

A STUDY ON RELIABILITY OF NEWS SHARED IN SOCIAL MEDIA PLATFORMS (WITH REFERENCE TO WHATSAPP USERS)

Dr. R. Hepzibah Gnana Sinthiya

Assistant professor,
Department of Commerce, Voorhees College, Vellore.
Sinthiyasweety92@gmail.com
ORCID ID: 0000-0002-3497-2639

Abstract

Recent studies indicate that mobile messaging apps such as WhatsApp are widely used for sharing news by consumers. Media outlets have begun to disseminate news via social media sites like Facebook and WhatsApp. When it comes to chat app news, journalists still have a lot to learn. This study compares the trustworthiness of WhatsApp news to that of other social media platforms using the Diffusions of Innovations idea. This study discusses the reliability of news received through Whatsapp and the factchecking websites used by Vellore district Whatsapp users. For this purpose, various secondary data was studied, and a structured questionnaire was circulated among the Vellore district Whatsapp users, 200 samples were collected as primary data. Analysis was made using SPSS and the statistical tool chi-square test, SEM analysis and frequency table are used to derive the result. It is found that WhatsApp users in Vellore District rely on the news shared and they also check the authenticity of the news.

Keywords: News, WhatsApp, Fake news, Fact-checking, netizens, reliability.

INTRODUCTION

“You shall not spread a false report”-

BIBLE (Exodus 23:1)

According to Newman et al. (2018), WhatsApp has surpassed other social media platforms like Instagram and Twitter in terms of news use. In contrast to the stagnation or reduction in Facebook use overall, WhatsApp usage is on the rise across all categories, including news. Several nations now rank WhatsApp higher than Twitter when it comes to news, and its use has almost quadrupled since 2014. (Newman et al. 2018, 12). Half of the sample of Brazilian and Malaysian internet users use WhatsApp to get their news, while around a third of the Spanish and Turkish users do the same (Newman et al. 2018, 9). Thanks to their expanding user base, WhatsApp news channels are now a topic worth studying in the field of journalism. Scholars have focused on WhatsApp for its use in journalistic source communication (Frank et al., 2019) as well as group communication, such as group members discussing the veracity of news they hear (Suhaily & Soelasih, 2017) or audience members discussing news stories (Procopiuck, 2018). In the Vellore area, this research intends to examine how trustworthy WhatsApp news is according to its users. Two features that stem from WhatsApp's true purpose of mobile and interpersonal communication have been the subject of prior research on the app's use as a journalistic tool.

In response to the decrease in Facebook engagement, and with a focus on capturing the attention of a younger demographic, news organizations have initiated the delivery of news through WhatsApp and various other platforms. This revelation stems from a research study on the evolution of local news in the digital realm, which involved interviews with European journalists and editors. (Jenkins and Nielsen 2018). This demonstrates the possibility of a technological shift in the journalistic industry. Reporters use WhatsApp for interaction, which might lead to a shift in journalism's relationship dynamics (Angelicuzzi, Scolari, & Donato, 2017). This follows WhatsApp's original intent of facilitating interpersonal connection.

REVIEW OF LITERATURE

The concept of the diffusion of creativity investigates the social application of innovation (Cain et al., 2016). Cain identifies various factors that influence distribution and deconstructs the process into component elements. The author describes the adoption process in terms of the five distinct classifications of adopters—i.e., laggards, early majority, innovators, and early adopters—and characterizes it as an S-curve. This approach held significant importance. An illustration of how individuals utilize media technologies, such as mobile networking platforms (Leung and Wei 1999), television (Sharndama, 2013), and the Internet, was through the lens of novelty dissemination. The critique of innovation theory draws its appeal from a foundational theoretical framework in emergent communications science and contends that it is excessively simplistic and generalistic. Nonetheless,

innovation diffusion theory demonstrated immense value in elucidating the characteristics of its various phases and comprehending innovation as a process. In addition to the human level, the notion has effectively defined the dissemination of innovation within organizations. It has demonstrated a variety of degrees and levels of modern technology.

Thus, communication theorists employ the concept of creative dissemination, as exemplified in a newsroom. Garrison (2001) investigates the way newspapers incorporate online reporting. Singer (2004) examines the phenomenon of newsroom integration. Recent usage of the term to characterize the operation of social media in newsrooms: According to the findings of Tettamanzi et al., (2023), journalists' utilization of media platforms can be categorized into distinct phases of adaptation. Crittenden et al., (2019) delineate a methodology for transitioning the broadcast industry that integrates the utilization of newsroom media. Scientific, relational, and cultural innovation are named as components of newsroom creativity. Technological advancements include features such as immersive storytelling, a digital-first publishing approach, and the implementation of social media tools. They characterize link innovation as developments in public relations, which could potentially mean that the audience can influence coverage decisions. Cultural creativity provides valuable insights into the essence and functions of media.

According to Crittenden et al., (2019), technological progress in a newsroom undergoing change is more rapid than relational or cultural innovation. The authors further note that relational transformation was once a highly uncertain area in which contemporary techniques held a relative advantage. Primarily designed for interpersonal communication, WhatsApp is a smartphone application. Although a plugin version is available for personal computers, the software was designed specifically for use on portable devices, with smartphones being the most common platform. As such, it is inherently designed for mobile communication. The proliferation of smartphones and the widespread usage of WhatsApp have contributed to the platform's emergence as a prominent digital journalism medium. The precise attributes of mobile devices that facilitate the production and consumption of digital journalism have yet to be definitively identified through research (Hagberg et al., 2016). However, the examination of "local media" raises noteworthy concerns, such as the question of whether "journalistic content is exclusively developed for and produced by mobile devices" (Parida et al., 2019).

WhatsApp serves a dual role in the realms of news production and consumption. Journalists not only utilize the platform to connect with sources but also employ it to engage with their audience. This study delves into how newsrooms adapt to the dynamic nature of news in the mobile era. It explores unconventional WhatsApp systems employed by media organizations, blending the social networking features of WhatsApp with content distribution through smartphone applications. The research assesses the quality of mobile news networks facilitated by these systems.

Agrawal et al. (2022) indicate that analyses of changes in interaction reveal a strengthening relationship between the media and the public over time. Matt et al.'s (2015) findings suggest that only a limited number of correspondents use Twitter to generate news for their audience. Journalists perceive Twitter users as "involved beneficiaries," as described by Hepzibah et al. (2020), functioning as witnesses, idea generators, venues, and content analyzers in the early stages of the journalistic process. Broersma and Graham (2013) note that approximately 20% of tweets serve as the origin of news articles, highlighting Twitter's role in "expanding access to news and diversifying news material" (Broersma and Graham 2013,).

According to Javaid et al., (2023), the purpose of rumors is to acquire social recognition within a group. It is also noted that in the digital age, information spreads more rapidly among groups. In their conclusion, Sinthiya et al., (2020) assert that rumors negatively affect the community. To informing their subscribers (also referred to as the "newsletter"), media networks employ WhatsApp. Your audience may have transitioned from Facebook or Twitter to WhatsApp to discuss and share news with friends. An additional rationale for developing a WhatsApp platform could be that traditional publications wish to connect with a younger demographic (Jenkins and Nielsen 2018). The number of people accessing news via mobile phones is increasing. According to a Reuters Digital News survey, 62% of respondents across all 36 countries (Germany: 47%; Newman et al. 2018, 28) reported using their smartphones to access news in the past week. Brazilian newsrooms have engaged in discussions regarding the commitment feature of WhatsApp channels, given that WhatsApp is a prominent news platform globally.

According to the findings of Nasiri et al., (2020), journalists utilize WhatsApp channels to obtain information from their audience in news situations, including email, audio, and photographs. This content, in contrast to social media, is exclusively available through a singular media source. Journalists frequently use WhatsApp to bring individuals closer to the newsroom through means such as including reader comments in their materials. An investigation conducted by Rwandan journalists (McIntyre and Sobel 2019) that utilizes WhatsApp to incorporate output analysis, distribution, and evaluations demonstrates how the application fosters substantive dialogues with the public and exposes the news making process to the public. Following this, Hagberg et al., (2016) demonstrate how an Israeli journalist integrates his audience into multiple phases of news production via WhatsApp. The study's conclusion (Sinthiya & Kulothungan, 2021) states that the impact of each rumour on society in the Vellore region is equivalent. As individuals become more preoccupied with their health, they are prone to experiencing heightened levels of dread in response to any form of information.

Public participation is not a conventional pillar of the media. Many journalists have little knowledge and training (Meier, Kraus, and Michaeler 2018; Loosen 2016). Whilst various variables affect considerably how journalists are using social media (Gulyas 2013) in the editing process, conventional rituals overall obstruct the transition of the interaction with the viewer. The research that identifies reticence in audience participation was identified as "participatory disillusionment" after a stage of optimism

(Lawrence, Radcliffe, and Schmidt 2018). Recent public participation reports have highlighted the issues that journalists continue to participate in. Lawrence, Radcliffe, and Schmidt (2018) recognize the interaction of the public with technology, economy, and corporate culture. Meier, Kraus, and Michael (2018) stress that it is a paradigm shift for the media to embrace all perspectives of public involvement. These findings show that public participation should be used only to a limited degree with WhatsApp platforms.

OBJECTIVES

- 1) To analyze the Vellore district WhatsApp user's news reliability i.e. the information received through WhatsApp.
- 2) To find the fact-checking website used by Vellore district WhatsApp users to check the authenticity of the news.
- 3) To determine the outcome/reaction of fake news receiver when they identify a fake content.

RESEARCH METHODOLOGY

For analysis, various articles that dealt with the keyword "WhatsApp news" are considered as secondary data. A structured questionnaire was circulated among the Vellore district WhatsApp users, where 200 samples were collected as primary data. The importance of this analysis is to find whether the Vellore district WhatsApp users rely on WhatsApp as the main source to gather news and also to find the fact-checking websites used by them. The statistical tool frequency table and the chi-square test and SEM model is used for the analysis purpose and suggestions are given according to the derived results.

The reliability of news received by the Vellore district WhatsApp users.

Below is a frequency table that shows the reliability of news received by the Vellore district WhatsApp users.

Table 1.1

		Frequency	Percent
Valid	Yes	84	42.2
	No	24	12.0
	Sometimes	92	45.8
	Total	200	100.0

Table 1.1 shows that 42.2% of WhatsApp users trust the news they receive through WhatsApp and 45.8% of them trust the news sometimes. Therefore this reveals that WhatsApp users in the Vellore district rely on news received via Whatsapp most of the time.

Hypothesis:

The hypothesis with a two-tailed approach for the Chi-square test can be formulated as follows:

H1: "A significant disparity exists in the reliability of news received through WhatsApp across different age groups."

Table 1.1a

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21.289 ^a	12	.046
Likelihood Ratio	15.036	12	.239
N of Valid Cases	200		

The provided Table 1.1a illustrates a Pearson chi-square statistic of 21.289 with a corresponding p-value of .046. Additionally, the likelihood chi-square statistic is 15.036, and its associated p-value is .239. Consequently, at the significant level of 0.05, it is noteworthy that the p-value is higher. As a result, the study refrains from rejecting the null hypothesis. Instead, it asserts that there isn't sufficient evidence to indicate a significant association between Age and the reliability of WhatsApp news. The fact-checking website used by Vellore district WhatsApp users.

Below is a frequency table that shows the fact-checking website used by Vellore district WhatsApp users

Table 1.2

		Frequency	Percent
Valid	Yes	112	56.7
	No	24	12.8

	Maybe	64	30.5
	Total	200	100.0

Table 1.2 shows that 56.7% of WhatsApp users use the fact-checking website to check the authenticity of news they receive through WhatsApp and 30.5% of them use the fact-checking website sometimes. Therefore this reveals that WhatsApp users in the Vellore district are aware of the fact-checking websites and uses to check the authenticity.

Hypothesis:

The Chi-square test allows us to formulate the two-tailed alternative hypothesis (H1) as follows:

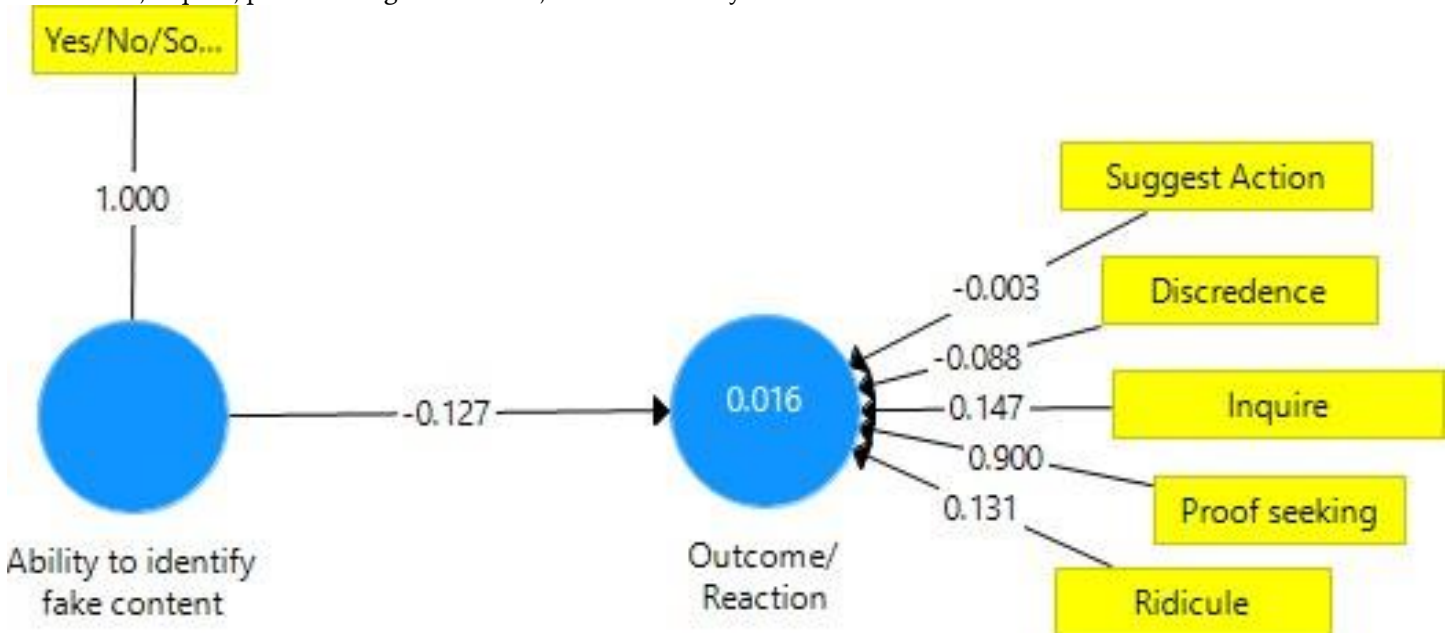
H1: suggesting a significant difference between the gender and the fact-checking websites utilized.

Table 1.2a

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.959 ^a	2	.228
Likelihood Ratio	2.972	2	.226
N of Valid Cases	200		

In the provided Table 1.2a, it is depicted that the Pearson chi-square statistic equals 2.959, with a corresponding p-value of .228. Additionally, the likelihood chi-square statistic is 2.972, and its associated p-value is .226. Consequently, at a significant level of 0.05, it is observed that the p-value exceeds this threshold. As a result, the study refrains from rejecting the null hypothesis and concludes that there is insufficient evidence to indicate an association between gender and the utilization of fact-checking websites.

The response of WhatsApp users upon identifying fake news is the focus of this model, developed based on a study by Ho, (2021) titled "Fake news: Acceptance by Demographics and Culture on Social Media." The Research published in the publication examined whether there was a connection between demographic variables and the acceptance of false information. As a basis, this research attempts to investigate if the capacity to recognise bogus news and the outcome of the recipient may be correlated. Since the latent variable i.e. outcome/reaction of the recipient is determined by the indicators such as, suggest Action, discredence, inquire, proof seeking and ridicule, it is measured by formative measurement scale.



The above SEM model states that the ability to identify fake information have negative effect on the outcome/reaction of a WhatsApp user.

FINAL RESULTS

Path Coefficients and Total effects

	Ability to identify fake information	Outcome/Reaction
Ability to identify fake information		-0.127
Outcome/Reaction		

Outer path model

The standardized weights along the path connecting the components to the indicator variables are denoted as measurement loadings. The outer model loadings can be found in the table below. These loadings can be interpreted as a type of item reliability coefficient in reflective models. A latent variable is considered more reliable when its loadings are closer to 1.0. Following the convention established by Henseler, Ringle, and Sarstedt (2012), path loadings exceeding 0.70 are indicative of a well-fitting reflective model.

Outer loading and weights

	Outer Loading		Outer weights	
	Ability to identify fake information	Outcome/Reaction	Ability to identify fake information	Outcome/Reaction
Suggest Action		0.674		-0.003
Dis-credence		0.692		-0.088
Inquire		0.680		0.147
Proof seeking		0.984		0.090
Ridicule		0.688		0.131
Yes/No/Sometime	1.000		1.000	

The above tables of outer loading (<0.07) shows that the indicators are fitted for the formative measurement model slight difference in reliability. The outer weight values are not higher than the 0.50, the indicators are highly significant for the model.

Reliability and validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Ability to identify fake information	1.000	1.000	1.000	1.000
Outcome/Reaction		1.000		

To assess the reliability of internal consistency, diverse tests including Cronbach's Alpha (greater than 0.70), rho_A (greater than 0.70), composite reliability (greater than 0.70), and average variance extracted (greater than 0.05) have been performed. The results shows that all the factors are highly reliable for the constructed model by satisfying the thumb rule values (David Garson, 2016). The convergent validity is also reliable as the average variance extracted is above 0.50.

Collinearity Statistics (VIF)

Outer VIF values

Suggest Action	1.853
Dis-credence	1.908
Inquire	1.995
Proof seeking	1.726
Ridicule	1.609
Yes/No/Sometime	1.000

Inner VIF values

	Ability to identify fake information	Outcome/Reaction
Ability to identify fake information		1.000
Outcome/Reaction		

One predictor of each indicator variable's value is described in reflective models, which are dependent variables. When the VIF (variance inflation factor) coefficient rises beyond 3.0, it's considered problematic collinearity (Kwong-Kay Wong, K, 2016). Therefore from the above table it is clear that both outer and inner indicators are highly collinear with each other as it lies below value 3.0.

R Square

	R Square	R Square Adjusted
Outcome/Reaction	0.016	0.015

According to Hair et al. (2011), when the R square values fall within the range of $R^2 < 0.25$, they are characterized as very weak. For R^2 values between 0.25 and 0.50, they are considered weak; for values between 0.50 and 0.75, they are categorized as moderate; and for R^2 values greater than or equal to 0.75, they are labeled as substantial. Hence, if the R square values for Outcome/Reaction are below 0.25, they are described as very weak.

Prediction Summary

	PLS				LV			
	RMSE	MAE	MAPE	Q ² _predict	RMSE	MAE	MAPE	Q ² _predict
Proof seeking	1.678	1.423	infinite	0.012	1.678	1.423	infinite	0.012
Suggest Action	1.572	1.275	infinite	0.002	1.572	1.275	infinite	0.002
Discredence	1.691	1.418	infinite	0.002	1.691	1.418	infinite	0.002
Ridicule	1.721	1.492	infinite	0.001	1.721	1.492	infinite	0.001
Inquire	1.556	1.278	infinite	0.004	1.556	1.278	infinite	0.004

To make and evaluate predictions based on PLS path model estimates, the approach makes use of training and holdout data. The examination serves to diagnose potential over-fitting of the PLS path model to the training data, a phenomenon consistently identified during the study. (Hair et al., 2011)

From the table above it is determined that the model outperforms most native benchmarks, according to the Q^2 results [$(Q^2 < 0)$ I.e. the indicator means from the analysis sample)

The RMSE of each indicator of PLS values are equal, when compared to LM Values. From the above table all indicator shows equal values, therefore it has moderate predictive powers.

CONCLUSION

This paper concludes by stating the WhatsApp users in the Vellore district rely on news received via WhatsApp but they also check the authenticity of the information they receive before forwarding it to others. Many deadly attacks and disruptions have taken place in civilization due to fake news spreading around the world. This research suggests that networkers should be cautious and share knowledge on social networks of some kind. The shared information should be checked two or three times before it is sent to others. It is very difficult to curb the dissemination of gossip, unless and until the networkers take this seriously and bring awareness and take responsibility.

FUTURE WORK

Further, a comparative study can be on the reliability of news received through various social media platforms.

REFERENCES

- [1] Agur, Colin. 2019. "Insularized Connectedness: Mobile Chat Applications and News Production." *Media and Communication* 7 (1): 179–188. doi:10.17645/mac.v7i1.1802 [Crossref], [Web of Science ®], [Google Scholar]
- [2] Anbazhagi & Kishore Kulothungan (2020). Digital Entrepreneurship- Studies In Indian Place Names/ISSN: 2394-3114 Vol-40-Issue-18-February -2020
- [3] Angeluci, Alan Cesar, Gabriela Scolari, and Rita Donato. 2017. "WhatsApp as an Actor: The Impact of the Interactive Application on Newsroom Journalism." *Revista Mediacao* 19 (24): 195–214. [Web of Science ®], [Google Scholar]
- [4] Baroni, Alice, and Andrea Mayr. 2018. "Tightening the Knots' of the International Drugs Trade in Brazil." *Journalism Practice* 12 (2): 236–250. doi:10.1080/17512786.2017.1397528 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [5] Belair-Gagnon, Valerie, Colin Agur, and Nicholas Frisch. 2016. "New Frontiers in Newsgathering: A Case Study of Foreign Correspondents Using Chat Apps to Cover Political Unrest." <https://academiccommons.columbia.edu/catalog/ac:wstqjq2bxt>. [Google Scholar]
- [6] Boczek, K., & Koppers, L. (2020). What's New about Whatsapp for News? A Mixed-Method Study on News Outlets' Strategies for Using WhatsApp. *Digital Journalism*, 8(1), 126–144. <https://doi.org/10.1080/21670811.2019.1692685>
- [7] Boczkowski, Pablo J., and Eugenia Mitchelstein. 2013. *The News Gap: When the Information Preferences of the Media and the Public Diverge*. Cambridge, MA: MIT Press. [Google Scholar]
- [8] Broersma, Marcel, and Todd Graham. 2013. "Twitter as a News Source." *Journalism Practice* 7 (4): 446–464. doi:10.1080/17512786.2013.802481 [Taylor & Francis Online], [Google Scholar]
- [9] Bruns, Axel. 2012. "Journalists and Twitter: How Australian News Organisations Adapt to a New Medium." *Media International Australia* 144 (1): 97–107. doi:10.1177/1329878X1214400114 [Crossref], [Google Scholar]
- [10] Cherubini, Federica, and Rasmus Kleis Nielsen. 2016. *Editorial Analytics: How News Media Are Developing and Using Audience Data and Metrics*. Oxford: Reuters Institute for the Study of Journalism. <http://www.ssrn.com/abstract=2739328>. [Google Scholar]
- [11] Costera Meijer, Irene, and Tim Groot Kormelink. 2015. "Checking, Sharing, Clicking and Linking." *Digital Journalism* 3 (5): 664–679. doi:10.1080/21670811.2014.937149 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [12] Cozma, Raluca, and Kuan-Ju Chen. 2013. "What's in a Tweet?" *Journalism Practice* 7 (1): 33–46. doi:10.1080/17512786.2012.683340 [Taylor & Francis Online], [Google Scholar]
- [13] Damme, Kristin Van, Cédric Courtois, Karel Verbrugge, and Lieven De Marez. 2015. "What's APPening to News? A Mixed-Method Audience-Centred Study on Mobile News Consumption." *Mobile Media & Communication* 3 (2): 196–213. doi:10.1177/2050157914557691 [Crossref], [Web of Science ®], [Google Scholar]
- [14] Dearing, James W., and Arvind Singhal. 2006. "Communication of Innovations: A Journey with Ev Rogers." In *Communication of Innovations: A Journey with Ev Rogers*, edited by Arvind Singhal and James Dearing, 15–28. New Delhi: SAGE Publications India Pvt. [Crossref], [Google Scholar]
- [15] Die Medienanstalten ALM GbR, ed. 2017. *Jahrbuch 2016/2017 – Landesmedienanstalten Und Privater Rundfunk in Deutschland*. Leipzig: Vistas. [Google Scholar]
- [16] Dimmick, John, John Christian Feaster, and Gregory J. Hoplamazian. 2011. "News in the Interstices: The Niches of Mobile Media in Space and Time." *New Media & Society* 13 (1): 23–39. doi:10.1177/1461444810363452 [Crossref], [Web of Science ®], [Google Scholar]
- [17] Dodds, Tomás. 2019. "Reporting with WhatsApp: Mobile Chat Applications' Impact on Journalistic Practices." *Digital Journalism* 7 (6): 725–45. doi: 10.1080/21670811.2019.1592693 [Taylor & Francis Online], [Google Scholar]
- [18] Ekdale, Brian, Jane B. Singer, Melissa Tully, and Shawn Harmsen. 2015. "Making Change: Diffusion of Technological, Relational, and Cultural Innovation in the Newsroom." *Journalism & Mass Communication Quarterly* 92 (4): 938–958. doi:10.1177/1077699015596337 [Crossref], [Web of Science ®], [Google Scholar]
- [19] Ekström, Mats, and Oscar Westlund. 2019. "The Dislocation of News Journalism: A Conceptual Framework for the Study of Epistemologies of Digital Journalism." *Media and Communication* 7 (1): 259–270. doi:10.17645/mac.v7i1.1763 [Crossref], [Web of Science ®], [Google Scholar]
- [20] Erdal, Ivar John, Kjetil Vaage Øie, Brett Oppegaard, and Oscar Westlund. 2019. "Invisible Locative Media: Key Considerations at the Nexus of Place and Digital Journalism." *Media and Communication* 7 (1): 166–178. doi:10.17645/mac.v7i1.1766 [Crossref], [Web of Science ®], [Google Scholar]
- [21] Ferrer-Conill, Raul, and Edson C. Tandoc. 2018. "The Audience-Oriented Editor: Making Sense of the Audience in the Newsroom." *Digital Journalism* 6 (4): 436–453. doi:10.1080/21670811.2018.1440972 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [22] Garrison, Bruce. 2001. "Diffusion of Online Information Technologies in Newspaper Newsrooms." *Journalism: Theory, Practice & Criticism* 2 (2): 221–239. doi:10.1177/146488490100200206 [Crossref], [Google Scholar]
- [23] Goh, Debbie, Richard Ling, Liuyu Huang, and Doris Liew. 2017. "News Sharing as Reciprocal Exchanges in Social

- Cohesion Maintenance.” *Information Communication & Society* 22 (8): 1128–1144. [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [24] Gulyas, Agnes. 2013. “The Influence of Professional Variables on Journalists’ Uses and Views of Social Media.” *Digital Journalism* 1 (2): 270–285. doi:10.1080/21670811.2012.744559 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [25] Hermida, Alfred. 2013. “#Journalism.” *Digital Journalism* 1 (3): 295–313. doi:10.1080/21670811.2013.808456 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [26] Hermida, Alfred, David Domingo, Ari Heinonen, Steve Paulussen, Thorsten Quandt, Zvi Reich, Jane B. Singer, and Marina Vujanovic. 2011. “The Active Recipient: Participatory Journalism through the Lens of the Dewey–Lippmann Debate.” *#ISOJ Journal: The Official Research Journal of the International Symposium on Online Journalism* 1 (2): 1–12. <https://core.ac.uk/download/pdf/55727961.pdf>. [Google Scholar]
- [27] Jenkins, Joy, and Rasmus Kleis Nielsen. 2018. “The Digital Transition of Local News.” <http://www.digitalnewsreport.org/publications/2018/digital-transition-local-news/>. [Google Scholar]
- [28] Karnowski, Veronika, Thilo von, Pape, and Werner Wirth. 2011. “Overcoming the Binary Logic of Adoption: On the Integration of Diffusion of Innovations Theory and the Concept of Appropriation.” In *The Diffusion of Innovations. A Communication Science Perspective*, edited by Arun Vishwanath and George A. Barnett, 57–76. New York, NY: Peter Lang. [Google Scholar]
- [29] Kligler-Vilenchik, Neta. 2018. “Why We Should Keep Studying Good (and Everyday) Participation: An Analogy to Political Participation.” *Media and Communication* 6 (4): 111–114. doi:10.17645/mac.v6i4.1744 [Crossref], [Web of Science ®], [Google Scholar]
- [30] Kligler-Vilenchik, Neta, and Tenenboim, Ori. Forthcoming. “Sustained Journalist-Audience Reciprocity in a Meso-Newspace: The Case of a Journalistic WhatsApp Group.” *New Media & Society*. [Google Scholar]
- [31] Koppers, Lars, Jonas Rieger, Karin Boczek, and Gerret von Nordheim. 2019. “tosca. Tools for Statistical Content Analysis.” <https://CRAN.R-project.org/package=tosca>. [Google Scholar] Larsen, Otto N. 1962. “Innovators and Early Adopters of Television.” *Sociological Inquiry* 32(1): 16–33. doi:10.1111/j.1475-682X.1962.tb00527.x [Crossref], [Google Scholar]
- [32] Lasorsa, Dominic L., Seth C. Lewis, and Avery E. Holton. 2012. “Normalizing Twitter.” *Journalism Studies* 13 (1): 19–36. doi:10.1080/1461670X.2011.571825 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [33] Lawrence, Regina G., Damian Radcliffe, and Thomas R. Schmidt. 2018. “Practicing Engagement.” *Journalism Practice* 12 (10): 1220–1240. doi:10.1080/17512786.2017.1391712 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [34] Leung, Louis, and Ran Wei. 1999. “Who Are the Mobile Phone Have-Nots?: Influences and Consequences.” *New Media & Society* 1 (2): 209–226. [Crossref], [Google Scholar]
- [35] Loosen, Wiebke. 2016. “Publikumsbeteiligung Im Journalismus.” In *Journalismusforschung*, edited by Klaus Meier and Christoph Neuberger, 2nd ed., 287–316. Baden-Baden: Nomos. [Crossref], [Google Scholar]
- [36] McIntyre, Karen, and Meghan Sobel. 2019. “How Rwandan Journalists Use WhatsApp to Advance Their Profession and Collaborate for the Good of Their Country.” *Digital Journalism* 7 (6): 705–724. doi:10.1080/21670811.2019.1612261 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [37] Meier, Klaus, Daniela Kraus, and Edith Michaeler. 2018. “Audience Engagement in a Post-Truth Age.” *Digital Journalism* 6 (8): 1052–1063. doi:10.1080/21670811.2018.1498295 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [38] Molyneux, Logan. 2018. “Mobile News Consumption.” *Digital Journalism* 6 (5): 634–650. doi:10.1080/21670811.2017.1334567 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [39] Moon, Soo Jung, and Patrick Hadley. 2014. “Routinizing a New Technology in the Newsroom: Twitter as a News Source in Mainstream Media.” *Journal of Broadcasting & Electronic Media* 58 (2): 289–305. doi:10.1080/08838151.2014.906435 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [40] Newman, Nic, Richard Fletcher, Antonis Kalogeropoulos, David A. L. Levy, and Rasmus Kleis Nielsen. 2018. “Reuters Institute Digital News Report 2018.” [Google Scholar]
- [41] Noguera-Vivo, José Manuel. 2013. “How Open Are Journalists on Twitter? Trends towards the End-User Journalism.” *Communication & Society/Comunicación y Sociedad* 26 (1): 93–114. https://www.unav.es/fcom/communication-society/es/articulo.php?art_id=438. [Google Scholar]
- [42] Nordheim, Gerret von, Karin Boczek, and Lars Koppers. 2018. “Sourcing the Sources.” *Digital Journalism* 6 (7): 807–828. doi:10.1080/21670811.2018.1490658 [Taylor & Francis Online], [Google Scholar]
- [43] Paulussen, Steve. 2016. “Innovation in the Newsroom.” In *The SAGE Handbook of Digital Journalism*, edited by Tamara Witschge, C. W. Andersson, David Domingo, and Alfred Hermida, 192–206. London: SAGE. [Crossref], [Google Scholar]
- [44] Quandt, Thorsten. 2018. “Dark Participation.” *Media and Communication* 6 (4): 36–48. doi:10.17645/mac.v6i4.1519 [Crossref], [Web of Science ®], [Google Scholar]
- [45] Radio NRW GmbH. 2018. “Radio NRW: Sendegebiet.” <https://radionrw.de/nrw-lokalradios/sendegbiet.html>. [Google Scholar]

- [46] R Core Team. 2018. *R: A Language and Environment for Statistical Computing*. Wien: R Foundation for Statistical Computing. <http://www.R-project.org/>. [Google Scholar]
- [47] Rogers, Everett M. 2003. *Diffusion of Innovations*. 5th ed. New York, NY: Free Press. [Google Scholar]
- [48] Roopavathi & Kishore (2020). Motivational factors of Employee Retention and Engagement in Organization, 1080-1085. <https://doi.org/10.12733.VII2.535569.11713>
- [49] Silverstone, Roger, Eric Hirsch, and David Morley. 1991. "Listening to a Long Conversation: An Ethnographic Approach to the Study of Information and Communication Technologies in the Home." *Cultural Studies* 5 (2): 204–227. doi:10.1080/09502389100490171 [Taylor & Francis Online], [Google Scholar]
- [50] Sinthiya, R. H. G., & Kulothungan, K. (2021). *IMPACT OF DIGITAL RUMOURS IN AN ACUTE EVENT (With reference to WhatsApp users)*. 13(1), 113–125.
- [51] Sinthiya, R. H. G., & Kulothungan, K. (2020). Digital Rumours- Studies In Indian Place Names/ISSN: 2394-3114 Vol-40-Issue-18-February -2020
- [52] Singer, Jane B. 2004. "Strange Bedfellows? The Diffusion of Convergence in Four News Organizations." *Journalism Studies* 5 (1): 3–18. doi:10.1080/1461670032000174701 [Taylor & Francis Online], [Google Scholar]
- [53] Struckmann, Samson, and Veronika Karnowski. 2016. "News Consumption in a Changing Media Ecology: An MESM-Study on Mobile News." *Telematics and Informatics* 33 (2): 309–319. doi:10.1016/j.tele.2015.08.012 [Crossref], [Web of Science ®], [Google Scholar]
- [54] Swart, Joëlle, Chris Peters, and Marcel Broersma. 2017. "Navigating Cross-Media News Use." *Journalism Studies* 18 (11): 1343–1362. doi:10.1080/1461670X.2015.1129285 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [55] Swart, Joëlle, Chris Peters, and Marcel Broersma. 2018a. "Sharing and Discussing News in Private Social Media Groups." *Digital Journalism* 7 (2): 187–205. [Taylor & Francis Online], [Google Scholar]
- [56] Swart, Joëlle, Chris Peters, and Marcel Broersma. 2018b. "Shedding Light on the Dark Social: The Connective Role of News and Journalism in Social Media Communities." *New Media & Society* 20 (11): 4329–4345. doi:10.1177/1461444818772063 [Crossref], [Web of Science ®], [Google Scholar]
- [57] Tripathi, S., & Somaiya, J. (2021). A Study on Social Media Addiction Among Youth of Gujarat Using Factor Analysis. *Towards Excellence*, 13(3), 796-811. DOI: 10.37867/TE130364 [Google Scholar]
- [58] Usher, Nikki. 2014. *Making News at the New York Times*. Ann Arbor, MI: The University of Michigan Press. [Crossref], [Google Scholar]
- [59] Villi, Mikko, and José-Manuel Noguera-Vivo. 2017. "Sharing Media Content in Social Media: The Challenges and Opportunities of User-Distributed Content (UDC)." *Journal of Applied Journalism & Media Studies* 6 (2): 207–223. doi:10.1386/ajms.6.2.207_1 [Crossref], [Web of Science ®], [Google Scholar]
- [60] Westlund, Oscar. 2015. "News Consumption in an Age of Mobile Media: Patterns, People, Place, and Participation." *Mobile Media & Communication* 3 (2): 151–159. doi:10.1177/2050157914563369 [Crossref], [Web of Science ®], [Google Scholar]
- [61] Westlund, Oscar, and Stephen Quinn. 2018. "Mobile Journalism and MoJos." In *Oxford Research Encyclopedia of Communication*, edited by Jon F. Nussbaum. Oxford: Oxford University Press. doi: 10.1093/acrefore/9780190228613.013.841. [Crossref], [Google Scholar]
- [62] Wolf, Cornelia, and Anna Schnauber. 2015. "News Consumption in the Mobile Era." *Digital Journalism* 3 (5): 759–776. doi:10.1080/21670811.2014.942497 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- [63] Zeitungsmag 2018. "Tageszeitungen Mit Vollredaktionen." 2018. www.zeitungsmag.de. [Google Scholar]
- [64] Zhu, Jonathan J. H., and Zhou He. 2002. "Diffusion, Use and Impact of the Internet in Hong Kong: A Chain Process Model." *Journal of Computer-Mediated Communication* 7 (2). doi: 10.1111/j.1083-6101.2002.tb00139.x [Crossref], [Google Scholar]
- [65] Implications of WhatsApp forwarding. (n.d.). Retrieved November 18, 2021, from <https://timesofindia.indiatimes.com/readersblog/myrecolection/implications-of-whatsapp-forwarding-36254/> PARTIAL LEAST SQUARES (PLS-SEM) 2016 Edition. (n.d.). www.statisticalassociates.com A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) Second Edition. (n.d.).