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Reading In-Between the Lines: An Analysis of Dissenter

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Internet Measurement Conference 2020



iDRAMA Lab

Warning!

This talk contains content that some individuals will find offensive, including racist, misogynistic, homophobic, and anti-Semitic language.

Individuals that are sensitive to this type of content may instead wish to read the paper, as it characterizes this language in the aggregate without specifically reproducing it.

Motivation

- Online censorship a hot topic
 - Twitter warning labels
 - Facebook, Twitter banning link sharing
- Why not just study Twitter, YouTube, Facebook?
 - Mainstream social networks ban individuals
 - Sites turn off comment sections
- Dissenter is a platform for free speech...
 - (mostly) free from content moderation
- ...but what's really there?

What you see



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IN THEATERS

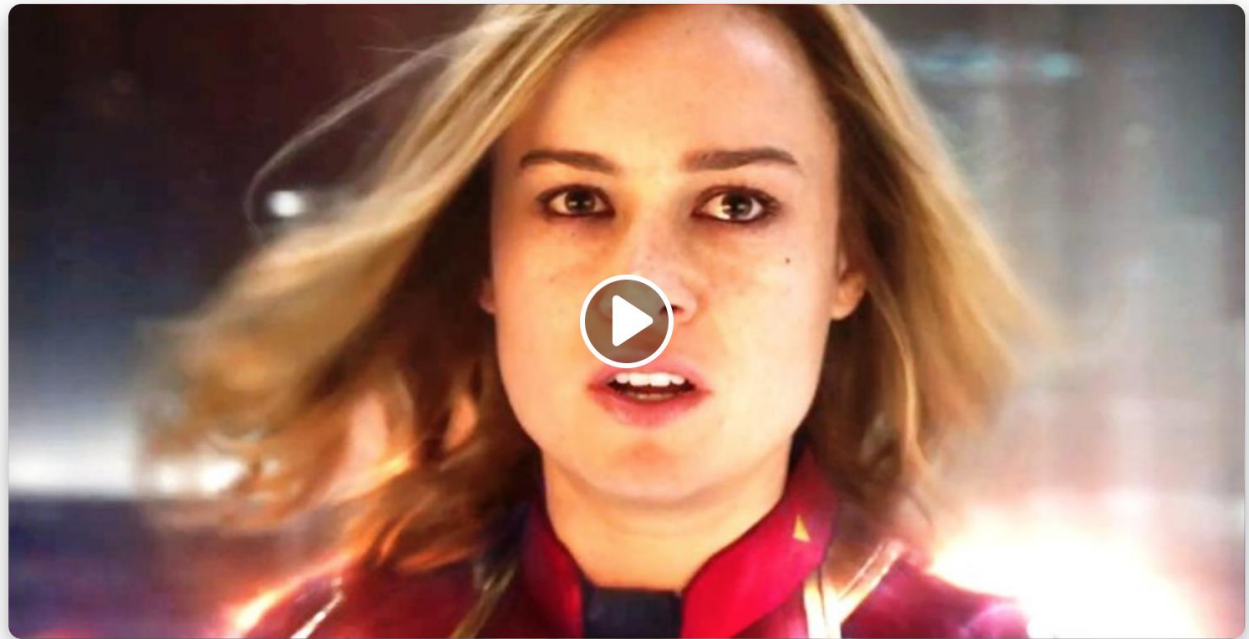
STREAMING MOVIES

TV SHOWS

MOST POPULAR

- 92% The Trial of the Chicago...
- 86% The More You Ignore Me
- 100% Bellingcat: Truth in a P...
- 44% The Lie
- 57% Ms. White Light
- 80% Charm City Kings
- No Score Yet [Daddy's Girl](#)
- 100% Buddies
- 75% Console Wars
- 48% Lost Girls & Love Hotels

[View All](#)



Order online

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CAPTAIN MARVEL

Critics Consensus

What Dissenter sees

How did we get here?

- Reaction to content moderation policies
 - Anti-hate speech, norm enforcement
- Feb 2019
 - YouTube disabled comments for millions of videos
 - Rotten Tomatoes received deluge of negative reviews before Captain Marvel release

Gab

Dissenter's Parent Social Network

- Founded 2016
- Alternative social network
 - Like Twitter, for people banned from Twitter
- Zannettou et al. "What is Gab?", WWW 2018
 - 22M posts by 336k users
 - Significant hate speech (~5% of all posts)
 - On the border between mainstream social networks and "fringe" web communities



Dissenter Overview

- Created by Gab in February 2019
- Subvert Big Tech censorship
 - Comment on any URL
 - Comments only visible to others using service
 - A “comment overlay” system
- Earlier attempts at web annotation:
 - Google Sidewiki, 2009-2011



Dissenter Overview

- First: Chrome/Firefox plugin
 - But, banned by Google/Mozilla for ToS violations within 2 months
- Current:
 - Dissenter Browser
 - Gab Trends



Dissenter Browser

- “Free Speech Web Browser”
 - Brave fork
- Dissenter plugin integrated
- Windows, macOS, and Linux versions

The screenshot displays the Dissenter browser interface. At the top, the browser address bar shows the URL: `breitbart.com/law-and-order/2020/10/11/news-outlet-admits-denver-protest-shooter-was-their-security-guard/`. The main content area features a news article titled "NEWS OUTLET ADMITS DENVER PROTEST SHOOTER WAS THEIR SECURITY GUARD" with a sub-headline "NEWS OUTLET ADMITS DENVER PROTEST SHOOTER WAS THEIR SECURITY GUARD". The article includes a photo of a man in a dark shirt and pants aiming a handgun at a person lying on the ground. Below the photo, the text reads: "Denver NBC affiliate News9 admitted that the shooter who killed a man near a 'Patriot Rally' worked for them as a contract security guard. The incident occurred at the end of the rally as people were leaving the area." The article is attributed to BOB PRICE and dated 11 Oct 2020. To the right of the article is a comment section titled "8 comments" with the heading "Welcome to Dissenter". The comment section shows two comments, both with redacted user avatars. The first comment reads: "He's a lefty, give him the death penalty! You aim for body mass center. (torso)...not the head!". Below the comment section is a sidebar with several news items, including "Biden, Harris Must 'Come Clean' on Court Packing" (6,957 comments), "Exclusive — Grenell: Trump Best President Ever for LGBT" (3,006 comments), "Poli: 51% Disapprove of Trump's Decision to Skip Virtual Debate" (1,421 comments), "BLM Marches Down Sidewalks Crowded with Kids in Florida" (4,112 comments), and "Watch: Joe Biden Lowers Mask to Cough in Hand During Speech" (3,993 comments). At the bottom of the article, there is a "LISTEN TO STORY" button and a "3:09" duration indicator.

Gab Trends

- News aggregation site
- Displays trending, user-submitted news and videos
- Provides brief description and comment board for each URL
 - Comment system *is* Dissenter

The word "gab" is written in a bold, lowercase, green sans-serif font.

REVEALED: Charged Denver Shooter Matthew Dolloff's Left-Wing Facebook Posts

GAB TRENDS

Paste a URL to start a Trend... **START TREND**

TODAY'S TOP



Minneapolis Leaders Looking for a More Humanized Way to Control Crime

The city of Minneapolis has a violence problem, and its leaders are looking for a way to control crime in the most humanized way possible....

17 likes 1 comment 0 shares www.breitbart.com



Monty Python Legend Warns 'Hate Speech' Laws 'Disastrous' for Comedy

John Cleese has warned that hate speech laws, such as those proposed by the SNP administration in Scotland, are "disastrous" for creativity....

15 likes 3 comments 1 share www.breitbart.com



Covid virus 'survives for 28 days' in lab conditions - BBC News

Researchers find SARS-Cov-2 survives for longer than thought - but only under certain conditions....

19 likes 0 comments 3 shares www.bbc.co.uk



Durbin: Republicans Have Been Packing the Court for the Past Three-and-a-Half Years -- 'They Brag About It'

BREAKING



L.A. Lakers Win Title, Victory Parade Postponed Until COVID Pandemic Is Over

The COVID pandemic won't stop the Lakers from celebrating their NBA championship -- but it WILL delay the official victory parade for a bit....

14 minutes ago 0 shares TMZ



Southern California braces for another heat wave this week

After a brief reprieve of cool temperatures over the weekend, Southern California is expected to get hit with another heat wave this week that could bring periods of elevated fire risk, according to f...

16 minutes ago 0 shares LA Times



EXCLUSIVE: Police Say Denver Killer Is Security Guard and Is Not Antifa - But All Evidence Suggests This is Not the Case

Initial reports came out yesterday that a local news producer and their bodyguard were taken into custody for the fatal shooting of a Trump supporter during dueling rallies in Denver on Saturday. All ...

19 minutes ago 0 shares Gateway Pundit

TRENDING

<https://www.youtube.com/watch?v=1QqBmKEhfzk>

7 likes 1 comment 0 shares www.youtube.com



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'Picking porn like a pro in no time': Parents warned about explicit sex ed

A ministry that focuses on social trends both inside and outside of the Christian faith is issuing a warning to parents about sex education programs that are being used by multiple Ohio school district...

4 likes 1 comment 0 shares www.wnd.com

<https://www.youtube.com/watch?v=zuOZxdR7Y9E>

3 likes 1 comment 0 shares www.youtube.com

<https://www.youtube.com/watch?v=1od0yvpWjTc>


3 likes 1 comment 0 shares www.youtube.com



Farm display supporting Joe Biden and Kamala Harris was set on FIRE | Daily Mail Online

A political display outside a farm in Dalton, Massachusetts, supporting Joe Biden and Kamala Harris in the

trends.gab.com/item/5f833bfff370cab1715feee0a
🔍 🌐 🛡️



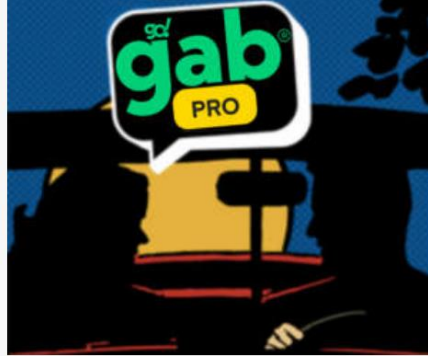
News Outlet Admits Denver Protest Shooter Was Their Security Guard

Sunday, October 11th 2020, 5:08:15 pm article views: 962

Denver NBC affiliate News9 admitted that the shooter who killed a man near a "Patriot Rally" worked for them as a contract security guard.

[See more at www.breitbart.com](#)

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8 comments
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Log In

Welcome to Dissenter

The Comment Section of the Internet

Top
Controversial
Latest
Oldest

He's a lefty, give him the death penalty! You aim for body mass center. (torso)....not the head!!

0

That means his employers are liable. Hope the dead guy's family retains a good attorney.

Breaking

Daniel Andrews is accused of misleading Victorians as Peta Credlin grills him

The premier has revealed that some social restrictions will be relaxed on Sunday even though Melbourne has been recording about 10 to 15 cases per day....

● 5 minutes ago ● [Dailymail](#)

Reaction to Gladys Berejiklian's admission she was in a relationship with Daryl Maguire

Politicians and commentators say Gladys Berejiklian won't survive as New South Wales Premier after her bombshell admission she was in a secret relationship with a disgraced ex-Liberal MP....

● 8 minutes ago ● [Dailymail](#)

IMC 2020

15

Our work

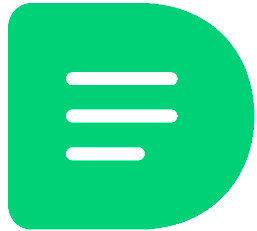
1. Enumerate Dissenter
2. Analyze Content
3. Case Study

Dissenter Enumeration

Username Discovery

Username
Discovery

gab



Enumerate Gab users with Gab API

Identify Dissenter accounts



Dissenter Enumeration Username Discovery

Username
Discovery

Gab API

```
erik@rocinante:~ » curl https://gab.com/api/v1/account/1
{"id":"1","username":"e","acct":"e","display_name":"Ekrem Büyükkaya",
"locked":false,"bot":false,"created_at":"2016-08-10T05:58:24.000Z",
"note":"\u003cp\u003e\u003c/p\u003e","url":"https://gab.com/e","avat
ar":"https://gab.com/media/user/5ba783dd84da1.jpeg","avatar_static":
"https://gab.com/media/user/5ba783dd84da1.jpeg","header":"https://ga
b.com/media/user/5942f42a6d074.jpg","header_static":"https://gab.com
/media/user/5942f42a6d074.jpg","followers_count":9572,"following_cou
nt":166,"statuses_count":2168,"is_pro":true,"is_verified":true,"is_d
onor":false,"is_investor":false,"emojis":[],"fields":[]}%

```

Dissenter account created

```
erik@rocinante:~ » curl https://dissenter.com/user/a 2>/dev/null | wc -c
72202
erik@rocinante:~ » curl https://dissenter.com/user/e 2>/dev/null | wc -c
145

```

Dissenter

No Dissenter account

Dissenter Enumeration

Comment Harvesting

Comment
Harvesting

- For each Dissenter user
 - Visit home page
 - Gather URLs they've commented on
- For each URL
 - Visit "URL page": Dissenter's aggregation of comments for a given URL
 - Harvest comments

Dissenter Characterization

- Discover 101k Dissenter users
 - 79k joined in first full month
 - 47k active (commented on ≥ 1 URL)
- 1.68M comments/replies
- 588k unique URLs

Dissenter Characterization

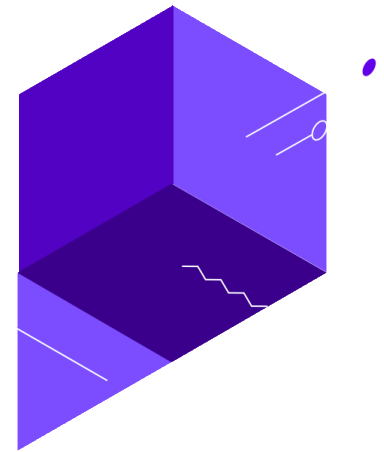
Commented URLs

# Commented URLs by Domain			
youtube.com	121,928 (20.75%)	foxnews.com	12,196 (2.08%)
twitter.com	40,392 (6.87%)	bitchute.com	12,124 (2.06%)
breitbart.com	23,705 (4.03%)	zerohedge.com	8,634 (1.47%)
bbc.co.uk	16,213 (2.76%)	theguardian.com	8,010 (1.36%)
dailymail.co.uk	15,752 (2.68%)	youtu.be	7,819 (1.33%)
Other	320,962 (54.61%)	Total	587,735 (100%)

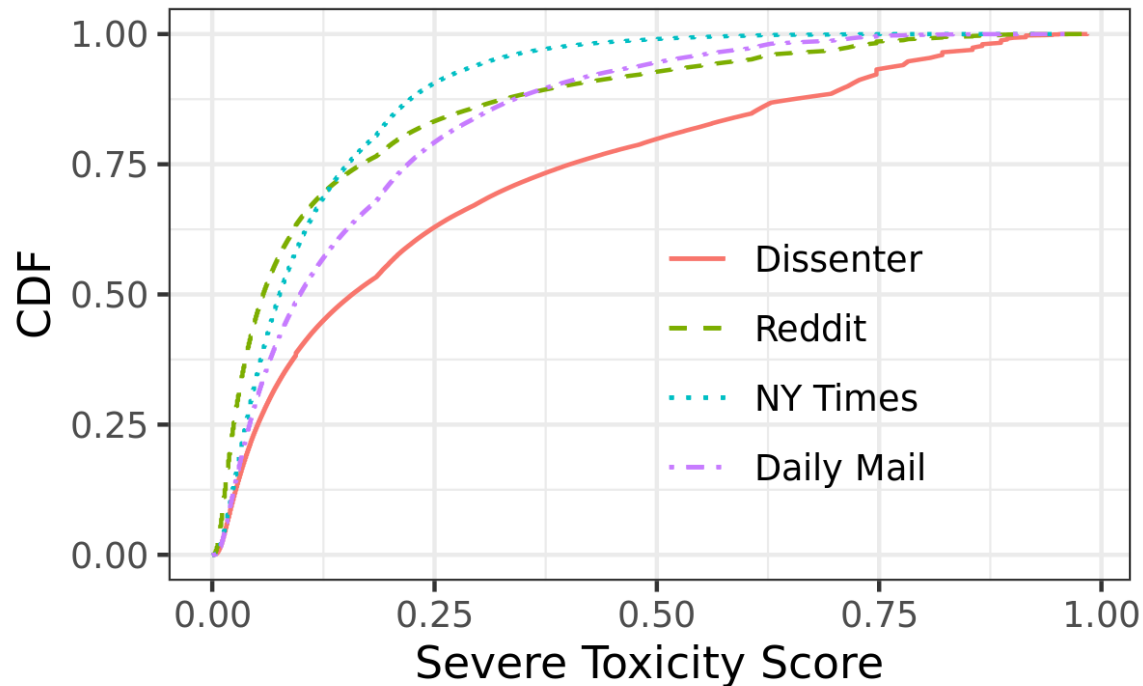
Video sharing, social media, and news websites are the most commonly commented-on domains. Mix of mainstream (YouTube, Twitter, BBC) and more fringe (Bitchute, Zero Hedge) content

Content Analysis

- Use Perspective API to classify toxic and offensive content
 - Toxicity, hate speech detection a *hard* problem
- 17 unique “attributes” that measure toxicity, obscenity, other characteristics
- Validate Perspective API results consistent with
 - Hate word dictionary (Hatebase)
 - NLP classifier
 - Use Perspective API for remaining analysis

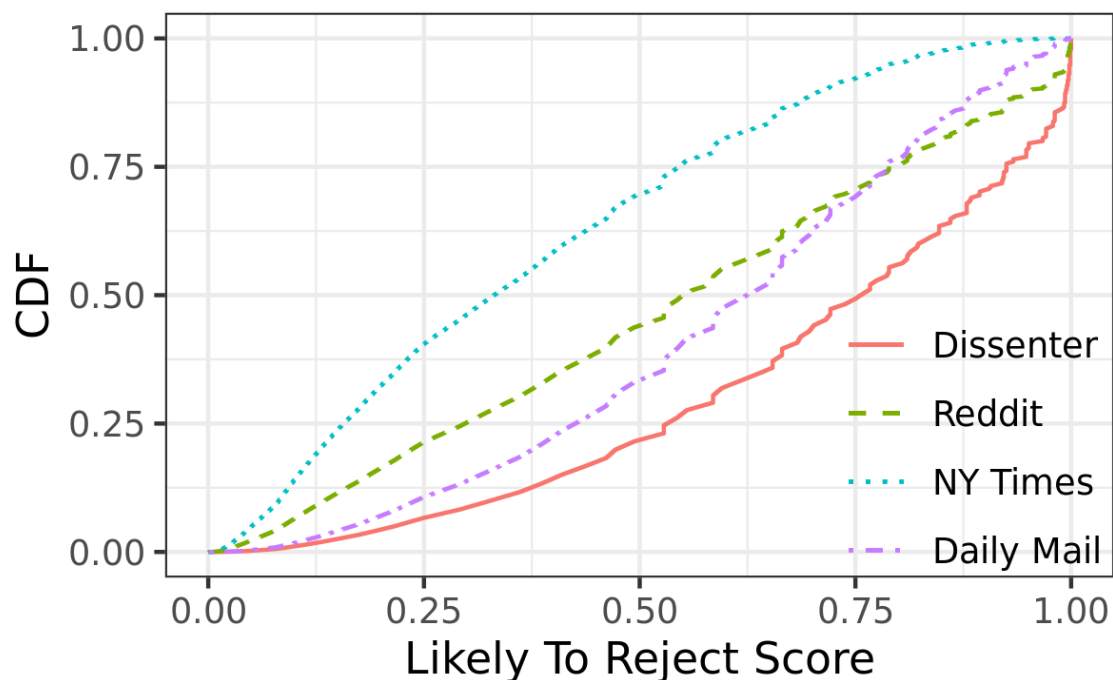


Dissenter Comments vs Related Datasets



- “Severe Toxicity” Perspective model measures very hateful speech; less sensitive to profanity than other toxicity models.
- Dissenter comments have substantially higher levels of toxicity than other platforms

Dissenter Comments vs Related Datasets



- “Likely to Reject” trained on NYT comments; how likely moderators are to reject comments
- Dissenter comments much more likely to be rejected than other datasets
- Validates reason for existence

NSFW and Offensive Content

- Some Dissenter comments have additional labels
- Must explicitly opt-in to view
 - NSFW
 - User-tagged
 - Offensive
 - Dissenter-tagged
 - Tagging mechanism unknown
- Leaked metadata reveal numbers opted-in
 - 7,000 opted-in NSFW
 - 3,500 opted-in Offensive

NSFW-Tagged Content

conferences.sigcomm.org/imc/2020/

IMC 2020 Home Calls Program Com

ACM IMC 2020 October 27-29, Pittsburgh, PA,

0 comments 👍 0 👎 0

conferences.sigcomm.org
imc/2020/

Comment Live Chat 1

Compose Comment

Network measurements are dope!

Share to Gab **NSFW** Publish

You are the first to comment 🚗

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Products
[Dissenter Store](#)
[Dissenter Web Browser](#)
[Dissenter Comment Extension](#)

Dissenter connected

Offensive-Tagged Content

Authenticated with “Offensive” filter checked

Only visible with “Offensive Filter” checked

Unauthenticated view

Top Controversial **Latest** Oldest

[Redacted]

He was a contributing factor. His actions initiated a heart attack, that could have under other circumstances been non-fatal

0

[Redacted]

This is a miscarriage of justice and everyone involved should be censured.

0

Top Controversial **Latest** Oldest

[Redacted]

He was a contributing factor. His actions initiated a heart attack, that could have under other circumstances been non-fatal

0 0 0 Reply

[Redacted]

What a joke. That fat tub of antifa shit died because she was a disgustingly overweight, coalburning hog. I'm honestly glad that fat scum is dead, and I hope she was really, really scared and powerless as she felt her weak, fat body dying.

Fuck Niggers, Fuck Self-hating White slaves, FUCK KIKES

0 1 0 Reply

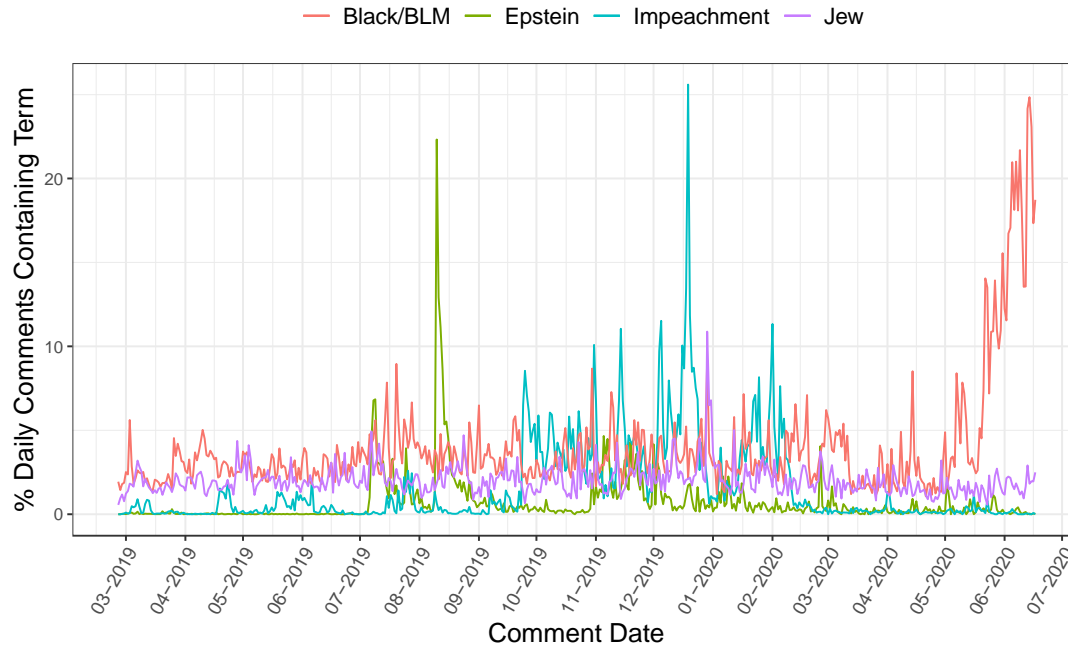
[Redacted]

This is a miscarriage of justice and everyone involved should be censured.

3 0 0 Reply

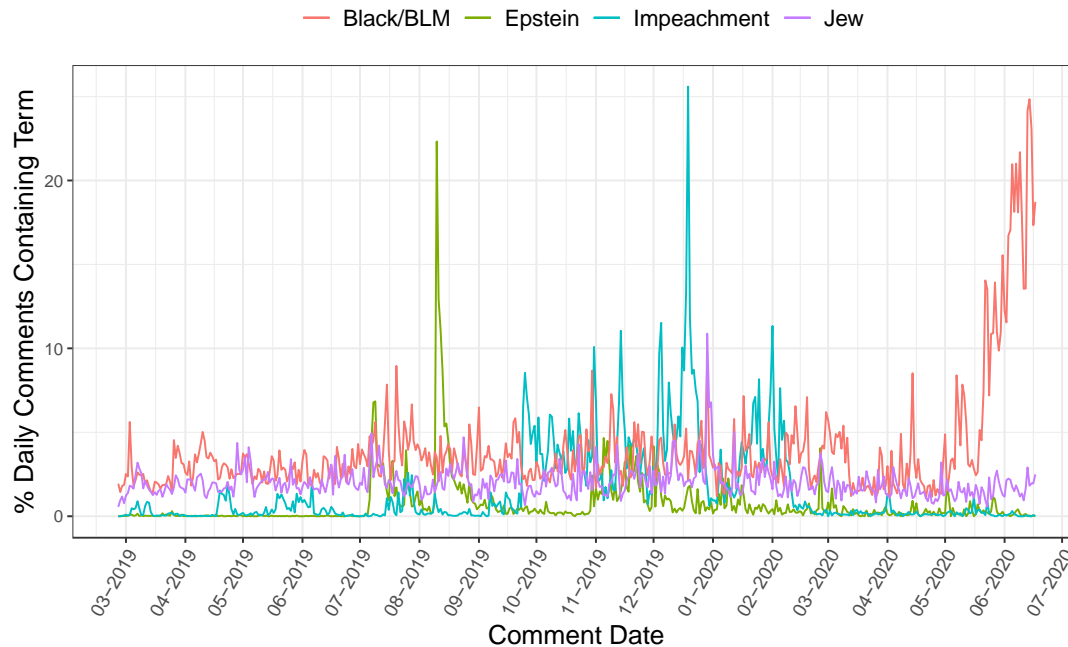


Case Studies



- Reflect both
 - Current events
 - Underlying biases, interests of user base
- Examine % of comments with term each day
 - In comment text
 - In URL string

Case Studies – Current Events



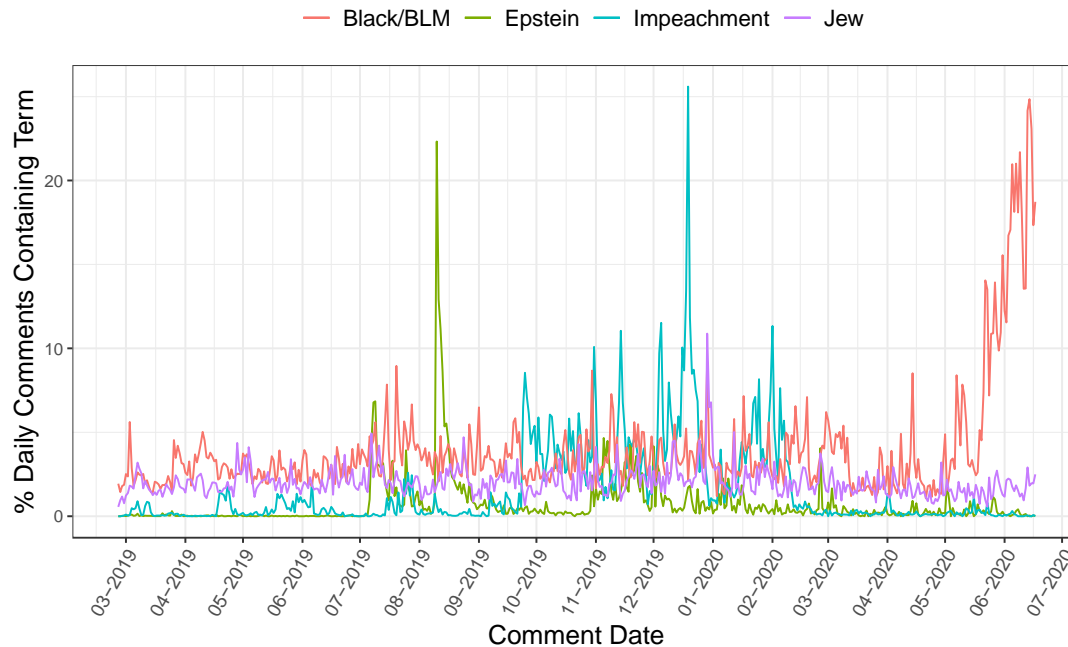
- **Epstein**

- Peaks when arrested and after suicide

- **Impeachment**

- Significant interest during hearings and trial

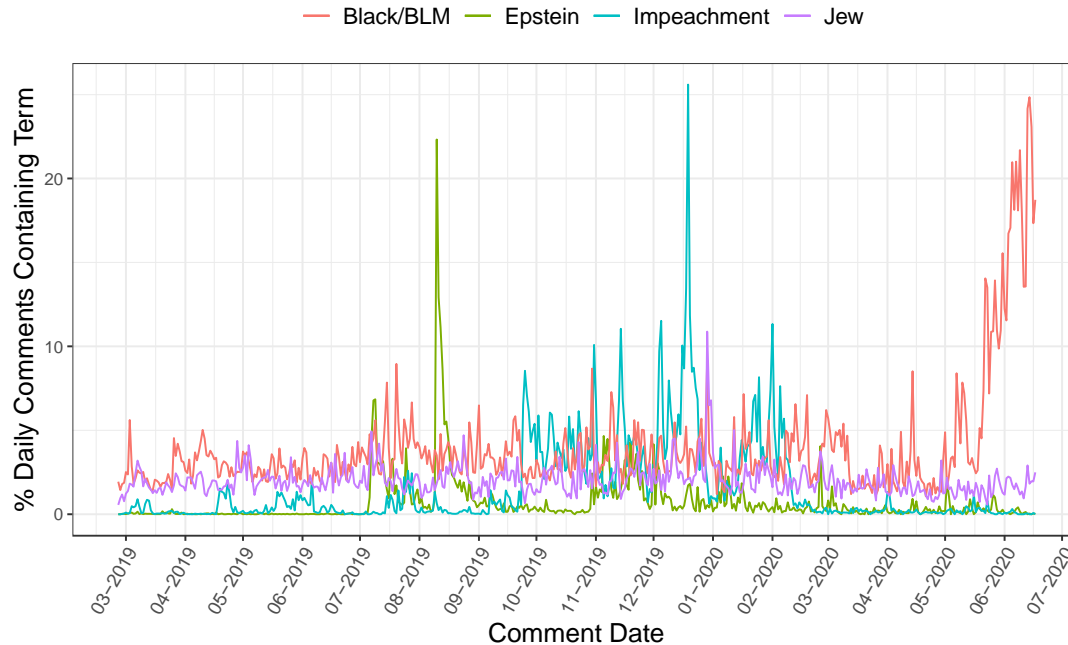
Case Studies – Community Interest



- **Jew/Jewish**

- Sustained significant daily interest (1-5%)
- Small spike following mass stabbing during Hanukkah
- Prior work indicates high level of anti-Semitism in Gab

Case Studies – Community Interest + Current Events



- **Black/BLM**

- Like Jew/Jewish, exhibits sustained interest
 - Death of George Floyd and accompanying BLM protests

Conclusions

- Characterize Dissenter, the “Comment Section of the Internet”
 - Find 101k users, 1.68M comments, 588k URLs
- Comments significantly more toxic than related datasets
- Comments likely to be rejected by moderators
 - Underscoring Dissenter’s niche as free speech bastion
- Case studies show current events as well as underlying community interests reflected in Dissenter comments

Thanks for listening!