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Temporal and topological patterns of reposting dynamics reveal online influence inflation in social media.

We study structural and temporal features driven by online influence manipulation using a massive social media repost dataset collected from Weibo (a Chinese microblogging site similar to Twitter). Our analysis shows that the vast majority of shared information goes viral through very shallow diffusion chains, instead of spreading through long information cascades. We identify a handful of intentional boosters who have disproportionate influence and are responsible for influence inflation of the original Weibo post. Along with their sock puppets, these boosters orchestrate high volume reposting within short amount time, leading to pronounced spikes in repost counts. As the reposting network is dynamic and growing, with nodes and edges constantly added into the network, our data-driven stochastic modeling of reposting dynamics takes into account these topological and temporal pattern of reposting behavior in social media. (Received September 24, 2018)