Introduction
0000

Results
00000000

Conclusion
00

Appendix
000000

References

The Modern Gatekeepers in Mass Media

Patrick Kraft   Yanna Krupnikov   Kerri Milita   John Barry Ryan

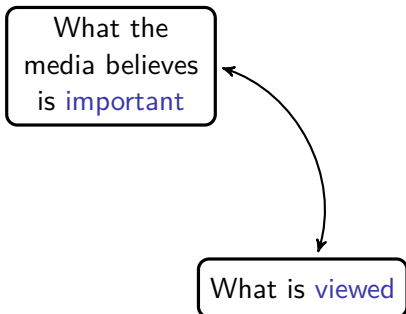74th MPSA Annual Conference, Chicago, Il

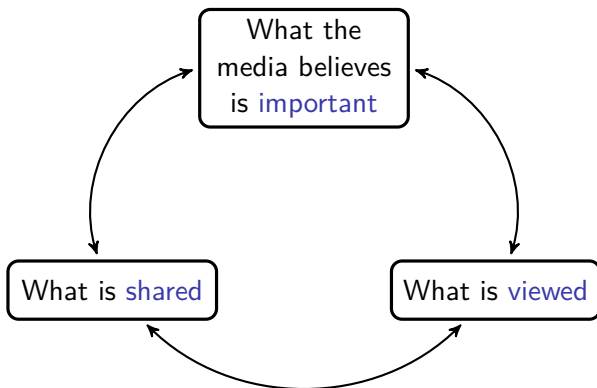April 8th, 2016

Stony Brook University

Introduction

How does social media change the agenda-setting role of traditional news media?

Introduction

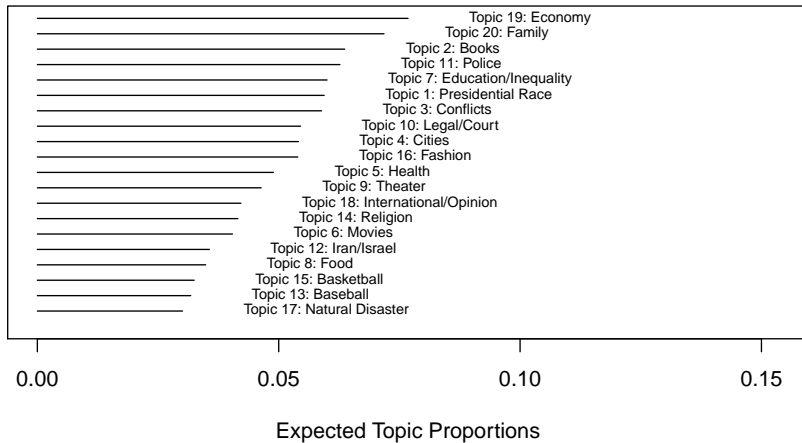What the
media believes
is important

What is viewed

Introduction

Data Overview

- ► Scraped articles from New York Times website between February 18 and April 28, 2015.
- ► Article categories: printed front page, digital front page (top, bottom & opinion section), most viewed, most emailed, most shared on Facebook, most shared on Twitter
- ► Extracted information: title, author, date, time, URL, full text
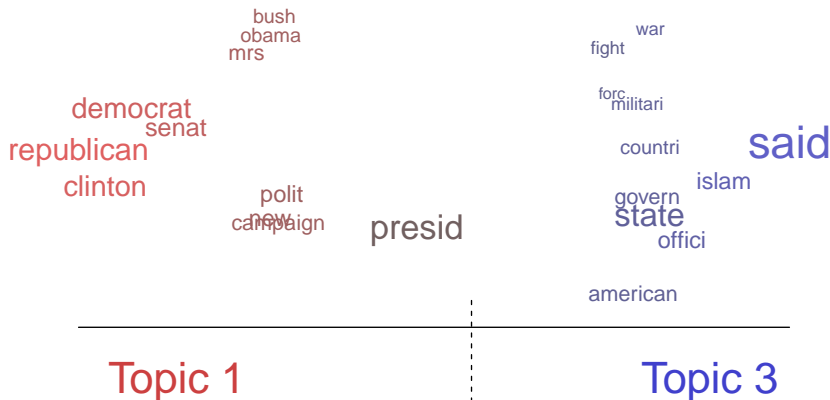- ► Total number of unique articles: 5504

Content of New York Times Articles

▶ Summarize content using structural topic model (Roberts et al., 2014; Roberts, Stewart, and Tingley, 2014)

  ▶ Each document is modeled as a mixture of K topics
  ▶ Prevalence of topics in documents can be influenced by a set of covariates
  ▶ (Word use within each topic can be influenced by a set of covariates)

▶ Number of topics: 20

Introduction
0000

Results
●0000000

Conclusion
00

Appendix
000000

References

Topic Proportions

Topic 19: Economy
Topic 20: Family
Topic 2: Books
Topic 11: Police
Topic 7: Education/Inequality
Topic 1: Presidential Race
Topic 3: Conflicts
Topic 10: Legal/Court
Topic 4: Cities
Topic 16: Fashion
Topic 5: Health
Topic 9: Theater
Topic 18: International/Opinion
Topic 14: Religion
Topic 6: Movies
Topic 12: Iran/Israel
Topic 8: Food
Topic 15: Basketball
Topic 13: Baseball
Topic 17: Natural Disaster

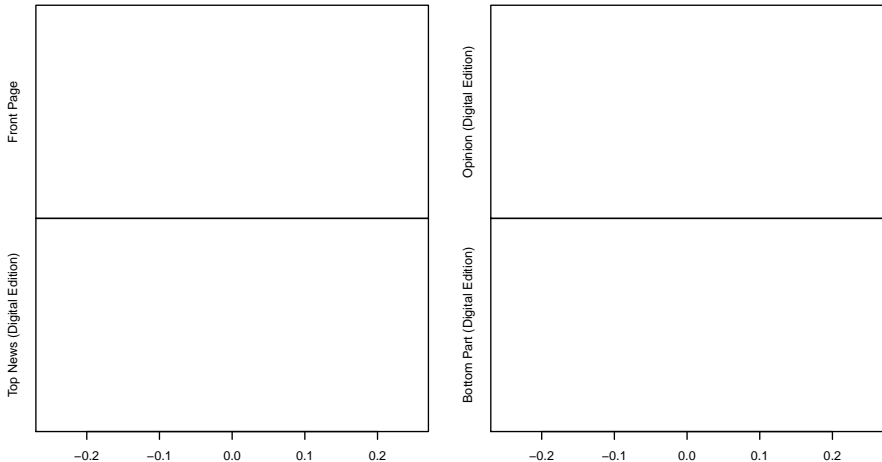0.00   0.05   0.10   0.15

Expected Topic Proportions

Example for Topic Perspectives

bush
obama
mrs

war
fight

democrat
republican   senat

forc
militari

clinton

countri

said

islam

polit
campaign new
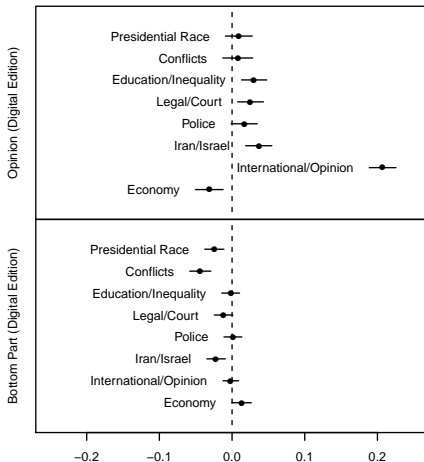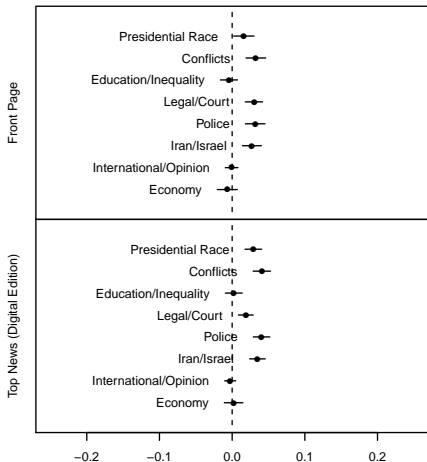
presid

govern
state
offici

american

Topic 1   Topic 3

Changes in Topic Distributions (Newspaper Section)

Introduction
0000

Results
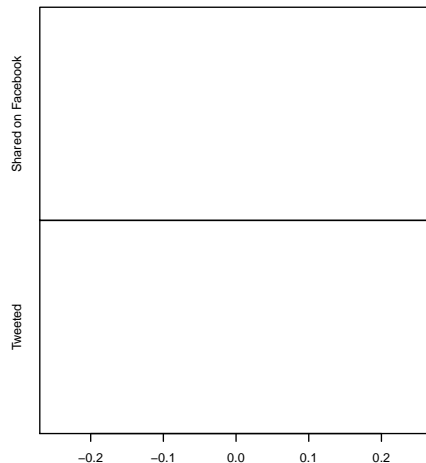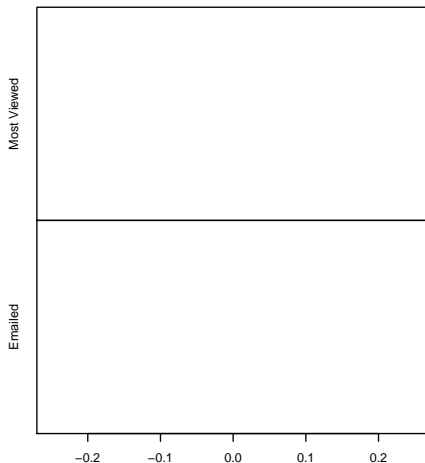00●00000
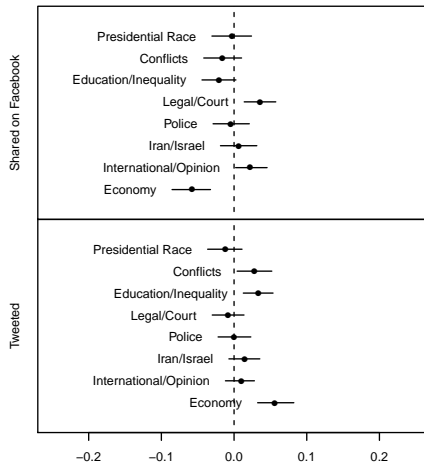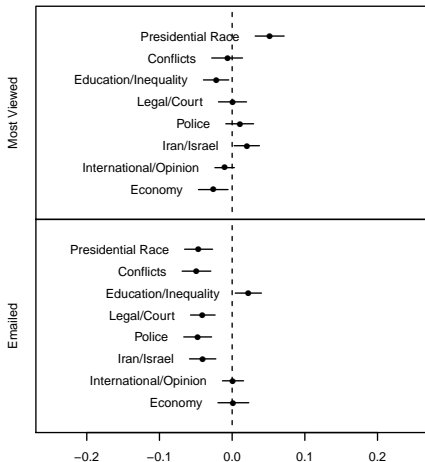
Conclusion
00

Appendix
000000

References

Changes in Topic Distributions (Newspaper Section)

Changes in Topic Distributions (Shared/Viewed)

Changes in Topic Distributions (Shared/Viewed)

Introduction
0000

Results
00000●000
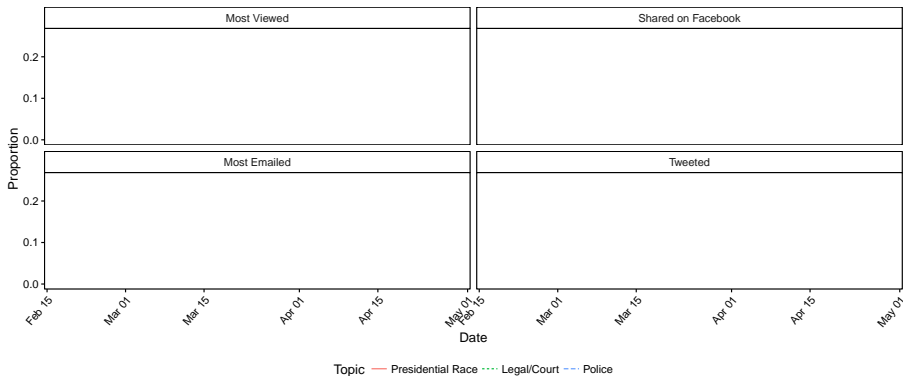
Conclusion
00

Appendix
000000

References

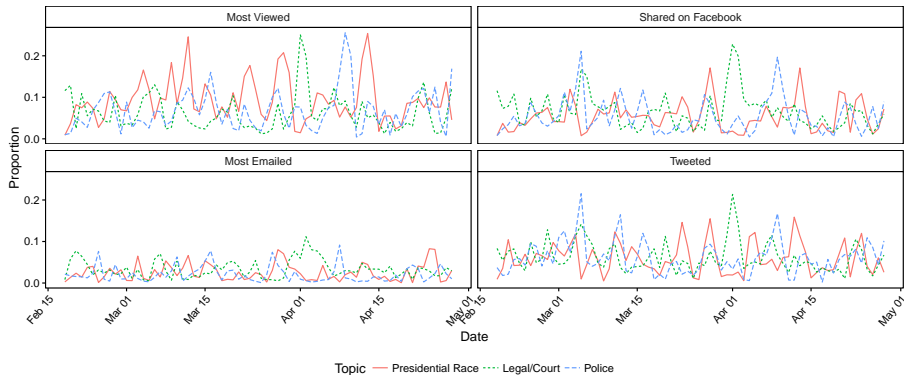# Topic Proportions over Time (Newspaper Section)
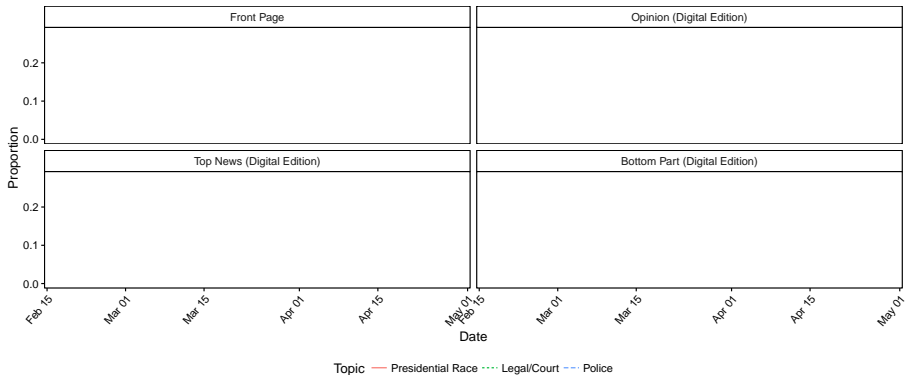
Topic Proportions over Time (Newspaper Section)
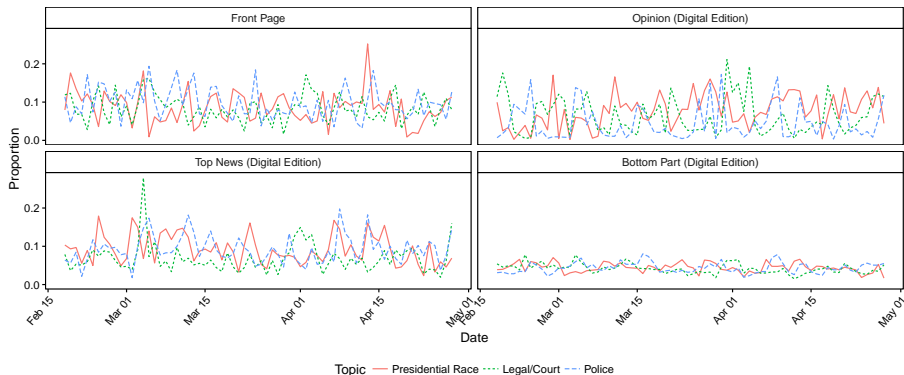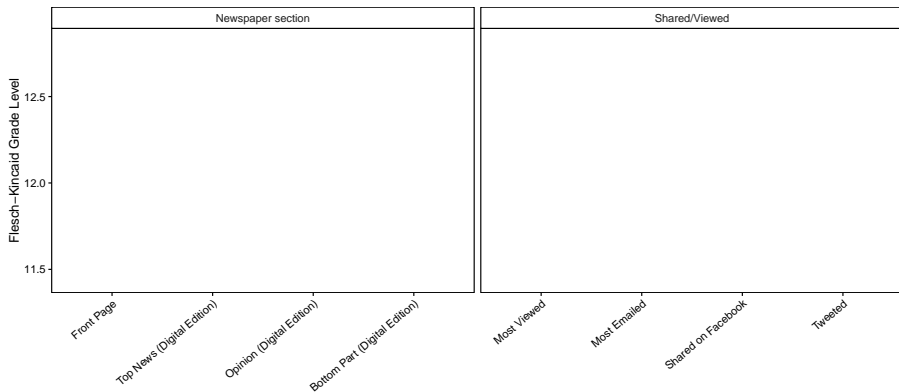
Topic Proportions over Time (Shared/Viewed)

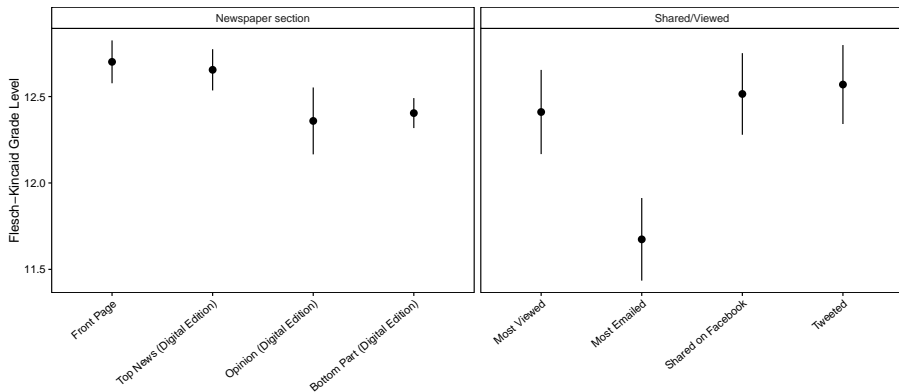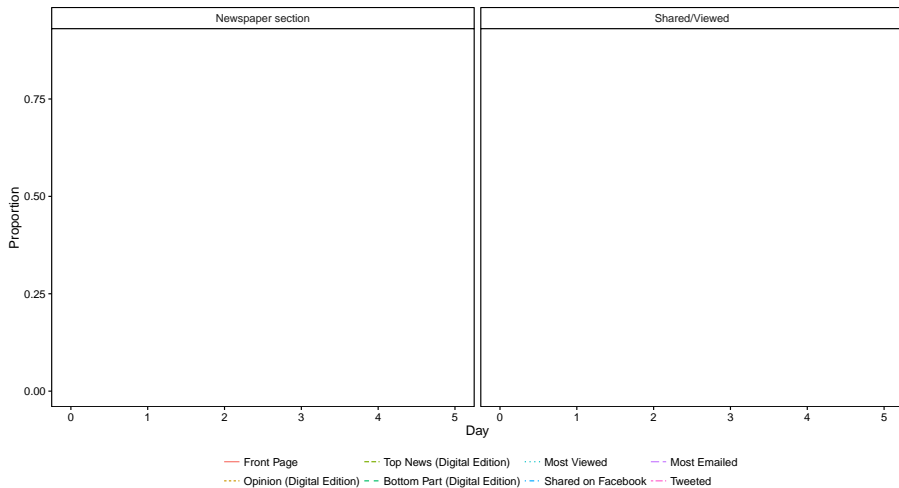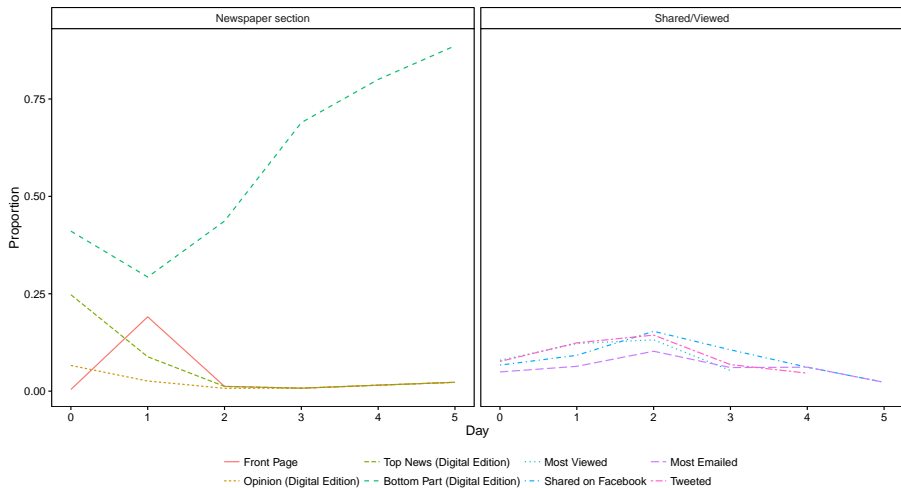# Topic Proportions over Time (Shared/Viewed)

Article Readability by Category

Article Readability by Category

What stays in the loop?

Introduction
oooo

Results
ooooooo●

Conclusion
oo

Appendix
oooooo

References

What stays in the loop?

Conclusion

- ▶ There are differences in types of articles that are shared across media, as well as articles that the New York Times places on its front page
    - ▶ Disagreement on importance of certain news stories
- ▶ Limitations:
    - ▶ Reader of the New York Times may be different than readers of other news sources.
    - ▶ The editorial team of the New York times may be less influenced by social media than other news outlets.
- ▶ Subsequent analyses:
    - ▶ Closer analysis of temporal development of articles, track how long articles remain popular in a given cycle
    - ▶ Matching individual articles to broader news stories
    - ▶ Take into account additional meta information (length etc.)

Thank you very much for your attention!

Comments, questions?
patrick.kraft@stonybrook.edu

Topic Words I

Topic 1:
republican, clinton, democrat, senat, presid, said, new, mrs, polit, campaign,
obama, bush, candid, parti, presidenti, will, hous, voter, elect, state

Topic 2:
book, one, like, work, stori, can, time, write, way, life, think, say, world,
make, read, peopl, will, novel, even, seem

Topic 3:
said, state, islam, offici, govern, presid, american, countri, war, militari,
fight, forc, group, attack, year, kill, unit, russian, two, citi

Topic 4:
new, citi, build, said, park, york, hous, street, year, room, home, open, like,
neighborhood, live, hotel, place, art, will, one

Topic 5:
said, patient, studi, health, research, medic, doctor, new, can, use, peopl,
drug, year, care, one, found, diseas, hospit, test, scientist

Topic 6:
film, said, movi, music, year, new, show, will, also, includ, award, watch,
like, time, televis, record, song, star, band, play

Topic 7:
percent, year, school, student, will, tax, peopl, rate, educ, work, job, like,
colleg, new, program, worker, mani, pay, polici, univers

Topic 8:
water, food, like, use, can, wine, restaur, cook, fish, one, make, chef, also,
eat, new, chicken, anim, sandwich, will, recip

Topic 9:
show, play, new, music, theater, like, charact, seri, perform, time, open,
broadway, star, york, one, critic, direct, actor, product, also

Topic 10:
said, state, law, court, feder, rule, case, justic, legal, right, conserv,
wildlif, vote, bill, republican, member, occup, say, refug, govern

Topic Words II

Topic 11:
said, offic, polic, new, report, depart, citi, investig, charg, offici, case, year, arrest, york, prison, kill, death, two, last, time

Topic 12:
iran, said, state, israel, nuclear, deal, unit, presid, obama, american, negoti, will, offici, agreement, netanyahu, iranian, isra, minist, saudi, countri

Topic 13:
said, player, game, team, year, sport, one, play, yanke, last, season, leagu, first, run, will, basebal, met, time, like, two

Topic 14:
women, said, univers, year, black, student, nation, white, church, men, one, school, mani, peopl, first, war, die, histori, right, presid

Topic 15:
game, team, said, season, player, coach, play, state, basketbal, point, iowa, year, two, one, second, first, made, tournament, win, kentucki

Topic 16:
show, new, fashion, art, design, collect, week, said, one, look, work, like, york, made, dress, artist, wear, model, way, see

Topic 17:
said, crash, two, pilot, year, flight, day, ebola, one, plane, gas, peopl, mile, report, ship, last, offici, airlin, passeng, earthquak

Topic 18:
american, govern, new, will, russia, countri, support, agreement, allow, european, histori, strategi, exist, approv, depend, doesnt, regim, hope, scandal, least

Topic 19:
compani, said, bank, year, busi, will, market, percent, servic, like, execut, new, million, billion, industri, also, last, investor, now, use

Topic 20:
said, one, like, peopl, day, just, want, time, get, famili, friend, back, home, live, now, know, look, dont, work, ask
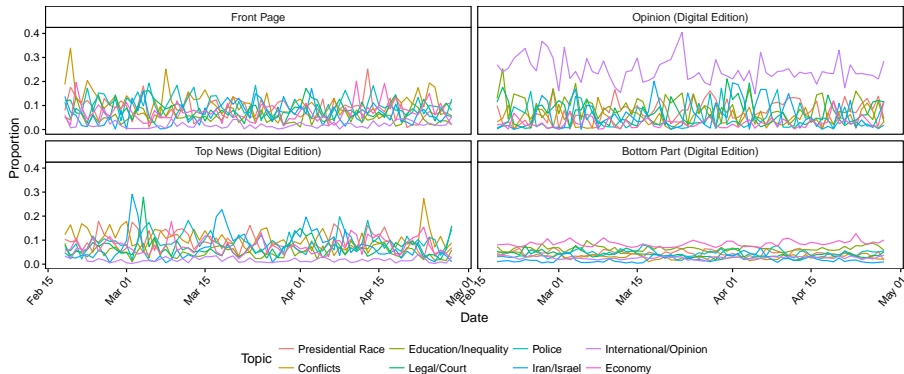
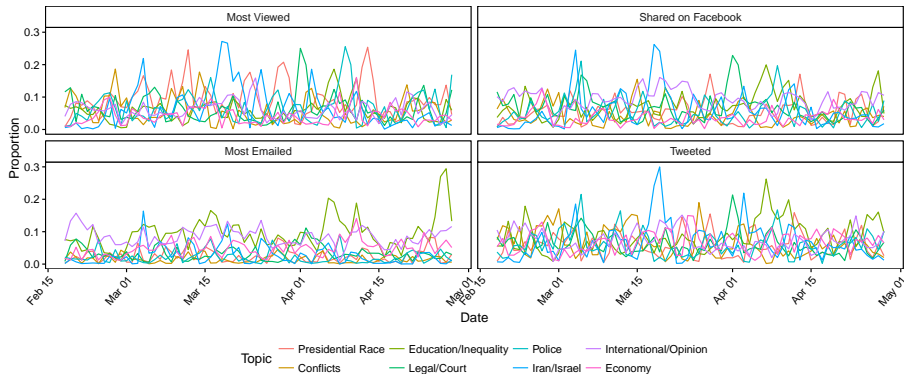## Changes in Topic Distributions (Newspaper Section)
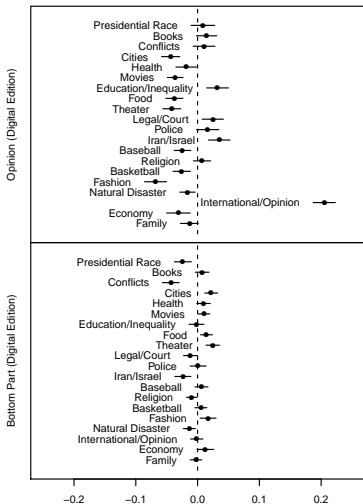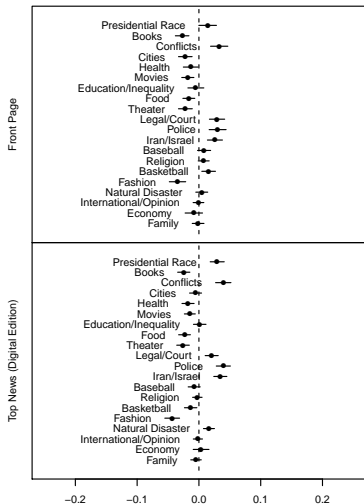
Changes in Topic Distributions (Shared/Viewed)
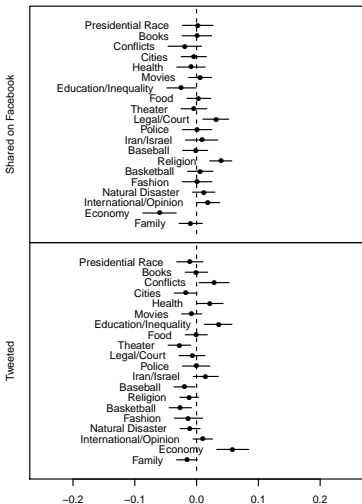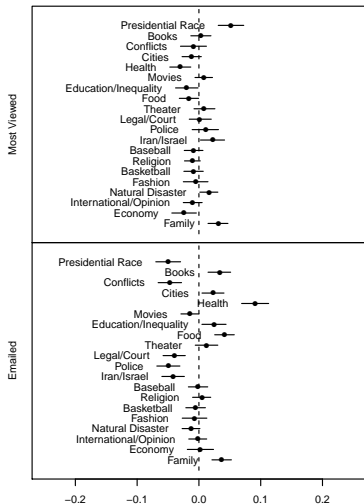
Topic Proportions over Time (Newspaper Section)

Topic Proportions over Time (Shared/Viewed)

References

Roberts, Margaret E, Brandon M Stewart, and Dustin Tingley. 2014. "stm: R package for structural topic models." *Journal of Statistical Software* 1: 1–49.

Roberts, Margaret E., Brandon M. Stewart, Dustin Tingley, Christopher Lucas, Jetson Leder-Luis, Shana Kushner Gadarian, Bethany Albertson, and David G. Rand. 2014. "Structural Topic Models for Open-Ended Survey Responses." *American Journal of Political Science* 58 (4): 1064–1082.