NAVIGATING THE GRAY: THE ECONOMIC UNDERBELLY OF TIKTOK'S SIDE HUSTLES

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Introduction

Amid an era marked by information excess, the struggle for human attention has intensified, reshaping digital landscapes and elevating the value of engagement. Herbert Simon (1971) first conceptualized attention as a finite resource, later expanded by Michael Goldhaber (1997; 2006) into the "attention economy", where human focus is monetized and traded. Today, algorithms designed to capture and sustain engagement dominate platforms like TikTok, Instagram, and Facebook, altering content distribution and influencing user behavior. These systems not only serve commercial objectives but also shape public discourse, amplify polarizing narratives, and enable phenomena like Coordinated Inauthentic Behavior (CIB; Gleicher, 2018), a practice often driven by economic or ideological motives (van Dijck, 2013; Gillespie, 2018). Our study situates itself within this theoretical framework, examining how TikTok has become a gateway for capturing attention and redirecting it toward evolving narratives. We focus on the surge of scams tied to cryptocurrencies, particularly around significant events like the Bitcoin halving. The 2024 Bitcoin halving, marked by historical speculation and price volatility (Singla et al., 2023), offers a critical lens through which to study how content evolves to exploit economic anxieties and aspirations. Building on insights from a previous work (Terenzi, 2023) on coordinated Facebook scams, we extend our analysis to TikTok, investigating how visual content captivates audiences and transitions into more ideologically charged themes.

Background and research questions

Our approach is grounded in the concept of the attention economy, articulated by Herbert Simon (1971) and expanded by Goldhaber (1997; 2006). Attention, a finite and valuable resource, underpins power dynamics in modern media ecosystems. In today's digital marketplace, attention is not a passive consequence of media consumption but a transactional asset. Platforms capitalize on this resource by selling user attention to advertisers and optimizing algorithms for maximum engagement. Tim Wu (2016) argues that this economic model prioritizes content that triggers strong emotional responses,

often at the expense of content quality. Consequently, attention becomes a traded commodity, influencing how information circulates and is consumed.

Algorithms play a crucial role in this economy, acting as intermediaries that engineer user experiences. Social media platforms employ data-driven processes to organize users into engagement-based clusters, often creating echo chambers that perpetuate cycles of attention capture. These opaque, "black-box" systems (Gillespie, 2014; 2018) obscure the mechanisms by which content is prioritized, leading to a lack of user awareness about how their attention is manipulated. As algorithms optimize for engagement, they inadvertently shape public discourse, heightening concerns about ideological influence and content governance.

Our research addresses how TikTok content evolves to exploit economic and ideological incentives, focusing on two questions:

[RQ1] How do TikTok actors capitalize on moments of heightened interest, such as the Bitcoin halving, to capture and sustain attention?

[RQ2] What strategies are used to transition from economic content to ideologically driven narratives, and how do these tactics leverage TikTok's algorithmic features?

Methods

We adopted a mixed-methods approach, combining computational analysis with qualitative interpretation. Building on insights from prior research into scam content on social media, we identified recurring patterns of persuasive and manipulative strategies. Using Randomized Logistic Regression, we grouped keywords into three strategic categories: Offers and Deals, Scarcity, and Calls to Action. By constructing AND queries that combined these categories, we were able to isolate content exhibiting persuasive characteristics.

We collected 10,221 TikTok posts between 19 February and 19 June 2024, capturing the period around the Bitcoin halving on 19 April 2024. However, TikTok's inconsistent API necessitated scraping for additional data. We compiled a visual dataset of 5,540 video thumbnails from 60 high-impact accounts, selected using a statistical cutoff (mean + 2 standard deviations) to ensure relevance and activity. This account decay, with 10 accounts deleted by the time of collection, reflects the transient nature of problematic content on social media (Bastos, 2021).

Our analysis followed Arminio et al.'s (2024) four-stage framework: labeling, embedding, dimensionality reduction, and clustering. We generated descriptive labels for thumbnails using OpenAI's gpt-4o, ensuring connotative richness. These labels were converted into numerical vectors with OpenAI's text-embedding-3 model. We then applied Principal Component Analysis (PCA) to simplify the data while preserving variance, followed by Uniform Manifold Approximation and Projection (UMAP) for two-dimensional visualization. Hierarchical Density-Based Spatial Clustering of Applications with Noise (HDBSCAN) identified thematic clusters, evaluated using metrics like Silhouette Score and Davies-Bouldin Index.

Results

Our analysis identified three broad thematic groups: economic persuasion, aspirational freedom, and ideological content. Early clusters, like Cluster 1 and Cluster 4, emphasized economic urgency using bold visuals and persuasive language. For example, Cluster 1 featured emotionally charged adoption campaigns, while Cluster 4 humorously highlighted consumer frustrations over missed sales.

Clusters 28 and 29 shifted towards aspirational narratives, promoting financial independence through digital entrepreneurship. Language such as "passive income" and "earn while on vacation" enticed users with promises of long-term security. The most significant transition emerged in Clusters 26 and 27, which pivoted from economic themes to ideological messages. Cluster 26 fused fitness and American patriotism, presenting physical discipline as a nationalistic virtue. Cluster 27 delved into geopolitical narratives, leveraging urgent language like "terrorism" and "crisis" to drive engagement. These clusters often aligned with pro-nationalist or anti-Western sentiments, using sensationalist imagery to influence user perceptions.

Discussion and Limitations

Our findings suggest that TikTok may play a role in enabling the transition of content from economic incentives to ideological narratives. This strategy exploits the platform's recommendation system, which clusters users based on engagement. By initially captivating users with relatable or aspirational themes, content creators can gradually introduce politically charged material, making the transition appear seamless. This manipulation underscores the opaque power of algorithms in shaping digital experiences.

However, our study faced limitations. TikTok's unreliable API complicated data collection, necessitating scraping that may have missed real-time trends. Additionally, analyzing only video thumbnails may not fully represent content nuances. Future research should employ multimodal analysis, incorporating video frames and text, and seek robust data access partnerships.

Our research also raises concerns about content governance. As engagement metrics drive algorithmic decisions, platforms risk exposing users to polarizing material. Understanding these mechanisms is crucial for developing policies that balance free expression with the need to curb manipulative practices. The phenomenon we describe highlights the need for greater transparency in how digital attention is monetized and manipulated.

Conclusion

Our study provides insights into the strategic manipulation of user attention on TikTok, revealing how visual content transitions from economic to ideological themes. This

dynamic reflects broader trends in the attention economy, where platforms capitalize on engagement at the expense of content diversity and integrity. As the digital landscape evolves, future research must address the complexities of algorithmic influence, advocating for transparent and accountable content governance to safeguard user experiences and promote constructive digital interactions.

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