Us and Them
Adversarial Politics on Twitter

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November 18, 2017
Dr. Gareth Rice
@belfastnomad

The anti-Tory @SNP rhetoric has helped the Tory revival in Scotland more than #indyref2!

4:54 AM - 5 May 2017

Brendan Hynes @Hyvast · May 5
Replying to @belfastnomad @snp and 3 others
I could agree with you on that
But then we both be Wrong!

Joni Sanders @jonisanders · 12 Oct 2016
Replying to @jeniferbeats
I am afraid the people voting for Donald are hypnotized I else makes sense. I just hope people wake up soon

H. Zena @jonsv3 · 12 Oct 2016
Replying to @jeniferbeats @voxdotcorn
Absolutely! #ImWithHer

Marty Nix @Marty_Nix · 12 Oct 2016
Replying to @jeniferbeats @voxdotcorn
I trust. @HillaryClinton with my life!

Katherine Yelen @kyelen

Bravo France, you rejected white nationalism, fear and hatred! The world thanks you! 👏👏 #Macron #ViveLaFrance #Presidentielle2017

12:46 PM - 7 May 2017

Louis @MetalTotenkopf

Replying to @kyelen @AloversGaming
Bravo, you elected a man who said there is no such thing as French culture and Terrorism is something you have to get used to. RIP france.

1:36 PM - 7 May 2017

Re: Replying to @58andstillhere

Helping to defeat Hillary Clinton is one of my greatest accomplishments.
I'm so glad I helped take her down.
#NeverHillary

Ash R @_Ash_Roberts · May 4
63% also not enough to constitute a super majority
No vote was given before joining
No vote was given on formation of the EU

Michael Kelly @Guedella · May 4
So you would support a vote on the ptoposed #Brexit deal?

Ash R @_Ash_Roberts · May 4
Sure, if it was a vote to accept the deal or leave on who

Michael Kelly @Guedella · May 4
Theresa May has no intention of signing any deal.
This country will irrevocably economically damaged.
Certainly has been an interesting 24 hours!
Certainly has been an interesting 24 hours!

Donald J. Trump
@realDonaldTrump

User @User - 9 Oct 2016
Replying to @realDonaldTrump
Interesting for you, horrifying for the rest of us. Time to give it up.
Donald J. Trump
@realDonaldTrump

Certainly has been an interesting 24 hours!

User @User - 9 Oct 2016
Replying to @realDonaldTrump
Interesting for you, horrifying for the rest of us. Time to give it up.

AnotherUser @AnotherUser - 9 Oct 2016
Replying to @realDonaldTrump @User
You Hillary supporters would love Trump to drop out of the race! That is definitely the ONLY way You will win!

5 more replies
This Work

• Political adversarial discussions on social media
  – Initiated by key political figures
  – Extended over the course of a campaign

• Recent prominent cases
  – 2016 US Election and UK Brexit Referendum

• Mining facets of the discussion
  – Main topics addressed
  – User roles and attitude towards stakeholders
Dataset: US Election and Brexit

- Twitter thread rooted on political figures
  - ‘16 US presidential candidates: Hillary Clinton and Donald Trump
  - Opposers and supporters of the Brexit referendum: Nicola Sturgeon, Jeremy Corbyn, Nigel Farage and Boris Johnson

<table>
<thead>
<tr>
<th>Stance/Leader</th>
<th>Clinton</th>
<th>Trump</th>
<th>Remain</th>
<th>Leave</th>
</tr>
</thead>
<tbody>
<tr>
<td>#Posts</td>
<td>2,602</td>
<td>1,861</td>
<td>1,098</td>
<td>539</td>
</tr>
<tr>
<td>#Replies</td>
<td>586,335</td>
<td>549,799</td>
<td>101,193</td>
<td>72,190</td>
</tr>
<tr>
<td>#Users</td>
<td>153,786</td>
<td>146,255</td>
<td>35,504</td>
<td>27,941</td>
</tr>
</tbody>
</table>

| Time Period   | 01-01-2016 to 15-11-2016 | 01-02-2016 to 01-10-2016 |
Factual and Post-Factual Topics

- Latent topics in the discussions
- Topic generation with Twitter-LDA\(^1\)
  - 20 topics per campaign
- Manual labeling with human judges
  - Semantic label: topic description
  - Factuality label: factual vs sentimental topics

<table>
<thead>
<tr>
<th>keywords</th>
<th>label</th>
<th>F/S</th>
</tr>
</thead>
<tbody>
<tr>
<td>nhs, health, public, tax</td>
<td>welfare</td>
<td>F</td>
</tr>
<tr>
<td>imwithher, vote, love, win</td>
<td>pro-Clinton</td>
<td>S</td>
</tr>
</tbody>
</table>

\(^1\)https://github.com/minghui/Twitter-LDA
Hillary Clinton 
@HillaryClinton

Raising CA’s minimum wage to $15 is a big win for workers. I applaud CA at wages. -H
4:06 PM - 28 Mar 2016
1,203 Retweets 2,666 Likes

Jeremy Corbyn 
@jeremycorbyn

We’re voting Remain. Leave will hurt the NHS at risk #Labour
7:14 AM - 23 Jun 2016
231 Retweets 466 Likes

Donald J. Trump 
@realDonaldTrump

Immigration reform is all risk for the @GOP. Their base doesn’t want it and the 12M illegals will all vote Democrat.
12:34 PM - 1 Apr 2013
1,295 Retweets 2,502 Likes

Dave Burgess @dav

Replying to @HillaryC @HillaryClinton didn’t dollars on 2/17/2016? Have you now evolve
75 Retweets 231 Likes

Marlıo Costa @maril
@daverburgess No, € in cost of living.

Maponus Reborn @Maponus

Replying to @jeremycorbyn @Mikkil Let’s do the maths hc breaking point. How does mas
255 Retweets 1.3K Likes

Graeme McGuire @Graeme_

Replying to @jeremycorbyn @jeremycorbyn @Mikkil how you come to that conclusion is a total mystery. Uncontrolled immigration is putting the NHS at risk.
Donald J. Trump
@realDonaldTrump

TERRORISM, IMMIGRATION, AND NATIONAL SECURITY SPEECH-TRANSCRIPT: bit.ly/1OiXbfwNHSpeech

12:26 PM · 13 Jun 2016 from Saint Anselm College

7,405 Retweets 16,275 Likes

Susang4Trump USA @Oil_Ranger · 13 Jun 2016

Replying to @realDonaldTrump
I couldn’t wait to get home from work to hear this. I see your heartbreak,your love & passion for our country. Thank you.

Bienafe @bienafe · 13 Jun 2016

Replying to @realDonaldTrump
Substantive, sincere & persuasive speech. I believe you mean every word you said. You got my support & vote! MAGA 🇺🇸❤️❤️

Happy Flower @FelizFlorencia1 · 13 Jun 2016

Replying to @realDonaldTrump
Great Speech!

Hillary Clinton
@HillaryClinton

Trump's convention message: fear and hate. RT if you agree we're better than this.

12:05 PM · 24 Jul 2016

6,720 Retweets 7,174 Likes

Amie @DivaAmie · 25 Jul 2016

Replying to @HillaryClinton
That video is a complete misrepresentation of #Trump and his message. #LynnHeary #CrookedHillary #NeverHillary

Scott Ford @ScottFordTVGuy · 24 Jul 2016

Replying to @HillaryClinton
No intelligent, free thinking, self-respecting person would vote @HillaryClinton. Smart progressives like me will vote, @realDonaldTrump.

Alexander @realAlexIvanov · 24 Jul 2016

Replying to @HillaryClinton
dear americans! Do NOT vote for this woman! She’s crazy and will start the Final world war if elected!!! Stop her!!!
Factual and Post-Factual Topics

- Predominance of sentimental topics
  - 56% of replies to Clinton, 61% of replies to Trump
  - 53% of replies to Remain, 59% of replies to Leave

<table>
<thead>
<tr>
<th></th>
<th>Factual</th>
<th>Sentimental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinton</td>
<td>10% social issues</td>
<td>29% contra-Clinton</td>
</tr>
<tr>
<td></td>
<td>9% gun control</td>
<td>16% pro-Clinton</td>
</tr>
<tr>
<td></td>
<td>8% foreign politics</td>
<td>4% Bill Clinton</td>
</tr>
<tr>
<td>Trump</td>
<td>18% republican party</td>
<td>17% contra-Trump</td>
</tr>
<tr>
<td></td>
<td>8% foreigners</td>
<td>22% pro-Donald Trump</td>
</tr>
<tr>
<td></td>
<td>7% economy</td>
<td>10% media coverage</td>
</tr>
</tbody>
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<th>Sentimental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave</td>
<td>14% European Union</td>
<td>20% referendum day</td>
</tr>
<tr>
<td></td>
<td>11% immigration</td>
<td>18% US parallels</td>
</tr>
<tr>
<td></td>
<td>7% foreign politics</td>
<td>12% pro-Leave</td>
</tr>
<tr>
<td>Remain</td>
<td>15% Scotland</td>
<td>30% pro-labour party</td>
</tr>
<tr>
<td></td>
<td>11% social welfare</td>
<td>17% Khan election</td>
</tr>
<tr>
<td></td>
<td>7% economy</td>
<td>10% middle east</td>
</tr>
</tbody>
</table>
The Power of Users

- Activity of different user groups

- User inclination: stance
  - Binary classification with SVM\(^2\)
  - Each user’s tweets concatenated into a single document
  - Leaders’ tweets as training data

- User roles: regular and power users
  - Binary classification with SVM\(^2\)
  - Profile information regarding account activity: creation date, number of posts, number of followees
  - 100 manually inspected accounts as training data

\(^2\)https://www.csie.ntu.edu.tw/~cjlin/libsvm/
The Power of Users

- Twice as many pro-Clinton users, but twice as many pro-Trump tweets!
  - Low activity from Clinton supporters
  - Five times as many pro-Trump tweets by power users
  - Pro-Trump tweets appearing frequently among replies to Clinton

<table>
<thead>
<tr>
<th>User type</th>
<th>Pro-Clinton</th>
<th>Pro-Trump</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#Users</td>
<td>#Tweets</td>
</tr>
<tr>
<td>Power</td>
<td>5,362</td>
<td>25,147</td>
</tr>
<tr>
<td>Regular</td>
<td>167,927</td>
<td>338,925</td>
</tr>
</tbody>
</table>
The Power of Users

- Twice as many users on the Leave side...
  - But no significant difference in activity
  - Power users active for longer periods, and outside the discussion

<table>
<thead>
<tr>
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<th>Pro-Remain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#Users</td>
<td>#Tweets</td>
</tr>
<tr>
<td>Power</td>
<td>1,042</td>
<td>3,529</td>
</tr>
<tr>
<td>Regular</td>
<td>42,310</td>
<td>85,455</td>
</tr>
</tbody>
</table>
Combining Topics and Users

● Topical activity of different user groups

● In the US case:
  – Contra-candidate topics were the most popular for regular users
  – Power users more active in pro-candidate topics, compared to regular users
  – Regular users more active in factual topics, compared to power users

● In the UK case:
  – Pro-Leave topic received more activity from power users
  – Referendum day is the most popular topic for most user groups
  – Remain leaders more active in pro-party topics
Conclusions

• Adversarial discussions led by political figures on social media

• Key insights:
  – Common themes across different campaigns
  – Discussions dominated by emotional topics, especially on the winning side
  – Regular users are more active in critical discussions, power users more active in endorsing parties

• Future (and current) work:
  – Extended dataset covering the aftermath of campaign results
  – Deeper look into nested discussions and topic evolution
  – ?
Thank You!

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