

Diffusion of Misinformation on Social Media; Content and Effects Study

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Abstract

Social media has influenced all fields of life due to their interactivity and freedom without any gatekeeping but these advantages developed immense problems related to the validity of data. Social media platforms are becoming the most influential tool of interaction and most users spend many hours on different social media networks daily. Diffusion of Misinformation has become one of the major problems on social media which is defined as unintentionally sharing and posting content on social media. The issues associated with the misinformation on Facebook and Twitter are focused on picture, video, and text-based content. The key objective of the study is to analyze the relationship between user engagement, the continued influence of misinformation, and religious and political intolerance. The model of the continued influence effect of misinformation suggests that social media users are part of misinformation even after the identification of fact-check tools. The content analysis of political and religious misinformation content identified by the fact-check sources (N = 200) highlighted a positive relationship between the variables. The findings highlight the interconnected dynamics between intolerance and the spread of misinformation in the digital age. It suggests that the role of fact-check sources should be increased and social media users should be literate or mindful while consuming social media.

Keywords: *Social Media, Diffusion of Misinformation, Religious and Political Intolerance, Continued Influence.*

1. Introduction

The use of social media was anticipated to have surpassed 50% of the global population in 2020, and projections indicate a further upward trend in the next decade (Martel et al., 2021). The Internet makes our world a global village, it has become an important part of the lives of people, and it has a strong impact on every field of life. Social media has redefined the way of interacting with people (Hindman & Graphika, 2018).

Social media is becoming a most influential tool of interaction and most users spend many hours on different social media networks daily. The users are sharing and uploading millions of posts and tweets every second from all parts of the globe without any gatekeeper (Shapiro et al., n.d.). The new media

is quickly diffused among Americas, and web-based social networking is giving users more chances than at any time in recent memory (Rheingold, 2012). Over two-thirds of all people who have access to the Internet and about one-third of the global population use social media platforms (Web, n.d.).

The current improvements include many digital platforms such as online journals, wikis, media-sharing tools (including sound, image, video, and text), social networking platforms (such as Facebook), and virtual environments (*Verification Handbook*, n.d.). This phenomenon is most evident in the emergence of Web 2.0 when individuals who use the Internet have transitioned from passive recipients of information to actively generating material on various online platforms such as Twitter, YouTube, and blogs (Bursztyn et al., 2020).

Recently, there has been a rise in a type of misinformation that has been around for a long time: the spreading of clearly fake news stories that are cleverly disguised as reliable sources of information (Pennycook & Rand, 2019a). Misinformation is a dynamic phenomenon that undergoes continuous evolution, making identifying and tracking its transmission among online people a challenging task. Simultaneously, this phenomenon erodes our confidence in the veracity of information and has the potential to distort or impair the integrity of our democratic and other systems of government (Derczynski et al., n.d.). Facebook and other social media platforms have implemented a variety of algorithmic and policy modifications to mitigate the dissemination of inaccurate information (Kanozia & Arya, 2021). This fake news was discussed and largely spread via social media networks in the form of pictures, text, audio, and video formats to get the attention of the public. It is an important question what we do to discourage this kind of sharing and belief in fake or misinformation? (Pennycook & Rand, 2019b).

Before the advent of Internet networks, conducting this research required resource-intensive procedures, like random trials, surveys, and manual data gathering, to amass even modest data sets. Pakistan's media market has experienced massive growth commensurate with an expansion in the media landscape, economic growth, and increasing audiences in the past decade overall (Raza et al., 2022). According to the voices raised in the media, misinformation on social media is a major concern for the users who use it to collect information in crises (Hill, 2020). After the rise of Web 2.0, the concept of gatekeeping was dropped and the right to disseminate information was transferred to non-skilled journalists. These inexperienced users are posting and sharing misleading information using social media networks (Dailey & Starbird, 2014). Several emergency managers who were among the first to embrace social media emphasize the need to recognize and mitigate rumours and misinformation as crucial elements of their social media use (Qazvinian et al., 2011). It is important to note that the problem of false news and misinformation cannot be primarily attributed to advancements in digital technology (Kristin Sanders Rachael Jones et al., 2018). Misinformation refers to the phenomenon when claims propagate at a pace that surpasses the capacity of human fact-checking (Dailey & Starbird, 2014). The lack of middlemen could make it unclear what caused what, which could lead to guesswork, rumours, and mistrust (Vicario et al., 2016). Modern form of misinformation has become so ubiquitous in online social media that the World Economic Forum has identified it as one of the primary risks to human society (Bessi et al., 2015). Misinformation warnings are becoming more and more prevalent in American political discourse. During the 2016 US election season, false information proliferated on social media platforms, sparking discussions and alerting the misinformation about politics. Reliable alerts about false information typically come from reputable outside sources, present inaccurate target information, and stop false information from spreading and being accepted (Shekter-Porat, 2019).

The Internet is becoming a more important place for religious life in the twenty-first century than places like churches, mosques, and temples. These days, anyone can search online for a fresh take on religion without ever coming across a physical house of worship or a priest or teacher with ordination. The digital era provides talk boards, virtual prayer rooms, and worship experiences for all major global faiths, pagans, and emerging religious movements. Misinformation, religious intolerance, and information terrorism are also rampant (Barker et al., n.d.).

1.1 Categorizing Misinformation and Involved Actors

It is generally understood that disinformation can be classified as a subset of misinformation. This categorization is based on the inclusion of intentionality as a defining characteristic of disinformation, distinguishing it from misinformation, which primarily focuses on the content of the information rather than the motives of those disseminating it (Swire-Thompson & Lazer, 2020).

A close relationship exists between misinformation, disinformation, and rumors, and fake news. Even though rumors, misinformation, and disinformation are distinct ideas, they all have certain things in common with fake news. Certain research works suggest typologies for fake news that establish links between rumors, misinformation, disinformation, and fake news (S. Haque et al., 2022). Because fake news and rumors share characteristics such as ambiguity, uncertainty, and the subject matter of interest, fake news is often treated as a rumor. B)

False information, which may unintentionally cause people to be misled, and C) Disinformation, which may be created and spread to achieve a specific objective. Other names for fake news are misinformation and disinformation (M. M. Haque et al., 2020). Misinformation may be categorized into seven distinct forms of "problematic content".

These resources are beneficial for comprehending the dissemination of misinformation on a larger scale.

- 1) Satire or parody, both of which lack malicious intent yet possess the capacity to deceive.
- 2) False connections; arise when headlines, graphics, or captions fail to substantiate the underlying material.
- 3) Misleading content; is characterized by the deliberate manipulation of facts to shape the perception of a certain matter or person.
- 4) False context; refers to the act of disseminating authentic material with misleading or inaccurate contextual details.
- 5) Imposter content; refers to the creation of deceptive information that mimics authentic news sources.
- 6) Manipulated content; refers to the deliberate alteration of authentic information or pictures to mislead.
- 7) Fabricated content; refers to newly created information that is wholly untrue and intentionally crafted to mislead and inflict damage (Tara Susman-Peña et al., n.d.).

The misinformation ecosystem has three primary actors: authoritative sources of propaganda, websites disseminating false information, and individual purveyors of hoaxes. The whole spectrum of both human and non-human intermediates that facilitate communication between sources and recipients of information might be included in this category (Douglas, 2018).

1.2 Objectives

- To study the role of misinformation on the political and religious intolerance of social media users.
- To investigate the continued influence of misinformation on political and religious user engagement.
- To evaluate the user engagement on social media misinformation posts.

2. Literature Review

The dissemination of misinformation across society is amplified when it is consistently and widely transmitted among individuals. The escalating prevalence of online misinformation has emerged as a growing global concern within the realm of the internet. (Dailey & Starbird, 2014, Rana, 2020). Unverified rumors, propaganda, conspiracy theories, and inauthentic data have become more prevalent in both mainstream and digital media. Consequently, the verification of such information has come to be a significant consideration.

The concept of fake news emphasizes the distribution of inaccurate or deceptive material that is presented as news that is factual. During the Brexit vote in the Kingdom of England and the 2016 American presidential elections, this phenomenon became extremely popular (Hassan, Li, et al., 2015). this phenomenon is referred described as "post-truth". Although modern media outlets have the capacity for self-correction, they do not proactively correct rumors to the same extent as they could. It is essential to put in place a variety of approaches targeted at strengthening correction accuracy to minimize the accessibility of false information (Johnson & Kaye, 2010).

The widespread dissemination of false information on the outbreak of Ebola has led to a state of confusion among healthcare professionals. The commencement of a fresh civil war in the United States was erroneously inferred from a rudimentary military practice as disseminated on the Internet (Vicario et al., 2016). The emergence of social media platforms and blogs, which allow the avoidance of traditional gatekeepers like professional editors and peer reviewers, has facilitated the spread of misinformation (Lewandowsky et al., 2012a).

Misinformation and popular misconceptions have a long history in the political process, and misinformation on social media has caused widespread alarm in recent years. There is a prevailing worry among scholars and experts over the detrimental impact of misinformation disseminated via social media platforms on communities and democratic institutions (Allcott et al., 2019). The observed impact of the perceived veracity of misinformation on the dissemination of misinformation suggests that individuals are more inclined to spread information that they perceive as being truthful. Individual personality traits and particular incentives play a major role in the spread of false information through social media platforms (Chen et al., 2015).

This discovery is intriguing, considering previous research indicates that women tend to exhibit more caution in their online behavior. At present, there is a lack of clarity on the specific variables that motivate regular users to engage in the sharing of misinformation (Hassan, Tremayne, et al., 2015). Policymakers and the social media sector are now faced with the complex task of mitigating the

proliferation of fake news, misinformation, and hate speech. Similarly, medicine is concerned with disseminating health information that is erroneous, inaccurate, or incomplete (Chou et al., 2018). Regardless of its veracity, societal norms or an individual's belief system may have a big impact on how they react to news. There are many ways for people to accept false information, which can result in the development of false beliefs that, once internalized, are extremely resistant to correction (Bessi et al., 2015). Mark Zuckerberg, the Chief Executive of Facebook, said that the platform is now undertaking a renovation of its News Feed service (Scott, 2018).

The contemporary digital media environment, characterized by intense competition, has led to a decline in journalistic standards and a deterioration in thought variety. Consequently, misinformation, prejudice, and factual mistakes have become commonplace occurrences (Alaphilippe et al., n.d.). Addressing these issues effectively may result in a decrease in overall exposure to political news, thus leading to diminished levels of political interest and civic involvement (Hindman & Graphika, 2018). Tools for natural language processing and the retrieval of relevant medical literature are being developed to facilitate the verification of health claims by social media users. The political and healthcare domains have been the primary focus of misinformation research in social computing (Ghenai & Mejova, 2018). Vested interests may serve as a significant contributor to the dissemination of misinformation since corporate entities have consistently shown a prolonged and well-documented inclination to exert control over public discourse via the propagation of inaccurate information (Lewandowsky et al., 2012a). Google plays a significant role in the dissemination of false information and misinformation. Similar to what the technologies of radio and television have previously done, the Internet is now having a transformative impact on democracy on a global scale. The 2016 elections, both domestically and abroad, highlighted the significance of social media platforms like Facebook and Twitter in influencing voting patterns and political perspectives (Feingold et al., 2017).

The issues associated with the misinformation on Facebook, focus on both video and text-based content. The main obstacles include issues of privacy and security, the usability of social media platforms, identity manipulation, and the dissemination of misinformation (Househ et al., 2014). The process of determining rumors has four main components: the identification of rumors, the monitoring of their progression, the categorization of the posture taken toward the rumor, and the assessment of its truthfulness (Prakash & Madabushi, 2020). The dissemination of information has the potential to incite unwarranted alarm. In the context of daily routines, individuals often engage with social media platforms. However, during emergencies, there is a tendency to go back to conventional media sources due to a perceived lack of dependability on internet-based platforms (Reuter et al., 2017).

2.1 Hypotheses

- H1** User engagement reflected in social media misinformation content is positively associated with the content's political and religious intolerance levels.
- H2** The continued influence of misinformation content positively correlated with user engagement reflected in social media.
- H3** Political and religious intolerance reflected in social media misinformation content has a positive relationship with the continued influence of misinformation.

2.2 Research Questions

- RQ1** How misinformation is associated with social media users' political and religious intolerance?
- RQ2** What are the impacts of misinformation on Religious and political Misinformation Exposure on social media users?
- RQ3** What is the behavior of social media users with misinformation after identification by factcheck websites?

3. Theoretical Framework

The continued influence effect (also recognized as the continued influence of misinformation) refers to the way that lies persist in our intelligence. The CIE refers to the ability for information that is exposed to be false, to continue to influence memory and cognition. This research was conducted by Lewandowsky, Ecker, Swire, and Cook. The main goal of their study is to analyze the situations under which the CIE holds or goes away. They have investigated the hesitancy to discharge material from memory unless a worthwhile substitute is accessible to replace it and we increase the strength of the misinformation by repetition during the withdrawal process.

Because the CIE paradigm more closely resembles actual circumstances that call for conceptual revision, it has greater ecological validity. Because those who experienced dysphoric rumination did not hold on to unfavorable knowledge, the findings may lessen stigma. Negative intentional bias in dysphoric ruminating may increase the salience of negative misinformation. Retractions of negative misinformation are beneficial in dysphoric rumination. The majority of psychological research on the ongoing influence effect assesses the impact of false information on inferential reasoning or the reasons people give for why an event happened (Lewandowsky et al., 2012b).

The continued influence of misinformation in memory is a powerful influence on later reasoning. Even when the correction is accurately reported, people still fall back on misinformation (Seifert, 2002). The continuing impact effect of the misinformation refers to the fact that people typically rely on information even after it has been withdrawn. Reiterating false information during a correction may unintentionally reinforce the false information by making it more recognizable, which is one theory put out to explain why retractions are useless. Misinformation, or information that is believed to be real but later proves to be false, can nevertheless have an impact on people's decisions and ways of thinking even after it has been corrected by a reliable source and even if the correction is understood and subsequently remembered. It has been suggested that a myth's tendency to recur after correction is one of the reasons why corrections are so ineffectual. (Swire et al., 2017). Corrections frequently lessen the impact of false information on reasoning, but they do not always do so. Both political and non-political topics indeed exhibit this phenomenon. When incorrect information is consistent with someone's preexisting attitudes or worldview while the correction is not, the misinformation's ability to persist in influence despite corrections is frequently greatest (Aird et al., 2018). Even when the misinformation is proven to be false, people's false beliefs about a subject or a person can frequently have a long-lasting impact on their attitudes and conclusions. However, if a correction is strong and of excellent quality, the initial false information's impact will be lessened (Huang, 2017). This is partly due to motivated reasoning, which encourages people to accept information that supports their existing beliefs and reject information that contradicts them once a belief has been adopted. Consequently, any correct information—information that exposes misinformation—is terminated, often before it can have the intended outcome of informing opinions about misinformation (Vraga & Bode, 2017).

4. Methodology

The quantitative content analysis methodology will be used to collect data from Factcheck sources including AFP Pakistan and Sochlo Factcheck. To analyze the continued influence of misinformation, 100 political and 100 religious misinformation with a minimum of 3K user engagement on Facebook and Twitter platforms from October 2018 to March 2022 using the probability sampling technique was selected to analyze the correlation between the variables using SPSS. CIE was measured by the engagement on the posts in categories Yes and No after the identification of Factcheck sources, Intolerance is measured by the 3 categories, Risk, Hate Speech, and Target in the comments on the selected posts and tweets. Moreover, 3rd variable user engagement is categorized as Views, Likes, Comments, retweets, and Shares of each identified post or tweet.

5. Results

Table 1: *Correlation of User engagement reflected in social media misinformation content with political and religious intolerance levels and continued influence of misinformation (N = 200)*

	INTOL	CIE	UE
CIE	.214**	1	
UE	.170**	.033**	1

INTOL = Intolerance; CIE = Continued Influence of social media; UE = User Engagement

**. Correlation is significant at the 0.01 level (2-tailed).

To analyze H1 which is User engagement reflected in social media misinformation content is positively associated with the content's political and religious intolerance levels. Table 1 shows that User engagement (UE) correlates with political and religious intolerance (INTOL) at .170. It indicates a significant positive correlation between user engagement in misinformation content and political and religious intolerance, with a correlation coefficient of 0.170. The moderate positive linear correlation indicates that as political and religious intolerance increases, user engagement with misinformation increases also.

To test the H2, "The continued influence of misinformation content positively correlated with user engagement reflected in social media", the results disclose a significant positive correlation between the continued influence of misinformation content (CIE) and user engagement reflected in social media (UE), $r = .033$, $p < .01$. This positive relationship indicates that as the continued influence of social media (CIE) increases, there is a corresponding increase in user engagement with social media misinformation content (UE). The H3 which is Political and religious intolerance reflected in social media misinformation content has a positive relationship with the continued influence of misinformation. The table indicates the positive correlation between Political and religious intolerance (INTOL) and the continued influence of misinformation (CIE), $r = .214$ and $p < .01$. This positive correlation proposes that if there is an increase in the levels of political and religious intolerance increase, the continued influence of social media (CIE) increase respectively.

6. Conclusion

There is a significant positive association ($r = 0.214$, $p < .01$) between Intolerance towards politics and religion and engagement with misinformation on social media. This correlation highlights the possible influence of social media usage on the emergence or manifestation of intolerance towards politics and

religion. An increasing influence of misinformation in the social media environment is linked to higher user engagement, according to the investigation, which also revealed a positive correlation between user participation in misinformation-filled social media material and the misinformation's ongoing influence. Furthermore, the relationship between Political Intolerance and the Persistent Influence of misinformation implies that an increase in political and religious intolerance is accompanied by an increase in the ongoing influence of misinformation on social media. These results demonstrate the interdependent relationships between bigotry and the dissemination of false information in the digital age. These findings underscore the complicated links among users' involvement with misinformation on social media, intolerance towards politics and religion, and the persistent impact of misinformation. The results prompt questions about how social media shapes and reflects public attitudes, perceptions, and beliefs, especially when it comes to religious and political tolerance. It is crucial to remember that even though these correlations offer insightful information, they do not prove causality. It is recommended that users of social media be literate or careful when using the platform and that the function of fact-checking sources be strengthened. To reduce the negative effects of their networks, social media platforms should revise their privacy policies. Additional investigation is required to examine the fundamental mechanisms and the wider implications of these links in the developing landscape of social media and misinformation.

References

- Aird, M. J., Ecker, U. K. H., Swire, B., Berinsky, A. J., & Lewandowsky, S. (2018). Does truth matter to voters? the effects of correcting political misinformation in an Australian sample. *Royal Society Open Science*, 5(12). <https://doi.org/10.1098/rsos.180593>
- Alaphilippe, Alexandre., Gizikis, Alexis., Hanot, Clara., Bontcheva, Kalina., & European Parliament. European Parliamentary Research Service. Scientific Foresight Unit. (n.d.). *Automated tackling of disinformation : major challenges ahead*.
- Allcott, H., Gentzkow, M., & Yu, C. (2019). Trends in the diffusion of misinformation on social media. *Research and Politics*, 6(2). <https://doi.org/10.1177/2053168019848554>
- Barker, E., Dawson, L. L., Herring, D., Højsgaard, M. T., Introvigne, M., Kim, M.-C., Laney, M. J., Linderman, A. G., Lövheim, M., MacWilliams, M., O, S. D., Piff, D., & Warburg, M. (n.d.). *Religion and Cyberspace*.
- Bessi, A., Petroni, F., Del Vicario, M., Zollo, F., Anagnostopoulos, A., Scala, A., Caldarelli, G., & Quattrociocchi, W. (2015). Viral misinformation: The role of homophily and polarization. *WWW 2015 Companion - Proceedings of the 24th International Conference on World Wide Web*, 355–356. <https://doi.org/10.1145/2740908.2745939>
- Bursztyn, L., Rao, A., Roth, C., Yanagizawa-Drott, D., Alesina, A., Candelaria, L., Cantoni, D., Caprettini, B., Dix, R., Droste, M., Ferrara, E. La, Glaeser, E., Han, R., Mattheis, R., Nunn, N., Obermeyer, Z., Perez-Truglia, R., Stegman, A., Yang, D., ... Zhao, A. (2020). *Misinformation During a Pandemic Misinformation During a Pandemic **.
- Chen, X., Sin, S. C. J., Theng, Y. L., & Lee, C. S. (2015). Why Do Social Media Users Share Misinformation? *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries, 2015-June*, 111–114. <https://doi.org/10.1145/2756406.2756941>
- Chou, W. Y. S., Oh, A., & Klein, W. M. P. (2018). Addressing Health-Related Misinformation on Social Media. In *JAMA - Journal of the American Medical Association* (Vol. 320, Issue 23, pp. 2417–2418). American Medical Association. <https://doi.org/10.1001/jama.2018.16865>
- Dailey, D. 1, & Starbird, K. (2014). Journalists as Crowdsourcerers: Responding to Crisis by Reporting with a Crowd. In *Journal of Computer-Human and Ecological Risk Assessment: An International Journal* (Vol. 1, Issue 3).

- Derczynski, L., Oskar, T., Lindqvist, A., Bendsen, M. V., Inie, N., Pedersen, J. E., & Pedersen, V. D. (n.d.). *Misinformation on Twitter During the Danish National Election: A Case Study*. <https://www.mm.dk/tjekdet/artikel/kriminaliteten->
- Douglas, C. (2018). Religion and Fake News: Faith-Based Alternative Information Ecosystems in the US and Europe. *Review of Faith and International Affairs*, 16(1), 61–73. <https://doi.org/10.1080/15570274.2018.1433522>
- Feingold, R., Heafey, E. A., & Herman, L. (2017). *Google's Role in Spreading Fake News and Misinformation*. <https://www-cdn.law.stanford.edu/wp->
- Ghenai, A., & Mejova, Y. (2018). Fake cures: User-centric modeling of health misinformation in social media. *Proceedings of the ACM on Human-Computer Interaction*, 2(CSCW). <https://doi.org/10.1145/3274327>
- Haque, M. M., Yousuf, M., Alam, A. S., Saha, P., Ahmed, S. I., & Hassan, N. (2020). Combating Misinformation in Bangladesh: Roles and Responsibilities as Perceived by Journalists, Fact-checkers, and Users. *Proceedings of the ACM on Human-Computer Interaction*, 4(CSCW2). <https://doi.org/10.1145/3415201>
- Haque, S., Eberhart, Z., Bansal, A., & McMillan, C. (2022). Semantic Similarity Metrics for Evaluating Source Code Summarization. *IEEE International Conference on Program Comprehension, 2022-March*, 36–47. <https://doi.org/10.1145/nnnnnnnn.nnnnnnn>
- Hassan, N., Li, C., & Tremayne, M. (2015). Detecting check-worthy factual claims in presidential debates. *International Conference on Information and Knowledge Management, Proceedings, 19-23-Oct-2015*, 1835–1838. <https://doi.org/10.1145/2806416.2806652>
- Hassan, N., Tremayne, M., Yang, J., Yu, C., Adair, B., Hamilton, J. T., & Li, C. (2015). *The Quest to Automate Fact-Checking Fact-checking View project Computational Journalism View project The Quest to Automate Fact-Checking*. [http://reporterslab.org/snapshot-of-fact-checking-around-the-](http://reporterslab.org/snapshot-of-fact-checking-around-the-Hill)
- Hill, R. L. (2020). What is at stake in data visualization? A feminist critique of the rhetorical power of data visualizations in the media. In *Data Visualization in Society*. Amsterdam University Press. https://doi.org/10.5117/9789463722902_ch23
- Hindman, M., & Graphika, V. B. (2018). *Disinformation, and Influence Campaigns on Twitter "Fake News."*
- Househ, M., Borycki, E., & Kushniruk, A. (2014). Empowering patients through social media: The benefits and challenges. *Health Informatics Journal*, 20(1), 50–58. <https://doi.org/10.1177/1460458213476969>
- Huang, H. (2017). A War of (Mis)Information: The Political Effects of Rumors and Rumor Rebuttals in an Authoritarian Country. *British Journal of Political Science*, 47(2), 283–311. <https://doi.org/10.1017/S0007123415000253>
- Johnson, T. J., & Kaye, B. K. (2010). Believing the blogs of war? How blog users compare on credibility and characteristics in 2003 and 2007. *Media, War and Conflict*, 3(3), 315–333. <https://doi.org/10.1177/1750635210376591>
- Kanozia, R., & Arya, R. (2021). "Fake news", religion, and COVID-19 vaccine hesitancy in India, Pakistan, and Bangladesh. In *Media Asia* (Vol. 48, Issue 4, pp. 313–321). Routledge. <https://doi.org/10.1080/01296612.2021.1921963>
- Kristin Sanders Rachael Jones, A. L., Kristin Sanders, A., & Jones, R. L. (2018). *Clicks at Any Cost: Why Regulation Won't Upend the Economics of Fake News* (Vol. 2). <https://scholarship.law.missouri.edu/betrhttps://scholarship.law.missouri.edu/betr/vol2/iss2/6>
- Lewandowsky, S., Ecker, U. K. H., Seifert, C. M., Schwarz, N., & Cook, J. (2012a). Misinformation and Its Correction: Continued Influence and Successful Debiasing. *Psychological Science in the*

- Public Interest, Supplement, 13*(3), 106–131. <https://doi.org/10.1177/1529100612451018>
- Lewandowsky, S., Ecker, U. K. H., Seifert, C. M., Schwarz, N., & Cook, J. (2012b). Misinformation and Its Correction: Continued Influence and Successful Debiasing. *Psychological Science in the Public Interest, Supplement, 13*(3), 106–131. <https://doi.org/10.1177/1529100612451018>
- Martel, C., Mosleh, M., & Rand, D. G. (2021). You're definitely wrong, maybe: Correction style has minimal effect on corrections of misinformation online. *Media and Communication, 9*(1), 120–133. <https://doi.org/10.17645/mac.v9i1.3519>
- Pennycook, G., & Rand, D. G. (2019a). Fighting misinformation on social media using crowdsourced judgments of news source quality. *Proceedings of the National Academy of Sciences of the United States of America, 116*(7), 2521–2526. <https://doi.org/10.1073/pnas.1806781116>
- Pennycook, G., & Rand, D. G. (2019b). Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition, 188*, 39–50. <https://doi.org/10.1016/j.cognition.2018.06.011>
- Prakash, A., & Madabushi, H. T. (2020). *Incorporating Count-Based Features into Pre-Trained Models for Improved Stance Detection*. Online. <https://github.com/Anushka-Prakash/RumourEval-2019-Stance-Detection/>
- Qazvinian, V., Rosengren, E., Radev, D. R., & Mei, Q. (2011). *Rumor has it: Identifying Misinformation in Microblogs*. <http://bit.ly/bk42ZQ>
- Rana, A. A. (2022). The right of custody of minor: A comparative study of Shari'ah and Pakistani legal system. *International Journal of Human Rights and Constitutional Studies*, Online First, 350-368. <https://doi.org/10.1504/IJHRCS.2022.126182>
- Rana, A. A., & Siddique, H. M. (2021). The Transgender Persons (Protection of Rights) Act 2018: A Shariah appraisal of self-perceived gender identity and right of inheritance of the transgender. *Competitive Educational Research Journal (CERJ), 2*(4), 77–88. <https://doi.org/10.2139/ssrn.4145921>
- Rao Qasim Zahid, & Afrasiab Ahmed Rana. (2021). The Competition Law and Digital Technologies in Pakistan: Critical Analysis. *Al-Kashaf, 1*(1), 1–8.
- Raza, M. R., Saeed, M. U., & Ali, Z. (2022). Media Concentration and Journalistic Independence in Pakistan Audience and Journalists' Perspectives. *Online Journal of Communication and Media Technologies, 12*(1), e202205. <https://doi.org/10.30935/ojcm/11462>
- Reuter, C., Kaufhold, M. A., Spielhofer, T., & Hahne, A. S. (2017). Social media in emergencies: A representative study on citizens' perception in Germany. *Proceedings of the ACM on Human-Computer Interaction, 1*(CSCW). <https://doi.org/10.1145/3134725>
- Rheingold, H. (2012). *Net smart : how to thrive online*. MIT Press.
- Scott, B. (2018). *Disinformation Is Becoming Unstoppable IDEAS*.
- Seifert, C. M. (2002). *The continued influence of misinformation in memory: What makes a correction effective?* (Vol. 41).
- Shapiro, I. T., Sokhey, A., Wolak, J., Fitzgerald, J., Griffin, J., & Saunders, K. (n.d.). *The Public's Relationship With Political Misinformation*.
- Shekter-Porat, N. (2019). Southwell, B. G., Thorson, E. A., & Sheble, L. (eds.) (2018). Misinformation and mass audiences. Austin, TX: University of Texas Press. 307 pp. *Communications, 44*(4), 469–470. <https://doi.org/10.1515/commun-2019-2029>
- Swire, B., Berinsky, A. J., Lewandowsky, S., & Ecker, U. K. H. (2017). Processing political misinformation: Comprehending the trump phenomenon. *Royal Society Open Science, 4*(3). <https://doi.org/10.1098/rsos.160802>
- Swire-Thompson, B., & Lazer, D. (2020). Public Health and Online Misinformation: Challenges and

- Recommendations. *Annu. Rev. Public Health*, 41, 433–451. <https://doi.org/10.1146/annurev-publhealth>
- Tara Susman-Peña, W., Druckman, M., & Oduro, N. (n.d.). *Fighting Misinformation Digital Media Literacy Course Guidebook Better Living Topic Personal Development Subtopic*. www.thegreatcourses.com
- Verification Handbook*. (n.d.). <http://emergencyjournalism.net>,
- Vicario, M. Del, Bessi, A., Zollo, F., Petroni, F., Scala, A., Caldarelli, G., Stanley, H. E., & Quattrociocchi, W. (2016). The spreading of misinformation online. *Proceedings of the National Academy of Sciences of the United States of America*, 113(3), 554–559. <https://doi.org/10.1073/pnas.1517441113>
- Vraga, E. K., & Bode, L. (2017). Using Expert Sources to Correct Health Misinformation in social media. *Science Communication*, 39(5), 621–645. <https://doi.org/10.1177/1075547017731776>
- Web, T. T. (n.d.). *State of Misinformation 2021-United States-The Trusted Web*.