PhD Project: Echo chambers, affective polarization, and democracy

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18 July 2019
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Introduction

TODO: Write up what you want to say?

TODO: READ OPENMIND QUESTIONS

TODO: BAYESIAN MODEL READUP

TODO: Reduce Text

How good is populist vs. anti-populist as meaningful conflict line if conflict is not against populists but actually against right-wing (or extremist) views?

Introduction

Some facts about me:

- Empirical Political- and Social Research M.A.
  - Quantitative & Statistical Methods
  - Latest focus: Far-right and misinformation online
  - Working on M.A. thesis

- Passion for Computational Social Science

  - Very active in the R community
  - Mostly self-taught in programming
  - Natural Language Processing
  - Open Science + Reproducibility advocate

- Work part-time as research analyst for non-profit organization *OpenMind*

  - Goal is to reduce affective polarization & foster intellectual humility
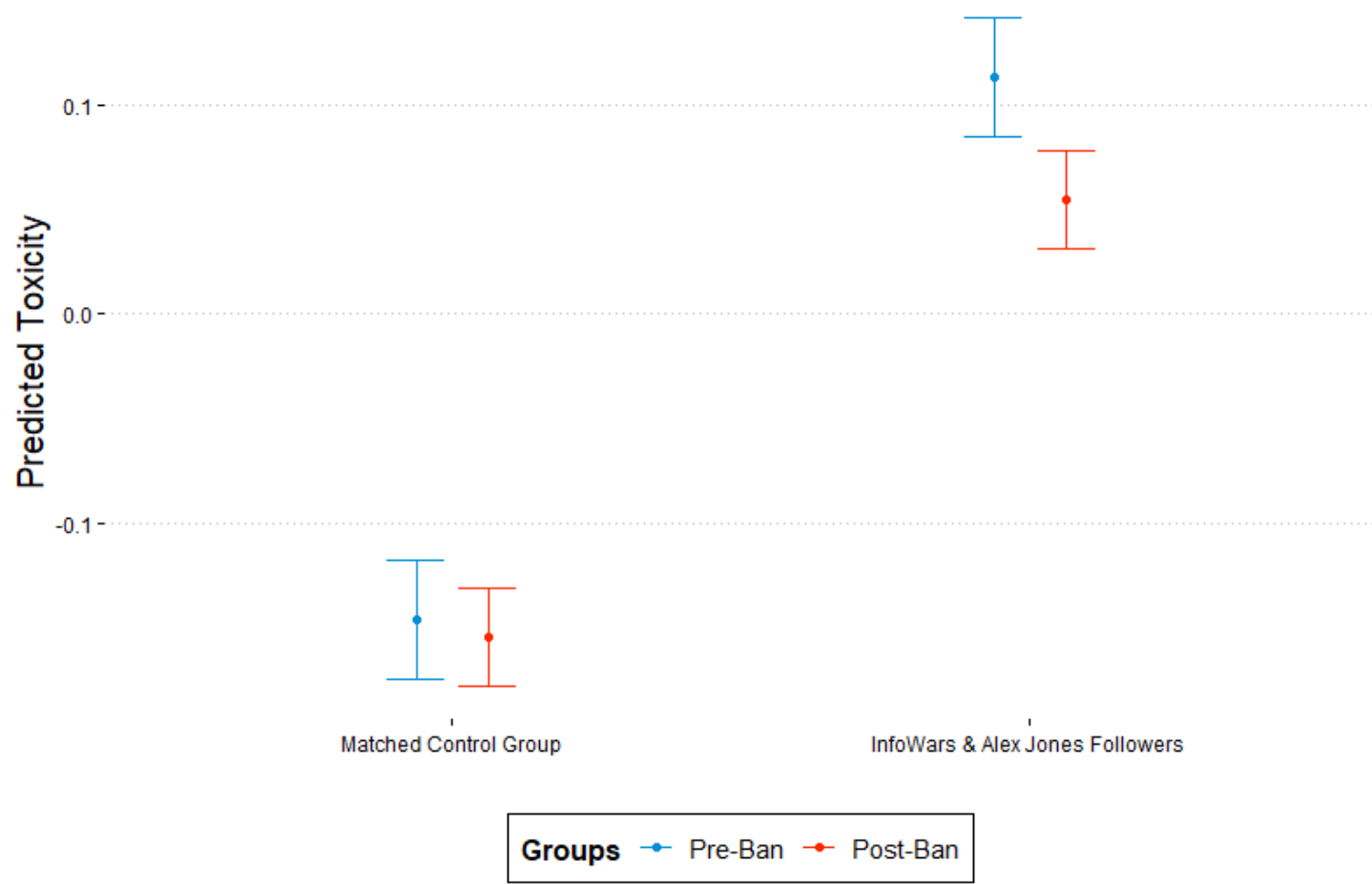 - Potential Collaboration with OpenMind?

M.A. thesis topic:

Twitter ban of conspiracy theorist Alex Jones & Infowars in September 2018

Did Alex Jones & Infowars followers become less toxic after the Twitter ban?

Other Relevant Research

1) Alt-Right interaction with Media

2) Radical Filter Bubbles on YouTube (forthcoming)

Research Outline

YouTube network of related videos about "Chemnitz" lead viewers to the German Alt-Right

each node is a video; size based on the number of times the video was 'related'

Pegida, white nationalism

Chemnitz, extreme right

AfD, refugees

Conspiracy theories
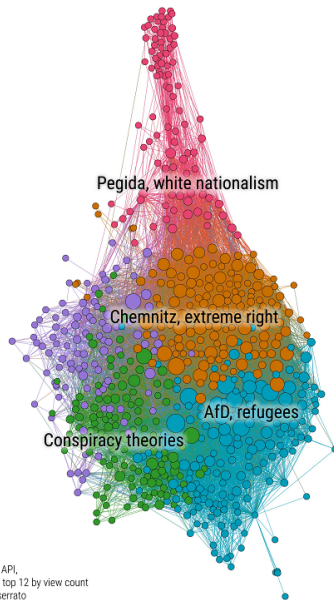
Source: Youtube API,
videos related to top 12 by view count
Graphic: @raymserrato

YOUR FILTER BUBBLE IS DESTROYING DEMOCRACY

WIRED

THE INTERPRETER — The New York Times

How Everyday Social Media Users Become Real-World Extremists

By Max Fisher and Amanda Taub

April 25, 2018

Everybody's in a Bubble, and That's a Problem

In politics as well as business, people are shaped by who they see—and who they don't. DEREK THOMPSON JAN 25, 2017

The Atlantic

Research Outline

- Social media as 'high choice media environments' (Lelkes et al. 2017)

- Online echo chambers

  - Tendency to reduce exposure to incongruent viewpoints (Tsang 2017)
  - Algorithms that prioritize what users wants to see ("filter bubbles")

- Evidence suggests that exposure to supportive information increases affective polarization (Garett et al. 2014)

- Due to *deinviduation* and anonimity online, partisans might be more willing to act unhinged which furthers affective polarization

Research Question

How do homogenous digital environments affect people's evaluation of ideological opponents that they have little or no contact with?

Hypothesis

Individuals in online echo chambers (who interact mostly with their own ideological side) are more affectively polarized than individuals who are exposed to different political views.

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> Individuals in online echo chambers (who interact mostly with their own ideological side) are more affectively polarized than individuals who are exposed to different political views.

Methodology

1. Identify and collect Twitter data on relevant political accounts for each (European) country and their followers.

2. Assign echo chamber and mixed conditions to users.

3. Assess affective polarization of users within and outside of echo chambers.

Data Collection

Political Accounts on Twitter

- Identify (official) Twitter accounts of politicians, parties, think tanks as well as political commentators and newspapers from various European countries.

- Goal is to meaningfully cover the entire political sphere of Twitter for each given country

- `legislatoR` tracks publically available data for 32,533 current and former elected politicians from nine countries' legislatures including social media handles.

- More accounts with additional research, especially on the local and regional levels

- Additional accounts can be webscraped from various sources

Collect data with Twitter REST API

- Collect a list of Twitter IDs for all followers of political actors

- Retrieve their last 3200 tweets

- This can be done at a later time to estimate trends over time

- During election time for increased salience

- Before and after election is opportunity to measure affective polarization of winners and losers

- Set up database and distributed services (MongoDB, Hadoop, Google Cloud, etc.)
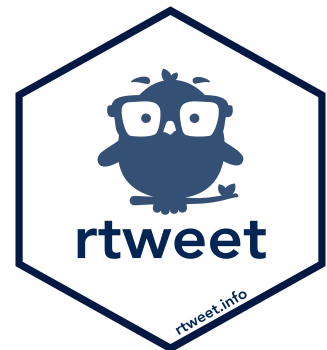
How to measure Political Ideology of Twitter users?
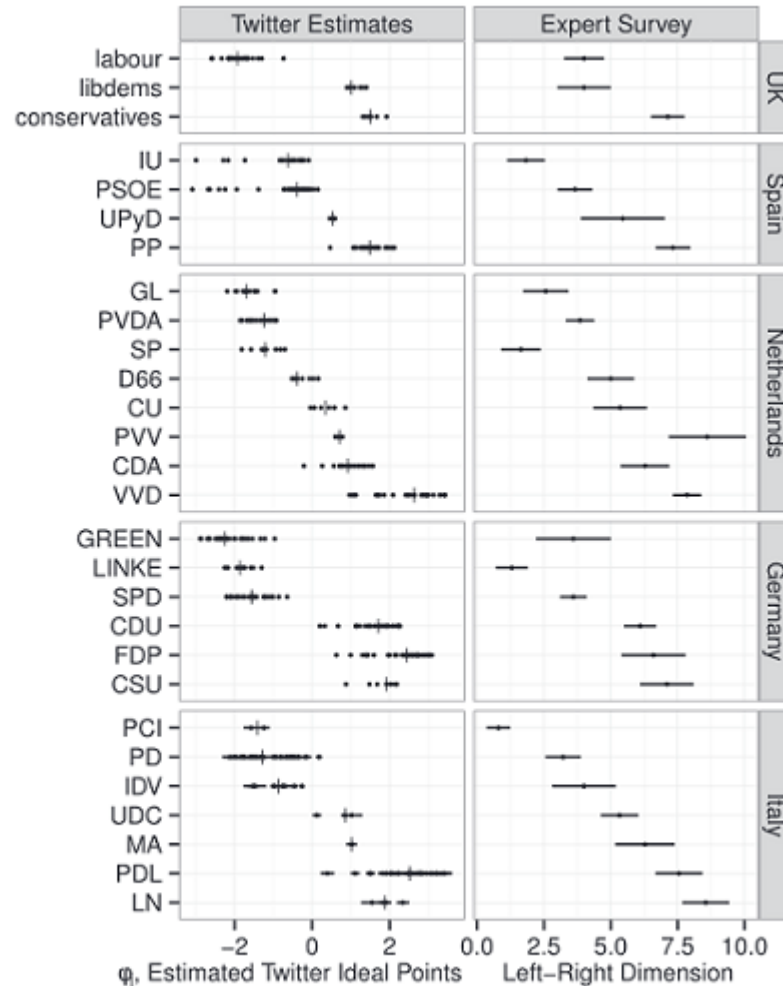
Bayesian Spatial Following models

Fig. 3 Ideological location of parties in five European countries.

Barbera 2015

Next: Classify condition of Users

Echo Chamber vs. Mixed Environment

Echo Chambers

Goal: Classify users into different conditions.

- Based on 3200 latest tweets collected from the users

- Look at their interaction with content produced by users with similar and dissimilar political ideology.

I propose the three following conditions:

1. *Echo Chambers*

2. *Mixed Networks*

3. *Neutral Networks*

Measure Affective Polarization

Affective Polarization

- Question: How to measure affective polarization?

- Machine learning classifier of text produced or shared by the users.

- Perspective API from Google which provides a machine learning model to score toxicity of a given text.

- Affective polarization can be measured as the toxicity of user content when it mentions an ideological opponent subtracted from the toxicity when it mentions ingroup actors

- Generate a list of terms associated with political actors for any given country context.

peRspective

Most Frequent Bigram Network - Muslims
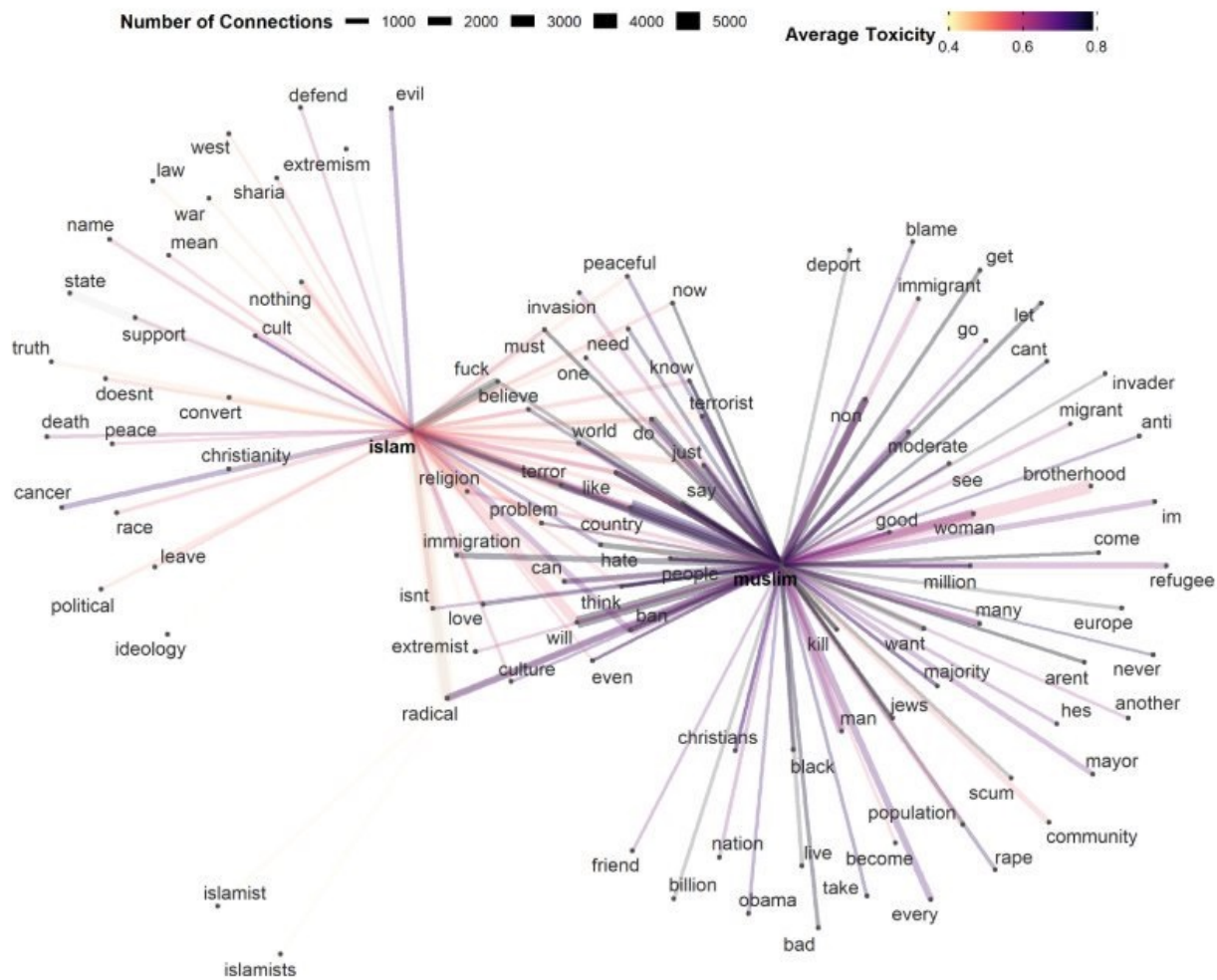
Limitations

- Current methodology does not account for users that do not follow political accounts

- Methodology only looks at content that users interacted with

    - unable to assess what people *actually* see on their timeline
    - really resembles an echo chamber?

- Finally, using social media data has its up- and downsides.

- Plus: Behave in the online environment without potentially priming them with our survey measures.

- Minus: computational methods to estimate ideological leaning and affective polarization need to be validated first.

Possible Extension

- Combine this study of social media data with a survey of Twitter users

- Random sample of users that will be sent messages on Twitter to participate in an online survey.

- The survey would include questions on

  - exposure to differing views, both online and offline,
  - perceptions of democratic performance and legitimacy
  - affective polarization towards ideological oppponents.

- Compare results of this survey with behavioural measures proposed in this study to test their validity and robustness.

- In my research outline I mentioned a few other ideas and I am open to pursuing them as well.

Thank you for Listening!

Literature

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Lee, E. J. (2006). Deindividuation effects on group polarization in computer-mediated communication: The role of group identification, public-self-awareness, and perceived argument quality. Journal of communication, 57(2), 385-403.

Lelkes, Y., Sood, G., & Iyengar, S. (2017). The hostile audience: The effect of access to broadband internet on partisan affect. American Journal of Political Science, 61(1), 5-20.

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