Measuring Progressive Media Impact

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Goals and Approach

• How can progressive media most effectively influence the conversation?

• Our approach:
  1. Build infrastructure to measure public discourse and media content (first six months)
  2. Observe relationship between public discourse and media content (previous six months)
  3. Run experiments to learn causal effects (next six months)
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1. Build Infrastructure

• Social media posts in our areas of interest
  - The Twitter firehose & analytics, courtesy of Crimson Hexagon

• Media content from TMC members and comparable conservative outlets
  - Software we built and are running 24/7 at Harvard/IQSS

• Web site pageviews from participating TMC member sites
  - Via Google Analytics
1. Build Infrastructure

   Acquire data

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Topics of Study

• Abortion
• Reproductive Health
• Immigration
• ACA/Obamacare
• Military Conflicts
• Fracking/Hydraulic Fracturing/New Energy Extraction Techniques
• Education: School Choice
• Education: Teachers’ Unions
2. Observational Research

• Monitor emphases of progressive, conservative, and larger media outlets
  ⇝ Number of articles in each topic category (new technology)

• Monitor opinions expressed in social media
  ⇝ % of posts in each given opinion category (Crimson Hexagon technology)

• Estimate causal effect of media outlets on social media conversation
  ⇝ Using on new statistical models we built for this project
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Measuring Media Content and Conversations

Abortion

40th Anniversary of Roe v Wade

"40 Days of life" anti-abortion protest

Wendy Davis Texas abortion law filibuster

Number of Articles

Date

Number of Twitter Posts
Estimating Effect of TMC Articles on Twitter Conversation

Percent Increase in Twitter Posts Associated with One Additional Progressive Article
3. Experimental Research

- Small scale interventions with one and then a small number of outlets. Then, larger scale, coordinated interventions.
- Better estimates of effects of media outlets on social media conversation.
- Learn what works, what doesn’t, and how to improve.
- Some funding available.
- First pilot: measuring the effect of reproductive health collaboration project.
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- First pilot: measuring the effect of reproductive health collaboration project
How Effective was the Plan B Collaboration?

• A small number of TMC outlets and alternative newsweeklies published articles on access to Plan B (emergency contraception).
• Website (whereisyourplanB.com) was promoted on Twitter, Facebook, blogs, etc.
• We measure the impact of these stories on social media conversations:
  \[
  \text{Causal Effect} = (\text{social media opinion if we intervene}) - (\text{social media opinion if we do not})
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Getting the Baseline Right: Predicting tweet volumes

Reproductive Health: Permissive

Leave–One–Out Cross–Validation: One Step Forecasts vs. Realized Values

Days

Predicted Tweets

Actual Tweets

MSE: 0.209
In 80% CI: 76.10%
In 95% CI: 91.22%
Comparing Observed Outcomes to the Predictions

Reproductive Health
Permissive:
Effect of Collaboration on Twitter Posts

<table>
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<tr>
<th>Day</th>
<th>Effect</th>
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<tbody>
<tr>
<td>2013-10-07</td>
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<tr>
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<tr>
<td>2013-10-10</td>
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</table>
Comparing Observed Outcomes to the Predictions

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<th>Day</th>
<th>Effect</th>
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<tbody>
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<td>−57</td>
</tr>
<tr>
<td>2013−10−08</td>
<td>−1046</td>
</tr>
<tr>
<td>2013−10−09</td>
<td>−734</td>
</tr>
<tr>
<td>2013−10−10</td>
<td>−2738</td>
</tr>
</tbody>
</table>
For More Information:

King@Harvard.edu
Appendix

Immigration

1. Pro: in favor of immigrants or for less restrictive immigration policy
2. Anti: opposed to immigrants or for more restrictive immigration policy
3. Other: neutral or conflicted (about immigration but no clear position)
4. Other: not about immigration, off-topic
Appendix

Military Conflicts

• Afghanistan
  1. For US intervention/more aggressive stance
  2. Neutral/factual/balanced/unclear
  3. Against intervention/less aggressive stance

• Iran
  4. For US intervention/more aggressive stance
  5. Neutral/factual/balanced/unclear
  6. Against intervention/less aggressive stance

• Syria
  7. For US intervention/more aggressive stance
  8. Neutral/factual/balanced/unclear
  9. Against intervention/less aggressive stance

• Off-topic
Appendix
Fracking/Hydraulic Fracturing/New Energy Extraction Techniques

1. More permissive regulation
2. More restrictive regulation
3. Neutral/conflicted/unclear
4. Off-topic
Appendix
Reproductive Health

• Permissive
  1. About abortion
  2. About contraception
  3. About both or unclear

• Restrictive
  4. About abortion
  5. About contraception
  6. About both or unclear

• Other
  7. Factual/neutral
  8. Irrelevant: Not about reproductive health
Example Twitter Posts

Immigration

• Pro
  • RT @Tammy4Congress: I support the DREAM Act. Anything we do with immigration needs to be practical, fair and humane. #IL08
  • RT @neappleseed Appleseed Blog: Current #Immigration policies tear apart families and hurt children. Time to make families stronger

• Anti
  • “Twitter Me This”, why is Our President Not Protecting Our Borders? Why Does He Shutting Down Border Stations? This Is Treason Against US!
  • @maddow the topic of illegal immigration should have been on the list of threats to America. (impact to costs, crime, education, community)