Beyond Preferences:

Contextual Influences on News Diets in High-Choice Environments

Sakshi Bhalla, Harsh Taneja (University of Illinois, Urbana-Champaign)

Abstract

In this study, we argue that even under conditions of high choice where users can curate their information sources, people's information diets reflect how their preferences are enacted within their social and media contexts. To demonstrate this, we adopt a network-based approach to construct and analyze a dataset comprising 485 most active popular journalists from India and their 32 million unique Twitter (X) followers. We leverage insights from inferential network analysis to show that structural factors such as journalists' location and the media context as well as individual preferences for the nature of messages or organizations act in tandem to shape ultimate information consumption behaviors. This study contributes to theoretical and methodological discussions on information choice, highlighting that even in high-choice environments like X, information choices are still constrained by contexts typically associated with traditional media.

Motivation

- **Information Diversity in High-Choice Environments**: Users have access to multiple sources for obtaining the same information, including following news outlets and **individual journalists** directly.
- **Increased User Agency**: This unbundling of information sources grants users greater agency in selecting their preferred information sources, allowing for a more personalized media consumption experience.
- **Role of Media Environment on Follower Behavior:** Despite this increased agency, it remains unclear to what extent the media environment influences the way users choose to follow journalists on social media platforms like X.
- **Understanding User Preferences and Structural Influences:** By examining users' choices to follow journalists instead of news outlets, we can gain valuable insights into both user preferences and the structural phenomena that shape these behaviors.

Research Question

*How do factors structuring the news media ecosystem in India – such as **location**, **media organizations**, **their digitally native or traditional affiliation**, as well as the **nature of their content** – manifest in users following journalists?*

Data, Methods and Analysis

We curated a list of India's most popular journalists (N=485), collecting their followers on X (formerly Twitter).

Measures

- **Organization:** Hand-coded journalists' organizational affiliations to create a binary dyadic variable.
- **Message Similarity:** Calculated cosine similarity between journalists' tweets to assess thematic connections.
- **Location:** Hand-coded journalists' locations at the state level, creating binary dyadic relationships.
- **Media Type:** Identified whether each journalist's organization was digitally native or not, creating a binary dyadic variable.

Analysis

1. **Network Construction:** Built a network of journalists linked by the number of common followers they share, emphasizing the consumption choices of followers.
2. **Additive and Multiplicative Effects (AME) Model:** Modeled shared followers among journalists as a function of pairwise similarities in covariates. The AME model captures first-order dependencies (activity levels), second-order dependencies (dyad variation), and third-order dependencies (structural attributes like homophily).

Results

	P. Mean (SD)	Avg. tweets/week (node)	-0.030 (0.040)
Intercept	-9.228*** (0.511)	Location (dyad)	0.040*** (0.001)
Weighted degree (node)	0.616*** (0.022)	Organization (dyad)	0.020*** (0.002)
Avg. likes (node)	0.017*** (0.019)	Org. Type (dyad)	0.009*** (0.001)
Avg. retweets (node)	0.069*** (0.017)	Tweet similarity (dyad)	1.011*** (0.014)

Table 1. Model results displaying posterior estimates. The dependent variable was the projection network of journalists and has been log transformed. Edge strengths in the dependent variable as well as nodal covariates were logged (natural) to treat the skewness of the data. Model reported for R = 17.

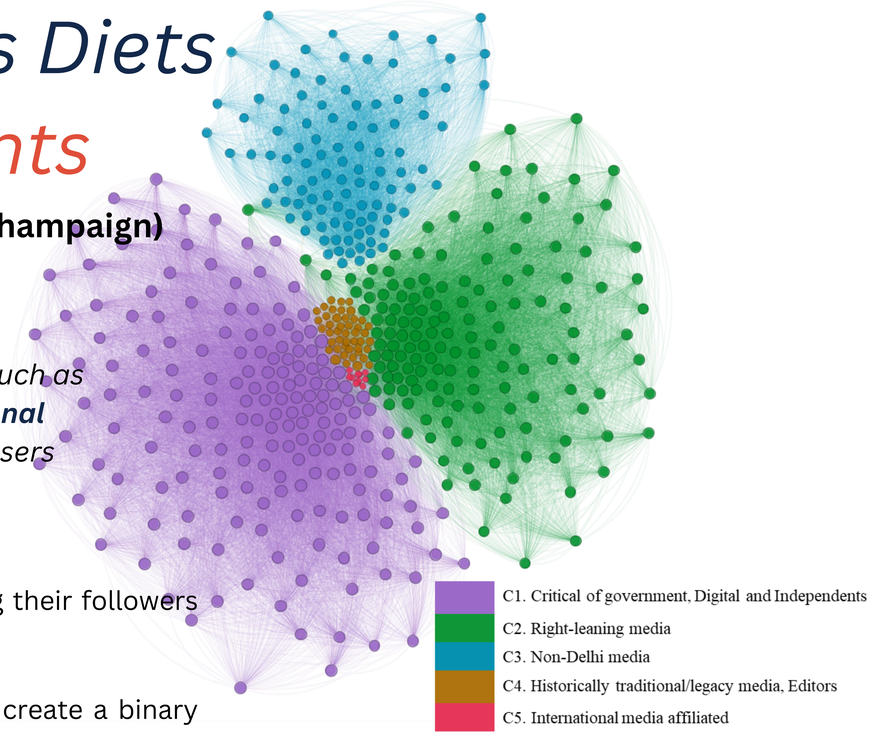

Fig 1. Description of Louvain clusters.

Takeaways

Network Overview: The journalists' co-following network had a high density, with only 24% of pairs not sharing any followers. On average, each journalist had 650,000 common followers with others. Despite high connectivity, the network showed clustering tendencies with a modularity of 0.32.

Influence of Structural Factors: Location, media type, and organizational affiliation significantly shape follower patterns, indicating that structural factors are crucial in guiding user choices on social media.

User Preferences: While users have many choices, their preferences are influenced by the media environment and structural factors.

Clusters: Analysis revealed distinct clusters based on ideology, language, region, and media type, underscoring the interplay between user preferences and social structures.

Implications: The study demonstrates how both user preferences and media infrastructures collectively shape information choices on social platforms, challenging the notion of purely individualistic media consumption behaviors.