Political Communication & Twitter Sentiment in DE Re: COVID-19
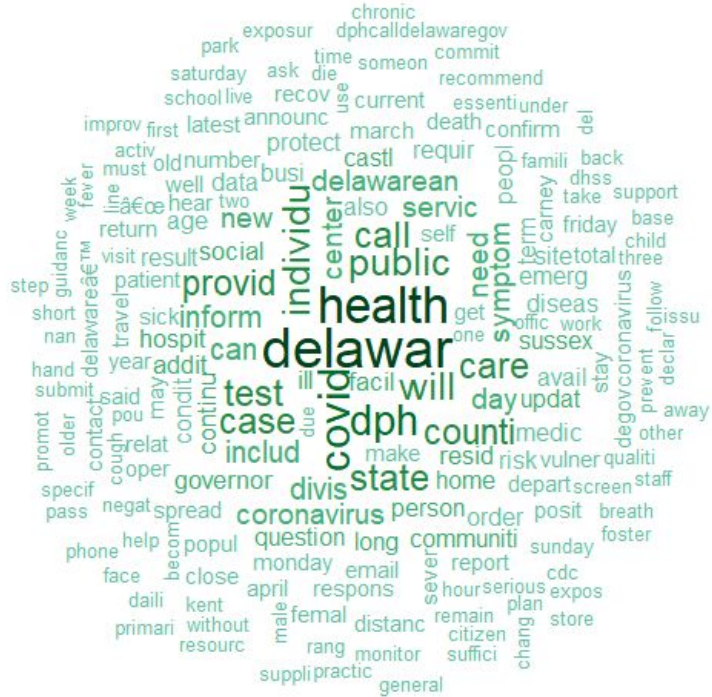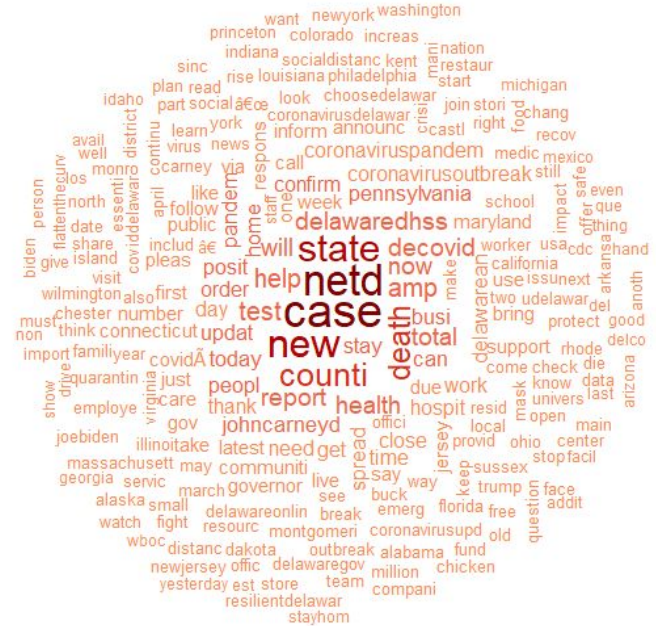

+/-?

Team Members (Alphabetical): Ben Bagozzi, Himaghna Bhattacharjee, Austin Brockmeier, Chuming Chen, Toby Driscoll, Priyanka Mondal, Enrich Rogers, Eli Turkel, Alima

Formatting Text Data for DE (Jan 27 - May 07)

Government Communications text:

- Combine & deduplicate
- Machine translate video
- Collapse to daily level
- Expand to include missing days
- Calculate measures for:
    - Sentiment
    - Readability
    - Wordcount
   - Document Term Matrix

DE Tweet texts:

- Recover COVID-19 Tweets
- Subset to only DE-mentions
- Collapse to daily level (partly)
- Calculate measures for:
    - Sentiment
    - Only available 3/10-4/30
- Alternatively, link previously coded twitter sentiment scores (also geolocated) to main tweets

Formatting COVID-19 Cases by DE/MD/NJ/NY & for USA

<u>Visualization</u>

- Parse data for total cases and deaths in USA as well as the states of DE, NJ, MD

  (https://github.com/himaghna/COVID-DE-19)
- Generate visualizations
- Tabulate data of case / death counts for the period of 27-Jan - 6-May
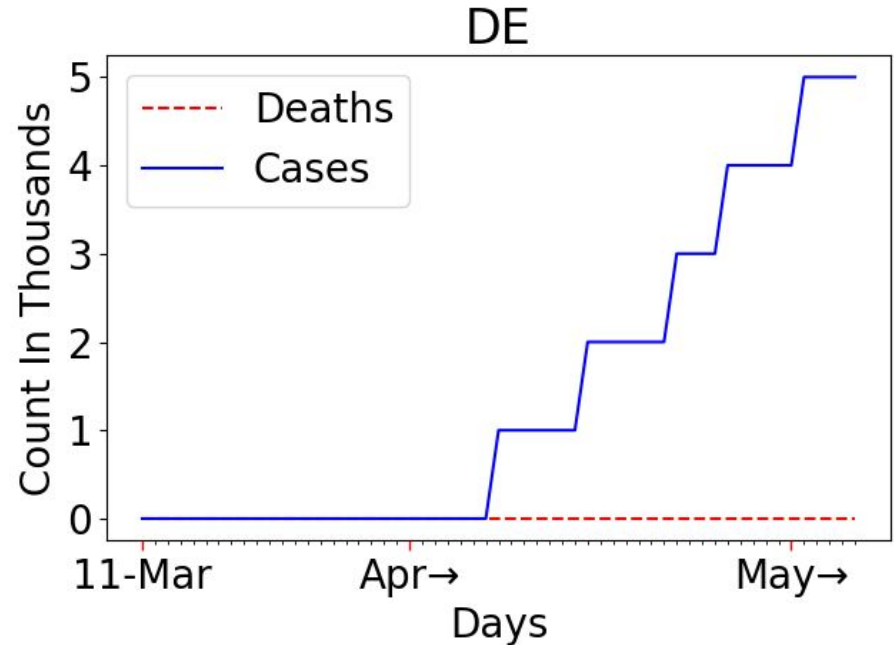
DE Govt. Communications

Goal: track changes in word usage through crisis

- Smooth word usage (binary occurrence) across different length windows (break into even parts)
- Find words that are predictive of a particular window (versus the rest)
- Use mutual information and return top ranked words. Plot each words usage window (covering 90% of uses).

Rapidly Evolving Language
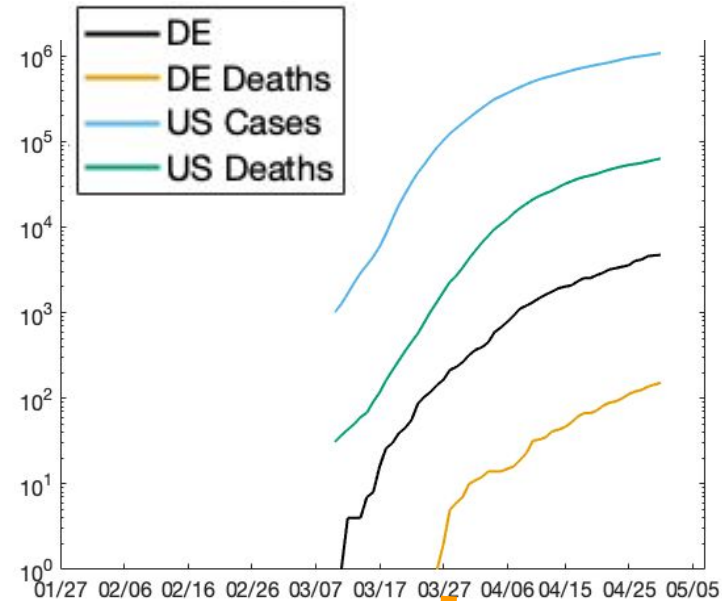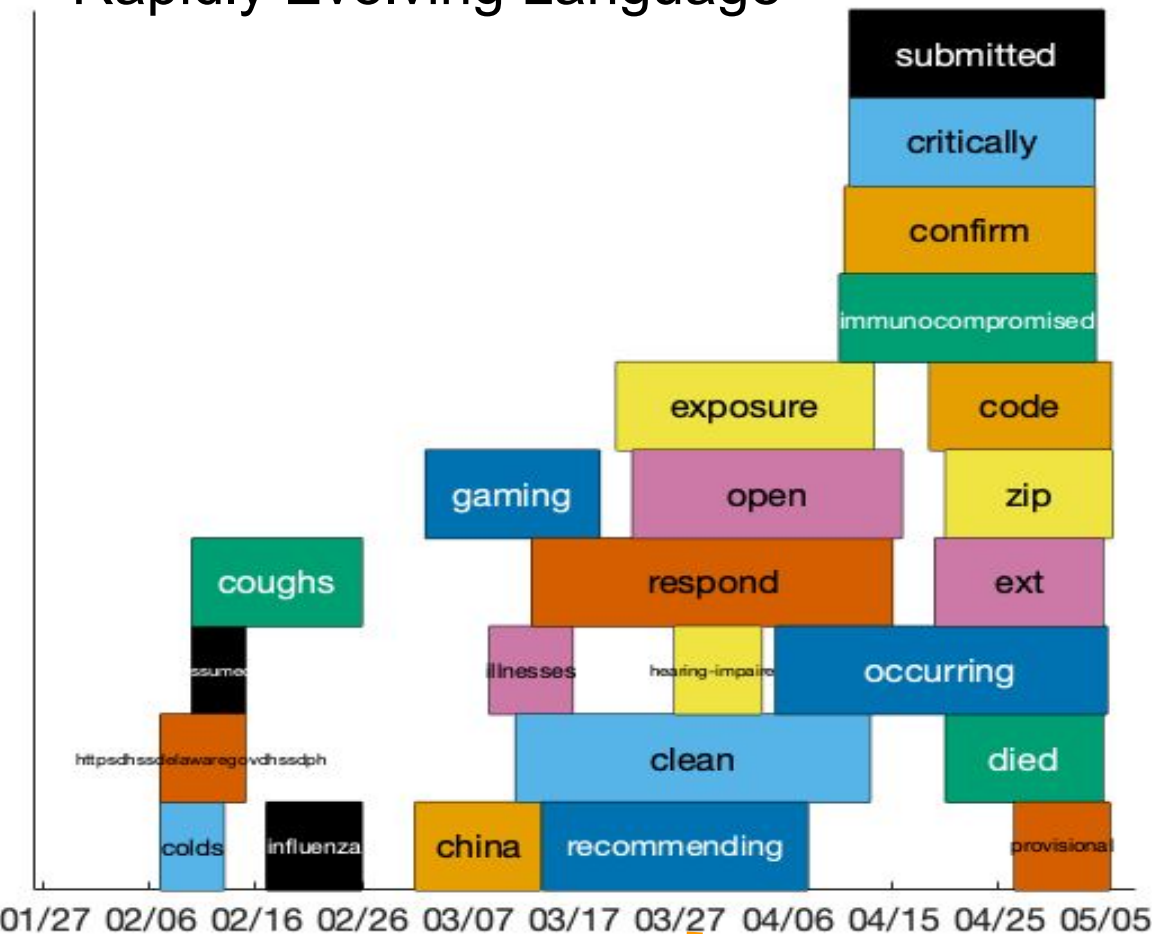
Analysis of Daily DE Gov Communications (N=106)

Effects of Ln(DE cases and Ln(DE Deaths) for 01/27/2020 - 05/07/2020

- Controlling for time trend, and including deaths/cases jointly,
- Deaths **decrease** readability/sentiment/wordcount
- Cases **increase** readability/sentiment/wordcount
- Potential implications for DE government responsiveness to COVID-19
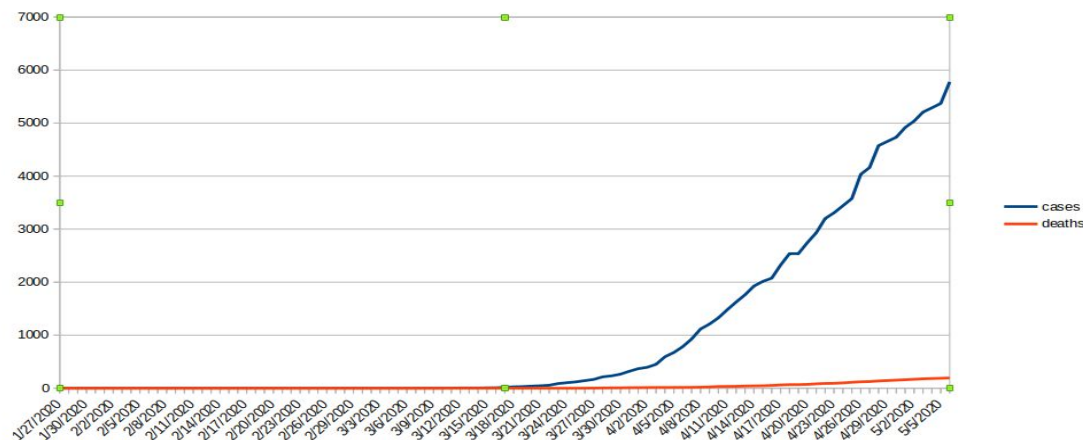
Finer resolution

Twitter moves fast. Based on global coronavirus tweets, there is information to be found within days. (Various smoothing windows shown.)
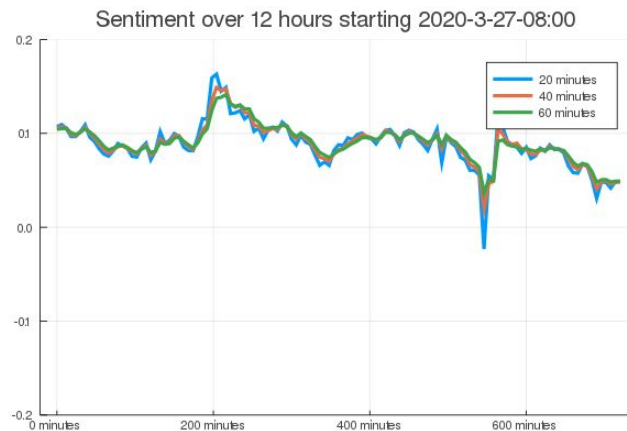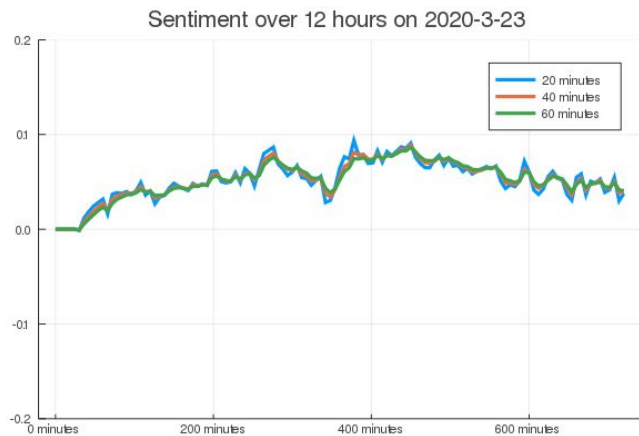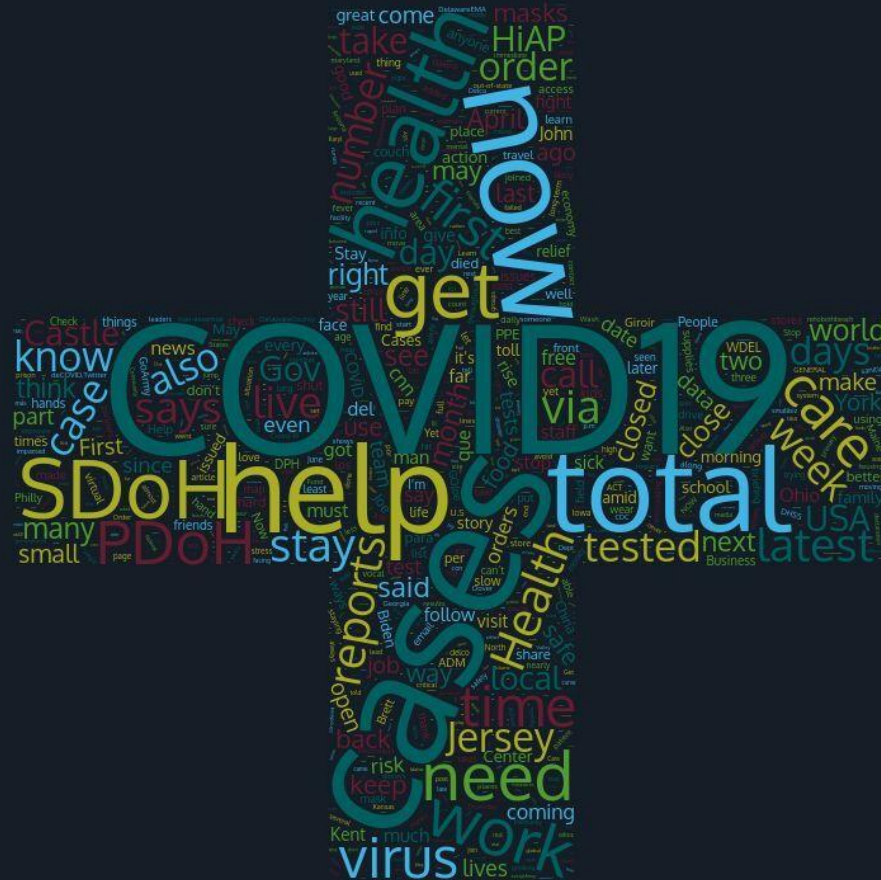
Thank You!

Collaborators
Alima,
Ben Bagozzi,
Himaghna Bhattacharjee,
Austin Brockmeier,
Chuming Chen, Toby
Driscoll, Priyanka Mondal,
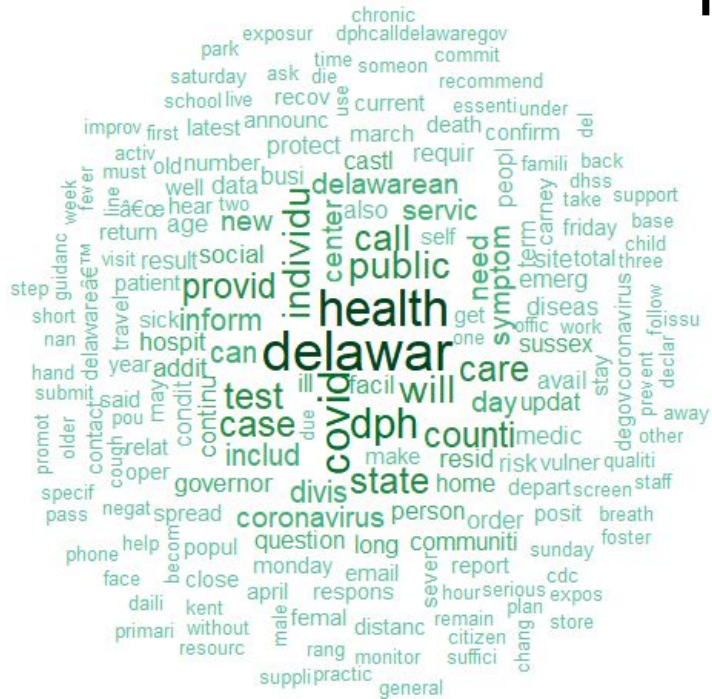Enrich Rogers,
Eli Turkel,

Software Tools Used:

Python
R
Stata
Matlab
vim
Java
Bash
JavaScript
LibreOffice Calc
Hydrator

Political Communication   &   Twitter Sentiment in DE

Re: COVID-19

+/-?

Quarantine day 11: My kids are playing outside, washing rocks from the landscaping. One of them is naked.

8:30 PM · Mar 24, 2020 · Twitter for iPhone

You're telling me my professor who can't stop the YouTube autoplayer from playing the next video is going to teach classes online? This should be good.

Relevant Interests: Coding, data collection, data fusion, data processing, statistical analysis, NLP, writing

Mentors: Ben Bagozzi & Chuming Chen