Understanding Twitter Usage through Linked Data: An Analysis of Motivations and Online Behavior

Shujun Liu[1], Luke Sloan[1], Curtis Jessop[2], Tarek Al Baghal[3], and Paulo Serodio[3]

[1]Cardiff University
[2]National Centre for Social Research
[3]University of Essex

Introduction & Background

Uses and gratification (U&G) theory posits individuals' engagement with social media is a deliberate effort to fulfill various needs, like information seeking, entertainment, and networking. However, prior studies predominantly addressed whether individuals use social media to satisfy their needs, leaving a gap in understanding how individuals behave online to satisfy needs. This study fills this gap by merging survey responses with actual Twitter activity, to investigate how individuals behave online to satisfy distinctive motivations, including (a) self-expression, (b) seeking entertainment, (c) business and working, (d) staying informed with news, and (e) networking. We also investigated how these online behaviors vary among individuals with different demographic features, including socio-economic classes, gender, and age.

Objectives & Approach

Our research addressed questions by linking survey responses with actual Twitter activities within the U.K. Participants were asked to provide survey responses surrounding age, gender, socio-economic class, and motivations for using social media. They were also queried about the existence of Twitter account, willingness to disclose Twitter username, and, if agreeable, the username itself. The survey continued until a total of 2,195 individuals shared Twitter handles. Following the removal of accounts that were either suspended or nonexistent, the study proceeded with a final count of 1,915.

We collected each user's Twitter metadata with Twitter API, including tweet count, follower count, following count, and bio information, and linked each user's metadata with survey responses. To ensure respondents' anonymity, survey, Twitter and linked data are stored separately, and can only be accessed by designated researcher.

Relevance to Digital Footprints

The study's approach of linking survey responses with actual Twitter activity offers a detailed insight into the digital footprints left by users as they engage with social media to satisfy their diverse needs. By analyzing the behaviors associated with motivations, this research illuminates the specific ways individuals curate their digital presence.

Results

Regression analysis indicated that individuals motivated by self-expression tend to tweet (b = .28, SE = .06, p < .001), follow account (b = .38, SE = .06, p < .001), gain followers (b = .13, SE = .06, p = .035), and post bio details (b = .89, SE = .13, p < .001). Work and business motivation leads to post bio information (b = .38, SE = .15, p = .012), while networking leads to follow more accounts (b = .28, SE = .06, p < .001).

Social-economic class moderated associations between networking motivation and tweet count (b = -.25, SE = .09, p = .004), and between self-expression and tweet count (b = .20, SE = .08, p = .009). For individuals with higher socio-economic, self-expression has a higher effect on tweet count, whereas networking motivation has a less effect on tweet count. Additionally, we found gender moderated the association between self-expression and tweet count (b = .25, SE = .12, p = .04) and between keeping updated with news and tweet count (b = .11, SE = .05, p = .03).

Conclusions & Implications

These findings offer a nuanced understanding of social media usage, highlighting how different motivations influence specific online behaviors. The novel approach of linking surveys with actual social media activity provides a more accurate representation of user behavior, contributing insights for academic and practical social media strategy and design.