

THE ROLE OF TECHNOLOGY IN SHAPING PUBLIC OPINION: A THEORETICAL FRAMEWORK OF ONLINE NEWS CONSUMPTION

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ABSTRACT

This study examines the impact of technology on public opinion through online news consumption, analyzing the relationship between online news sources and public opinion.

Utilizing secondary data from existing academic datasets, this research investigates how demographic characteristics influence online news consumption and its subsequent effect on public opinion.

The study, through content analysis, identifies trends and patterns in online news consumption and its influence on public opinion. Agenda-Setting Theory, Framing Theory, and Uses and Gratifications Theory provides theoretical grounds to the entire research work along with other theoretical concepts like Echo Chambers, Misinformation and Social Media Dynamics.

Findings shed light on the significant role technology plays in shaping public opinion, highlighting the influence of online news sources on public perception. The study reveals variations in online news consumption patterns across demographics, impacting public opinion. Social media emerges as a critical factor in shaping public opinion, with online news sources demonstrating agenda-setting capabilities.

This research contributes to the understanding of technology's impact on public opinion, informing strategies for media outlets, policymakers, and communication practitioners. By elucidating the

complex dynamics between online news consumption and public opinion, this study provides valuable insights for navigating the rapidly evolving media landscape.

Keywords: *Technology, Public Opinion, Online News Consumption, Social Media, Agenda-Setting, Framing, Demographic Characteristics.*

INTRODUCTION

The advent of the digital age has revolutionized the way information is disseminated and consumed, profoundly impacting public opinion. The proliferation of online news sources and social media platforms has transformed the media landscape, enabling unprecedented access to information. However, this increased accessibility raises essential questions about the influence of technology on public opinion.

In today's digital ecosystem, online news consumption has become a dominant mechanism for information acquisition. Studies suggest that online news sources significantly shape public perception, with social media platforms serving as critical gatekeepers of information (**del Pozo *et al.* 2023; SMd *et al.* 2023**). The intersection of technology and public opinion is complex, with demographic characteristics, such as age, education, and income, playing a pivotal role in online news consumption patterns.

Despite the growing importance of online news consumption, there is a need for comprehensive research examining its impact on public opinion. Existing studies often focus on specific aspects, such as social media's influence or online news credibility. This study aims to bridge this gap by investigating the relationship between online news consumption and public opinion, considering demographic factors.

RESEARCH OBJECTIVES

The research objectives are as follows:

- To examine the influence of online news consumption on the formation and evolution of public opinion.
- To analyze the relationship between social media usage patterns and the shaping of public opinion.
- To investigate the role of online news platforms in reinforcing biases and fostering echo chambers, particularly during political crises.

This study is grounded in three theoretical frameworks:

1. Agenda-Setting Theory: Examines how media influences public opinion by setting the agenda.

2. Framing Theory: Analyzes how information is presented and its impact on public perception.

3. Uses and Gratifications Theory: Explores how individuals use media to satisfy their needs.

By exploring the intersection of technology and public opinion, this study contributes to our understanding of the complex dynamics shaping public perception in the digital age. The findings will inform media outlets, policymakers, and communication practitioners seeking to navigate the evolving media landscape.

METHODOLOGY

The research seeks to answer three key questions. They are as follows:

- How does online news consumption influence public opinion?
- What is the relationship between social media use and public opinion?
- How do online news platforms contribute to the reinforcement of biases and the creation of echo chambers during political crises?

To address these questions, this study employs an approach to analyzing secondary data from existing datasets. By examining the intersection of social media, online news consumption, and public opinion, this research contributes to our understanding of how technology contributes to shaping public opinion.

THEORETICAL FRAMEWORKS

This study is grounded in three theoretical frameworks that provide a comprehensive understanding of the relationship between technology, online news consumption, and public opinion.

Agenda-Setting Theory

In accordance with Agenda-Setting Theory, media's influence on the opinion of public is undeniable and this entire process is facilitated through the determination of the importance of issues (McCombs & Shaw, 2005). This theory suggests that media outlets select and highlight specific topics, assign prominence and emphasis, and shape public perception of issue importance.

Framing Theory

Framing Theory examines how information is presented and its impact on public perception **(Goffman, 1974)**. Frames influence interpretation and understanding, shape attitudes and opinions, and can be positive, negative, or neutral.

Uses and Gratifications Theory

Uses and Gratifications Theory explores how individuals use media to satisfy their needs, including information seeking, social interaction, entertainment, and identity formation **(Katz, E., Blumler & Gurevitch, 1973)**.

Interconnections

These theories intersect in complex ways:

- Agenda-setting influences framing by determining which issues are highlighted and how they are presented.
- Framing affects agenda-setting by influencing which issues are considered important.
- Uses and gratifications influence agenda-setting and framing by shaping individuals' information-seeking behaviors.

THE IMPACT OF ONLINE NEWS CONSUMPTION ON PUBLIC OPINION: MECHANISMS, INSIGHTS, AND APPLICATIONS

Public opinion, or the collective views, attitudes, and judgments of a group regarding a specific issue, is shaped by various factors **(Glynn, 2018)**. These include the accuracy, reliability, and comprehensiveness of information; media presentation, narratives, and coverage; social interactions; education and background; personal experiences; social and political context; and emotions and values. The widespread adoption of technology and online news consumption has significantly impacted public opinion formation **(McCombs & Valenzuela, 2020)**. Online news consumption shapes public opinion. It helps form perceptions, strengthens pre-existing biases, and contributes to the polarization of opinions. The influence of online news is complex, affecting political views, societal values, and even individuals' perceptions of conflict and peace. This

impact is facilitated by different mechanisms, such as sentiment analysis, reinforcement of personal preferences, and effects specific to each platform.

As per **Pratama, Santoso and Ardiansyah (2024)**, Online news consumption analysis helps understand public sentiment and preferences by examining how people interact with news on digital platforms. This involves analyzing data from a variety of sources, including news websites, social media, search engines, and podcasts. Analyzing online news consumption provides real-time insights into public opinion, allowing for comprehensive coverage and accuracy (**Seib, 2002**). Automated analysis minimizes bias, identifying key influencers and trends. This enables content optimization, tailoring news to audience interests. Tools like Netlytic, Natural Language Processing, and Machine Learning facilitate analysis. Applications include:

- **Media and journalism understanding audience preferences**
- **Marketing and advertising targeting demographics**
- **Politics and public policy gauging public opinion**
- **Research and academia studying online behavior**

By leveraging big data tools, online news consumption analysis offers valuable insights into public sentiment, preferences, and behaviors, enabling informed decision-making and effective communication.

ECHO CHAMBERS AND BIAS REINFORCEMENT: THE ROLE OF ONLINE NEWS IN POLITICAL CRISES

In accordance with **Baccini, Sudulich and Wall (2016)**, in times of political crisis, online news consumption can reinforce existing biases, rather than challenging them. This phenomenon, known as "echo chambers" or "filter bubbles," occurs when individuals are selectively exposed to information that aligns with their pre-existing views. During the economic crisis in Ireland, for example, citizens who consumed political information online were more likely to blame the European Union for economic issues (**Baccini, Sudulich & Wall, 2016**). This reinforced their negative predispositions towards the EU, rather than encouraging a nuanced understanding of the complex factors contributing to the crisis.

Several factors contribute to this reinforcement of biases:

- People have tendencies of seeking out information that are aligned with their existing views, and avoid information that contradicts them (**Pecile *et al.* 2024**). Online algorithms, such as those used by social media platforms and search engines, prioritize content that aligns with users' past interactions, further solidifying their perspectives.
- Online news sources often cater to specific ideologies, reinforcing existing biases and prejudices (**Spohr, 2017**). Citizens may also engage in "selective exposure," actively seeking out information that supports their views while ignoring or dismissing opposing viewpoints.

This reinforcement of biases can have significant consequences, including:

- **Increased polarization and division among citizens**
- **Reduced critical thinking and nuanced understanding**
- **Intensified misinformation and conspiracy theories**
- **Decreased trust in institutions and media**

To mitigate these effects, it is essential to promote media literacy, it is important to encourage diverse information consumption, and foster critical thinking skills (**Al Danani & Yassen, 2023**). By recognizing the potential for online news consumption to reinforce biases, citizens can take steps to seek out diverse perspectives, engage in constructive dialogue, and cultivate a more informed and empathetic understanding of complex issues.

THE POWER OF ONLINE MEDIA IN SHAPING PUBLIC OPINION: CONFLICT NARRATIVES, GLOBAL PERCEPTIONS, AND SOCIAL MEDIA DYNAMICS

Online media, as argued by **Marukhovskiy *et al.* (2024)**, has become a vital influencer of public opinion, particularly in the context of military conflicts and peace prospects. The ongoing conflict in Ukraine serves as a prime example, where changes in online media content have been significantly linked to public confidence in victory and attitudes towards military operations. The Ukrainian public's perception of the conflict has been shaped by the narratives presented in online media outlets. Research has shown that online news coverage can either escalate or de-escalate tensions, depending on the tone and content (**Patel, 2005**). For instance, online media outlets that

emphasize Ukrainian military successes and highlight Russian aggression tend to boost public morale and confidence in victory. Conversely, online media coverage focusing on civilian casualties, humanitarian crises, and economic hardships can foster pessimism and skepticism towards military operations. This dichotomy underscores the significant impact of online media on public sentiment. Traditional news outlets like The New York Times, as noted by **Huang, Cook and Xie (2021)** play a powerful role in influencing public opinion, especially regarding perceptions of foreign nations. Their extensive reach and credibility allow them to shape narratives and frame international issues in specific ways. For example, studies have shown that The New York Times' reporting on China significantly influences how Americans perceive the country (**Huang, Cook & Xie, 2021**). The coverage highlights particular themes, policies, or events, which audiences then use as reference points. This demonstrates how media content can explain a considerable portion of the differences in public attitudes toward foreign nations.

Social media platforms have revolutionized the way people consume and interact with online news, influencing public opinion. These platforms enable users to create, upload, and share content, facilitating social interaction and information exchange. Social media's impact on public opinion is significant, as it allows users to:

- **Access diverse news sources**
- **Engage with others through comments and shares**
- **Form online relationships and networks**
- **Encounter various perspectives and opinions**

Examples of social media platforms influencing online news consumption include:

- **Facebook:** Personalized news feeds and algorithm-driven content
- **Twitter:** Real-time news updates and hashtag-driven discussions
- **Instagram:** Visual news representation and influencer-driven narratives
- **YouTube:** Video-based news analysis and commentary

THE DUAL IMPACT OF SOCIAL MEDIA ON PUBLIC OPINION: POLARIZATION, MOBILIZATION, AND THE SPREAD OF MISINFORMATION

Social media news consumption can lead to opinion polarization, particularly through the resonance effect, where different social groups experience varying cultivation effects based on their life experiences. Platforms like WhatsApp amplify this polarization, while others like YouTube may mitigate it. As argued by **Latif, Samad and Kadir (2024)**, social media platforms are of prime importance in terms of disseminating information with real-time monitoring of public opinion and engagement between policymakers and citizens being allowed. Referring to the case of Jordan's academic sector, **AlKhudari et al. (2024)** observed that social media significantly shapes opinions and beliefs of university students with the exchange of ideas being facilitated. In addition, it is considered instrumental in terms of adopting new perspectives. When it comes to reflecting social values and influencing public opinion through interaction amongst family members in the UAE, social media networks are also regarded instrumental. This observation was reflected in the research findings of **Al Tayer, Mohamad and Jalil (2023)**. On social media, the concepts of echo chambers and filter bubbles, as observed by **Latif, Samad and Kadir (2024)**, have become increasingly common. These phenomena occur when users are primarily exposed to content that aligns with their preexisting beliefs. This selective exposure is often driven by algorithms that personalize content based on user preferences and behavior. As a result, individuals may encounter limited perspectives, reinforcing their own viewpoints. Over time, this can significantly influence and potentially distort public perception. These patterns contribute to the polarization of opinions in society. For instance, during the 2016 US election, social media sentiment played a significant role in shaping public discourse (**Huh & Park, 2024**). News media and social platforms created feedback loops that amplified partisan viewpoints. This cyclical interaction further entrenched divisions among individuals. Consequently, the role of social media in influencing opinion became more apparent during this period. In addition to these, social media's contributions are extended to the areas of political mobilization and social movements. In this context, **Ishrat (2023)** argued that social media plays a crucial role in raising the voices of marginalized groups and promoting political engagement, although it also poses challenges such as the spread of misinformation.

While social media offers numerous advantages, it also comes with significant challenges. One major issue is the rapid spread of false information, which can mislead users and influence public opinion negatively (Kumar & Shah, 2018). The platform's ability to amplify unverified or biased content makes this problem more acute. Additionally, navigating social media effectively requires users to be proactive in educating themselves about identifying credible sources and avoiding misinformation. This emphasizes the need for digital literacy and responsible engagement in the online space.

THEORETICAL FRAMEWORK

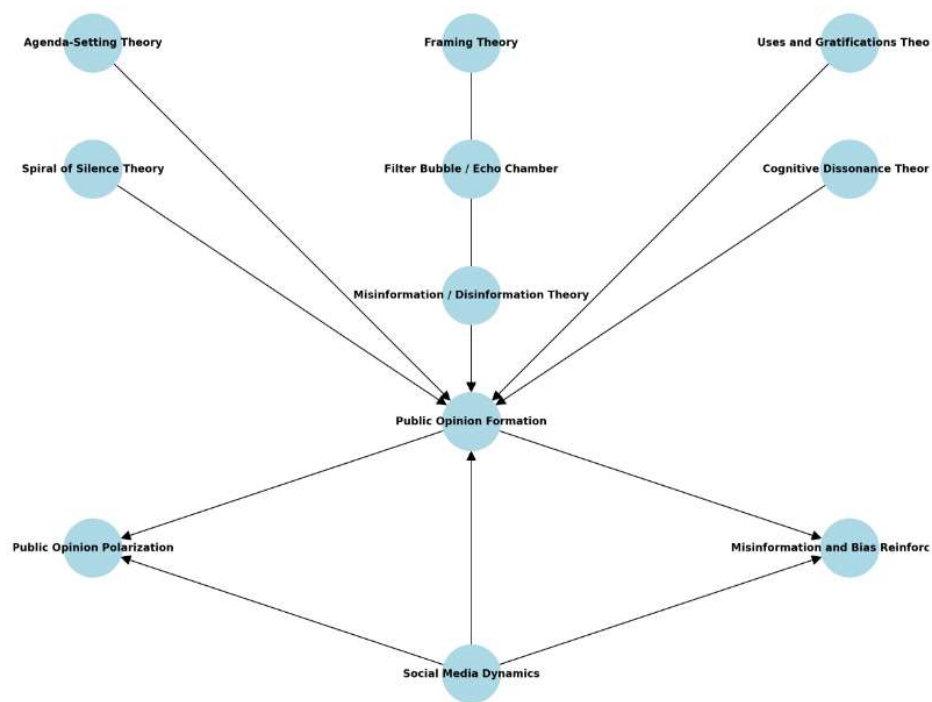


Figure 1: Theoretical Framework Developed based on the Analysis of Literature

The above-drawn theoretical framework has been developed on the basis of the concepts discussed above. It shows how different theories and theoretical underpinnings interact for influencing the process of forming public opinion along with polarization and the reinforcement of biases in the context of the consumption of online news. The theoretical framework integrates three earlier-specified theories along with the concepts like Echo Chambers, Misinformation and Social Media Dynamics. All of these contribute to shaping public opinion, perceptions, facilitating polarization and reinforcing bias.

CONCLUSION

This study highlights the impact of online news consumption and social media on shaping public opinion in the digital age. With reference to Agenda-Setting, Framing, and Uses and Gratifications theories, it examines and underscores the interrelationship between online platforms and public perception and analyses how the relationship between two variables is realised by prioritizing specific issues, presenting information in particular ways, and catering to user preferences. The findings highlight that while online media and social networks provide unprecedented access to diverse perspectives. In addition, it contribute to fostering echo chambers, reinforce biases, and exacerbate opinion polarization is undeniable.

In political crises and global conflicts, online news can escalate tensions or promote peace, depending on its framing and tone. Similarly, social media platforms play dual roles: empowering marginalized voices and mobilizing communities while amplifying misinformation and deepening societal divisions. These dynamics emphasize the need for critical media literacy, diverse information consumption, and responsible digital engagement to mitigate these challenges.

By exploring the interplay between technology, online news consumption, and public opinion, this study offers valuable insights for media outlets, policymakers, and communication practitioners. Recognizing the transformative potential of digital platforms, stakeholders must leverage their influence to foster informed discourse, enhance public trust, and navigate the evolving media landscape responsibly and effectively.

IMPLICATIONS

This study's findings will provide valuable insights for policymakers, media outlets, and communication practitioners seeking to navigate the complex landscape of public opinion in the digital era.

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