



Turkish Salafism on Twitter: Social Network Analysis and Computational Text Analysis



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ABSTRACT

Although Salafism has a long history in the Muslim communities, Salafism, mostly due to its violent extremist side, has gained visibility in the public opinion with the catastrophic September 11 terrorist attacks. The entry of Salafist networks in Turkey could be dated back to the early 1990s, however, Salafist ideas have been spreading in Turkey especially after the outbreak of Arab Awakenings and the Syrian conflict. Despite the common characteristics and its transnational nature, every country has formed their local Salafism(s). Global Salafism and its' national forms have been widely studied in the literature, but there is a lack of exploratory and explanatory analysis on Turkish Salafism when compared to other Middle Eastern countries. The Turkish case has been underrepresented in the literature. This research utilizes primary sources, which is Twitter data, to explore on the activities and constituencies of the Turkish Salafis by employing social network analysis and quantitative text analysis. Because of the security concerns and the difficulties of doing fieldwork, this study limits itself to the digital space as its research field.

INTRODUCTION

Topic: An exploratory analysis on Turkish Salafism

Aim: Revealing Online Evolution and Presence

Conceptual Framework: Global Salafism, Radicalization, Extremism, Terrorism, Islamism

Approach: Interpretivist Approach, Research then Theory

Methods: Social Network Analysis and Quantitative Text Analysis

Data and Collection: Twitter, Snowball Sampling

RESEARCH QUESTIONS

Main Research Question:

How Turkish Salafists represent themselves on Twitter?

Sub Research Questions:

- what is the nature of their ecosystem whether centralized or decentralized,
- which subgroups of Global Salafism show existence on Twitter,
- which subgroup dominate the ecosystem,
- what are the most referenced websites and social media platforms in their tweets,
- which themes come to the forefront in their tweets.

DATA

Sample Accounts: 213 Users

Sampling Method: Key Words, Key Figures, Snowballing (Two months)

Text Data: 69998 Tweets

Network Matrix: 213 Nodes, 4557 Edges

METHODOLOGY

Python for Data Collection
R for Computational Text Analysis
Gephi for Social Network Analysis

Two methods will be used to explore twitter data.

- The first one is social network analysis in Twitter-sphere and the second one is quantitative text analysis on obtained text data from users. In general, social network analysis tells us about the important actors in the network, the level of connectedness, the existence of sub-communities in the network, and the sphere of influence of the network.
- In addition to network analysis, text analysis tells us about the worldview of the community, highly referenced websites, authors, and hashtags. In-text analysis section, themes are generated based on statistical results, and selected tweets regarding these themes provided with their critical discussions.

Considering distinct features of these two methods, a combination of them allows us to grasp more about the nature of online communities.

There are three stages of methodology; data collection, data preparation, and data analysis. Data was collected on October 2018 by using a Python package which allows us to retrieve data from Twitter. Python is a common programming language among software engineers and data scientists. However, data preparation and analysis were made by using R programming language. As R language is mostly preferred by social scientists, R packages were used for text cleaning and analysis. Moreover, Gephi application was used to visualize the network data and to calculate metric results. This study prefers to use Gephi, Python and R, as they are all open-source, free and user-friendly platforms.

WHY TWITTER and ONLINE PRESENCE?

This study focuses on the online sphere due to some reasons.

- *At first*, As Stein (2013) underlines, Jihadi movements prefer to use mostly social media platforms instead of static official websites and forums, especially in the last decade. This requires studying militant movements through the lens of social media today.
- *Second*, as the Salafi community is linked to terrorist groups, there is a security issue to study them in the field.
- *Third*, there is a scarcity of studies on the online sphere, hence this study aims to contribute to the literature by focusing on the online sphere. In the last decade, the online sphere has been a hub for social movements and social networks (Watts, 2007). They address both their supporters and potential supporters via social media and websites.

There are many platforms to study Salafists in the digital sphere. However, this study limits itself only to the Twitter-sphere. Most Salafists use *Twitter as a way of conveying their messages to the public*. Facebook, Instagram, and other platforms are less common when it comes to the Turkish context. Besides, collecting data from Twitter is relatively easier than other platforms. And, twitter data, mostly text data, tell us about their network and their worldview. Studying twitter data allows us to take a big picture of the community through their own eyes. The data are created by themselves in their natural environment, the internet (Lazer et al., 2009).

ETHICAL CONCERNS

Regarding ethical issues, Twitter Social Network Analysis is a widely used method among both academics and researchers. Twitter's terms of service inform the users that the data created in this space will be shared with the public. The users implicitly give their consent to the researchers to use their data. However, the anonymity of collected data and the privacy of users should be protected.

RESULTS : SOCIAL NETWORK ANALYSIS

- **Highly connected** : The degree of connectedness is high in the community, only one user is weakly connected; however, thirteen users are strongly connected.
- **50% Alive**: Half of the sample is deactivated after one of year of data collection.
- **Militant Dominance**: Militants are more dominant in Turkish Salafi networks.
- **Low Density**: Density in the network is 0.108, which reports the vacancy in the network.
- **Average path length** in the network is 2.4, which shows the distance between users.
- Only 11 users exceed 100-total degree in the network, in other words, *5 percent of individuals have connection with half of the community*.

Figure 1: Subcommunities in the network
- Blue nodes for militant Salafis close to Al Qaeda network.
- Red nodes for Hizbut-tahrir fraction as well as Islamists. - -
Orange nodes for Ebu Hanzala community.
- Green users for quietist and political Salafi fractions.

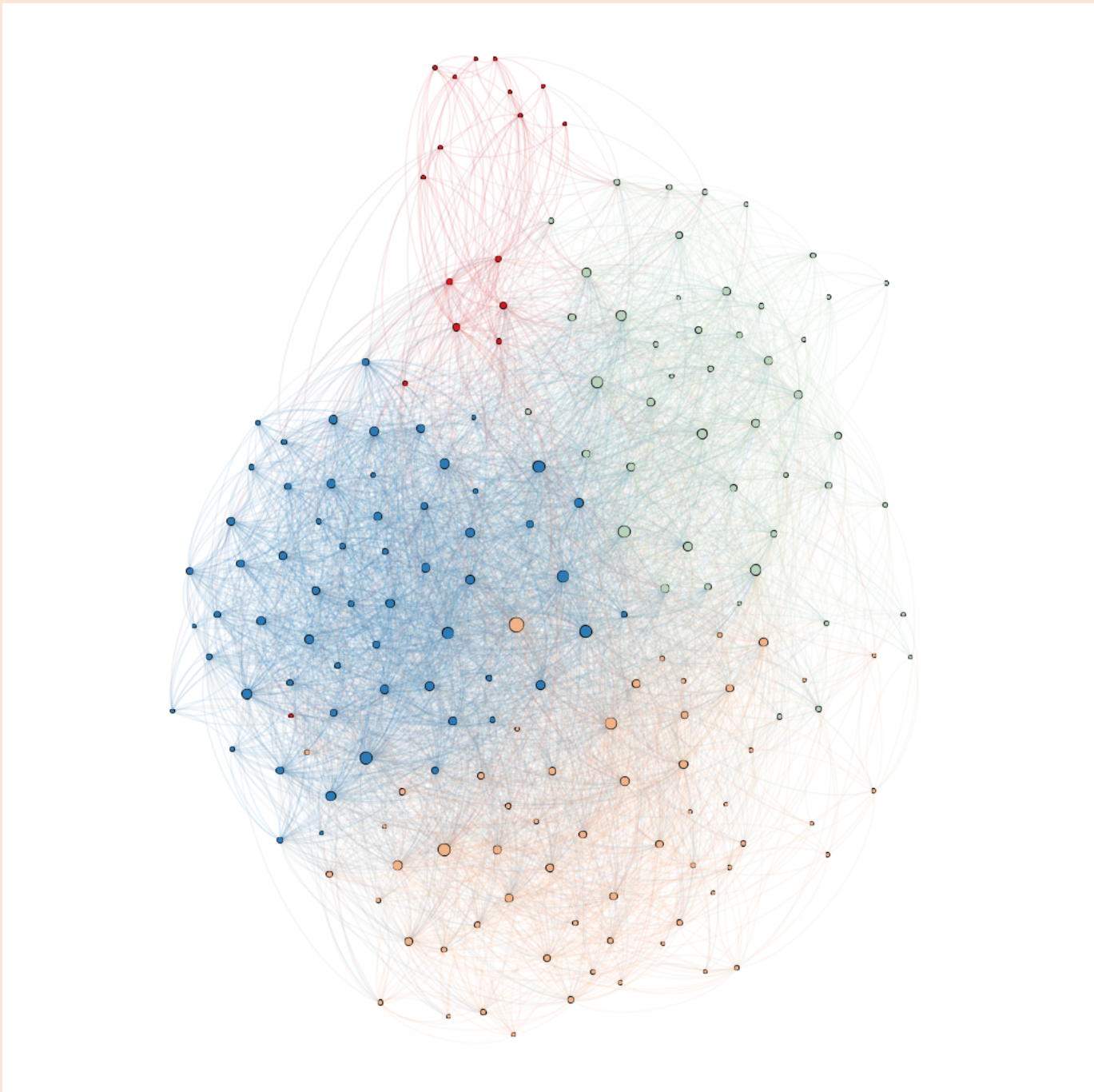
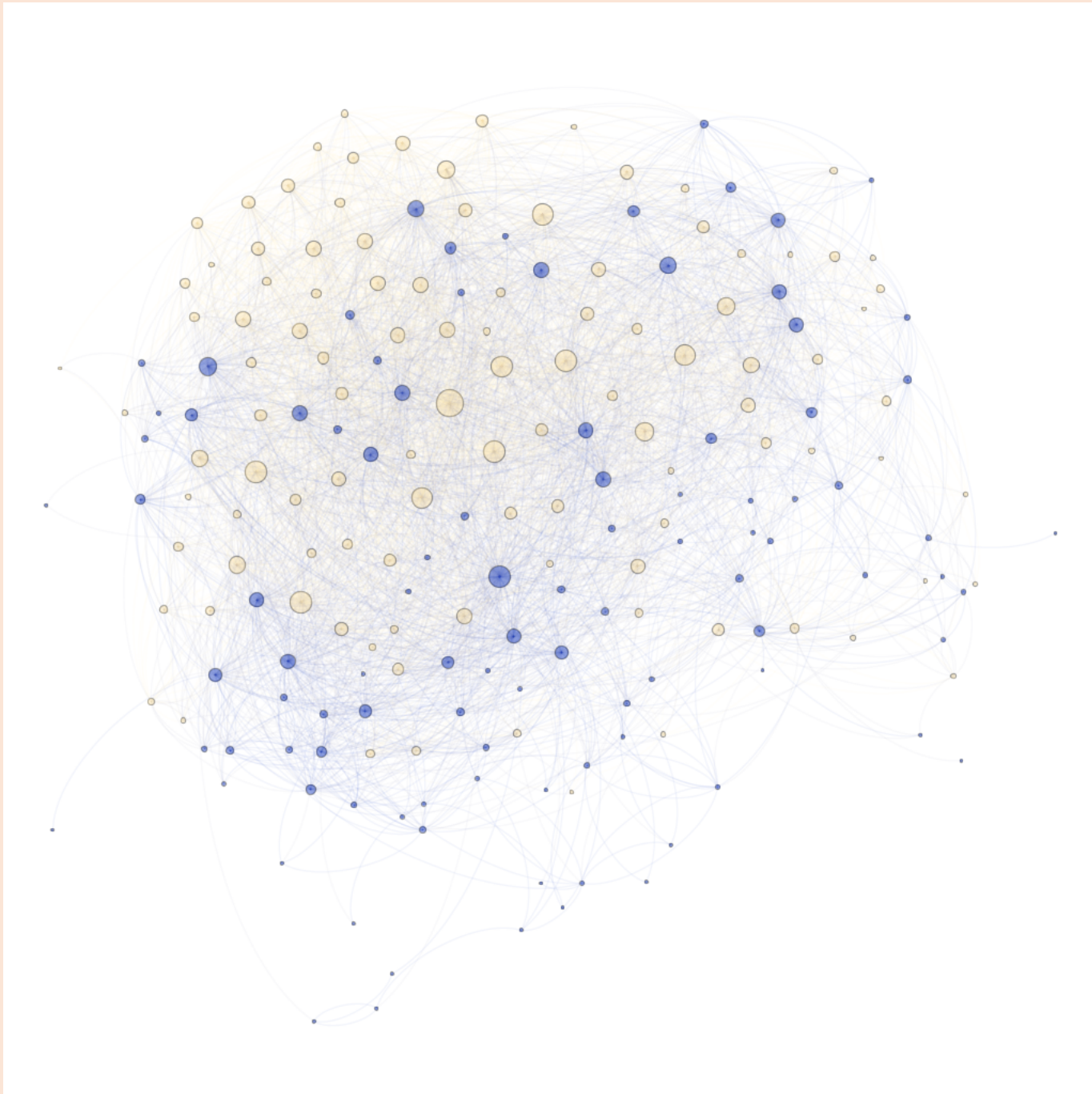


Figure 2: Liveness after one year of data collection
(only 50% Alive)



RESULTS: COMPUTATIONAL TEXT ANALYSIS:

- **More Religion, Less Politics**: From quietists to militants, Turkish Salafi subgroups have different agendas on Twitter. Quietists have almost no reference to politics as consistent with their agenda. Militant Salafis could not be seen as a unified group instead there are lots of groups with different agendas. Some militant Salafis have no reference to Turkish context, but some write more on Turkey. Regarding politics, Turkey, Syria, Russia, US and Iran, which are mostly the Middle Eastern and related countries, are forefront discussion topics. Syrian conflict is a common theme among militant Salafis. Hanzala community has the most leader-centered discourse different from other branches.
- **Different agenda on Subgroups and Decentral Ecosystem**: It can be inferred that there is no central mechanism among all Turkish Salafis for determining their agenda.
- **Echo Chamber**: According to the most referenced websites in tweets, it is seen that Turkish Salafis create an echo chamber on Twitter. While they abstain to interact with mainstream understandings in physical world, they keep mainstream media out of their circles. This is explained as a step toward radicalization process in the literature.
- **Hashtags** (Syria, Hanzala, Genders)
- **Instagram and YouTube**: In terms of references to social media platforms, Instagram and YouTube come to forefront. Different from Twitter, they allow spreading visual propaganda materials online. The future research should focus more on visual materials based on Instagram and YouTube data.
- There is a clear upturn in **tweet frequency** after 2017. This may tell us about their evolution online after their loss on the ground and crackdown on them in Turkey.

Table 1: Word Percentages based on thematic classification for All users

Themes	All %
Salafi Theology-Religious Practices	33.64%
Salafi Leaders-Figures	25.29%
Muslim Community	12.36%
Conflict in Syria-Idlib	8.39%
Politics in Turkey	7.72%
Family-Gender	3.49%
Politics in US	2.78%
Politics in Russia	1.62%
Afghanistan-Taliban	1.59%
Conflict in Palestine	1.57%
Politics in Iran	1.55%
TOTAL	100.00%

Table 2: Word Percentages based on thematic classification for Salafi Fractions

Subgroups	Apolitical S.		Militant Salafis		Political S.
	Quietists %	Hanzala %	Emir-kucuk %	Nusra %	Hizb-tahrir %
Salafi Theology	62.25%	28.54%	34.62%	25.75%	19.39%
Salafi Leaders-Figures	28.01%	50.76%	40.75%	18.49%	23.36%
Muslim Community	7.76%	9.58%	9.38%	16.16%	17.89%
Politics in Turkey	1.07%	11.12%	1.98%	10.31%	17.70%
Family-Gender	0.91%	0.00%	1.50%	7.25%	1.50%
Afghanistan-Taliban	0.00%	0.00%	0.00%	0.00%	0.00%
Conflict in Syria-Idlib	0.00%	0.00%	6.85%	10.28%	6.25%
Conflict in Palestine	0.00%	0.00%	3.43%	4.41%	6.18%
Politics in Russia	0.00%	0.00%	0.00%	2.32%	3.19%
Politics in Iran	0.00%	0.00%	0.00%	2.12%	1.95%
Politics in US	0.00%	0.00%	1.50%	2.91%	2.60%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%

Table 3: Hashtag Themes for All Users

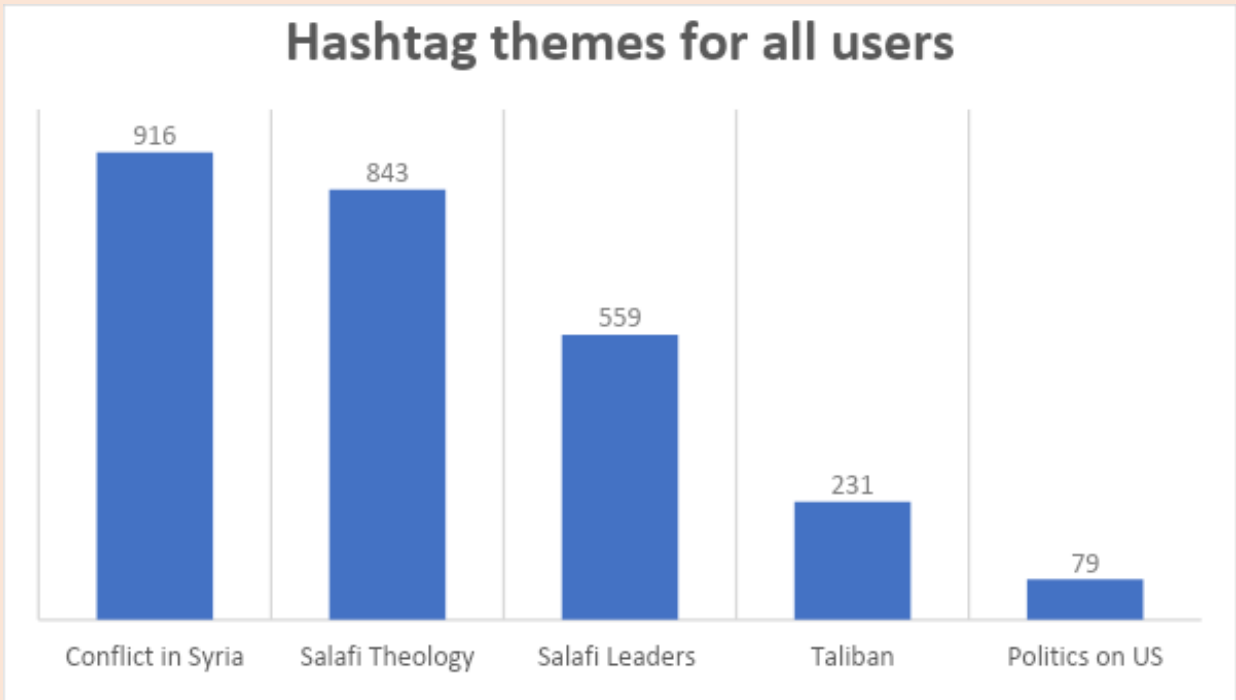


Table 4: News Site Frequencies

News Site	Freq
Mepanews (al-Qaeda oriented news site)	165
Yenisafak (religious conservative)	111
Trthaber (national public news agency)	47
Haberturk (mainstream)	36
Yeniakit (religious conservative)	36
Milligazete (religious conservative)	18
Aktivt (religious conservative)	17
Dirilispostasi (religious conservative)	4

Table 5: Tweet Frequencies by Day

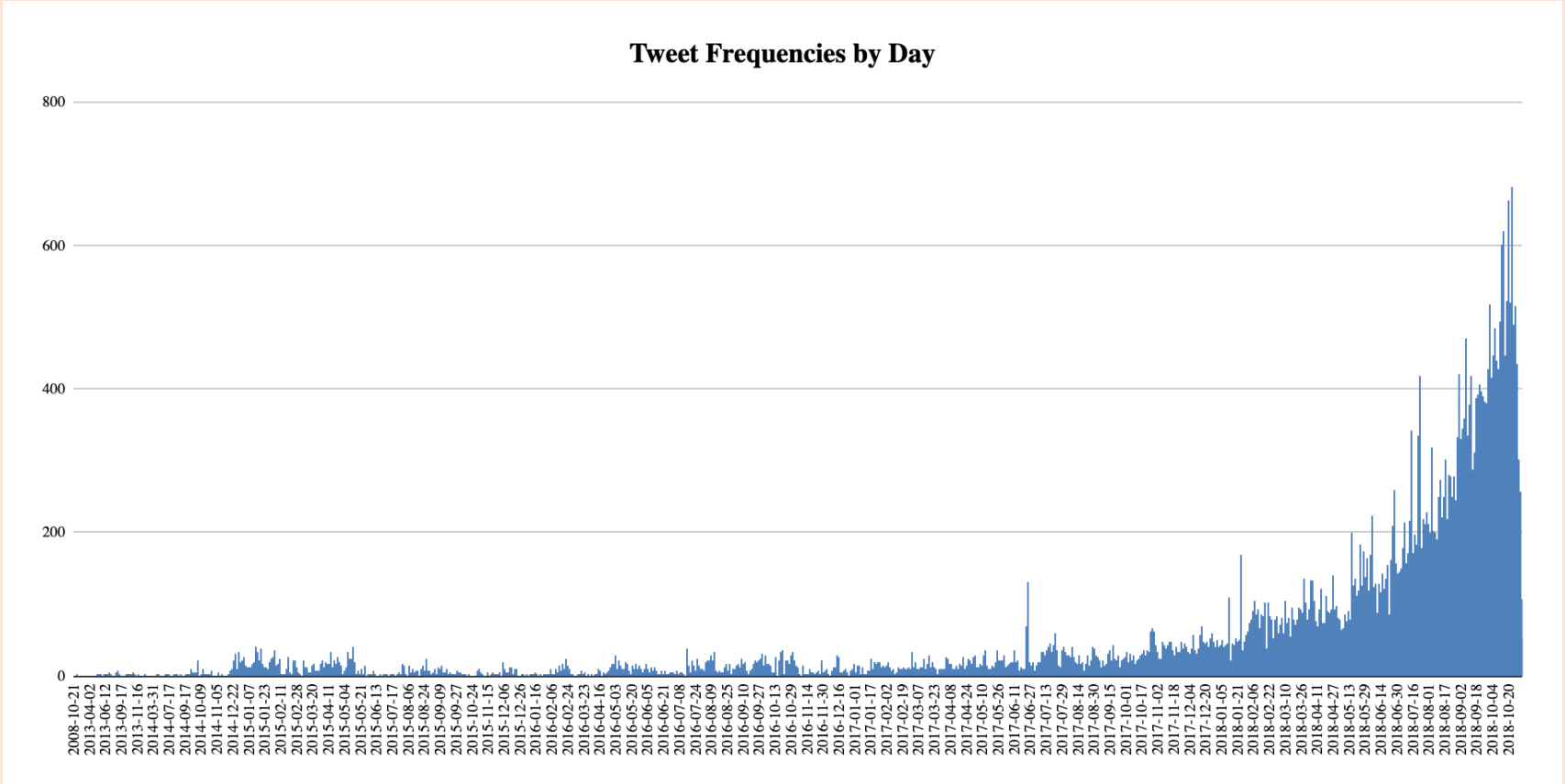


Table 6: Social Media Platforms by Frequencies

Platform	Freq
Instagram	703
YouTube	567
Facebook	312
Periscope	27
Swarmapp	7