

# Telegram OSINT

Exploring the "Similar Channels" feature

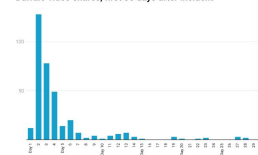
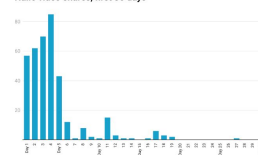
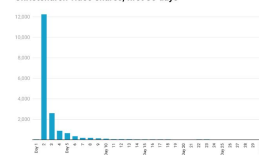
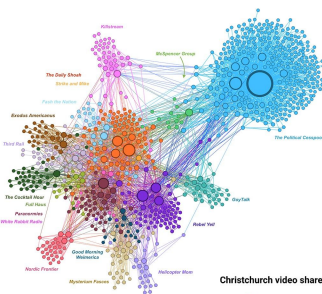
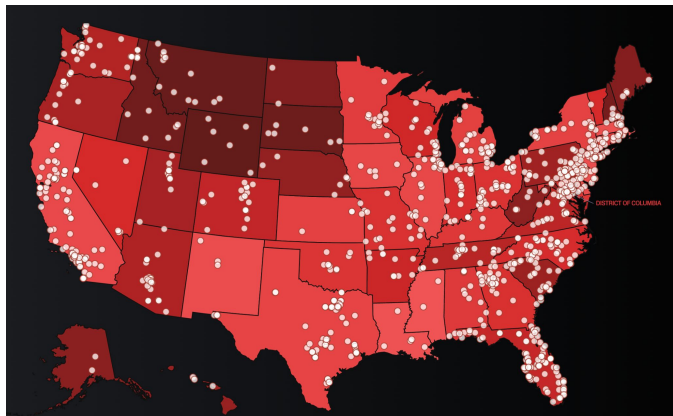
Dr. Megan Squire (paritybit)



Deputy Director for Data Analytics and OSINT  
Southern Poverty Law Center

# Hello.

- I work for the Southern Poverty Law Center's Intelligence Project
- We are a civil rights non-profit
- I run the Data Lab
  - We use digital methods to track and expose hate and extremism
  - Lots of OSINT



# What is Telegram?

## Messaging app

- Chats
  - Person-to-person
  - Group chats
- Broadcast-style "channels"
- Features
  - Audio, video broadcast
  - Large file storage
  - Programmable, with bots
  - Mini app store

The screenshot displays the Telegram channel for INFOWARS.COM, which has 29,316 subscribers. The channel header includes the name, subscriber count, and a search icon. A pinned message is visible at the top, titled "Gear Up For The Ultimate Battle Against The NWO In Alex Jones' OFFICIAL Vid...". The main content area shows a post from "The American Journal" with the headline "The American Journal: Trump Warns Kamala Ukraine Policies Could Spark WWII". The post includes a "WATCH NOW" link, a video player with a "Banned.Video" label, and a description of the journal's mission. The video player shows a man in a suit with the "AMERICAN JOURNAL" logo. Below the video, there are reaction icons (fire, heart, smiley face) and a comment button. The right sidebar contains the "Channel Info" section, which includes the channel's name, subscriber count, a link to the Telegram channel, and a list of statistics: 1927 photos, 2501 videos, 5 files, 34338 shared links, 3 voice messages, 20 GIFs, and 75 similar channels.

INFOWARS.COM 29,316 subscribers

Pinned message  
Gear Up For The Ultimate Battle Against The NWO In Alex Jones' OFFICIAL Vid...

INFOWARS.COM  
Forwarded from The American Journal  
The American Journal: Trump Warns Kamala Ukraine Policies Could Spark WWII

WATCH NOW | #AmericanJournal

<https://madmaxworld.tv/channel/the-american-journal>  
<https://www.infowars.com/posts/friday-live-trump-warns-kamala-ukraine-policies-could-spark-wwiii/>

↳SUPPORT THE INFOWAR: [www.infowarsstore.com](http://www.infowarsstore.com)

Banned.Video  
The American Journal  
Taking a record of the heart and minds of the people, American Journal puts the power of the conversation into the callers' hands. Join us Monday through Friday, 8-11AM CST and call in to talk to ...

6 2 2 1039 6:52 AM

Leave a comment

Channel Info

INFOWARS.COM 29,316 subscribers

t.me/infowarslive  
Link

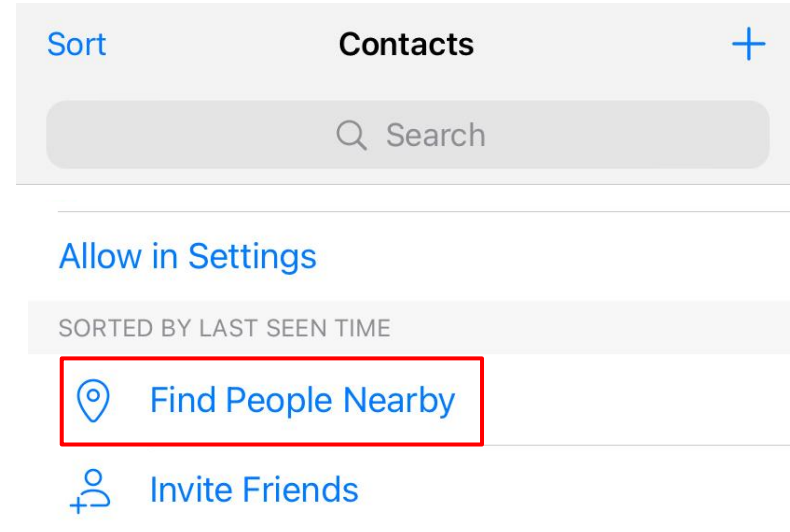
Official Telegram for #INFOWARS - Tomorrow's News Today  
★★★★★ SHARE THE LINKS  
Tune in 24/7:  
<https://www.infowars.com/show/>  
Support: [infowarsstore.com](http://infowarsstore.com)  
Description

Notifications

1927 photos  
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75 similar channels

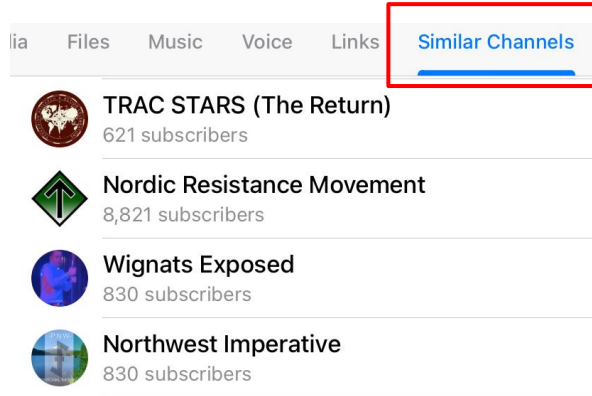
# OSINT opportunities, in brief

- Robust API
- User searching & exposure opps
  - Phone numbers
  - Usernames
  - Profile pics
- Geo-location
- Labyrinth of security settings
  - Confusing for users = spillage opps



# New OSINT Opportunity: Similar Channels

- Feature introduced November 2023
- Shows up to 100 channels with similar/shared membership

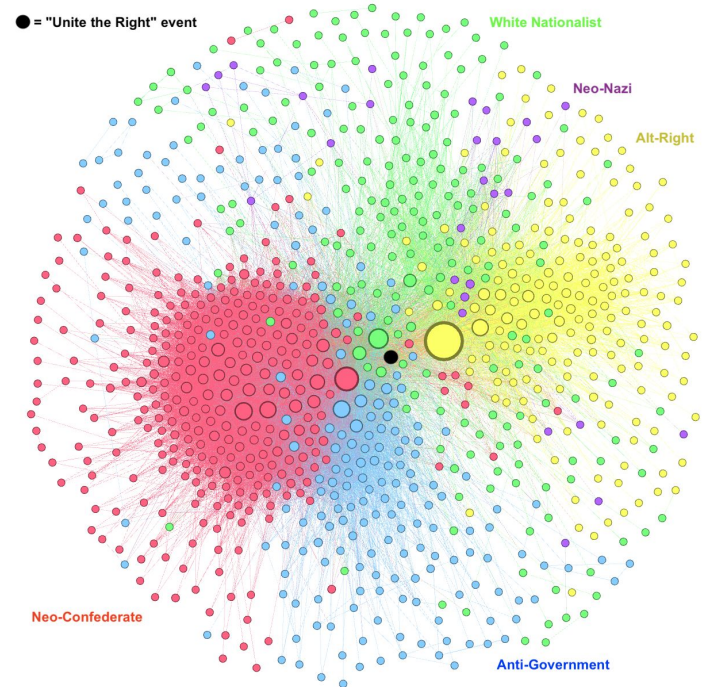


# Similar to the old Facebook group membership rosters

- Facebook used to allow API access to group membership rosters
- This was removed in early 2018

# Facebook group membership rosters

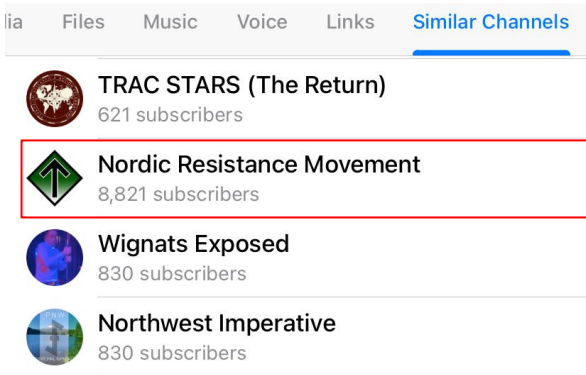
- Nodes = FB group
- Edges = number of members in common



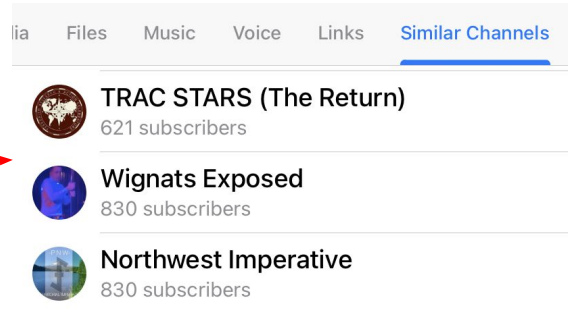
# Important Caveat

Telegram does not show similar channels that you have already joined

- In this way, it is like a **suggestion** or **recommendation** algorithm



*Clean Telegram*



*Telegram with joins*



# Code and database model overview

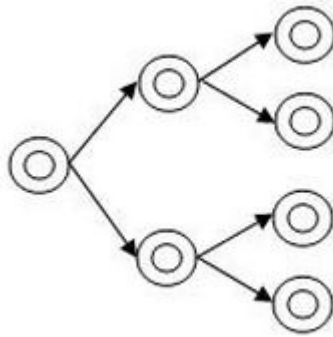
<https://github.com/megansquire/telegramSimilarChannels>

- SQL creates (for MySQL)
- SQL queries
- Code to collect channels and populate DB



# Experiment: US-based Extremist Groups on Telegram

Snowball collection method:



Seed list: 335 Telegram channels from a variety of extremist/hate ideologies

# Experimental numbers - 3 rounds of snowball

Generation	Total Count of Channels Discovered
1	335
2	2652
3	25062

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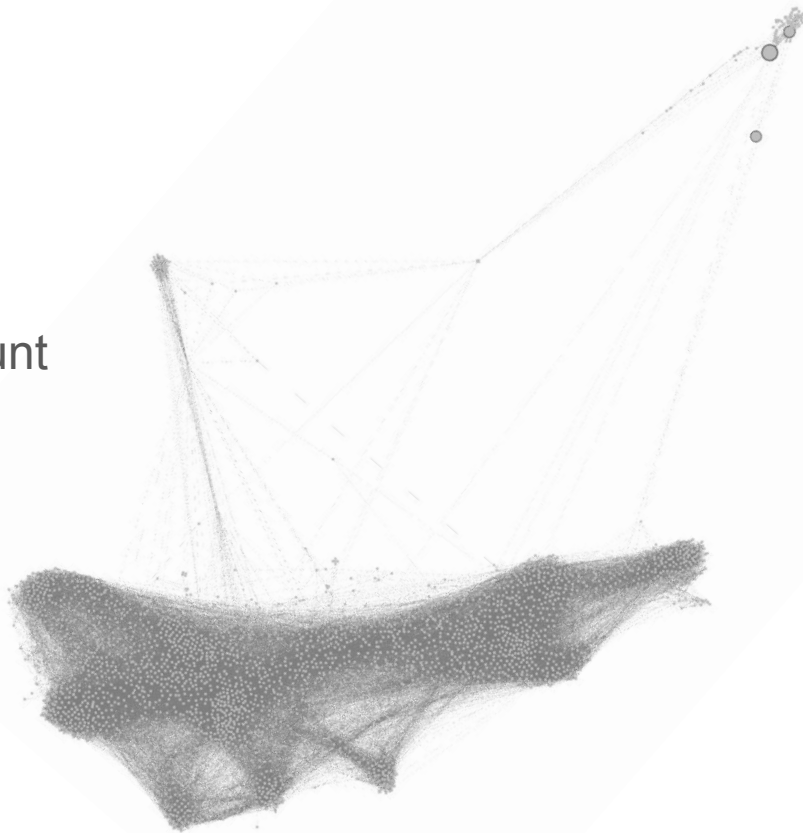
Create social network diagram using

*Gp* Gephi

# Raw network, v0

## Characteristics

- ForceAtlas2 layout
- All nodes included (unpruned)
- Node size = Channel member count
- Hairball :(



# Pruning Strategies

## 1. Language detection

- a. Prune out non-English language channels
- b. Use Python modules `langdetect`, `unidecode`, and `langcodes` for this
- c. Try channel title and channel description first

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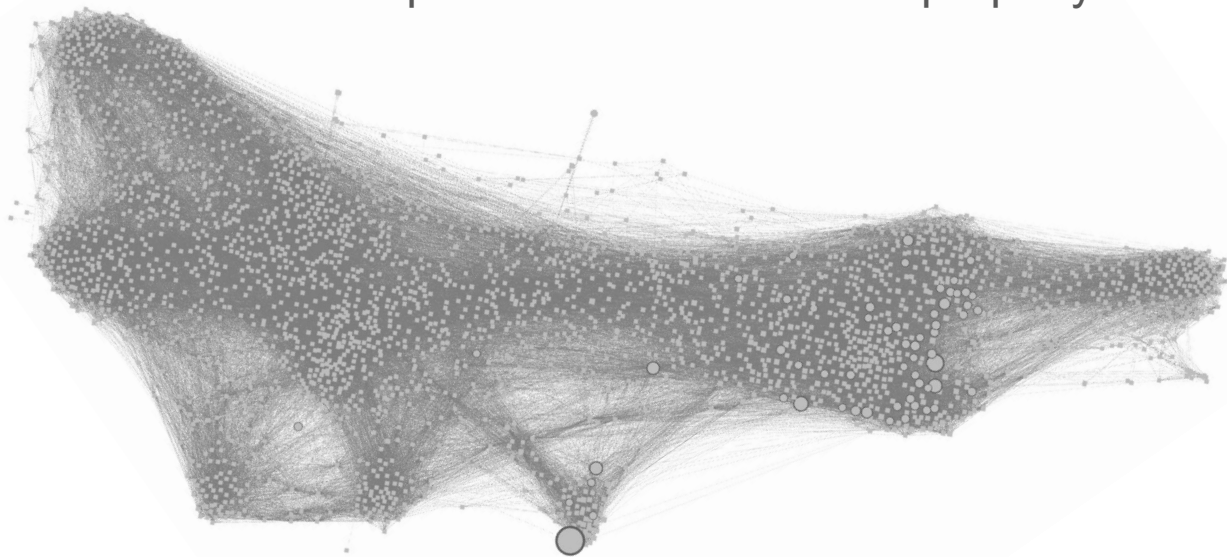
## 3. Use network metrics

- a. Prune out channels that have low betweenness or look like an island
  - i. Two sets of these were
    - 1. The Telegram branded channels
    - 2. A collection of Ethiopian religious channels

# Pruned Network, v1

Here is the network with 2 island chains pruned out

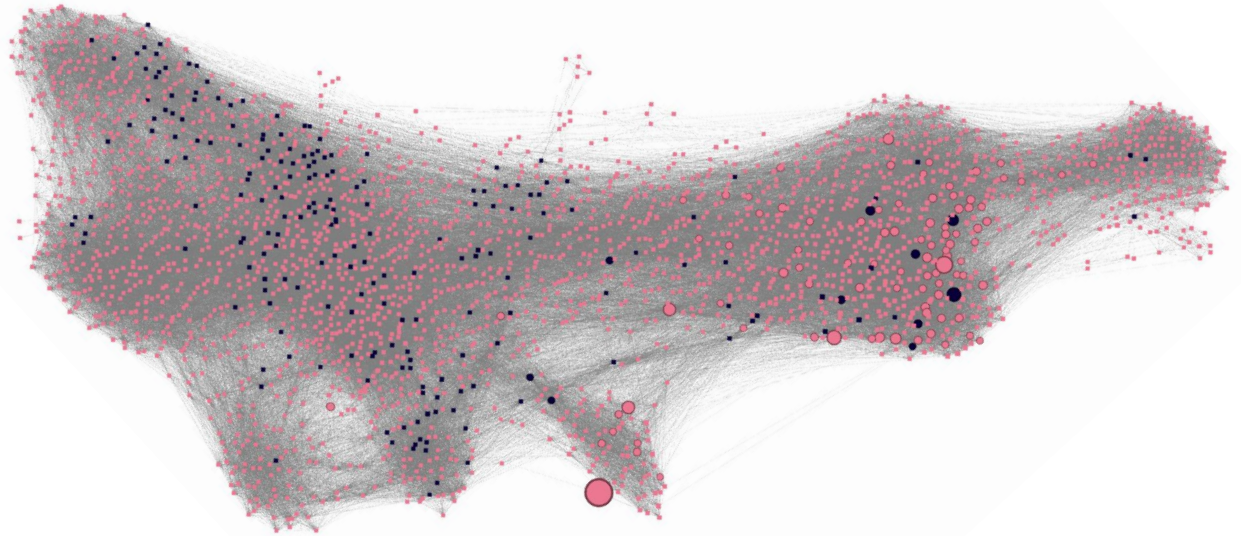
It is still a hairball, but now some more important nodes are sized properly



Some structure, but I'd like more

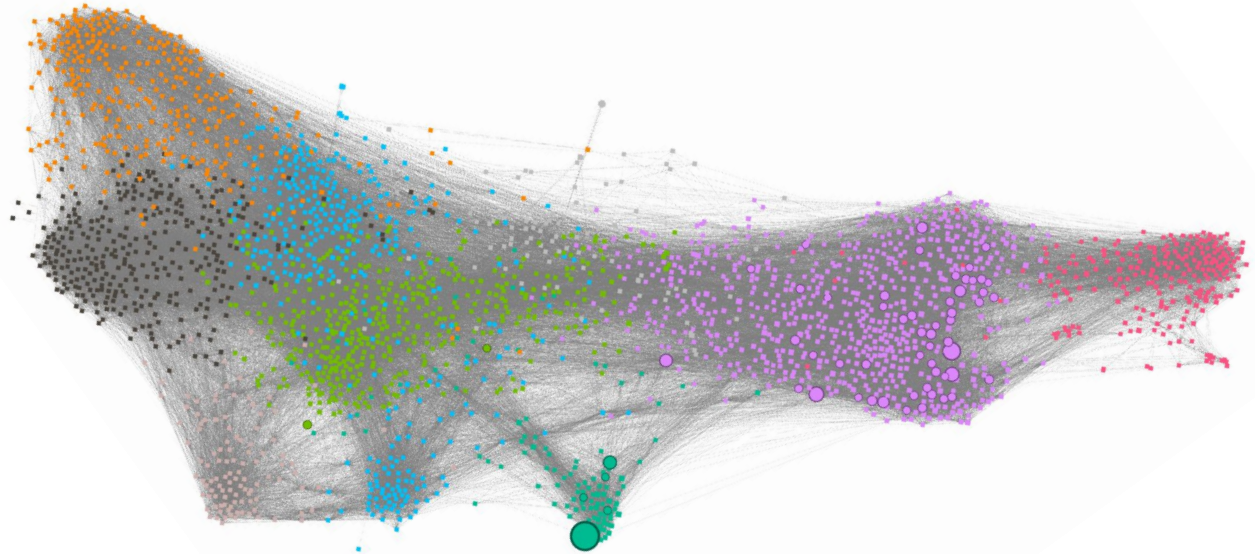
# Colorized Network, v2.1

- Black = Generation 1, the seed list
- Pink = Similar channels

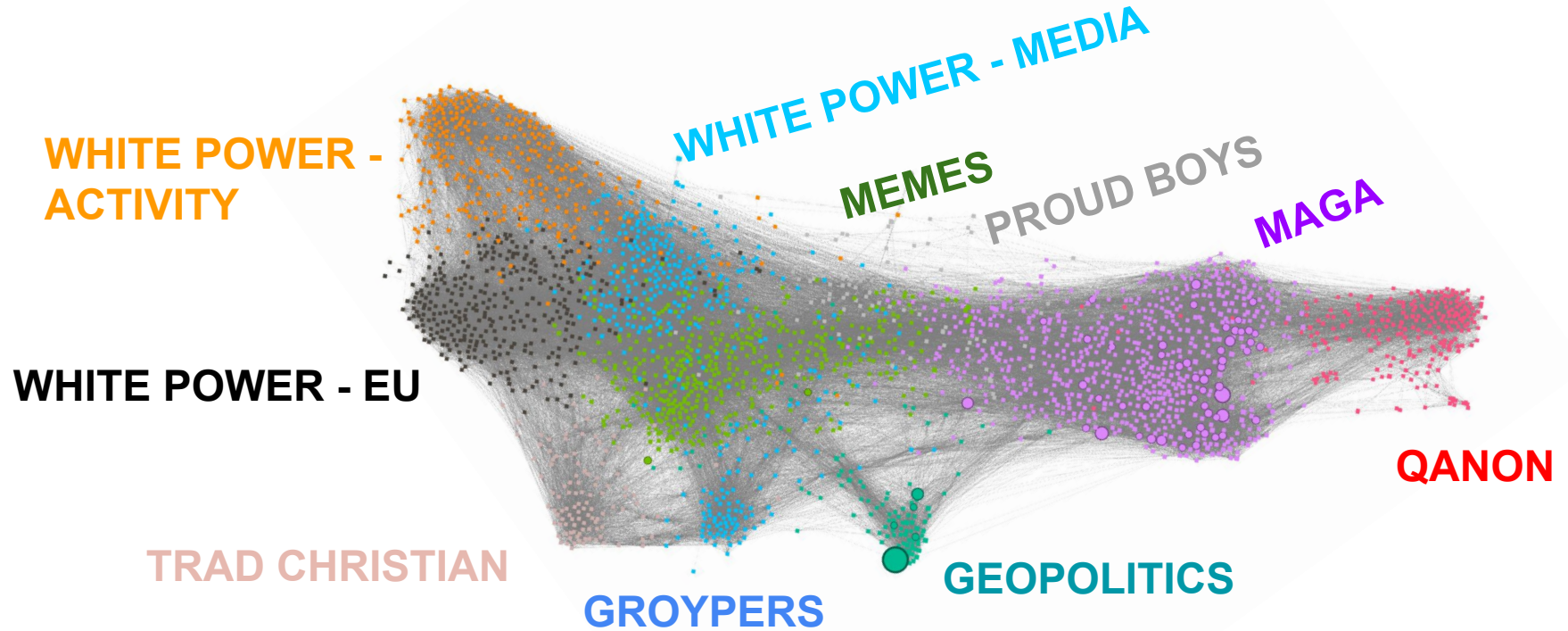


# Colorized Network, v2.2

- Apply a neighborhood finding algorithm (Louvain)
- Colorize nodes that are most similar "geographically"



# Naming the neighborhoods



# Calculate Network Metrics

In-degree can help locate the most popular channels

name	username	size	In-Degree ▾	Out-Degree	Degree	Eigenvector
<b>ZoomerWaffen</b>	zoomerwaffen08	28589	564	60	624	0.957385
Diary of an Und	RoninooftheNight	8154	518	78	596	0.812419
History Memes	HistoryMemes88	9917	504	51	555	0.846568
BASED AI ART	BASED_AI_ART	8534	491	59	550	0.796231
Midnight Rider	realKarliBonne	203238	466	97	563	1.0
Raw Egg Nationa	raweggnationalistofficial	10033	454	64	518	0.766238
RISING RACE	risingrxce	7702	450	70	520	0.718347
ヒマワリ会 Sun...	SunflowerSociety	7445	448	50	498	0.68552
Deranged Postin	derangedposting	12901	373	43	416	0.581369
Disclose.tv	disclosetv	382488	368	78	446	0.668932

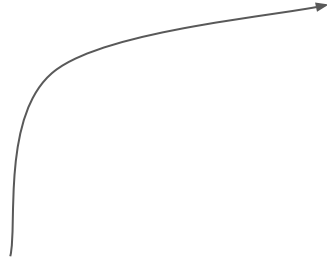
# Calculate Network Metrics

Eigenvector centrality can help locate "well placed" channels  
(those that link to other popular channels)

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# Look for suspicious features

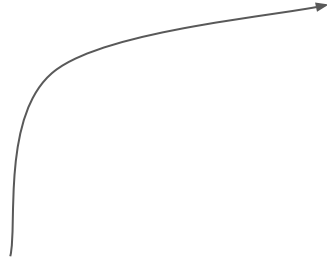


Here is a cluster of channels that is **only** connected to Columbus Proud Boys, but seems thematically unrelated.





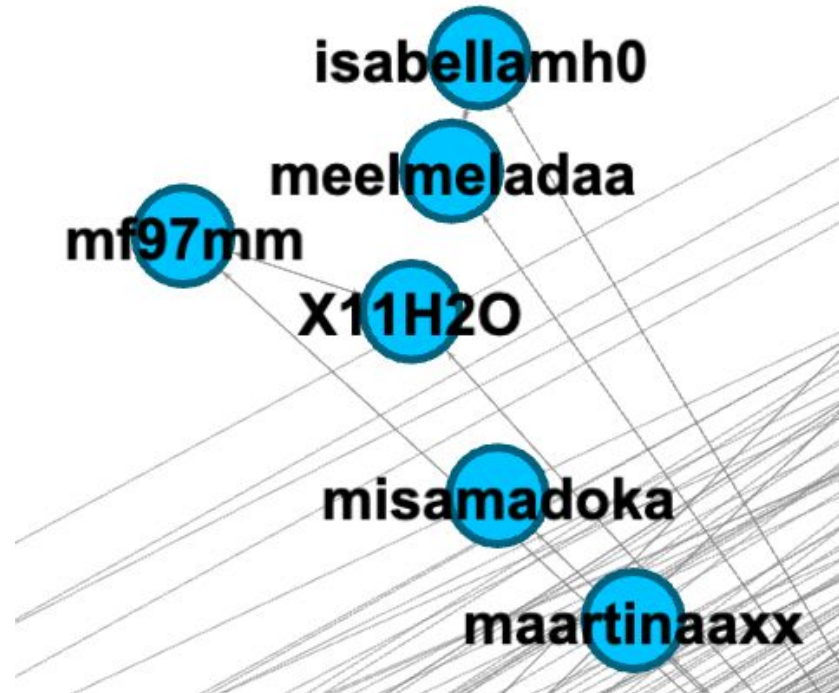
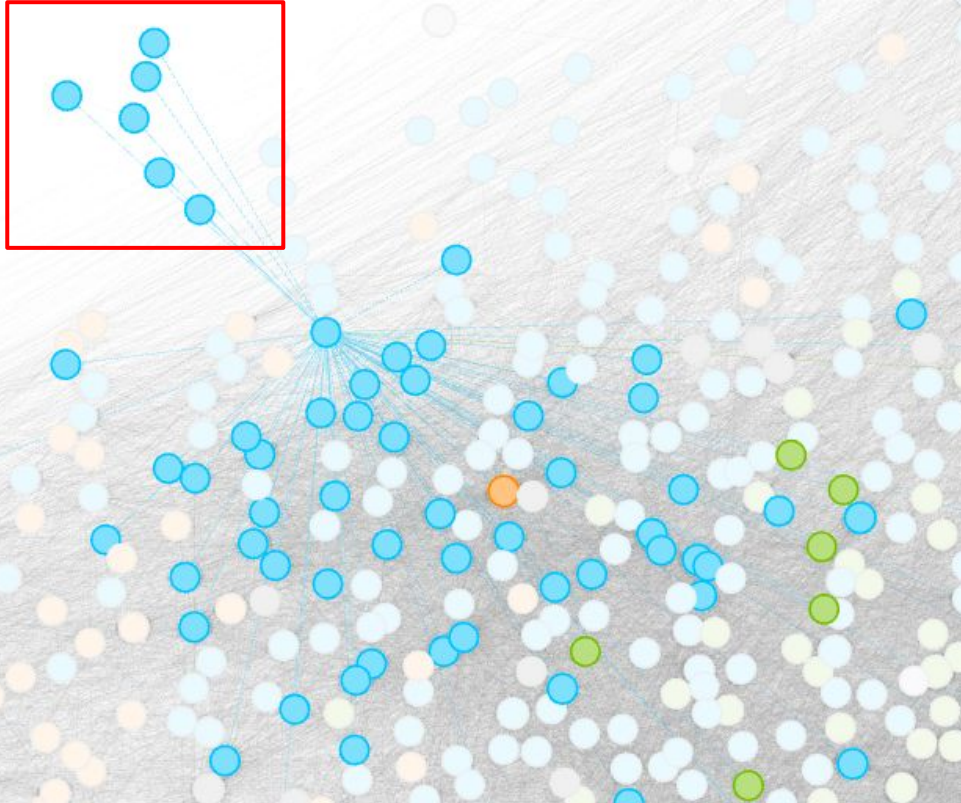
# Sure enough...



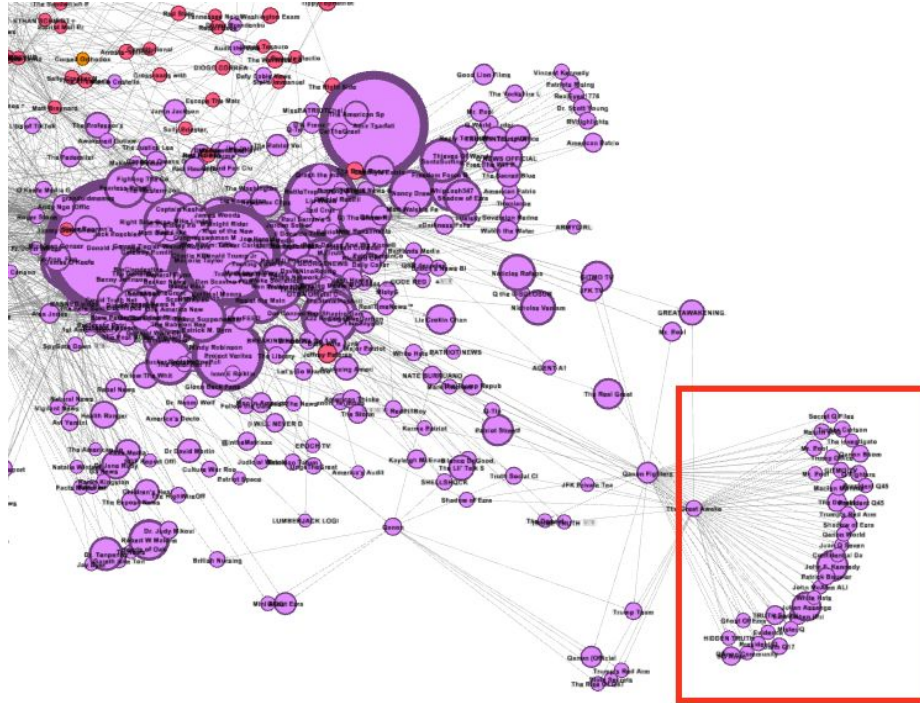
Today, some of these channels have now had their "similar channels" feature disabled.



Another one

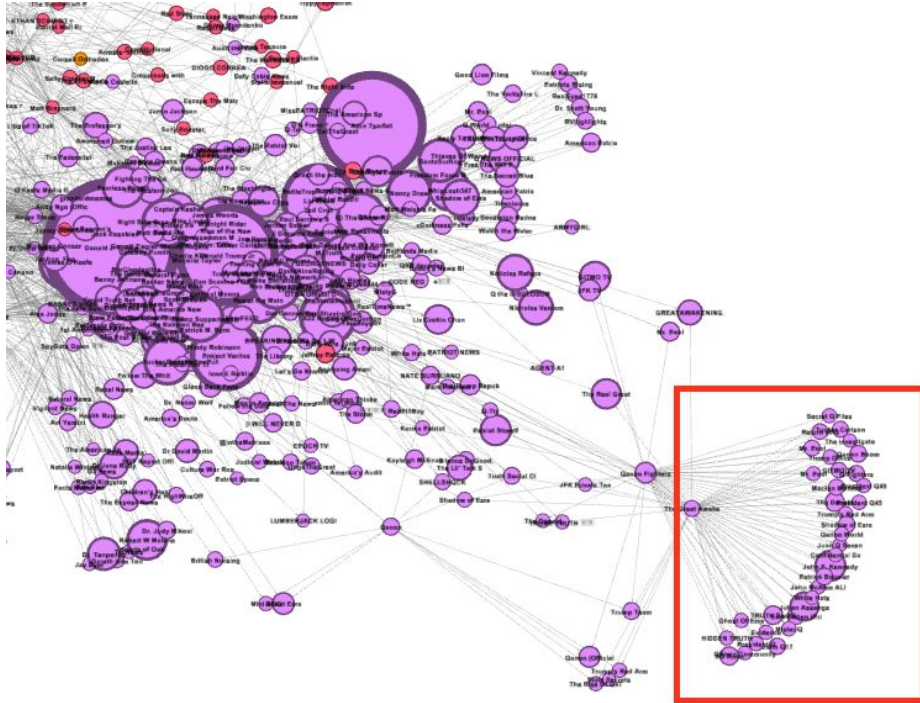


# A different case



This is an odd-shaped archipelago of channels that seem to be only related to each other, and all the channels have names matching famous US political figures.

# Sure enough...



@ivanka\_trump is a collectible  
username that belongs to



Ivanka Trump

This username was bought on **Fragment** on Dec 8,  
2022 at 4:27 PM for **₺236.00 (\$1,406.56)**

[Learn More](#)

[Copy Link](#)

# What is the grift? Scams, Holocaust denial...

Be like President Trump! GET YOUR JESUS COINS NOW 📌

[https://bit.ly/JESUS-COIN\\_](https://bit.ly/JESUS-COIN_)  
[https://bit.ly/JESUS-COIN\\_](https://bit.ly/JESUS-COIN_)



👁 119 8:05 PM

If you are smart enough, you will accept the help given by our President, Donald Trump, and you will place your order now 📌

<https://bit.ly/Cashout-Sticker> ✓  
<https://bit.ly/Cashout-Sticker> ✓



👁 162 12:17 AM

ORDER BY CLICKING ON THE LINK BELOW AND GET YOUR PROFITS IN SHORT 3 WEEKS 📌

<https://bit.ly/Cashout-Sticker> ✓  
<https://bit.ly/Cashout-Sticker> ✓



👁 183 3:54 PM

Then all you need to do is try this 3-second method NOW.

[https://bit.ly/PINEAL\\_Guardian](https://bit.ly/PINEAL_Guardian) ✓  
[https://bit.ly/PINEAL\\_Guardian](https://bit.ly/PINEAL_Guardian) ✓

*\*NOTE. If you want to skip the welcome video, just refresh the page once and scroll down!!!*

[https://bit.ly/PINEAL\\_Guardian](https://bit.ly/PINEAL_Guardian) ✓

👁 122 2:18 AM

The Holocaust Debunked In 5 Minutes - By Fred Leuchter American Gas Chamber Expert

Yours, Richard Wilson.

Click ⬇⬇⬇⬇⬇

<https://t.me/+TgymoPq2aPZiZmZk> (Black Swan)

👁 1 9:44 AM

# The OSINT wrap up

"Similar channels" feature in Telegram can expose:

- Which channels have similar users

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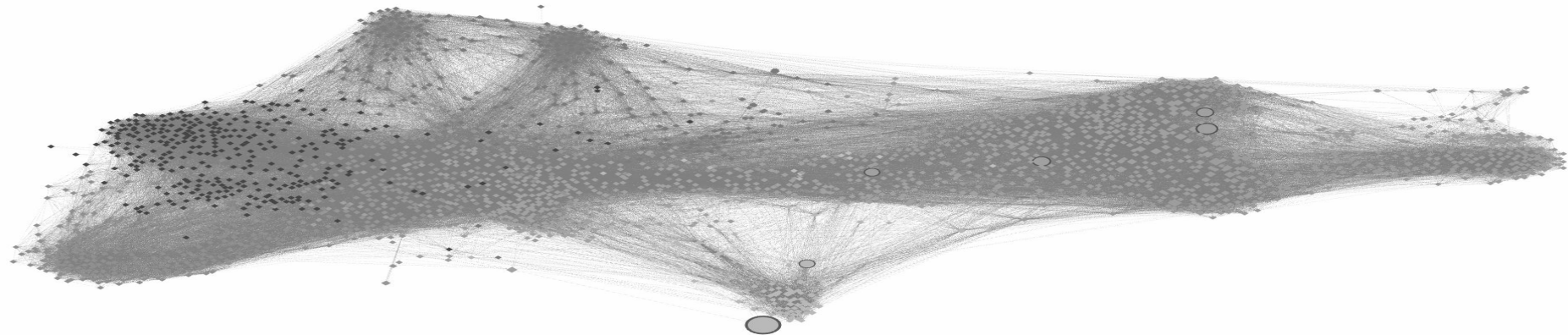
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- Which channels are being used for inauthentic behavior
- Which channels are conducting inauthentic behavior
- Which channels are being **targeted** to conduct inauthentic behavior



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