Lecture 12: Computational Propaganda
History of Propaganda

- Carthago delenda est!
History of Propaganda

- Carthago delenda est!
- History is written by the winners
  - So it’s biased, (those losers never deserved to win anyway)
- Propaganda has existed even before writing
- But with mass media it has 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
## We vs Them

<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>
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
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