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Sustaining Discourse in a Rumour Network on Twitter

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Extended Abstract

Social media has evolved to be an effective means for individuals to stay relevant and garner a profitable followership online. We study an online conspiracy community formed on Twitter around the death of popular Bollywood star Sushant Singh Rajput in 2020 [1]. Much past and continuing research has shown this community as circulating misinformation, conspiracy theories, and propagandist messaging, based on the foundational claim that the actor's death was not by suicide as claimed by the police. By extension, the messages in the community make accusations against various key figures in the film industry as well as in mainstream politics, attributable to the overarching concept that systemic nepotism in the Hindi film industry aims to undermine, or even murder, outsiders such as Rajput. We identify the core members of this community (N=200) using a snowball-sampling approach, starting from 10 manually identified *seed users*, collecting over 6 million tweets from 14 June 2020 to 20 April 2022, and find that despite falling off the news cycle, the community remains active on Twitter, driven by three strategies – managing a hierarchical outreach structure, navigating platform algorithms, and managing the discourse around the topic carefully.

Hierarchies of Influence

We use PageRank [2] as a metric to measure the hierarchy of influence within the retweet network (R) of the core users (N=200) in the community. The network $R(V,E)$ is defined such that $(u,v) \in E \implies u,v \in V$ and user u has retweeted v. We observe high correlation between in-degree and influence (0.986) and negligible correlation between out-degree and influence (0.008), indicating (a) Retweets are the primary mechanisms of garnering influence in this community and (b) There exists a clear hierarchy where only a select few are highly retweeted, and the most influential users typically do not retweet other accounts. For instance, the user with the highest eigenvector centrality, @nilotpalm3 (0.14) retweets exactly one core member, while is retweeted by 128 core members. In the following sections, we illustrate how this hierarchy is crucial in organised campaigns and disciplining of infighting within the community.

Navigating Platform Policy

A defining feature of this conspiracy community has been their adoption of taglines as a way to promote a collective narrative online, while combating platform moderation. Fig 1 shows that while hashtag usage was prevalent right after the death of the actor, *taglines* were rapidly adopted by the community and surpassed hashtag usage on Jan 18^{th} 2021, days before the birthday of the late star. *Taglines* are blocks of texts which are copy-pasted verbatim as an addendum to tweets. This alternative to hashtag usage appears to be a way to promote the community narrative without indications of obvious collusive activity. This adoption is likely to be a deliberate strategy as several prominent users have been suspended by the platform over time owing to mass reporting, including the most influential @nilotpalm3, forcing the

community to develop newer strategies of information dissemination. Our qualitative analysis revealed tweets by several highly-influential community leaders explicitly instructing about the use of specific taglines instead of hashtags.

Management of Discourse

We find that the *SSR community* has developed a de-facto hierarchical organization, which allows a few core users to concentrate disproportionate levels of influence. A Gini-coefficient [3] (originally a metric to measure income equality) value of 0.84 corroborates this inequity in influence within the community. Infighting and leadership struggles are common within the community, which is hardly surprising given that the community rests on a foundation of suspicion. Despite these challenges, a qualitative analysis of popular tweets reveal that influential users successfully use disciplining, partisanism, and hyper-nationalism to cope. Finally, while the community receives multiple threats from journalists and fact-checkers (in popular media outside Twitter), a small number of highly influential people, including film celebrities and politicians have signalled support to the community by endorsing their narrative of doubt on official investigative processes related to the actor's demise. These influential people are not members of the core community, since they are not perpetually active in the discourse. However, their sporadic tweets leads to endorsement of the core community, both within and outside social media.

While this is a case study on a particular conspiracy community in India, our findings have broader implications. First, we highlight some characteristic features of conspiracy communities in social media - such communities develop de-facto hierarchies leading to a highly inequitable distribution of influence, and exhibit highly disciplined and organized messaging to sustain the movement. Second, we shed light on information operations that constantly evolve over time to overcome platform-side content moderation. This study serves as a formative step for more robust and fool-proof designs of social media platform policies to ensure health of online information spaces, through countering of misinformation, conspiracies, and propaganda.

References

[1] Syeda Zainab Akbar, Ankur Sharma, Dibyendu Mishra, Ramaravind Kommiya Mothilal, Himani Negi, Sachita Nishal, Anmol Panda, and Joyojeet Pal. Devotees on an astroturf: Media, politics, and outrage in the suicide of a popular filmstar. In *ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies (COMPASS)*, COMPASS '22, page 453–475, New York, NY, USA, 2022. Association for Computing Machinery.

[2] Lawrence Page, Sergey Brin, Rajeev Motwani, and Terry Winograd. The pagerank citation ranking: Bringing order to the web. Technical report, Stanford InfoLab, 1999.

[3] Chau-Nan Chen, Tien-Wang Tsaur, and Tong-Shieng Rhai. The gini coefficient and negative income. *Oxford Economic Papers*, 34(3):473–478, 1982.

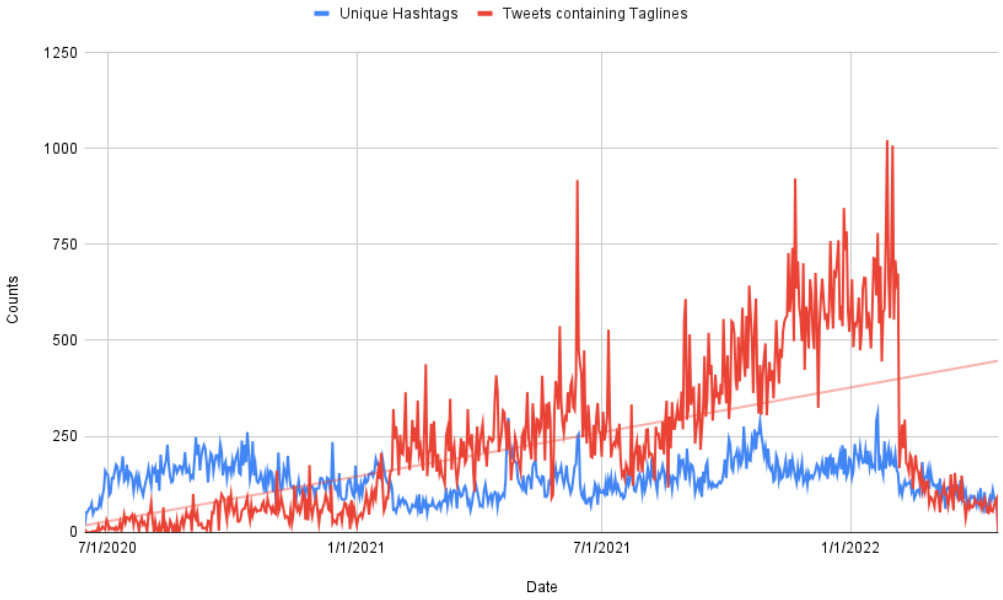

Figure 1: Use of taglines surpassing the use of hashtags by the SSR community, indicating planned combating of platform moderation (by Twitter)