Lecture 12: Computational Propaganda
History of Propaganda

- Carthago delenda est!
History of Propaganda

- Carthago delenda est!
- History is written by the winners
  - So its biased, (those losers never deserved to win anyway)
- Propaganda has exists even before writing
- But with mass media its become more refined
  - Newspapers/pamphlets
  - Radio/Movies/TV/News
  - Social Media
  - Interactive Social Media (comments)
  - Personalized Propaganda targeted specially to you sitting quietly in the second row
Propaganda vs Persuasion

- Propaganda is designed to influence people *emotionally*
- Persuasion is designed to influence people with *rational arguments* (ish)

- But it's not that easy to draw the line *objectively*
  - They use propaganda to influence
  - We use rational arguments to inform
<table>
<thead>
<tr>
<th>We have …</th>
<th>They have …</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army, navy and air force</td>
<td>A war machine</td>
</tr>
<tr>
<td>Reporting guidelines</td>
<td>Censorship</td>
</tr>
<tr>
<td>Press briefings</td>
<td>Propaganda</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>We …</th>
<th>They …</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take out</td>
<td>Destroy</td>
</tr>
<tr>
<td>Suppress</td>
<td>Kill</td>
</tr>
<tr>
<td>Dig in</td>
<td>Cower in their fox holes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Our men are …</th>
<th>Their men are …</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>Troops</td>
</tr>
<tr>
<td>Lads</td>
<td>Hordes</td>
</tr>
</tbody>
</table>

The Guardian 1990
Propaganda

- Demonize the enemy
  - “The only good bug is a dead bug”
- Personalize your side
  - “Our good boys ...”
- Be inclusive
  - “Good people like yourself ...”
- Be exclusive
  - “Never met a good one ...”
Propaganda

• Obfuscate the source
• Nazi Germany makes a BBC-like show
  • Lord Haw Haw (William Joyce) “Germany Calling”
  • Sounded like a BBC broadcast (at first)
  • Talked about failing Allied Forces
  • Personalized to local places
• Flood with misinformation
  • To hide main message
  • Discredit a legitimate source
  • Add a sex story to deflect attention
Propaganda

- Doesn’t need to True (or False)
  - Make up stories that distract
- But you can still just be selective with the truth
  - Marketing does this all the time
  - The most popular smart phone in the world
  - The most popular smart phone platform in the world
- Maybe truth plus distraction
  - Add a hint of a financial scandal
Most countries, organizations, companies have official press releases
  • Mostly legitimate news stories
  • But may sometimes just propaganda
  • The mixture with legitimate news strengthens the illegitimate

Major News Outlets have explicit bias
  • VOA, RT, Al Jazeera, BBC World Service, DW

Private News Organizations have explicit bias
  • Washington Post (owned by Jeff Bezos)
  • Blog sites (owned by unexpected rival)
  • Often explicit bias statement
Computational Propaganda

- People still generate base stories
- But automated bots can magnify attention
  - Bots can retweet
  - Add likes
  - Give a quote and a link
- Build an army of bot personas
  - Be applied to many aspects of on-line influence
Computational Propaganda Project
University of Oxford

• Philip N Howard and Sam Woolley
• Since 2012
• Originally at University Washington (started with an NSF grant)
• Grants on
  • Computational Propaganda
  • Misinformation, Media and Science
  • The Production and Detection of Bots
  • Restoring Trust in Social Media Civic Engagement
• They produce (detailed) reports on aspects of
  • Fake News, Election Rigging
  • Regulation of Social Media
Political Bots

- @Girl4TrumpUSA created on Twitter
- Generated 1,000 tweets a day
- Mostly posting comments and links to Russian news site
- Deleted by Twitter after 38,000 tweets
- Many other similar bots
  - They amplify a candidate’s support
  - Forward other messages (so you see things multiple times)
  - Ask: “what do you think about ‘x’” (to get responses)
  - Like and retweet articles
  - Create fake trends on hashtags
    - Astroturfing vs grass roots
  - Manufacture consent
How Many Bots

- Use crowd sourcing services to do tasks
- Can buy armies of bots with existing personas
- Start a twitter account
  - Buy a following of bots
  - High number followers attracts real followers
  - Bots will get deleted
  - Keep all the real followers
- There are offers of 30,000 personas for sale
Bot Detection

- Not very hard (at present)
  - Bot activity over time is quite different from humans
  - Bot post contents is often formulaic (its all rule driven)
- Oxford Computational Propaganda Project
  - Published papers on bot types and detection techniques
  - They interviewed a bot maker
    - “How do you avoid your bots from being detected”
    - “We read papers by you on what you do to detect us”
- Oxford Computational Propaganda Project
  - Looking for post doc to work on bot detection
Bot Development

• Bot content formulaic
  • Generated from basic templates
  • Hand written
• Bot actions vs machine learning
  • Reinforcement learning
  • Send message1 to 50 people
  • Send message2 to different 50 people
  • Count number of clicks
  • Send most clicked message to 500 people
• Do this on more targeted messages to personalized interests
  • Send education message to person who mentioned education
  • Send healthcare message to person who mentioned healthcare
Automated Bot plus Humans

- But Crowdworkers won't post propaganda for you
  - So..

- Please help with this propaganda detection problem
  - Here are 4 messages
  - Which ones are real, and which ones are bot generated:
    - "We're the greatest"
    - "They're the worst"
    - "Where is his birth certificate?"
    - "My granddaughter sent this link ..."

- Thank you for help with the propaganda generation problem
Investigative Journalism on Bots

- FCC Net Neutrality Public Comments
  - Overwhelmly anti-neutrality
Investigative Journalism on Bots

- FCC Net Neutrality Public Comments
  - Overwhelmingly anti-neutrality
- Dell Cameron and Jason Prechtel, Gizmodo
  - Traced each comment (uploaded through API)
  - Traced timing with downstream registrations
  - Highly correlated with PR firms CQ Roll Call and Center for Individual Freedom (CFIF).
- “Of course there are fake posts to the comment section, see look we added a few on the other side too so we don’t look so shady.” (not a quote)
Is it all bad Propaganda

- Probably we can’t draw the line between propaganda and persuasion
- Social media use for protests can be effective
  - 4Chan/Anonymous and the Arab Spring 2010/11
  - Soc.culture.china (usenet) and Tiananmen Square Protests 1989
- Much of early Internet Interest was in the voice of the people
  - Cyberactivists (John Perry Barlow, John Gilmore) saw social media as a plus
  - “A Declaration of Independence of Cyberspace”
  - Electronic Frontier Foundation
Comparison to Spam

- Spam: the mass distribution of ads (real or otherwise)
- It was successful at first (a few people clicked)
- People developed automatic spam detection algorithms
  - Mostly on Usenet as that was the largest forums at the time
  - Then in email
  - Detection improved, but it's still there
- We still receive spam, though mostly we ignore it
- Other much more sophisticated marketing is now common
  - And more acceptable
  - Google links to purchasing options
  - Amazon recommendations
- So spam is contained and mostly ignored
Can Propaganda become like Spam

- People send spam *if* it works
  - Spam working means people “buying”
- People send propaganda *if* it works
  - Propaganda working means people … voting (?)
  - Which isn’t as important as buying the best smart phone :-(
- People may become more sophisticated with propaganda
  - Learn to ignore it, (but what of those who don’t)
  - But it will become more targeted to the unsophisticated
- Propaganda messages may become more sophisticated
  - Control your news bubble/echo chamber
- Propaganda messages may drift to informative messages
  - People will learn to evaluate both sides of the issue and make informed decisions