THE WORLD ACCORDING TO TIKTOK: AN OBSERVATORY ON CROSS-NATIONAL CONTENT PRIORITIZATION AND PLATFORM-MEDIATED PROXIMITIES

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The present paper contributes to the field of critical platform studies by: a) showcasing a research tool which allows the research community to replicate our methodological framework; b) presenting the outcome of the analysis of global and geographical patterns of content promotion on TikTok; c) developing and operationalizing the notion of 'platform-mediated proximity,' which emerges from this type of data and analysis.

Cross-national analysis of TikTok content prioritization

TikTok's main access point to content is its For You Page (FYP), a continuous feed of content that is algorithmically curated by the platform's recommendation system (TikTok 2019). This recommendation system is based on a combination of factors, such as inferred user interests and interactions, video information, device and account settings, as well as, importantly here, the device's geographical location (TikTok 2019). Despite affording global connectivity beyond local and cultural barriers, indeed, platforms' ecosystem are highly reactive to local conditions and cultural boundaries (Rogers 2019). Furthermore, growing concerns are emerging around the rise of a 'splinternet,' where national borders are impressed over an infrastructure that used to hold a promise of universality (Lemley 2020). Governments, as well as private platforms, are nowadays intervening at legal, commercial, and infrastructural levels to re-instantiate control over information diffusion (Vendil Pallin 2017). Especially globally-operating private platforms

have been found to adhere to countries' local political pressures and national regulations (Biddile, Ribeiro & Dias 2020).

Given its centrality in the contemporary mediascape, TikTok's content moderation and promotion/demotion strategies are under scrutiny and at the center of controversies (Biddle, Ribeiro & Dias 2020). Additionally, little research has been conducted on how geography influences TikTok's content prioritization on a global scale. Monitoring and understanding how TikTok prioritizes content differently across the world is of paramount importance given its power over global information flows, and growing concerns associated with the platform's compliance with countries' censorship (Ryan, Fritz & Impiombato 2020). These trends emphasize the need to make data available about how TikTok's recommendation system works on a cross-national level. Through the development of tools such as the one that we present and showcase here, we want to ensure that researchers, journalists, and content creators have the access and resources to hold the platform accountable for its globally-disparate implementation of algorithms and content moderation strategies.

The tool

The TikTok Global Observatory is based on a continuously updated dataset, which consists of the first 8 videos scraped from the web-version of the FYP of a non-authenticated [TikTok](#) user. The data collection is replicated across 197 countries and territories up to 4 times per day. Metrics made available include country, description, video ID, authors/account, author ID, views, likes, hashtags, shares, upload date, date of extraction, and more. This data collection relies on a Residential IPs Network that allows us to programmatically access TikTok from each of the listed countries. With this tool, we aim to make cross-national comparisons on TikTok more accessible and contribute to easing the process of identifying how TikTok distributes content on the FYP. The tool's main feature is a geographic map of the world that allows users to mouse-over territories and get a preview of the most recommended videos, hashtags, filters, or audio that are being pushed within an adjustable time frame. A search bar allows the user to query for specific authors, songs, filters, hashtags, labels, or words in the description. This data is then exportable as CSV files, including different types of relational datasets for network analysis. Overall, it allows users to view, filter, sort, and extrapolate FYP data as prioritized in different countries and territories, making it a unique access point for researchers, journalists, and content creators who aim to investigate trends, content moderation, and content promotion from a cross-national perspective.

Whereas focusing on homepages served to unauthenticated users does not enable the the study of personalization dynamics, it allows us to infer how TikTok tailors content trends and prioritization logic to the geographical and political context of respective countries or territories. Moreover, the FYP displayed to a non-logged-in user represents the platform's "show window" designed to attract newcomers all over the world.

Preliminary analysis

The tool is illustrated in this paper with an analysis of emerging patterns, trends, and thematic clusters when (non-authenticated) users access TikTok from different countries. our questions are: What kinds of patterns emerge by comparing content pushed by TikTok across different regions of the world? What platform-mediated cross-national boundaries and proximities can we map out? In other words: What does the world look like according to TikTok? We focus on a dataset collected between June 2023 and September 2023, consisting of roughly 700.000 recommended videos, corresponding to around 100.000 unique ones.

In order to achieve a complex representational overview of 'the world according to TikTok', we use a combination of exploratory data analysis and network analysis / visualization. Our analysis focuses on global trends and distributions through the lens of platform-mediated proximity. We consider it platform-mediated proximity when countries cluster together based on shared content. Using network analysis as an entry point for examining proximity, we first look to general trends in the data, such as examining outliers and their likely cause. Moreover, we describe in detail some selected cases of cross-country content circulation. We then reconstruct the way in which countries are structurally clustered together through patterns of co-recommendation – i.e., mapping and interpreting the type of proximity among countries through a proximity index, which is calculated by dividing the amount of shared videos between two countries by the total amount of recommended videos each country receives. The proximity index allows for more precision in understanding the degree to which two countries share content.

Preliminary results obtained on a subset of the data (referring to August 20-September 9, 2023) suggest that TikTok's cross-national content prioritization patterns generate forms of platform-mediated proximities that, in most cases, follow regulatory lines. This is particularly strong in the case of countries within the European Union and Schengen area, who show tight clustering likely because they fall under the jurisdiction of the GDPR. In some cases, we see clustering following legacy colonial relationships, such as the United States and its territories Puerto Rico, Guam, and the U.S. Virgin Islands sharing a high number of videos despite being geographically disperse. Moreover, some countries (namely: United States, Russia and Senegal) are largely disconnected from any other countries, signaling an emerging 'national TikTok-sphere' likely due to cases of country-level censorship.

Our mission is to give access to the largest data collection currently available on TikTok, which allows to explore and understand cross national differences in content prioritization patterns. Independent research is essential in order to promote transparency of TikTok's recommendation system, and hold the platform accountable for its content prioritization and moderation strategies. This paper presents a tool that allows for this type of research, and showcases possible directions of analysis among the many that, hopefully, will contribute to understand how a global platform mediates information flows in different areas of the world.

References

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