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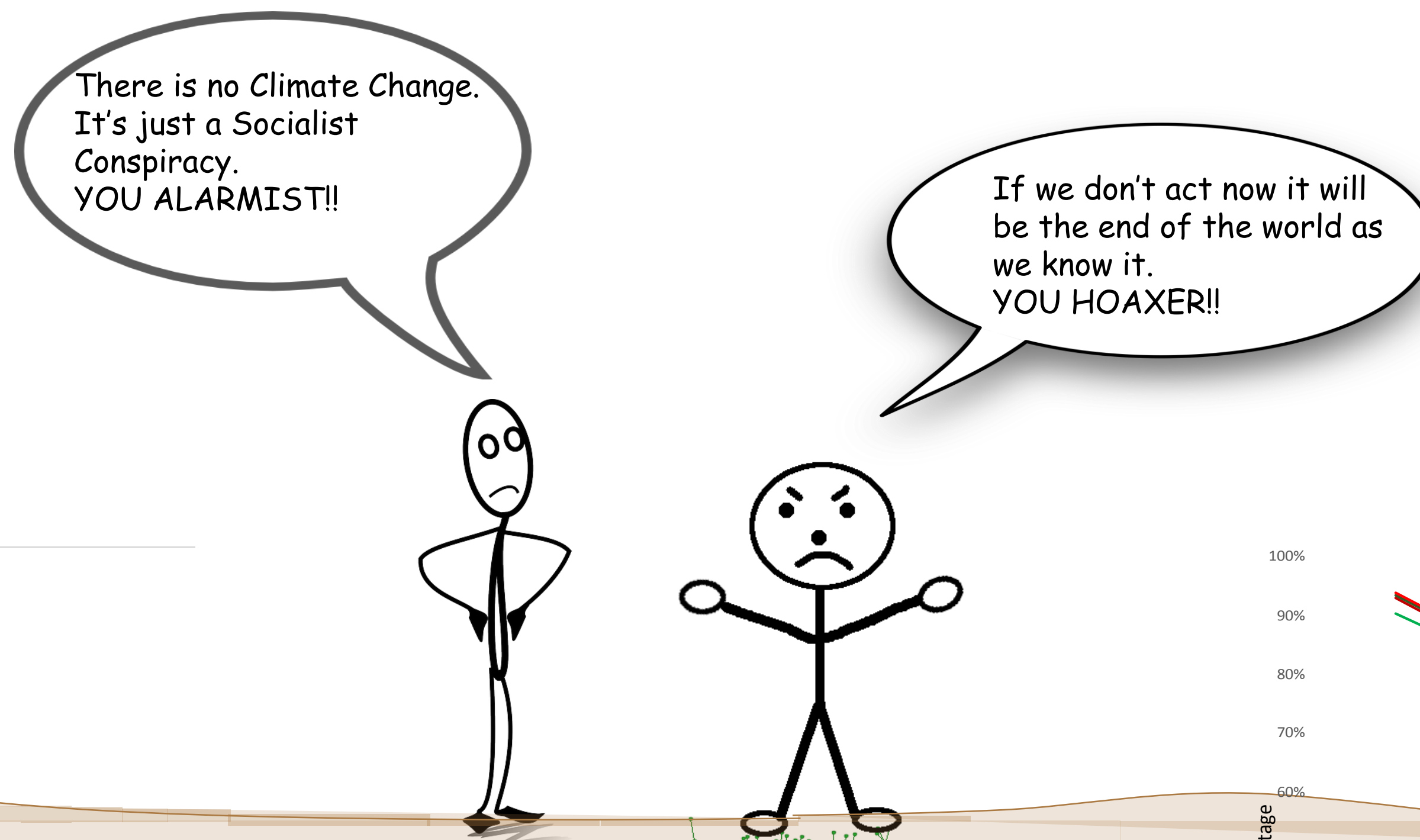# Climate Change Debate on Twitter During COP24

Introduction

- A case study analyzing conversations between two competing groups of Twitter users who believe in anthropogenic reasons of climate change (**Believers**) and those who are skeptical of these reasons (**Deniers**) during United Nation's Climate Change Conference – COP24 (2018), Katowice, Poland.
- Collected all tweets related to climate change from 27th November to December 20th, 2018 using Twitter's API. We decided on collection hashtags based on hashtags related to #climatechange found on best-hashtags.com and news articles about COP24. The combined data set contains a total of **1,379,584** distinct tweets and retweets.
- We identified competing groups of believers and deniers by hashtags used by these groups. We identify that "ClimateHoax" and "ClimateChangeIsReal" hashtags are used mostly by deniers and believers respectively. Using a label propagation method on hashtag x hashtag co-occurrence network we were able to find more hashtags belonging to the two communities. Overall, we identified **2,170 deniers and 15,640 believers**.
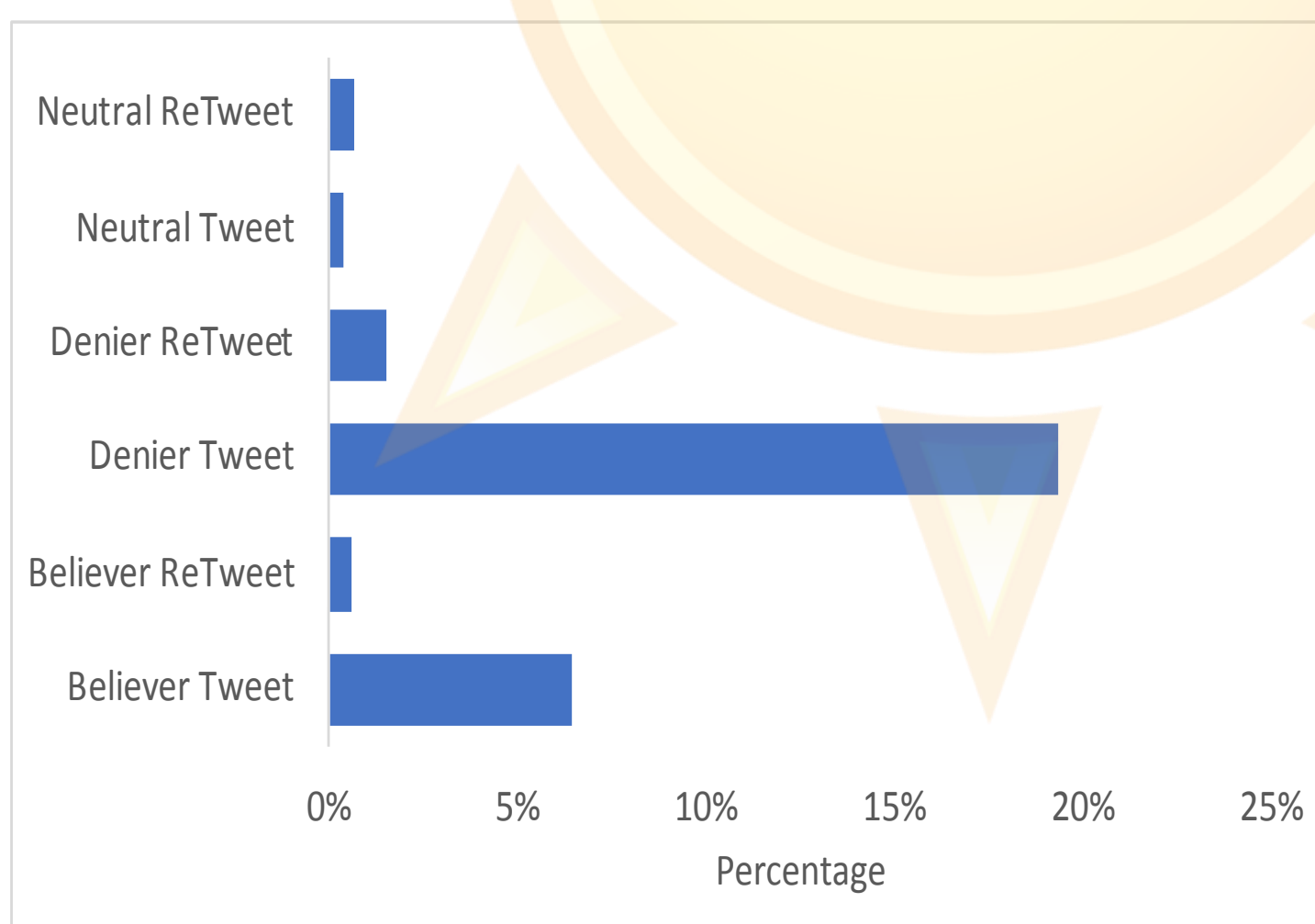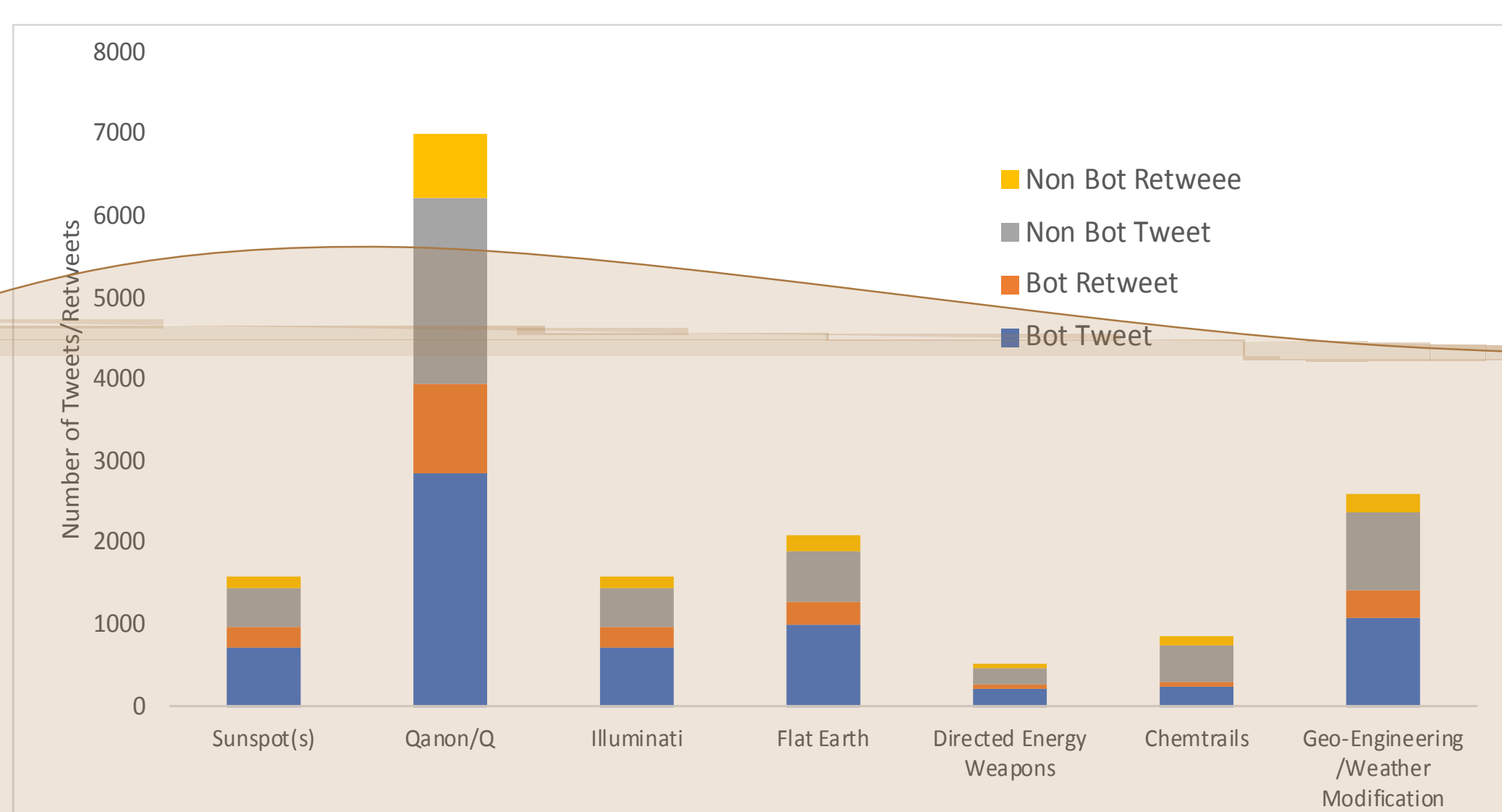

Percentage of tweets and retweets of believers and deniers with unigrams and bi-grams related to conspiracies.
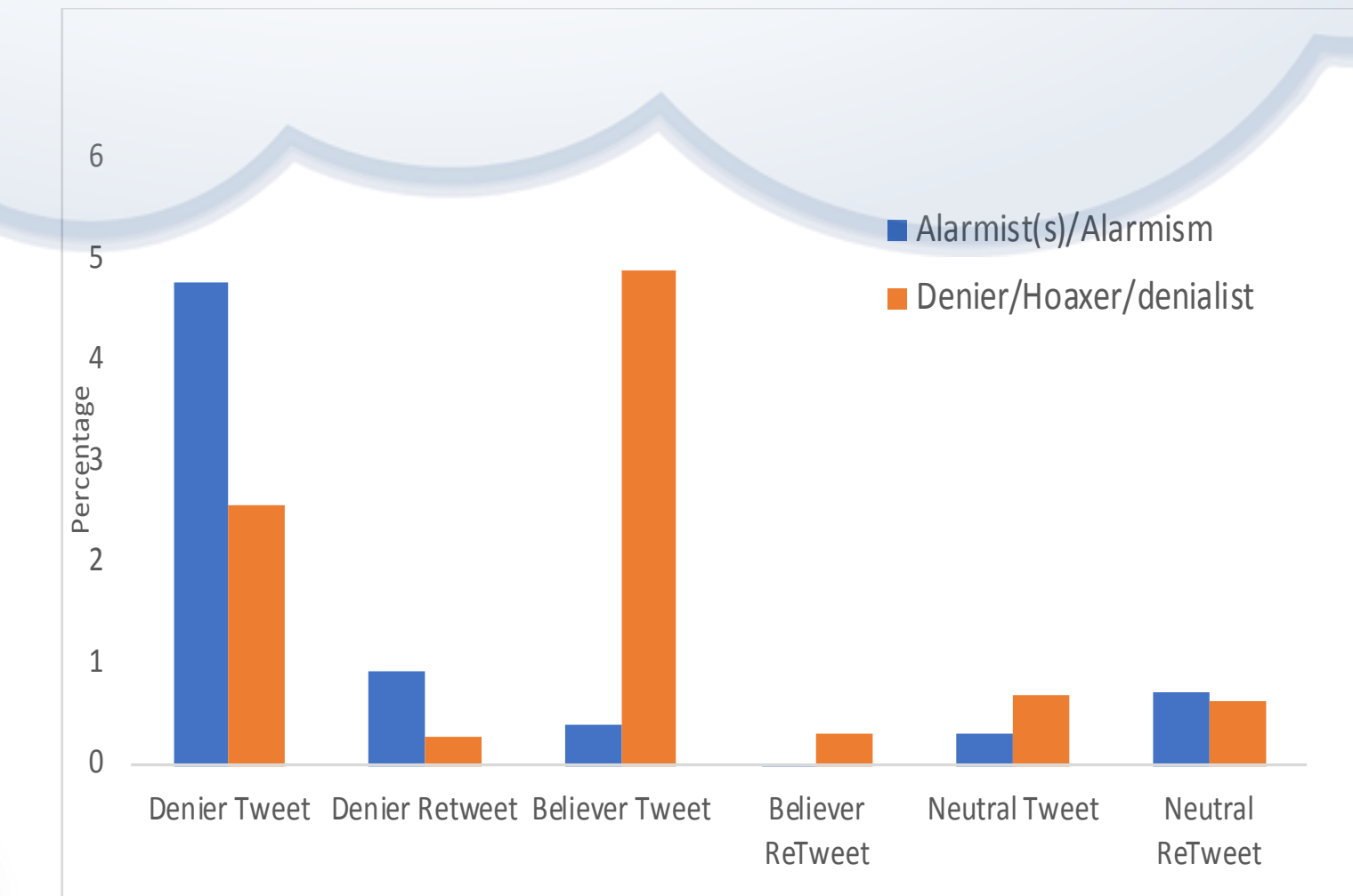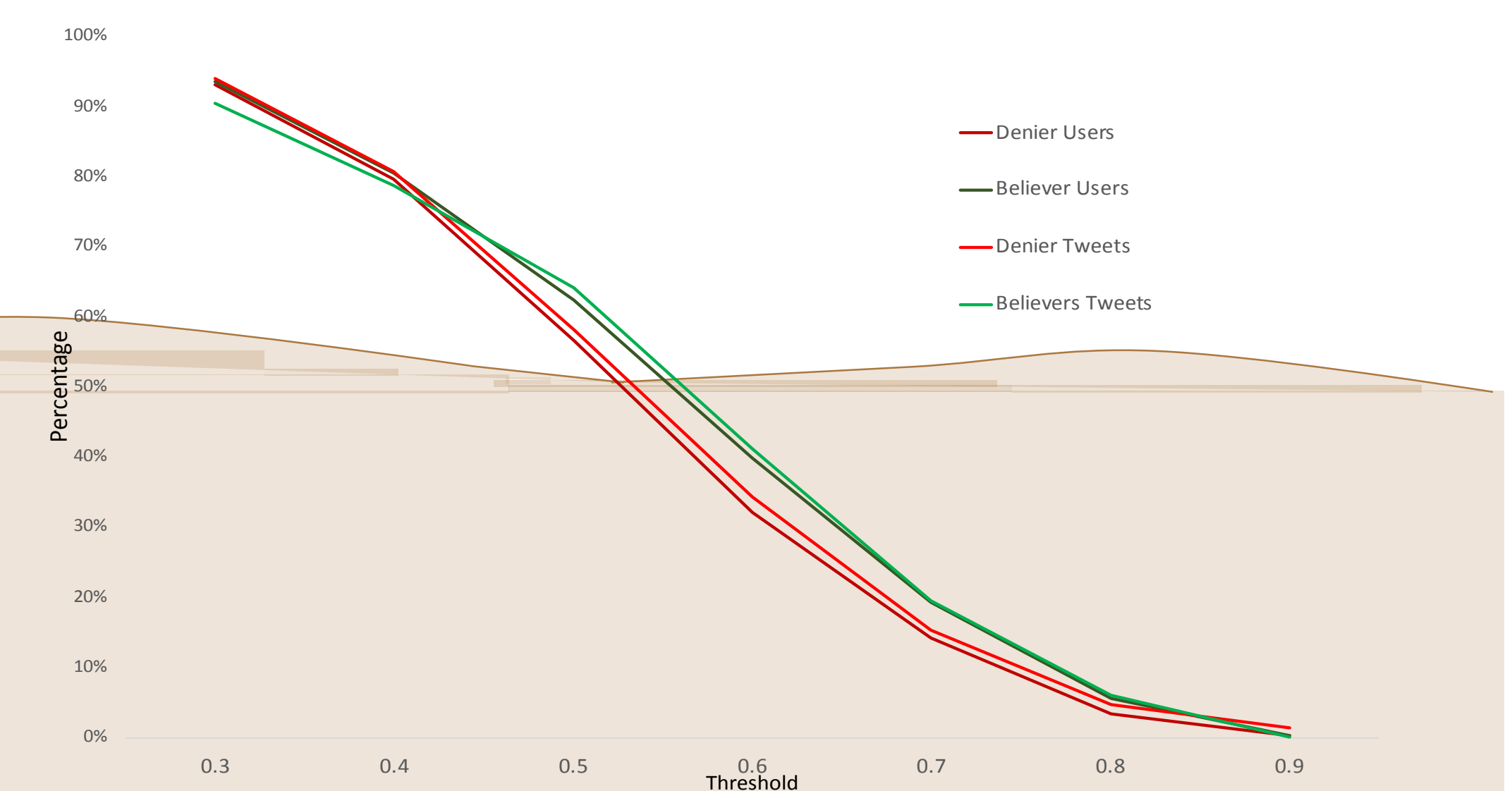
Percentage of tweets and retweets of believers and deniers with unigrams Alarmist(s)/Alarmism and Denier/Hoaxer/Denialist for deniers and believers.

Number of tweets and retweets by accounts classified as bots and non-bots containing unigrams and bigrams related to conspiracy theories.

Denier and Believer Retweet Network

Percentage of bots and tweets at different probability threshold for an account to be classified to be bot-like as predicted by Bot-Hunter (Beskow, et al., 2018) for climate denier's and believer's group.

Key Takeaways

- Tweets and Retweets containing words or phrases related to conspiracies are more frequent in denier's conversations. Conspiracies are Tweeted more than Retweeted.
- Exaggerations made by believers were targeted by deniers to strengthen their argument. Deniers call out believers as **Alarmists** and believers call out deniers as **Hoaxers**.
- We found that in both deniers and believers bot-like accounts were equally active.

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