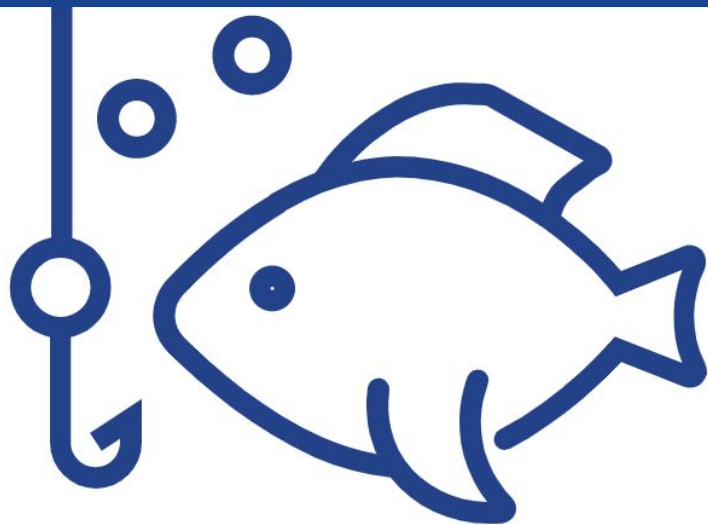


How to Catch a Troll





Dean Browning 

@DeanBrowningPA

Twitter is a weapon of war masquerading as a toy.

2:30 PM - 27 Sep 2020

76 Retweets 264 Likes



6



76



264

What is a troll?

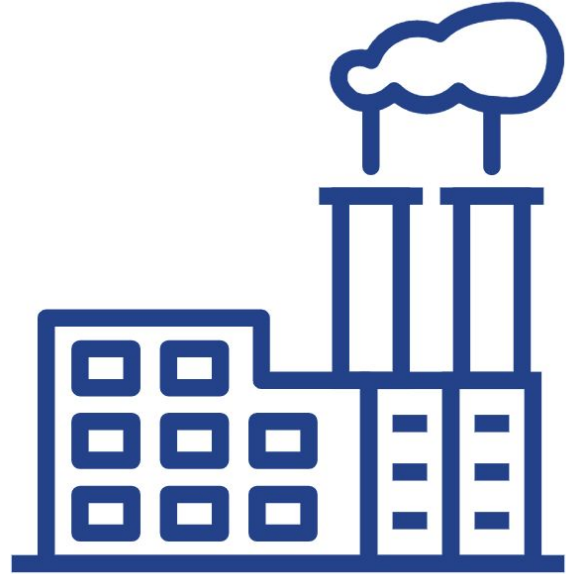


A **troll is a person who** starts flame wars or **intentionally upsets people** by posting inflammatory and digressive, extraneous, or off-topic messages in an online community **with the intent of provoking readers into displaying emotional responses and normalizing tangential discussion,** either for the troll's amusement or a specific gain¹

¹Wikipedia - Internet Troll

Russian “troll factory”

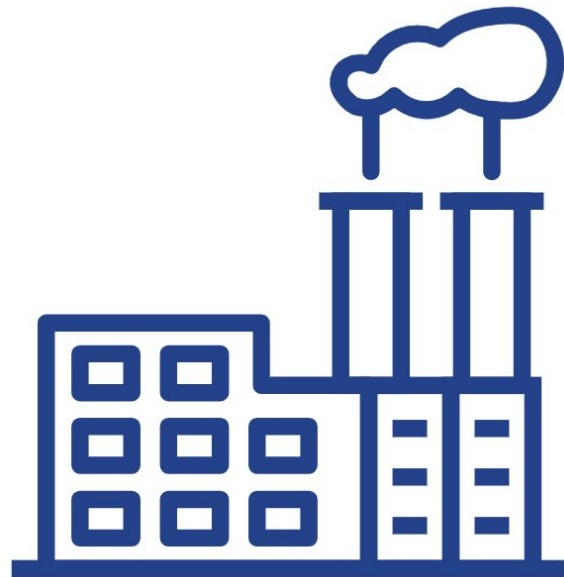
In 2018, Twitter removed **+3,500 Russian-linked accounts** and their **3 million tweets**



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The entire corpus of tweets dates from **February 2012 to May 2018**



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A team at NBC was able to construct a subset of the deleted content consisting of **200,000 tweets** from **+500 accounts**



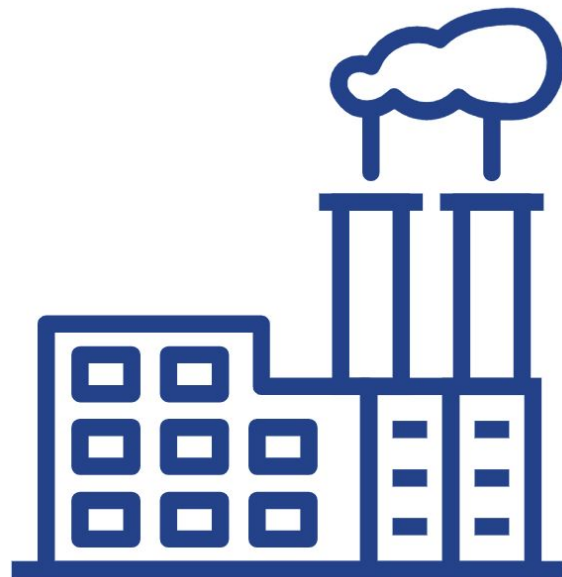
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A team at NBC was able to construct a subset of the deleted content consisting of **200,000 tweets** from **+500 accounts**

FiveThirtyEight has since shared the entire corpus



¹NBC Story: <https://www.nbcnews.com/tech/social-media/now-available-more-200-000-deleted-russian-troll-tweets-n844731>

²Kaggle Dataset: <https://www.kaggle.com/vikasg/russian-troll-tweets>

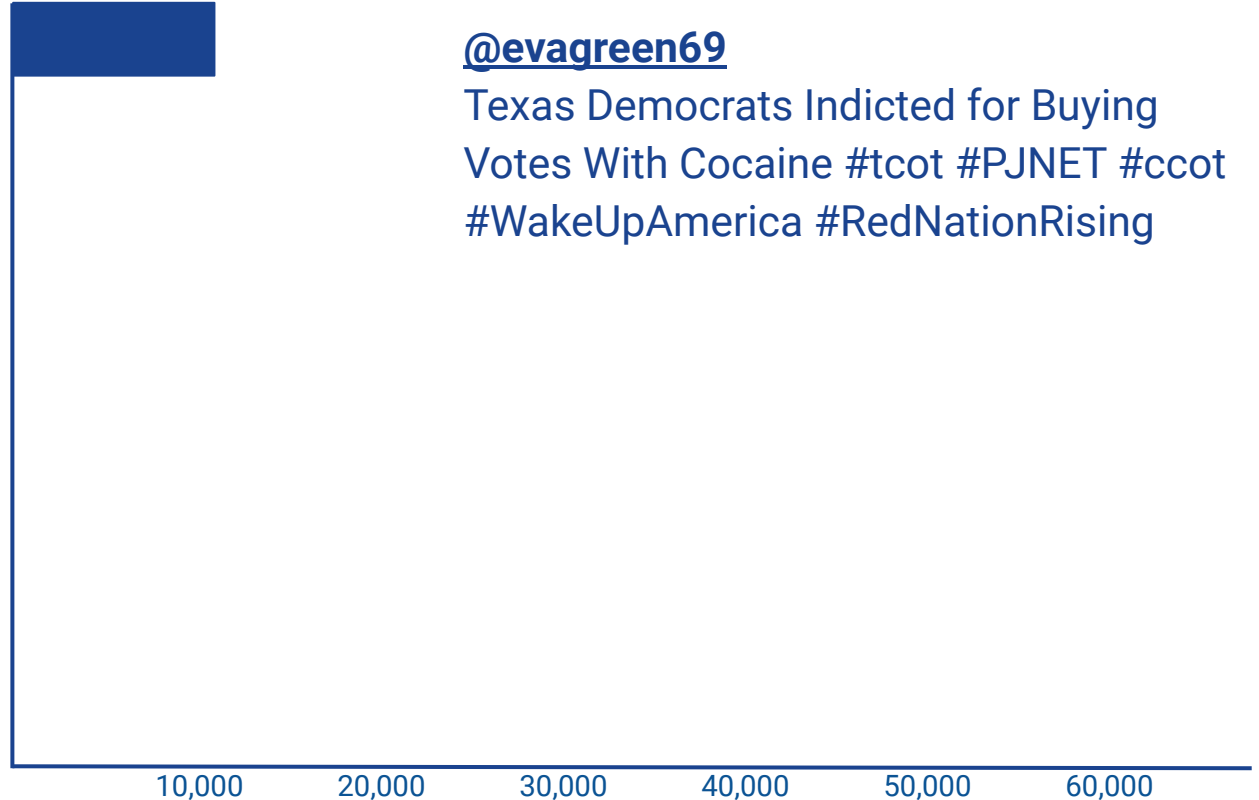
³FiveThirtyEight: <https://fivethirtyeight.com/features/why-were-sharing-3-million-russian-troll-tweets>

What do trolls tweet about?



What do Russian trolls tweet about?

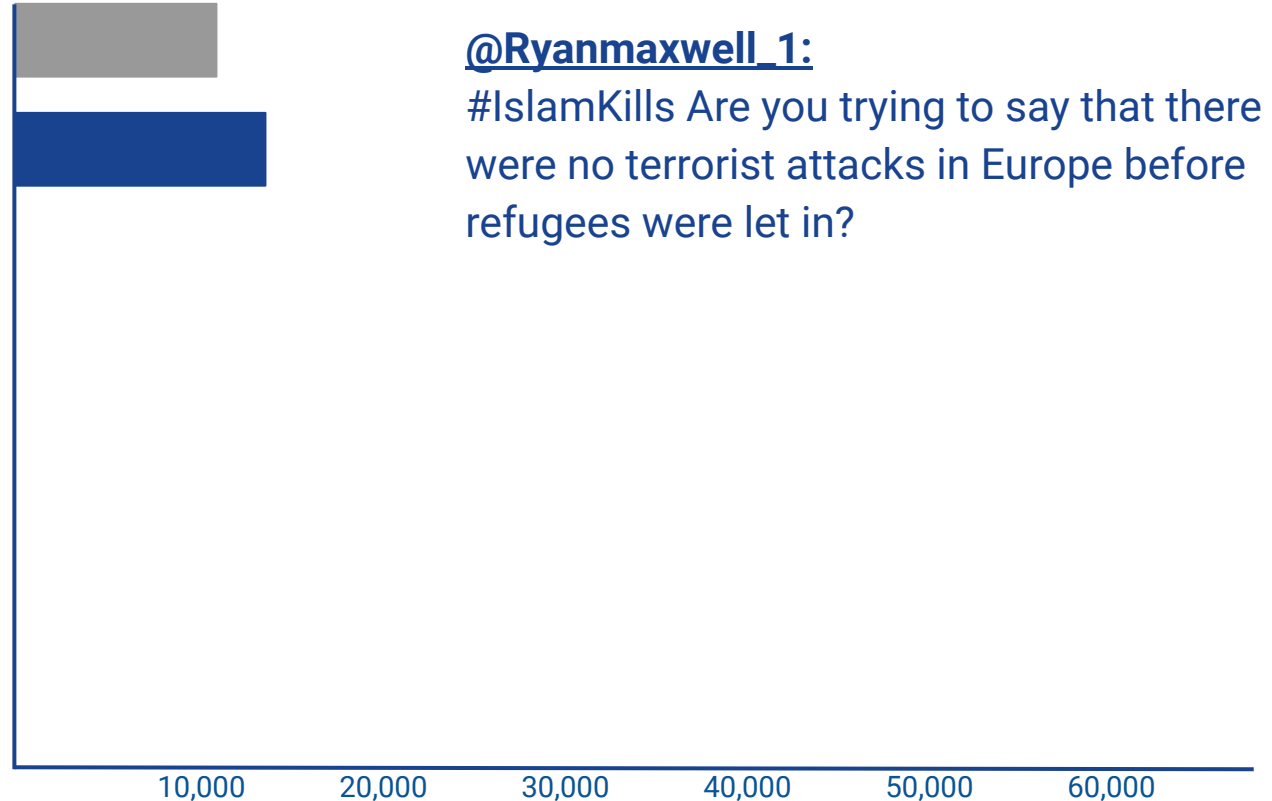
Right wing news



What do Russian trolls tweet about?

Right wing news

Middle East



[@Ryanmaxwell_1:](#)

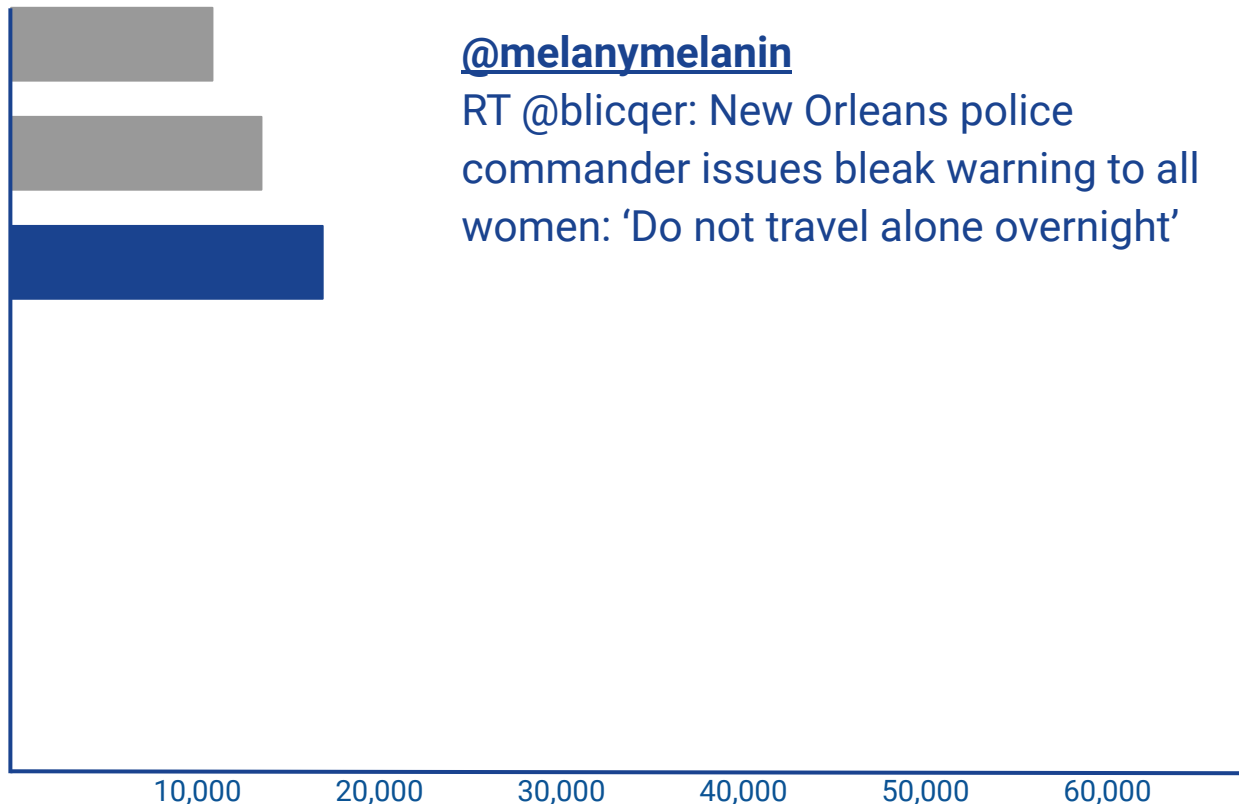
#IslamKills Are you trying to say that there were no terrorist attacks in Europe before refugees were let in?

What do Russian trolls tweet about?

Right wing news

Middle East

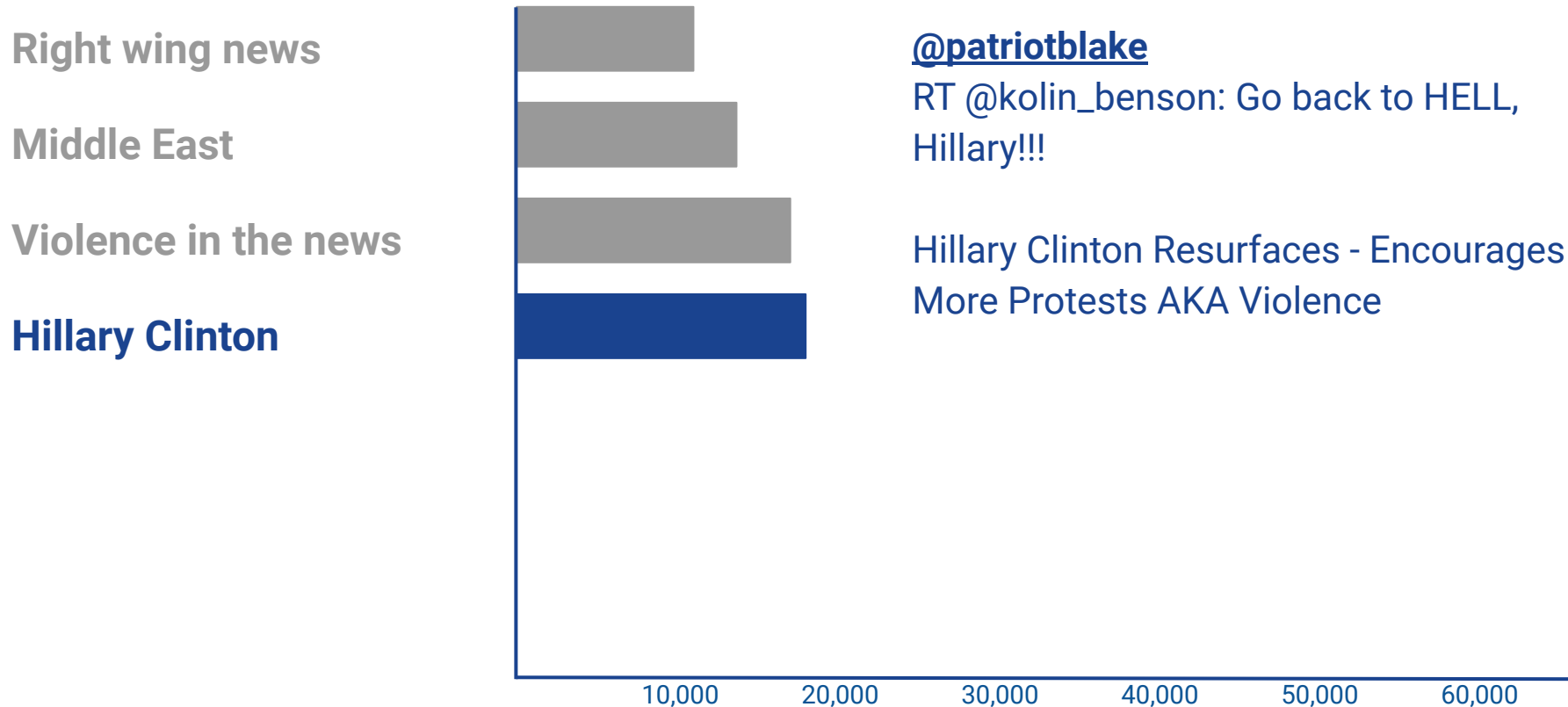
Violence in the news



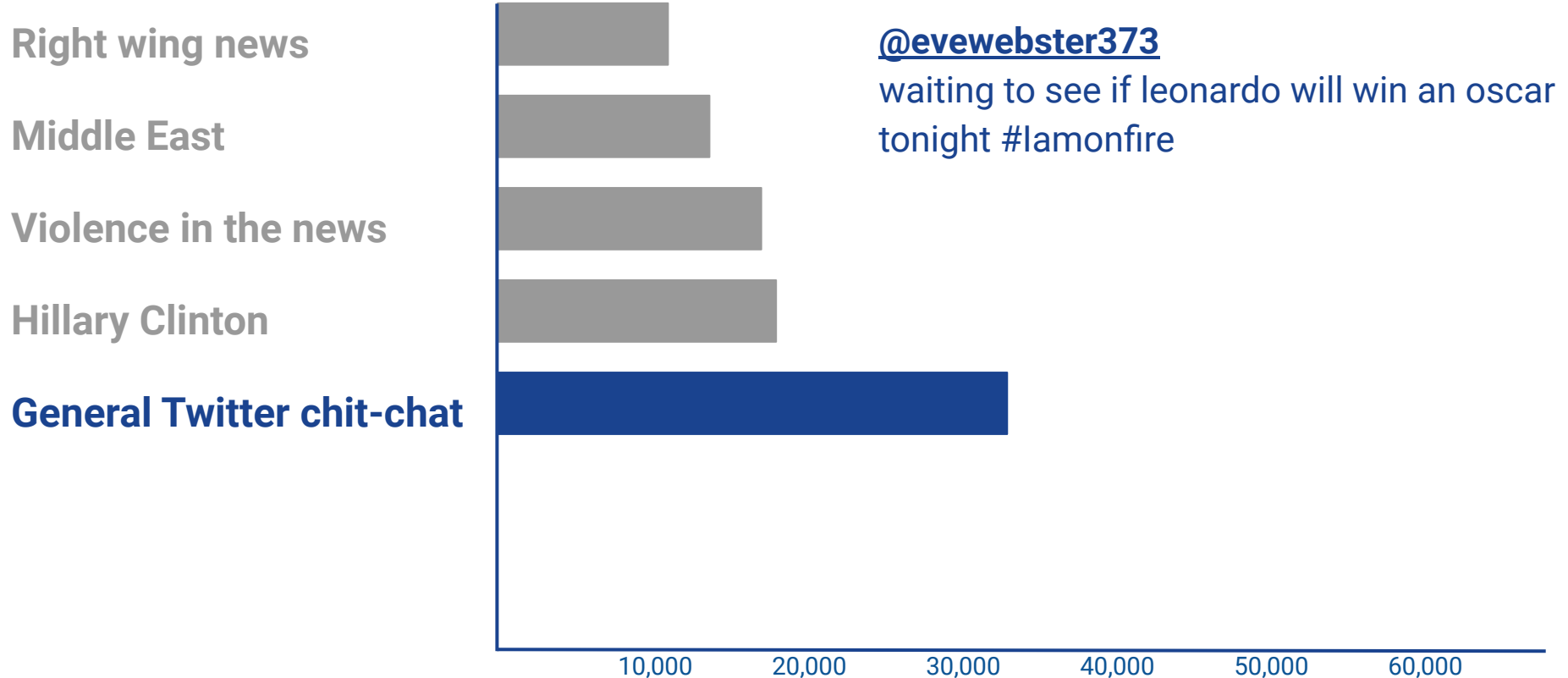
[@melanymelanin](#)

RT @blicqer: New Orleans police
commander issues bleak warning to all
women: 'Do not travel alone overnight'

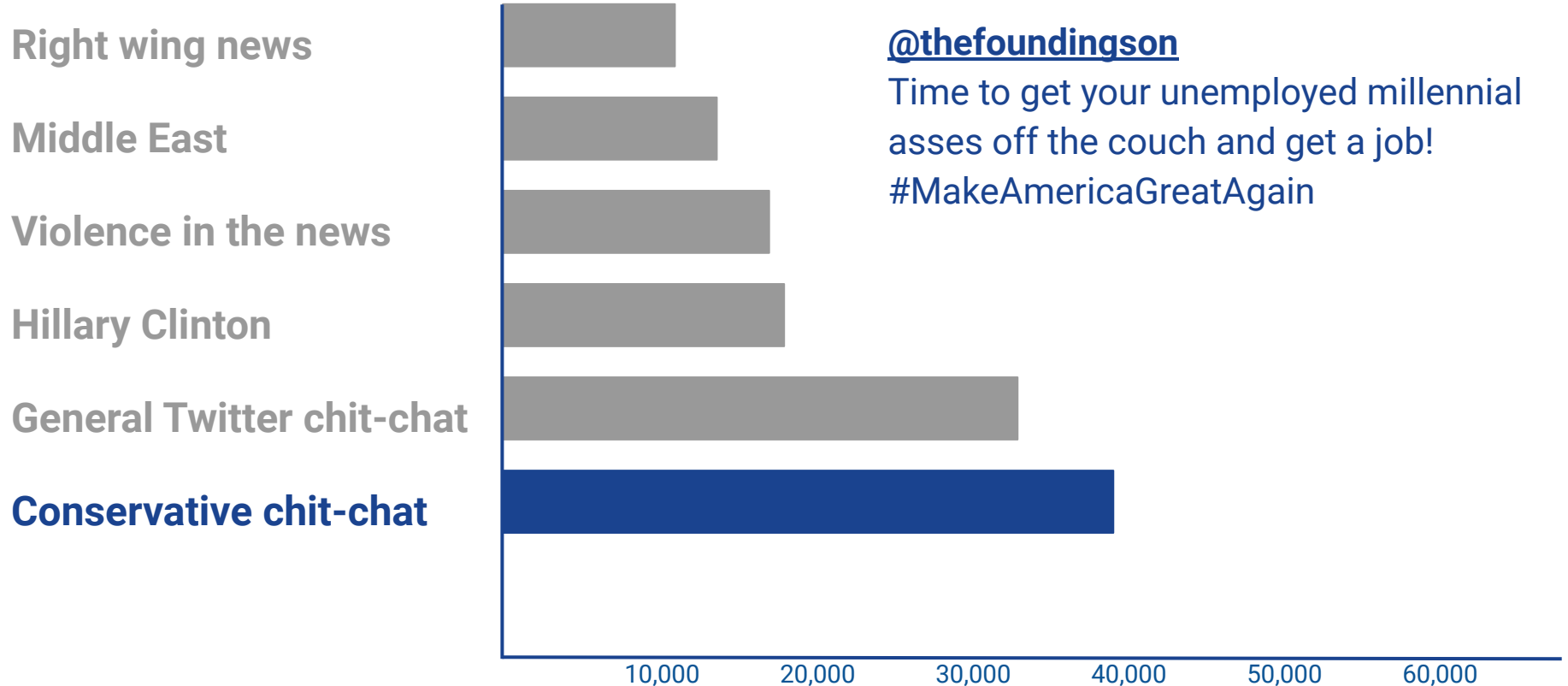
What do Russian trolls tweet about?



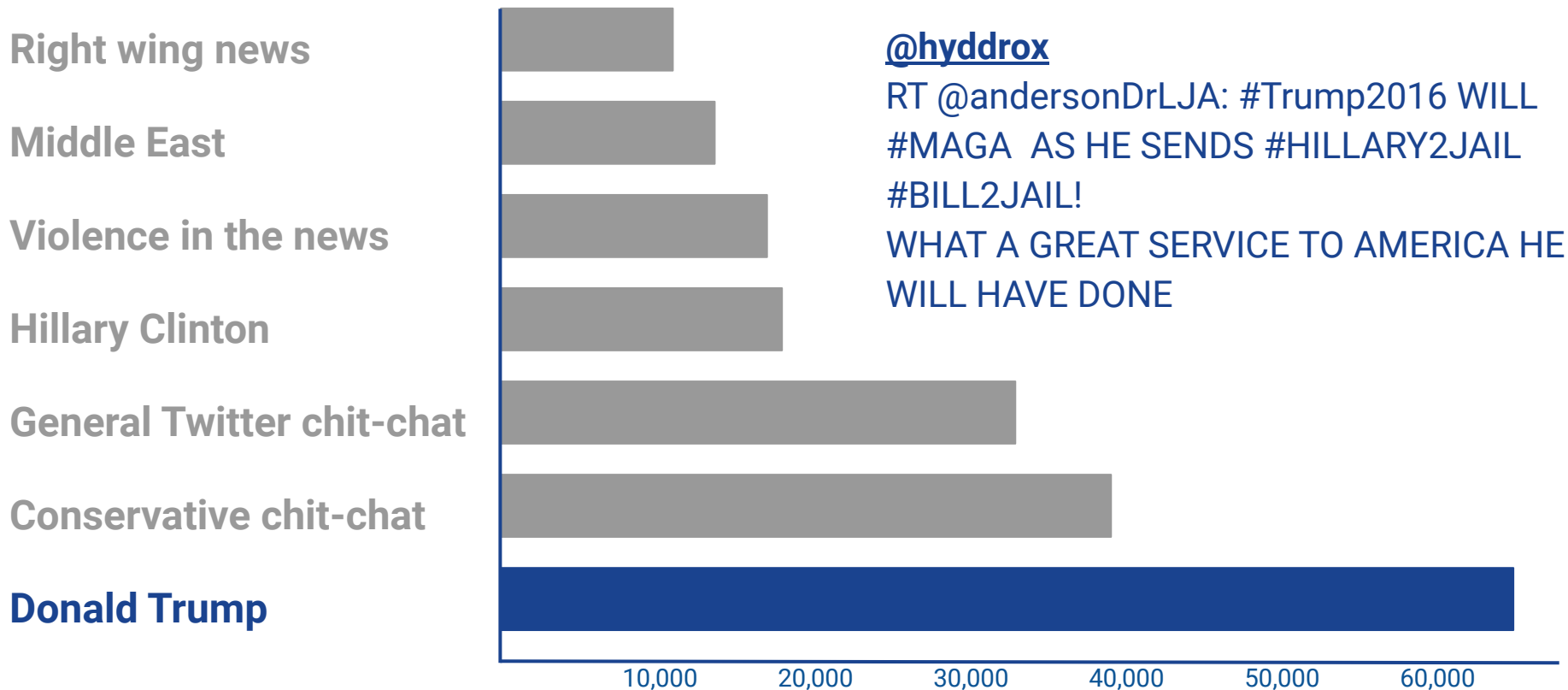
What do Russian trolls tweet about?



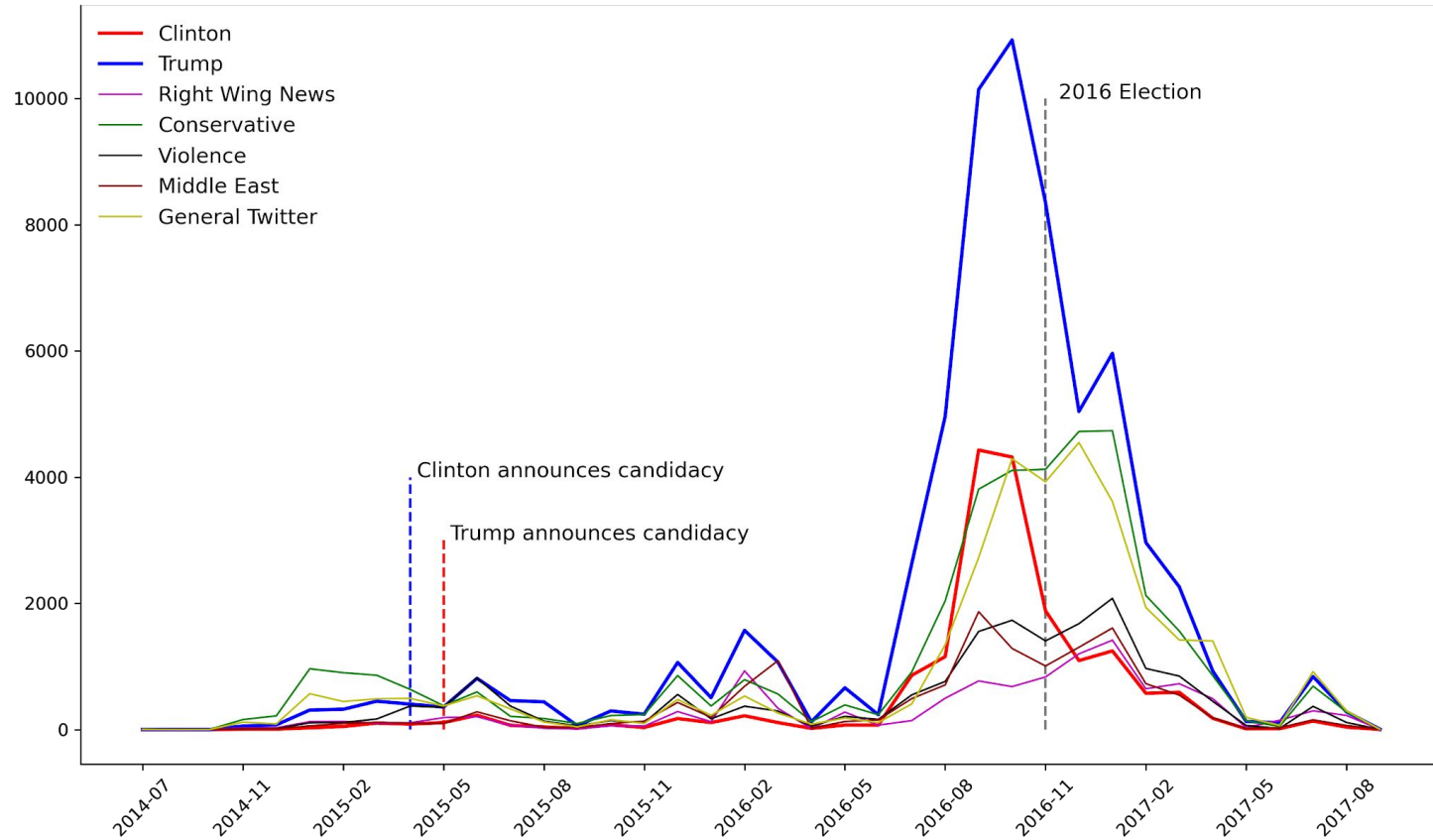
What do Russian trolls tweet about?



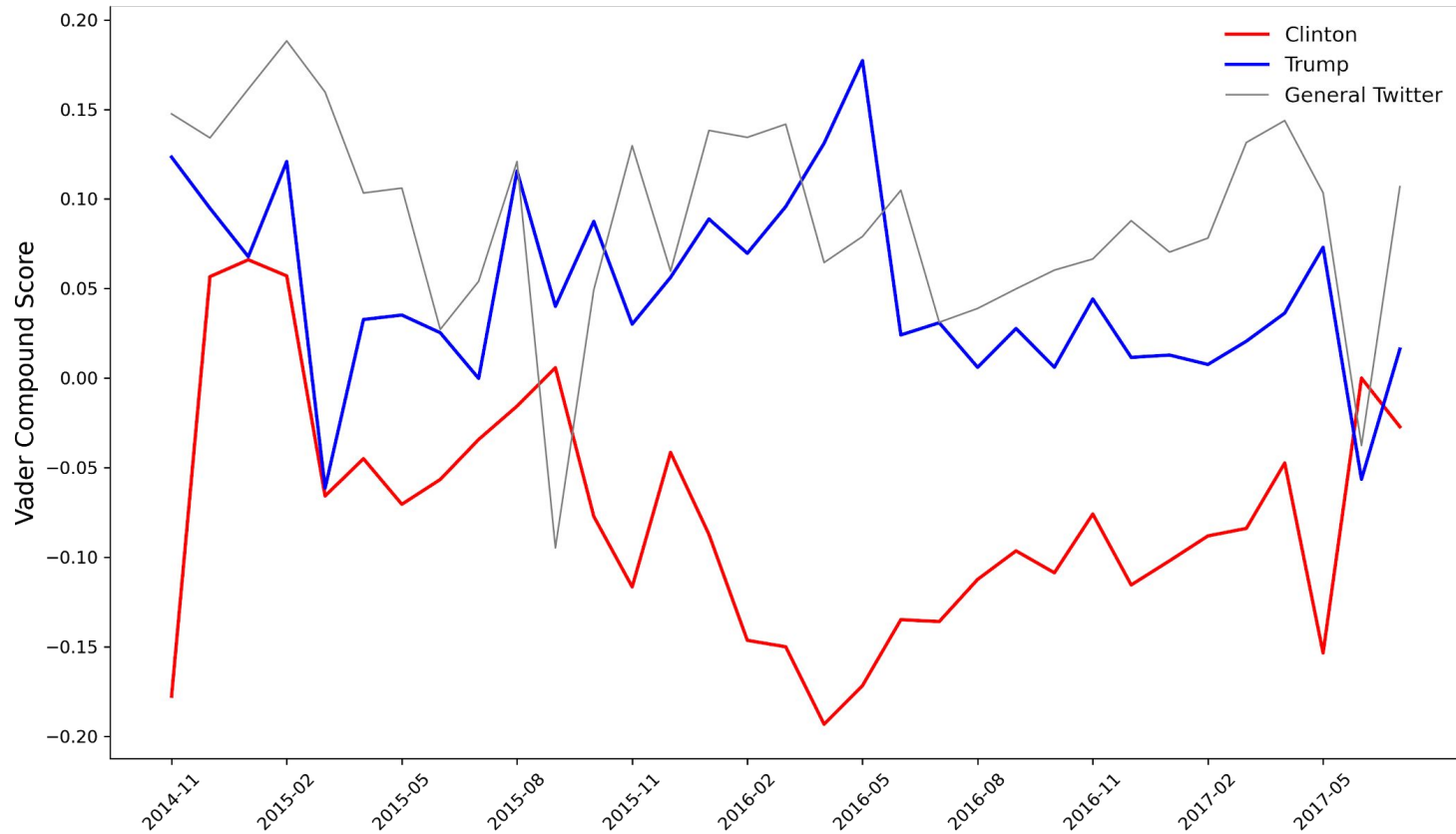
What do Russian trolls tweet about?



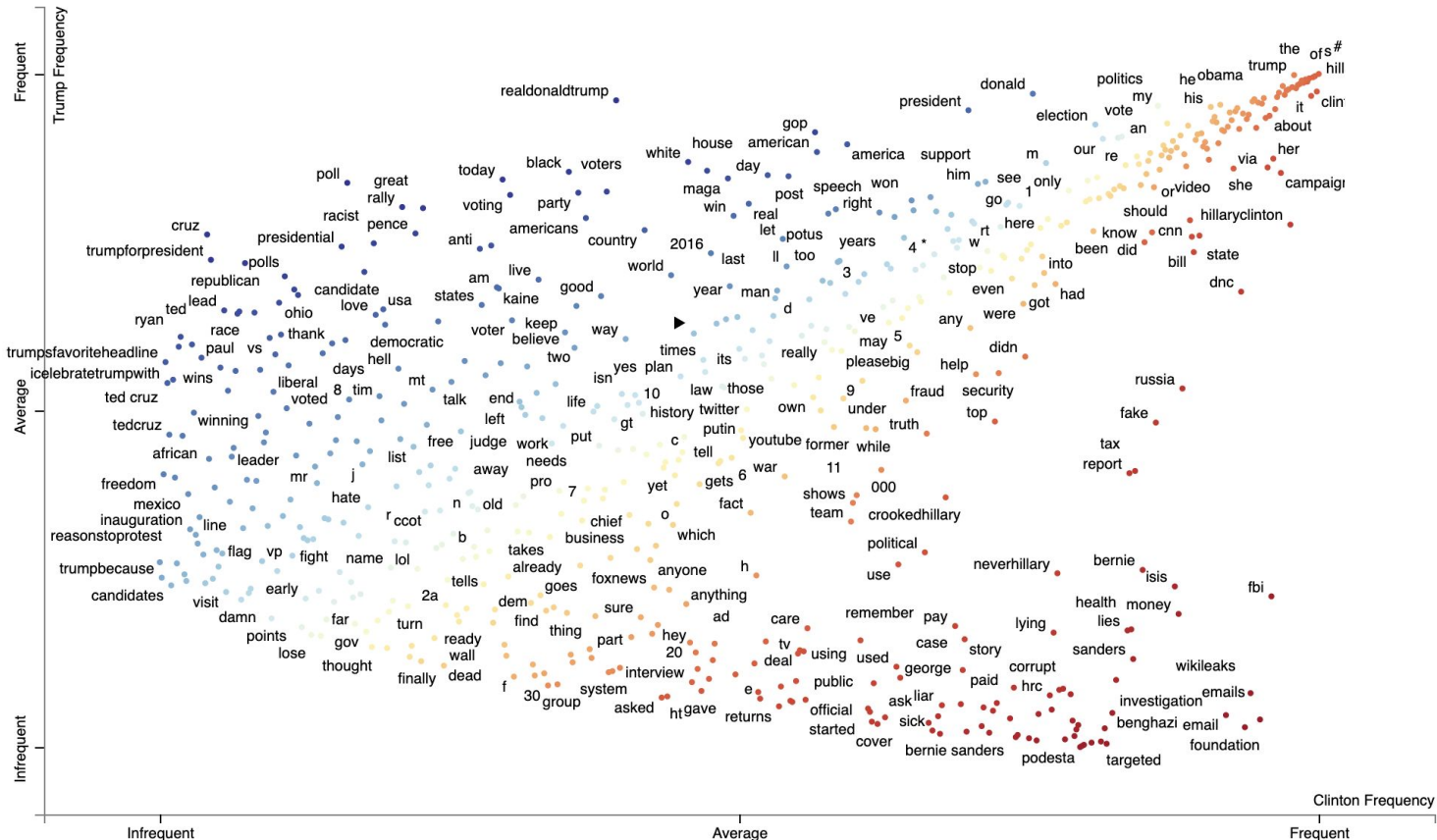
The election became the goal...



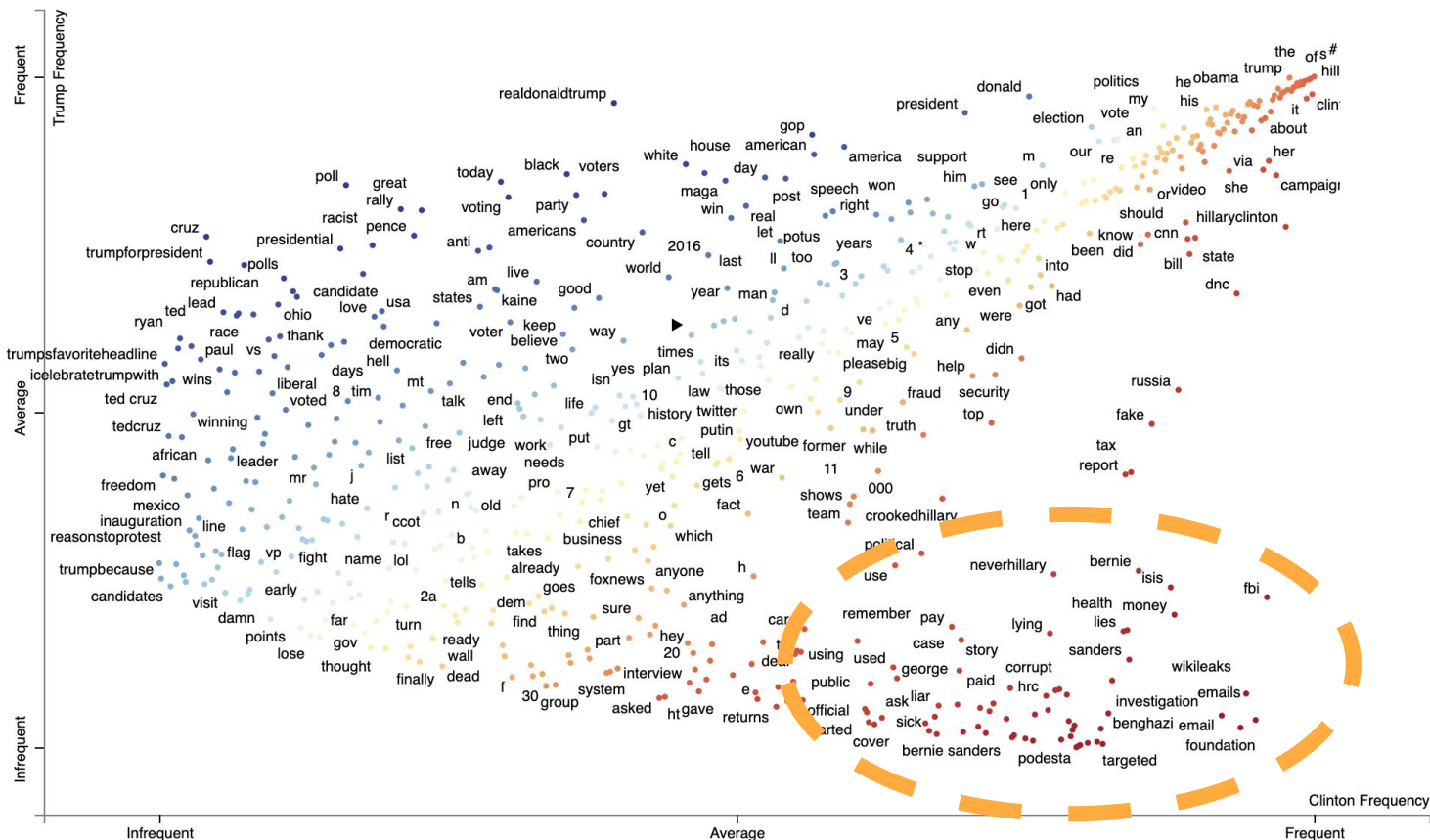
...and they clearly favored a candidate



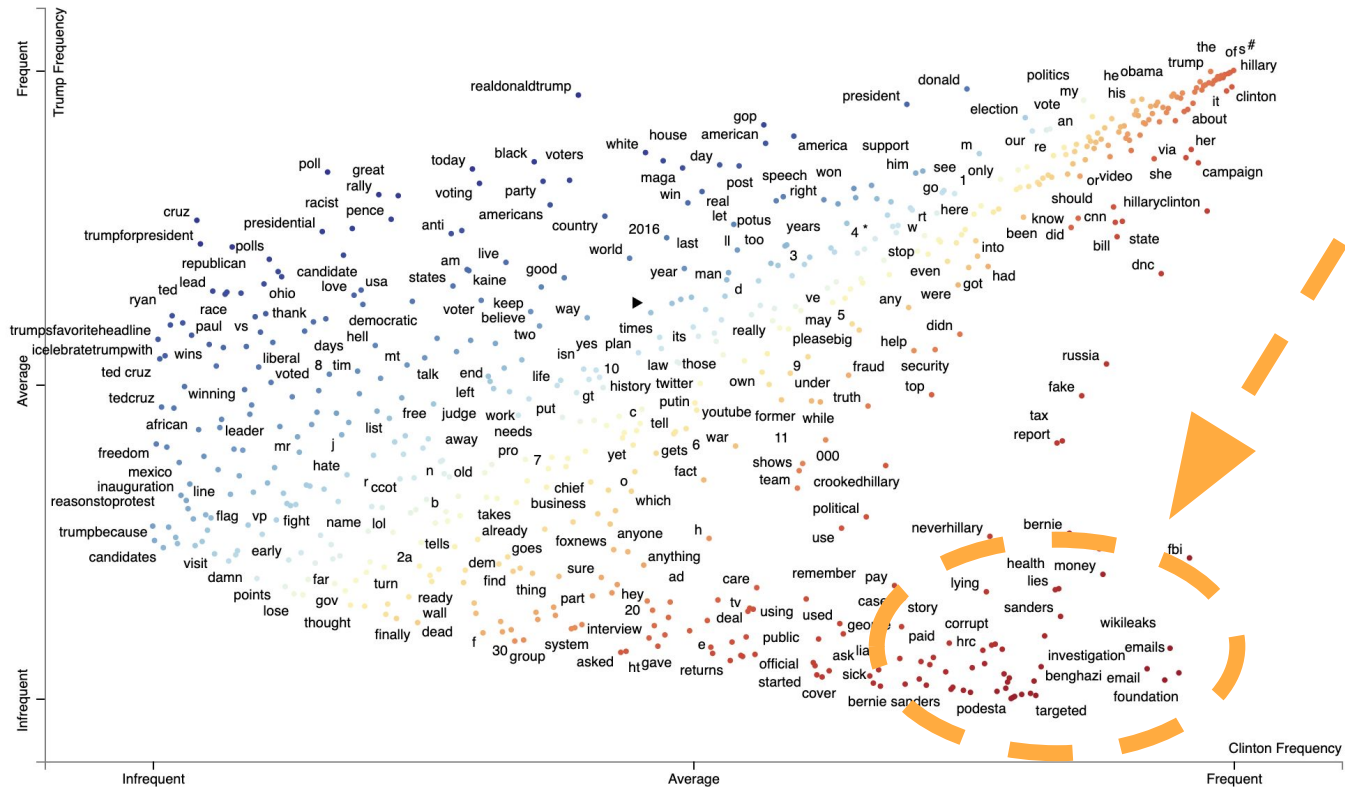
Word frequencies by candidate



Word frequencies by candidate



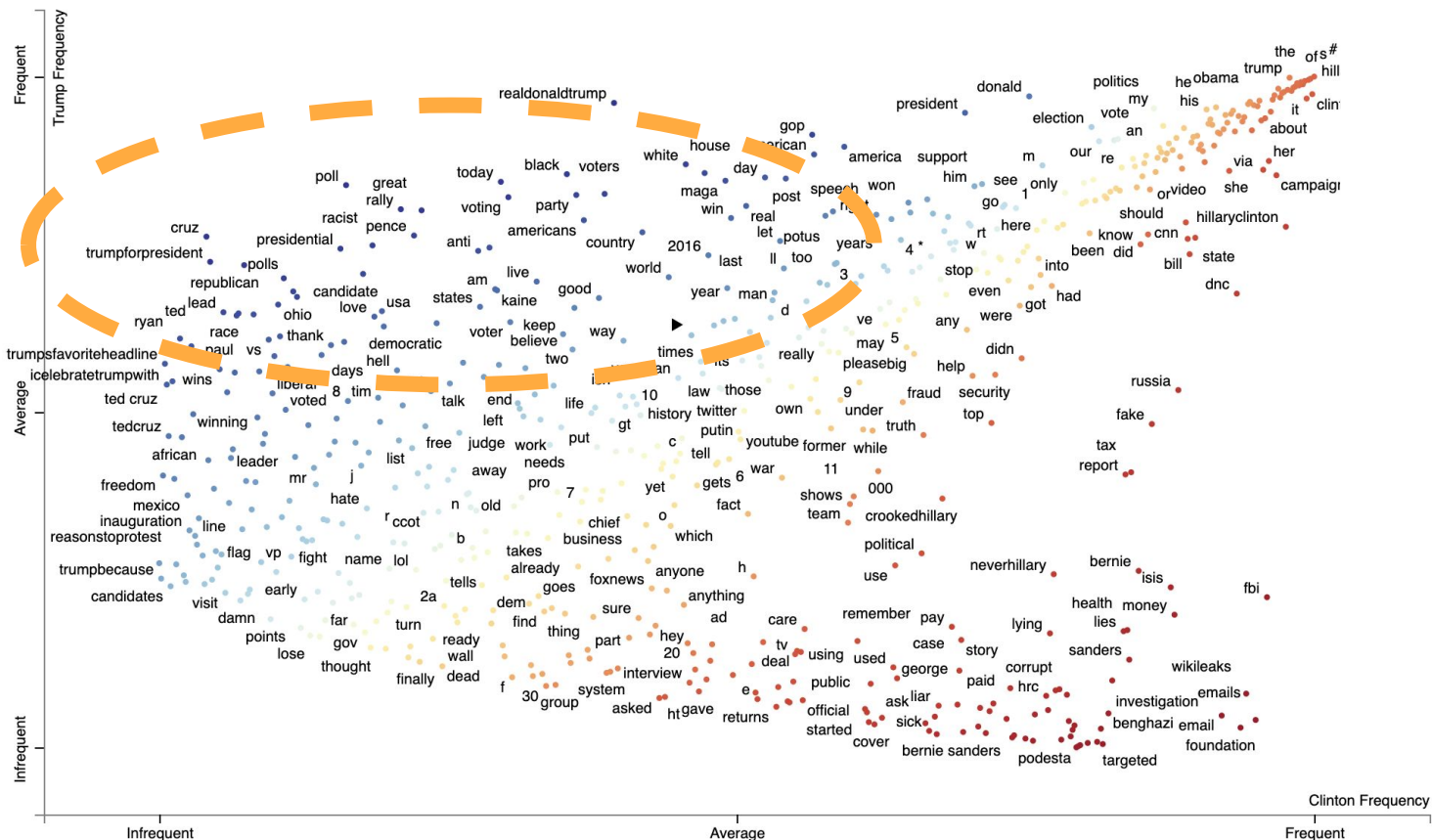
Word frequencies by candidate



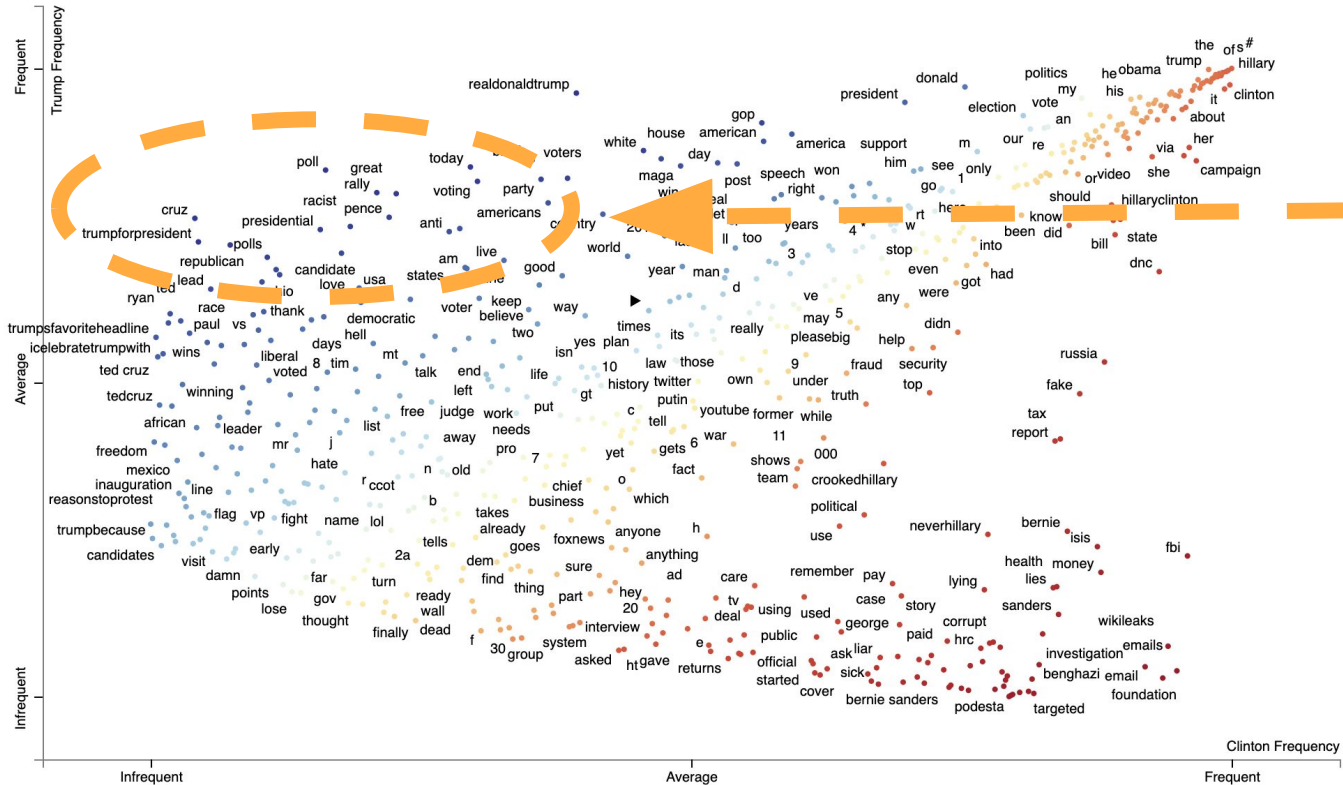
Top Hillary Clinton words

- **emails**
- Wikileaks
- **Benghazi**
- FBI
- #neverhillary
- #crookedhillary
- **health**
- corrupt

Word frequencies by candidate



Word frequencies by candidate



Top Donald Trump words

- #MAGA
- #trumpforpresident
- rally
- voting
- Republican
- presidential
- racist
- love

#WakeUpAmerica

“**Russian accounts impersonated everyday Americans and drew hundreds of millions of followers,** exploiting terrorist attacks, the debates and other breaking news events.

#WakeUpAmerica

“ Russian accounts impersonated everyday Americans and drew hundreds of millions of followers, exploiting terrorist attacks, the debates and other breaking news events.

[these accounts] pushed **graphic, racist and conspiracy theory-filled disinformation**, while flattering, arguing and cajoling more than 40 U.S. politicians, media figures and celebrities into interacting with and ***amplifying their propaganda.***”

Remember Dean?



Dean Browning 

@DeanBrowningPA

Twitter is a weapon of war masquerading as a toy.

Remember Dean.



Dean Browning ✓

@DeanBrowningPA

Former Lehigh County Commissioner. A proud pro-life & pro-2A Christian conservative dedicated to enacting common sense solutions to Keep America Great.

📍 Pennsylvania, USA 🔗 csspac.com 📅 Joined December 2015

32.4K Following **53.1K** Followers

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Conservative politician
from Pennsylvania



Remember Dean.

Common Sense *Solutions*



Dean Browning ✓

@DeanBrowningPA

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📍 Pennsylvania, USA esspac.com 📅 Joined December 2015

32.4K Following **53.1K** Followers

Verified Account with an impressive network!



Dean Browning ✓

@DeanBrowningPA

Replying to @ADunks5

I'm a black gay guy and I can personally say that Obama did nothing for me, my life only changed a little bit and it was for the worse. Everything is so much better under Trump though. I feel respected - which I never do when democrats are involved.

7:48 AM - 10 Nov 2020



Dean Browning ✓

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This was 3 days ago...

Final thoughts

Trolling and the spread of **misinformation** and **disinformation** aren't going away anytime soon...

- We can't rely on platforms to keep us safe -- though **we can and should demand more** from them!
- Healthy skepticism remains our best defense *for now*

Final thoughts

Trolling and the spread of **misinformation** and **disinformation** aren't going away anytime soon...

- We can't rely on platforms to keep us safe -- though **we can and should demand more** from them!
- Healthy skepticism remains our best defense *for now*

Suggestions for future work

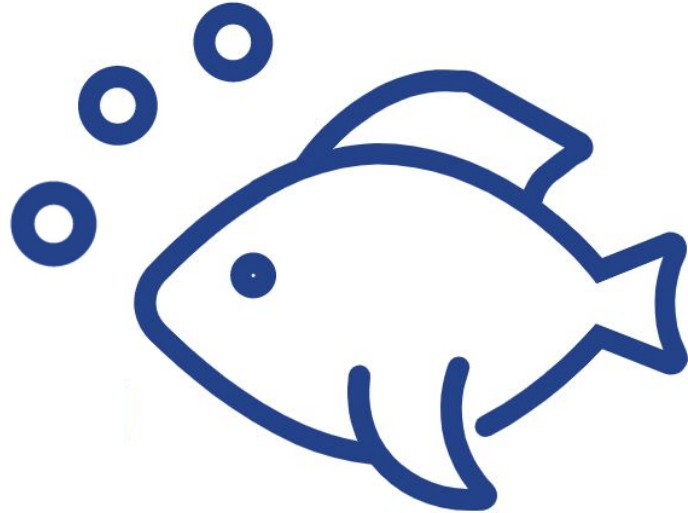
- Continue to develop AI that can accurately detect misinformation, disinformation, and deep fakes
- Analyze content from major social platforms during the 2020 US Presidential election -- **continue to build awareness!**

Thank you!

Chris Doenlen

scrapfishies@gmail.com

[@scrapfishies](#) (not a troll)



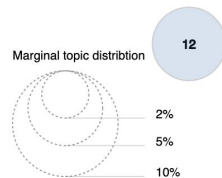
Appendix: pyLDAvis Topic Modeling

Topic Interpretation

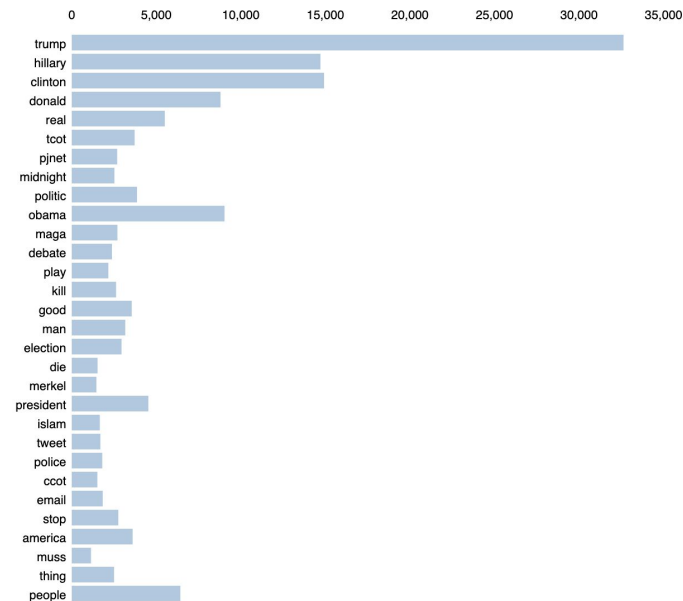
- Trump (1, 2)
- Clinton (4, 6)
- Violence (3)
- General Twitter (5, 9, 11)
- Middle East (8)
- Conservative (7, 10)
- German (12)

Note: These topics changed slightly when more vigorously training the LDA model

Intertopic Distance Map (via multidimensional scaling)



Top-30 Most Salient Terms⁽¹⁾



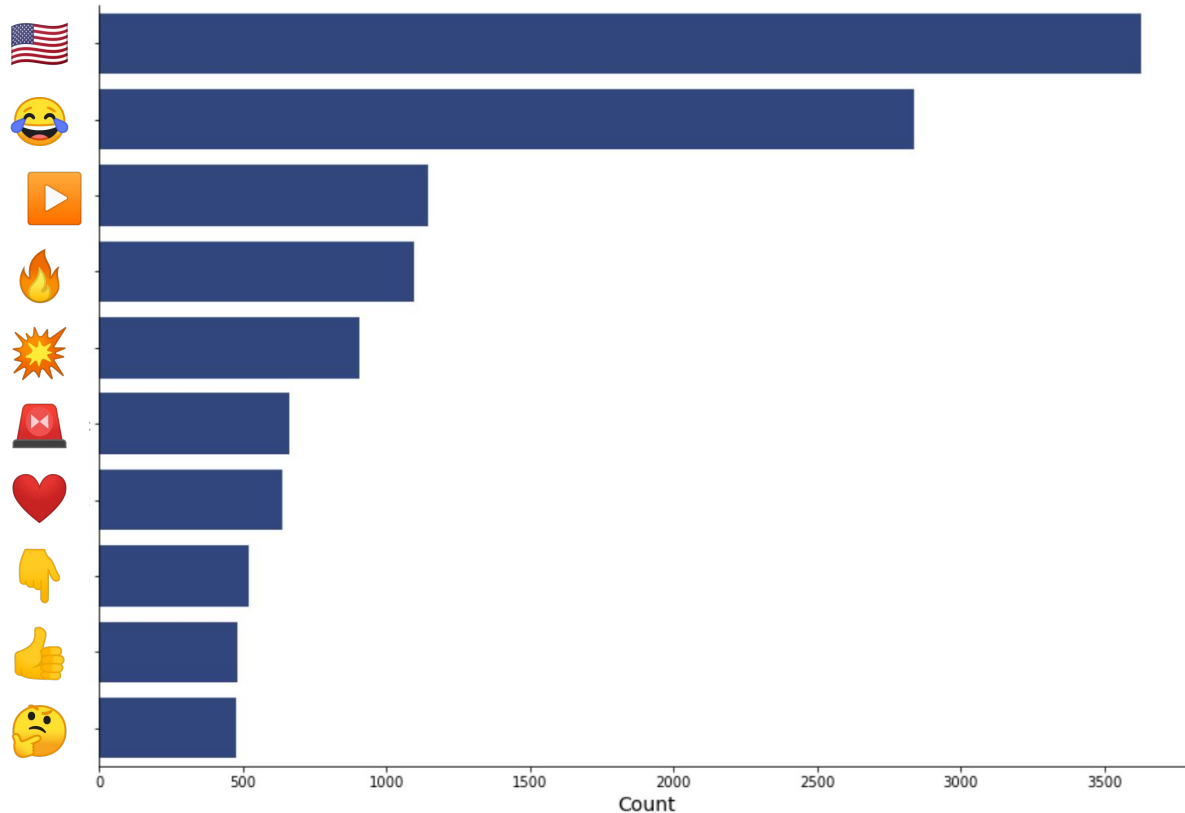
Overall term frequency

Estimated term frequency within the selected topic

1. $saliency(term, w) = frequency(w) * [\sum_t p(t|w) * \log(p(t|w)/p(t))]$ for topics t ; see Chuang et. al (2012)

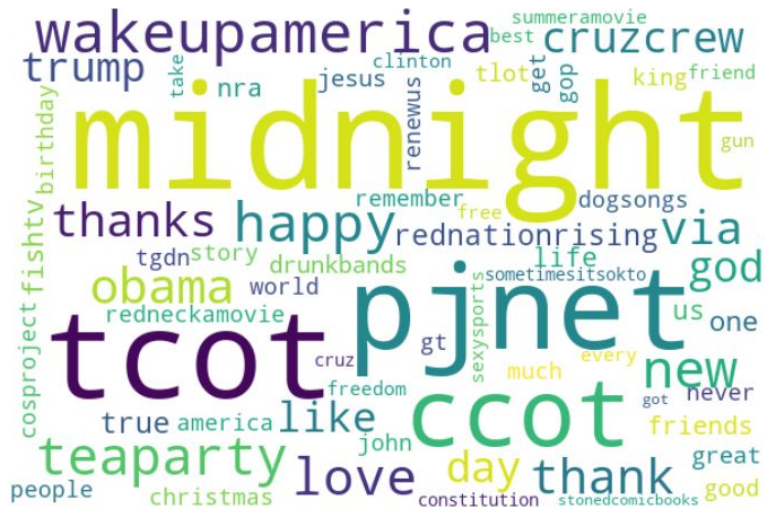
2. $relevance(term, w, t) = \lambda * p(w|t) + (1 - \lambda) * p(w|t)/p(w)$; see Sievert & Shirley (2014)

Appendix: Top 10 emojis used

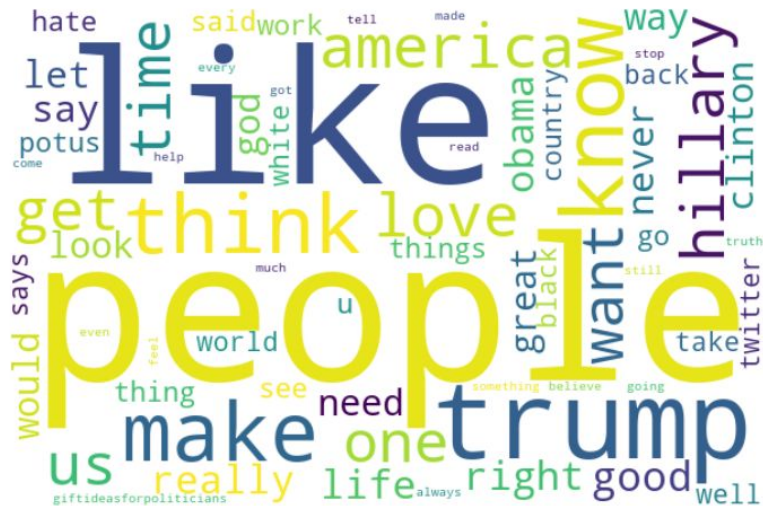


Appendix: Word Clouds

Conservative News

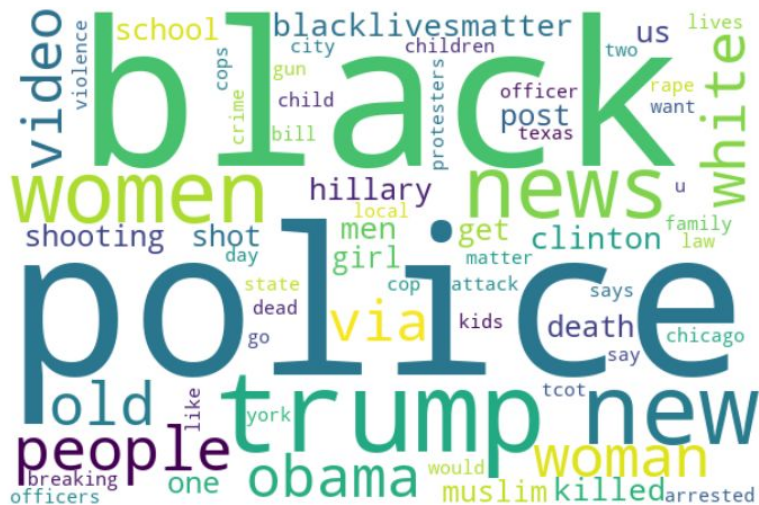


General Conservative Chit-Chat



Appendix: Word Clouds

Violence in the news



Middle East

