



Selected Papers of #AoIR2023:
The 24th Annual Conference of the
Association of Internet Researchers
Philadelphia, PA, USA / 18-21 Oct 2023

THE POLITICS AND EVOLUTION OF TIKTOK AS PLATFORM TOOL

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Introduction

TikTok's unprecedented rise challenges scholarly assumptions about cultural creativity (Kaye et al., 2022). By September 2021, in a market dominated by incumbent social media platform companies, the short-form video platform accumulated over one billion monthly active users globally (Silberling, 2021). We argue that critical to the platform's success is its emphasis on *platform tools*: the software-based instruments used to make cultural content for social media platforms—e.g., visual effects, audio libraries, and application programming interfaces (APIs). The predecessors to platform tools (i.e., software tools) provided similar functionality to platform tools, and their study was at the forefront of software studies in the early 2010s (Manovich, 2013; Salter & Murray, 2014). Both are widely used for cultural production today, but software tools differ in that their ownership remained independent of distribution platforms and monetization infrastructures.

In this paper we further tease out the distinction between software tools and TikTok's platform tools to illustrate historical continuities and differentiate between tools in the pre- and current platform age. 'Platform tools' (Foxman, 2019) are provided by transnational conglomerates that follow data-oriented business models and are shaped by, and shape 'platform capitalism' (Srnicek, 2017). These tools contribute, we argue, to increased platform dependence and the further 'platformization of cultural production' or the 'extension of the economic, governmental, and infrastructural frameworks of platforms into and beyond the cultural industries' (Poell et al., 2021, p. 6). Accordingly, we suggest that platform tools form a productive empirical entry point for understanding this process. Therefore, we conducted an exploratory, political economic analysis of TikTok's tools. As they constantly evolve, the relationship between the platform owner and content creators do so as well, which raises questions as to how platforms organize digital labour and exercise power over cultural producers.

Suggested Citation (APA): Mahetaji, K & Nieborg, D.B. (2023, October). *The politics and evolution of TikTok as platform tool*. Paper presented at AoIR2023: The 24th Annual Conference of the Association of Internet Researchers. Philadelphia, PA, USA: AoIR. Retrieved from <http://spir.aoir.org>.

Platform Tools in Media Studies and Information Systems

Our empirical approach aligns with emerging tool-based studies that identify platform tools as a source of platform power and a mechanism through which platforms govern (Author). We consult two bodies of scholarship in particular: critical media studies and information systems studies.

Much of the governance-related work in media studies concentrates on human and algorithmic content moderation (Cunningham & Craig, 2019), privacy (Greene & Shilton, 2018), and creator responses to regulation (Duffy & Meisner, 2022). Governance focused research that is specific to TikTok is mainly focuses on the platform's For You algorithm (Zeng & Kaye, 2022), moderation policies (Are, 2022), and geopolitical tensions (Jia & Liang, 2021). Except for studies of 'game engine' software tools (Foxman, 2019; Nicoll & Keogh, 2019), media studies literature on platform tools is relatively scarce, albeit a few recent studies probing how APIs and software development kits (SDKs) steer platform governance and platform power (Helmond et al., 2019). Because media studies literature tends to lack theoretical specificity when it comes to platform tools it started to incorporate information systems literature. The so-called 'boundary resource' framework is used as it offers a clear typology for classifying and assessing the role of platform tools in platform owner/end-user relationships (Ghazawneh & Henfridsson, 2013). Such resources 'serve as the interface for the arm's length relationship between platform owner and application developer' (Ibid., p. 175). We build on this definition to include content creators and cultural production to examine how a platform owner (in our case ByteDance) uses tools to balance user creativity with the ability to control cultural production. By studying the evolution of TikTok's tools, we attempt to make this balancing act more explicit.

Platform Historiography: Methods for Periodizing Platform Tools

We start our historical survey with ByteDance's entry into the international market in September 2017 and end our analysis in April 2022. Because platform tools evolve over time, we draw on the method of 'platform historiography' (Helmond & van der Vlist, 2019) by collecting platform documentation: i.e., GitHub, Stack Overflow, PyPI, Rapid API, and news articles. During the period of study, we assessed (1) the types of platform tools available (sanctioned and unsanctioned by the company) and their specific affordances; (2) the social, political, and economic environment(s) and actor(s) that guide the introduction, modification, and deprecation of tools; and (3) the impact of platform tools on platformization and platform-dependent cultural production work. Then, we juxtaposed this assessment with three secondary timelines: The first maps the changes in platform features for end-users, while the second charts major financial decisions taken by ByteDance. The final timeline provides an overview of significant legal, geopolitical, and societal shifts. These secondary timelines demonstrate that the evolution of platform tools is always inherently contextual and deeply political.

By studying TikTok's platform tools, our paper uncovers how TikTok, since its inception, has worked toward expanding the breadth and depth of its in-app toolkit through mergers and acquisitions, and strategic partnerships. We discern three periods that break down into the formalization and professionalization phase (August 2017 to April 2020); the standardization phase (May 2020 to March 2021); and the platformization phase (April 2021 tot April 2022).

In 2017, TikTok started out by supplying an all-in-one set of tools for recording, editing, and distributing cultural content, resourcing tools from its Musical.ly acquisition. These tools were intended to be used by creators and were largely co-developed with third parties, from e-commerce companies to game developers. The apps' rapid ascendance, which marks the first phase, put cultural production directly under the regulatory gaze of ByteDance, transitioning away from cultural creation as 'informal economic activities' seen in the 'Web 2.0' era (Lobato & Thomas, 2015). As a result, the tools themselves focused on more polished content, as the platform partnered with incumbent editing software companies, for example introducing a software development kit (SDK) developed by Adobe in November 2019. Second, starting in May 2020, no major third-party tools were introduced, mainly revisions or additions to existing tools. At this stage, TikTok's tools afforded primarily standardized content in the video production process, which itself was also becoming more and more standardized. As users limited themselves to TikTok's tools only, the platform distributed content that became more readily recognized as TikTok clips. In April 2021, a new suite of third-party integrations became noticeable in the third phase we discerned. These integrations took the form of interactive effects and filters that enforce TikTok's governmental frameworks on industries outside the creator economy (e.g., e-commerce, gaming, etc.). At this point, ByteDance's governance frameworks became dictated by a series of new partner agreements, which all contributed to the process of platformization.

In sum, our periodization points to three major implications that stem from this growing toolkit of official tools (i.e., tools sanctioned by TikTok): (1) the formalization and professionalization of platform content, (2) the standardization of platform-dependent cultural production, and (3) the further platformization of TikTok's platform logic both within, as well as outside the cultural industries. While our research is primarily exploratory in nature, it is ultimately meant to serve as the impetus for further inquiries into how content creators grapple with the limitations of both platform-sanctioned but also the unsanctioned means of cultural production. As TikTok's competitors are widening their economic and infrastructural scope to mimic TikTok, we expect a further centralization of control over the tools that are at the heart of the creator economy.

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