



Capstone Proposal: **The Spatial Relations of Online Echo Chambers**

Tom Truong - MSGT Winter 2021



Introduction

- **Topic**
 - Based on how local news markets reach audiences within proximity
 - How the shift to online communities can also have spatial connectivity
- **Significance**
 - Addresses the issue of misinformation of being susceptible to audiences
 - Conveying to readers to be more aware/seek diversified perspectives



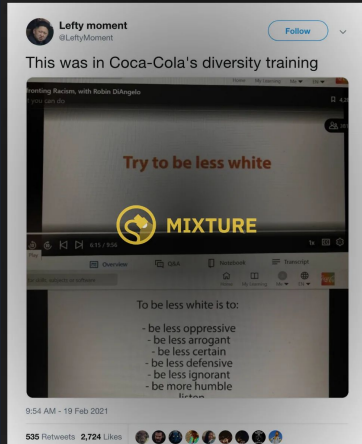
Research Questions

- What sort of audiences are more susceptible to misinformation based on the source of news they consume?
- Does the origin of online news sources indicate the kind of audiences they reach based on geographic proximity?
- How well does alternative news media create echo chambers that shape an audience's views and opinions on current events?

Literature Review - Section 1

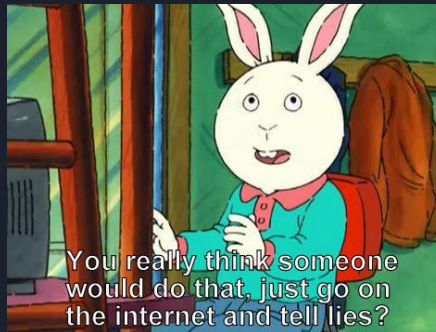
- Transitioning from Traditional Media to Online
 - Traditional sources providing more “pick and choose’ news coverage
 - The demand for sensational news, more instant online (Fitzpatrick, 2018)
 - Growing perception of traditional media being more biased

(Ardèvol-Abreu & Gil de Zúñiga, 2016)



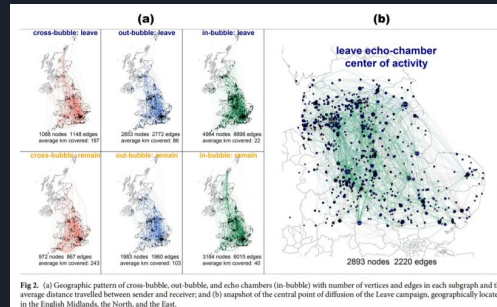
Literature Review - Section 2

- Emergence of Alternative News Sources Online
 - Online communities are made for like-minded news consumers
 - These “middle-level gatekeepers” control the flow of information (Hemsley, 2019)
 - The geographic audience of a source has now been scattered



Literature Review - Section 3

- Spatial Dimensions of Online Media Communities
 - Echo chamber attitudes on current and controversial issues
 - Tweets about events occur within a short time and is concentrated (Bastos et al., 2018)
 - The issues of handling bot and troll accounts



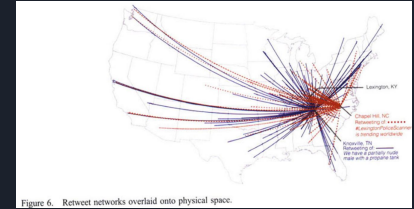
(Bastos et al., 2018)



Literature Review - Tie-in

- Each article has shown some sort of connection in echo chamber communities
- Look into more contemporary and long-term events affecting nationwide
- To see how precise the connection between online communities are

Methods - Step-by-Step

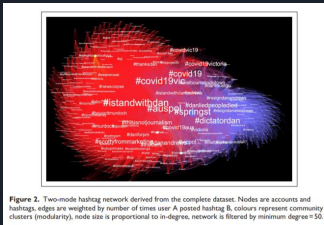


(Crampton et al., 2013)

- **Data Collection**
 - Tweet data (timestamps, location, retweets) will be extracted
 - Choosing hashtags/articles that define the most sociopolitical moments
- **Network Analysis**
 - About 5k tweets using the hashtag or tweeted article
 - Graphing nodes as users, edges based in mutual retweeting or following

Map Analysis

- Similar to network analysis, but now visualized spatially
- Choosing one viral tweet as origin and retweets/likes as the strings



(Graham et al., 2020)



Methods - Answering Questions

- Does the origin of online news sources indicate the kind of audiences they reach based on geographic proximity?
 - How well a viral tweet reaches out to an audience outside their geographic realm based on retweets/likes
- How well does alternative news media create echo chambers that shape an audience's views and opinions on current events?
 - Depending on how a specific hashtag or article reaches an audience, if it's concentrated in one area or in significant areas



Methods - Timeline

- **Data Collection** (*March-April*)
 - Choosing hashtags and/or articles
 - Testing and running collector script to gather tweets
- **Network Analysis** (*May-July*)
 - Reading into NetworkX library documentation
 - Writing a script to do social media analysis
- **Map Analysis** (*July-August*)
 - Applying the network analysis on a geographic scale
 - Adjusting and finalizing the map visualizations



Expected Results

- Results may be concentrated in more populated and urban areas
 - Anyway to “normalize” that data?
- In the end, this is to see if there’s a spatial connection on online communities similar to local news markets
 - With components of misinformation and confirmation bias added



Thank You!

Any Questions?

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Through Canvas or Slack
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