Shadow-promotion: TikTok's algorithmic recommendation of banned content in Russia

Why is content that is supposed to have been banned since the start of the Ukraine-Russia war instead being promoted?

August 10 2022

reports@tracking.exposed

Foreword

Tracking Exposed has been investigating social media platforms' algorithms and their impact on society since 2016. This report is the third investigation into TikTok's content restrictions in Russia since the Ukraine-Russia war began, following on from reports released in **March** and **April** 2022. Both reports uncovered important decisions that TikTok made in response to Russia's "fake news" law, which led to the proliferation of propaganda and pro-war content, and the removal of all international content for Russian users. These decisions were not clearly announced.

TikTok is well known for its content recommendation algorithm. Given its historic lack of transparency we were motivated to explore if – despite the supposed ban on new and international content - such content was still algorithmically recommended in Russia. It is, via a new phenomenon we've called "**shadow promotion**," detailed in our **Findings section**.

As one of the the last international social platforms in Russia it is of the utmost importance that TikTok is transparent about what content is shown to Russians. This third report finds that - yet again - TikTok is failing to announce important policy decisions, this time in relation to algorithmically-recommended content. It also falls woefully short of the transparency standards that will soon apply to all big tech platforms in Europe as part of the Digital Services Act, despite its **recent attempts**.

If TikTok cannot be transparent then more researchers and journalists must learn how to scrutinize the company effectively. TikTok has shown it responds to public pressure and high profile press scrutiny. Our open access tools are available free of charge, and we invite collaborators to join us.

Report authored by:
Salvatore Romano, Giulia Giorgi, Ilir Rama,
Marc Faddoul, Alessandro Polidoro, Natalie Kerby, Justin Yeung.

~ Tracking Exposed

Table of contents

Timeline

February 24	Russia invades Ukraine
February 28	Tracking Exposed starts a systematic observation of TikTok in Russia
March 4	Russia announces "fake news" law, which makes spreading "fake" news about the Russian army a crime with a maximum 15 year prison sentence.
March 6	TikTok updates its policy and announces it will ban new content uploads in Russia, in response to the "fake news" law
March 15	Tracking Exposed releases: "Tracking Exposed Special Report: TikTok Content Restriction in Russia", showing that TikTok also removed all international content for Russian users, without announcing it - an estimated 95% of what was previously available.
April 13	Tracking Exposed releases: "Tracking Exposed Special Report:Content Restrictions on TikTok in Russia following the Ukrainian War", showing that: ● New uploads are not actually banned on the desktop app ● Despite the upload ban announced, there is a surge of pro-war content on TikTok in Russia. ● Upload ban announced on March 6 is finally implemented properly on March 26, leaving users with a stagnant, pro-war saturated feed.
June 30	TikTok publishes a Community Guidelines Enforcement Report (Q1) clarifying that "Content posted by accounts based outside of Russia is not currently available for distribution in Russia", as previously highlighted in our report.
July 5	The European Union approved the Digital Service Act, setting a new standard for content moderation and transparency reports.
August 10	Tracking Exposed releases this report: "Shadow-promotion: TikTok's algorithmic recommendation of banned content in Russia" revealing that supposedly banned content is in fact being promoted in the For You page.

Key Findings

- **TikTok has started "shadow-promoting" content to users in Russia - promoting content that's supposed to be banned.** According to TikTok's own policy updated June 30, new content and international content is not available to domestic users inside Russia. However, we found state controlled media, political and non-political content being promoted to Russian-based users, via the algorithmically-recommended For You page (FYP), even though it does not appear on the profiles of the users who posted it.

    "Shadow-promotion" is a new term we have coined to describe this previously unobserved phenomenon of algorithmic promotion of content that is supposedly banned on a platform.

- **Some accounts are unaffected by the content ban**. We found verified Russia-based accounts that have uploaded new content at the time of publishing, despite the ban, and these new videos are accessible to Russian users. Additionally, this content is available to users outside Russia.

- **International political content is back on TikTok in Russia.** Without following any accounts, the standard content being algorithmically recommended is mostly Russia-based entertainment and often shows Russian accounts despite the ban. Political content is recommended only if a user starts to follow political accounts (and perhaps if they were already following too). Since international content is available to Russia-based users as described, this means political content is now available to some users via the For You page.

- We believe this change to make international and new content available again solely via algorithmically recommendations happened between May and July 2022. This change has not been announced by TikTok.

See more in the full **Findings**.

Introduction

As one of the last international social platforms in Russia it is of the utmost importance that TikTok is transparent about what content is shown to Russians. It is crucial to understand how the company distributes content in Russia, as it can both provide an international perspective on the war that Russian state-controlled media is not showing Russians, and its prominence raises the possibility of manipulation from propagandists that deserves scrutiny.

In **our first report** into content restrictions in Russia Tracking Exposed uncovered that TikTok had restricted Russian users from accessing content from outside Russia without announcing it - equating to banning 95% of what was previously available to Russians.

In a **follow up analysis**, we demonstrated how its ban on new uploads was inconsistent for a period in March 2022, allowing propaganda and pro-war content to proliferate. Since new uploads were banned at the same time, it effectively locked Russian TikTok users in a bubble of stagnant pro-war content. These reports were covered by NPR, the Washington Post, Le Monde, the Guardian Wired, Techcrunch, and more. Additionally, our report sparked a letter to the US congress, demanding that TikTok US CEO Mr. Shou Zi Chew explain its policies. TikTok has not yet responded, as far as we're aware.

On June 30, 2022, TikTok released its quarterly **Community Guidelines Enforcement Report**, which explains how the company has moderated content and ads up to 31 March, covering only the outbreak of the Ukraine war.

TikTok's report states that, in response to Russia's 'fake news' law, TikTok has suspended livestreaming and new content in Russia since March 6, 2022: "**content posted by accounts based outside of Russia is not currently available for distribution in Russia**." Our second report, published in April, before their report of June 30, demonstrated the ways in which this is not true.

This third report shows new ways that content is still being posted, despite the ban on new and international content that TikTok says is still in place, and confirms that the findings of the previous two reports are still valid.

The European Union recently passed the Digital Services Act, and is working on the AI Act, both of which require transparency about the way a platform handles content and its distribution, as well as reporting on the potential negative effects of algorithms. Among the requirements of the Digital Services Act is a yearly transparency report regarding content moderation practices.

Our scrutiny of TikTok in 2022 shows that we need careful implementation of this regulation designed to bring transparency to platforms. There is a difference between how a platform says its content moderation or algorithms work, and what is actually happening. This is why independent investigations, like this one, are vital.

Since we had not yet investigated algorithmically recommended content, that is the subject of this investigation. We expected to find that content was being algorithmically served in Russia despite the bans, given our previous reports, but did not expect to find an entirely new category of algorithmic content distribution.

Methodology

Tracking Exposed Research Tools

To conduct this research, we accessed TikTok using our custom free software ([Guardoni](#)), which automates access of TikTok's content in Russia using both Russian Virtual Private Networks (VPNs) and Residential Internet Protocol (IP) addresses.

Tracking Exposed's browser extension ([tkTrex](#)) scrapes the data from automated browsers in order to investigate TikTok, since Tiktok does not provide data access through APIs for transparency and public scrutiny [yet](#).

The Tracking Exposed data collection pipeline emulates real users, allowing us and other researchers to independently collect data to show how the platform behaves in Russia, and what content is available. Forensic evidence is collected for every experiment, including the responses of our requests to TikTok's servers.

Tracking Exposed's technology can retrieve the content suggested on the TikTok's For You Page in every country in the world simultaneously, enabling cross-country comparison. It can also analyze which content is promoted or demoted on social media enabling cross-platforms research.

All Tracking Exposed tools are publicly available and released under an open access and free-software license, so they can be used and reviewed by anyone.

The Experiments

We carried out two experiments to investigate how TikTok manages the accessibility of content in Russia.

The first experiment replicated our previous investigation methodologies, aiming to see if the findings were still valid. The second experiment looked at algorithmic-served content on the For You Page (FYP).

Experiment 1: Content upload and availability

Following the methodology from our **[previous report](#)**, we created a Russian TikTok profile and tried to upload a video while using a Russian IP to simulate a Russian-based user. Then, we tried to upload the same video from the same account but using a non-Russian IP.

Then, we tried to access the video from different locations (Russia and Italy) using different access points, for example accessing the uploader's profile through direct link, querying for keyword and/or hashtag.

Experiment 2: Accessibility of new content through Russia-based and Italy-based accounts

This second experiment explored the availability of supposedly banned content for Russian users. We followed accounts with supposedly banned content, then we looked at the For You Page afterwards to check if content from the account we'd just followed was algorithmically served. We tested three account types:

1. A Russian media account, e.g.. *Sputnikvideo*, which has been labeled by TikTok as 'Russia state-controlled media';
2. A non-Russian media account, e.g. the official TikTok profile of BBC;
3. A non-political account, e.g. the official TikTok account of FCDynamo, the Ukrainian professional football club based in Kyiv.

For all the three accounts, we followed the same protocol. We first checked their accessibility in Russia, in a EU-country (Italy), and in a non-EU country (U.S.) through non-logged browsers.

Findings

1. **TikTok is "shadow-promoting" content to users in Russia**

Supposedly banned content is now being promoted via TikTok's algorithmic infrastructure: the case of *Sputnikvideo, the BBC* and *FC Dynamo*.

According to TikTok's own policy, international content from accounts based outside of Russia is not available to domestic users inside Russia, and it's not possible to upload new content. However, we found state controlled media, political and non-political content being promoted to Russian-based users, via the algorithmically-served For You page (FYP) - even though it does not appear on the profiles of the users who posted it.

"Shadow promotion" is a new term we have coined to describe this previously unobserved phenomenon of algorithmic promotion of content that is supposedly banned on a platform

We found examples of shadow promotion of new videos uploaded by Russian accounts as well as new and old content uploaded by non-Russian users.

 In our first test, we took a Russian political profile, *Sputnikvideo* and we followed it using one of our ad-hoc created Russian profiles connected from Russia through a VPN. We discovered that new videos are algorithmically distributed by TikTok. When accessing the For You Page, the first video that was recommended is a video published by *Sputnikvideo* on the 17th of May 2022, that is well after the implementation of the ban on March 26 (See Figure 1, below)
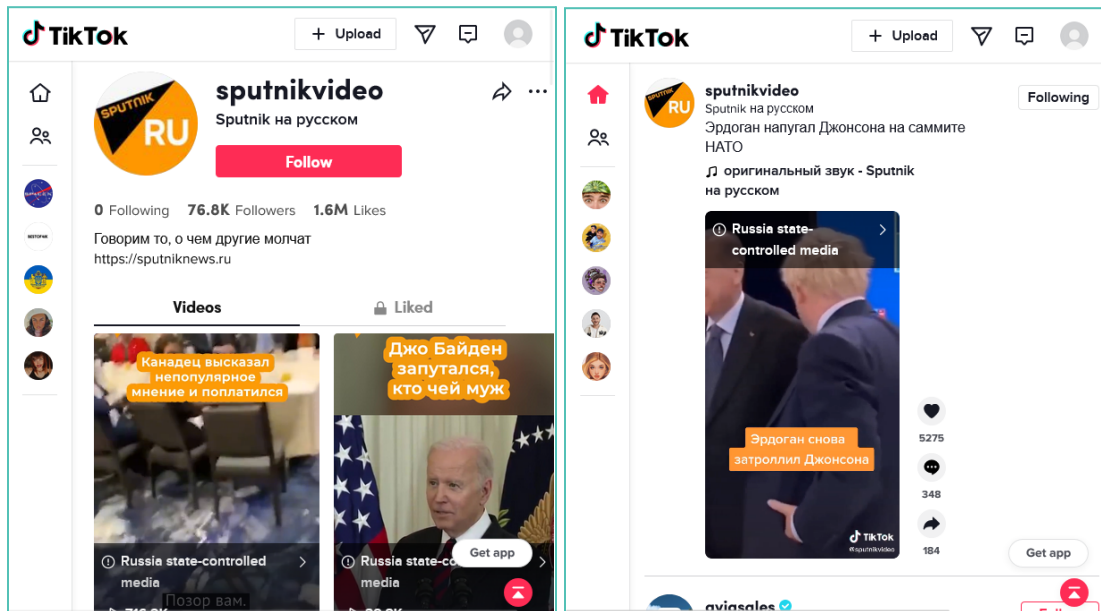
Figure 1. One of our puppet Russian-based accounts followed Sputnikvideos on TikTok Russia, after checking that no videos were visible on Sputnikvideo's profile (on the left). Moments later, the FYP of the same puppet account was shown a video published on the 17th of May 2022, well after the ban (on the right). Both pages accessed at the same time on the 25th of July.

The same situation was observed for non-Russian content. We followed the official TikTok profile of the **BBC**. The BBC's profile accessed in Russia shows no videos, as seen in Figure 2, but as soon as it was followed, the FYP of our Russian account recommended a **video** posted by BBC's profile in May.
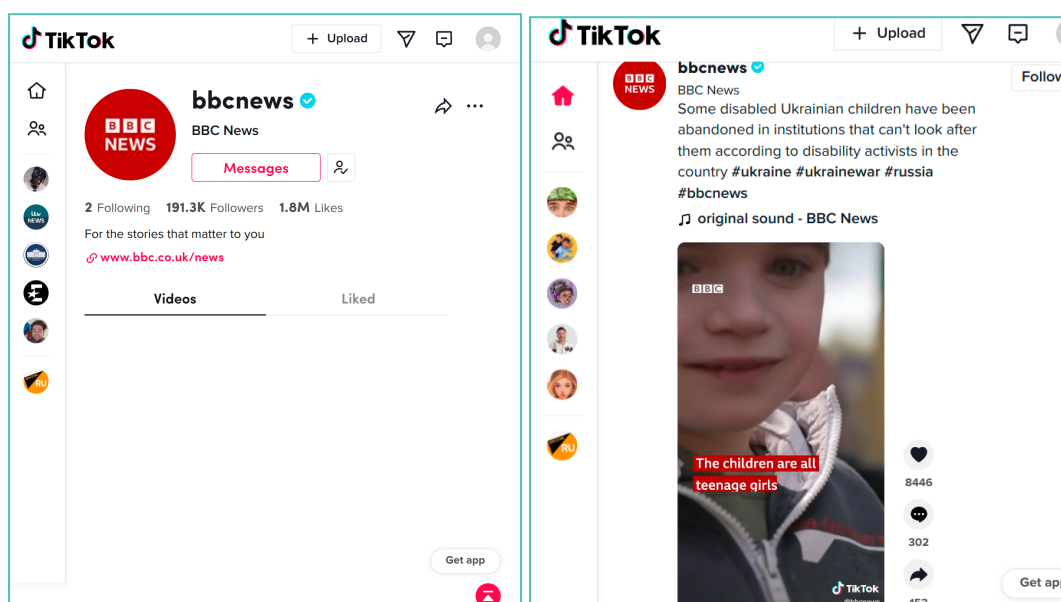
Figure 2 . One of our puppet Russian-based accounts followed BBC on TikTok Russia, after checking that no videos were visible on the news media's profile (on the left). Moments later, the FYP of the same puppet account was shown a video of BBC published May 2022 (on the right). Both pages accessed at the same time on the 29th of July.

Finally, we found similar evidence with non-political (and non-Russian) content. We followed the TikTok account of FC Dynamo, the Ukrainian professional football club based in Kyiv. Although no videos are visible on the profile page, the FYP of our puppet Russian profile recommends videos published by FC Dynamo (see Figure 3).

Content published outside Russia is not actually banned as TikTok states, and can be easily accessed through the For You Page after following the account. This demonstrates there is actually no difference between Russian and non-Russian profiles: once followed, the For You Page makes new videos published by Russian accounts (like in the case of *Sputnikvideo*) and non-Russian content equally available to users in Russia. There seems to be no difference on the type of content either, as both political and non-political videos are recommended.

Following other users is a key behavior on TikTok so this means the ban that TikTok said is still in place in its June 30 transparency report now does not exist in practice. A typical user can now see new and old, domestic and international content via the For You page. This same content is however unavailable on the profile page.

Taken together, these findings show that the content restriction introduced by TikTok in Russia is implemented inconsistently at best, and at worst a way to quietly get around the ban it implemented in response to the Russian "fake news" law. Only TikTok can explain why this is happening.
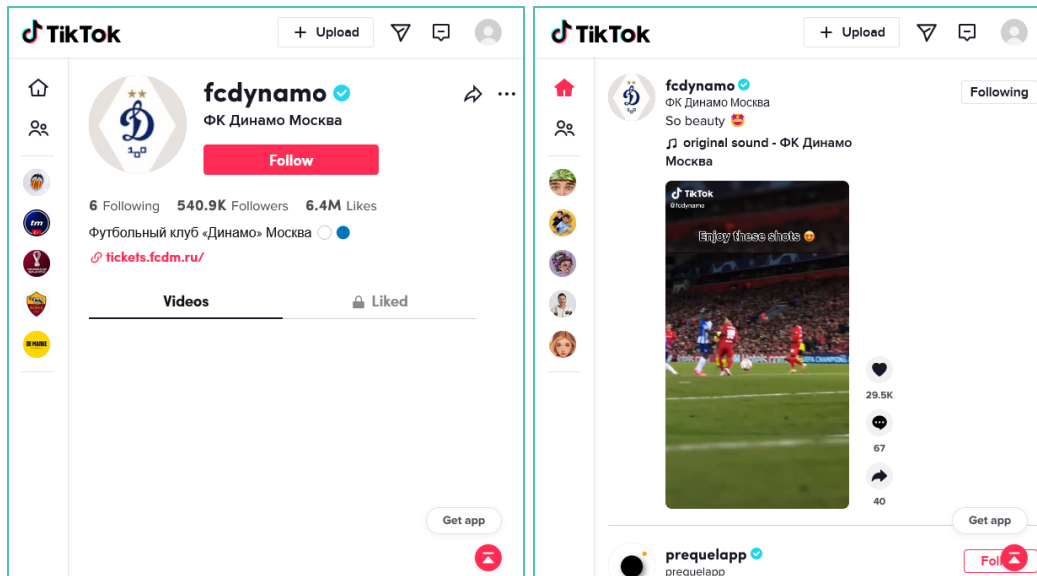

Figure 3. One of our puppet Russian-based accounts followed FC Dynamo on TikTok Russia, after checking that no videos were visible on the profile (on the left). Moments later, the FYP of the same puppet account was shown a video of FC Dynamo (on the right). Both pages accessed at the same time on the 25th of July

2. Some verified accounts escape the ban

Some accounts are unaffected by the content ban. Some verified Russia-based accounts have uploaded new content as recently as today despite the ban, and these new videos are accessible to Russian users. Additionally, this content is available to users outside Russia.

We found that some Russian verified accounts have continued uploading new content despite the ban, and that these new videos are accessible to Russian users.

These accounts were repeatedly recommended to our clean Russian profiles on the For You page.

One such example is represented by **Kinopoisk**, a Russian online database of information related to films: by accessing Kinopoisk's profile from Russia, Russian users are presented with videos uploaded after the ban (the latest uploaded just a few hours earlier). The comparison between the profile accessed from Russia and from Italy (through direct link) shows no difference (Figure 3).
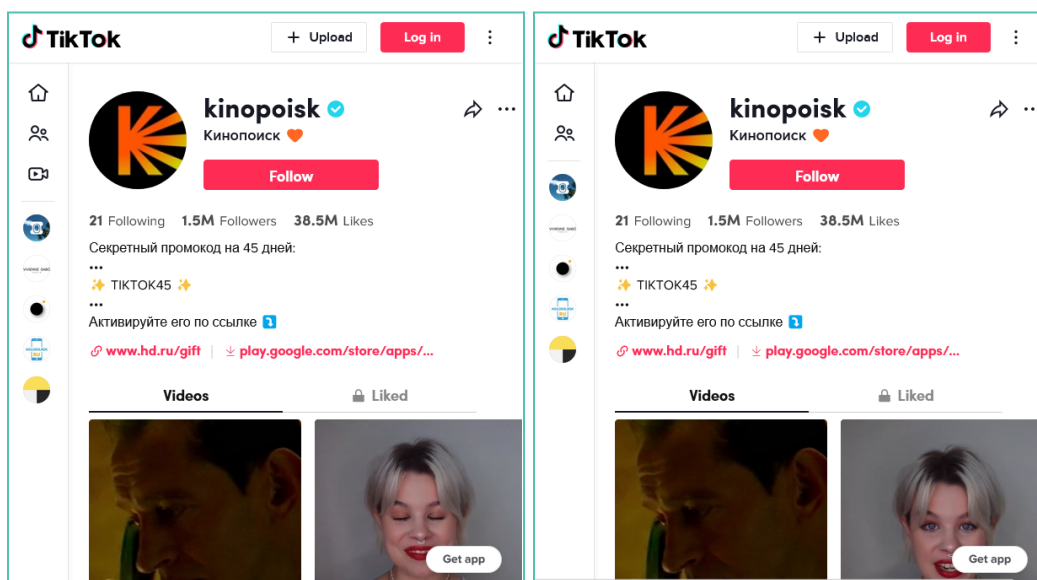

Figure 3. The same profile (Kinopisk) accessed by a Russian (left) and an Italian (right) ad-hoc created account, both showing videos, the latest was published today (25th July)

Other profiles showing the same behavior include: **Yandex Music**, **Premier**, **Letoile Official**, **Hice Bank**, **Prequelapp**, **Vprokru**, **Beautybomb.rus**, **Aviasales** and **Yota.ru**.

3. New and international content is still not available via profile pages.

Our experiments in this report confirm that some parts of TikTok's ban on new content in Russia is still operational: as confirmed in our **previous report**, most Russian users cannot upload content unless they use a non-Russian IP through a VPN service.

Content uploaded using this method does not appear on the user's profile page in Russia. This means that when a user from Russia looks at the profile using a Russian account, videos uploaded via VPNs set to a foreign country are not visible. The same videos are instead visible to users outside of Russia, or for Russian users using a VPN.

This confirms that what we discovered in April is still true today, which was useful to make sure that no substantial changes were implemented since our last report.

Discussion

Shadow-Promotion

"Shadow-promotion" is a new term we have coined to describe what we discovered: a previously unobserved phenomenon of algorithmic promotion of content that is supposedly banned on a platform. It draws on existing term in content policy, shadow-banning.

The concept of **shadow-banning** is widely used by influencers and content creators to describe when their content is not performing well and has been (or seems to have been) removed from search results. They speculate that they did something to "upset" the algorithm, and are being punished by being banished to the shadows of the platform.

This concept has also been explored in academic **literature**, including by **Tracking Exposed**. With regards to Instagram, scholar Carolina Are has **defined it** as a "cross-platform moderation technique (...) which prevents shadow-banned accounts' usernames from appearing at search". This technique **is used by commercial platforms** to demote a content that "comes close to— but does not quite cross the line of—violating our Community Guidelines." It is, however, unclear if platforms use these techniques to also secretly hide content that they don't want to circulate too much for other political reasons.

However, what we observed in this investigation is that TikTok seems to instead use '**shadow-promotion,**" where content seems to be blocked and is therefore absent on an individual user's profile page, but continues to be distributed by the algorithm to users' For You page. This is the main source of content distribution on TikTok.

Why this is happening is unclear. TikTok could be aiming to remain operational in Russia by appearing to comply with local laws on the surface, while trying to make the platform attractive for the Russian users with recently updated content by giving some top accounts the ability to post despite the ban. Alternatively, the ability to follow and get supposedly banned content via algorithmic recommendation could just be a technical error, where algorithmic recommendations might not have been updated in line with other recent geographical and diachronic restrictions TikTok has implemented in Russia since the war in Ukraine started.

Both cases require algorithmic audits to discover how and why this is happening. There is no evidence that TikTok is leaving a loophole for Russia to target Russian TikTok users with state propaganda, and there is no evidence that they are leaving a loophole for the international community to reach Russian users, though both are currently possible as our findings show. TikTok

should clarify its position and transparently state how the platform is making content available - algorithmically or otherwise - to users in Russia during the Ukraine-Russia war.

Community Guidelines Enforcement Report

TikTok has started to release Community Guidelines Enforcement Reports on a regular basis, in an effort to explain how it is managing its content moderation. These documents, commonly known as "transparency reports", are becoming more common and we expect even more in the coming years thanks to the new Digital Service Act recently approved by the European Union.

In the text of the Digital Service Act, article 13 will require big online platforms to "publish, at least once a year, clear, easily comprehensible and detailed reports on any content moderation they engaged in during the relevant period". This law then further details some elements that will be necessary to include in such a report.

Though TikTok's operations in Russia fall outside of the scope of EU legislation, as standards emerge for platform transparency it will raise big questions if TikTok continues to shun transparency in such a high profile region. We find its current transparency efforts in the Community Guidelines Enforcement Report are woefully lacking.

Firstly, TikTok has split its report into separate documents, each covering a different time:

- Community Guidelines Enforcement Report Government Removal Requests,
- Intellectual Property Removal Requests
- Information Requests.

This makes it quite difficult for an average user to have a "clear, easily comprehensible" idea of the content moderation performed by TikTok.

TikTok has also been very vague in describing "increased investments with [their] fact-checking partners" that still does not provide any meaningful insight on the extent of these investments, the size of the workforce involved and the criteria or the methodology used in the process.

On the relationship between TikTok and the several governments it is worth mentioning that the platform has committed to explicitly label content deemed to be coming from state-controlled media in order to give users a better understanding of the origin of certain kinds of information. However, on the other hand we have learned in the most recent Government Removal Requests (still only as of 2021) that state-issued removal requests have more than quadrupled compared to the previous year. This startling insight immediately raises the fear of increasing state censorship online, which TikTok does not elaborate on further.

We welcome TikTok's move towards transparency, but it is woefully inadequate. Two things are clear: we need more powerful public scrutiny over the conduct of this platform, and we need new solutions capable of ensuring algorithmic accountability. Any other alternatives are destined to be filled with opaque moderation strategies and unpredictable behaviors from these online giants whose impact on our lives grows stronger every day.

Algorithmic audit

By structuring its interface in a way where all videos are hidden on the profile page, TikTok attempts to reinforce the idea that the content is blocked. However, the algorithm continues to pick up and distribute content to the FYP. This underlines the opaque nature of how platforms enact (or do not) regulations, and how auditing is still necessary to avoid simplistic understandings of algorithms, platforms, content, and how regulations are received and put into action in these contexts.

If TikTok cannot be transparent and until independent audits are mandated then more researchers and journalists must learn how to scrutinize the company effectively. TikTok has shown it responds to public pressure and high profile press scrutiny. Our open access tools are available free of charge, and we invite collaborators to join us.

Quotes

I have never seen a platform opaquely promoting content that it publicly said it had banned. Only TikTok can explain why the For You page is shadow-promoting content in Russia. Given how vital the flow of information is in times of war, it's way past time for TIkTok to explain what its policy on content in Russia is once and for all.

~ Salvatore Romano. Head of Research.

"The current level of public scrutiny over the conduct of big online platforms is not enough, we need better transparency reports as a solution for fostering algorithm accountability"

~ Alessandro Polidoro. Lawyer, Lead Attorney.

"While most of the public debate focuses on content moderation, it is the dynamics of algorithmic promotion and demotion which actually define what users can or can't see."

~ Marc Faddoul. co-director.

Conclusion

TikTok is well known for its content recommendation algorithm. Given its historic lack of transparency we were motivated to explore if - despite the supposed ban on new and international content - such content was still algorithmically recommended in Russia. To conduct this research, we accessed TikTok using our custom free software ([tkTrex](#) and [Guardoni](#)), which automates access of TikTok's content in Russia using both Russian Virtual Private Networks (VPNs) and Residential Internet Protocol (IP) addresses and collects the data shown while browsing.

We found that TikTok has started "shadow-promoting" content to users in Russia - promoting content that's supposed to be banned. "Shadow-promotion" is a new term we coined to describe this previously unobserved phenomenon of algorithmic promotion of content that is supposedly banned on a platform. Additionally, we found that some verified accounts are unaffected by the content ban, and international political content is back on TikTok in Russia. None of these changes, implemented sometime between May and July have been announced by TikTok. Why this is happening is unclear.

Our scrutiny of TikTok in 2022 shows that we need careful implementation of new regulations like the Digital Services act and the AI Act, designed to bring transparency to platforms. There is a difference between how a platform says their content moderation or algorithms work, and what is actually happening. This is why independent investigations, like this one, are vital.

About Tracking Exposed

Tracking Exposed is a European non-profit organization defending digital rights through algorithmic investigations.

For more than 6 years, its team has been pioneering new methodologies to scrutinize the most influential recommender systems, such as those of YouTube, Facebook, Amazon, PornHub and TikTok. The **code** is released as free software, enabling anyone to use, extend or review it.

Tracking Exposed's infrastructure and methodologies have been validated in several **peer-reviewed publications,** and the works of the team have received coverage on **major media outlets**. Some of its reports have been cited in a **United Nations report**, a house **testimony** and a **US Congress official letter** to YouTube's CEO and **one to TikTok**.

 Tracking Exposed is also developing **YouChoose.ai**, an alternative recommendation system for YouTube which empowers users and content creators.

Tracking Exposed was born in Italy and its legal nonprofit is registered in France. The organization is funded through various grants and foundations, including from NGI Atlantic, the Mozilla Foundation and **Reset.tech**.

Contact details: reports@tracking.exposed

This report is authored by:

Salvatore Romano, Giulia Giorgi, Ilir Rama,
Marc Faddoul, Alessandro Polidoro, Natalie Kerby, Justin Yeung

 ~ Tracking Exposed