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Determinants of News Sharing Behavior on Social Media

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ABSTRACT

Social media is relied upon as a single portal for entertainment, communication, and news. To understand determinants of news sharing, we empirically evaluate data from 188 Facebook users with PLS structural equation modelling. Results support the significant influence of information sharing and status seeking gratifications on news sharing, and that this significance varies across contexts. We find that status seeking gratification has a stronger effect on news sharing when news quality is more emphasized. In other words, sharing low-quality news can be damaging to an individual's status and they try to avoid it. However, information sharing gratification has a stronger effect on news sharing for those individuals who rely more on credibility and may be employing more heuristic selection approaches. This work has opened up new opportunities for further research and it is hoped that this may contribute to improving the quality and experience of news sharing in social media.

KEYWORDS

Social media; news sharing; Facebook; uses and gratifications; fake news

Introduction

The rise of Web2.0 technology over the last decade has propelled ordinary users into new and influential roles as information curators, distributors and even creators. With around 1.5 billion daily active users on Facebook alone,¹ the significance and reach of social media content is undeniable. In contrast with the unidirectional consumption of content through traditional sources such as television or print media, today's media landscape includes increasing levels of user generated content in the form of shares, likes and comments. Some users take on the role of content creators, although a greater number adopt the role of distributors or commenters who share material that they encounter. In all cases, the ordinary user, once a largely passive receiver of information, now has a powerful voice in modern society.

Studies suggest that 62% of US adults are using social media to keep up with the news with Facebook being the dominant platform, which 67% of these adults turn to for their news.² This already high figure is on a trajectory that might see social media one day becoming the *only* media platform. As traditional news outlets increasingly turn to social media to remain competitive and stay with the times, the line between user generated content and more traditional news reports may also fade. For many readers, there may be no straightforward way to tell the difference between accurate news or entertaining fiction. This position is supported by recent research statistics revealing that less than half of surveyed adults are very confident that they can recognize fake news.³

Since the 2010s, the term "Fake News" has become part of the political and mainstream narrative. Although spreading of misinformation (intentional or otherwise) pre-dates social media – this is a timely and important topic as the shift to user generated content has brought a wider pool of potential news creators and distributors who may amplify the reach and effect of a single story.

An example of the real-world impact of sharing misinformation is evident in the "PizzaGate" conspiracy theory of late 2016. PizzaGate emerged soon after the leak of Democratic National Party Emails in the midst of the US Presidential Election campaigning. Proponents of the theory put forward wild speculations that the leaked emails contained coded references to pedophilia and human trafficking, centering on a family pizza restaurant in the DC area – all with no evidence.⁴ Yet this was enough for alt-right groups and fake news websites to pick up and share the story, with over one million impressions of the hashtag #PizzaGate in November 2016 alone. The fallout from this misinformation campaign was severe, with restaurant staff experiencing harassment, death threats and property vandalism. This culminated in a shooting, where 28 year old Edgar Maddison Welch fired an AR-15 style assault rifle at Comet Ping Pong Pizza restaurant, seeing himself as a hero, attempting to right the wrongs he believed were being committed there. So thoroughly convinced was he, that even after his arrest he still rejected the claim that the theory was untrue. The prevailing sentiment was summed up by former Secretary of State Hilary Clinton in a subsequent press release, stating "It's now clear that so-called fake news can have real-world consequences. This isn't about politics or partisanship. Lives are at risk, lives of ordinary people just trying to go about their days."⁵

The increased reliance on social media for news,² and the real-world implications of sharing low quality or incorrect information is the motivation for the current study. We study news sharing behavior in general, as the sharing and commenting mechanisms on social media are common for any type of information. By including items around source quality and credibility, we are then able to understand the role of these factors in news sharing. As terms such as

“misinformation” or “fake news” have negative connotations, these are not singled out in the data collection. This aims to reduce the risk of social desirability bias in participant responses⁶ and improve the validity of any findings. Through this study, we aim to better understand the motivations for news sharing and the cognitive strategies employed when selecting and sharing news. It is hoped that this will provide an understanding of the factors that lead to any news story spreading and yield actionable insights to allow media platforms and consumers to have better control over the types of information that are spread.

Using the world’s most popular social network, Facebook, we survey 188 adult users about their news sharing behavior. Drawing from the Uses and Gratifications Theory (U&G),⁷ we first assess which gratifications drive news sharing behavior. Whilst prior research into U&G is a valuable foundation, it has largely been applied to areas such as print media or television, with little attention to news. Further, the research focusing on news (e.g.⁸) largely pre-dates the meteoric rise of social media and does not reflect the changed online landscape. Finally, prior research typically considers the passive *consumption* of media, rather than the more active *sharing* which is relevant for news sharing. Following our study into the significant factors in U&G, we draw from the Information Adoption Model⁹ to study how news quality and credibility influence the significance of these gratification factors. Specifically, news quality is adapted from argument quality, and credibility is adapted from source credibility.⁹ This stage of our work addresses the research question – “*Does information processing strategy influence the role of gratifications in news sharing?*”

Our study makes two main contributions. First, our study extends the literature (e.g.⁸) by including additional gratification drivers including *information sharing* and *pass time*. Unlike Lee and Ma,⁸ our study focuses on general social media users instead of students to increase the generalizability of our study. Secondly, and more importantly, we do not limit the work to establishing significance for each gratification driver, but rather go on to study whether the role and significance of these observed gratifications differs across the different contexts (i.e., high news quality versus high source credibility). Our study thus contributes to the literature by clarifying the importance of gratification drivers in various contexts.

The following section provides an overview of the two main theories, which provide the theoretical foundation for the research.

Theoretical background and hypotheses

The focus of this study is to understand the determinants of news sharing behavior in social media and how these are influenced by cognitive strategy. Our theoretical foundation for this study is built upon the Uses and Gratifications Theory (U&G),⁷ and the Information Adoption Model.⁹ The U&G theory describes an individual’s reasons for seeking out specific media whereas the Information Adoption Model considers the influence of different aspects of the message such as its perceived quality. The following sections will briefly review

the research in U&G and Information Adoption Model to provide the background to our hypotheses which we later test.

Uses and gratifications of news sharing

The origins of U&G theory can be traced back to the mass communication research of the 1950’s and 1960’s where mass communication research took a sharp turn and went from focusing primarily on the effects of media on its audiences to how audiences play a role in media selection.^{10,11} Thus, audience members were now considered more active than passive in their selection of media. At that time, Schramm et al.¹² argued that children’s usage of television varied significantly depending on their backgrounds, such as their intellectual capabilities and their relationship with their parents. Katz and Foulkes¹³ explained that due to our modern society’s demands, individuals are often left depressed and estranged, and as a result, they look to mass media to fulfil certain social and psychological needs that may be lacking. For example, some individuals go to the cinema to “forget about their troubles” or “to lose themselves,” – indications of turning to the media to escape reality.¹³ To understand the complicated reasons why individuals use a particular media, Katz et al.⁷ later developed the U&G theory. The fundamental objective of the U&G theory is to explain how and why individuals consciously choose certain kinds of media among other types and how they satisfy their needs (gratifications).

With time, developments in Internet technologies gave rise to social media. Nov et al.¹⁴ suggest that out of its many attractive features, social media’s ability to allow individuals to create their own content, converting them from a passive to active audience stands out as the most worthy one. This and other related work prompted researchers to consider U&G from a social media perspective. Lee and Ma,⁸ who studied the relationship between U&G and *information sharing* highlight two key points. First, the literature on the relationship between U&G and social media establishes the applicability of the U&G approach in the study of news sharing behavior. Second, despite media usage reasons varying across individuals, situations, and type of media, almost all U&G work investigates the following gratifications: *entertainment*, *socializing*, *status seeking*, and *information sharing*. In our study we consider these four gratifications, plus an additional *pass time* gratification which appears particularly well suited to current use of social media. In the following sections, we introduce each of these gratifications separately as background to the hypotheses:

Status-seeking gratification refers to the desire to be correct, therefore strengthening an individual’s feelings and morals.⁷ Thus using media may satisfy the desire to feel superior and respected, thus increasing one’s status.⁸ Cheung et al.¹⁵ discovered that when people contribute in some way on social media they acquire approval and admiration from other users within their circle and thus, this enhances their *status*. Similarly, the use and membership of groups allows individuals to participate in their community, which ultimately provides them with a sense of pride and self-status.¹⁶

Hew and Hara¹⁷ identified that peer recognition motivated individuals to participate in knowledge sharing communities.

This finding also translates to social media, where status-seeking has been reported to be one of the strongest predictors of news sharing in social media.¹⁸ These findings suggest that individuals treat news sharing as a powerful technique to endorse their status.¹⁹ Furthermore, in social media, there is a likelihood that people share news in order to provide others access to it. If what they distribute appears to be relevant to other's needs, they will be able to assert their status and popularity.^{18,20} Hence, we aim to test the following hypothesis:

H1. *Status-seeking gratification* will be positively associated with users' intention to share news on Facebook.

Socializing gratification or social interaction gratification refers to the desire for connection.⁷ Whiting and Williams²¹ and Lee and Ma⁸ describe social interaction as the need to converse and interrelate with others, which could address the need for belonging. With regards to social media use, Dunne et al.,²² Cheung et al.,¹⁵ and Whiting and Williams²¹ found that the primary reason why people use social media is to fulfil their *socializing gratification*.

Ma et al.¹⁸ found a positive correlation between news sharing and *socializing gratification*. Thus, individuals view sharing news as a convenient way to preserve and expand their social networks as it allows for something to talk about with friends. Furthermore, through leaving comments and liking news stories, an individual can feel a sense of belonging. Chen and Sin²³ and Chen et al.²⁴ found a strong correlation between misinformation sharing and *socializing gratification* as sharing can be a good way to converse. Furthermore, according to Chen and Sin²³, extroverts were more likely to share news due to their friendly *socializing* nature. Choi²⁰ states that people's consumption of news has become a "socially-driven activity." Taken together, we assume that news found on Facebook is an item which people can *socialize* about. Thus, we hypothesize that:

H2. *Socializing gratification* will be positively associated with users' intention to share news on Facebook.

Entertainment gratification refers to using media to amuse oneself and satisfies the need for pleasure, emotional release, and anxiety relief.^{18,21} Baek et al.²⁵ found that individuals shared links on Facebook because they were relaxing and *entertaining*. Kim²⁶ discovered a high correlation between the *entertainment gratification* and the utilization of a social recommendation tool (the "like" button on Facebook) and suggested that individuals utilize it for joy and expressing their opinions in a happy/positive manner. With regards to news consumption, Diddi and LaRose²⁷ found *entertainment gratification* to be positively associated with an individual's Internet news consumption, while there was no correlation with newspaper reading and television news forms. This is because the Internet can provide other functions such as exchanges with other individuals through comments and likes. This can result in the release of stress and fulfilling the need for *entertainment*.^{8,22} Conversely, Ma et al.¹⁸ found no association between sharing news on social media and *entertainment*

gratification suggesting that individuals do not derive any pleasure from the activity. Consistent with the majority of prior work, we hypothesize that:

H3. *Entertainment gratification* will be positively associated with users' intention to share news on Facebook.

Pass time gratification refers to the usage of media to alleviate boredom and occupy time,²¹ and is an influential predictor of general social media use.²⁸ With regards to online news content, Choi²⁰ found that endorsing/sharing news was related to satisfying the *pass time gratification*. In fact, it was the second strongest predictor of news sharing after *socializing gratification*. It was also further suggested that that social media features like Facebook's "like" and Twitter's "favorite" function are frequently used when individuals are not cognitively stimulated by the content presented in front of them. Baek et al.,²⁵ on the other hand, found no correlation between link sharing on Facebook and the *pass time gratification*. Unless individuals are stimulated by the contents of the news stories, they will not share them for the sake of passing time. Consistent with some prior work and the general literature on gratifications, we hypothesize that:

H4. *Pass time gratification* will be positively associated with users' intention to share news on Facebook.

Information sharing gratification refers to individuals' need to improve knowledge of their surrounding environments through sharing information for self-education.^{7,21} Prior work has positively linked this to social media use in the context of learning about events and businesses²¹ or other people.²²

Baek et al.²⁵ found that people satisfied their *information sharing gratification* through sharing links of news content. Kim²⁶ found that college students use the "like" function on Facebook to fulfill their *information sharing gratification* freely and without fear of sanction from the public. Previous studies have also examined the link between U&G and news content in an online environment. Ma et al.¹⁸ discovered that sharing news in social media satisfied the *information sharing gratification* due to two reasons. First, any news contents a social media user has shared will automatically be chronicled in their profile. This then facilitates the prospect for information acquisition as the gratification develops. Secondly, individuals are more prone to interrelate with other users who have related information interests.

Lastly, Chen and Sin²³ and Chen et al.²⁴ utilized U&G theory to understand why people share misinformation on social media. Both studies found that individuals shared misinformation more for informational reasons than for entertainment.^a Based on the above, we offer the following hypothesis:

H5. *Information sharing gratification* will be positively associated with users' intention to share news on Facebook.

^aThe top three reasons found by Ref. 24 were all information reasons. Other reasons they find include status seeking (or self-expression). Similarly, Ref. 23 found four reasons: entertainment, information seeking, socializing, and status seeking (self-expression).

Influence of information adoption model during news sharing

The Information Adoption Model⁹ describes two factors influencing individuals' information adoption: argument quality and source credibility. Argument quality is more emphasized when individuals elaborate issue-related messages with high-effort processing, which requires the receiver to carefully consider the content and arguments presented in the message and evaluate the relevance and quality of these arguments. On the other hand, source credibility is more emphasized when individuals are unwilling to expend a great deal of thought or effort on the task and instead rely on whether the source seems credible or appears to be an expert.

Applying their Information Adoption Model in the context of news sharing, we argue that the degree to which individuals emphasize news quality versus credibility may influence their behavior regarding news sharing. Our study uses news quality to refer to individuals' perceived *quality* of news on social media. Such a perception can be developed after individuals cognitively elaborate and process the content of news. Consistent with Chaiken,²⁹ our study uses credibility to refer to individuals' perceptions that news on social media is trustworthy, and such perceptions have nothing to do with the content of news. We suggest that there may be an interaction between the factors emphasized by the media consumer, and the influence of various U&G constructs on news sharing intention. That is, individuals who emphasize news quality more than credibility may be influenced more strongly by a different set of gratifications. This is summarized as RQ1:

RQ1: Does information processing strategy influence the role of gratifications in news sharing?

Our research model is shown in Figure 1. Five black arrows show five hypotheses, and one white arrow shows the research question (the moderation effect of news quality versus credibility).

Methodology

Data collection procedures and participants

An online survey hosted on Qualtrics was conducted to test the proposed research model. A convenience sample of Facebook users was recruited with snowball sampling. The anonymous survey link was posted on Facebook and LinkedIn through the researchers' own networks, and participants were asked to complete the survey and afterward share the link with others in their circles. Data was collected in late 2017, and a total sample of 283 respondents was acquired. After removing incomplete data, we received 188 valid responses. Table 1 summarizes the demographic information of the respondents.

Measurement

Our measures are adapted from previous literature (see Appendix A for complete listing). Specifically, items of status seeking, socializing, information sharing, entertainment, and pass time gratification were adapted from previous U&G research.^{8,16,20,25,30–32} Prior research was used as the basis

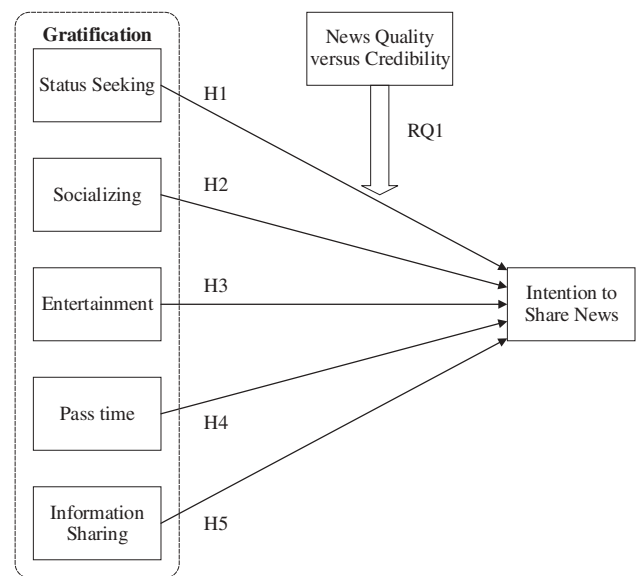


Figure 1. Research model.

Table 1. Sample demographic information.

Category	Sample (N = 188)
Gender (% of female)	55.32%
Age	
Under 18	2.13%
18–24	41.49%
25–34	47.34%
35–44	6.38%
45–54	.53%
55–64	1.06%
65–74	1.06%
Profession	
Employed full-time	46.28%
Employed part-time	11.17%
Student	38.83%
Retired	.53%
Unemployed	9.57%
Education	
High school	17.55%
Bachelor's degree	46.81%
Postgraduate diploma	9.57%
Master's degree	18.09%
PhD	.53%
Other	7.45%

for items on news quality, source credibility^{33,34} and intention to share news.^{8,35} These items were rated on a 7-point Likert scale from “Strongly Disagree” to “Strongly Agree.”

Prior to full data collection, a pilot test was carried out to identify any inconsistencies or errors. The trial comprised of ten participants gathered from the authors' own circles. Feedback from the pilot test was used to revise wording of the items to avoid misunderstanding.

Data analysis and results

Because all the variables were collected in one survey, we first assessed the potential threat of common method bias (CMB) with a pooled sample.³⁶ First, a Harmon one-factor analysis was conducted. The results showed that eight factors were present and that the most variance explained by one factor was 31.94%. Second, we assessed CMB with the marker-variable technique.³⁷ A marker variable was used as surrogate

for method variance to partial out method bias. After adjustment, all significant correlations remained significant. Therefore, we concluded that CMB was unlikely to be a serious concern for our study.

Our model was tested with partial least squares (PLS). SmartPLS³⁸ was used with the bootstrap resampling method (using 1000 samples) to determine the significance of the paths. PLS is used in our study because our measurements were not normally distributed, and Shapiro-Wilk tests were significant. PLS is more appropriate with non-normally distributed data.³⁹

We first evaluated the measurement model. As shown in Table 2, each item loaded significantly on its respective construct, with none of the loadings below .50.⁴⁰ The composite reliabilities (CRs) were over .70, and the average variance extracted (AVE) was over .50 (Table 2). Therefore, convergent validity was supported.⁴¹ Discriminant validity was also confirmed by ensuring that the correlations between constructs were below .85⁴²; and for each construct, the square root of its AVE exceeded all correlations between that factor and any other construct (Table 3). Therefore, our measures demonstrated good psychometric properties.

We then examined the structural model. Status seeking gratification was positively related to intention to share news ($\beta = .21, p < .01$), supporting H1. Information sharing gratification had a positive effect on intention to share news ($\beta = .35, p < .001$), supporting H5. Socializing gratification ($\beta = .09, p > .05$), entertainment gratification ($\beta = .12, p > .05$),

and pass time gratification ($\beta = .01, p > .05$) had no significant effects, and H2, H3, and H4 were not supported. These five factors together explained 38.01% of variance for intention to share news. The results are presented in Figure 2.

Finally, we examined whether the effects of these factors were consistent for those who emphasize news quality versus those who emphasize credibility. When the standardized value of news quality is higher than that of credibility, it shows that individuals perceive news to have a higher level of quality despite a lower level of credibility. In such a context, they focus more on news quality. On the other hand, when the standardized value of credibility is higher than that of news quality, it shows that individuals perceive news to have a higher level of credibility despite a lower level of quality. In such a scenario, they focus more on credibility.

Therefore, participants were classified as those with a relatively high level of news quality and those with a relatively high level of source credibility. The process of Koestner and Zuckerman⁴³ was followed to classify participants and the z-scores of news quality and source credibility were calculated. A participant was classified as relying more on news quality if z-score on the news quality scale was higher than z-score of the source credibility scale; otherwise, he/she was classified as relying more on source credibility. The whole sample was thus divided into two subsamples.

Next, the structural model was tested for subsamples (see Table 4), and the path coefficients between subsamples were compared with the formula of Keil et al.⁴⁴:

Table 2. Item descriptive statistics.

Items	Mean	SD	Loading	CR	AVE
SS1	4.75	1.75	.86	.94	.77
SS2	4.93	1.69	.91		
SS3	4.97	1.74	.91		
SS4	5.35	1.59	.80		
SS5	4.82	1.77	.89		
SOC1	3.60	1.78	.85	.94	.76
SOC2	3.66	1.63	.87		
SOC3	3.32	1.63	.91		
SOC4	3.29	1.62	.88		
SOC5	3.06	1.70	.87		
IS1	2.72	1.48	.79	.92	.58
IS2	2.55	1.40	.77		
IS3	4.44	1.79	.63		
IS4	4.11	1.75	.67		
IS5	3.91	1.75	.76		
IS6	3.22	1.60	.85		
IS7	3.10	1.52	.82		
IS8	3.59	1.73	.78		
PE1	3.10	1.57	.91	.95	.81
PE2	3.11	1.51	.87		
PE3	3.53	1.72	.91		
PE4	3.23	1.63	.92		
PT1	3.36	1.73	.88	.89	.62
PT2	3.51	1.86	.84		
PT3	4.24	1.87	.71		
PT4	3.32	1.84	.84		
PT5	4.73	1.82	.67		
INT1	3.87	1.99	.89	.95	.79
INT2	3.97	1.83	.90		
INT3	4.79	1.83	.87		
INT4	4.60	1.98	.91		
INT5	3.97	1.90	.87		
CRE1	3.53	1.44	.84	.85	.66
CRE2	4.77	1.20	.67		
CRE3	4.06	1.32	.91		
NQ1	4.35	1.35	.70	.77	.63
NQ2	4.22	1.30	.87		

Table 3. Correlation between constructs and square-root of AVEs (on-diagonal).

	1	2	3	4	5	6	7	8
1 Information sharing gratification	.76							
2 Intention to share news	.55	.89						
3 Entertainment gratification	.48	.40	.90					
4 Pass time gratification	.33	.28	.52	.79				
5 Socializing gratification	.61	.48	.50	.41	.87			
6 Status seeking gratification	.43	.45	.33	.29	.53	.88		
7 Credibility	.19	.29	.02	.04	.09	.18	.81	
8 News quality	.10	.31	.11	.08	.10	.16	.62	.79

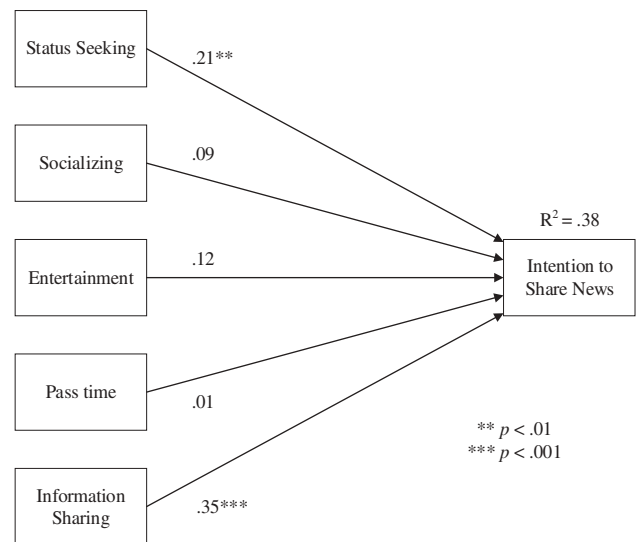


Figure 2. Model results.

Table 4. Model testing with subsamples.

	"News quality" subsample	"Source credibility" subsample	Diff. Sig.?
H1: Status seeking gratification → Intention	.32***	.07	sd
H2: Socializing gratification→ Intention	.07	.15	bns
H3: Entertainment gratification→ Intention	.14	.05	bns
H4: Pass time gratification→ Intention	.08	-.08	bns
H5: Information sharing gratification→ Intention	.24*	.47***	<***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, bns = both paths not significant, sd = structurally different (one path is significant and the other is not), Diff. Sig. = different significantly

$$t = \frac{\text{Path coefficient } t_{\text{Group1}} - \text{Path coefficient } t_{\text{Group2}}}{\left[\sqrt{\frac{(m-1)^2}{(m+n-2)} \times SE_{\text{Group1}}^2 + \frac{(n-1)^2}{(m+n-2)} \times SE_{\text{Group2}}^2} \right] \times \left[\sqrt{\frac{1}{m} + \frac{1}{n}} \right]}$$

where m is the sample size for Group 1 and n is the sample size for Group 2.

Based on the results (Table 4), status seeking gratification had a stronger effect on intention to share news when individuals relied more on news quality. On the other hand, information sharing gratification had a stronger effect on intention to share news when individuals relied more on source credibility.

Discussion

This study aimed to examine how different types of gratifications influence individuals' intention to share news on social media. Based upon data collected from Facebook users, we find that status seeking and information sharing gratifications have significant effects on news sharing intention. Further, individuals' emphasis on news quality or credibility has notable interaction effects. Our study has important implications for theory and practice.

Implications for theory

Our study makes two important contributions to the literature. First, our study clarifies the effect of different gratifications on news sharing in the context of social media. Specifically, we find that status seeking and information sharing gratifications are positively related to individuals' intention to share news. These results are consistent with Ma et al.¹⁸ On the other hand, socializing, entertainment and pass time gratification do not have a significant effect. Unlike personal status updates (e.g., recent pictures, mood, activities), news does not contain any information about individuals themselves. Therefore, news probably plays a less important role in individuals' socializing with their contacts. Further, many types of news, such as political or civic news, are not always as engaging. Therefore, individuals probably do not share these types of news for entertainment or to pass time.

Second, our study contributes to the literature by describing how different gratifications are emphasized in different contexts. When news quality is emphasized, we find that

status seeking gratification has a stronger effect. The explanation is that in this context, individuals would go through the content of news carefully and pay more attention to news quality. Sharing high-quality news can then help them enhance their status in social media. In other words, sharing low-quality news can hurt their status and they try to avoid that by focusing on news quality.

On the other hand, when source credibility is focused, we find that information sharing gratification has a stronger effect. The explanation is that in such a scenario, individuals pay more attention to heuristic cues (such as source) without going through news content carefully. Therefore, news with high source credibility can facilitate the gratifications of information sharing. In other words, individuals can receive the gratifications of information sharing more easily by looking at the sources of news.

Implications for practice

Our study also has several important implications for practitioners. For social media providers and news media, our study shows that status seeking and information seeking gratifications can enhance individuals' intention to share news. Therefore, these two factors can be emphasized to support news sharing. For example, social media providers may integrate with other news media and provide sharing buttons on their web pages, such that individuals can find it easier to share news on their social media account. Social media can also provide news ratings from individuals' social contacts to enhance individuals' status.

Further, our study shows that individuals can share their news on social media due to different reasons. For those who pay more attention to the news quality, they tend to share news with higher quality to enhance their status. Therefore, news media may improve their news quality, especially for important news, to increase the likelihood that it will be shared on social media (e.g., adding more details, providing relevant pictures, etc.). They could also provide information such as how many times it has been shared already. For those who focus more on source credibility, the information sharing gratification has a stronger effect. Therefore, news media may increase credibility (e.g., show their coverage or prizes received). News media should also improve the design of their web sites and make it easier for individuals to share news. Please note that our results may be limited by our sampling technique and should be interpreted cautiously (more details in the next section).

Limitations and opportunities for future studies

Our study has several limitations. First, we used a convenience sample recruited with snowball sampling. Although our participants come from a variety of backgrounds, our sample may still be biased. Second, our study selected Facebook as the context, and the results may not hold in other platforms of social media (e.g., Twitter). Future studies can test our model in other platforms and examine whether our results still hold. Third, we did not differentiate between participants' cultural background, and it is not clear

whether the culture has a moderation effect on our hypotheses. Finally, our study examined general news sharing behaviors to minimize the potential risk of social desirability bias in responses. We admit that our results may not be targeted only to fake news sharing. Nevertheless, prior literature has shown that individuals usually cannot easily differentiate fact from fiction³, and we suggest future studies further examine individuals' sharing of different types of news on social media.

Future studies can extend our study in several ways. First, studies are needed to test whether other variables (e.g., gender, age) can have a moderation effect on our hypotheses. Second, longitudinal studies are needed to examine how users' perception toward different gratifications change over time and how these changes influence their subsequent news sharing behavior.

Conclusion

Although this is an emerging area of research and one which is not yet fully understood, it is short-sighted to believe that academic researchers are the only ones considering topics such as the determinants of news sharing behavior. Users must realize that attention is a form of currency, as it not only spreads information and opinions, but also drives ad-impresions and ultimately financial revenue. Thus, online media-outlets (credible or otherwise) seek to understand and ultimately influence the news-sharing behaviors of the public, and by all accounts they appear to be enjoying some successes in this endeavor. Through our findings we have made recommendations regarding how media outlets can improve the sharing of their own news by accommodating the preferences of their readers. For example, highlighting the credibility of the work (through readership statistics or awards) will bolster the sharing of items by those readers who are driven by the gratification to share information.

As members of today's always-connected society, we are constantly bombarded with information from all sides. One certainty is that the momentum of technological progress will continue to feed this tide of information, sweeping in with it both good and bad elements alike. It is possible is that the rapid uptake of social media has outpaced the average individual's ability to adapt and develop strategies to survive this information deluge. Leaving us, as a society, more vulnerable to the kinds of misinformation, Internet trolls and unwanted influences which have motivated the work discussed in this paper.

On a more positive note, the many recent high-profile breaches or intrusions have brought such topics out from the exclusive attention of technophiles, and into the mainstream spotlight. This may in time lead to increased awareness and vigilance when dealing with online information. These authors are cautiously optimistic that our society will head toward a cyber savvy equilibrium, where the many forces competing for our attention are kept in check through the age-old mantra: "do not believe everything you read".

Until that point, the growing attention on human factors, not just in news sharing, but also general online disclosures or privacy are a positive step toward recognition of the complex and inseparable interaction between humans

and computers in society. This research has contributed to the knowledge of news sharing in social media and has generated new opportunities for research into the role of cognitive style. As social media is firmly entrenched in society and forms an integral part of many people's lives, research that improves the experience or quality for users is potentially impactful. However, to improve the overall experience and quality of news sharing on social media, the environment must support the necessary cognitive style of the user. That is, instead of relying on technical countermeasures such as filters or blocking, users must be supported in making their own evaluation and judgments about the media which they choose to share and interact with.

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Appendix A. Measurement

Status seeking gratification

Please rate the following statements on why you share news content:

SS1	Because it helps me feel important when sharing news.
SS2	Because it helps me to gain status when sharing news.
SS3	Because it helps me to look good when sharing news.
SS4	Because I feel peer pressure to participate.
SS5	Because it helps me gain support and respect.

Socializing gratification

Please rate the following statements on why you share news content:

SOC1	Because I can talk about something with others.
SOC2	Because I feel involved with what's going on with other people.
SOC3	Because I can interact with others when sharing news.
SOC4	Because I can exchange ideas with others efficiently.
SOC5	Because it helps me keep in touch with others.

Information sharing gratification

Please rate the following statements on why you share news content:

IS1	To share information that might be useful to others.
IS2	To get feedback on information, I have found.
IS3	To provide information.
IS4	To share practical knowledge or skill with others.
IS5	To express myself freely.
IS6	To share information that might be of interest/entertaining to others.
IS7	To provide personal information about myself.
IS8	To tell others a little bit about myself.

Entertainment gratification

Please rate the following statements on why you share news content:

PE1	Because it is entertaining.
PE2	Because it is funny.
PE3	Because it is exciting.
PE4	Because it is enjoyable.

Pass time gratification

Please rate the following statements on why you share news content:

PT1	Because I just like to play around on Facebook
PT2	Because it is a habit just something to do
PT3	Because I have nothing to do
PT4	Because, it passes the time away, particularly when I am bored
PT5	Because everyone else is doing it

News quality

NQ1	News content on Facebook is of poor quality (<i>r</i>).
NQ2	News content on Facebook has a reputation for quality.

Credibility

CRE1	News content on Facebook is believable.
CRE2	News content on Facebook is trustworthy.
CRE3	News content on Facebook is credible.

Intention to share news

INT1	I intend to share news stories on Facebook in the future.
INT2	I expect to share news stories contributed by other users on Facebook.
INT3	I plan to share news stories on Facebook regularly.
INT4	I am certain that I will share news stories on Facebook.
INT5	It is possible that I will share news stories on Facebook.
