

Audience Engagement with Political Messaging on YouTube Shorts (Student Abstract)

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Abstract

This study investigates user engagement and political polarization on YouTube Shorts, a special category of YouTube videos with a duration of 15-60 seconds. Via a substantial corpus of 38,838 videos gleaned from 100 YouTube channels focusing on political content, we contrast YouTube Shorts with long-form content in terms of user engagement, content toxicity, and polarization. Our analyses reveal that (1) YouTube Shorts receive more likes and views and fewer comments as compared to their long-form video counterparts; (2) YouTube Shorts are more toxic; and (3) considerably more polarized than long-form YouTube videos.

Introduction

In September 2020, following TikTok’s ban in India, YouTube introduced YouTube Shorts in India for the first time. Soon after, YouTube Shorts was released in the US in March 2021, followed by a global release in July 2021. YouTube shorts are videos of a duration of 15-60 seconds aimed at capturing the audience that appreciates short-form content such as Facebook or Instagram reels or TikTok. By now, YouTube Shorts (Shorts hereafter) have earned more than five trillion videos, and studies show that they ate away a slice of the popularity of their long-form counterpart (Rajendran, Creusy, and Garnes 2024). From the vast popularity of microblogging sites such as Twitter (currently X) and short-form video content-sharing platforms such as TikTok, Instagram, and Facebook (Meta), the demand for easy-to-digest content is palpable. Studies indicate that short-form content is likelier to get viral (West 2011) which makes it an attractive vehicle for political messaging.

How does the YouTube audience engage with the political messaging via Shorts as contrasted with long-form YouTube videos? Political polarization in the US is widely studied in diverse settings that include congressional votes (Poole and Rosenthal 1984), mate selection (Huber and Malhotra 2017), allocating scholarship funds (Iyengar and Westwood 2015), and content moderation (Weerasooriya et al. 2023). Political polarization in US social media has been extensively studied on different social media platforms (e.g., Twitter or X; YouTube (KhudaBukhsh et al. 2021); Facebook or Meta; and Reddit (Dutta et al. 2019)). YouTube’s

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platform level change to include Shorts to stay with changing times presents an interesting natural experiment setting to compare and contrast Shorts with long-form content. To our knowledge, a contrastive analysis of audience engagement with political messaging across short-form and long-form content has not yet been explored. To this end, via a comprehensive corpus of 19,496 Shorts and 19,342 long-form YouTube videos (Longs from hereafter) gleaned from 100 prominent YouTube channels with documented political leanings (50 conservative and 50 liberal), we present a contrastive analysis of audience engagement to political messaging on YouTube.

We investigate three research questions:

1. **RQ1:** How does the user engagement vary across political Shorts and Longs on YouTube?
2. **RQ2:** Do users exhibit more toxicity on political Shorts as opposed to Longs?
3. **RQ3:** Is the political discourse on Shorts more polarized than the political discourse on Longs?

We construct a rigorous control and treatment group with careful consideration of the evolving nature of the YouTube channel’s popularity and leverage sophisticated natural language processing methods to answer these questions. Our analyses reveal that (1) YouTube Shorts receive more likes and views and fewer comments as compared to their Longs counterparts; (2) YouTube Shorts are more toxic; and (3) considerably more polarized than the Longs.

Dataset

We consult Wu and Resnick 2021 that list 1,268 YouTube channels with annotating political leanings focused on US politics. From these, we sample 50 conservative and 50 liberal YouTube channels ensuring all these channels have considerable shorts presence. From these channels, we first obtain all the short videos. Since we contrast user engagement and the viewerships of these channels may evolve over time, for each short video, we consider the long video that is uploaded closest to the time of upload of the short to ensure user engagement comparability. Overall, our dataset consists of (1) 9,956 conservative Shorts and Longs; and (2) 9,540 liberal Shorts and 9,386 liberal Longs (few of the Shorts mapped to the same Long in the timeline). For each of these videos, we collect the user comments using YouTube API.

Results

RQ1; User Engagement. We observe that Shorts video receive considerably more likes than Longs across both liberal and conservative content (see, Figure 1). However, the Shorts and Longs do not significantly differ in terms of views. We observe that user comments on Shorts are shorter in terms of average number of tokens (see, Figure 2). However, we note that emoji usage in comments on Shorts are considerably higher than comments on Longs (25% more for liberals and 30% more for conservatives).

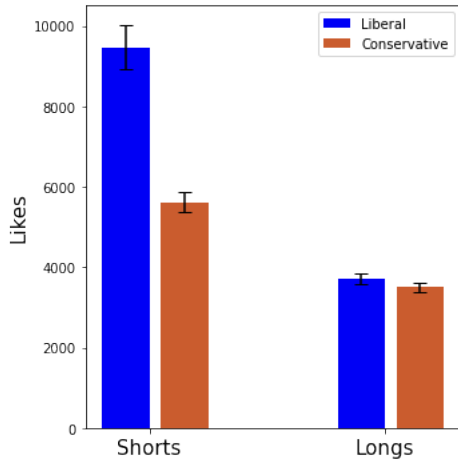


Figure 1: Contrasting likes on Shorts and Longs.

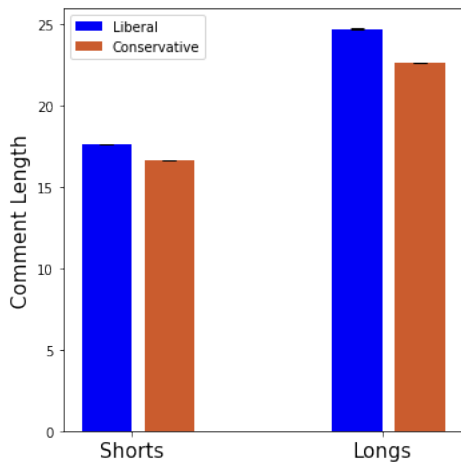


Figure 2: Contrasting comment lengths on Shorts and Longs.

RQ2; Content Toxicity. On a randomly sampled 5K comments from Shorts and Longs of each political leanings, we run Perspective API (threshold parameter is set to 0.7) and compute the fraction of toxic comments. As shown in Figure 3, we observe (1) that user discussions on Shorts are more toxic than that of in Longs; and (2) conservative Shorts elicit the most toxic user discussion. The elevated toxicity in user discussions is possibly due to the nature of Shorts, where political content creators tend to create content that will elicit polarized reactions. This hypothesis is supported

by our next finding on political polarization in the user discussions.

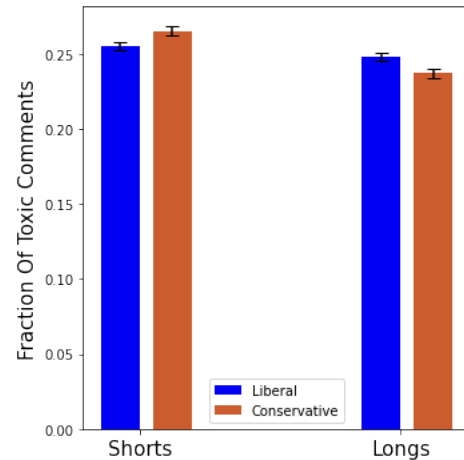


Figure 3: Contrasting presence of toxic user comments on Shorts and Longs. We use the Perspective API to estimate toxicity.

RQ3; Political Polarization. To quantify political polarization, we leverage a machine-translation-based framework first proposed in KhudaBukhsh et al. 2021. This framework has been used in diverse settings relevant to US politics (KhudaBukhsh et al. 2022) and beyond (Villa-Cox et al. 2022). On user discussions on Longs, conservative and liberal discussions had a polarization score of 80.1% (higher score implies less polarization, 100% implies perfect agreement). However, on user discussions on Shorts, conservative and liberal discussions had a polarization score of 71.4%. This result indicates that user discussions on Shorts are far more polarized than user discussions on Longs.

Closing Thoughts

This paper investigates how political content on YouTube Shorts contrasts with Long form videos in terms of user engagement, political polarization, and toxicity. While YouTube Shorts attract tremendous user engagement, extant literature has not looked into political Shorts. Our results aided by sophisticated natural language processing tools indicate that user engagement are more toxic and polarizing on Shorts. Under current US political climate, our findings are timely and important.

Ethics Statement

Our study uses publicly available data obtained through publicly available YouTube APIs, and we primarily conduct aggregate analyses without focusing on individual users. We therefore see no ethical concern.

References

Dutta, S.; Das, D.; Kaur, G.; Mongia, S.; Mukherjee, A.; and Chakraborty, T. 2019. Into the Battlefield: Quantifying and Modeling Intra-community Conflicts in Online Discussion. In *CIKM 2019*, 1271–1280. ACM.

Huber, G. A.; and Malhotra, N. 2017. Political homophily in social relationships: Evidence from online dating behavior. *The Journal of Politics*, 79(1): 269–283.

Iyengar, S.; and Westwood, S. J. 2015. Fear and loathing across party lines: New evidence on group polarization. *American Journal of Political Science*, 59(3): 690–707.

KhudaBukhsh, A. R.; Sarkar, R.; Kamlet, M. S.; and Mitchell, T. 2021. We Don't Speak the Same Language: Interpreting Polarization through Machine Translation. In *AAAI 2021*, volume 35, 14893–14901.

KhudaBukhsh, A. R.; Sarkar, R.; Kamlet, M. S.; and Mitchell, T. M. 2022. Fringe News Networks: Dynamics of US News Viewership following the 2020 Presidential Election. In *WebSci '22: 14th ACM Web Science Conference 2022*, 269–278. ACM.

Poole, K. T.; and Rosenthal, H. 1984. The polarization of American politics. *The journal of politics*, 46(4): 1061–1079.

Rajendran, P. T.; Creusy, K.; and Garnes, V. 2024. Shorts on the Rise: Assessing the Effects of YouTube Shorts on Long-Form Video Content. *arXiv preprint arXiv:2402.18208*.

Villa-Cox, R.; Zeng, H. S.; KhudaBukhsh, A. R.; and Carley, K. M. 2022. Linguistic and News-Sharing Polarization During the 2019 South American Protests. In *Social Informatics: 13th International Conference, SocInfo 2022 Proceedings*, 76–95. Springer-Verlag.

Weerasooriya, T. C.; Dutta, S.; Ranasinghe, T.; Zamperi, M.; Homan, C. M.; and KhudaBukhsh, A. R. 2023. Vicarious Offense and Noise Audit of Offensive Speech Classifiers: Unifying Human and Machine Disagreement on What is Offensive. In *EMNLP 2023*, 11648–11668.

West, T. 2011. Going viral: Factors that lead videos to become internet phenomena. *The Elon Journal of Undergraduate Research in Communications*, 2(1): 76–84.

Wu, S.; and Resnick, P. 2021. Cross-Partisan Discussions on YouTube: Conservatives Talk to Liberals but Liberals Don't Talk to Conservatives. In *ICWSM 2021*, 15: 808–819.