

Persuasion and its Impact on Engagement in Social Media

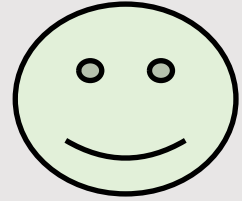
Lynnette Hui Xian Ng

Paper link:



Human Biases

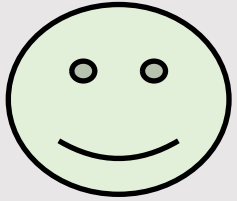
Shortcuts that the human brain uses to make sense of uncertainty



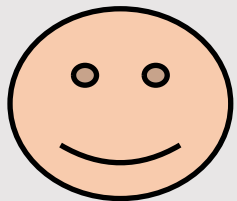
KIMCHI CAN CURE FLU



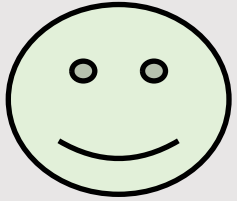
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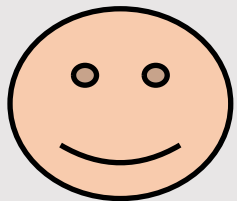


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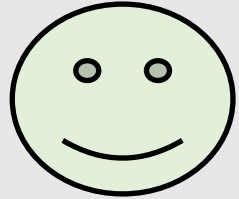


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AVAILABILITY BIAS



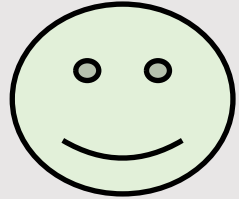
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Kimchi can cure flu

Kimchi can cure flu really fast

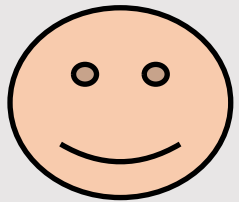
Kimchi soup cured my flu



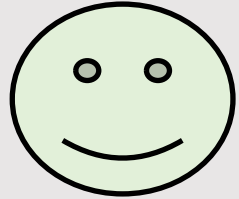
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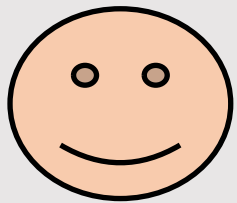


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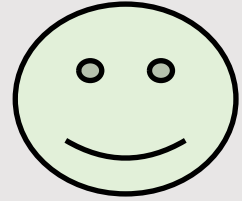
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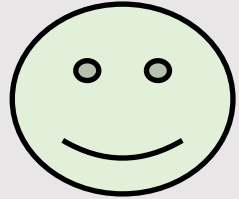
ILLUSORY TRUTH EFFECT



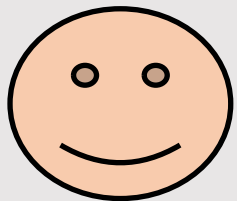
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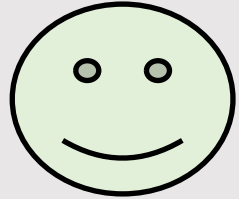
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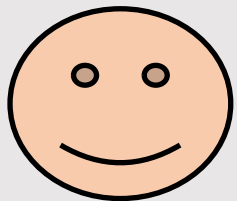


I think Kimchi cures flu!

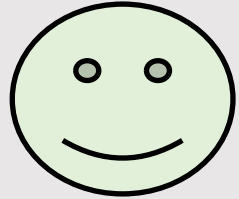


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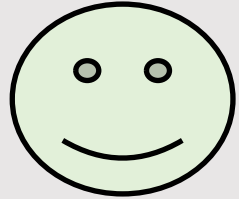
AFFECT BIAS



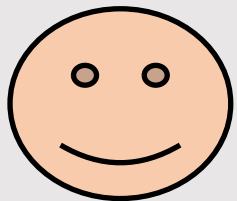
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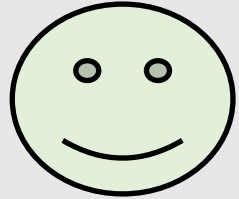
**Don't trust your doctors.
Just take kimchi, it can cure flu.
Your doctors are lying, all you need is
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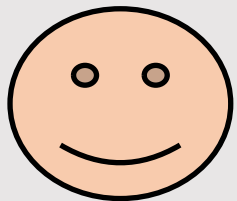


**Yeah, kimchi cures flu, not your
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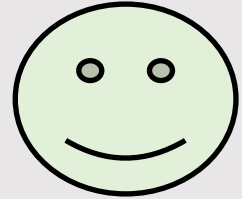


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NEGATIVITY BIAS

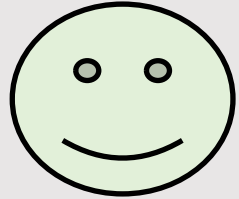


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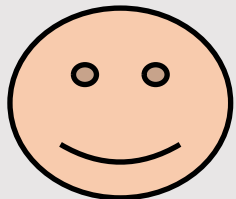
Dr. Z:

KIMCHI CAN CURE FLU

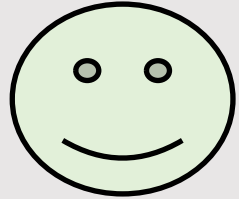


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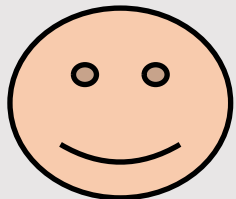
Got to eat kimchi because Dr. Z says
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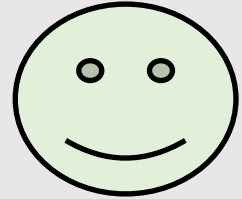
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AUTHORITY BIAS

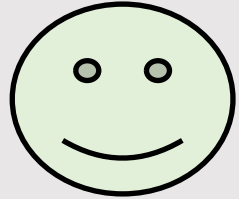


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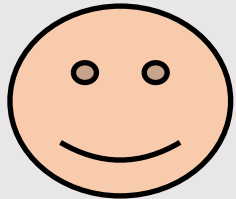


Mum 1:

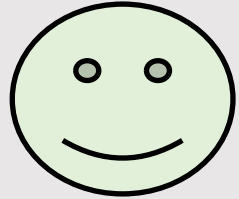
Kimchi can cure flu for kids



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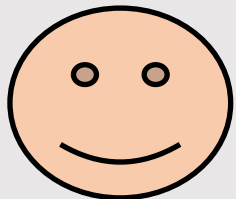


Mum 2:
**Feeding my sick kids kimchi cuz
Mum 1 says it cures flu**

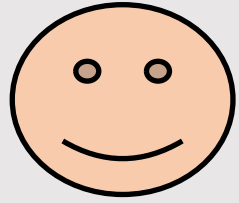


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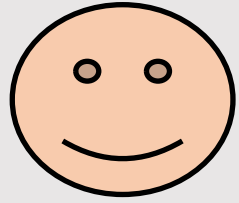
HOMOPHILY BIAS



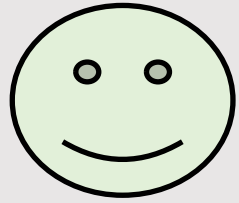
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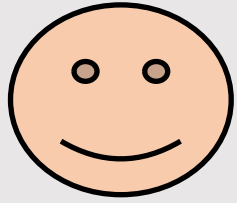
I hear kimchi can cure flu



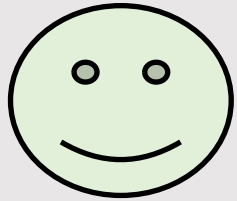
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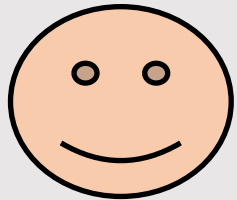
Kimchi does cure flu



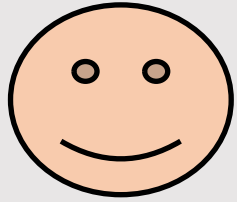
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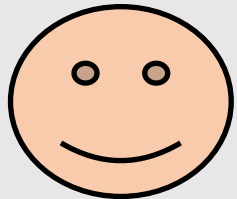
Yup, orange said kimchi can cure flu



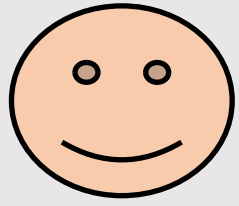
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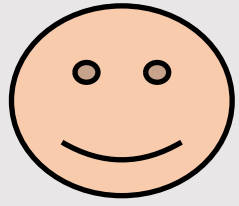
CONFIRMATION BIAS



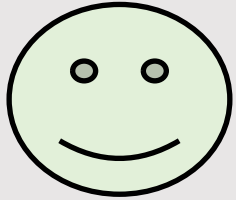
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Kimchi doesn't cure flu



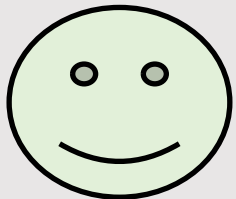
Kimchi doesn't cure flu



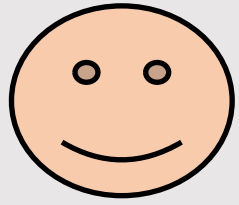
Nono, kimchi cures flu



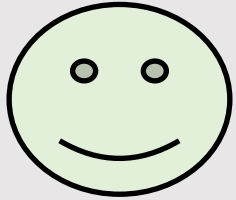
I ate kimchi and it cured my flu



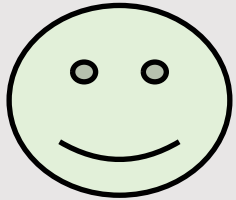
Kimchi cured my flu really quickly



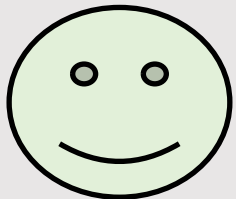
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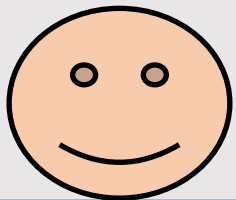
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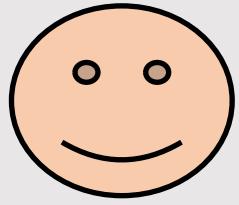
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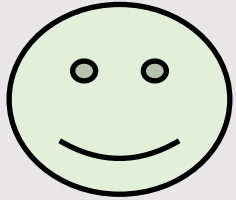
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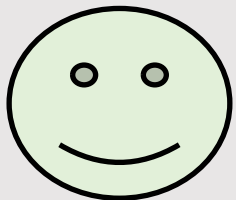
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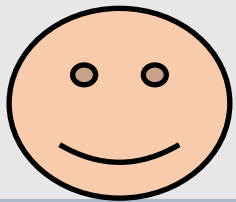
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COGNITIVE DISSONANCE



Kimchi cured my flu really quickly



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Persuasion

- Goal: elicit changes in attitudes or behaviour

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- Social media – widespread reach, accessibility, capacity for cultivating diverse networks

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- Goal: elicit changes in attitudes or behaviour
- Social media – widespread reach, accessibility, capacity for cultivating diverse networks
- Social Media Bots – automated persuasion

Persuasive Influence

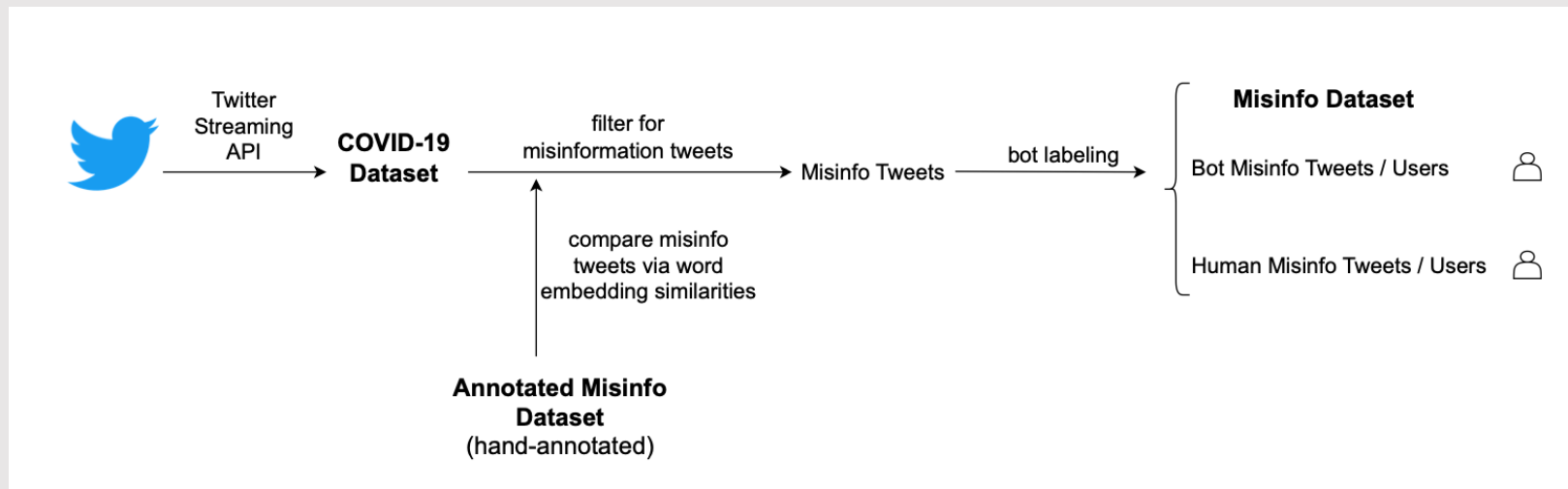
- What impact does persuasive influence have on engagement?

Research Questions

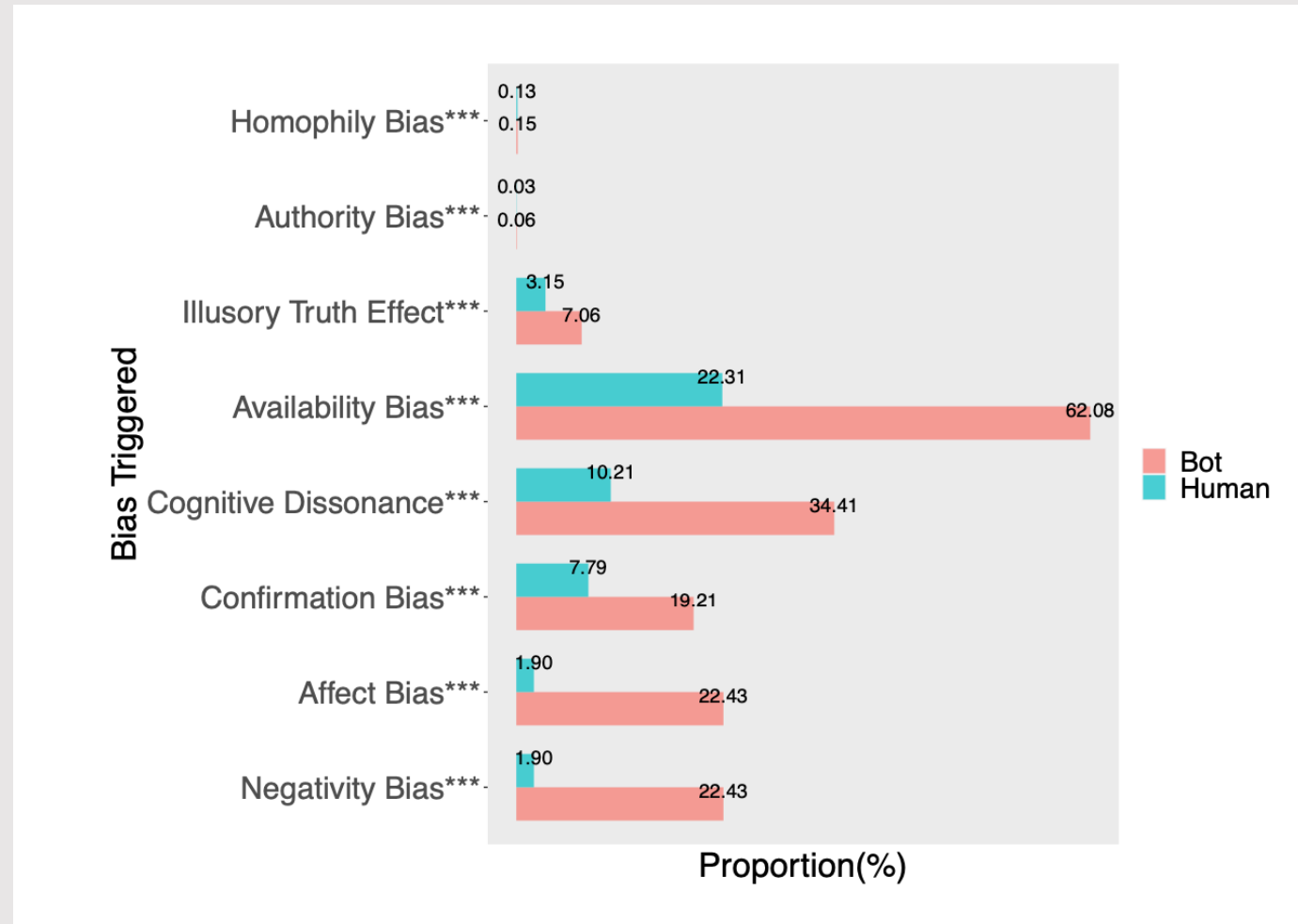
- How can we methodically identify triggers of human biases in online discourses during the pandemic?
 - How do bots employ triggers differently than humans?
- To what extent did triggers of human biases facilitate misinformation to engagement?
 - Did Bot-authored misinformation or Human-authored misinformation benefit more?

Dataset

COVID-19 Misinformation Tweets

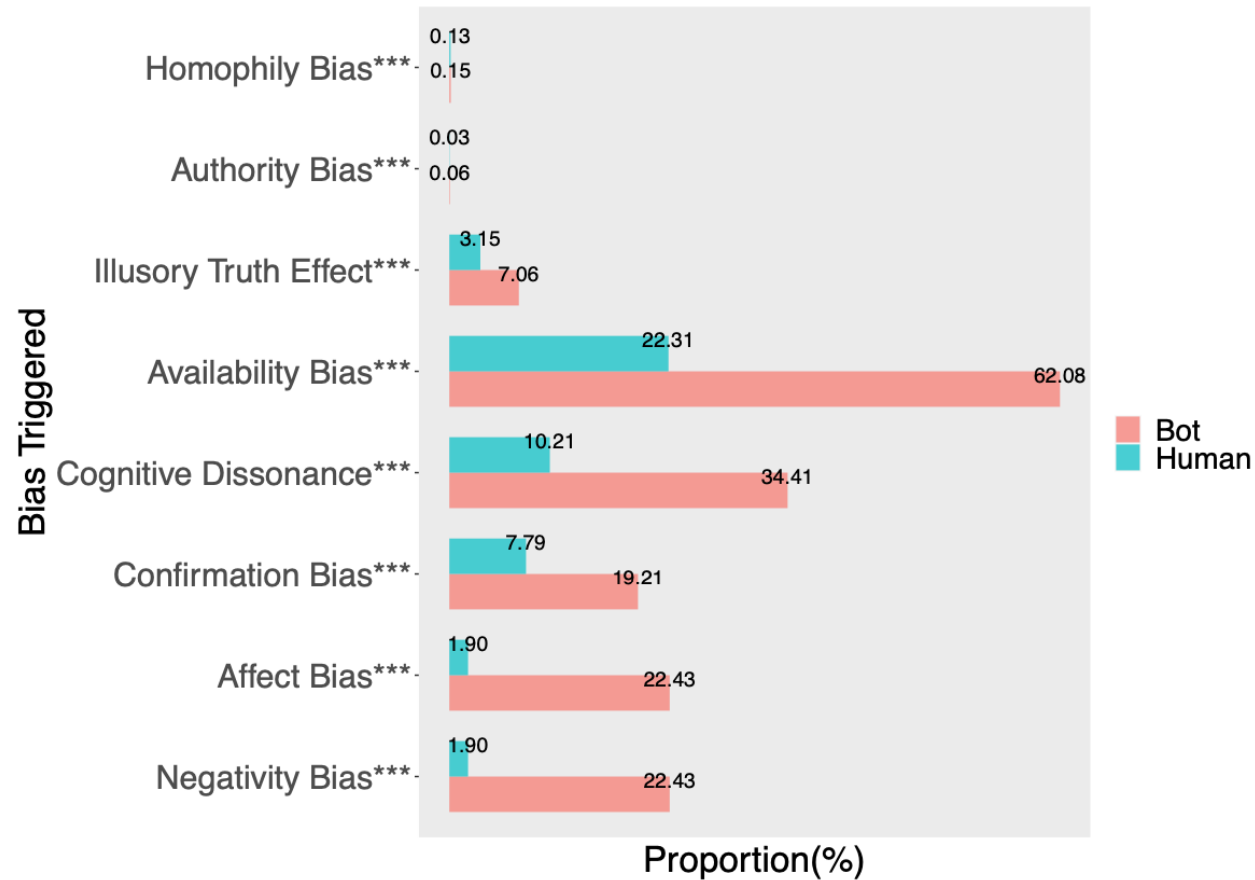


Bots trigger more biases than Humans



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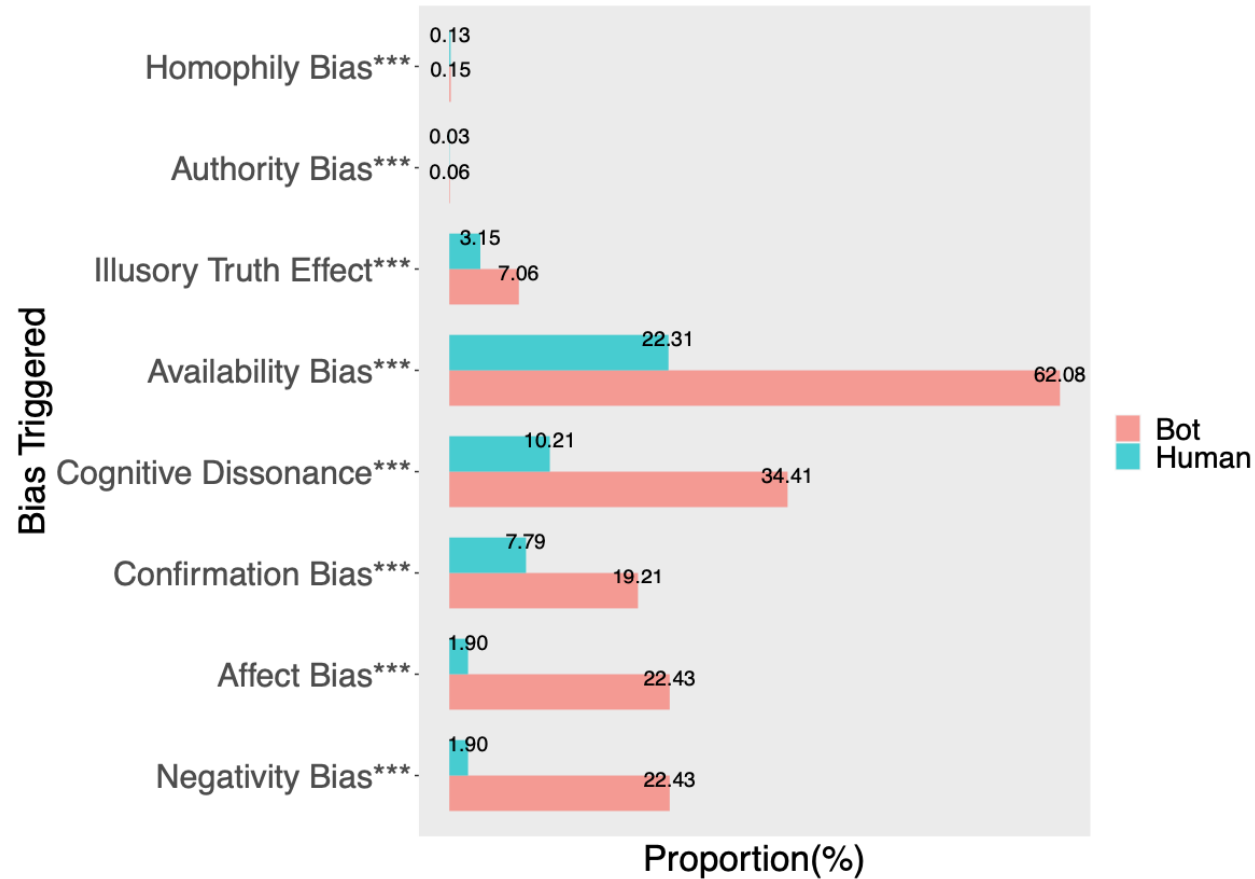
Majority of Human tweets did not employ biases, but majority of Bot tweets did



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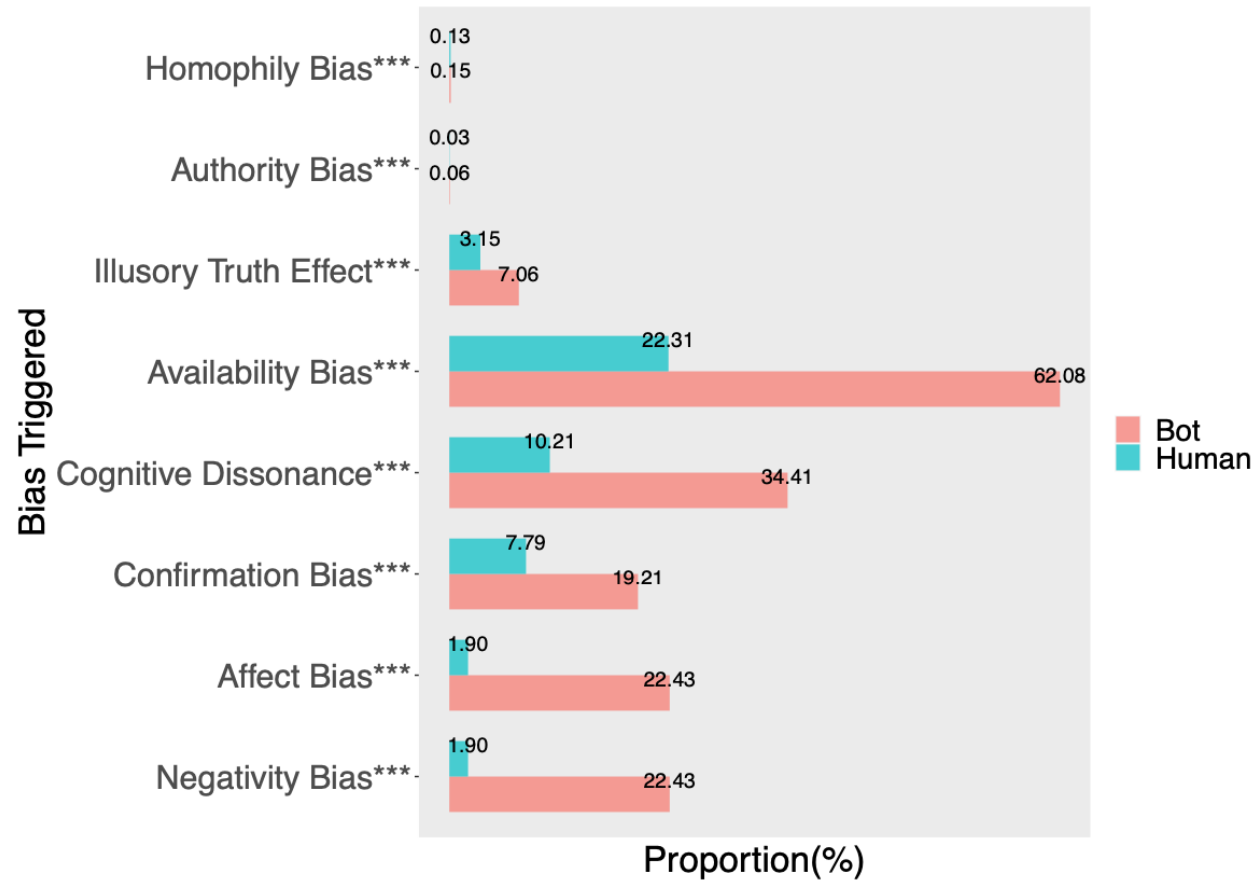
Bots are more masterful at forging fake collective belief, changing their opinion positions to blend in



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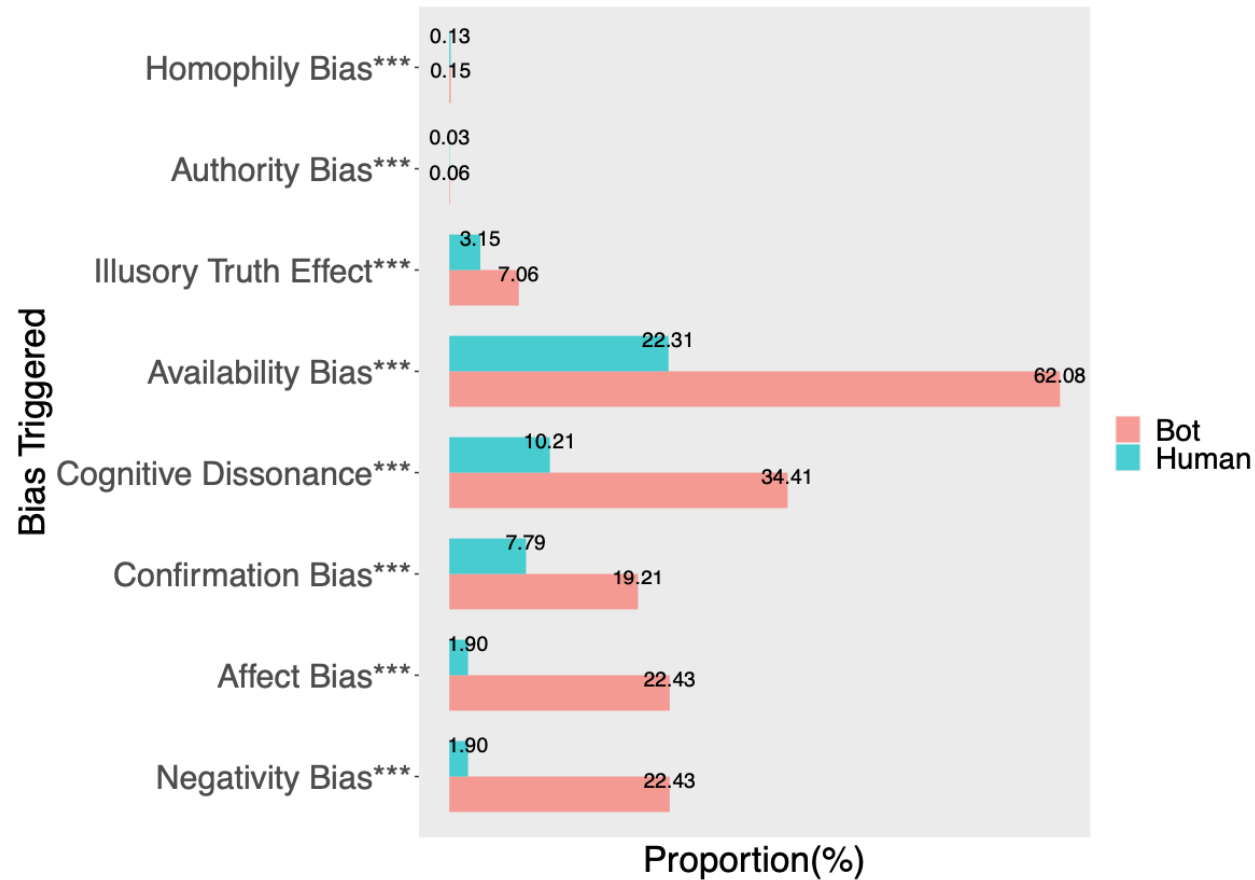


Affect Bias is highly used

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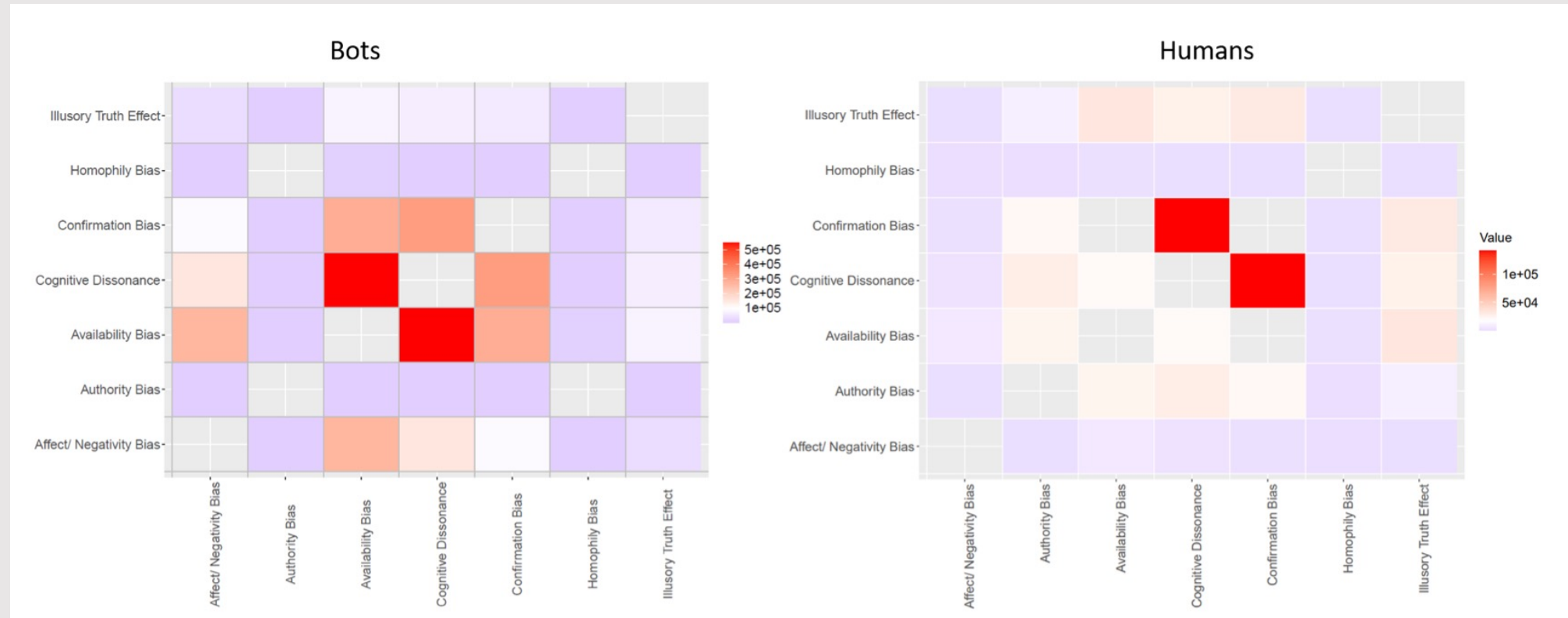
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Affect Bias is highly used

Emotional appeal is a common persuasion strategy

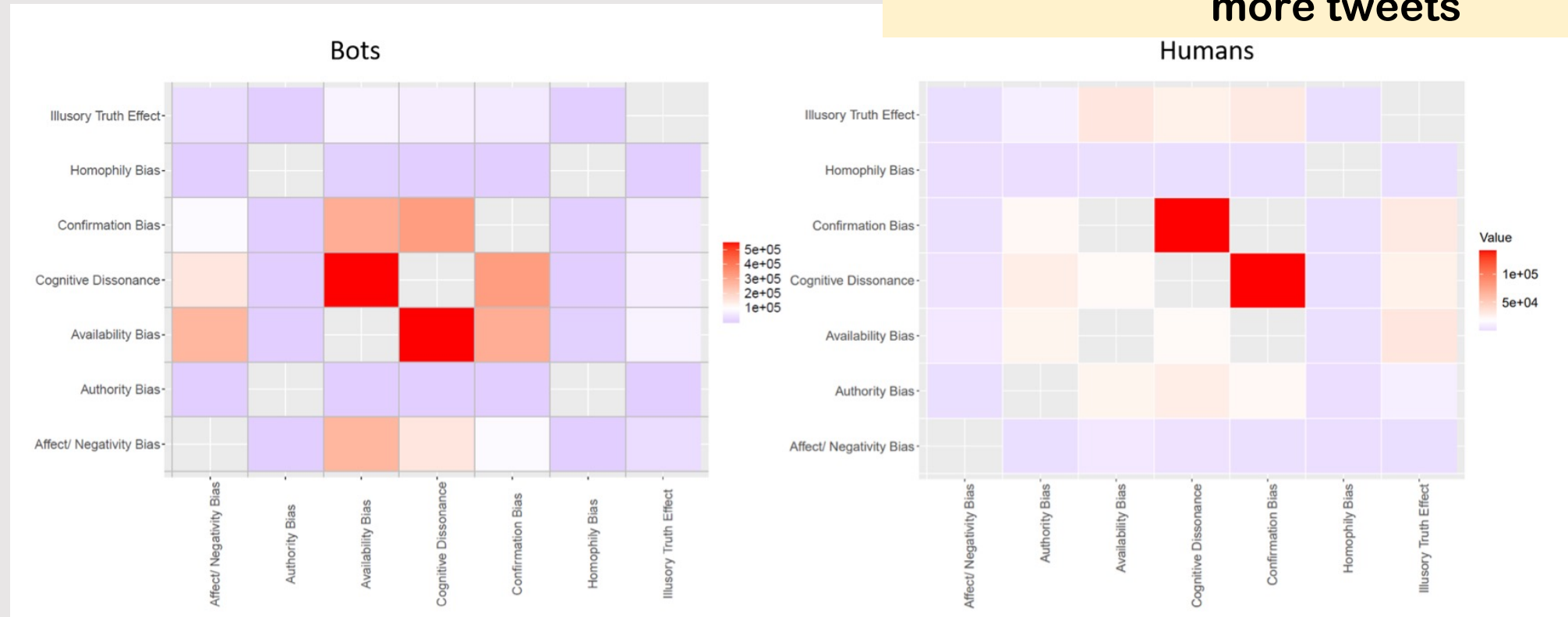
Similar yet different co-occurrences of bias triggers



Similar yet different co-occurrences of bias triggers

(Confirmation Bias, Cognitive Dissonance)

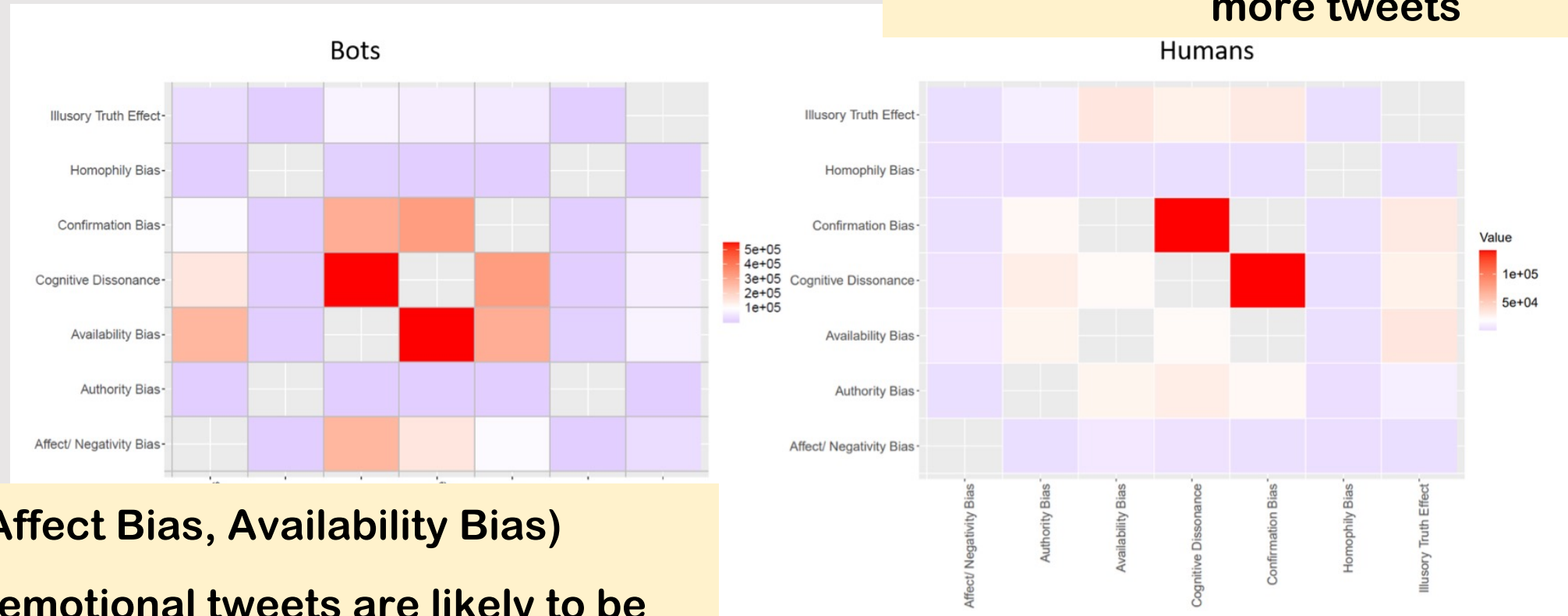
Change stance & remain in stance for a few more tweets



Similar yet different co-occurrences of bias triggers

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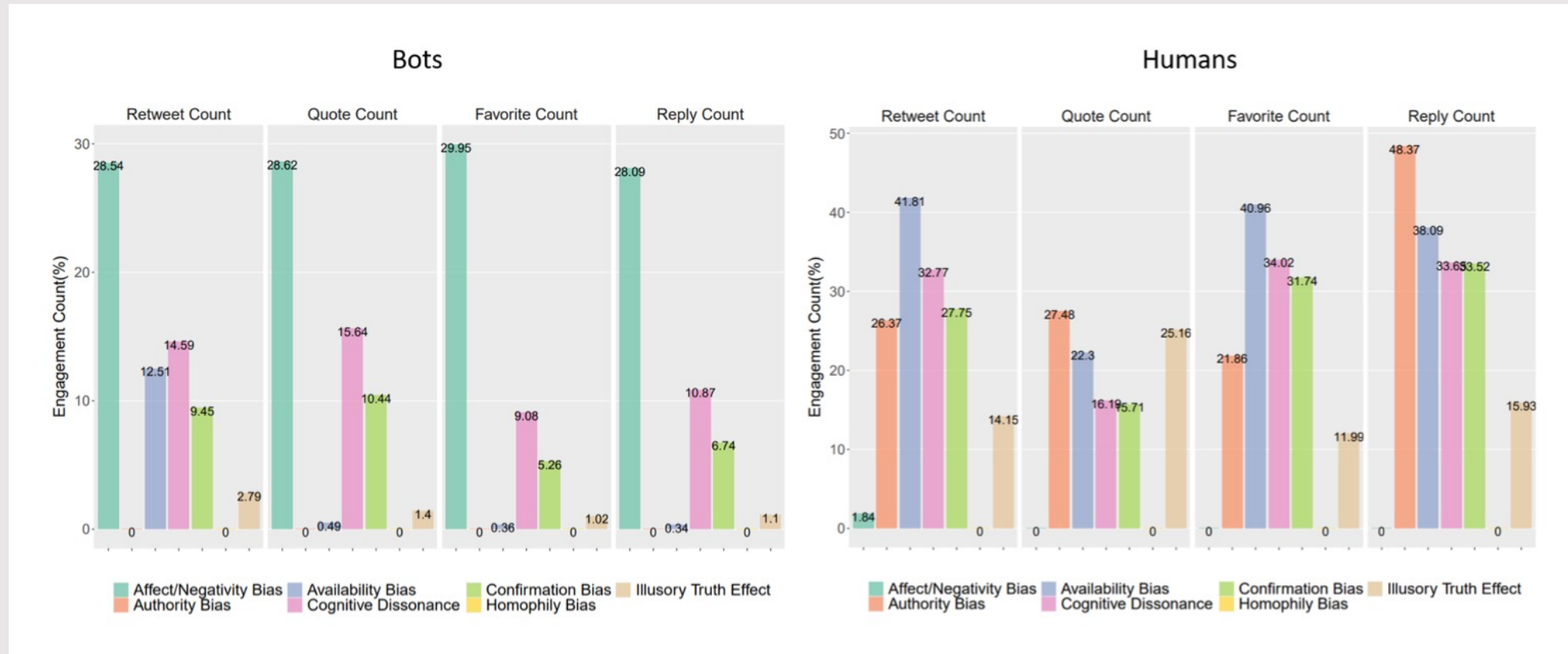
Change stance & remain in stance for a few more tweets



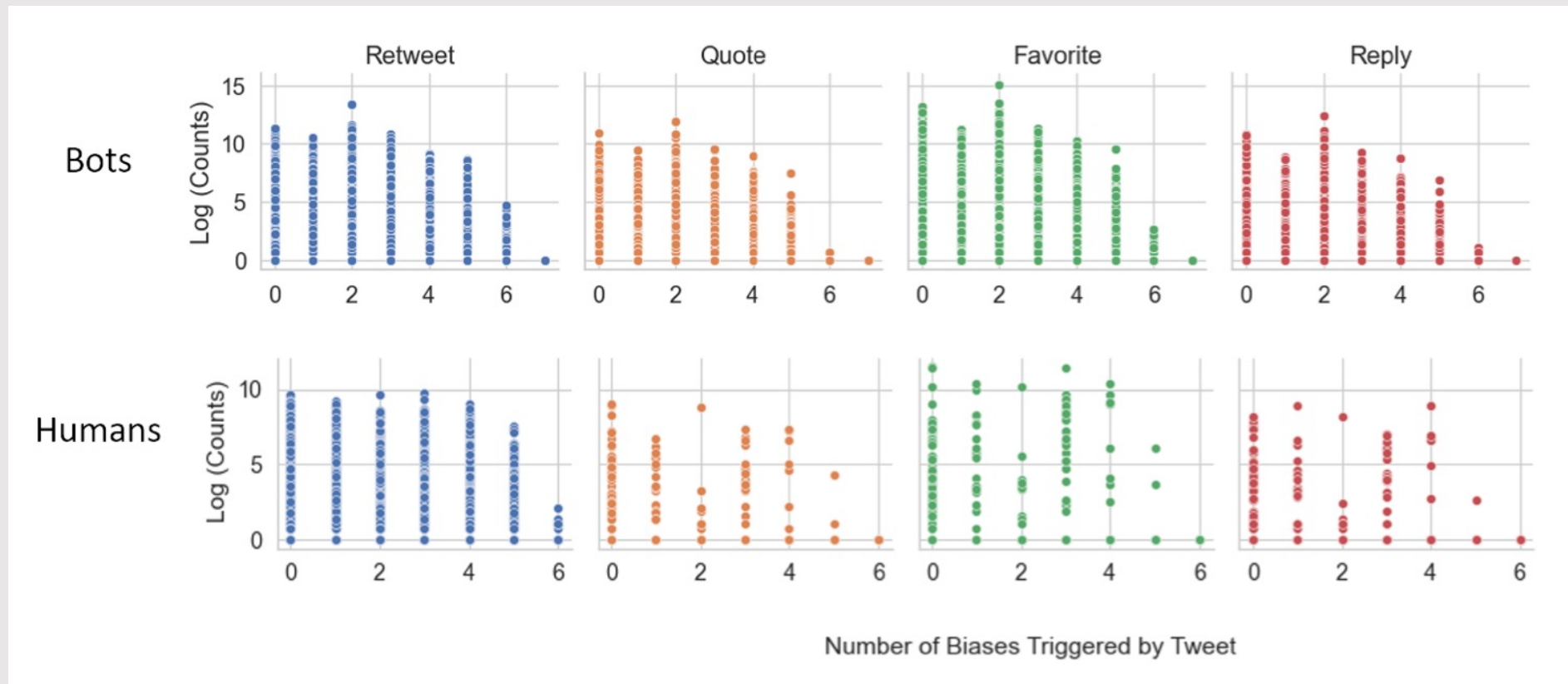
(Affect Bias, Availability Bias)

More emotional tweets are likely to be retweeted

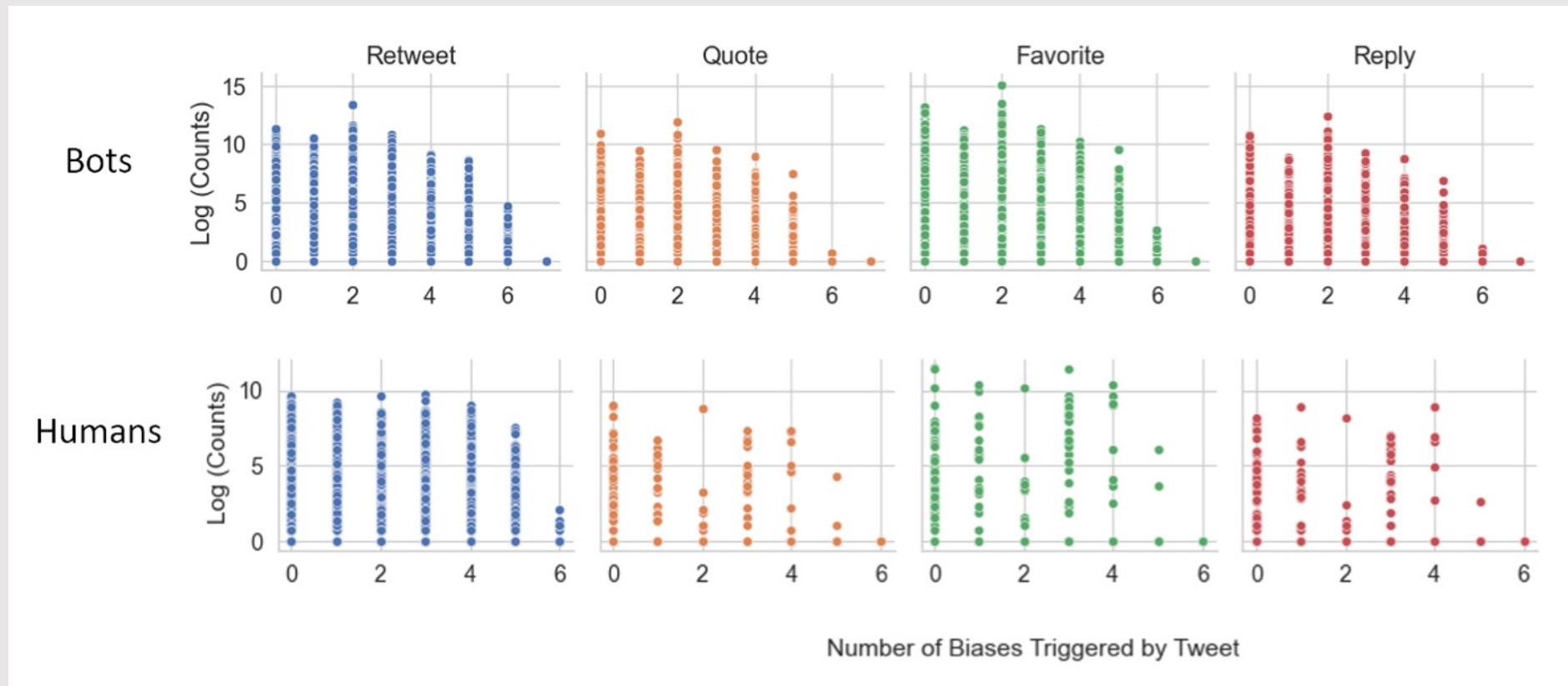
Bots have consistent engagement from Bias Triggers



Bots have consistent relationship between engagement and number of biases

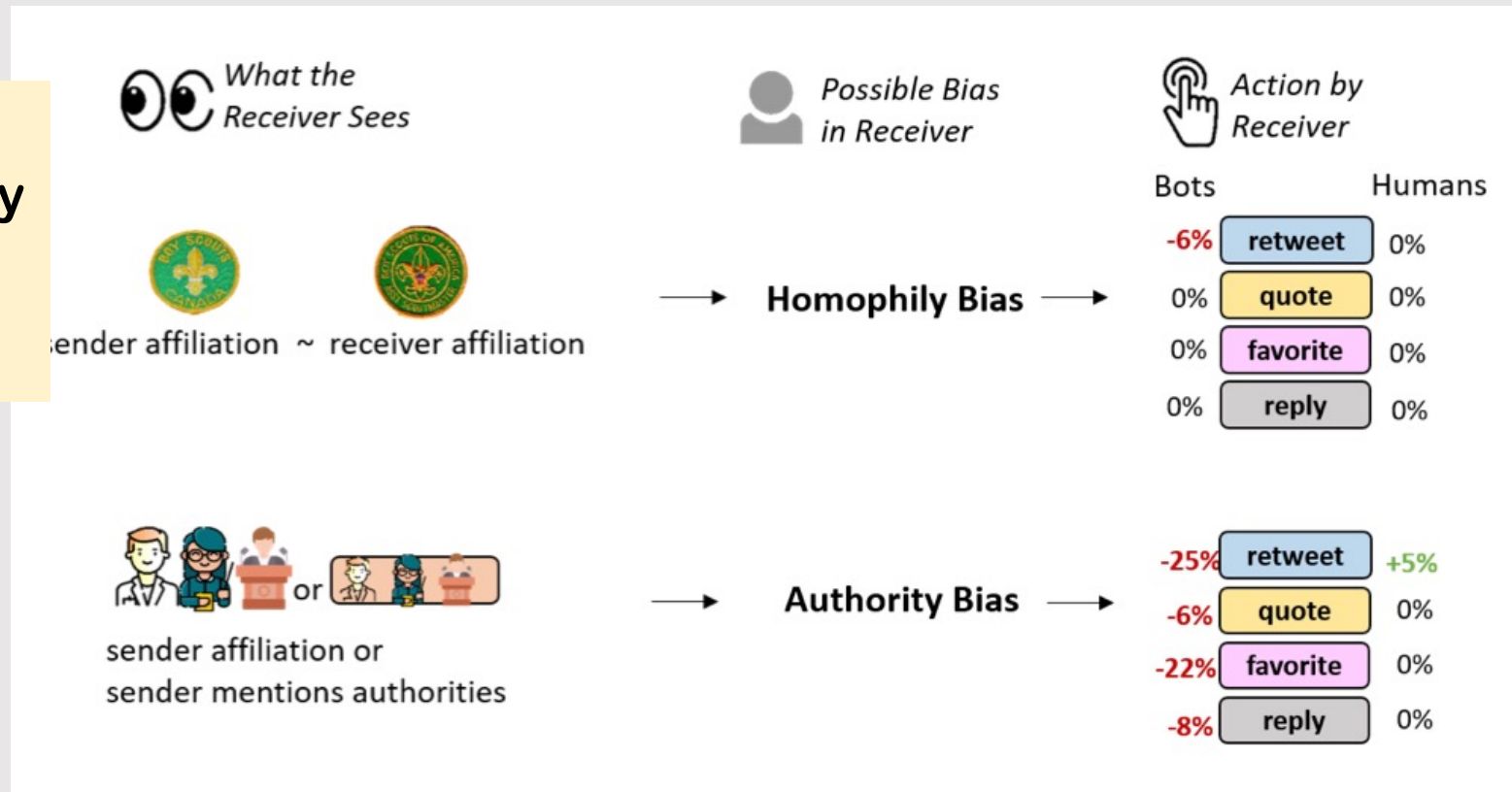


Decrease in engagement after 2 biases



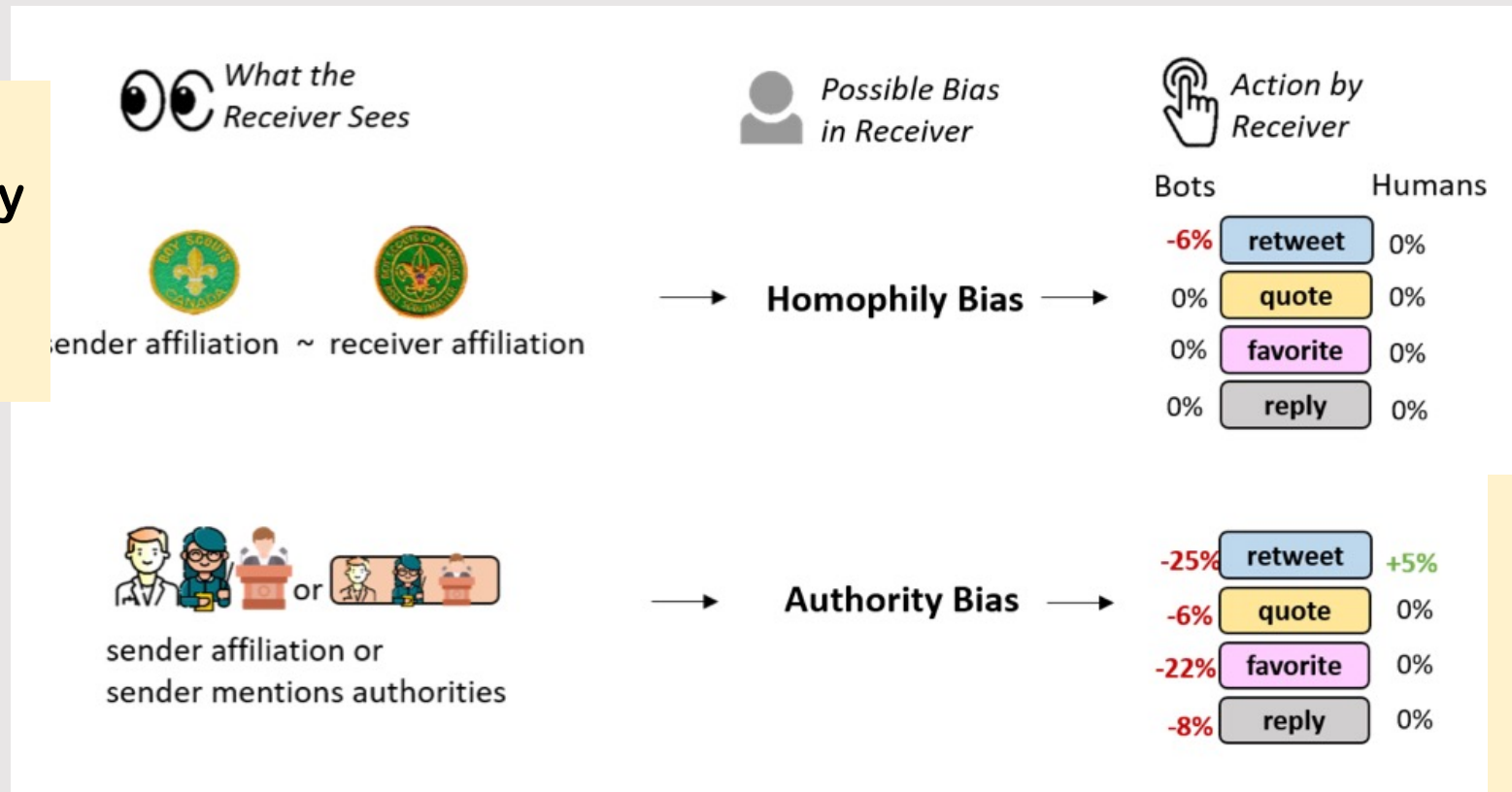
Impact of bias triggers on engagement

Group similarity
doesn't quite
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Impact of bias triggers on engagement

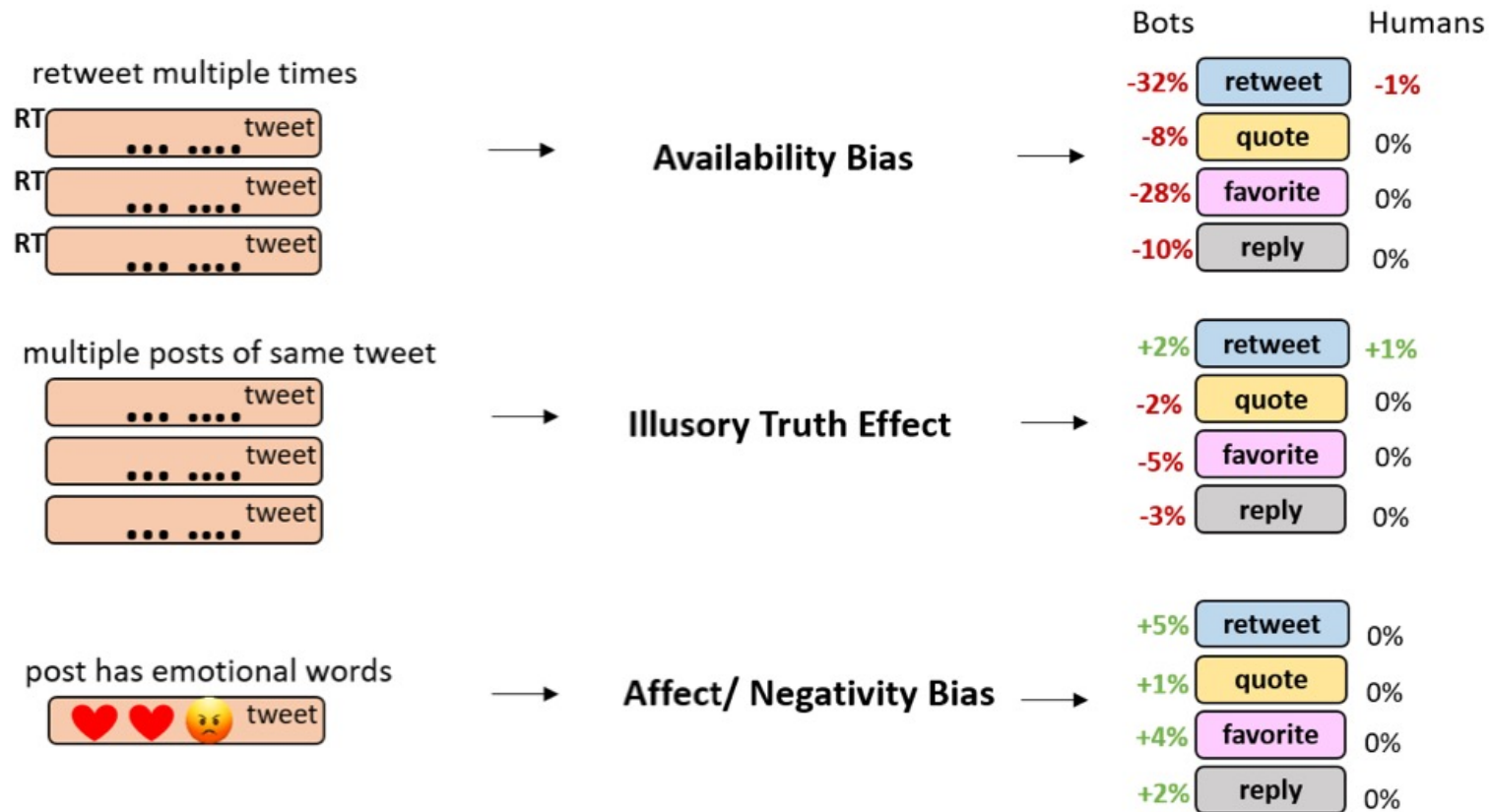
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People often
reject explicit
authority

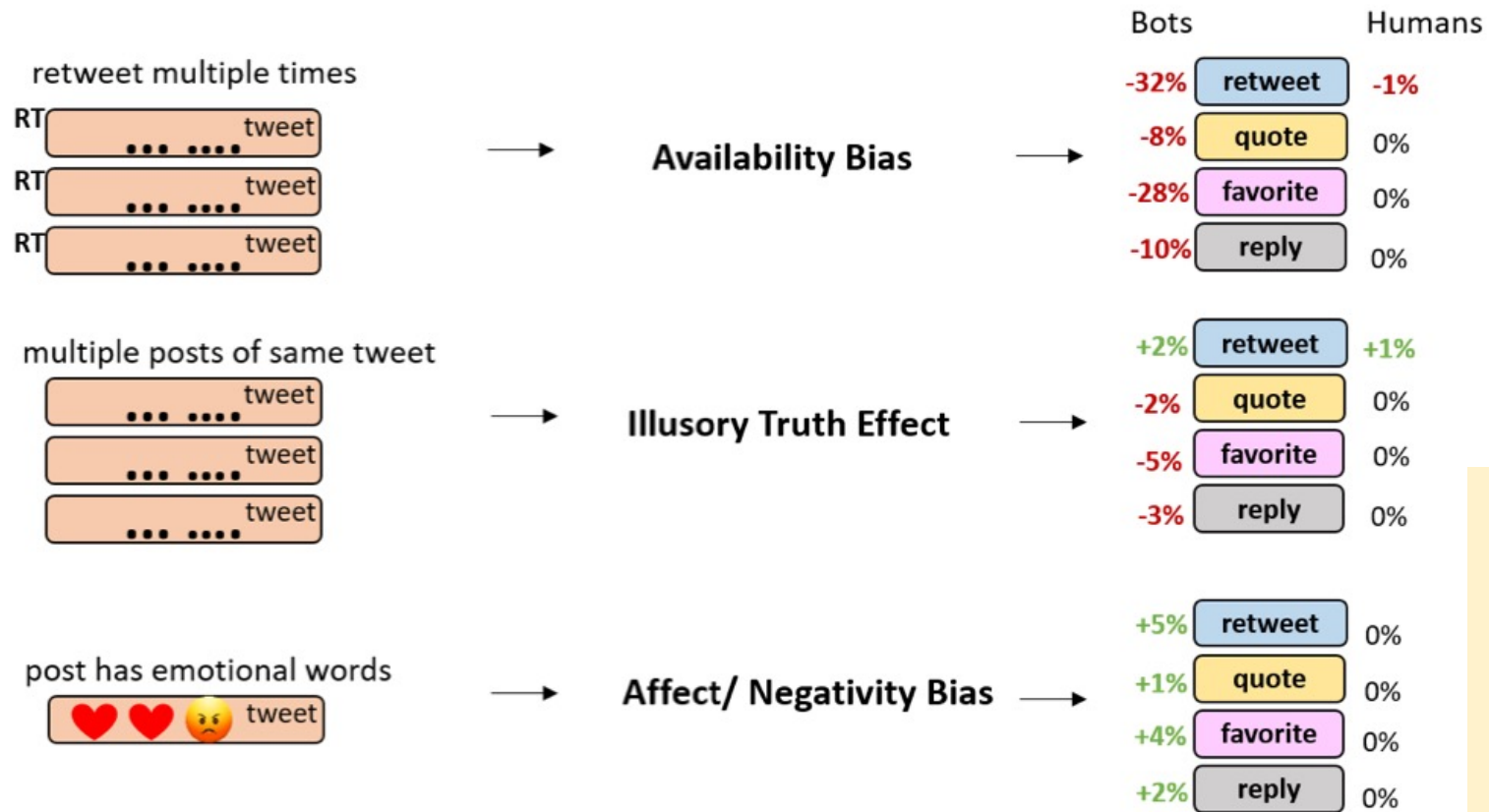
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Too much information causes cognitive overload, too repetitive



Impact of bias triggers on engagement

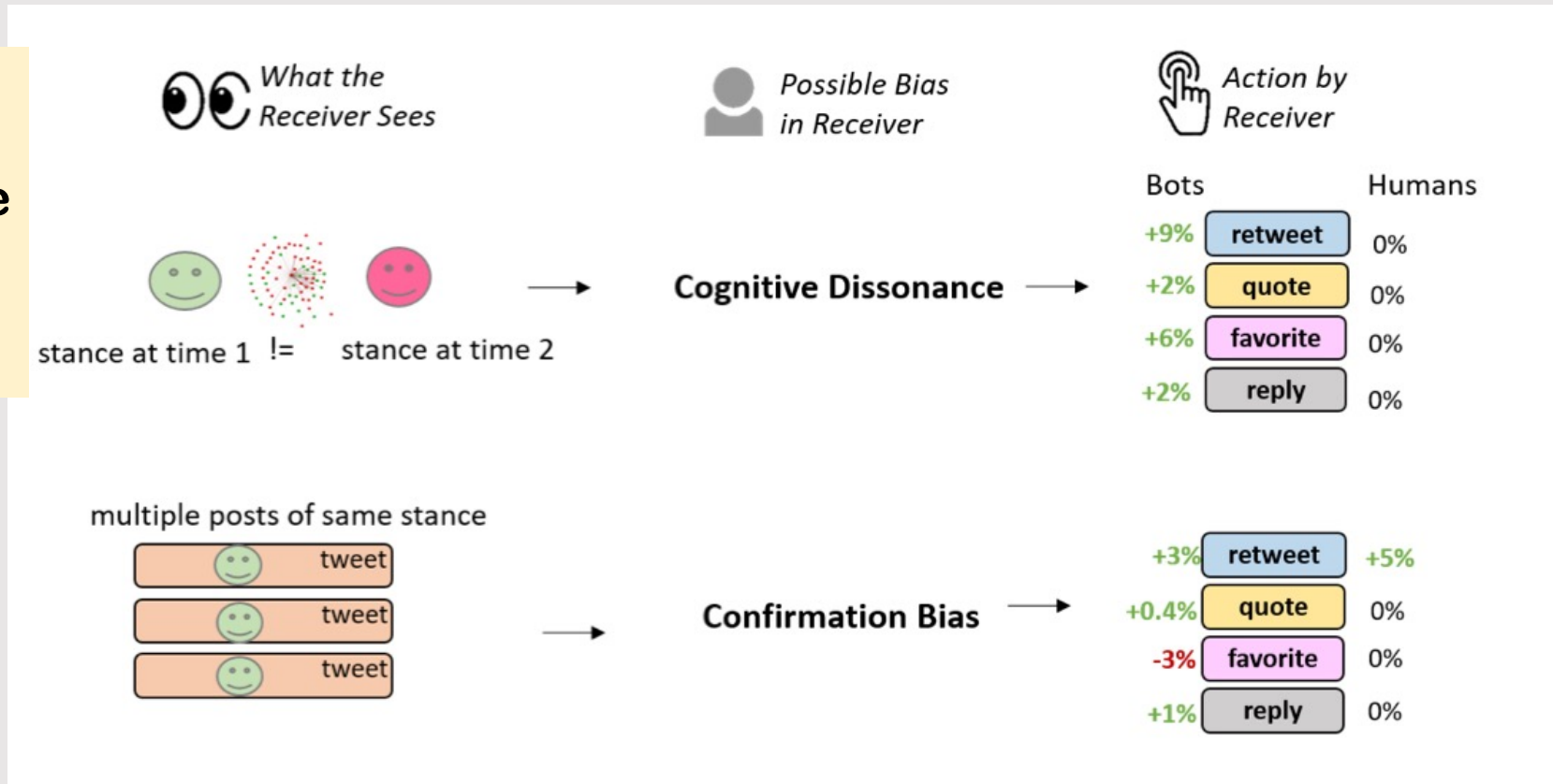
Too much information causes cognitive overload, too repetitive



Emotional appeal increases engagement

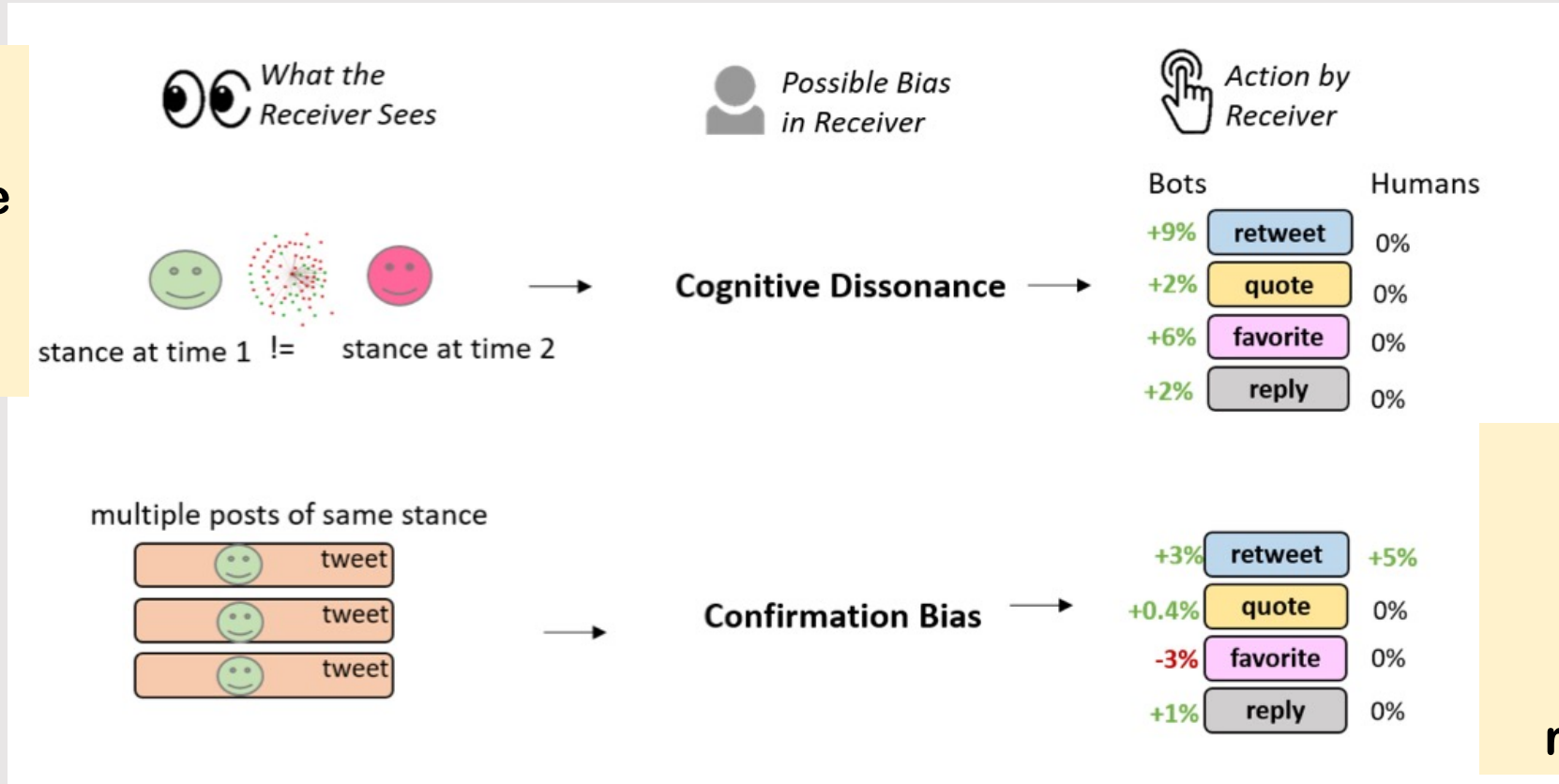
Impact of bias triggers on engagement

People are more receptive to others that try to fit in



Impact of bias triggers on engagement

People are more receptive to others that try to fit in



People like reassurance

Future Work

- Simulate temporal dynamics:
 - If I want to achieve 100 likes in 3 days, what biases must I induce?

How do we craft persuasive messages?

- Trigger cognitive biases
 - Some triggers of cognitive biases increase engagement
 - Bots are more consistent engagement results from bias trigger
- + Affect Bias, + Confirmation Bias
- - Authority Bias, - Availability Bias
- At most 2 Biases

How to not get bots banned?

- Use Cyborgs!
- Mix in Bots / Human personalities
- Longer longevity



Cyborgs for Strategic Communications. Big Data and Society. 2023

Lynnette Ng

Website: quarbbby.github.io

Paper link:



Website link:



