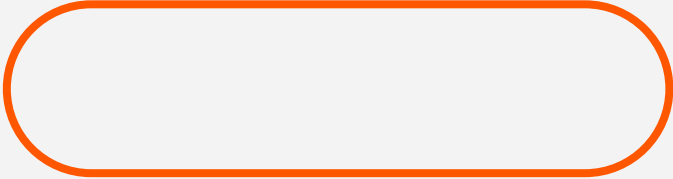


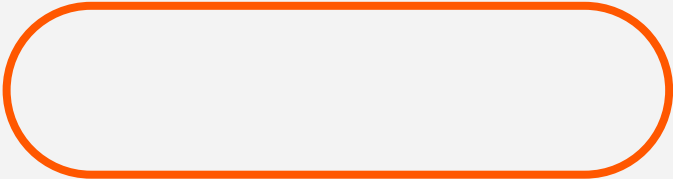


Echo Chambers & Cognitive Bias: Measuring Reactions on Reddit

Stanley Ou, Andy Ouyang, Julieta Ruiz, Gideon Deasy



Opening Question



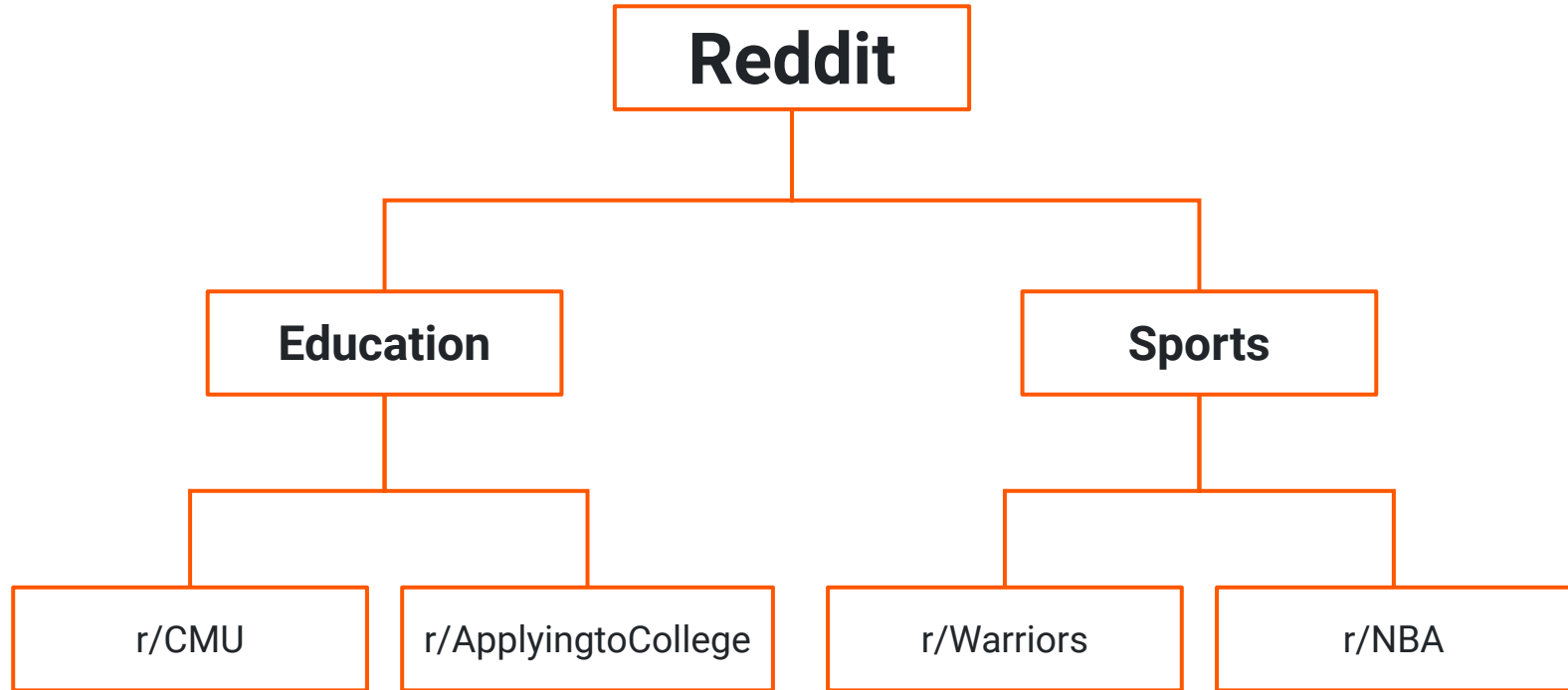
Research Questions

- How do people in a community of like-minded individuals react to polarizing information that goes against and for their beliefs?
- How does this differ when the post is presented in a community of people who share an identity targeted by the post versus a more general community (i.e sports team vs sports in general)?

Class Connection

- In class we discussed the various cognitive biases that impact how preferences are constructed and how decisions are made.
- Echo chambers and connections to priors
- Problem of the troll in information cascades

Data Used ~ Reddit





Methods



Example of Posts (+)



Long_History_7736 • 3d ago



nanapopo • 2d ago



Fair_Competition7820 • 2d ago



Was this written by the Marketing Department at CMU



34



Reply



Share



10



Reply



Share



And don't even get me started on the city of Pittsburgh. It's the perfect backdrop for college life, with its rich culture, thriving arts scene, and endless opportunities for exploration.

So yeah, shoutout to CMU for being the best decision I ever made. Thanks for making this place feel like home, and thanks to all of you for being a part of this amazing journey with me.

sophomore who entered with similar feelings, and I do not like a lot of the culture here. I don't like the pipeline, I don't like the lack of entrepreneurship, I don't like the highly theoretical grindiness of the n, etc.

s, I believe you are misled, just as I was. There is no "toxic cutthroat" environment here in the way you t. No, everything online talking about how CMU is competitive with grade cutoffs is largely untrue o cutthroat o. Typically,

like CMU pr ody. The for y argue that subjective, ai

at CMU is p sented." You diversity of i and much of r others) is I erson my wl oes a lot to for "there's interested ti

point about b don't have r o little schoc n for sports game a

sion, you are making ust want to make st ly a big enough pic

of Posts (-)



Confident_Promise_71 • 2d ago

This reads like ChatGPT.



56



Reply



Share



karmaniak • 2d ago

It's the 'in conclusion'. Dead giveaway.



20



Reply



Share



14



Reply



Share



Reply



Share



ChatGPT Analysis

will give you a reddit post and a series of replies to that post. I want you to assign a score to each reply representing the degree of agreement/disagreement that each reply has relative to the original post (1 is strongly disagree and 10 is strongly agree). I want you to assign another score to each reply but now representing the degree of aggression/hostility (where 1 is very friendly and 10 is very aggressive). Make use of decimal values. I will number the posts. Please try and be objective, using your knowledge of sentiment scores.

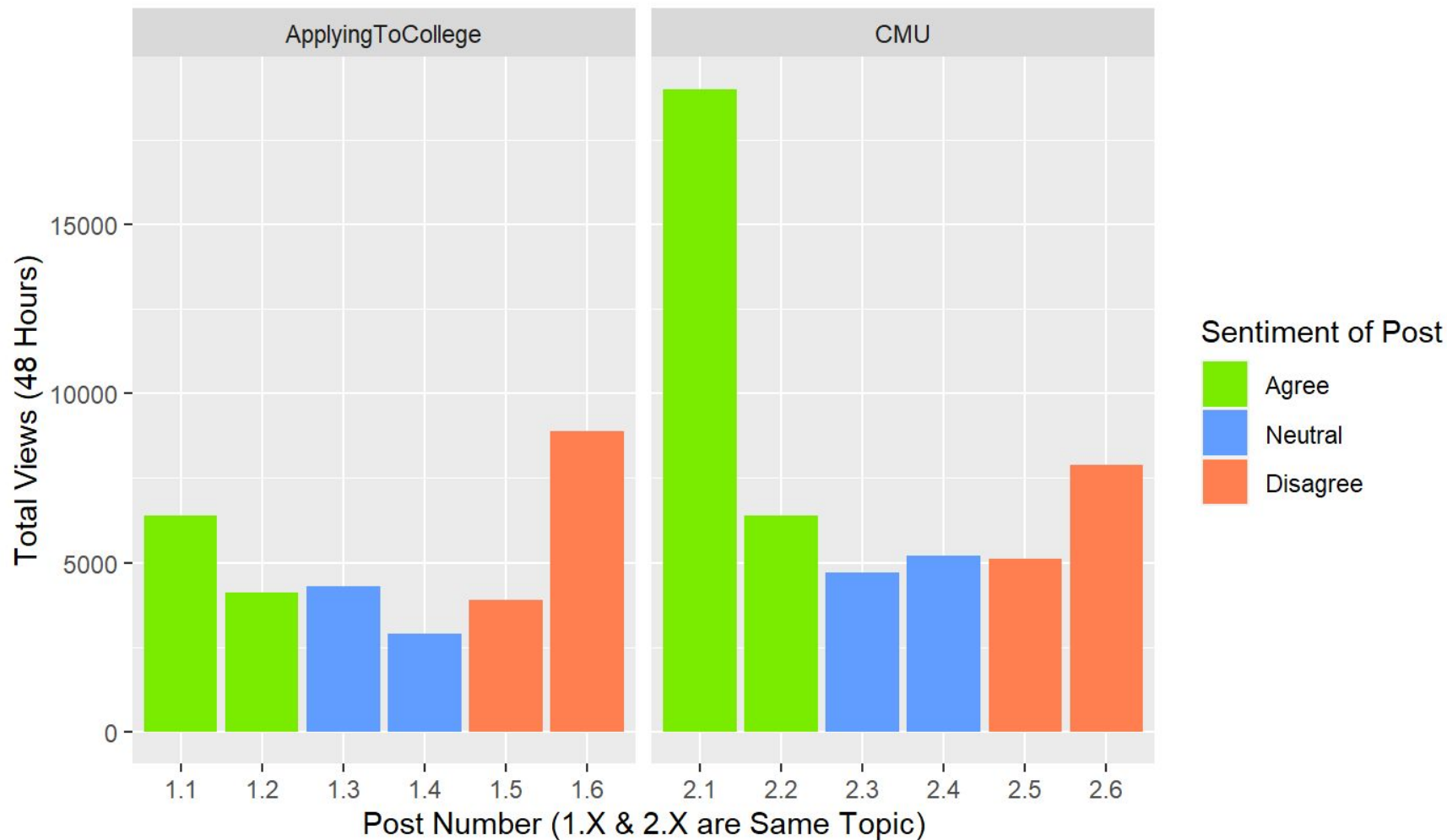
5. Degree of agreement: 5.0
Degree of aggression: 2.0
Explanation: This reply is neutral, opening up a spot for discussion. The tone is aggressive.
6. Degree of agreement: 6.0
Degree of aggression: 2.0
Explanation: This reply is neutral, mentioning a dining hall but acknowledging the need for more information.
7. Degree of agreement: 7.0
Degree of aggression: 2.0
Explanation: This reply is neutral, agreeing with the negative post.



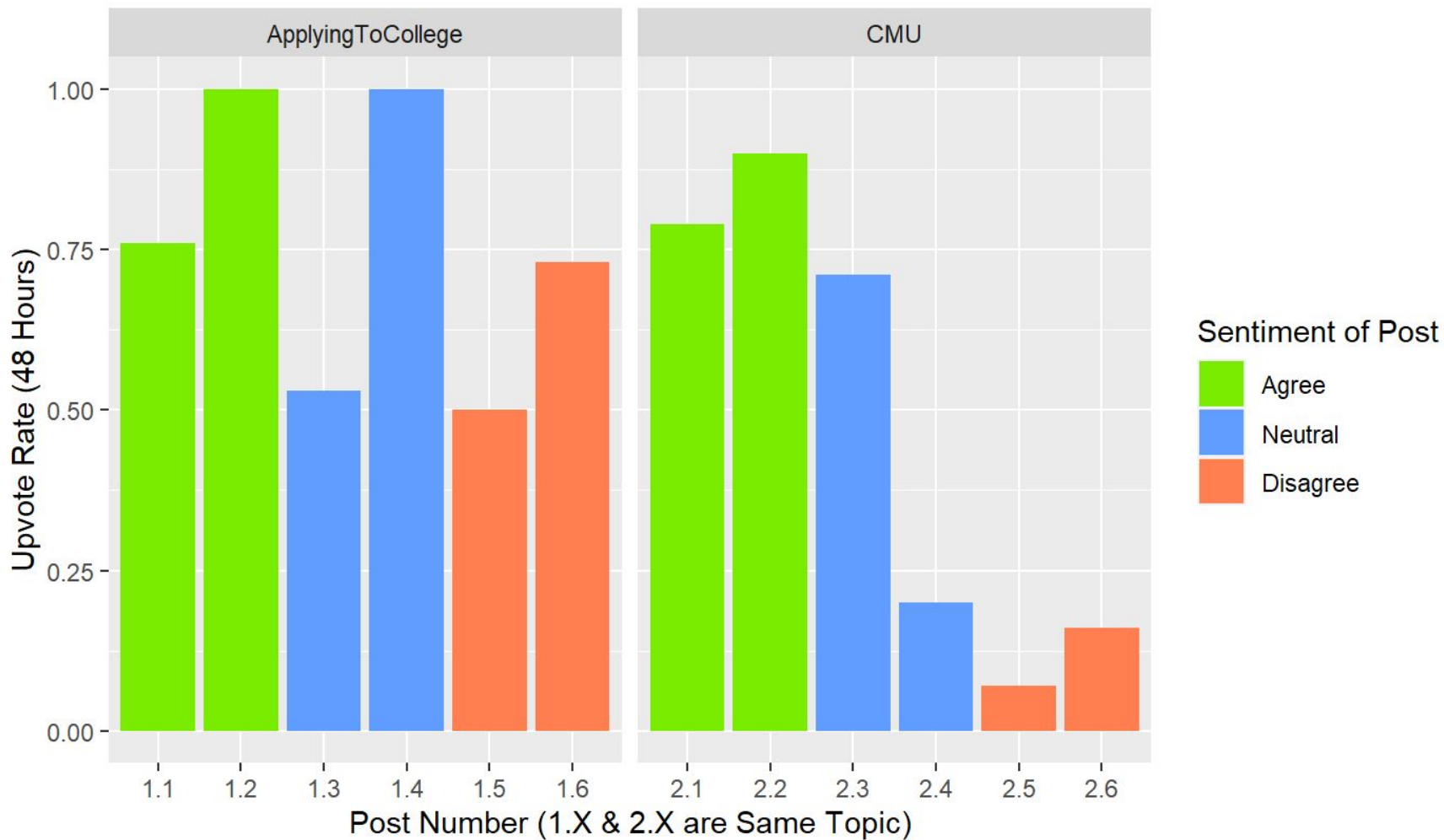
Education



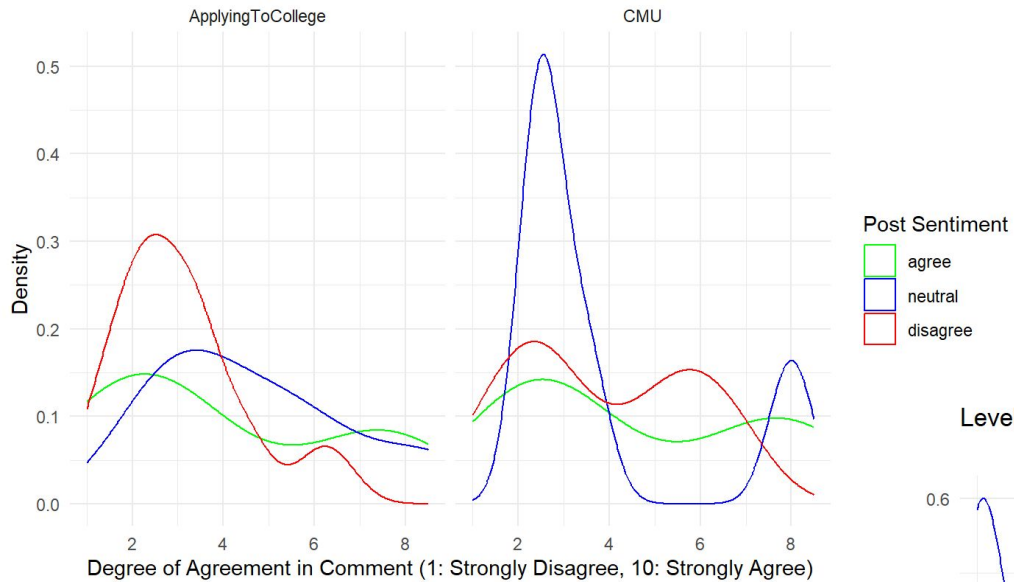
Total Views Across Subreddits by Sentiment of Post



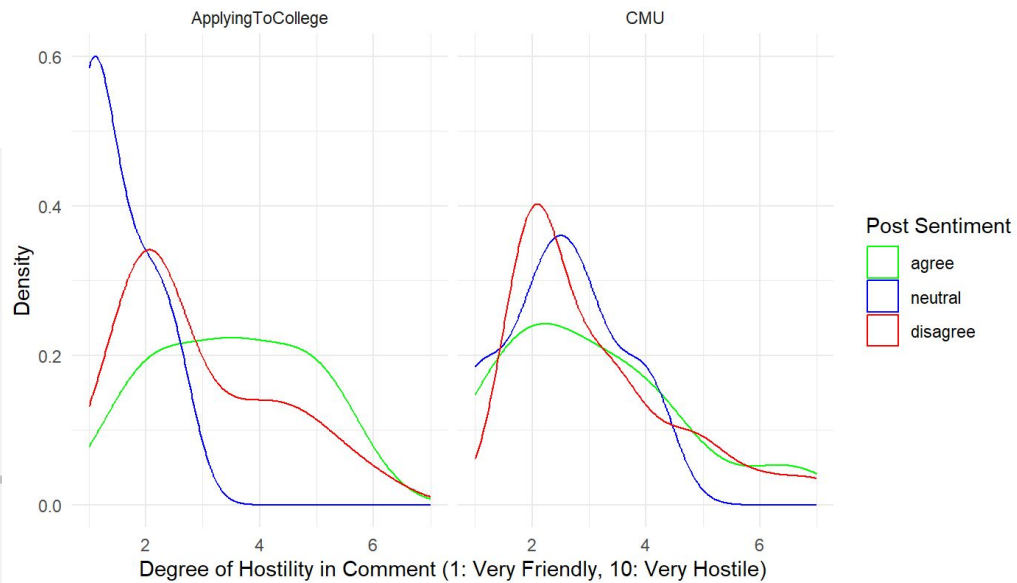
Upvote Rate Across Subreddits by Sentiment of Post

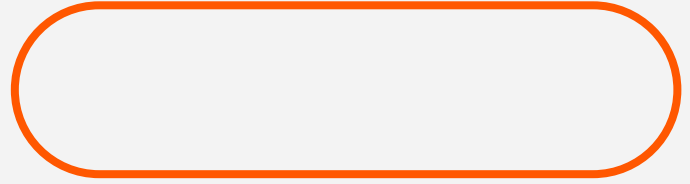


Level of Agreement from Comments Towards Original Post Sentiment

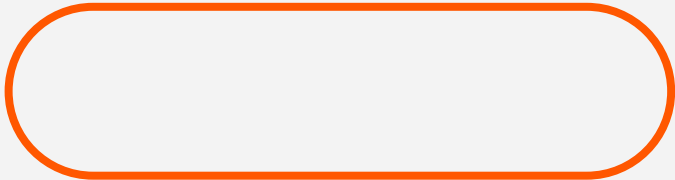


Level of Hostility from Comments Towards Original Post Sentiment





Sports



r/Warriors



Posted by u/Over_Theme639 2 days ago

We should consider a Curry Trade

Discussion



Sorry, this post has been removed by the moderators of r/warriors.

Moderators remove posts from feeds for a variety of reasons, including keeping communities safe, civil, and on-topic.

As a lifelong Warriors fan, it hurts me to say this but I think the Warriors should seriously consider trading Steph if we want any chance of getting a ring.

Curry's performances this season have been inconsistent. He's had four games this season with less than 10 points while playing considerable minutes. You can say that it's because the team is performing poorly but he's the type of guy to give it his all every night. He is 36 years old and recently just got injured.

And even if you think Wiggins, Klay, Draymond, etc are the problem, there is no chance we get enough pieces to compliment Curry to be anything better than a 6-10th seed.

The best solution for the Warriors right now is embracing a full rebuild and exploring trade options with the entire core roster.

Curry will no doubt have a better shot at a championship elsewhere and we also set ourselves up for a brighter future.



43 Comments



Share



Save



...



r/warriors • 2 days ago
Organic-Ad-8098

...

My first Warriors game!

Memorabilia

Hey guys, I just wanted to share a little positivity with everyone. So, a week ago, I had the incredible opportunity to attend my first ever Warriors game (vs Bucks), and let me tell you, it was an experience I'll never forget. The energy in the arena was electric. From the moment I walked in, I could feel the passion and dedication of our DubNation. So glad we clinched out the Dub aswell!!!!!!

Now, I know the season isn't going as we hoped, but I couldn't be prouder of this community. Watching the game live really invigorated my love for this community. It reminded me why I'm proud to be a Warriors fan.



97



12



Share

r/NBA



Posted by u/Over_Theme639 2 days ago

The Warriors should consider a Curry trade



Sorry, this post has been removed by the moderators of r/nba.

Moderators remove posts from feeds for a variety of reasons, including keeping communities safe and their purpose.

As a lifelong Warriors fan, it hurts me to say this but I think the Warriors should seriously consider the idea of trading Steph Curry if they want any chance of getting a ring.

Curry's performances this season have been inconsistent. He's had four games this season with more than 10 points while playing considerable minutes. You can say that it's because the team is performing poorly but he's the type of guy to give it his all every night. He is 36 years old and recently just got injured.

And even if you think Wiggins, Klay, Draymond, etc are the problem, there is no chance we get enough pieces to compliment Curry to be anything better than a 6-10th seed.

The best solution for the Warriors right now is embracing a full rebuild and exploring trade options with the entire core roster.

Curry will no doubt have a better shot at a championship elsewhere and we also set ourselves up for a brighter future.

26 Comments Share Save ...



r/nba • 2 days ago
Additional-Ad8627

Being an NBA fan is amazing

Hey guys, I just wanted to share a quick story. So, a week ago, I had the incredible opportunity to attend my first ever Warriors game (vs Bucks), and let me tell you, it was an experience I'll never forget. The energy in the arena was electric. I was so glad we clinched out the Dub as well!!!!!!

Now, I know the warriors' season isn't going as we hoped, but I couldn't be prouder of my community. Watching the game live really invigorated my love for the NBA. It reminded me why I'm proud to be a Warriors fan and an NBA watcher.



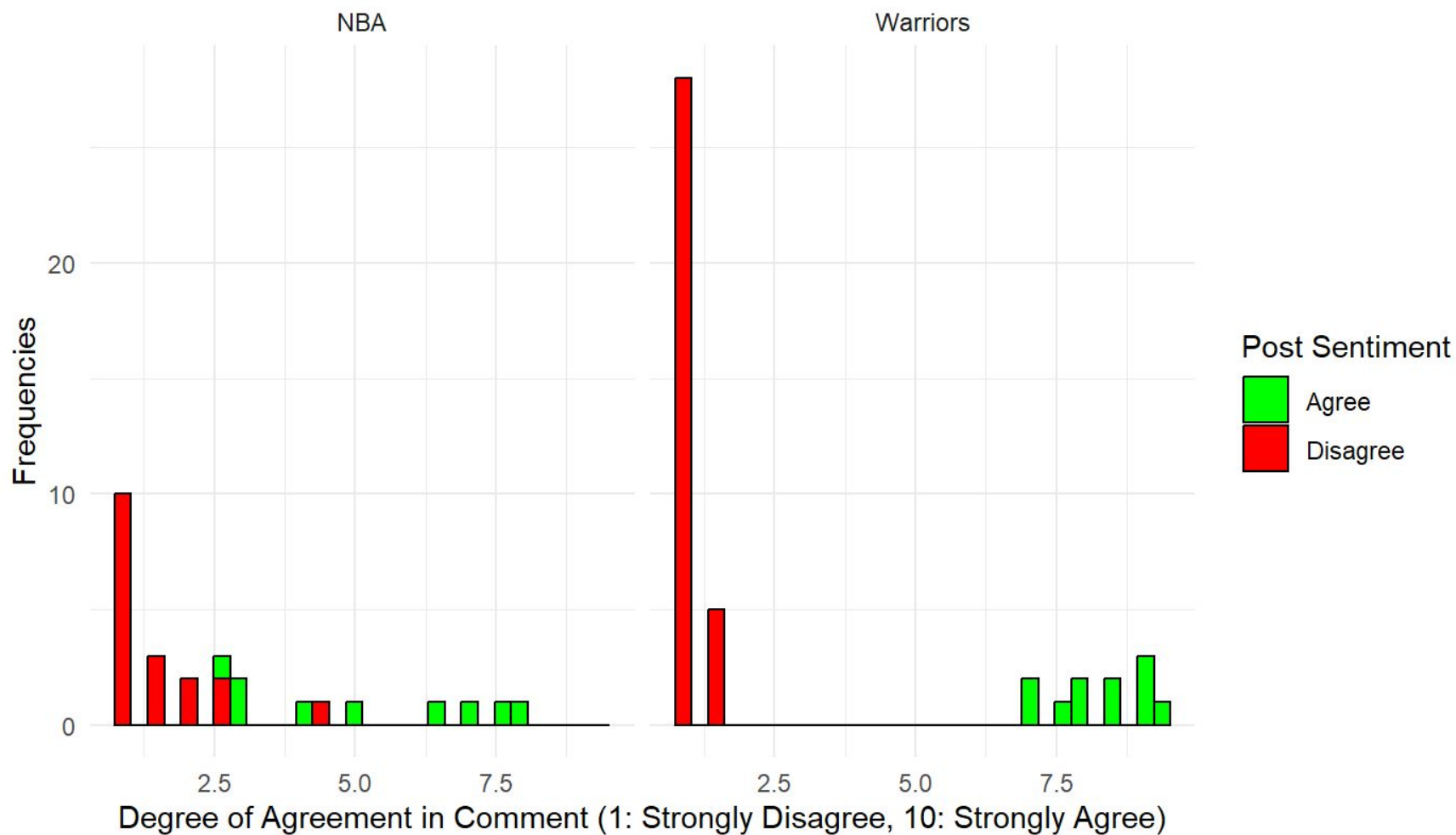
9



Share

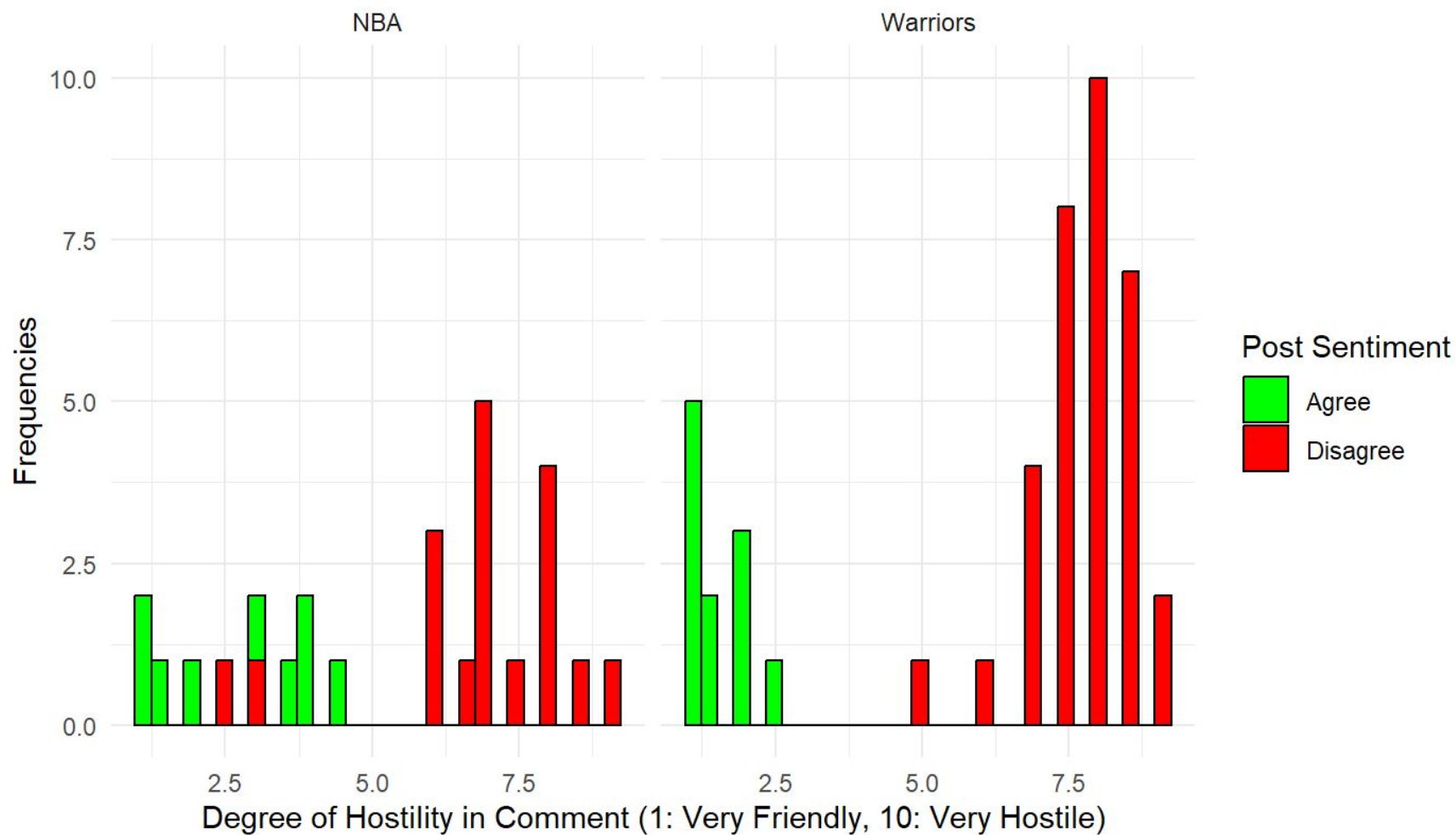
Distribution of Agreement from Comments Towards Original Post Sentiment

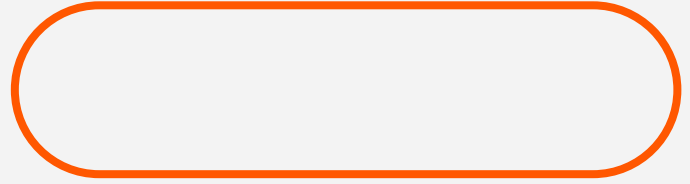
1.2 B



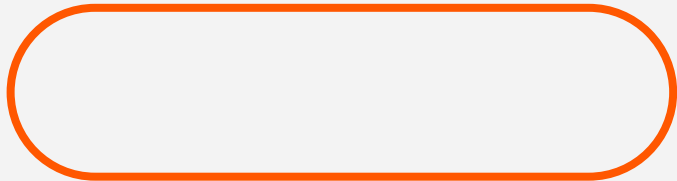
Distribution of Hostility from Comments Towards Original Post Sentiment

1.2 B





Results



Conclusions

- As expected, disagreement posts garner negativity and agreement posts garner positivity. Neutral is mixed.
- Reactions much more polarized in “identity” subreddits as opposed to more general subreddits
- Posts that are in agreement or disagreement have higher engagement than neutral posts
- Among all the pooled disagreement posts, there were far more accusations of the post being written by generative AI as opposed to agreement posts

Limitations & Future Research

- Directly copying posts from ChatGPT was not effective as their style of writing is too easily recognizable even though we tell it to write like a redditor
- Auto-moderation in subreddits prevented posting.
 - Small sample size
- ChatGPT sentiment analysis inaccurate => use pre-built model trained for sentiment analysis?
- Difficult to objectively make agree/neutral/disagree posts
- Other topics & other forums - more trial and error required

The Meaning Behind Result

- Understanding Human Behavior: We gained a deeper understanding of how information is processed within echo chambers and how people will seek and discuss information that aligns with their priors.
- Impact of Technology on Communication: How anonymity and discourse contribute to online conversations involving different opinions.
- Ethical Considerations with Echo Chambers: Echo chambers contribute to the polarization of society by preventing individuals from exploring diverse perspectives.



Thank you!

Questions?



Link to Spreadsheet w/ Posts

https://docs.google.com/spreadsheets/d/1O2kRFjOBoZ2V4vQy3lA9Sbo_2tOQdkJ8FXhig5C5Wn0/edit?usp=sharing