



INDIANA UNIVERSITY
**OBSERVATORY ON SOCIAL
MEDIA**

**Analysis of Twitter accounts created around
the invasion of Ukraine**

OSoMe White Paper, 4 May 2022

Introduction

Russia launched a full-scale military invasion of Ukraine on February 24, 2022. During the early weeks of the invasion it became clear that the war was also fought in the arena of public opinion, around the world. In our previous work¹ we reported on a sharp increase in the number of new accounts created in the first days after the invasion, and on multiple groups of accounts sharing suspiciously similar messages. We did not find evidence of substantial interference by pro-Russian actors. This may be due to Twitter's ban of Russian state news outlets shortly after the invasion. Concerns linger about the effective presence of Russian propaganda on Twitter, and whether it is playing a role in influencing public opinion.

In this analysis, we focus on accounts created during the first week of the Russian invasion, when new account creation was at its peak. We are motivated by the hypothesis that newer accounts are more likely to be inauthentic. For instance, these new accounts could include automated and sock-puppet accounts put in place to coordinate campaigns and manipulate online conversations. An alternative explanation for the spike in new accounts could be that genuine social media users created Twitter accounts to join public discourse around the invasion. To explore these questions, we leverage a dataset of 218 M tweets collected between Feb 1st and April 14th 2022, which match search terms compiled in a list of almost 40 English, German, Russian, and Ukrainian keywords relevant to the invasion. Preliminary analysis of these data do not demonstrate evidence of large-scale Russian propaganda tweets generated by the large group of new users.

Preliminary Findings

We found around 1M new accounts were created and posted about Ukraine during the time period studied. As shown in Figure 1, we notice around 320K new accounts created in the 24 days before the invasion on February 24th, followed by a dramatic spike during the early days of the invasion. Then, we observe a decreasing trend toward the end of the period of observation. Our data alone do not allow us to shed light on the reasons behind

¹ OSoMe White Paper (2022). *Suspicious Twitter Activity around the Russian Invasion of Ukraine*. <https://osome.iu.edu/research/blog/suspicious-twitter-activity-around-the-russian-invasion-of-ukraine>

this spike and the following decrease. The initial increase might be explained by several factors including a sudden growth of online conversations around the war, or coordinated campaigns from inauthentic accounts¹. The following decrease could be due to a combination of Russia's ban on Twitter (March 4, 2022), Twitter's more aggressive platform moderation to counter malicious activity or a decline in public interest.

Figure 1



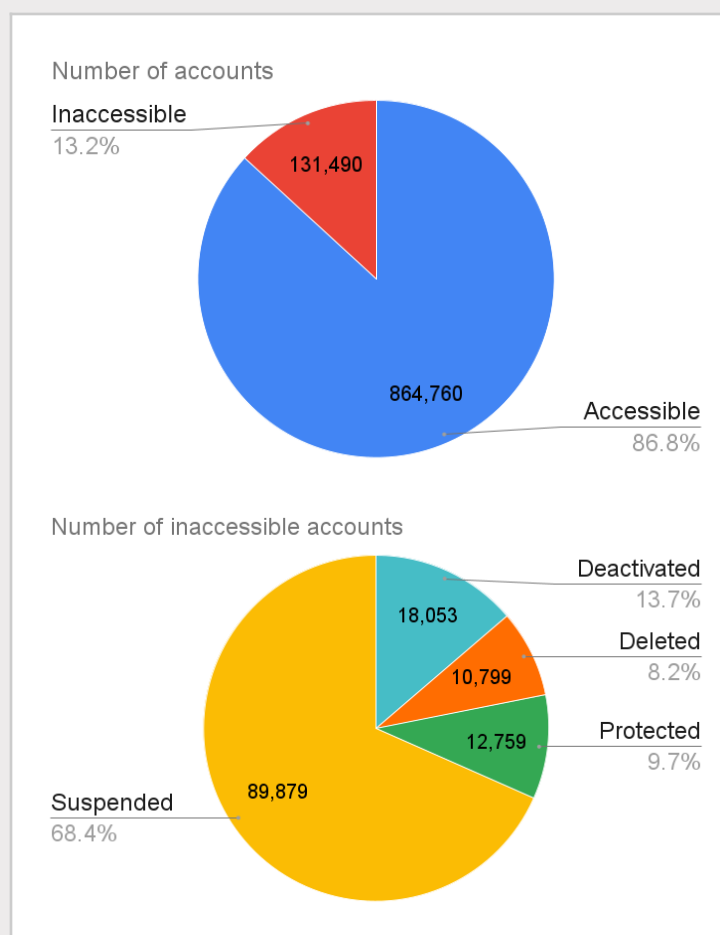
One question is whether new accounts created around the invasion were part of a Russian propaganda campaign. We looked at the most popular newly-created accounts according to the number of retweets. A manual inspection of the top 100 accounts revealed many benign or genuine accounts like public political figures (including German Chancellor Olaf Scholz and many Ukrainian MPs). We also noticed a few accounts associated with promoting Non Fungible Tokens (NFT) or cryptocurrencies, which most likely attempted to hijack public discourse for financial gain. Several accounts aggregate war reports and open source intelligence, posting content that is often unverified. The content from 12 popular accounts is suspicious as they were later suspended by Twitter. The top 100 accounts were responsible for approximately 50% of all retweets of new users in our data, leaving the

other half of the content unexamined by this approach. We therefore pursued a broader analysis of the retweets.

Inaccessible accounts

Around 13% of the accounts created between February 1st and April 14th were no longer accessible by April 15th. Twitter's terms of service do not allow us to investigate the content of messages by these accounts. However, Twitter provides information as to why these accounts are no longer available.² These include both accounts that were deactivated or protected by the owner, and those suspended or deleted by Twitter for violating the platform's terms. We report in Figure 2 the statistics for the approximately 1M new accounts we studied.

Figure 2



² Twitter Developer Documentation. *Batch Compliance*. (2022). <https://developer.twitter.com/en/docs/twitter-api/compliance/batch-compliance/introduction>

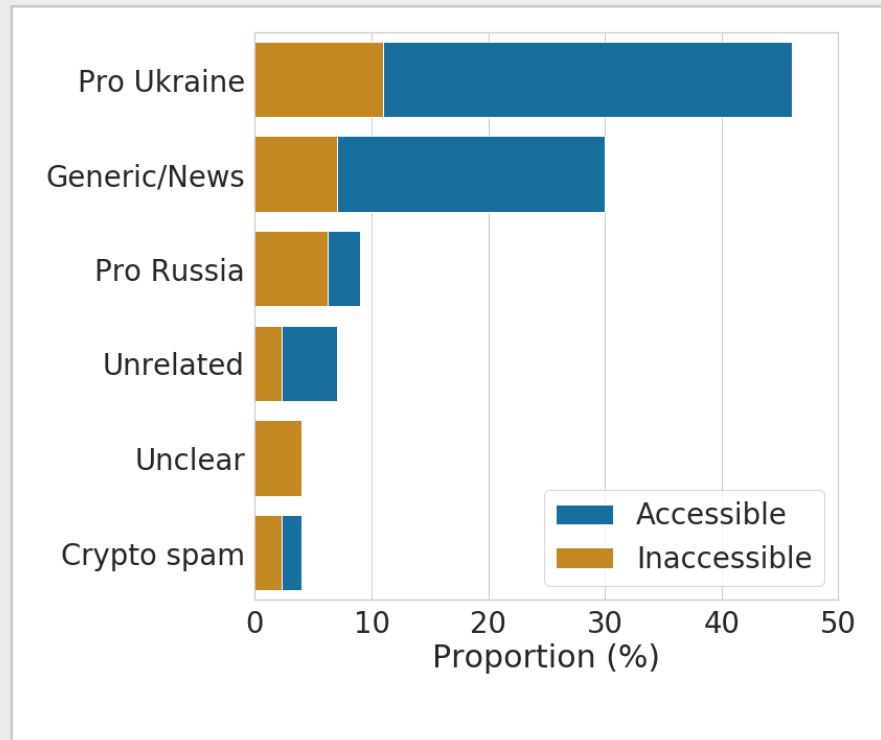
Content posted by new accounts

Focused on accounts created on the first day of the invasion (February 24th), we did a preliminary analysis of message content. Specifically, we used a random sample of 100 tweets and retweets posted by the group of new users between February 24th and March 3rd. We classified the tweets into six categories:

Category	Types of tweet
Pro Ukraine	Explicitly supporting Ukraine, or attacking Vladimir Putin in a personal or abusive way, or portraying Russian actions as immoral
Pro Russia	Critical of NATO or the Ukrainian government, blaming them for the war, or supportive of Russia
Generic/News	Including news reports or discussing the war from a general or neutral perspective. This also included tweets that were critical of local politicians for inconsistent positions about the war.
Crypto spam	Promotion of NFTs and cryptocurrencies
Unrelated	Not directly related to the ongoing war
Unclear	Not enough information to make a determination

Figure 3 shows the proportion of sampled messages in each category, highlighting those that were inaccessible. We see that pro-Ukraine messages (approximately 46%) are much more prevalent than pro-Russia ones (around 9%). Messages in favor of Russia are also less prevalent than the Generic/News posts, which were either related to the war but without a specific stance or simply sharing related news (approximately 30%). The number of posts that are not directly related to the war (unrelated, unclear, and crypto spam) account for around 15% of all messages. We note that two thirds of the pro-Russia messages were inaccessible by April 15th. As a robustness check, we carried out the same analysis but sampling only from the tweets originally posted by the new users and ignoring any retweets, and we observed similar results.

Figure 3



In summary, our findings indicate that while the new accounts created around the invasion look suspicious, a large amount of the content they post was benign or genuine. We did not find evidence of a substantial Russian incursion into the Twittersphere.