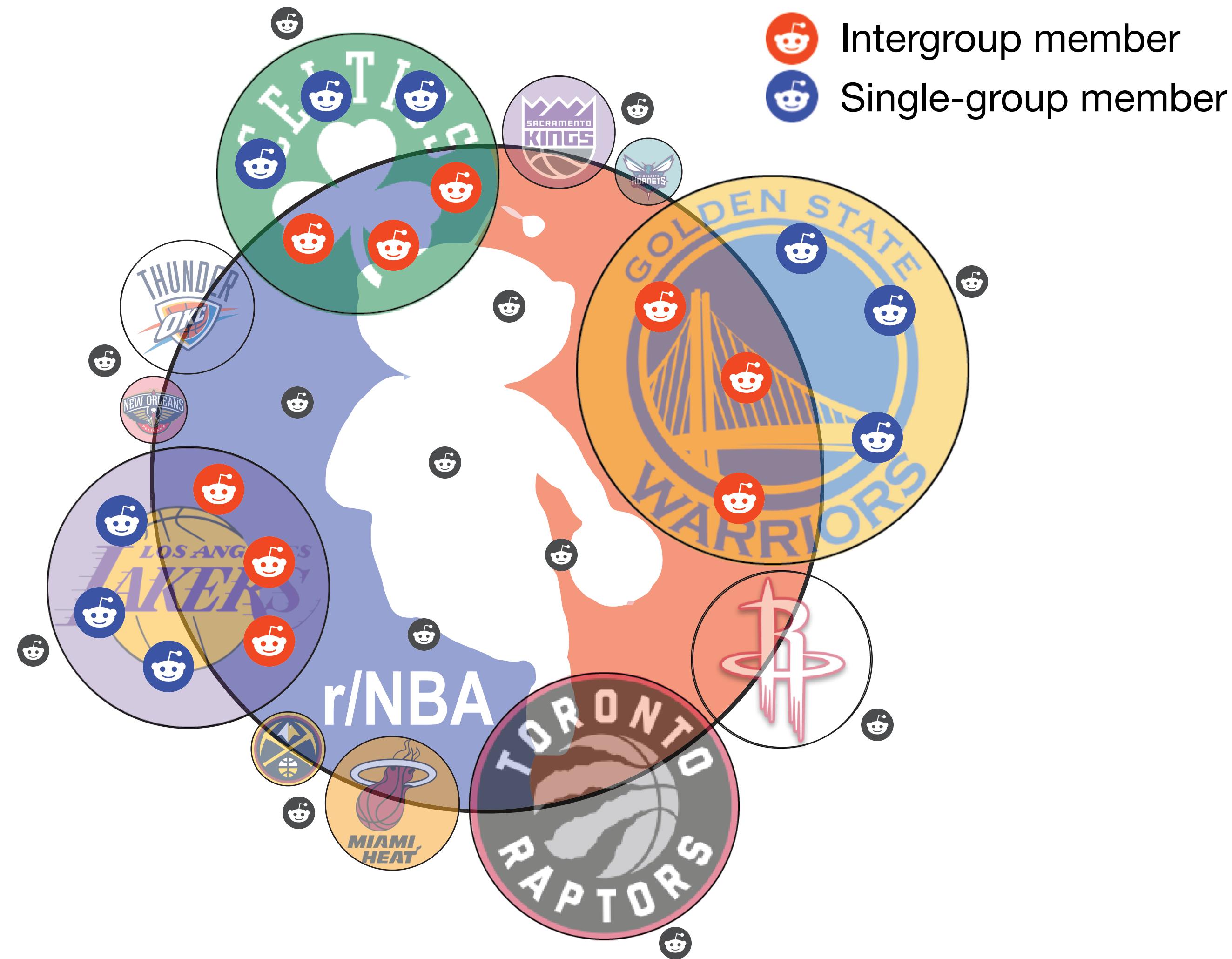
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Identifying Team Affiliation
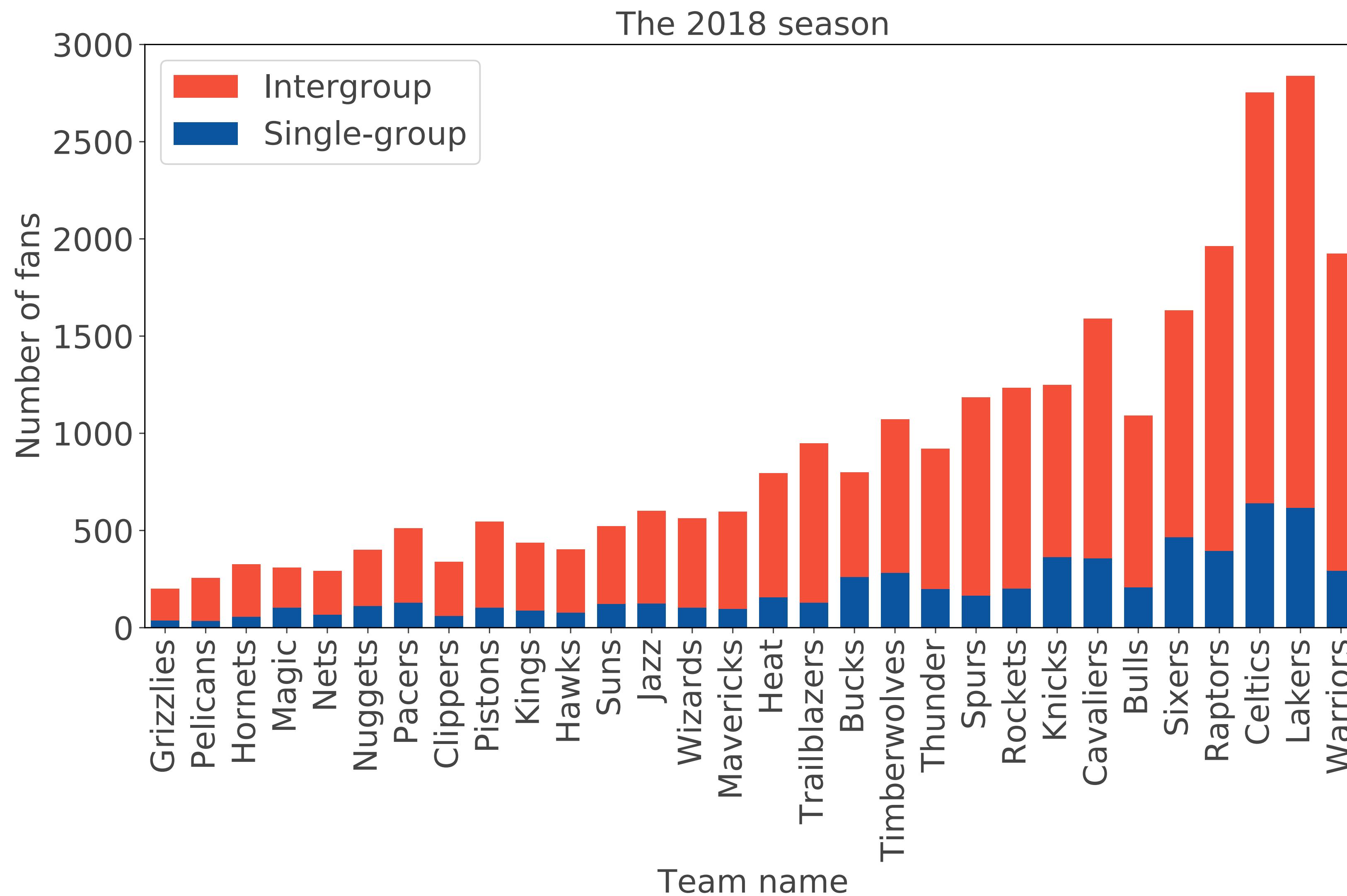
- Posting/commenting in a team subreddit (intragroup setting)

- Using a team's flair in /r/NBA (intergroup setting)

Only users who consistently indicate support for one NBA team throughout an entire NBA season are included in our study

The Structure of NBA Subreddits

Intergroup member
Single-group member

r/NBA

# Basic Stats

The 2018 season
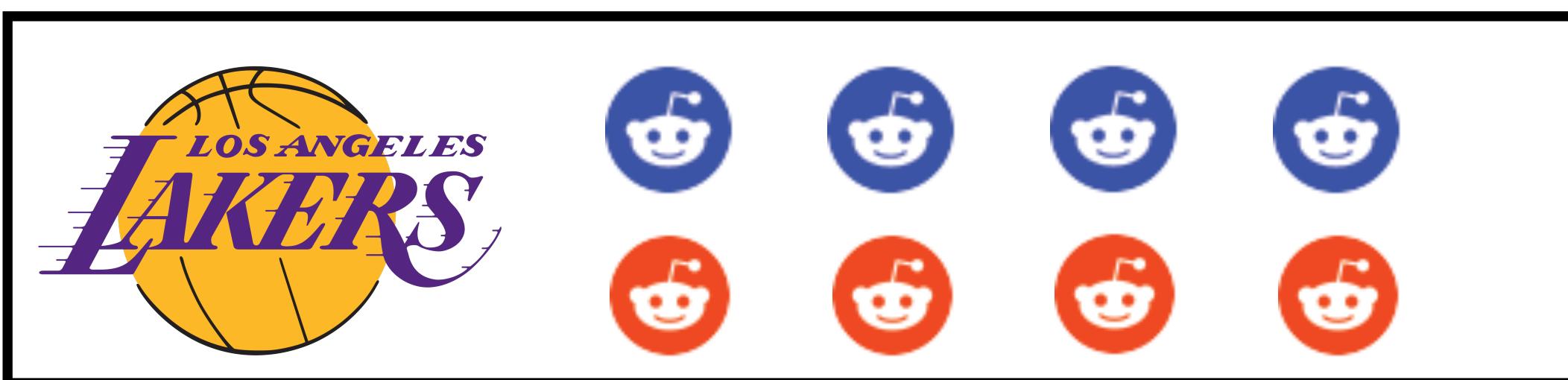
Matched Intergroup Members
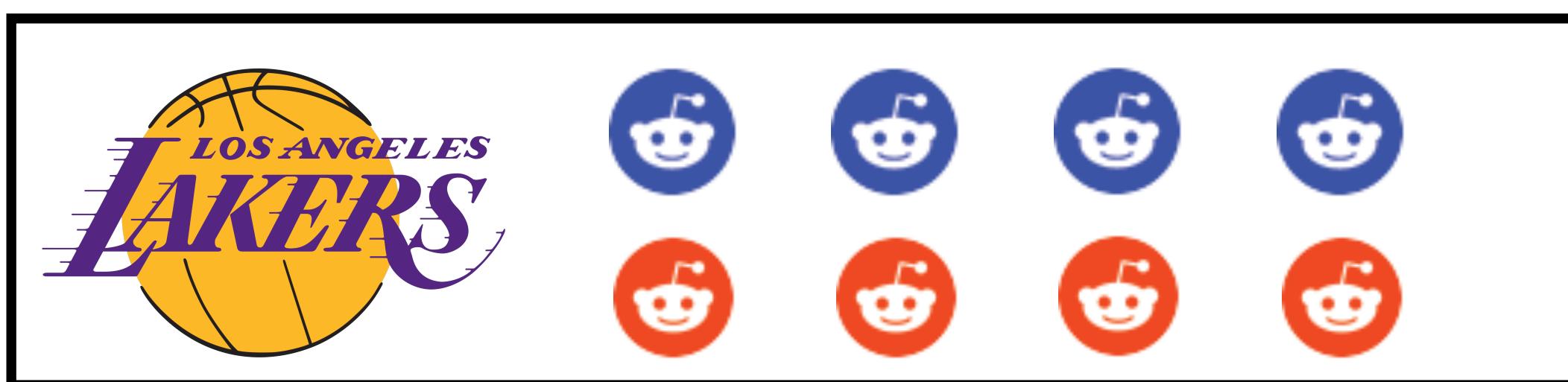
Matching

Matched Intergroup Members
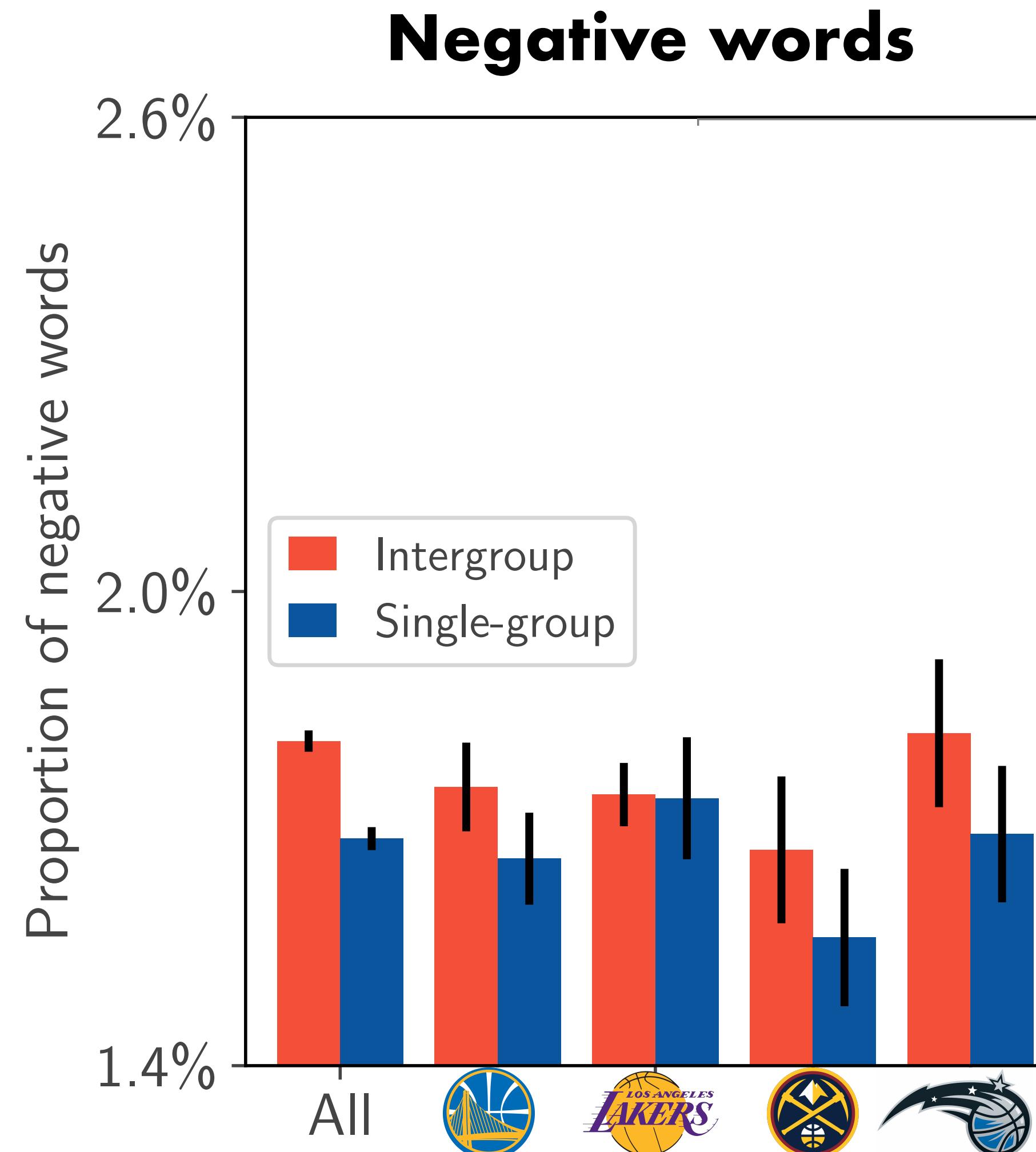
- The number of comments

- The average time gap between comments

- The average length of comments

- The proportion of comments in the playoff season

- The proportion of comments in the game threads
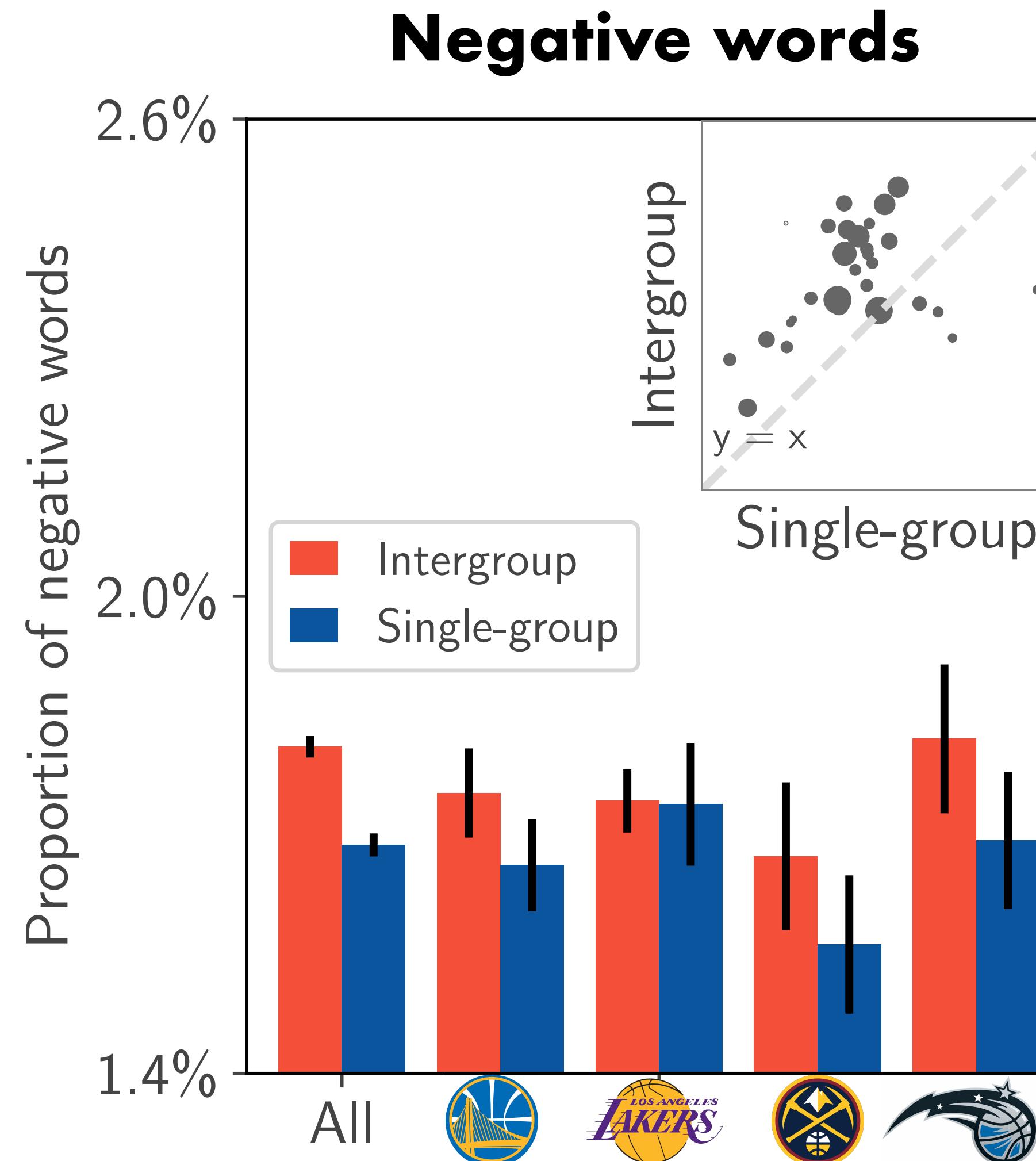
Language Usage Analysis

- LIWC [Pennebaker et al. 2007]: the prop. of emotional words (pos, neg, swear)

- Hate speech detection model [Davidson et al. 2017]: the prop. of hate speech comments identified

- Fightin-Words model [Monroe et al. 2008]: identify a list of distinguishing key words that are overused by intergroup or single-group members
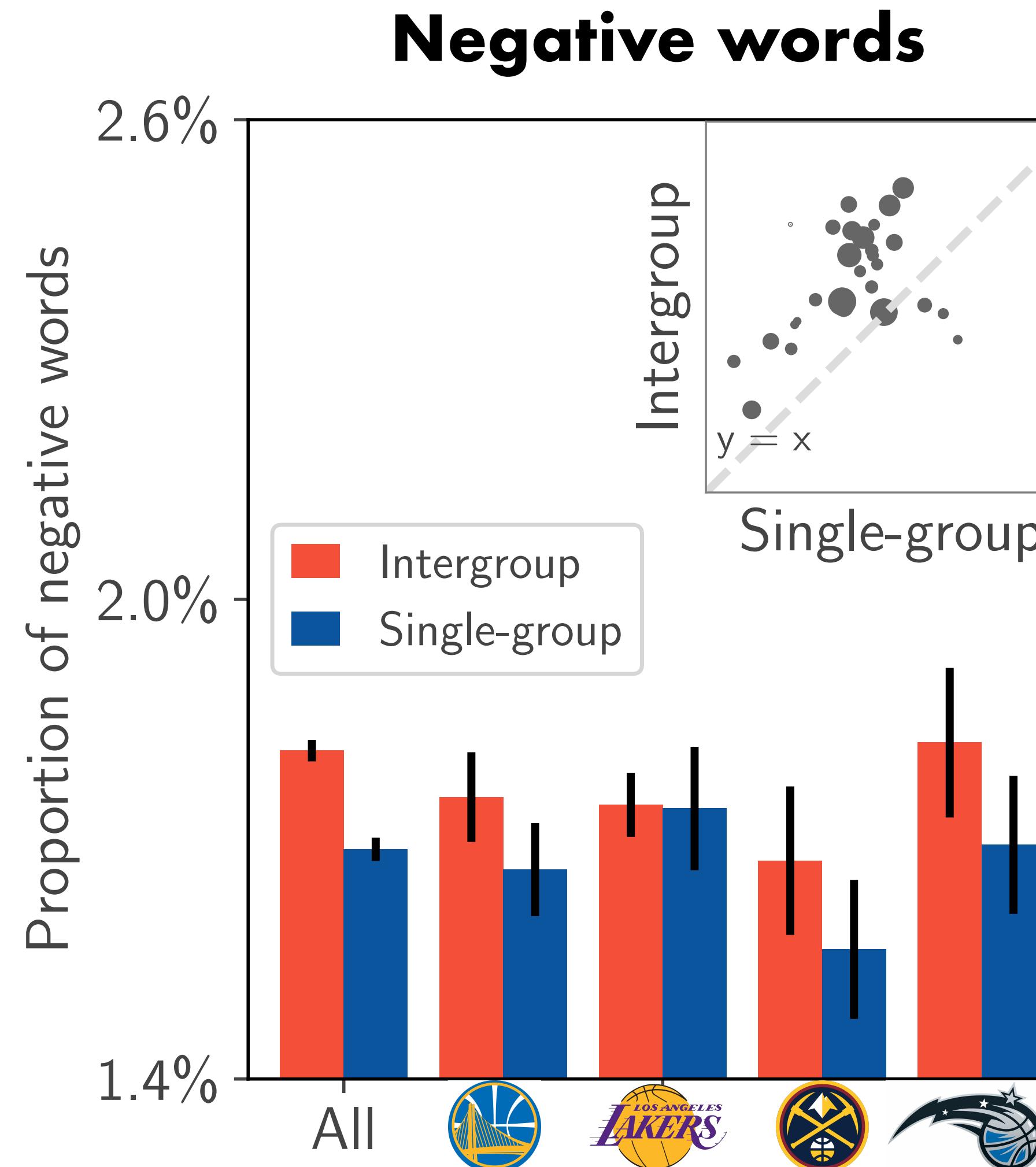
Intergroup vs. Single Group Members in the Team Subreddit

Negative words

Intergroup vs. Single Group Members in the Team Subreddit

Negative words
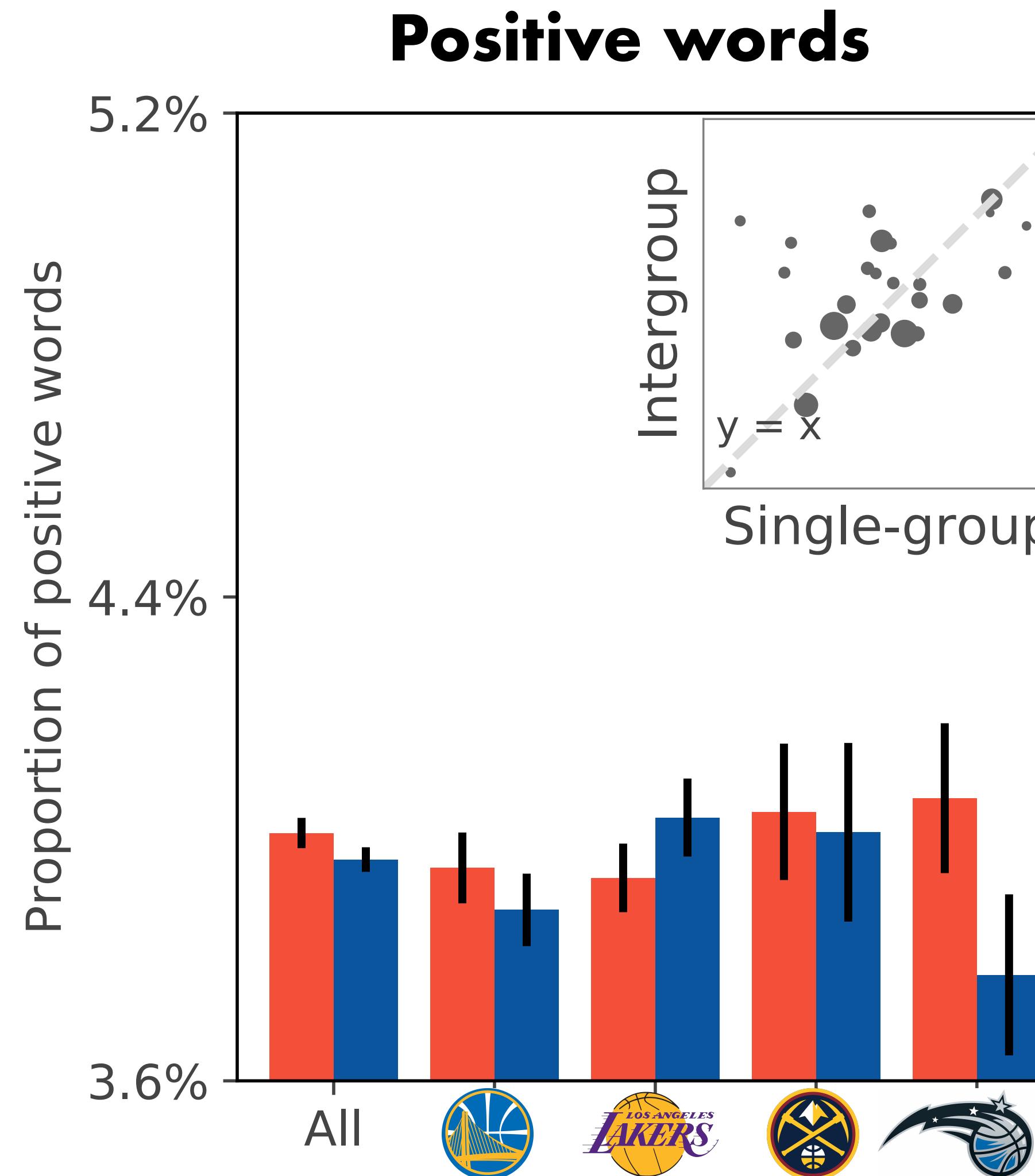
# Intergroup vs. Single Group Members in the Team Subreddit
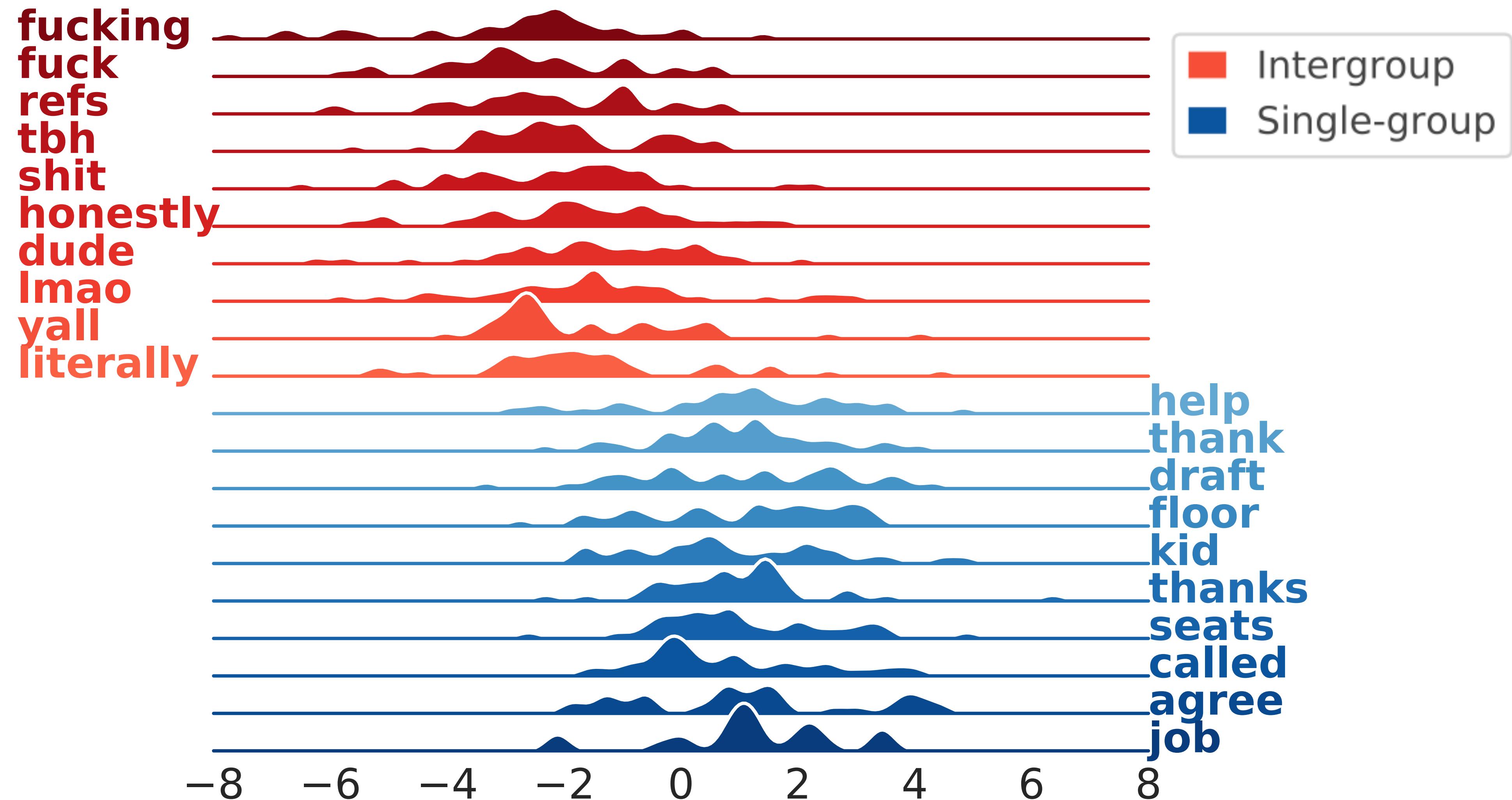
Negative words

Intergroup members tend to use more **negative** and **swear** words and generate more **hate speech**

Intergroup vs. Single Group Members in the Team Subreddit

Positive words

Not statistically significant!
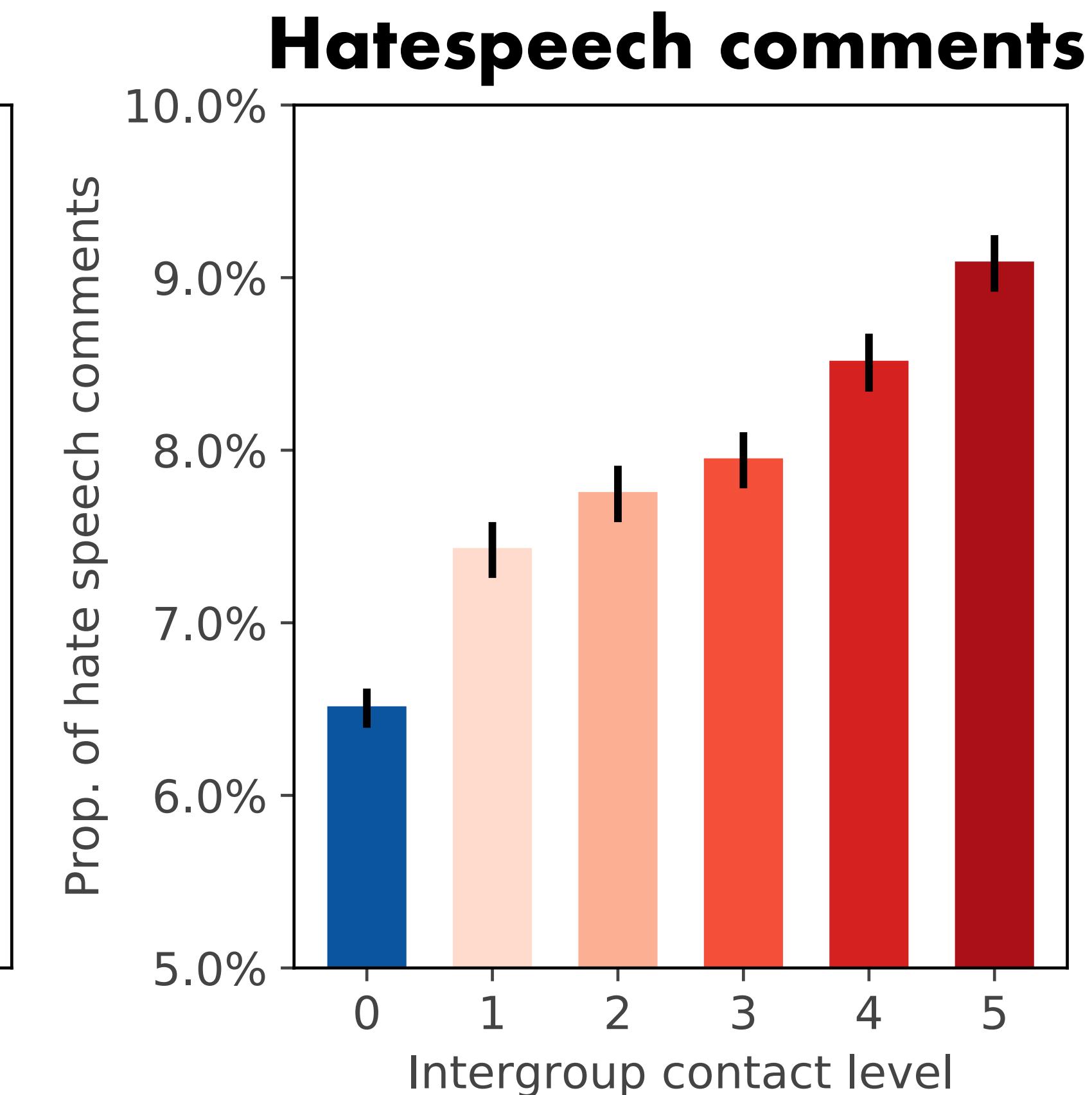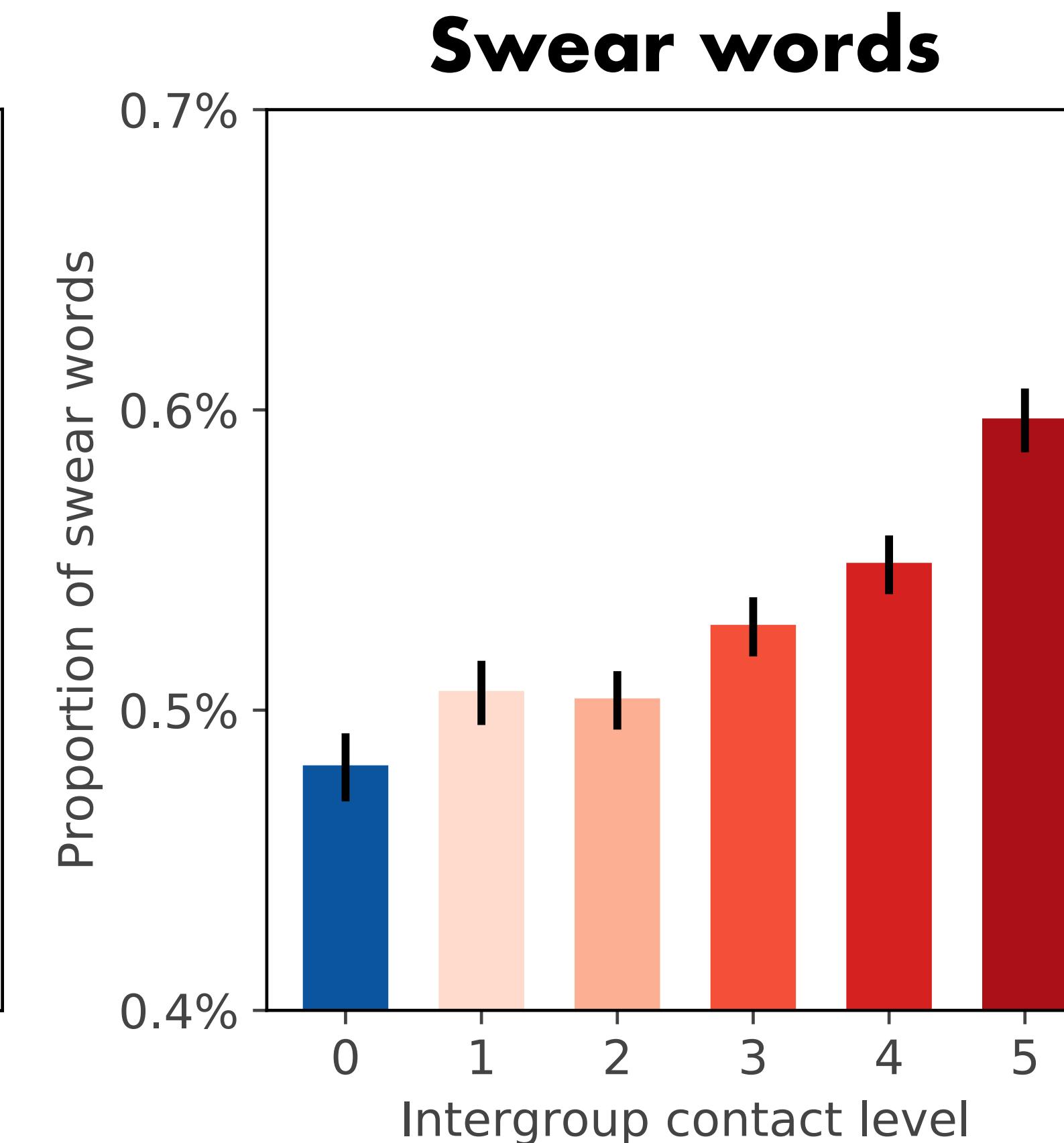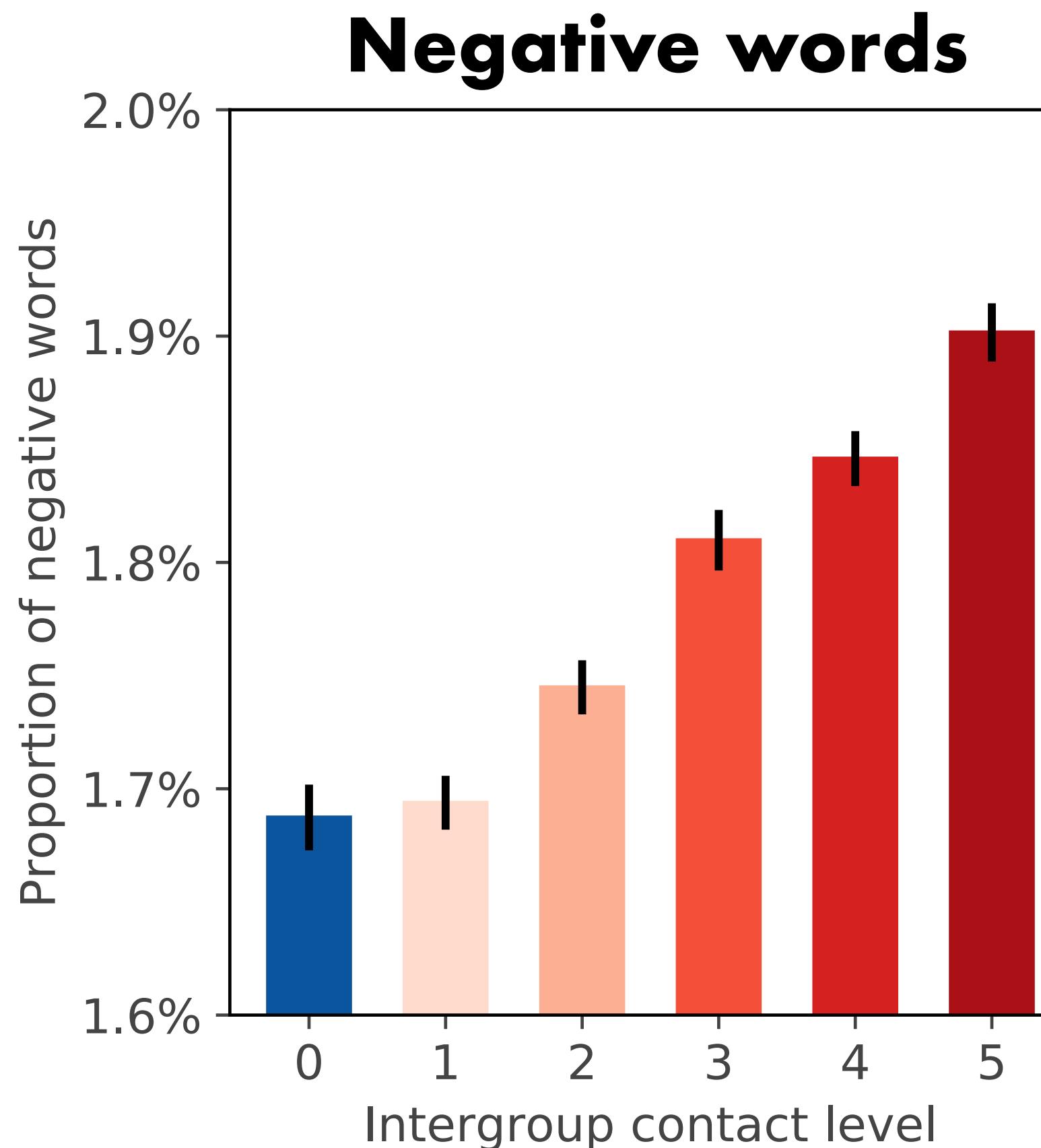
Intergroup vs. Single Group Members in the Team Subreddit

Different Levels of Intergroup Contact

- Fraction of comments in the intergroup setting (/r/NBA)

- Apply the matching technique and find five closest intergroup members

- Assign a label 1, 2, 3, 4, and 5 based on their intergroup contact level

# Different Levels of Intergroup Contact
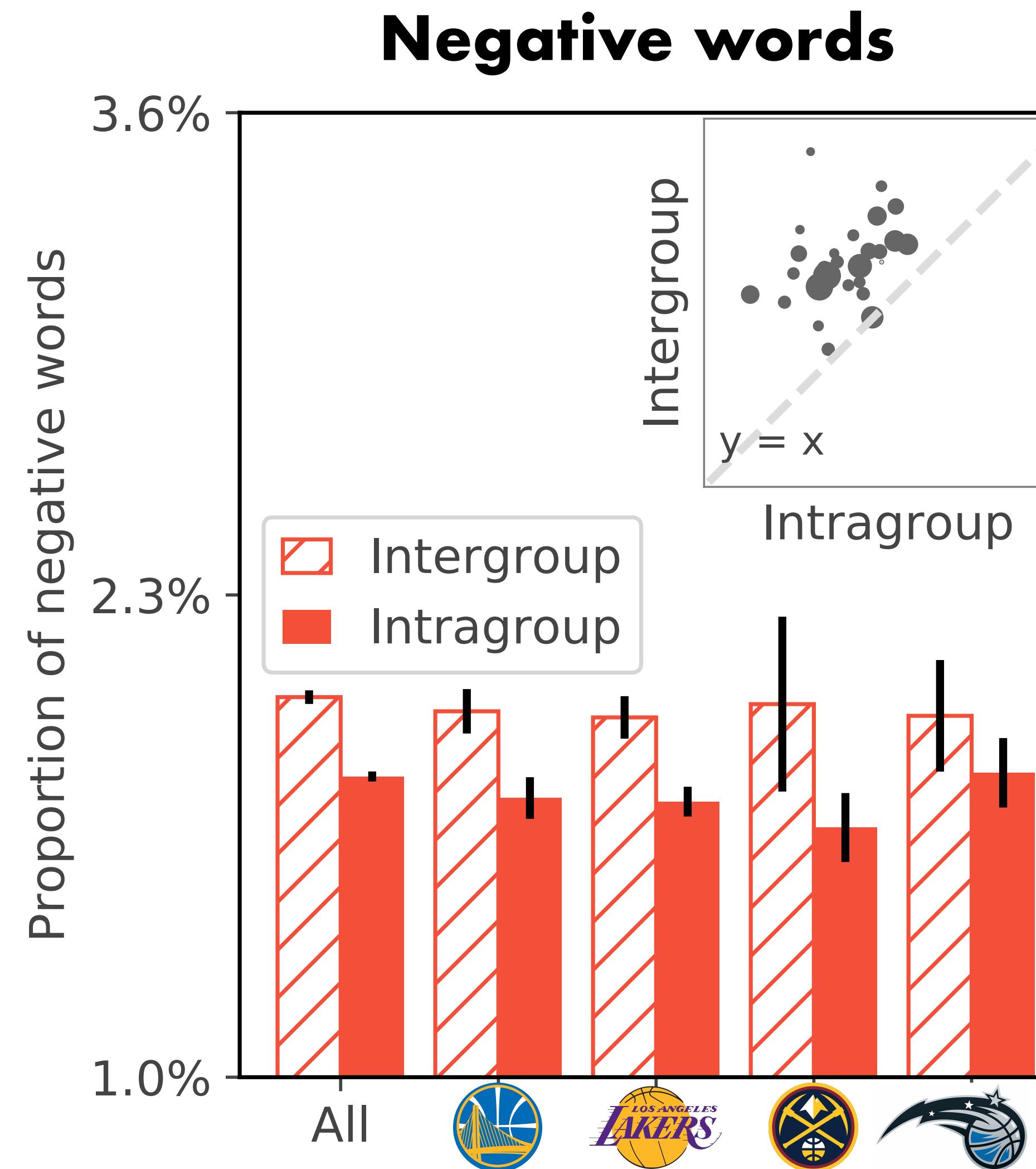
Confirmed using regression analyses

One Person, Two Settings

- **Same** users between intergroup (/r/NBA) and intragroup (team subreddit) settings

- Naturally controls for the most of the confounding factors
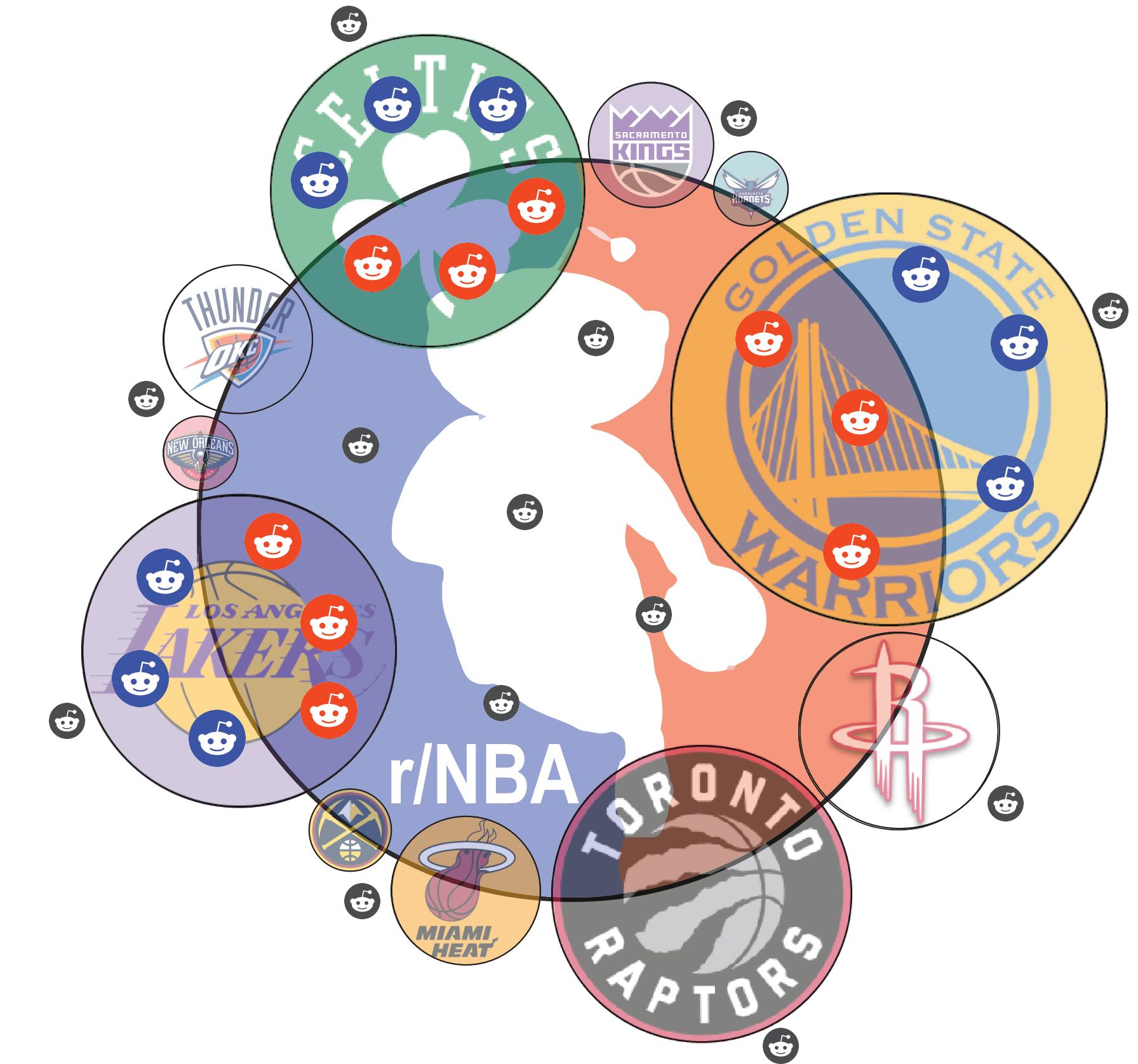
Intergroup vs. Intragroup Settings

Negative words

Proportion of negative words

3.6%

2.3%

1.0%

Legend:
- Intergroup
- Intragroup

Inset: Intergroup vs. Intragroup, y = x

X-axis: All, Golden State Warriors, Los Angeles Lakers, Denver Nuggets, Orlando Magic

Intergroup members use **even more negative** language in the intergroup setting

Implications

- Users selectively become intergroup members

- Exposing people to opposing groups/views may not reduce polarization

- Obervational study can provide complementary evidence to experimental studies

Jason Zhang, jasondarkblue.com, @darkblue_jason

References

[1] White et al. (2015) Emotion expression and intergroup bias reduction between Muslims and Christians: Long-term Internet contact. Computers in Human Behavior, 53, 435-442.

[2] Kim et al. (2018) Intergroup contact through online comments: Effects of direct and extended contact on outgroup attitudes. Computers in Human Behavior, 81, 63-72.

[3] Bail et al. (2018) Exposure to opposing views on social media can increase political polarization. Proceedings of the National Academy of Sciences, 115(37), 9216-9221.

[4] Lee et al. (2018) Does social media use really make people politically polarized? Direct and indirect effects of social media use on political polarization in South Korea. *Telematics and Informatics*, *35*(1), 245-254.

[5] Pennebaker et al. 2007. Linguistic Inquiry and Word Count: LIWC 2007. Technical report.

[6] Davidson et al. 2017. Automated Hate Speech Detection and the Problem of Offensive Language. In Proceedings of International AAAI Conference on Web and Social Media. 512–515.

[7] Monroe et al. 2008. Fightin'words: Lexical Feature Selection and Evaluation for Identifying the Content of Political Conflict. Political Analysis 16, 4 (2008), 372–403.