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# Social Media and Modern Society

How Social Media Are Changing the Way  
We Interact with the World Around

*Edited by Ján Višňovský and Jana Majerová*





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Society - How Social Media  
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Edited by Ján Višňovský and Jana Majerová

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Ján Višňovský is an author of scientific monographs, textbooks, and over 100 scholarly articles and conference contributions. He is a member of the editorial boards of domestic and foreign scientific journals in the fields of media and communication, and a member of the Slovak Syndicate of Journalists, the International Federation of Journalists, and other Slovak and international professional organizations.



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# Preface

The edited volume *Social Media and Modern Society – How Social Media Are Changing the Way We Interact with the World Around* critically explores the breadth of social media's influence, offering a multidimensional analysis that spans theoretical discussions, empirical studies, and case-based insights. The chapters in this book collectively address the complex and dynamic role that social media plays in various aspects of contemporary life, ranging from economic and political realms to cultural and personal domains.

The first section, “Theoretical and Empirical Outlines of Social Media”, establishes the foundational perspectives necessary for understanding the evolving landscape of digital communication. Opening with a critical examination of social media's role in marketing communication and sustainability, the section highlights the intersection of economic interests and social responsibility. The analysis emphasizes the shift from traditional marketing strategies to digital engagements that leverage social platforms to connect with socially conscious consumers. By exploring concepts such as green marketing and the rise of “green influencers,” the book underscores the growing expectation for businesses to engage authentically in sustainability efforts. The discussion extends beyond a business-to-consumer focus to also encompass business-to-business interactions, revealing the potential for digital tools to support sustainable development goals across different market sectors.

Another critical aspect explored in this section is the psychological and behavioral impact of social media on vulnerable populations, particularly adolescents exposed to violent content in conflict zones. By analyzing qualitative data from interviews with young individuals, the chapter offers a nuanced view of the ways in which social media content can shape mental health, emotional resilience, and even political beliefs. The chapter's findings indicate that the effects of exposure extend well beyond individual experiences, pointing to broader implications for mental health interventions and digital content regulation on a global scale.

The section further explores the effectiveness of advertising via mobile social networks, providing a critical analysis of how digital marketing influences consumer behavior in the era of ubiquitous connectivity. It reveals that while engaging advertisements can drive user interaction, the translation of digital engagement into tangible purchase behaviors is less straightforward than anticipated.

A significant theme in the volume is the use of social media analytics as a tool for business intelligence and strategic development. The exploration of analytics goes beyond data collection to consider how social media metrics can support the development of business models, improve customer experiences, and anticipate market trends. By incorporating bibliometric analysis and case studies, the volume provides

a methodological guide for researchers and practitioners interested in leveraging social media analytics to drive innovation. However, the chapters also caution against an over-reliance on digital metrics, recognizing the limitations and ethical considerations inherent in data-driven decision-making.

As the volume shifts to discuss the cultural implications of social media, chapters on influencer culture and place branding highlight the profound changes in how identities and narratives are constructed in the digital age. Influencer marketing, examined through the lens of authenticity and audience trust, exemplifies how social media platforms have disrupted traditional celebrity culture, giving rise to new forms of influence. The importance of authenticity is a recurring theme, with chapters emphasizing that consumers increasingly value relatable and genuine content over polished, overtly promotional messaging.

Furthermore, this section delves into the integration of social media within educational contexts, particularly in the field of digital humanities. The chapters advocate for a comprehensive approach to digital literacy, suggesting that traditional educational paradigms must evolve to equip students with the skills needed to navigate an increasingly digital world. This argument extends beyond technical competencies to encompass critical media literacy, which enables individuals to evaluate the credibility of online content and recognize the social implications of digital communication.

The second section, “Regional and Local Contexts”, provides a more granular examination of social media’s role within specific geographical and cultural settings. The diverse case studies presented offer insights into how social media platforms function as both tools for civic engagement and as vectors for misinformation and social division. The section highlights the dual nature of social media, particularly in the context of local politics and grassroots movements. For example, chapters discussing social media’s role in mobilizing opposition to wind farm developments or amplifying hate speech in political discourse illustrate the potential for digital platforms to energize real-world actions.

Chapters addressing social media’s impact on community policing and local democracy further illustrate the role of digital platforms in shaping public safety and governance. While social media can facilitate the sharing of valuable information and foster community collaboration, the potential for misuse through the spread of misinformation or the erosion of trust in institutions poses significant challenges.

A recurring theme throughout the section is the concept of social media addiction and its far-reaching consequences. It provides a detailed analysis of the factors driving compulsive social media use, including psychological triggers such as FOMO and social comparison. The discussion also extends to the design of social media platforms themselves, suggesting that ethical considerations should guide the development of features that encourage healthy user behaviors.

By offering a nuanced analysis of social media's influence at global and local levels, the book serves as an essential resource for academics, policymakers, and anyone interested in understanding the opportunities and challenges posed by the digital age.

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Section 1

Theoretical and Empirical  
Outlines of Social Media

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## Chapter 1

# Achieving Sustainability via Marketing Communication in the Era of Social and Technological Changes

*Jana Majerová and Ján Višňovský*

### Abstract

The plurality that characterises postmodern society calls for a much more coherent reflection on socio-economic trends and challenges than was the case in the past. It has become necessary in all fields to take account of individual facts against the background of broad socio-scientific overlaps. This also applies to the achievement of the objectives of sustainable development of society. Thus, the aim of the chapter becomes the conceptualisation of the postulates of social responsibility in the context of the current trends and challenges of the use of social media in marketing communication framed by the specificities of contemporary digital society. Methodologically, the paper is based on the implementation of basic methods of formal logic and the method of scientific excerption. It has been found out that the potential of incorporation of new trends in scope of communicating in favour of achieving sustainable goals is high not only on B2C but also on B2B markets. Also, the phenomenon of green influencers and the importance of authentic pro-socially responsible content in marketing communication of socially responsible companies have been identified.

**Keywords:** social media, postmodern society, sustainable development, marketing communication, corporate social responsibility, CSR

### 1. Introduction

The issue of social responsibility in the form of individual overlaps of moral and ethical motives of an individual towards the surrounding environment has been appearing in society since time immemorial. Altruism or philanthropy are naturally understood as human-quality manifestations of fulfilling the highest levels of Maslow's hierarchy of needs with the status of virtues. However, the evolution of society—both its basic characteristics and the problems it faces as a whole—has gradually made social responsibility socio-economic in nature and fully embedded it into existing and emerging market structures. This trend is becoming increasingly

important, in particular thanks to the empowerment of civil society and NGOs. While in its original form, corporate social responsibility was established as a tool for achieving competitive advantage, businesses are now increasingly aware of the fact that the implementation of socially responsible activities is becoming a *conditio sine qua non* in terms of the need to ensure the sustainable development of the society of which the company is an immanent part. The concept of corporate social responsibility is no longer a meaningless phrase, and in response to the current development of society, companies are beginning to actually fulfil the principles of valid corporate citizenship. This is happening against the backdrop of their individual as well as global market realities in the full breadth of interactions with other actors and interest groups that occur in the context of their business activities [1]. And it is precisely the intensity of the linkage to the market and interest groups that also changes many traditional business and management concepts and models. The market orientation of enterprises significantly strengthens the role of marketing, which is moving from the functional to the strategic level of corporate management. All this is happening at a time when society is strongly resonating with themes marked by ethical and moral-economic conflict with a strong socially responsible overlay.

Marketing communication is currently the fastest growing area of marketing management due to the dynamic development of information and communication technologies. Marketing managers are confronted with the need to keep pace with technological developments in the macro-environment and the associated changes in customer communication standards [2]. In addition to the original tools of marketing communication, which have not remained unchanged and are flexibly modified with regard to the development of the environment, a significant group of modern tools of marketing communication has emerged, both those that have been on the market for a long time and are demonstrably functional and those that have been on the market for only a short period of time in reflection of current trends and the communicative possibilities of information and communication technologies.

At the same time, the development of information and communication technologies also influences the dynamics of metamorphosis of the content and tools of marketing communication. Not only does it provide more space for effective communication of socially responsible corporate action, but at the same time social responsibility represents a content concept for the functional implementation of marketing communication in oversaturated communication spaces [3]. Marketing communication as a whole is faced with the need to present a real value orientation of enterprises and to move away from the implementation of business activities with exclusively sales targets. At the same time, against the background of these processes, the consumer is becoming resistant to marketing communication under the influence of the increasing penetration of marketing communication into all spheres of his or her life. It is therefore necessary to create communication concepts that present the enterprise and its business activity represented by the product portfolio in a socio-economically effective way in the context of instrumental, media and content changes in marketing communication. Social responsibility is one such communication concept. Not only does it enter significantly into the content component of marketing communication due to the requirement of value orientation and authenticity, but at the same time, thanks to these parameters, it facilitates the establishment of new forms and media [4]. Thus, social responsibility gives a new dimension to the traditional communication tool of PR, expands the possibilities of effective use of already established modern forms of marketing communication and increases the likelihood

of the establishment of those modern forms of marketing communication that are yet to be given a place for marketing use in the context of the development of information and communication technologies.

## **2. Methodology**

The present study employs a systematic literature review approach developed using basic methodological platform of formal logic (analysis, synthesis, induction, deduction) and scientific excerption. This literature review adopted a systematic approach to examine existing research. A rigorous analysis of selected studies was conducted. Key findings were synthesised to identify commonalities, discrepancies, and emerging patterns. Inductive reasoning was employed to derive broader theoretical concepts from specific observations, while deductive reasoning tested existing theories against the compiled data. Scientific excerpting involved meticulous extraction of relevant information to construct a comprehensive thematic framework. This process facilitated the identification of knowledge gaps and opportunities for further research. The sequential approach to the methodology used can be summarised as follows: (1) the research question guided the selection of relevant scholarly articles; (2) comprehensive database search was conducted using predefined keywords; (3) inclusion and exclusion criteria were rigorously applied to filter studies; (4) retrieved articles underwent a thorough screening process; (5) selected studies were subjected to a detailed analysis of their methodologies and findings; (6) analysis involved a critical examination of research designs, data collection methods, and statistical analyses; (7) key findings from individual studies were synthesised to identify commonalities and discrepancies; (8) inductive reasoning was utilised to derive broader patterns and themes from specific findings; (9) deductive reasoning was applied to test existing theories against the collected data; (10) scientific excerpting involved carefully selecting and extracting relevant information from the text; (11) thematic analysis was conducted to identify recurrent concepts and patterns; (12) framework was developed to organise and categorise the extracted information; (13) the synthesised knowledge contributed to the development of new insights and understandings; (14) the research adhered to ethical guidelines for conducting literature reviews; (15) the findings were presented in a clear and structured manner; (16) implications of the research for theory and practice were discussed. The overall aim was to contribute to the existing body of knowledge in the field.

## **3. Social responsibility communicated by established modern marketing communication tools**

The dynamics of ICT development is one of the reasons why the traditional construct of the communication mix has expanded to include a large number of communication tools and platforms in a short period of time. In an equally short time, these tools have fully established themselves in the practice of marketing management and have significantly expanded the original marketing communication scheme. However, this resultant state of affairs has not only been due to the impact of digitalisation. The psychographic changes on the part of the addressees of marketing communication have been equally significant. Changes in value

schemes and communication interaction mechanisms have also accelerated changes in marketing communication outside the online space. The influence of reference marketing on customers' purchasing decisions has increased significantly, irrespective of the type of market in which the company conducts its business. This change has manifested itself in the context of marketing communication by profiling a robust communication strategy based on word-of-mouth marketing (WoM) and the organic dissemination of communicated content. Generically, the original WoM marketing has developed into a strong parallel allocated to the virtual media space. Noting the emergence of the concept of WoM marketing does not mean denying the long-term existence of the communicative potential of reference marketing. The changes outlined at the beginning of this chapter have only created the conditions for the emergence of WoM marketing as one of the categories of the so-called modern marketing communication tools and at the same time created the space for the coordination of activities carried out within this communication tool on the side of the enterprise. In the previous existence of the communication potential of reference marketing, it was primarily about its acceptance as a secondary communication tool, which is able to support other traditional communication activities if the company manages them effectively. Today, however, WoM marketing represents a fully fledged primary sphere of management interest in the marketing communication department, whose positive effect on the market performance of the enterprise is supported by managers through schemes and structures of appropriately chosen activities. As a parallel to WoM marketing, buzz marketing has thus emerged specifically for the online space, and viral marketing is also characterised by a significant overlap towards these two concepts. There has also been an increased emphasis on the aspects of acceptability and credibility of the source as basic attributes of the effectiveness of marketing communication, which has resulted in the phenomenon of greenfluencers. These are situated in the social media environment, which is an important communication platform for socially responsible enterprises. This is also supported by the fact that the marketing communication of companies conducting their business activities in the organised buyers' markets (B2B) is also moving to the environment of selected social media in this area.

Traditionally, WoM marketing is defined as an unpaid form of marketing communication, the essence of which is the off-media dissemination of communicated content on a word-of-mouth basis among existing and potential customers [5]. The essence of the matter implies that the content communicated in this way is a concomitant phenomenon of the existence of the enterprise in the society and the content of WoM marketing is not necessarily always in favour of the enterprise. It is precisely because of this fact that it is in the interest of the enterprise, even though it does not have a direct influence on the individual WoM processes, to exert as much entrepreneurial and communicative effort as possible towards both ensuring the positive effect of the communication activities undertaken by the enterprise on the subsequent word-of-mouth dissemination among customers and guiding such word-of-mouth dissemination in a way that is desirable for the enterprise [6]. Indeed, the fact that it is an unpaid form of marketing communication does not mean that it is a communication activity in the final form of which the enterprise does not have the opportunity to actively participate. At the same time, the absence of financial involvement of the enterprise in this communication activity increases its credibility from the perspective of customers. It is these two facts that are substantial arguments in favour of incorporating WoM marketing into effective marketing management of socially responsible enterprises [7]. The aforementioned is also noted by Fatma and

Khan who highlight the importance of the traditional offline nature of WoM marketing [8]. In addition, they state that WoM is a suitable tool for showcasing socially responsible activities and subsequently building and managing brand equity and at the same time that social responsibility itself is a suitable accelerator for spreading positive word of mouth. By returning to the offline concept of WoM marketing, they appeal to the need to achieve authenticity of communicated content and realistic fulfilment of objectives at the level of working with stakeholders in the context of the social pillar of corporate social responsibility. Meanwhile, the trend towards a preference for the online form of WoM marketing has been evident in the literature in this area to date. Dalla-Pria and Rodriguez de Dios have also argued in its favour, but at the same time, they have pointed out the need to apply a consistent approach to the type of source and framing of the message on social media, given the impact of these factors on the credibility of the message [9]. In doing so, they built on the research conducted by Cheng et al. with the intention of analysing the relationship between socially responsible communication on social media, purchasing behaviour and WoM marketing in the online space in the specific context of the banking sector of an emerging economy [10].

Viral marketing is a tool for the geometric dissemination of communicated content within a target group. The virality of content dissemination is fully ensured by situating this communication tool in the social media environment. From a content point of view, it is characterised by the complexity of the creative side and, from a process point of view, by the reduced degree of control by the initiator. The issue of using viral marketing in the communication strategies of socially responsible enterprises has been addressed by Hartmann et al. [11]. They found that social pressure is an important supportive element in the dissemination of viral content. Thus, they contributed to changing the perception of the applicability of this communication activity by socially responsible enterprises. Indeed, the original assumption was towards its overlap towards the pull concept, while their findings create a prerequisite for the application of the push concept. This means that the virality of dissemination is supportable by enterprises, provided that appropriate complementary mass marketing communication tools are applied, and the reach of dissemination is significantly higher. The tendency to disseminate socially responsible content within their online social group is not due to intrinsic motivation. Thus, under the influence of social pressure, content disseminators have the potential to become even entities that are not intrinsically convergent with the issue in terms of values but are important communication nodes for dissemination.

#### **4. Social networks in marketing communication for the sustainable development goals**

The development of social networks and their social assimilation, combined with the practice of involving media celebrities in marketing communication, together with the potential of exploiting the aspect of credibility and attractiveness of the source, has caused the phenomenon of influencers to enter the field of socially responsible marketing communication [10]. These are specific proxy sources of communicated content that implement a specific form of reference marketing in the social networking environment. Influencer marketing, by its nature, is a communication concept using a consumer trusted and socially attractive personality to provide information about a product and its parameters [12]. It is particularly functional with

the Z and alpha generational segments. For other customer generations, it is particularly effective when there is no person in their immediate environment who is a source of such information about the selected product or consumer solution. The importance of influencer marketing in the context of corporate social responsibility marketing communication is particularly high in the area of achieving educational and awareness objectives [13]. Thus, a specific group of so-called green influencers has emerged, who fulfil these objectives in the environmental pillar of corporate social responsibility. The importance of greenfluencers in adopting sustainable lifestyles has been noted by Cavazos-Arroyo and Melchor-Ascencio [14].

The use of social networking in the digitised revision of marketing communications is increasing not only in consumer markets but also in organised buyer markets. However, due to the specificities of each market, individual social networks are not used to the same extent in both markets. In consumer markets, it is already standard, whereas in organised buyer markets, the concept has been much more recently established. The heterogeneity of social networks and consumer preferences and characteristics, despite the long-standing existence of this concept in the functional corporate practice of consumer markets, poses a greater challenge to marketing management than is the case in organised buyer markets, where, on the contrary, there is a concentration of these communication activities in the environment of the dominant social network, which is LinkedIn. The importance of integrating this social network into the communication strategies of socially responsible enterprises has not yet been directly established. Moehl and Friedman consider the social network LinkedIn in a broader context when examining the issue of consumer perceptions of the authenticity of socially responsible marketing communications [15]. However, applying basic methods of formal logic, the convergence of two scientifically established facts can be interpreted in a correlation in favour of stating the importance of social networks in corporate social responsibility marketing communication. These are the importance of the overlap of social responsibility towards the supply chain and the effectiveness of communication through the selected social network in the markets of organised buyers. The need for communication support to expand the circle of cooperating socially responsible actors and the need to develop activities towards socially responsible transformation of suppliers were stated by Klosa and Kisperska Moron [16]. The potential for content impact of marketing communications on LinkedIn in the context of orchestrated buyer markets is highlighted by Sundstrom et al. [17]. The need to develop a specific functional content strategy is subsequently identified by Cortez et al. [18].

The real content of socially responsible activities and their impact on the functioning of society is also essential in terms of considering the adequacy of individual tools and platforms of marketing communication. This fact is pointed out by Seele and Lock, who elaborate a typology of communication tools in the context of the specific category of so-called corporate political responsibility [19]. The latter is stated by Scherer and Palazzo and further elaborated by Persson, Tang et al. and Maier and Gilbert [20–23]. Political responsibility extends the traditional trinitarian concept of economic, environmental and social corporate responsibility. At its core, it involves businesses engaging in deliberative processes and structures that address governance gaps where national and local governments fail to do so—either due to lack of willingness or lack of capacity. This brings to the fore the issue of the moral legitimacy of businesses, whose place in their communication with a marketing overlay in order to fulfil their commitments to political accountability is unquestionable.

## **5. Conclusions and discussion**

The evolution of corporate social responsibility from a philanthropic gesture to a strategic imperative is evident. It has become an indispensable component of sustainable business operations, driven by societal expectations, regulatory pressures, and competitive dynamics. Marketing, as a strategic function, plays a pivotal role in translating these complex societal demands into effective communication strategies.

The intersection of technology, particularly the rise of social media, has reshaped the landscape of marketing communication. The emergence of influencers, especially green influencers, has provided new avenues for disseminating socially responsible messages. However, while influencer marketing is effective in reaching younger demographics, its impact on other segments requires further exploration.

The digital realm has also witnessed the growing importance of social networks in both consumer and business-to-business markets. LinkedIn, in particular, emerges as a potential platform for fostering socially responsible business relationships. However, the specific content strategies required to maximise its impact within the context of corporate social responsibility remain under-explored.

Furthermore, the concept of corporate political responsibility expands the scope of social responsibility beyond the traditional economic, environmental and social dimensions. This necessitates a broader range of communication tools and platforms to effectively address the complex challenges associated with governance and societal issues.

In conclusion, the integration of social responsibility into marketing communication is a dynamic and evolving process. While significant progress has been made, there is a clear need for further research to understand the nuances of different target audiences, platforms, and content strategies. Moreover, the evolving concept of corporate political responsibility offers new opportunities and challenges for communication professionals. By addressing these areas, organisations can more effectively leverage social responsibility as a strategic asset to build trust, enhance reputation, and contribute to a sustainable future.

Key areas for future research include: (1) the comparative effectiveness of influencer marketing across different demographic segments and product categories, (2) the development of tailored content strategies for social networks like LinkedIn to promote corporate social responsibility in business-to-business markets, (3) the measurement of the impact of corporate political responsibility initiatives on organisational reputation and stakeholder engagement and (4) the exploration of emerging communication technologies and their potential to enhance social responsibility messaging.

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## Chapter 2

# Adolescents' Exposure to Violent Content Related to Conflict on Social Media: Qualitative Research

*Liat Franco and Meyran Boniel-Nissim*

### Abstract

Exposure to Violent Content Related to Conflict on Social Media (VCRCSM) significantly impacts youth due to its graphic nature and the young age of those exposed. This study, based on interviews with 31 adolescents aged 13–15 in northern Israel, provides insight into how youth in conflict zones experience VCRCSM. Exposure to VCRCSM influences youth emotionally (e.g., anxiety), physically (e.g., sleep difficulties), and mentally (e.g., changes in perceptions and political views). In addition, we identified several reasons for the vast exposure which include mass distribution on social networks, making it hard to ignore, curiosity, and social pressure. Lastly, the findings of this study expose various coping mechanisms: the interpersonal option—turning to the parents—and the personal option—developing immunity and indifference to the exposure. Due to the global nature of the Internet and the borderless trends that swipe across social media, we believe that this exposure extends far beyond the borders of a country that experiences conflicts and, thus, a phenomenon on a global scale that merits global comprehensive designed solution involving parents, educators, mental health providers, and decision-makers to work toward and provide legal, social, emotional, and psychological support to deal with this phenomenon.

**Keywords:** teens exposure to violent content, effects of exposure of teens to violent content, violent content exposure on social media, extent of exposure of teens to violent content over social media, qualitative research

### 1. Introduction

On 7 October 2023, the most significant terror attack in the history of Israel occurred, which ignited a cycle of escalation of conflict in the Middle East. Handling this situation involves multiple complex fronts. One of these fronts, a hidden, collateral yet frightening in its' damaging effects, is adolescents' exposure to Violent Content Related to Conflict on Social Media (VCRCSM). This exposure is harmful due to both the young age exposure to inappropriate content and the highly graphic violence depicted in these contents, usually as videos.

Military operations and strenuous geo-political conditions are known to have immediate effects (such as anxiety victims) and long-term impacts on families

living in conflict zones [1]. Considerable research evidence exists regarding the consequences of living in conflict zones on youth's well-being. Research suggests that children may have feelings of unsafety and altered daily functioning when they are exposed to war-traumatic events [2]. Moreover, kids growing up in conditions of political violence and terrorism are vulnerable to damaging developmental consequences and other various intense psychological effects [3, 4]. Additionally, research suggests that exposure to traumatic war experiences and conflict-related events is a risk factor for the development of various mental illnesses and reactions, including post-traumatic stress disorder (PTSD), grief, and depression [1, 5–7].

However, the digital age enhances the exposure to VCRCSM and thus augments the damaging effects of violent and inappropriate content, particularly among the youth. The enhanced detrimental experience occurs due to compounding circumstances; more children are exposed to violent content at younger ages, and the content is visually graphic and, therefore, has a more significant impact on them. Hence, it is essential to analyze the extent of exposure and how adolescents are influenced.

This research is based on data gathered in 2021, during “Operation Guardian of the Walls” in Israel. Therefore, it provides insight into how adolescents in conflict zones, but not necessarily in the war area, experience exposure to VCRCSM, the extent of this exposure, the various influences of this exposure, and their coping mechanisms. This research is of great importance as it suggests that exposure to VCRCSM may result in harmful consequences and affect teenagers worldwide, not limited to those who live in conflict areas due to social media's global and transcendent nature. This research may promote the necessity of adequate treatment tools for professionals, parents, and decision-makers to help adolescents during social unrest. Lastly, this research provides valuable insight into the need to draft competent intervention policies that must be adopted to prevent or at least mitigate youth's exposure to VCRCSM.

## **2. Adolescents in the digital age**

Teenagers worldwide spend more time using screens and engaging in the digital environment than ever. The age at which they first use social media continues to drop [8]. Most families with children aged birth—18 (97%) had access to the Internet in 2022 [9]. About 96% of kids view videos on online video-sharing platforms. While young children view videos mostly on YouTube (83%), older children, ages eight and over, use various platforms such as TikTok (62%) and Instagram (54%) [9]. However, this digital space is more than just a tool to consume content. Children do not just “use” screens; they live in a digital environment. They communicate, play, absorb knowledge, establish friendships, and engage in various social activities. Thus, the digital realm is prevalent in children's lives, and social media is used extensively.

The Convention on the Rights of the Child and supporting General Comment No. 25 clearly states “The rights of every child must be respected, protected and fulfilled in the digital environment” ([10], p. 1). Yet compared to the censored “sterile” children's physical environment, much of their digital environment is devoid of guidance, enabling spaces, or protections. Moreover, children and teenagers often perceive the digital domain as a “lawless playground”—an area empty of norms of their empowerment, safety, and protection [11].

Children use social media to construct their self-identity and social identity [12, 13]. Thus, social media usage has become an inseparable and normative part of adolescents' daily routine behavior [14]. Moreover, children use social media at

younger ages. Though several social media platforms (such as TikTok, Instagram, YouTube, and Snapchat) restrict their usage to children under 13 years of age, they are widely used by children under the age of 13 [15, 16]. Since Internet use is still increasing and children who engage in a broader range of online activities tend to experience more online risks, it can be assumed that youth are currently exposed to online risks at younger ages than in the past.

The EU Kids Online Network Report identified several online risks, including overall negative experiences encountered online, online aggression and cyberbullying, exposure to potentially harmful content, experienced data misuse, excessive Internet use, sexting (sending sexually explicit messages via electronic devices), exposure to sexual content, and meeting strangers online [17]. However, it did not include exposure to violent terror-related content as an online risk. We find exposure to VCRCSM to be a critical and unique risk that demands the adaptation of new social, psychological, and legal frameworks. Indeed, research suggests that a substantial part of the world's children are exposed to violence, political and armed conflict, and social unrest [18]. However, social media presents this risk as a new challenge that must be identified and addressed. The popularity and the extensive and prevalent use of social media in children's lives enhance this circle of exposure and de facto give most of them worldwide access to VCRCSM. Therefore, it is essential to map the extent of this exposure and identify adolescents' immediate coping tools to discuss the necessary means to mitigate and handle the aftermath.

### **3. Violent content related to conflict on social media**

Violent content online has several unique characteristics relevant to comprehending the ramifications and consequences of youth's exposure to VCRCSM. It spreads fast, so the exposure is extensive and in percentages. Exposure to VCRCSM has a tremendous impact on youth due to the graphic nature of the content depicted and the young ages that are exposed to this content [19, 20].

Since the introduction of television into our lives, researchers have examined the effect of violent content on children. The Cultivation Theory tackles television's long-term impact on viewers, which started in the 1960s. The theory proposes that the danger of television lies in its ability to shape not only a particular viewpoint about one specific issue but also people's moral values and general beliefs about the world. The Cultivation Theory stands on several concepts: the symbolic environment, storytelling, the symbolic function of television, the television traits, the cultural model, the cultivation of the value system, the multidirectional process, and the cultural indicators [21]. Since then, the media environment has evolved. Visual information is accessible via the Internet using a variety of devices. Unlike television, which used to be found in the living room and allowed specific supervision for adults, the latest technological tools, such as the smartphone, are for personal use and allow exposure with minimal oversight by adults.

Violent and inappropriate content from war events and military operations can be seen on public social media. Nowadays, violent content is not only available online, but the digital platforms themselves, mainly social media, are used by terrorists and violent extremists "for recruitment, dissemination of propaganda, communication and mobilization" ([22], p. 6). Such content has high explosiveness in social media without any ability to stop and warn the viewer of the content. Some researchers had coined the spread of violent and offensive content online as "digital

wildfires,” and a report by the World Economic Forum labeled this phenomenon in 2013 as a “global risk factor” arising from the misuse of an open and easily accessible system. Thus, the mere nature of VCRCSM contributes to its widespread as research suggests that offensive content (violence, cyberbullying, deepfake, misinformation, etc.) spreads faster than other types of content [23–26]. In addition, using artificial intelligence allows for the creation of visual content that is not faithful to reality but can mistakenly be considered as such. In this case, the viewer is exposed to VCRCSM without being able to assess the degree of exposure to the problematic content or its reliability.

The above scientific findings regarding youth’s comprehensive access to social media expand the influence of VCRCSM on this vulnerable population at large. In addition, the dramatic impact of this exposure is a process not limited to members of a particular nationality, religion, ideology, or party. A significant part of the deviation on political or religious grounds occurs among people whose primary contact with others occurs through the Internet and not in a physical encounter. A systematic review provided evidence that exposure to radical, violent online material is associated with extreme behavior online as well as offline and may influence a person to commit political violence [5]. Online influences have been depicted as significant drivers for the propagation and adoption of extremist ideologies, which often contain an element of collective grievance and subsequent acts of violence [27]. Thus, online radicalization is a cause for common concern.

Online radicalization is when individuals get exposed to, imitate, and internalize extremist beliefs and attitudes through the Internet, mainly social media and other forms of online communication [28]. Exposure to videos that include complicated scenes can affect every person and has a strenuous effect, especially on youth [29]. Exposure to VCRCSM may activate cognitive structures that can interpret events aggressively, thus increasing the chance of an aggressive response and may shape their attitudes regarding accepting aggressive real-life behaviors [30, 31].

This study aims to analyze the extent of exposure to VCRCSM by youth from conflict areas and evaluate the coping mechanisms that youth deploy when exposed to VCRCSM.

#### **4. The current study: case study of VCRCSM in Israel**

Between the end of April and the beginning of May 2021, violent clashes between Israel and Palestinian militants escalated in Gaza. Residents in southern Israel had to face the threat of missiles. At the same time, photos and videos from war zones were distributed online, which created emotional involvement among residents who live in other parts of the country. Part of the escalation was attributed to incitement videos in TikTok, which, according to Israeli police and other Israeli security authorities, contributed to the spread of violence. As a result, Israeli and Palestinian youth were exposed to offensive and violent content related to the conflict [32].

In the following study, we aimed to examine how Israeli teenagers in conflict zones, but not necessarily near or within the actual conflicted area, experience exposure to VCRCSM following violent clashes. Therefore, we engaged in qualitative research focusing on the real-life experiences of teenagers immediately after the military operation in Gaza ended (May–June 2021). Our research questions were: (1) Are adolescents exposed to VCRCSM, and what is the extent of this exposure? (2) How does this exposure to the VCRCSM influence adolescents? and (3) What are the coping mechanisms of adolescents to this exposure?

## **5. Methodology**

### **5.1 Participants**

A total of 31 participants, aged 13–14, participated in the study. Of them, 12 were male, and 19 were female. This research was conducted in three different schools in northern Israel (in Tiberius, Zefat, and Haifa). One school was urban, and two were suburban, thus representing distinct demographics that adhered to varied socioeconomic backgrounds.

### **5.2 Research tools**

Detailed face-to-face, semi-structured interviews were conducted over 2 months, from May through June 2021. Semi-structured interviews are organized around a predetermined set of questions, but additional questions may emerge during the interview [33]. Participants were asked about their experiences and perceptions regarding their exposure to VCRCM, including the extent of their exposure, its effects on them, and the various ways they cope with that exposure.

### **5.3 Research design**

The Israeli Ethics Committee of the Ministry of Education approved the study (L-11167). With the consent of the school principals to conduct the study, an appeal was made to the parents of the students, including an explanation of the study, how it would be performed (through interviews), and a request for permission to contact their children. Upon receiving the approvals, contact was made with the students who received approval to schedule an interview.

The personal interviews lasted an average of 45 minutes in a private and quiet place at school. It was explained to the participants that their details would remain confidential and their anonymity would be kept. In addition, they were told that they could withdraw from the interview at any stage. Due to the sensitive character of the content, the participants were offered to turn to the school educational counselor for additional assistance, if necessary.

The interviews were recorded and then transcribed accurately. Then, the textual analysis was done using the following method: first, transcripts were read and annotated through the main research questions. Second, data was organized into categories and subcategories. Lastly, data was analyzed and grouped into coherent themes.

## **6. Findings**

Our first research question was, are adolescents exposed to VCRCM, and what was the extent of their exposure? Most participants were exposed to VCRCM. Ninety percent of the participants in the study (28 students) mentioned that they were exposed to VCRCM during the military operation. They characterized VCRCM as brutal and uncensored videos. The most common social media platforms were Instagram, TikTok, and WhatsApp.

Interestingly, participants mentioned the same VCRCM, which points out the exposure of specific videos, even though they were from three different schools. Most participants mentioned two videos. One video was a harsh descriptive video

of someone in a car that is being bombed, and half of his head was blown away. The second video was of a soldier running around where the hinterland was on fire. These videos were censored in the public media and TV news due to their violent and descriptive nature. However, the youth had free access to view them repeatedly. Participants mentioned that it was almost impossible to avoid these videos.

As a 13-year-old girl explained: *“You cannot avoid it. These days it is everywhere... TikTok, Instagram and WhatsApp...there is no way for a teenager to avoid it”*. When another 13-year-old girl was asked if she was exposed to VCRCSM, she replied, *“I saw many videos!!! Millions!!!! from both sides...riots...rocks thrown at people...cars were burned...lynches on both sides...lynches mainly filmed and posted on TikTok, so you see everything...I mean EVERYTHING!!!!... Kids cannot avoid it. It’s on TikTok, on WhatsApp, and Instagram. All over social media all day long.”*

When another interviewee, a 13-year-old boy, was asked about his exposure to VCRCSM, he replied: *“OHHHH! A lot of violent content, horrific, about ten videos a day...I saw a video where half of the head was decapitated, and the brain was kind of liquid, dropping to the ground. Another video was of a guy whose whole body was crushed under a building.”* The description of exposure to VCRCSM was familiar to almost all the participants. A 13-year-old boy indicated: *“Over social media, we see horrific videos, much more violent than what you [adults] see over the TV news.”*

A 13-year-old girl shared: *“I was exposed to a video of a soldier running around, and his neck and back of his head are on fire. It was horrible. I was in shock.”* Another 13-year-old added: *“I saw stabbings. I saw rockets hitting houses. I saw an Israeli soldier with a knife in his back.”* Twenty-eight percent (9 students) mentioned their curiosity as a reason to keep watching VCRCSM. Participants described that the images they were exposed to in the VCRCSM were vivid in their minds, that when they chose to avoid watching it, their imagination filled in the gaps and caused them even more anxiety. As described by a 14-year-old girl: *“It was late at night, and I knew that if I watched it, I would have nightmares. I don’t know if my imagination is worse than the exposure to these videos... I dreamt about it that night.”* A 13-year-old shared, *“Sometimes I watch till the end... I can’t help it... it’s out of curiosity... then I watch other types of content... but I still think about what I watched”*. Another 13-year-old boy said her peers hype her to watch VCRCSM by saying she should not overlook that video. Then, she was driven by curiosity and persuaded to watch. *“When others remark on a video that it is too violent and warn others not to watch, it just causes the opposite. But, of course, I will watch it. I can’t help myself.”*

Our second research question was, how does exposure to VCRCSM influence adolescents? The participants in this research stated that the exposure to VCRCSM generated solid emotions and impacted them in various ways. When analyzing responses to this question, we recognized three main themes: (a) sadness, (b) emotional distress, and (c) changes in perceptions of the conflict they were witnessing.

## **6.1 Sadness**

About 65% of the participants (20 students) described the exposure to VCRC as influential and very saddening. As depicted by a 13-year-old boy: *“It was hallucinatory... but it’s not like I went mad or something like that.”* Another 14-year-old girl explained, *“When I watch these violent videos, I get very sad – everyone is mean and scary.... the world is scary...”* A 13-year-old girl shared: *“Since this started, I sleep sad...every night...just sad”*.

Even though there were participants who described a kind of resilience and indifference toward VCRCSM, they still characterized it as harsh and horrific. As

a 13-year-old girl explained: *"If I was another girl, a normal regular girl, not me...not myself that I am blocking what I see, I would have had nightmares at night"*.

## 6.2 Emotional distress

About 52% of the participants (16 students) experienced distress from VCRCSM exposure. Participants described in detail their complicated feelings following their exposure to VCRCSM. The various emotional distress includes feelings like anxiety, fear, difficulty sleeping, and nervousness. As a 13-year-old boy explained: *"Watching these horrific videos [VCRCSM] makes things worse...some friends watch it, get stressed by it, and start stressing others. Some teenagers were in conflict zones and started having panic attacks. But even those that live further away [from areas of conflict] felt the same"*. Another 13-year-old boy explained: *"What you see [adults] on the news is the same three censored videos over and over again, while we, the kids, are exposed to 12 videos, uncensored, violent with blood all over the place. What is shown on the news is nothing compared to what we watch. So, it has much more influence on us as it takes our emotions to the extreme"*. When a 13-year-old girl was asked why she keeps watching VCRCSM, even though it affects her, she answered: *"I see the videos to the end. It's out of curiosity. I can't stop. I regret it in the end. Then I think about these videos, and I can't get any sleep"*. Another 13-year-old girl described her emotions while watching VCRCSM: *"I was scared, afraid. And now I get scared of everything"*.

## 6.3 Changes in perceptions of the conflict the adolescents witnessed

About 45% of the participants (14 students) stated that their perception of the conflict changed. The exposure to VCRCSM escalated the conflict in their opinion and altered their perception regarding the other side of the conflict. A 14-year-old boy explained how exposure to VCRCSM enhances the conflict: *"After I saw what they [Arabs] did to us, I was happy when I saw violence against them. They got what they deserved. It just causes more hate- mutual hate for both sides."* Another 14-year-old girl shared: *"Until I saw those videos, I had no issues with Arabs. But once I saw how much they hated us, I was shocked. It changed my perception of them...These videos make me hate them more because they show how bad and mean they are. This kind of violence makes you hate people because of their religious identity. You don't care if this individual is good or bad."* As summarized by a 13-year-old boy: *"Watching this kind of content over social networks makes Jews and Arabs hate each other more- both sides now hate more... and the sad part is that we are children... now we are children who hate"*.

The third research question was, what are the coping mechanisms of adolescents to VCRCSM exposure? Two coping tools were identified: (a) discuss sharing with an adult (e.g., parent) and (b) darkness and indifference.

## 6.4 Discuss sharing the VCRCSM exposure with an adult

About 13% of the participants (four students) shared their exposure to VCRCSM with an adult. A 13-year-old boy stated that his parents trust him: *"If I tell my parents I saw something violent online, they will tell me to erase it and forget about it...they trust me, and they trust my judgment."* Another 14-year-old girl mentioned trust when she was asked if she shared her exposure to VCRCSM with her parents: *"...they trust me...they know if I encounter violent content, I just move forward...I block it...I don't take it to my heart...so I can tell them anything"*.

However, most participants (21 students) stated that they would not share this exposure with an adult, specifically with a parent, because they feared the parent would take their phone away or delete the specific social App the child viewed VCRCM on. A 13-year-old girl stated, *“If my mother had known what I watch, she would never have let me keep watching or even being on these social networks”*. She elaborated that if she had experienced a boycott, she *“will definitely tell [her] mom... but violent content exposure... that’s something else...if my mom knows what I am watching online, she will erase all social networks”*. Another 13-year-old girl stated that she would tell her parents only if she was bullied online. But in the case of VCRCM exposure, *“I would not share if I saw something violent...my parents could not do anything about it...it will just make them sad...I need to deal with it by myself”*.

Another 13-year-old boy stated that he will not tell his parents what happens online; *“They [his parents] will either go to the police...or on the other hand will not take it seriously...I don’t think they get it [the digital realm] they don’t understand it...”*. Another 14-year-old boy stated that he prefers not to tell anyone if exposed to VCRCM: *“I take care of it myself...I just stop watching...if my mom knows what’s out there, she will freak out”*.

## **6.5 Darkness and indifference**

About 19% of the participants (six students) stated that they become bewildered, crude, and indifferent as they watch more of the VCRCM. As a 13-year-old boy described, *“...it’s not a big deal...this kind of content does not change anything... it’s just showing the world as is... a bad world with bad images...it does not influence me.”* Another 14-year-old girl shared, *“It does not influence me... it just shows the reality... some of my friends get anxious but not me”*.

## **7. Discussion**

In the present study, we explored how youth experience exposure to VCRCM and what tools they use to deal with it. The current study, conducted using a qualitative approach, showed that teenagers (aged 13–14) are widely subjected to VCRCM. Even though they do not live in the southern country, where the military operation occurs, they still mentally participate in war by watching VCRCM. Unlike the physical reality, which usually takes place in various locations further away from teenagers’ exposure and with parents controlling this exposure, the VCRCM allows repeated viewing of uncensored extraneous and violent content. According to our findings, this exposure strengthens feelings of alienation, anxiety, fear, and insecurity. The contents described by the participants were harsh, even for adults to view. These contents would undoubtedly not have been shown on TV due to a requirement for censorship. Previous findings reported that exposure to news about violent and traumatic events which occur in reality could increase youngsters’ sense of stress and anxiety and affect their well-being [34].

Previous studies have demonstrated the consequences of living in conflict zones on youth. However, this study specifically sought to examine the implications of exposure to violent online content over social media. According to Bronfenbrenner’s well-established model [35], the social environment has significant consequences for the individual’s experience of well-being. With technological development, social media was also added to the model [36]. This expression in our study can be seen among the teenagers who need to watch VCRCM, considering the transfer of

information between their peers. The participants' curiosity can also be associated with the growing need to feel part of the peer group. It is possible that the need to watch VCRCSM can be identified as a combination of Fear of Missing Out (FOMO) [37], the need to be part of the peer group, and part of the national affiliation. This need is now being met by watching uncensored videos that are dangerous to the mental well-being of teenagers. However, understanding the needs of parents, educators, and decision-makers can lead to a more favorable handling of the situation by explaining the political situation and limiting the spread of the videos.

This study echoes other studies regarding adolescents sharing online experiences with their parents. For instance, only 20% of teenagers share with a family member about being witness to cyberbullying [38]. Moreover, 40% of cyberbullying victims do not share the fact they were cyberbullied. Teenagers do not communicate their online experiences for various reasons: they think it's not important enough, believe their parents will punish them and take their phones away, or feel their parents cannot do anything about it [39]. In our study, participants who testified that they shared information regarding exposure to problematic content online with their parents described it in terms of trust and support. This finding raises a question for further research: what characterizes parents whose children feel comfortable sharing such information with them?

In conclusion, technology is advancing and enables the distribution of content without any control and without being able to identify its credibility or the motives behind it. Along with progress, there are severe wars in the world (e.g., Russia-Ukraine in 2022 and Israel-Gaza in 2023). The current study highlights the moral obligation to protect young people from exposure to VCRCSM. Though wars occur in certain geographical places, their exposure is done in a way that crosses geographical borders and becomes a global online risk.

## **8. Limitations and further research**

The present study is innovative in its contribution to the research field, focusing on teenagers living within and outside the war zone and exposed to VCRCSM. At the same time, it is possible to identify several limitations that require consideration. First, the research approach used in the study is a qualitative one. This research approach was chosen due to the need for sensitivity due to the population and the proximity to the event. It is essential to conduct further quantitative research to understand how widespread the phenomenon is among adolescents of different ages and on other sides of the country (characterized by distance from the physical combat event) and the consequences for various elements of their lives (e.g., emotional, behavioral, cognitive, and social).

Further, data was collected from school pupils. It is suggested that future studies consider collecting data from parents and teachers. It is also recommended that the research question be explored on both participants from Israel and Gaza. Lastly, the research was carried out a short time after the event. It is essential to study the long-term effect of VCRCSM exposure.

## **9. Implications**

As a society, we need to be aware of the extent of the violent content adolescents are exposed to and provide much-needed emotional, legal, and psychological support systems to mitigate the importance of this exposure. Therefore, this study is a

call for action to parents who should monitor their children's exposure to VCRSM and to psychologists and welfare employees who need to be aware of the extent of this exposure. They need to offer suitable emotional support and hold social media platforms accountable for these damaging and unaccounted-for effects, as previous studies indicated the possible association between exposure to violent content and violent behavior [31].

The conclusions from our study oblige educators to provide information regarding VCRSM. It is vital to teach teenagers intrapersonal tools to deal with social pressure to view VCRSM and external tools (e.g., website blocking). It is recommended that educators, counselors, and therapists be trained about the consequences of exposure to VCRSM among adolescents to promote prevention and intervention programs. Policymakers must be expected to provide the resources to keep children safe and comfortable in the digital realm.

Finally, military operations are projected, analyzed and transferred throughout the globe and thus become a worldwide concern. The information and disinformation from these events are recorded in videos and distributed through social media in a way that is not monitored or censored. Our research showed that exposure to VCRSM significantly affects teenagers' well-being and security. Furthermore, exposure to VCRSM can provoke severe distress in adolescents, even if they were not directly exposed to the event in reality and even if they do not live in conflict zones. Therefore, creating a safer digital environment is essential.

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## **Conflict of interest**

The disclosure of interests' statements—the authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest in the subject matter or materials discussed in this manuscript. Therefore, they have no conflict of interest.

## **Data availability statement**

The data supporting this study's findings are available on request from the corresponding author [MBN]. The data are not publicly available due to their containing information that could compromise the privacy of research participants.

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## Chapter 3

# Effect of Advertising Effectiveness via Mobile Social Networks (SNS) on Consumer Engagement and the Behavioral Intentions of Online Consumers

*Nesrine Mzid*

### Abstract

This chapter aims to determine the impact of advertising effectiveness via mobile social network service (SNS) on consumer engagement. It also focuses on the treatment of the hypothetical relationship between advertising effectiveness and the behavioral intentions of online consumers. In this chapter, we will try to better understand the general concepts, namely mobile marketing, its tools, and its strategic implications. While relying on a theoretical framework, we will seek to study the direct links that exist between mobile marketing, mobile social media, mobile social networks, and social network services (SNS). A quantitative study was conducted on 430 Tunisian online consumers in the North African context who frequently use their mobile phones. The method of structural equations based on the AMOS approach was deployed for data analysis. The results reveal that the effectiveness of mobile advertising via social network services (SNS) positively affects consumer engagement. The results show that an effective advertising message transmitted via social networks has no effect on the purchase intentions of online consumers. This research fills the gap in the literature by examining the simultaneous impact of the effectiveness of advertising via social networks on brand equity and purchase intentions in a North African context that is still very rare.

**Keywords:** mobile marketing, advertising, social network services (SNS), advertising effectiveness, consumer engagement, consumer behavioral intentions

### 1. Introduction

Nowadays, the impact of new technologies, the evolution of consumer needs, and their implementation in the mobile marketing sector are considered important to academics and practitioners. In this context, it is very important to quickly reach

consumers who are actively involved in digital environments. Similarly, many companies that want to stand out from their competitors and gain a competitive advantage aim to succeed using different digital marketing methods [1]. One of the evolving trends in mobile communications is mobile-based marketing [2].

Tunisia, with its 11,818,619 million inhabitants, is on the small side of e-commerce markets both in its region and in Africa as a whole [3]. The total number of Internet users in Tunisia was close to 8,170,000 million in December 2020, that is, 68.4% of the Tunisian population [3]. A report by the United Nations Conference on Trade and Development ranked Tunisia fourth among African countries and 79th in the world in terms of e-commerce [3]. This leads us to deduce that, based on the relevant data, the volume of trade carried out on the Internet and the number of companies operating on e-commerce marketplaces are increasing daily.

Faced with this situation, companies are increasingly open to these new electronic communication methods, which enable them to communicate with online consumers by broadcasting advertising messages via smartphones. They are also looking for effective ways to develop favorable attitudes toward mobile advertising. According to Hadi and Aslam [2], mobile advertising consists of persuading people to buy products and services using mobile devices [2]. It can be used to commit an online consumer to a brand [2].

In this respect, this form of advertising not only creates opportunities for marketers but also enables them to reach an unlimited number of consumers directly and quickly and to gain a better understanding of consumer attitudes toward messages transferred to smart devices as an effective new advertising medium. In this regard, we noted that the literature on social network services (SNS) and consumer engagement is still emerging [4].

Previous research investigated the impact of advertising effectiveness via social networks on brand value, brand image, and equity value as the main components of brand equity and did not consider the importance of consumer engagement [5].

In this case, we can declare the importance of this research, since it is part of the wider framework of research into advertising via social networks (SNS), which are the fundamental basis of technological development and provide companies and cyber consumers with a high level of virtuosity and up-to-date information. In this line of insufficiency, the study by Ha et al. [6] does not consider the impact of advertising effectiveness on the behavioral intentions of online consumers but only clarifies its impact on the advertising value and the attitude of online consumers.

We, therefore, review in search of the inherent consequences of advertising effectiveness on consumer engagement, we followed a broad research path, unlike Ha et al. [6], who followed a narrow research path that is limited to the attitudes of online consumers as consequences of advertising effectiveness. Therefore, our contribution consists of including other variables in our conceptual model, such as the consequences of advertising effectiveness on consumer engagement and the intentional outcomes of Tunisian online consumers in the context of advertising effectiveness via mobile social network services (SNS).

Guitart et al. [7] confirm the positive effect of effective social network advertising on consumer engagement. We also cite studies that focus on clarifying the effect of advertising effectiveness via social networks on the behavioral results of online consumers [8–13].

We note that this effect was tested in other countries, such as Korea, Pakistan, India, and the United States, according to Idris et al. [14]. However, our study focuses on the determination of this relational effect in Tunisia, a country in North Africa that remains unexplored.

Tunisia is a particularly interesting example of a developing country in North Africa. The use of mobile advertising via social network services (SNS) in developing countries is comparatively lower than in most developed countries. This research is particularly necessary in the context of African developing countries such as Tunisia, where companies adopt less ICT than companies from developed Western countries. This research aims to answer this central question: to what extent does advertising effectiveness via mobile social media services (SNS) affect consumer engagement that may influence the behavioral intentions of online consumers?

In this chapter, we present the theoretical framework of the research relative to the general concept of mobile marketing. To do this, we reviewed previous work relating to this notion in order to better understand it.

Indeed, when briefly examining this work, we noted a lack of consensus regarding the definition of mobile marketing.

The structure of the remainder of this chapter is as follows: first, we discuss the main theories underlying our proposed research model and the review of the existing literature. Then, we formulate our research hypotheses. Secondly, we explain the main methods used to collect the data. Third, we present the main results of this research. Finally, we develop and discuss the results and present the theoretical and managerial implications, limits, and future research avenues.

## **2. Literature review**

### **2.1 Mobile advertising**

Mobile advertising offers marketers the opportunity to promote their products and services in a personalized and interactive way. Thus, advertising content can be personalized based on private data obtained from consumers such as demographic profile, customer purchasing behavior, time, location, search history, etc. [15–19]. All of this data can create significant business opportunities for companies. Under this highlight, researchers have clarified mobile advertising as a new form available through mobile media that can be used to attract the attention of consumers, in order to strengthen the positive connection with their favorite brands. Mobile advertising is defined by Mzid et al. [20] as one of the message communication techniques that has appeared on all mobile devices such as smartphones and tablets.

### **2.2 Advertising**

According to Lolowang et al. [9], advertising is all paid forms of presentation and non-personal promotion of ideas, goods, or services by certain sponsors. To this definition is added that of Abbasi et al. [21] who show that the central principle of advertising research is the advertising value as perceived by consumers.

### **2.3 Mobile social network services (SNS)**

Filho et al. [22] suggest that hyperconnectivity is generated by consumers' desire to be online 24 hours a day through social media. In their study, Suki and Suki [23] define mobile social networks as "all web services that allow individuals to create a public or semi-public profile, establish social relationships with other users and share

all similar interests, view and browse their list of connections, and those established by others within the system”.

## 2.4 Advertising effectiveness

To study the effectiveness of advertising via mobile social network services (SNS), we focus on the contribution of the integrator model of factors that affect the effectiveness of advertising on the Web, as recommended by Ha et al. [6]. Lutfie and Marcelino [24] present advertising effectiveness as “a cost-effective means of delivering the message, either to develop brand preferences or to educate the consumer”.

## 2.5 Consumer engagement

Consumer engagement is one of the most highly discussed topics in the field of marketing [4, 15–17, 21, 25]. This literature review helps us understand that commitment can be expressed to a virtual community, product, service, and brand. In light of our research, we focus our attention on the last type of commitment, that is defined as “a user’s ability to spread their experiential perspective with a brand on social media” [18].

## 2.6 Purchase intentions

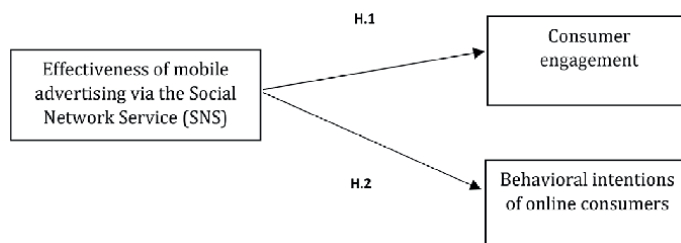
Purchase intention is a salient concept widely known and vigorously studied by marketing researchers, because it can directly affect consumer behavior [9, 11, 19, 20, 26]. A consumer’s purchase intentions indicate their desire to buy a product or service from a given brand [8, 14, 27].

# 3. Research framework and hypotheses

This research attempts to contribute to the existing body of research by introducing both concepts simultaneously: consumer engagement and purchase intentions, to study the effectiveness of Mobile Advertising via Social Network Services (SNS) in Tunisia, an Arab and developing country where research has been relatively scarce until today. In the following, the conceptual model will be presented (**Figure 1**).

## 3.1 Effect of mobile advertising effectiveness via SNS on consumer engagement

The degree of consumer engagement with the brand is known as the attitude, behavior, level of interaction, and grouping of online businesses with their customers [28].



**Figure 1.**  
*Research model.*

The results of the factorial analysis by Saeed et al. [29] revealed a significant positive association between social media marketing factors, brand image, electronic word of mouth, customer engagement, trust, and consumer satisfaction. Similarly, Dwiviolita and Zuliarni [30] point out that the company recognized the importance of mobile applications as an essential promotional tool for increasing consumer engagement. Gutierrez et al. [31] highlight the interactive nature of social media as a platform for effective consumer-brand interaction (CBI), a phenomenon that is proving to be an important driver in strengthening the relationship between consumers and brands.

In their works, Gutierrez et al. [31] explain that social media provide brands with a platform for interaction, and if the advertising is perceived as corresponding to the brand's image, we can expect more engagement. In this regard, we cite the study by Choedon and Lee [16], which showed that investing in social media to disseminate effective advertising content can improve consumer engagement with the brand in the long term.

A study by Warbung et al. [32], found that social media marketing has a significant impact on perceived quality through various mechanisms, such as online recommendations, brand reputation, and consumer engagement with the brand. For their part, Deng et al. [33] identify six linguistic characteristics on social media, namely publication length, language complexity, visual complexity, emotional signals, interpersonal signals, and multimodal signals that influence brand engagement.

The use of this form of online sharing and interactivity is necessary in all sales situations, particularly when the customer is engaged in a complex decision-making phase that requires the help of a brand-linked web page, capable of facilitating consumer-brand interaction without any constraints of time, place, or medium to increase customer satisfaction. Naidoo [34] confirms the positive link between the effectiveness of mobile advertising via SNS and brand engagement, hence sub-hypothesis H1–3.

H1: Mobile advertising effectiveness via SNS has a positive effect on consumer engagement.

### **3.2 Effect of the effectiveness of mobile advertising via SNS on the purchase intentions of online consumers**

The results of the study by Lolowang et al. [9] indicate that the online advertising variable has a positive and significant effect on the purchase intentions variable. Alcaraz et al. [11] state that advertising on social networks (SNS) is known for its low costs; it therefore allows start-ups to launch various promotions that increase purchase intentions. Moreover, this result is in line with the study of Meliawati et al. [27], who confirm that social media marketing, and more specifically TikTok, affects purchase intentions. In Gutierrez 2023's study [31], the results show that brands need to build strong relationships through high-quality consumer-brand interactions to significantly increase purchase intentions while carefully managing consumers' privacy expectations.

Kim and Park [35] state that social media influencers positively affect brand image, and consumer purchase intentions can be significantly influenced by the attractiveness of digital influencers. We also refer to the study by Ebrahim [36], who shows that social media activities affect brand awareness and image, and consequently consumer behavior.

As for Hasim et al. [12], they point out that the effectiveness of social media, and Instagram in particular, has a positive impact on the purchase intentions of online consumers and on brand equity. These findings seem to highlight the mediating role played by brand attitude between the effectiveness of online advertising and purchase intentions. We also highlight the study of De Keyzer et al. [37], who examine the relationship between personalized advertising perceived via social networking sites (SNS) and consumer responses to the brand. This indirect link is mediated by four variables, namely perceived self-efficacy, perceived intrusiveness, brand attitude, and click intentions. These results contradict those of Shaouf et al. [38] and Zhu [39], who find a negative correlation between advertising effectiveness and purchase intentions. Based on these various results, we can predict that mobile advertising effectiveness via the Social Network Service (SNS) has a positive effect on the purchase intentions of online consumers, hence the following hypothesis:

H2: The effectiveness of mobile advertising via SNS has a positive effect on the purchase intentions of online consumers.

**Figure 1** illustrates the research model.

## **4. Research methodology**

### **4.1 Data collection**

We retain the assertion of Carricano and Poujol [40], who stipulate that “the population to be studied must be defined with the greatest care. We agree with these two authors, that “an appropriate choice of sampling method can make our survey a success”. We, therefore, chose people who receive advertising content on their phones and who frequently visit websites via social networks (SNS).

To this end, we followed a convenience sampling procedure, based on people with mobile experience (at least one year’s experience) and age 18 and above as the two criteria for selecting survey respondents. We also followed studies in this field that included people with mobile experience. This prerequisite is applied in almost all studies that deal with the importance of mobile advertising via social networks. The questionnaire is aimed primarily at young people (under 30) living in Tunisia (North Africa).

At the same time, we made sure to reach diverse socio-professional categories, while guaranteeing the diversity of answers collected on the questions asked. We also included gender, age, family status, and professional social category as criteria for diversifying our sample.

Nevertheless, as part of our research, we created our online survey using Google Forms. Respondents were sent a link to a Google Forms questionnaire, opened for the first six weeks of June 2021, via Facebook. Each participant took around 10 minutes to complete the questionnaire. Data collection lasted one month. We pointed out that we took advantage of the containment period (COVID 19) to send out more questionnaires. Our sample is made up of craftsmen, professionals, employees, students, managers, the retired, company directors, shopkeepers, and the inactive.

Subsequently, to determine the exact number of our sample, we based ourselves on the words of Dalmás [41], who suggests that “the sample size should include 5 to 10 times as many individuals as there are items subject to the same factorial analysis” [41]. This rule is a strict constraint that must not be exceeded in the context of our research [41]. Hence, given this calculation range, we combine 5 observations to

obtain a matrix composed of  $64 \times 5 = 320$  people, which will serve as the basis for our exploratory and confirmatory factorial analyses.

We note that most of the respondents interviewed were young people (63.3%) aged under 30. We note that the sample belongs to categories of women representing (51.9%) compared to men (48.1%). Most of the respondents were single women (56.5%). This is explained by the fact that this category has more free time to browse anytime and anywhere without any worries, unlike married people who do not even find the time to access websites. These descriptive characteristics of the two samples are summarized in **Table 1**.

In the following, we will present the data analysis methods used in our research. First, we relied on the method of exploratory factor analysis to explore the relationship between the measured variables and to purify the measurement scales [40]. Then, we began a confirmatory factor analysis to confirm and validate the measurement model and the measures adopted for the different concepts.

In our research, we opt for the first method whose choice is based on the words of Akrouf [42], who stated that “principal component analysis contributes to the common variance between observable variables”. The second method is generally

Description		Collection number (n = 430)
Total questionnaires distributed		650
Total questionnaires retained for analysis		430
Response rate		66%
Sample characteristics		N = 430
Gender	Man	207
	Woman	223
Age	Under 30	272
	Between 30 and 45	68
	Between 41 and 50	56
	More than 51	34
PSC	Executive/business manager	12.3%
	Liberal profession	8.8%
	Employee	20.7%
	Artisan/Trader	4.9%
	Student	40.7%
	Retirement	5.3%
	Inactive	5.6%
Marital status (MS)	Other	1.6%
	Married	120
	Single	243
	Divorced	40
	Widowed	27

**Table 1.**  
*Descriptive characteristics of the sample.*

used to identify the latent variables that contribute to the common variance between the observable variables [43]. Thus, this method is based on the structural equation method (SEM) with the maximum likelihood (ML) estimation method. We subsequently used AMOS 20 software to determine whether the proposed model fits well with the data or not. If not, the proposed measurement model is rejected.

#### **4.2 Content of the questionnaire**

We used a pre-test method for our experimental version of the questionnaire, distributing the original version (without any modifications) to ten or so consumers before testing the respondent for confusion or ambiguity about the items. We also told respondents that their help will be important for our survey and that this medal of rigorous answers gives a great chance of having better reliability of answers and reduces the bias due to non-response. Respondents were diverse across the board (age, education, gender, and industry) to ensure our sample would be diverse.

Most respondents were involved in our survey. Based on their recommendations, we made a few adjustments to the meaning of some vocabulary and original items. We also point out that the interviewees did not hesitate to express their opinion on the number of scales. They felt it was better to reduce the number of scales to 7 points because of the length of the questionnaire. We based ourselves on the comments of Assaidi et al. [44], who recommended using 5-point scales when a survey has more than 60 items. We also mention the study of Dalmas [41], who states that a questionnaire with more than 100 items will be very heavy and run many risks, such as bias, the Halo effect, response polarization, contamination, and missing data.

We reduced the number of items to make the questionnaire “lighter”, “shorter”, and “easier” for respondents to answer. We also noted that several respondents found it very difficult to distinguish between the different levels. A source of confusion and even incomprehension was repeated several times by other interviewees who asked the same questions about the meaning of these scales. We also noted that there was a lack of understanding of the exact position of the scales, which differed from one person to another. For this reason, we decided to retain the comments that were unanimous. We then decided to distribute the questionnaire to other people to ensure that there were no misunderstandings.

In the first part of the questionnaire, we clarified and redefined the various key concepts related to our research objective so that the respondent would have a clear idea of the theme and could easily answer the questions posed. From the first question to the fourth, we set out to study the effect of advertising effectiveness on consumer engagement. The last question is devoted to studying the behavior of online consumers who frequently use their mobile phones to purchase goods or services. The last part of the questionnaire was devoted to the respondent’s personal characteristics, that is, name, gender, age, PSC, current marital status, etc. These data will help us describe our sample. We also specify that our questionnaire includes 19 items.

#### **4.3 Measurement instruments**

Three constructs were measured in this research: advertising effectiveness, consumer engagement, and the purchase intentions of online consumers. We chose the

measurement scales based on three principles: the conceptualization of each variable, the research objective, and the reliability of the scales [44].

The measurement scales used in this research are interval scales and, more specifically, 5-point Likert-type scales ranging from “strongly disagree” to “strongly agree”.

3 items for advertising effectiveness inspired by the Martins [45] measurement scale.

12 items measure consumer engagement based on the Helme-Guizon and Magnoni [46] measurement scale.

4 items to measure purchase intentions adapted from the Ha [6] scale.  
(See **Table A1**).

#### **4.4 Analysis of the measurement model**

A confirmatory factor analysis (CFA) was conducted to empirically test the measurement model. We used structural equation methods (SEM) with maximum likelihood (ML) estimation. At this level, the standardized regression coefficients, explained variances (SMC), construct variances, critical ratio (CR), and error variances must be checked for each construct. The results show that all the variables have standardized regression coefficients greater than 0.7 and are significant (**Table 2**).

We also find that all the variables have good reliability (CR) > 0.6. Based on Joreskog's Rho, we find that all the constructs are verified since they are greater than 0.6. Next, we check the convergent validity of our measurement model. According to Akrouf [43], convergent validity is verified when the Rho of convergent validity is greater than or equal to 0.6 and the VME [43]. These authors admitted that the measurement of convergent validity is based on compliance with two criteria, such as the result of the t-test (cr = critical ratio), which must be significant and greater than 1.96, and the average variance extracted (VCM), which must be >0.5 [43]. Our results are consistent with these recommendations since the AVE Rho represents a value below the significant threshold of 0.5; hence, the convergent validity of our measurement model is verified. The results are shown in **Table 2**.

We now test the discriminant validity of the overall measurement model. We rely on Amamou and Koubaa [47], who state that “this test is designed to be used as a discriminant validity assessment tool”. For discriminant validity, we checked that the square of the correlation (R<sup>2</sup>) is lower than the lowest mean variance extracted (VME), following the approach of Fornell and Larcker [43].

Nevertheless, according to our analyses using AMOS software, we noticed that the square root of the AVE of some constructs exceeds its correlation with the other constructs in the model. This means that these constructs are highly correlated with the other constructs. Hence, this condition is not verified because the structures are not systematically adjacent. In conclusion, our measurement scales do not have complete discriminant validity, but this does not provide a departure from the overall measurement model, according to the words of Chemangui [48], who state that “it is difficult to aim for absolute validity” [48]. **Table 3** illustrates all the discriminant validity results.

After this verification, we will then check the fit indices provided by the AMOS 20 software to determine whether the proposed model fits the data well or not. Furthermore, if this is not the case, rejection of the measurement model is proposed. We also note that the evaluation of the overall measurement model and structure must be based on the Chi-Square statistic ( $\chi^2$ ), c.r < 1.96, the parsimony index ( $\chi^2/ddl$ ), the absolute measurement indices (RMR, GFI > 0.9, AGFI > 0.9 and

Variables	Items	Standardized coefficient	SMC	Jöreskog rho	VME	Error variance
Advertising efficiency	EFFPUB2	0.776	0.602	0.732	0.577	0.053
	EFFPUB3	0.743	0.553			0.066
Consumer engagement	ENGM3	0.768	0.589	0.922	0.569	0.053
	ENGM4	0.748	0.559			0.049
	ENGM5	0.769	0.591			0.048
	ENGM7	0.730	0.533			0.051
	ENGM8	0.726	0.528			0.053
	ENGM9	0.765	0.585			0.058
	ENGM10	0.774	0.600			0.049
	ENGM11	0.774	0.599			0.057
Purchase intentions	INTACH2	0.836	0.699	0.869	0.689	0.047
	INTACH3	0.837	0.700			0.048
	INTACH4	0.817	0.668			0.056

**Table 2.**  
Reliability and validity indices.

	EFFPUB	ENGM	INTACH
EFFPUB	0.760*		
ENGM	0.873	0.754	
INTACH	0.847	0.806	0.830

Convergent validity of each construct.

\* Square of the correlation between two dimensions.

**Table 3.**  
Test of the discriminant validity of the global measurement model.

RMSEA < 0.08), and the incremental measurement indices (CFI > 0.9 and NFI > 0.9, TLI > 0.9). We note that most of the indices are above the standards. **Table 4** summarizes all the fit indices of the models respecting the recommended thresholds.

#### 4.5 Testing hypotheses

Research hypotheses H1 is verified. The results show that advertising effectiveness is linked by a direct effect to consumer engagement ( $\beta = 0.822, p < 0.005$ ).

The results obtained in relation to hypothesis H.2 reject the existence of a significant effect of advertising effectiveness via social network services on purchase intentions. This result is opposed to the study of Lolowang et al. [9], who confirm that online advertising has a positive and significant effect on purchase intentions. On the other hand, this result is in line with the study of Ahmad and Mahmood [49] who state that the number of advertising exposures must be considered to achieve advertising effectiveness. They state that it is difficult to change the purchase intentions of online consumers with a single advertising exposure. This leads us to infer that a

Fit index	The measurement model	The structural model
CMIN/DF	2.027	2.020
GFI	0.9	0.872
AGFI	0.873	0.849
CFI	0.971	0.952
NFI	0.922	0.901
TLI	0.965	0.946
RMR	0.049	0.056
RMSEA	0.036	0.044

**Table 4.**  
*The adjustment indices of the research and structure model.*

The resulting hypotheses on consumer engagement		Result
Hypothesis 1	H.1 The effectiveness of mobile advertising via SNS has a positive effect on consumer engagement.	Validated
The resulting hypotheses on purchase intentions.		
Hypothesis 2	H2. The effectiveness of mobile advertising via mobile social network services (SNS) has a positive effect on the purchase intentions of online consumers.	Invalidated

**Table 5.**  
*Statistical tests of hypotheses.*

logical level of exposure creates viewers' behavioral flexibility about online advertising, with the aim of achieving a high level of intentions.

**Table 5** summarizes all the results related to the verification of research hypotheses.

## 5. Discussion

This study focuses on a new direction that addresses the relationship between advertising effectiveness, consumer engagement, and purchase intentions of online consumers. Regarding the impact of advertising effectiveness on consumer engagement, this result is consistent. This result stresses that companies must be committed to investing in improving their virtual communication activities in order to popularize the brand, create a competitive advantage in a dynamic environment, and offer social benefits for users.

Consumer engagement proved to be the ability of a user to broadcast their experiential perspective with a brand on social media [50]. Based on the results, we were able to verify the positive effect of advertising effectiveness on consumer engagement. These results enabled us to establish that consumer engagement is essentially based on the ability of effective, interactive, and adaptive advertising to recall and activate the action of brand recall. This result is in line with the study of Choedon and Lee [16], who state that investing in social media to deliver effective advertising content can improve the engagement of online consumers in the long term. This result is backed up by Abbassi et al. [21] and Ao et al. [25], who treated this relationship,

confirming the positive effect between these two constructs. Finally, regarding the second hypothesis, an examination of the structural links shows that there is a non-significant link between advertising effectiveness and the purchase intention of online consumers. This result shows that an effective advertising message does not affect the behavioral intentions of online consumers. This result contrasts with those of Lolowang et al. [9], Meliawati et al. [27], and Fink et al. [51], who confirmed the significant effect between the two constructs. This result is in line with the findings of Manan et al. [52], who find that the two dimensions of social media advertising (credibility and authenticity) do not influence purchase intentions [52]. This result is in line with the study of Yusof et al. [53], who found that green advertising does not have a significant influence on purchasing behavior [53]. This result seems logical to us, if we also follow the study of Ahmad and Mahmood [49], who state that to achieve advertising effectiveness, we need to pay attention to the number of advertising exposures. This leads us to infer that a logical level of advertising exposure creates a sense of enjoyment and flexibility in the receiver. Furthermore, according to Hanaysha [54], the entertaining nature of advertising via social network services (SNS) improves users' confidence but does not necessarily affect their purchase intention. This means that when people look for brand-related content to entertain themselves, relax and spend their time, they will not intend to buy that brand's products. We concluded that the degree of enjoyment of advertising content does not necessarily affect the purchase intentions of online consumers. This result corroborates Al Koliby and Rahman [55] conclusion that insufficient information about a brand does not affect online consumers' purchase intentions toward that brand [55].

## **6. Theoretical implications**

Based on advanced previous research that focuses on mobile advertising, we saw a growing interest from practitioners and researchers in understanding social media advertising (SNS), in which our study fits. The investigation in this field gave rise to several disciplines to study the phenomenon of advertising effectiveness via social network services (SNS). Little research was invested in explaining the effectiveness of advertising via social networking services (SNS), particularly in the North African context. Consequently, our research has come to address this shortcoming. It seeks to uncover the consequences of advertising effectiveness on consumer engagement on the one hand and behavioral intentions on the other by combining the conceptual models of Ha et al. [6] and Alhaddad [56]. The model advanced by Ha et al. [6], did not consider the effect of advertising effectiveness on consumer engagement but only clarified its impact on online consumers' attitudes. However, the model advanced by Alhaddad [56] focuses on the analysis of advertising effectiveness on consumer engagement. This merger allowed us to discover and integrate new constructs into our research model that helped enrich the existing literature.

Similarly, we integrated new notions into our model that encompass all the concepts that are related to mobile advertising via SNSs, such as brand value, brand image, brand commitment, and equity value, while trying to find a better understanding of each term used by various authors in the literature. Hence our first contribution, which consists of enriching the digital marketing literature by rethinking mobile advertising via social network services (SNS). Our research contributed to the construction of a model that integrates consumer engagement which is affected by

advertising effectiveness through SNS. This enabled us to clarify the link and complementarity between advertising effectiveness and consumer engagement, which is a field of research that is still unexplored and is particularly in need of clarification.

The contribution of our research also lies in the treatment of the causal relationships between advertising effectiveness and the behavioral intentions of online consumers. Moreover, the confirmation of our theoretical results through empirical analysis enabled us to demonstrate the importance of the virtual interaction between the online consumer and the brand, as well as to demonstrate the principle of the presence of a relationship between the effectiveness of mobile advertising via social networks and the purchase intentions of online consumers. Based on the theory of brand equity Keller [57] and the hierarchy of the effects model [14], our study extended the model proposed by Ha et al. [6] by incorporating the inherent consequences of advertising effectiveness on consumer engagement. Our research provided insight into the consequences of advertising effectiveness via SNS, which were not addressed by previous research. To address this shortcoming, we proposed to investigate the relationship between advertising effectiveness and consumer engagement, both of which are responsible for creating long-term economic wins. Moreover, there is a theoretical gap as to the nature of this relationship. Most researchers studied either users' perceptions of advertising, the consequences of advertising effectiveness, or the behavioral intentions of online consumers, but they did not tackle these subjects simultaneously.

## **6.1 Practical implications**

From a managerial point of view, this research offers advertisers, companies, managers, and all those involved in the field of mobile advertising in general and advertising via social network services (SNS) in particular—possible solutions for understanding the consequences of the effective creation of advertising content on consumer engagement and the behavioral intentions of online consumers. However, effective, entertaining, up-to-date, and informative ad creation triggers a strong editorial construction of consumer engagement.

In this sense, managers need to adopt real virtual techniques that enable advertisers to abandon traditional techniques and replace them with others that are likely to offer a strong bond with mobile users and maintain a behavior that enables them to remain loyal and buy the same brand repeatedly. We, therefore, recommend encouraging companies that rely on this online creativity to create an active commitment from their subscribers so that a strong emotional attachment to the brand is created, and consequently, their purchase intentions will increase. Indeed, the effective creation of advertising content via social network services (SNS) has a positive and significant effect on consumer engagement.

Finally, to increase the intentional levels of online consumers, we suggest that managers humanize their brand on social networks by adapting the brand's corporate elements, that is, the logo, colors, shapes, and design, to get closer to their virtual community. The principle is, therefore, to move beyond a bland tone toward an approximate accessibility that could be the main reason for falling in love with a brand. Hence, strong love will create strong brand equity, which in turn will lead to high purchase intentions. If advertisers and managers carefully study the inherent consequences of advertising effectiveness, they can help companies engage consumers and create strong brand purchase intentions.

## **6.2 Limitations and future research directions**

Like all research, there are some limitations to this study. First, we have used a single source of information, namely online consumers who frequently use their mobile phones to access online mobile social network services (SNS). Future research should use other sources of information, such as project managers, companies, and communications agencies. Secondly, another limitation relates to the dissemination of the research questionnaire—it seems that most reactions came from interactions on a single tool, and more specifically, Facebook. Further research will attempt to clarify this concept in other offline media, as this area of research is still vast and there are still many avenues to explore. Another limitation concerns the failure to take account of actual purchasing behavior because of advertising effectiveness. In this context, we propose that future interest be given to actual purchasing decisions. Finally, other variables may exert an influence on the hypothetical relationships tested. For example, Martí Parreño et al. [58] found that age can modify the acceptability of such a mobile advertising campaign. We propose that future research consider the moderating effect of socio-demographic variables.

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## **Conflict of interest**

The authors declare no conflict of interest.

## **Notes/thanks/other declarations**

I thank everyone for their relevant suggestions, which improved the quality of my work.

41 **Appendix 1**

Measurement scales	Items	Number of items	Factors	Eigen values	Cronbach's alpha	KMO	Authors
Mobile advertising effectiveness	I find mobile advertising via social network services (SNS) useful.	3	0,861	2343	0,856	0,727	Martins [45]
	I find mobile advertising via social network services (SNS) relevant.		0,888				
	I find mobile advertising via social network services (SNS) important.		0,901				
Consumer engagement	The withdrawal of this brand from social networks bothers me greatly.	12	0,751	8786	0,966	0,944	Guizon et Magnoni [46]
	This brand represents on its page exactly what I'm looking for.		0,809				
	It is in my interest to continue to follow this brand on its fan page.		0,877				
	This brand deserves my loyalty to its fan page.		0,859				
	Following this brand on its fan page gives me great joy and pleasure.		0,894				
	I am very attracted to this brand on its page.		0,877				
	I am sharing information published by this brand with someone close to me.		0,890				
	I would recommend this brand to a friend on social networks.		0,856				
	I publish content from this brand's fan page on my wall.		0,879				
	I comment on information published by this brand on its page.		0,859				
	I post a message on the page of this brand.		0,879				
	I participate in competitions organized by this brand on its page.		0,828				

Measurement scales	Items	Number of items	Factors	Eigen values	Cronbach's alpha	KMO	Authors
Online consumers' behavioral results	I am willing to buy directly when I receive an ad via social networks if there is an attractive product or service available.	4	0,884	3382	0,937	0,855	Ha [6]
	I am willing to provide my credit card information to a mobile advertising company (SNS).		0,932				
	I am willing to carry out banking transactions to purchase a product or service via mobile SNS advertising.		0,935				
	I am willing to buy a product/service I need directly from a mobile SNS ad.		0,926				

**Table A1.**  
*Measurement scales and questionnaire structure.*

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# Perspective Chapter: Social Media Analytics – The Pavers of Business Model Development

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## Abstract

Social media analytics is a new communication channel that provides new sources of data on customer behavior and opinions, leading to analyzing data effectively. This paper presents a descriptive qualitative study that examined primary and secondary data sources to delve into the realm of social media analytics. The study presents bibliometric analysis involving two stages: collecting information from databases using a specific search equation and examining bibliometric indicators (quantity, quality, and structure) of social media analytics. The paper aims to assist researchers in utilizing social media analytics in their research or business model development. The paper also provides an overview of how to use types of social media analytic tools in relation to social media data. The survey conducted demonstrates that 59% participants who utilized social media analytics, showed that social media analytics is beneficial as it involves using tools, technologies, and techniques to facilitate communication in the digital world. The study relied solely on qualitative secondary data, which has its constraints. To address this, future studies should incorporate both primary and secondary data and utilize a combination of qualitative and quantitative research methods. Specifically, researchers should focus on quantifying social analytics data from social media platforms and analyzing trends over time using machine learning algorithms.

**Keywords:** social media analytics, consumer behavior, social media platforms, customer satisfaction, business model development

## 1. Introduction

Social media, from the onset, was intended for personal connections. It quickly evolved to fulfill various needs. It all started with the emergency of Myspace. On August 1, 2003, Myspace made its debut as a pioneering social network, captivating a worldwide audience and leaving an indelible mark on technology, popular culture, and the music industry. Additionally, it played an active role in the initial expansion of platforms such as YouTube [1]. In 2004, it became a pioneer by attracting 1 million active users monthly and it was a popular website and social media platform

that dominated the social networking scene from 2005 to 2008 [2]. The subsequent years witnessed an unprecedented surge in social media engagement, primarily due to the emergence of Facebook and Twitter (now known as the X platform). Businesses were from these platforms as they offered the ability to connect with a global audience. Currently, social media has the largest audience and usage linked to social media analytics (SMA). It is essential as it builds and validates business models and marketing strategies that complement social networking. Referring to Ref. [3], “it is difficult to study social media without encountering the phrase social networking” as these complement each other. According to Ref. [4], social media analytics refers to gathering, extracting, examining, and showcasing data to facilitate decision-making, uncover insights, or aid in other business-related activities. However, there is a lack of understanding of its role in social media platforms being critical in modern times. There is a gap in analyzing social media data usage, user interface, and user experience information. This chapter provides an overview of the use of social media analytics in business model development and how it relates to the roles of social media and social networks in mitigating the social media data usage gap. It suggests using social media platforms through social media analytics to develop business models classified under Business-To-Business (B2B) models, Business-To-Consumer (B2C) models, Subscription-Based Models, and On-Demand Business Models as some of the business models. The chapter also discusses the strategic adaptation of social media sites for design, user engagement, transparency, and data analysis considerations. Social media analytics is a current trend that helps identify conversations and attitudes in social media. It can influence business models, strategic decisions, and marketing implementations. Firms can collect and analyze large amounts of usage data from social media sites to gain valuable insights. SMA provides real-time and dynamic information about users’ opinions, concerns, likes, and sharing. User comments, reviews, tags, and the use of products develop business models and marketing strategies. SMA can provide valuable information about potential customers’ preferences, needs, attitudes, and recommendations for new goods, services, and features.

SMA is an emerging category of Internet communication technology that has generated recent significant shifts in consumer communication behavior and traditional business models. As stated by Ref. [5], “the Internet is the source of spreading information quickly to a large audience and of going beyond the limitation of time and space.” The Internet spreads information through the use of social media. The Internet alone cannot spread information, and social media cannot spread information without the Internet. Thus, Ref. [6] points out that social media is nothing apart from a web-based tool that allows individuals to publish posts, update their profiles, increase their connections, and enable users to interact with the outside world and work with each other since the process of gathering valuable information from various social media platforms to conclude. Similarly, the Internet and social media cannot digest information without social media analytics. As such social media analytics and business model development represent two of the most current and rapidly evolving fields of interest for today’s entrepreneurs and all levels of management in public and private sector organizations that have increased global competition and the current recession in many countries have helped organizations develop a sustainable competitive advantage to satisfy customer needs more effectively. Despite the recent exponential growth in the use of social media by consumers, organizations are facing an unparalleled opportunity to achieve this understanding of consumer needs.

## **2. Literature review**

### **2.1 Background of the study**

Social media analytics is now seen as an essential part of many companies' marketing strategies, recognizing the impact consumer perception can have on brand reputation over time. The field of social media analytics is still relatively new, but it has garnered significant interest from the Information Systems community. Numerous researchers in information and technology are now undertaking projects focused on SMA [7]. Even if businesses are not directly selling products through social media, consumers are discussing their brands online. By utilizing social media analytics, companies can monitor these conversations and gain valuable insights. Consumer feedback is crucial for product development, as it helps understand consumer preferences and create successful products. This feedback is in various forms on social media platforms and, with data extraction methods, can provide valuable information for companies in developing strategies, particularly for business models. For example, Ref. [8] conducted a study on using social media analytics to raise public awareness and concern about climate change. They used Twitter data and sentiment analysis to monitor public sentiment on the issue. By analyzing the sentiment data, they identified messages more likely to create measurable changes in public sentiment. This information created tweets and paid advertisements aimed at influencing public opinion. The strategy utilized data at every stage and made adjustments as necessary until achieving the desired sentiment.

While the term analytics refers to the process of analysis, the term social media analytics specifies the data analysis techniques over social media data (SMD). On the other hand, and from the perspective of organizational learning, Ref. [9] defines social media analytics as the process of gathering and analyzing data from social media platforms and sharing, storing, and applying the insights gained. Social media analytics involves gathering and analyzing raw data from various social platforms to guide business decisions and assess the impact of social media activities [10]. Social media analytics involves tracking, analyzing, and creating data from social media outlets and web conversations to extract valuable business insights that traditional methods may not provide [11]. These insights can include information on marketing effectiveness, customer sentiment, new product opportunities, brand health, and more. According to the Wikipedia page on social media analytics, it is the practice of gathering data from blogs and social media websites to make informed business decisions based on consumer opinions, needs, and behaviors. Social media analytics involves using tools, technologies, and techniques to facilitate communication in the tech world. Popular social media sites like network sites pointed out by Refs. [6, 12] are social network sites (Facebook and LinkedIn), wikis (Wikipedia), blogs (Blogger), microblogging services (Twitter), video-sharing services (YouTube), and photo-sharing services (Flickr) constitute some of the examples of social media included in this SMA analysis. To support business model development, social media analytics can fetch different types of data from social media to understand the behavior of groups interested in the demand for the product. The highest level of benefits is achieved by those contributing to the advancement and development of social media and how to provide more intuitive data visualization. This is the most effective way to show consumers the visualization and if this visualization increases their understanding of complex systems.

## **2.2 Significance of social media analytics in modern digital technologies**

Social media analytics provide insight into digital technologies. By using these analytics, marketers can quantitatively assess their marketing efforts. Digital technologies can monitor behaviors and analyze the content of requests, problems, and assessments on the platforms of organizations and social networks [13]. For example, a company might launch a marketing campaign, and depending on its success, it will decrease or increase the amount allocated for that specific marketing tactic in the future. This trial-and-error method also is less efficient as the effects of one marketing tactic might influence sales several months down the line. Additionally, businesses face challenges in obtaining useful insights from the vast amount of information generated from various sources, including social media due to the fact that social media analytics is a new communication channel that provides new sources of data on customer behavior and opinions, leading to the development to analyzing data effectively. For social media to produce effective data analysis, it is mandatory for organizations to clearly define their goals and objectives for their social media platform designing efforts. For example, popular platforms for this include Facebook, YouTube, Instagram, Twitter, LinkedIn, and Reddit as now people tend to link their social life and even their businesses with these platforms. However, it is important to prioritize productive usage above all else [14] as social media analytics alludes to the collection of information and measurements that assist large social media execution and is characterized as the method of collecting crude information from distinctive sorts of discussions on social media stages [15].

Social media analytics provides a more comprehensive range of insights than basic metrics, such as likes, follows, retweets, views, clicks, and impressions on specific channels. It distinguishes itself from reporting tools like LinkedIn or Google Analytics, which focus mainly on marketing campaigns. For example, specialized software platforms are used for social media analytics, similar to web search tools. These platforms collect data on specific keywords or topics through search queries or web “crawlers” that scan across channels. The collected data is then stored, categorized, and analyzed to uncover valuable insights. Social media analytics also involves social listening, which entails monitoring social channels for potential issues and opportunities. Social media analytics tools for various social media networks typically include social listening in their reports, combining listening data with performance analysis for a comprehensive overview. Social media analytics enables companies to track trends, analyze conversations and customer opinions, measure the effectiveness of communications, pinpoint important product attributes, keep an eye on competitors, and evaluate the influence of external partners and channels [16]. The information provided not only assists in making tactical changes, like addressing criticism but also influences strategic decision-making.

Social media analytics offers a unique opportunity to gather insights, track trends, and conduct experiments on a global scale. By analyzing social media data, companies can gain valuable information about customer needs, preferences, and opinions. For example, Synthesio, a leading social media monitoring firm, was able to help Accor, a multinational hotel chain, identify and address customer complaints by analyzing over 5000 consumer opinions posted on travel websites each month. By tracking the social media profiles of thousands of hotels, Synthesio was able to pinpoint issues such as demagnetized room keys and help Accor take swift action to resolve them.

This demonstrates the power of social media analytics in improving customer satisfaction and driving business success [16].

Organizations have various methods to evaluate social media platforms, enabling them to consolidate customer feedback and devise strategies for enhancing product quality, thereby enhancing overall productivity in the workplace. By pinpointing and enhancing underperforming areas, companies can also bolster their profitability. For example, Ref. [17] highlights the theoretical contributions of social media usage in the workplace. It demonstrates that participants who utilized social media to communicate with colleagues showed high work performance. These individuals also temporarily escape from unsatisfying and demanding jobs by using social media. Consequently, the frequent use of social media in the workplace improved work performance.

Feedback and reviews on products and services are collected, stored, and analyzed using different technologies. The categorization of this feedback aligns with the brand's objectives. Natural language processing techniques assess the sentiment of comments and classify them as positive or negative toward a product or service. Summaries of customer opinions provide insights into potential product usage and suggest appropriate corrective actions. According to Refs. [18–20], sentiment analysis is considered vital for businesses as it allows them to derive valuable insights from their data. This, in turn, helps them gain a competitive advantage by improving their understanding of the environments in which they operate.

Optimizing the customer journey using social analytics is critical for retaining customers. Consistently engaging with the customers improves online presence and understanding, resulting in further commercial advantages. It examines structured and unstructured information and summarizes it to get relevant insights. The engagement rate measures how involved people are with the messages and campaigns. By actively listening to customer feedback on social media, businesses can gather insights, identify areas for improvement, and implement necessary changes. According to Refs. [21, 22], big data has the potential to offer companies a comprehensive comprehension of their customers. Through the analysis of vast amounts of data, companies can detect patterns and trends in customer behavior, enabling them to create more precise and customized marketing and advertising approaches. According to Ref. [23], this can lead to increased involvement, commitment, and ultimately, revenue.

According to Ref. [24], in today's business landscape, companies are placing increasing importance on their reputation. This is because a single comment or opinion deriving from social media about their product or service can have a significant impact on the choices of other consumers. Furthermore, in today's business environment, the Internet and social media are essential tools for firms looking to grow and transform their operations. It is against this background that businesses must leverage these technologies to promote their products effectively and to develop business models.

To identify their market competitors, companies are utilizing various analytics tools by employing effective techniques to achieve superior outcomes. Comparative charts provide valuable insights into a company's brand and market position about its rivals as it is it that social media platforms also play a key role in this process such as allowing customers to share feedback on products frequently. Furthermore, companies can utilize social media to gather feedback on their products and interact with customers, thereby improving customer service. For instance, companies analyze consumer ratings and comments to improve product quality and gain a competitive

edge. This process helps in strategic decision-making by identifying a brand's most valuable attributes. It also measures people's reactions to social media posts and other forms of communication, enabling firms to make well-informed decisions and increase productivity.

According to Ref. [25], there is academic community's increasing interest in social media marketing. They also suggest that the future of social media marketing may evolve beyond current practices due to the dynamic nature of social media and consumer behavior because social media is a global tool for communication, social interaction, and accessing digital content where like-minded individuals or businesses access and contribute to digital content such as news and product brand ads. The growth of social media platforms is significant and so are the social media tools and the aligned social media analytics that help businesses and consumers in understanding the current state of technologies or services available.

Research on social media analytics and business model development highlights the importance of this modern tool in the market. The rise of Web 2.0, which allows for increased user interaction with the Internet, has led to a wealth of data from social media platforms. According to Ref. [26], web 2.0 is referred to as the wisdom Web, people-centric Web, participative Web, and read/write Web, as it encourages more interactive and collaborative use of the Internet. This business model focuses on social interaction among peers and collective intelligence, offering new opportunities for effectively engaging users on the Web. However, traditional research and data collection methods have become less effective due to the interactive and dynamic nature of Web 2.0. Additionally, social media analytics is better suited to the modern era, involving gathering data from stakeholder interactions and using it to create or modify strategies to achieve specific goals. This process includes data collection, analysis, strategy formulation, and implementation.

### **2.3 Significance of internet and social media analytics**

The Internet and social media impacted various aspects of society, including individuals, corporations, and businesses. In today's rapidly changing business landscape globalization and digitization have transformed business practices. As a result, businesses strive to stay current by utilizing the Internet and social media platforms to reach a larger audience. Their study [27] examined different business models employed by entrepreneurs, start-ups, and established businesses on these platforms. The findings from the literature and study provided guidelines on how traditional business models can be adapted for social media, taking into account the interactive nature of this digital platform.

In their study, Ref. [28] emphasize the significance of marketing in driving business growth through effective content sharing on social media platforms. The authors highlight the essential role of social media platforms in retaining customers and expanding reach, as they offer valuable analytics tools for free. These tools enable businesses to track content engagement and utilize proprietary features for enhanced capabilities. While these tools rely on shared content for analysis, they do not explicitly disclose the content itself. Nonetheless, they assist businesses in creating engaging content, albeit at the cost of hiring skilled personnel.

The study by Sivarajah et al. [29] highlights the importance of social media analytics in business. They emphasize that analyzing data from platforms like Facebook, Instagram, and Twitter can help companies understand consumer preferences, improve customer service, and make informed decisions about product development

and marketing strategies. The authors introduce the BD-SMAB model, which uses big data analytics to gain insights into competitors, adjust pricing strategies, and improve customer satisfaction. The model explores the impact of social media analysis in various industries and aims to improve customer satisfaction, brand awareness, and overall customer experience.

In their study, Ref. [9] argue that organizations use social media analytics to improve performance outcomes. However, the industrial marketing literature has primarily focused on social media as a promotional tool and not an analytical tool. Therefore, the Agnihotri study is one of the first attempts to explore the concept of social media analytics in industrial markets and provide a theoretical perspective on the topic. The authors define social media analytics as activities that acquire and analyze social media data and disseminate, retain, and utilize the findings. Their study not only guides future academic research by posing relevant questions but also offers managerial implications for using social media analytics in B2B sales.

A study by Ref. [30] discovered that using Social Media Platforms (SMPs) for sharing customer information and knowledge benefits innovation in small and medium-sized enterprises (SMEs) in emerging economies. This practice also indirectly helps SMEs grow and become more profitable. For example, decision-makers in Saudi SMEs improve their skills in using SMPs to collect customer information and share knowledge, as this can positively impact innovation and ultimately lead to increased growth and profitability for SMEs.

Refer to Ref. [31], discusses how the Internet and smartphones have led to the emergence of social media as a powerful tool for communication in the twenty-first century. Social media has democratized the spread of ideas in various aspects of society, including business, sports, and politics. Consumers are exposed to a wide range of information on social media, which they must evaluate for credibility and impact on their opinions. Marketers need strategies used when using social media to influence consumers and enhance brand reputation. Scholars from different fields are actively researching the role of social media in our lives, with marketing playing a role in studying human communication and persuasion. The authors' monograph focuses specifically on social media analytics in marketing rather than examining social media across all disciplines.

And Ref. [32] delves into social media scraping, data cleaning, and sentiment analysis. Their paper explores the growing popularity of social media analysis focusing on Twitter feeds and the availability of APIs (application programming interface) offered by platforms like Twitter, Facebook, and News services. It emphasizes the rapid evolution of this research field and the commercial pressures that drive it. The paper also provides an overview of how to lead software tools and how to scrape, clean, and analyze social media data. Additionally, it presents the system architecture of a social media analytics platform developed by University College London. The paper aims to assist scientists in utilizing social media scraping and analytics in their research or business endeavors. However, it acknowledges that the techniques for retrieving data may change due to the constantly evolving nature of social media data scraping APIs.

In their study, Ref. [33] explored the role of social media analytics (SMA) in providing competitive intelligence (CI). They analyze qualitative data from semi-structured interviews with individuals from various industries, including social media, manufacturing, telecommunication, IT, and services. The analysis used NVivo coding and matrix queries. The findings reveal that SMA goes beyond traditional CI by

offering insights into supply chains, costs, and information flow. Additionally, SMA-driven CI can enhance demand planning and inventory management by addressing supply chain uncertainties. The study also highlights that SMA can provide valuable information on competitors' strengths and weaknesses and customers' dynamics. However, it cautions that the bi-directional nature of CI could be detrimental if customers linked to social media are not educated or informed. The matrix query results shed light on the differences and similarities in respondents' perspectives. Overall, the study contributes to the academic understanding of how SMA expands CI for businesses beyond the scope of traditional competitor analysis.

### **3. Research aims and methodology**

The study focuses on social media analytics and how it can influence the development of business models. The research presents a descriptive qualitative study that examined primary and secondary data sources to delve into the realm of social media analytics. According to Ref. [34] qualitative descriptive approach produces a straightforward summary in common, factual language that helps researchers from various disciplines understand a chosen phenomenon. Qualitative research is a comprehensive method that focuses on exploration. It is often referred to as an evolving process that takes place in a real-life environment, allowing the researcher to gain a deep understanding through direct engagement with the subject matter [35] and according to Ref. [36]. Qualitative research explores real-world issues, providing comprehensive insights and thorough exploration. To conduct a thorough evaluation, the author extensively researched Social Media Analytics (SMA) by reviewing articles searched on Internet, publications, journals, and books to explore the significance, characteristics, benefits, drawbacks, and other facets of social media analytics. These secondary sources of information were carefully analyzed on topic by topic in relation to the research topic, resulting in a comprehensive literature review that presents an overview of the study on SMA. And by Ref. [37] recommendations, this study utilized a keyword search strategy to identify pertinent articles. Keywords such as "Social media," "Social media analytics," and "Social media platforms," as well as terms like "Facebook," "LinkedIn," and "Twitter," were employed to search the ResearchGate database for high-quality studies. This method reflects the growing trend of utilizing online databases for systematic literature reviews in information systems research.

While one of the objectives of this study is to analyze diverse viewpoints regarding the relevance of social media platforms using social media analytics in developing business models perceived as an essential requirement or an optional strategy in digital marketing that provide insight into digital technologies, the researcher complemented the study with a survey.

#### **3.1 Research methodology**

##### *3.1.1 Survey participants*

The study included 20 students from Nkhoma University in Lilongwe, Malawi who participated in the Winter Crash Programme from April 2024 to June 2024. Of the participants, 16 were male and 4 were female. The majority (58%) were aged

20 and 21, while 42% were 22 and older. Ten students were enrolled in the Risk Management Course Weekend Class, three in the Company Law Weekend Class, three in the Risk Management Generic Class, two in the Company Law Course Generic Class, and two in the Financial Management Generic Class.

### 3.1.2 Instrument

The study utilized an article titled “*Traditional Marketing Versus Digital Marketing*” by Pascalau and Urziceanu [13] to investigate the effectiveness of social media analytics in quantitatively assessing marketing efforts. The researchers designed a survey instrument to gather information on participants’ knowledge of social media analytics as a tool for understanding digital technologies. The survey included 14 positive statements with five Likert scale options ranging from “I strongly disagree” to “I strongly agree”. Participants were asked to select the option that best reflected their views for each statement. Upon analyzing the survey data, the researchers found that the scale had a high-reliability value of 0.9530, indicating strong consistency in responses. The results are presented in **Table 1**.

### 3.1.3 Survey procedure

After obtaining the necessary permissions from the University Administration, the researcher then obtained approval from the class lecturers to introduce the instrument to students and help in grading their responses on survey sheets. Once the instruments were collected, the answer sheets were processed and Excel random statistics were used to analyze the data. The total scores for participants’ responses on the scale were calculated, as well as the comparative response rate. Statistical analysis was conducted on the frequencies of each item to identify the areas where participants felt most confident.

### 3.1.4 Results

The scale consisted of 18 items, with a score of 5 given for “I am totally in agreement” and a score of 1 for “I am not agreeing”. This resulted in the highest mark of “90” and the lowest mark of “18”. Participants scoring between 90 and 71 were classified as “Totally in Agreement”, 60-31 as “In Agreement”, and 35-18 as “Not in Agreement”. The results can be found in **Table 2**, where it is evident that 59% of participants believed that Social Media Analytics Provide Insight into Digital Technologies. Of these, 26% were “In Agreement” and 15% were “Not in Agreement” regarding the tool’s influence on business model development.

The objective of this section was to evaluate students’ confidence in Social Media Analytics as a tool for influencing business model development by closely examining

Cronbach’s alpha	Number (N) of items
0.9530	18

Source: Researcher’s own calculations.

**Table 1.**  
Survey reliability analysis.

the scale items. After analyzing the participants' responses, percentages were calculated for each option and the items were then ranked from highest to lowest.

Thus in summary, the data presented in **Tables 2** and **3** with the highest response of 59% with those respondents totally in agreement and believing that social media analytics provides a distinct chance to collect insights, monitor trends, and carry out

Scale	Remarks	Response rate
90 ± 61	Totally in agreement	59%
60 ± 31	In agreement	26%
35 ± 18	Not in agreement	15%

*Source: Researcher's own presentation.*

**Table 2.**  
*Social media analytics provide insight into digital technologies.*

Items	Items	Totally in agreement	In agreement	Not in agreement	Total
1	Attribution analysis	14	9	2	25
2	customer behavior analysis	8	10	3	21
3	Benchmark against competitors	9	7	1	17
4	Boost campaign performance	12	6	5	23
5	Brand management	15	6	3	24
6	Campaign analysis	8	3	2	13
7	Competitor analytics	9	5	1	15
8	Customer experience	7	3	5	15
9	Data visualization	6	2	3	11
10	Identify trends	10	6	4	20
11	Improve products	15	9	2	26
12	Influencer analytics	15	5	3	23
13	Make better strategic and business decisions	16	3	4	23
14	Monitoring competitors	15	5	7	27
15	Performance measurement	12	7	2	21
16	Sentiment analysis	15	3	3	21
17	Social network analysis	16	4	2	22
18	Social Media analysis	10	1	2	13
Total responses		212	94	54	360
Response rate (%)		59	26	15	

*Source: Researcher's own presentation.*

**Table 3.**  
*Items that participants feel totally in agreement, in agreement and not in agreement to social media analytics provide insight into digital technologies.*

experiments on a worldwide level. Through the analysis of social media data, businesses can obtain valuable insights into customer needs, preferences, and opinions toward business model development.

## 4. Discussions

### 4.1 Social media analytics toward business model development

Social media analytics involves collecting and analyzing data from various social networks like Facebook, Instagram, and Twitter. This data analysis helps companies gain a better understanding of consumer preferences and behaviors, improve customer relations, gather market intelligence, and make informed decisions about product development and advertising efforts. A business model defines how an organization uses its resources to generate value and sustain itself through profits. In the context of developing a business model from social media analytics, this is an important consideration. Social media analytics relies on utilizing social media platforms and extracting data from them to understand specific audiences and enhance interactions with them. However, these activities can be costly. Hence, it is recommended to create a streamlined social media analytics process that offers valuable insights to the organization while keeping costs low such as in **Table 1** which shows how social media analytics enhance marketing strategies toward developing new business models. This involves collecting and analyzing data from social media platforms to gain insights into customer preferences and behaviors. By tracking trends, analyzing conversations, and measuring communication effectiveness, companies can identify important product attributes and develop targeted marketing campaigns. To effectively integrate social media analytics, businesses should evaluate tools, consider specific needs, identify metrics, select relevant platforms, gather and organize data, analyze metrics, and interpret data for valuable insights (**Table 4**). By following these best practices, businesses can leverage social media analytics to improve their business models and remain competitive in the market.

There are also instances where social media analytics activities have strategic value for the organization, such as public service campaigns or crisis prevention and management. In these cases, the activities should be designed to ensure long-term engagement and maximum impact on the audience. During the early stages of business model development, the organization must determine the relevance of social media analytics activities to its business. If these activities do not generate profitable outcomes, it may be better to reconsider them. However, if they are strategically important, they can serve as a foundation for the organization's future business model.

**Table 4** categorizes the process flow of activities required when integrating business model development in social media analytics. By understanding the current and future activities of the organization, including social media analytics, a business model can ensure the production of valuable outputs for clients with minimal costs and maximum impact. It may also be beneficial to extend social media analytics services from an outsourcing vendor to the industry. This allows actionable data packaging into an intelligence service that clients can fully appreciate. Additionally, a business model can guide sustainable activities by making informed decisions about future trends and increasing interactions with the target audience.

The business aims to achieve the goal of increasing the familiarity of its products among a large audience. By introducing a parent product, the value of the products being sold can be enhanced thus leading to increased sales. However, effective and

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1. Evaluate available Social Media tools
2. Consider specific business needs
3. Identify key metrics for analysis
4. Select relevant social media platforms
5. Gather and organize data
6. Analyze social media metrics
7. Interpret data for valuable business insights

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*Source: Researcher's own presentation.*

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**Table 4.**  
*Integrating business model development in social media analytics.*

efficient promotion is essential to accomplish this objective. Thanks to technological advancements, promotional activities can now be carried out effortlessly and at minimal cost, with social media being a prime example. Today, numerous social media platforms offer extensive reach to potential customers. Hence, the incorporation of social media analytics is vital in the business development model.

Achieving business success can significantly enhance individuals' quality of life. Businesses, regardless of their size, are always working toward achieving their objectives and staying ahead of their competitors. To thrive in today's rapidly evolving world, having an innovative business model is crucial. This involves thorough analysis and adjustment to the constantly changing global environment, especially in the field of technology. The advancements in IT have transformed the way we operate, affecting everything from basic tasks to intricate projects. Businesses must keep pace with these developments to stay competitive.

## **4.2 Types of social media analytics**

There are four main types of analytics: descriptive, diagnostic, predictive, and prescriptive (**Table 2**). Descriptive analytics helps us understand past events, diagnostic analytics helps us understand the reasons behind those events, predictive analytics helps us anticipate future occurrences, and prescriptive analytics uses these predictions to suggest a recommended action plan. When combined with information from social media analytics, these four approaches offer valuable insights into historical, current, and future performance, as well as potential strategies to enhance operations toward business model development.

### *4.2.1 Descriptive analytics*

Descriptive analytics is a statistical method used to analyze past data to identify patterns and relationships. It aims to provide businesses with a foundation for tracking trends by describing events, phenomena, or outcomes. This type of analytics helps to give context to data, turning numbers into measurable patterns. Descriptive analytics is one of the four main types of data analytics, along with diagnostic, predictive, and prescriptive analysis [38]. Organizations often combine descriptive analytics with other forms to gain a comprehensive understanding of their performance. While descriptive analytics summarizes historical data, other types of analysis delve into causes and future outcomes. The process of descriptive analytics involves

creating metrics, collecting relevant data, analyzing historical data, and presenting insights through visualization techniques [39]. To apply descriptive analytics, organizations must identify relevant metrics, gather supporting data, extract and prepare data, analyze it using tools, and present the findings visually. Descriptive analytics provides a simple analysis that does not require extensive expertise in statistical methods or analytics.

#### *4.2.2 Diagnostic analytics*

Diagnostic analytics is focused on answering questions about why certain events or outcomes occurred, what factors influenced them, and if there were any anomalies or deviations and their causes. It also aims to identify correlations and understand how actions or changes impacted the results. This type of analytics bridges the gap between descriptive analytics, which focuses on what happened, and predictive analytics, which looks at potential outcomes and decision-making [40]. By providing context and detail to the data, diagnostic analytics helps in making more informed decisions by fully understanding the influencing factors.

The main goal of diagnostic analytics is to gain deeper insights into the reasons behind specific events, outcomes, or behaviors. It seeks to uncover the origins and elements that led to particular results. Some key objectives of diagnostic analytics include finding the root cause of events, identifying and resolving issues, improving processes, evaluating performance, validating hypotheses, assessing data quality, and managing risk. By combining diagnostic analytics with other data science branches, businesses can achieve a comprehensive understanding of their operations.

The process of diagnostic analytics is iterative, allowing for the refinement of hypotheses and further analysis as insights are uncovered. It involves defining the problem or objective, collecting relevant historical data, preprocessing the data for quality and reliability, conducting exploratory data analysis, formulating hypotheses, performing statistical analysis, visualizing the data, detecting anomalies, establishing causal relationships if possible, conducting root cause analysis, validating and interpreting the findings, communicating insights to stakeholders, and making recommendations and action steps based on the analysis.

#### *4.2.3 Predictive analytics*

Predictive analytics in social media involves gathering and analyzing user-generated data, such as comments, shares, likes, and demographic information, using machine learning algorithms to identify patterns and make predictions. This data is used to forecast future outcomes based on historical data, providing insights into human behavior that can help companies make informed decisions and drive growth. The process of predictive analytics in social media includes data collection, analysis, and predictive modeling. Data is collected from social media platforms and analyzed using machine learning and statistical algorithms to uncover patterns and relationships. Predictive models are then constructed to predict future behavior based on the analyzed data, ensuring accuracy and reliability. By applying predictive analytics to social media, businesses can understand customer preferences, create targeted marketing strategies, analyze data to develop engaging content, personalize products and services, and make informed decisions to drive growth. This encompasses the acquisition of information, electronic word of mouth, information created by sellers, the perceived quality of consumers, and the perceived risk of customers [41].

While implementing predictive analytics may present challenges, the benefits include improved customer engagement, enhanced experiences, and more effective marketing strategies. To maximize the benefits of predictive analytics, companies should have strategies, select the right tools, foster a data-driven culture, and prioritize data privacy and security. By leveraging predictive analytics, businesses can gain valuable insights into customer behavior and preferences, leading to more personalized experiences and informed decision-making in the ever-evolving landscape of social media algorithms.

#### *4.2.4 Prescriptive media analytics*

Prescriptive analytics uses data to determine the best course of action and provides recommendations for decision-making. Machine-learning algorithms analyze large amounts of data quickly and efficiently. However, algorithms cannot replace human judgment; it is a tool to inform decisions. Prescriptive analytics uses investment decisions to weigh risks and make recommendations. It can also play a role in sales through lead scoring, where leads are ranked based on their likelihood to convert into customers. Prescriptive analytics is also used in social media platforms and dating applications to provide algorithmic content recommendations based on user engagement history. In addition, prescriptive analytics utilizes optimization techniques to enhance the accuracy of predicting potential outcomes and consequences, ultimately leading to the best possible results by addressing uncertainties in decision-making [42]. It detects and flags bank fraud by analyzing transactional data for anomalies. Additionally, prescriptive analytics can inform product development and improvements by analyzing user data and identifying trends. Email automation is another example of prescriptive analytics, where leads are categorized, and personalized email content is delivered based on their motivations and needs.

The traditional business model theory is evolving due to the impact of social media and its data. The pros and cons of using prescriptive media analytics are challenged by many researchers. For example, referring to Ref. [43]’ research, their study outlined the prescriptive analytics lifecycle and highlighted the current research obstacles in this area. They discovered that current prescriptive analytics applications are typically created without a systematic approach and cannot adapt to the ever-changing and intricate nature of modern businesses. Additionally, there is a lack of seamless integration with predictive analytics, preventing the full utilization of the vast possibilities offered by big data. To the relatively new and rapidly growing field. It emphasizes the importance of suppliers, customers, partners, resources, activities, channels, opportunities, and cost structures. For instance, companies like Spotify, which generate revenue from ads and subscribers, use the same music and distribution channels. However, experts argue that the approach is too focused on internal operations and engineering. Social media is a place for fun and socializing and a tool for connecting businesses, marketing efforts, and the construction industry. It also provides a space for global communication, sharing information, and engaging with others [44]. Instead, future data-savvy companies need a focus on humanities to create value propositions centered around human needs, knowledge, and solutions. Recognizing the importance of social media analytics starts with understanding the significance of the consumer. It is essential to consider consumers as a broad term, including stakeholders and other interested parties, not just those active on social media. Social media analytics involves systematically analyzing qualitative

and quantitative data from consumers on social media platforms to extract valuable information and insights for businesses.

The widespread use of social media has revolutionized business engagement with their customer as marketing experts are using social media to engage with customers and promote businesses [45]. Entrepreneurs can now connect with clients worldwide, thanks to constant connectivity and sharing experiences, opinions, and ideas on social media platforms. This abundance of information has proven invaluable for marketers as it provides limitless data on consumer interactions. The impact of social media and its data is causing a transformation in the traditional business model theory. This new perspective highlights the significance of suppliers, customers, partners, resources, activities, channels, opportunities, and cost structures. However, it is argued that future companies that are data-savvy should prioritize the humanities, creating value propositions that revolve around human needs, knowledge, and solutions.

### **4.3 Integrating social media analytics**

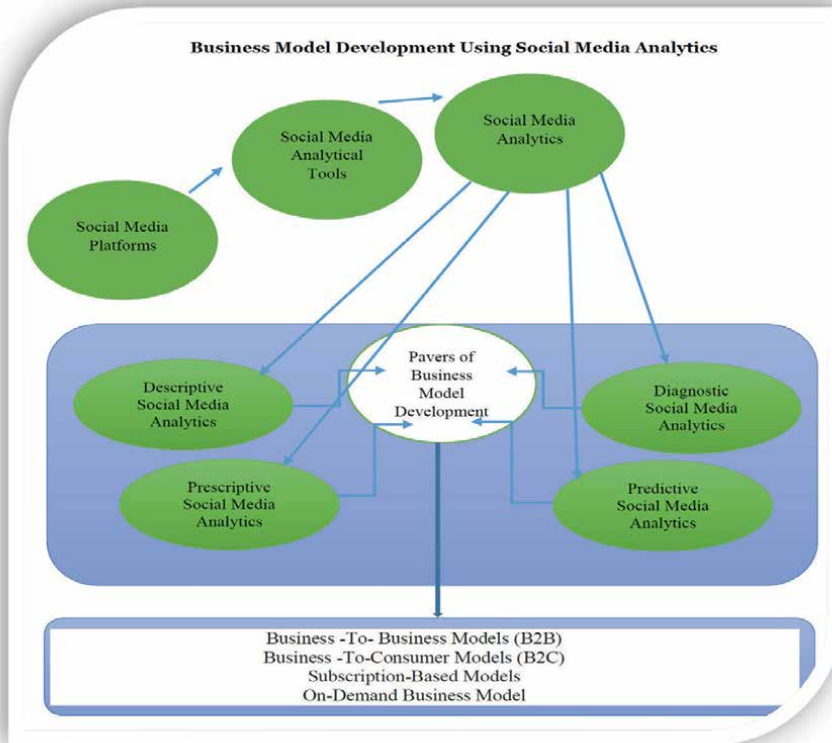
Selecting the optimal social media platform and mastering its usage can provide you with a steady online presence that can aid in the expansion of your business through a cost-effective approach. This goes well with understanding different types of social media analytics generated by these social media platforms to achieve revenue goals, draw in new clients, and much more. The following is an overview of how social media analytics is integrated in business model development as illustrated in **Figure 1**.

Descriptive analytics is the most basic form of social media analytics. It involves gathering and analyzing social media data to understand past events. For example, it can track the number of likes, comments, and shares a piece of content receives. This process helps businesses gain a deeper understanding of changes over time by comparing historical data to industry standards. This information can then be used to inform business strategies and develop new business models.

Predictive social media analytics tools use machine learning to make predictions and improve their accuracy with new data. These tools are essential for businesses looking to strategically boost their social media presence and engagement. By analyzing user actions and anticipating future behavior, businesses can tailor their content to specific interests. This allows them to develop new business models that enhance decision-making and increase operational efficiency.

Diagnostic analytics goes beyond descriptive analytics by uncovering the reasons behind certain events. It helps determine the types of content that engage the audience and the social media platforms that generate the most website traffic. Retail leaders can use diagnostic social media analytics to understand customer behaviors, such as purchasing patterns and factors influencing buying decisions. This information can then be used to improve product offerings, marketing strategies, and store designs to cater to customer preferences in future business development models.

Prescriptive social media analytics considers multiple factors, including potential scenarios, available resources, and historical and present performance, to offer suggestions for action or strategy. It is useful for decision-making in all timeframes. This type of analytics provides recommendations on how to capitalize on future opportunities or reduce future risks, while also outlining the potential outcomes of each decision. It combines heuristics, machine learning, and rule-based systems to provide precise suggestions based on data and probability-weighted projections.



**Figure 1.** Business model development framework using social media analytics (Source: Researcher's own presentation).

#### 4.4 Data used in social media analytics

The type of data used in social media analytics is new in terms of data used in organizations. However, the data can be leveraged for business insights in a large variety of industries today. The emphasis is on structured data and it is manipulated and managed to provide insights for decision-makers. It can also provide results far more cost-effective than more traditional data analysis. The scope of social media analytics is quite broad. It varies from one end of the scale where it is possible to adopt very tactical and focused analysis—such as counting the number of retweets of a product tweet or measuring the click-through rate of a recent Facebook advertisement to the other end of the scale, where integration with data from other data-rich areas such as sales and marketing automation to provide predictive analysis on sales pipeline and the effectiveness of sales and marketing activities on revenue. At the simplest of levels, social media analytics is a new way to provide rich insights into old age for almost any business area. It accomplishes this using new methods such as complex pattern recognition techniques, and very often it brings together a mix of different social media data to provide the best insights. An important thing to note is that the scope of social media analysis heavily depends on the type and source of the data analyzed and continues to evolve as new methods and data types are employed.

The traditional understanding of social media data is limited and fails to recognize its presence in various consumer and business contexts. This includes information shared on company websites and the use of online channels for product sales and customer acquisition. Additionally, traditional methods of tracking web user behavior and analyzing web data shape social media strategies and measure their effectiveness. As a result, the distinction between social media data and other forms of online data is becoming less clear. This complexity is in that social media services are expanding across multiple platforms, such as mobile devices and game consoles, and the data generated from these platforms is not always social media data. Social media platforms automatically gather and store data on user interactions, offering valuable insights into customer preferences and behaviors for businesses. Six categories of social media data enhance business growth and these are (1) behavioral social media data, (2) qualitative social media data, (3) engagement social media data, (4) personal social media data, (5) attitudinal social media data, and (6) preference social media data.

#### *4.4.1 Behavioral social media data*

Behavioral social media data focuses on patterns and actions by social media platforms, including transactional data like purchases, subscriptions, and cart abandonment. It also includes information on social media usage, such as repeated actions, feature usage, and device preferences. The research conducted by Ref. [46] on social media platforms reveals that they have transformed into vast collections of intricate data, capturing an unprecedented volume of user interactions and behaviors. Utilizing advanced big data analytics methods has allowed for a more profound comprehension of this extensive data, shedding light on the intricate realm of social media user behavior. Additionally, the study presents a comprehensive manual that provides valuable perspectives on leveraging big data analytics for examining user behavior on different social media platforms. Among the techniques discussed in the manual are analytical methods such as natural language processing, sentiment analysis, machine learning, and network analysis that drive social media platforms.

#### *4.4.2 Qualitative social media data*

Qualitative social media data, like user attention and heatmaps, can also be gathered. Before 2019, Google Analytics (GA) users opted to create a free heat map using Google's heat map extension called Page Analytics. This heat map visually displays the areas on your website where visitors click, utilizing the data collected by GA through its tracking snippet. This is evidence that social media offers valuable qualitative data for a comprehensive and intricate comprehension of users' behaviors, emotions, and interactions. Researchers have shown significant interest in social media technologies, leading to numerous studies in recent times. A study by Ref. [47] presents an overview of qualitative and mixed methods social media research literature published between 2007 and 2013. Through a systematic literature review, 229 qualitative studies were identified, with 55 studies utilizing both qualitative and quantitative methods. These articles underwent a qualitative content analysis for review, analysis, and coding. The article discusses the overall trends observed in all the articles and analysis of the mixed methods research approaches found in the subset of 55 studies. Data collection methods included interviews, focus groups, and surveys, but content analysis of social media platforms like Facebook, Twitter, and YouTube was also popular.

#### *4.4.3 Engagement in social media data*

Social media engagement data tracks user interactions on social media platforms, third-party sites, and advertisers' platforms. This data includes metrics such as website visits, app interactions, likes, shares, and comments on posts. It also involves collecting customer service information and paid advertisement engagement data to assess user engagement. In their article, Ref. [48] presented a comprehensive analysis of the literature on social media engagement in business, management, and accounting. They utilized bibliometric techniques to track the evolution of this concept since its inception, considering content, platforms, and industries. Through this analysis, the authors identified the most influential authors and journals in social media engagement. Additionally, they provided insights for future research by referencing the *Journal of Business Research*, aiming to assist practitioners in gaining a thorough understanding of social media engagement. This understanding can then be a strategic tool for customer engagement.

#### *4.4.4 Personal social media data*

Personal social media data includes sensitive information like name, location, email address, and phone number. Users' likes, opinions, geotags, photo uploads, and friend connections are personal data. What social media companies do with that information is vitally important. However, users often give those platforms enormous control over their data when they sign user agreements. However, marketers may only have access to less revealing data points, such as birthdays, gender, and age. Personal social media data is crucial for targeted marketing efforts but must protect user privacy. For example, the advancement of technology has provided various options for accessing information and communicating with others remotely. This includes virtual environments, cloud services, and social media platforms. As a result, users need to create profiles and share personal data. The issue of personal data safety was in Ref. [49]'s presentation, which explored the challenges associated with privacy and the principles of protecting personal information. The author emphasized safeguarding personal data by implementing an organizational scheme, a comprehensive data protection policy, and adherence to security policies related to information and communication security.

#### *4.4.5 Attitudinal social media data*

Attitudinal social media data focuses on users' emotions and feelings toward social media content and messages. It is subjective; data collection is through surveys, polls, interviews, and user feedback. This data provides insights into user motivations, challenges, satisfaction, and preferences based on the rapid progress of Information and Communication Technologies (ICTs) that has resulted in the enhancement of marketing strategies through the generation, customization, and dissemination of information, which plays a crucial role in social media. The article by Ref. [50] identified the shifts and attitudes toward social media as a marketing tool. The study presents bibliometric analysis involving two stages: collecting information from databases using a specific search equation and examining bibliometric indicators (quantity, quality, and structure) from 2008 to 2016. The findings revealed that the most significant subjects included Consumer Attitude, Health, advertising, Communication, and Consumer Behavior.

#### *4.4.6 Social media preference data*

Social media preference data reveals users' affiliations, beliefs, and interests, including political affiliations, religious beliefs, food preferences, favorite activities, and entertainment choices. Marketing focuses on comprehending consumer needs and wants and then developing a product or service that will resonate with them. It also includes ensuring that the product is readily available and priced correctly. Often, contemporary marketing tactics involve sparking consumer interest through extensive advertising campaigns [51]. Understanding user preferences helps businesses tailor their marketing strategies to specific target audiences.

By analyzing these various types of social media data, businesses gain a deeper understanding of their target audience, preferred social media platforms, and interactions. This knowledge enables companies to create more targeted and engaging marketing campaigns that align with their customer's preferences and behaviors.

### **4.5 Measuring the effectiveness of social media analytics**

#### *4.5.1 Engage through comments*

Engagement through comments is crucial for success on social media platforms like Facebook, Instagram, and YouTube. Comments have become a social signal on Facebook, surpassing shares in importance. Therefore, to optimize posts for success, it is desirable to focus on generating more comments and use scheduling tools to enhance analytics. Comments demonstrate to platforms that people like your content and want to engage with you, making them a factor in boosting performance. Respond to every comment, even the simplest ones, to show appreciation and encourage further engagement. Additionally, monitor your social media mentions and create share-worthy content to increase visibility and performance on social media. For example, you can participate in discussions on ResearchGate by commenting on research items. This is an excellent opportunity to engage with experts in your field, ask authors questions, and contribute your expertise.

#### *4.5.2 Increase the click rate*

In social media analytics, clicks are valued as they tend to answer the question: "How can we increase our click rate?" While likes are nice, it is impressive when someone clicks on your Facebook post because they genuinely want to read your blog. This metric is of great importance because, for most brands, the ultimate goal of social media is to drive traffic to their website. If your social media efforts are not achieving this, something is wrong. It is important to emphasize that vanity metrics such as likes are insignificant if they do not lead to meaningful actions. Therefore, social media posts should have a clear purpose.

#### *4.5.3 Generate impressions*

When promoting a brand on social media, it is important to consider the type of approach. The ultimate goal is to generate impressions and clicks, but this can only happen if you effectively reach your target audience. It is crucial to understand that the objective is not to reach as many people as possible but to connect with those most

likely to become your customers. It is perfectly acceptable for a local baby clothing shop to have a smaller audience compared to a global clothing brand. The focus should not solely be on the number of people reached but on whether you are achieving your specific goals or not. To accurately measure your social media analytics, it is essential to have a rough estimate of your targeted audience. One helpful method is to utilize Facebook's Ads Manager, where you can create an ad and experiment with targeting to determine the estimated reach. However, it is important to note that this reach is a total estimate, and it does not mean you should aim to reach every single person within that estimate with each post. If your posts are only reaching a small number of people, it may be necessary to reevaluate your social media strategy and make any necessary adjustments.

#### *4.5.4 Hashtag tracking*

It is essential to track hashtag performance in your social media analytics. Hashtags play a crucial role, especially on Instagram. Research shows that posts without hashtags perform better on Facebook, but on Instagram, hashtags are a game-changer. Neglecting to use of hashtags on Instagram can harm your success. Studies consistently demonstrate that hashtags significantly improve Instagram performance. The ideal number of hashtags to use varies for each business, so it is important to experiment and find what works best for you. You can conveniently track hashtags across multiple social media platforms from a single location [52]. Quickly assess and showcase the impact of your campaigns, events, and influencers using user-friendly reporting tools. Remember, hashtags play a significant role in conveying your message effectively.

#### *4.5.5 Determine the optimal time for the post*

Determining the optimal time to post on social media can be tricky. While posting when your audience is most active is important, it can also be the most competitive time. Determining the most effective times to post is crucial as it enhances monitoring and analyzing social media metrics. The metrics identify when posts are most successful. It is important to note that the optimal posting times may differ between weekdays and weekends. For example, while Wednesdays at 10:30 a.m., just after morning tea, may be the most effective time to post, this could shift to 2:30 p.m. on Saturdays or Sundays. Continuously track and measure your posting times to maximize engagement.

#### *4.5.6 Identify the biggest sources of traffic*

If you are unsure where to invest your time, money, energy, and resources, it is important to identify where you can achieve the most success. For example, if Twitter is not driving traffic to your website but Facebook and Pinterest are performing well, it may be wise to focus on the latter. It is essential to test, track, and measure the effectiveness of different platforms before making any assumptions. Once you have identified the best platforms for your business, prioritize them and consider putting others on hold. Many business owners believe they need to be present on every social media platform, but in reality, some platforms may not be suitable for your business. It is better to concentrate on a few platforms that yield results rather than spreading yourself too thin across all platforms.

#### 4.5.7 Monitor the conversion rate

This issue is of great importance and should not be overlooked. It may take some effort to address, but the results will be well worth it. Conversions are key in social media. Just think about all the clicks you are getting and the traffic you redirecting to your website. That is fantastic! But what happens once they land on your site? Are they exploring, engaging, and signing up for your email list? Or are they leaving right away? If it is the latter, it is time to stop and reevaluate your approach. While it is beneficial to bring in traffic from social media, visitors must take the desired actions once they arrive. If they are not, it is important to dig deeper. It could be that you are attracting the wrong audience or that there are issues on your website that cause people to leave quickly. In these situations, your social media strategy may be effective, but your website may need some work. If increased clicks are not translating into more conversions, it is time to review your social media analytics and monitor your conversion rate.

#### 4.6 Social media analytics tools

Social media analytics involves collecting and interpreting data from social platforms to inform business decisions and evaluate the effectiveness of actions taken on social media. Social media analytics tools and platforms come in various forms, from location-based mobile applications to websites offering statistical analysis of online traffic. With so much variety, it may be overwhelming to identify the right tools to use. Overall, the tools must be the means to an end. If they do not directly or indirectly contribute to revenue or reduce risk, findings, or insights, then they are likely an unworthy use of time and resources.

There are a variety of paid and free tools or platforms (media tools and platforms used interchangeably) available on the market that can be used. It is important to consider whether a contracted or on-demand tool will provide short and long-term functionality and data access. But in general, the application cost and opportunity cost must be less than the expected value of the data that will be obtained. At the very least, free trials or basic versions of pay tools should always be vetted.

In objective-oriented analytics with an understanding that data is the collection of facts and statistics for reference or analysis, there is an inefficient use of resources to gather research data without a specific objective in mind. Thus, with social media platforms, it becomes easier to get data as the social media platforms provide metrics and data overload. Furthermore, objectives keep the research question on track and more manageable. For instance, if a company is launching a Twitter campaign, it may want to track the number of retweets in comparison to the number of link click-throughs. This will be a benchmark to see whether or not the tweets are contributing to getting traffic to the website. Once the objectives are laid out, specific strategies are formulated to capture the intended data. However, it is ideal to note that not every social media analytic tool provides specific data and different tools required for different platforms.

All major social media platforms come equipped with analytics and dashboards that provide valuable insights into activity on the social media platforms. For example, Facebook Insights is accessed through Meta Business Suite and measures content performance on Facebook and Instagram. Alternatively, log into Facebook, click on your profile picture, select your page, and click Insights. For Instagram Business or Creator Profiles, access it via the application or web to get comprehensive data about your profile, posts, stories, and followers. X, formerly Twitter, provides analytics

tools to track content performance and engagement. To access it, log in to the Twitter account and go to [twitter.com/i/account\\_analytics](https://twitter.com/i/account_analytics). TikTok Analytics shows one's profile performance, including views, follower growth, likes, comments, and shares accessed in the app or the web. With Pinterest Analytics, tools show growth in impressions, followers, audience statistics, and website engagement as they convert one's account to a business account to access these tools. LinkedIn Analytics offers both LinkedIn Pages and personal profiles. It tracks content performance, visitors, followers, leads, and more. Accessing the analytics requires clicking on your profile picture and choosing the relevant option. YouTube Studio Analytics provides a comprehensive system for tracking video performance, including metrics like watch time, views, earnings, and audience demographics. Accessing YouTube Studio requires signing in to YouTube and going to [studio.youtube.com](https://studio.youtube.com).

#### **4.7 Consequences**

The study found that most businesses and students at higher education institutions recognize the importance of social media analytics in today's digital age, as it provides a cost-effective way for businesses to benefit from various analyses (Refer **Table 2**), such as attribution, customer behavior, benchmarking against competitors, campaign performance, brand management, and more. Businesses that have adopted social media analytics have seen positive results in terms of increased social media traffic and customer engagement. Social media platforms and social media analytics are increasingly becoming indispensable tools for organizations seeking to gain a competitive advantage in today's digital business age. The integration of social media data into SMA allows businesses to harness the power of real-time business development models to make informed business decisions by business owners and consumers. Furthermore, and from the numerous studies reviewed on social media analytics, it has been found that the effectiveness of social media analytics in promoting business model development as it has become an important component of the business firm journey in enhancing marketing efforts over traditional methods and allowing businesses to cultivate customer relationships and foster brand loyalty. However, some businesses still question the value of social media analytics, as noted by 15% of business students who expressed concerns about monitoring competitors online and the effectiveness of managing social media platforms and responding to customer inquiries that prove to be time-intensive and costly for business owners and customers.

The study shows that by monitoring and analyzing social media conversations in real time on any social media platform, business owners can gain valuable insights into customer sentiment whether it be prescriptive, descriptive, predictive, or diagnostic. For example, using Facebook (also known as Meta Business Suite) with Keyhole social media tool provides real-time social media reporting and analytics that monitor the performance of any public Facebook page. Thus, Competitor Analysis Business leads in tracking data and evaluating the effectiveness of the Facebook marketing strategy by analyzing the competitors' social presence and monitoring the performance of the posts. Another example of social media is LinkedIn. LinkedIn, if used with the Brand24 social media tool, offers a unique perspective on marketing strategies. With Brand24, you can gain valuable insights into sentiment, mentions, reach, hashtag usage, and various other detailed analytics. Thus, LinkedIn Network assists brands in increasing their online advertising reach and frequency, as well as raising awareness of B2C business models. This is achieved through the utilization of campaign

optimization and reporting tools. The other social media platform is Instagram. If used with the Icon Square social media tool it may increase visibility by sharing various types of content such as posts, stories, and reels to promote the existing business model or developing a new business model that attracts potential customers and drives sales by directing them to the website or physical store. With X (Twitter) if it uses Buffer, a popular social media management tool, it provides a wide range of features, including post-scheduling, conversation tracking, and follower growth insights, making it a comprehensive toolkit. The data is presented in visually appealing graphs and charts, simplifying the process of understanding and assessing Twitter's performance. Depending on the nature of social media analytics, the new business model can be developed using account text mining, social network analysis, and sentiment analysis. Social media analytics is prevalent in today's business world, sparking debates on whether businesses should rely solely on social media platforms for promotion or rely on the traditional way of advertisement using banners, billboards and print newspapers. It is important to consider if social media analytics is necessary if there are alternative methods to reach customers, and if it always benefits a business or can sometimes be harmful. Research by Ref. [53] suggests that consumers may be less likely to make repeat purchases if they feel pressured to signal their identity through their choices. Additionally, social media campaigns can leave companies vulnerable to attacks from malicious individuals, especially for lesser-known or new businesses. Therefore, companies need to evaluate if social media marketing is helping attract customer attention or causing harm through misuse and miscommunication.

## **5. Conclusion**

In conclusion, incorporating social media analytics and business intelligence into a business model development framework offers businesses a powerful tool for gaining a competitive edge in the digital landscape. This combination allows organizations to utilize the vast amount of data generated on social media platforms to make strategic decisions based on insights into customer preferences, sentiment, and emerging trends. These insights are invaluable for customizing marketing strategies, developing products, and engaging with customers. Additionally, integrating social media analytics and business intelligence enables businesses to monitor and evaluate the effectiveness of their digital marketing campaigns in real time, allowing for quick adjustments and resource optimization. This dynamic approach allows businesses to adapt swiftly to market changes, giving them an advantage over competitors using traditional methods. Moreover, the integration of social media analytics and business intelligence enhances the decision-making process by providing actionable insights and data-driven recommendations. By utilizing data visualization and predictive analytics, businesses can identify opportunities and threats in their industry, enabling proactive decision-making. In today's fast-paced business environment, this can be the determining factor between staying ahead or falling behind.

In summary, the integration of social media analytics and business intelligence is a game-changer for businesses seeking a competitive advantage. Utilizing data from social media platforms can help organizations improve their marketing strategies, allocate resources more efficiently, and make informed decisions based on data. However, in today's digital era, effectively using social media analytics and platforms is essential for businesses looking to succeed in a competitive market by developing innovative business models. Thus, future studies should consider the limitations of

this study. The present study relies solely on qualitative secondary data and secondary data being qualitative. To address this, future studies should incorporate both primary and secondary data and utilize a combination of qualitative and quantitative research methodologies. Specifically, researchers should focus on measuring social analytics numerical values obtained from social media platforms and analyzing their growth or decline over time using machine learning algorithms [54]. One of the key benefits of utilizing machine learning is that after an algorithm has been trained on data, it can autonomously perform its tasks [54]. This is achieved by developing a business model framework that includes base, reach, engagement, and conversion. For example, a second-hand dealer looking to target different age groups in the fashion industry through a social media content strategy should assess the potential audience on various platforms. By tracking the reach and engagement of posts on platforms like Facebook and Twitter, valuable insights can be gained. Analyzing the conversations and classifying them into different types of social media analytics can help identify areas for improvement or the need for a new business model.

### **Conflict of interest**

The author declares no conflict of interest.


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## Chapter 5

# How Social Media Contributes to Place Branding

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### Abstract

Place branding involves a range of initiatives intended to increase the attractiveness of a geographic area. One of the essential components of an effective place brand is a coordinated communication strategy that connects with a diverse range of stakeholders. As digital technology disrupts the ability to control communications, social media is playing a central role in the reach, influence, and engagement with all communications, including place branding. This chapter examines the role of social media in place brand communications by capturing a sample of Instagram posts relating to the place branding of Oman. These posts are analysed to understand how their content has the ability to appeal to an audience and generate substantial engagement. The findings suggest there are several strategies that are useful for considering when generating place brand content, which have implications for how place brand managers attempt to extend their influence on online communications and engage with their audiences.

**Keywords:** place branding, place marketing, nation branding, nation marketing, social media influencers

### 1. Introduction

Place branding is a general term that refers to the implementation of branding principles and strategies to raise the profile of a country, town, city, or district. Activities of place branding can include advertising campaigns, public relations initiatives, cultural and economic events, and infrastructure development, all designed to establish a positive and appealing image of the location in the minds of its target audience. One of the crucial components in the success of place branding is the controlled communication between the extensive range of stakeholders, to ensure that messages are in alignment with the core vision. With the rise of digital technology, especially social media, audiences have become more involved in shaping and consuming information, disrupting traditional communication channels. While this enables place brand managers to leverage social media platforms like Instagram to connect with stakeholders, share promotional campaigns, and build relationships, it also allows unofficial contributors to play a role in shaping the place brand message. This presents a challenge for place brand managers tasked with controlling the message.

This chapter examines the role social media plays in the strategic communication of place brands. Using a content analysis of 685 Instagram posts, this chapter explores the different types of content that are created and published in relation to the

promotion of place brands, and which type of content generates the most audience engagement. These findings suggest there are a range of strategies that place brand managers can employ to facilitate the promotion of place brand communication that significantly impacts audience interaction, engagement, and further dissemination.

## **2. Understanding place branding**

Geographical regions of all sizes compete with other areas in a bid to enhance the social, cultural, and economic conditions within their area. Within this competitive landscape, regions are increasingly adopting the principles of strategic branding to showcase the unique qualities and benefits of a place. Such qualities may involve focusing on local culture, showcasing notable landmarks or landscapes, promoting a prosperous economy, or promoting the place as an area that offers an exceptional quality of life [1]. Effective place branding principles can improve the perception of a specific area among its residents, tourists, and potential residents, thereby increasing tourism revenue, attracting foreign direct investment, creating jobs, and promoting economic growth [2]. Thus, by building a positive place brand identity, a region is better placed to attract talent, visitors, and investment, all of which contribute to enhancing the quality of life in the region [1].

As with other forms of branding, one of the objectives of place branding is to make a place easily recognisable and different from other regions by showcasing the place's special qualities and crafting a captivating story [3]. An effective place brand, therefore, resides in its ability to integrate the different elements of the place, including the culture and values of the region, into a distinctly recognisable brand [2, 4]. It is this rich blend of associations that form an impression in the minds of its audiences that constitutes a place brand [5]. By strategically utilising the place's characteristics and attributes, a place brand aims to appeal to tourists, investors, businesses, and residents, to ultimately enhance the location's global reputation and competitiveness, further contributing to the long-term sustainability and prosperity of the place [6].

Given these diverse and extensive stakeholders, all having different needs, place branding is a significantly complex process [7, 8]. This range of stakeholders, each with different roles and objectives, requires place brand managers to have an excellent grasp of communication to be able to persuade their audiences, build success, and surmount inevitable challenges. Effective communication, therefore, plays a vital role in building connections among diverse stakeholders' groups, including locals, visitors, and tourists, through the exchange of compelling stories and appealing visuals [9]. Such communication might involve a mix of sounds and visuals to convey a place's history, culture, and stories, all of which can enhance a place's image across a wide range of audiences, merging the past with the present. The act of sharing diverse stories and interpretations through various forms of communication can support the feeling of belonging to a place, which further reinforces a place's brand.

## **3. Social media's disruption to everyday communication**

Traditional broadcast media such as television, radio, and newspapers allow one-way communication, which enables place brand managers to distribute pre-determined messages through paid-for advertisements to a range of audiences. Such one-way channels restrict interaction between the senders and the receivers

of the communications, enabling place brand managers to control the messages being transmitted and consumed by their diverse audiences. However, as audience figures for traditional media continue to decline and an increasing proportion of the population receive their communications *via* new media, there are limitations on the ability of brand managers to control the place brand message. This rapid disruption to how we consume communications, particularly through social media platforms, has democratised the exchange of communications. Individuals now have access to a wide range of communication channels, both official and unofficial channels, that enable participation within platforms of exchange, rendering it difficult for place brand managers to author and control the messages relating to their place brand [10].

Although place brands continue use both traditional and digital communication channels for reaching and influencing their intended audiences, social media has become a crucial platform for distributing information and engaging users. In addition to the low cost of using social media, its immediacy and its unlimited reach, this technology greatly enhances communication by breaking down geographical barriers and promoting participation [11]. Furthermore, social media platforms allow for open discussions, giving users the freedom to express their thoughts and opinions and promoting a feeling of shared connection and collaboration [12]. For this reason, social media is essential for spreading positive information and experiences about a location [13] as it facilitates a smooth exchange of information and stories, and enables users to easily respond to comments and feedback [8].

#### **4. Social media's contribution to place branding**

Social media has enabled users to generate and publish their own content about places, culminating in the dissemination of a wide range of perspectives beyond the orchestrated narratives that can be found on official channels. This perceived independence of the contributors, with no explicit affiliation to any official channels, creates the impression of independence and authenticity [14]. Such inclusion of other perspectives can provide a more accurate and real reflection of a place, further enhancing the perception of trust, which can be instrumental in shaping how stakeholders perceive a place. Indeed, the advent of social media has enabled individuals from any part of society to have the means to express their thoughts and opinions, resulting in a multitude of diverse narratives about any place being shared at any time [15]. Within this context, managing a place brand's image in the digital age presents a challenge for the official place brand managers because of the difficulty in controlling the narrative in an open and shared space, such as on social media platforms [8]. Yet, for the official place brand managers, social media is an effective and essential tool for optimising and enhancing their communication strategies, ultimately enabling greater reach and participation in their communications, with greater immediacy than traditional channels.

Such platforms also allow brand managers to mine the overriding opinions of contributors in relation to the content of their posts on the official channels as well as the content created by independent influencers. Arguably, the most important aspect of place brand communication is the digital content that is posted on social media by independent creators [16]. While the content produced by official channels typically emphasises the positive aspects of the locations, user-generated content can offer a more revealing peak behind the official curtain, possessing a greater ability to influence potential tourists and shape their preferences [17].

Social media content creators have the freedom to determine the nature of their content, which has the potential to have a negative effect on the perception of a place and undermine the positive images created by a place's official channels. It is therefore crucial for the official place brand governors to establish a solid relationship with their stakeholders, particularly independent content creators, to reduce the likelihood of any adverse messages [6] and encourage a closer alignment between official and unofficial content [18]. Place brand officials must also monitor the engagement of influencers with substantial followers, to keep abreast of comments, likes, discussions, and the general mood of contributors, to enable them to address any emergent issues [19, 20].

Cooperation between official place brand managers and independent content creators can be aided by a better understanding of the motivations of social media influencers. Studies have revealed that social media influencers have various motivations for producing content for their respective place brands on social media [21]. These include a sense of social responsibility, the desire to stay connected, being inspired by others, seeking recognition, forming a personal connection with the place brand, and being influenced by opinion leaders and local online communities [21]. Savvy influencers recognise that by helping to promote democratic and social causes on public platforms can enhance their own kudos [22]. When such discourse relates to place-specific issues, sharing authentic, value-driven content that engages audiences with creativity can significantly impact the positivity associated with place brands [23].

Alongside the necessity of place brands having a presence on social media, not least with which to communicate with stakeholders and allow a public sharing of viewpoints and experiences, the bigger managerial challenge for place brands is concerned with managing unofficial channels on social media. Given the freedom of social media influencers, who have the autonomy to determine the publishable content for their channels, the issue facing brand managers is on how they might encourage influencers to post content that remains on-message with the place brand. To explore this issue, we use the following sections to discuss the findings of social media content relating to the place brand of Oman.

## **5. Collecting data: sampling Instagram posts**

The aim of this research was to explore how the Oman place brand has been promoted through the use of social media. Instagram was the selected platform for data extraction due to its popularity and efficacy in capturing personal experiences and sharing photos and videos with social connections in real time [24]. The platform has amassed a substantial user base of over 2 billion individuals who regularly interact with the application monthly [25] and is reported [26] to have 500 million users upload an average of 95 million photographs daily. This platform provided a rich collection of textual, audio, and static and time-based visual media [27].

A purposive sampling approach was adopted to ensure that data was collected from the most suitable influencers to meet the objectives of the research. In drawing from the sampling principles of previous studies [28–30] the following criteria were used to inform the selection: (1) area of interest: The selected influencers should express a genuine interest in Oman brand, as otherwise their content would be irrelevant to the purpose of the research; (2) diverse content: The influencer should create content that is not limited to a single specialist topic, thereby avoiding channels that lack thematic variation; (3) impact level: The influencers should have more than

10,000 followers on their Instagram page; and (4) frequency: It was essential that influencers consistently published content, as this better facilitated examining the level of engagement of their followers in response to the posts.

A further consideration was that it was important to disregard any influencers that posted content about a range of countries, such as those influencers who travel regularly and share their experiences of other countries. Selecting influencers who post content restricted to one nation enabled the content to be compared in relation to the brand communications of one nation. Furthermore, the collected content excluded “Instagram stories” due to their restricted 24-hour availability. While such stories serve an additional communicative purpose, they do not provide comparable functionality for posts, such as the inability to provide captions, display comments, and express approvals in the form of “likes” [31].

Data were gathered from the most significant influencers, capturing all posts published between November 2022 and October 2023. A total of 685 posts were collected for analysis, consisting of 337 posts from official Oman Government channels directly connected to Oman’s tourism accounts and 348 posts from independent influencers’ accounts. The resulting data were subjected to a content analysis, whereby the aim was to (1) ascertain the presence and frequency of concepts [32] and (2) determine how the different types of content relate to levels of follower engagement.

The analysis identified the number of materials in each post, and the content of the posts was evaluated according to the type of data, in terms of whether the content consisted of a photograph, video, infographic, cartoon, or text. Further analysis of these materials sought to identify the primary subject of the postings, enabling the categorisation of content according to their principal topics, such as people, landscape, adventure, lifestyle, heritage, food, and dress. For postings that contained a person within a geographical setting, the analysis focused on determining the primary purpose of the post based on the support hashtag, text, and focal point of the photography. In most instances, because the posting was related to the specific region of Oman, the focal points of the imagery were typically based on the physical environment, the activity, or the interaction. Furthermore, the location of the content, particularly in relation to the environment of the setting, such as whether the imagery was situated indoors or outdoors, provided an added means of interpreting the key points in the posts. The level of engagement generated by each post was recorded in the database, through the registering of the number of followers, likes, shares, and qualitative expressions, in terms of use of emojis and positive and negative comments. Once the post characteristics were inputted into Microsoft Excel, a second coder from the research team checked the interpretation of the posts to ensure that the classification of data was consistent.

## **6. Findings: how Instagram is used to promote the Oman place brand**

As a visually driven platform, the data extracted from Instagram were primarily photography and video content, as noted in **Figure 1**. Photographs were the most prevalent content type, accounting for 58%, closely followed by video with 38% of the content. Given the platform’s design, text played only a minor role, representing only 3% of the content and mostly fulfilling the role of subject framing, such as providing attitudinal statements. This largely image-driven format reflects the ease and immediacy enabled by everyday mobile devices, whereby creating a post through the uploading of photos takes less time and effort, even when adding multiple

## Content type

■ Photos ■ Videos ■ Text



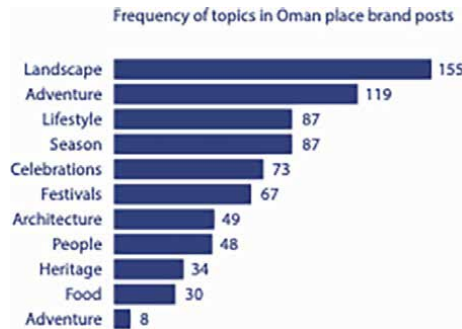
**Figure 1.**  
*Content types related to place brand's analysed posts.*

pictures to one post. The minimal use of text-based material (3%) is both a reflection of the platform and the propensity for expediency and their impact upon audiences. Powerful visuals captured during people's travels can readily convey a captivating experience that connects with an audience on an emotional level that is not easily captured by text alone.

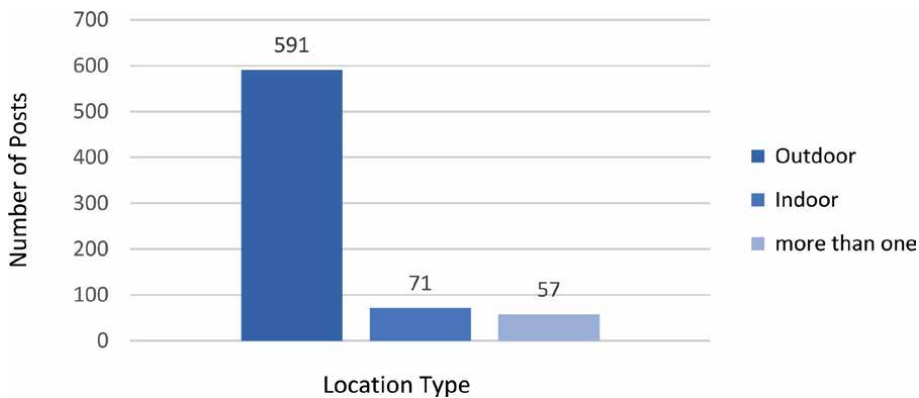
### 6.1 Oman topics displayed on Instagram

The subject matter of the posts revealed a preference for significant cultural experiences and notable settings. The most common theme was visual media relating to either specific or scenic landscape settings, with 155 posts highlighting Oman's natural beauty. Of these particular posts, 60% included a person or people within the image or video. The subject of adventure was the second most popular topic, with 119 posts that focused on themes of what could be considered as thrilling activities, such as rock climbing in dramatic settings or engaging in picturesque aquatic sports. The frequency of such posts demonstrates that influencers consider Oman a destination for adventure. Both lifestyle and seasonal subject representation, with 87 posts each, typically contained imagery involving people dining, posing in social settings, and people enjoying recreational shopping. The subjects of festivals and celebrations featured in 73 and 67 posts, respectively, where the content depicted a variety of cultural events and vibrant entertainment associated with Oman. As a cultural extension, the subject of architecture featured imagery of distinctive physical landmarks of Oman, where buildings, structures, and monuments appeared in 67 posts. In 49 posts, the focus was on depicting people generally enjoying life, often posing, but in non-descript settings. In such instances, people were the primary feature within the image, and there was less emphasis on the location or background depictions (e.g. no landscapes, buildings, or specific activities). There was less frequency in the postings of subjects that might be considered more directly linked to culture, such as heritage and food, with only 34 and 30 posts, respectively. Posts that showcased food were less distinctive in their depictions of a specific place, which could explain the limited representation of food. While many of the posts contain overlapping themes, the subject distinctions depicted in **Figure 2** indicate the focal point of the posts.

When examining the data from a more abstract perspective, it was noted that outdoor locations were prevalent, featuring in a total of 591 posts, while indoor locations appeared in only 71 posts (**Figure 3**). From a place branding perspective, the greater focus on outdoor imagery provided a more dramatic and unique sense of place, enabling viewers to see the different physical spaces that the place has to offer, such as cultural and historical points of interest as well as natural landscapes and adventure activities. This focus on outdoor subjects highlights Oman's unique natural beauty and opportunities for adventure, reinforcing its image as a destination for nature lovers and adventure seekers. This reoccurring focus on outdoor imagery corresponds with the official Oman place brand communications, where the emphasis typically centres



**Figure 2.**  
*Frequency of topics in Oman place branding posts.*



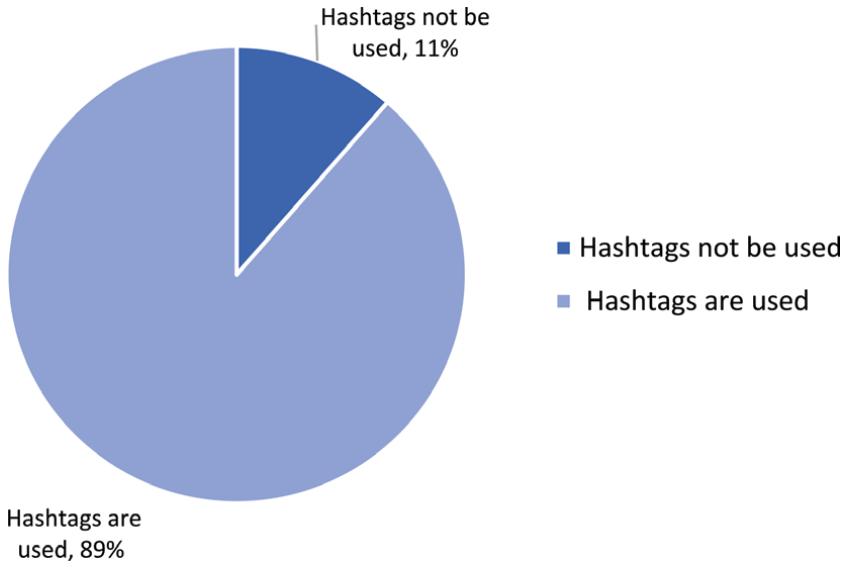
**Figure 3.**  
*The location of subjects in place branding posts.*

on depictions of landscapes and adventure activities as the most popular recreational pursuits in Oman.

While Instagram is primarily a platform for visual content, 89% of the collected posts made use of hashtags in their captions, and the use of hashtags on Instagram increases the reach and visibility of posts, which was particularly evident in place brand content, where there is a keen interest in attracting a target audience who are looking for specific places and activities. This type of labelling of social media content can help to generate a collective community of people interested in a specific topic connected to the place brand. Furthermore, the effective use of hashtags can enhance the authenticity of the content with a place brand by attracting additional related content posted by various visitors, tourists, or locals, thereby increasing independent contributions that showcase a place's characteristics (**Figure 4**).

## 6.2 Content that generates engagement

The collected content showed some commonalities between the posts that attracted the most engagement, as identified by the quantity of likes, comments, and shares. Examining the features of these posts can help determine what factors contribute to higher levels of engagement among followers. Of the three posts with the highest follower engagement, the common characteristics were: (1) the subject



**Figure 4.**  
*Using hashtags in place branding posts.*

of the post focused on unique aspects of the place brand; (2) there was a high-quality production of content, particularly apparent in time-based content; (3) relevant and indicative use of hashtags and descriptors; and (4) the content creator has high social status, more followers and thus greater influence.

The first prominent feature of the three posts with the most engagement, as measured through the number of likes, shares, and comments (**Table 1**), was the focus on subjects that are unique to the Oman place brand. Two of the three posts focused on subjects related to Oman’s seasons, these being the rose season and the dates season. The third post focused on the construction of the region’s largest wooden ship, showcasing the region’s authentic craftsmanship skills. These subjects are considered unique to Oman and provide a source of pride that forms the basis for the distinct place-based subject matter.

The second feature of the top three posts was the high production quality of the posted material. These posts all featured high-quality resolution video, shot with aesthetically pleasing compositions, high-quality audio, mostly with original sound, and professional-level edits and transitions between scenes. Alongside this technical prowess, there was the use of brief captions to indicate the particular season or topic, which was displayed in both Arabic and English texts.

Related to this latter point, the third feature common to the most popular posts was that they all made effective use of indicative hashtags by using one or two words to

No.	Likes	Comments	Sharing	Views
1	253,832	1402	9562	5 million
2	133,607	676	12,100	5.4 million
3	121,302	1060	31,000	2.3 million

**Table 1.**  
*Posts with the highest engagement level.*

capture the subject matter in a creative way that was relevant to either the country, the location, or the activity being displayed. This use of hashtags facilitated the sharing of such content to a broader audience, providing an opportunity for followers to redirect content in a way that, in some, reflected and reaffirmed their own feelings on a subject.

The fourth common feature between the posts that generated the most engagement was the level of influence of the individual creating the post. If the influencer had a large following, then the general level of engagement was much higher. Similarly, if the poster had an esteemed reputation due to receiving a royal ward from the Sultan of Oman, then the level of engagement was considerably higher. In these situations, there seemed to be perceived social cachet gained from being digitally connected with a highly esteemed individual, especially when this was readily achieved by sharing, liking, or commenting on their content. While the status of the content creator appeared to have an influence on the level of engagement that their responses generated, the individual creators were not personally present in either of the three most engaged-with posts.

In contrast, there were several commonalities among the posts that generated the least engagement. Low-quality content seemed to be one factor that inhibited engagement, with the least engaged posts all sharing the features of having low-resolution imagery in both video and photography, and was lacking in creative entertainment value or competence in the compositional imagery. Furthermore, these images contained fewer points of visual interest, thus having less ability to capture viewers' attention or pique their curiosity when compared with the posts that received higher engagement. This was most apparent in the minimal use of captions, with posts often having no captions or posts having captions that were highly descriptive and unimaginative. In all three of the ranked posts, measured by the least engagement, the creator's physical presence was evident in the posts. Typically, these posts featured the use of only one or two hashtags, which mostly served as a descriptive reference to the location of the content (**Table 2**).

The data also showed a greater pattern of engagement with positive content that related to distinctive Oman culture, such as seasonal activities and celebrations. More specifically, the posts that generated richer comments featured content that reflected a more emotional framing of the content. Examples include authentic storytelling that reflects a nostalgic aspect of cultural background, depictions of a perceived successful and attractive lifestyle, and postings that reflect an association with a higher moral attitude. By contrast, posts that featured unpopular commercial entities attracted a higher proportion of negative comments, the most notable being an unpopular telecommunications company in Oman. In such posts, the aesthetic appeal of the posted content appeared to have less impact on the comments, with the general sentiment being driven by prior experience with the organisation.

Generally, posts that were stylish, creative, or humorous were more readily shared by followers, enabling the sharers to express their affiliation with the culture by endorsing the posts. Such sharing and liking of posts provided followers with

No.	Likes	Comments	Sharing	Views
1	118	6	—	—
2	122	1	16	4176
3	155	11	3	2494

**Table 2.**  
*Posts with the lowest engagement level.*

a convenient way for them to be active on social media without having to invest time in generating their own content. Endorsements of other creators' content also allowed followers to display part of their own online identity through the sharing and advocacy of certain topics in the social domain. Sharing content enabled followers to signal that they were informed about current issues, offer support on moral principles and outwardly display pride in their region's cultural heritage.

## **7. Discussion**

Social media has become an essential tool for the communication of place brands. As platforms become increasingly visual, the utility of mobile devices facilitates the ease of creating and sharing content. This research examined how the Instagram platform had been used as a communication tool in the place branding of Oman. The findings revealed that when influencers use high-quality photos and captivating videos to promote various locations on Instagram, they attract greater engagement from individuals. The prevalent subjects of the posts primarily focused on features unique to Oman, such as the visual content of stunning landscapes, unique seasons, regional cuisine, and impressive architecture. In correspondence with related studies on social media efficacy, when content contained dynamic elements, it made the consumption more captivating and, based on the comments, was seen to enhance the viewer's overall experience [33, 34].

The findings revealed that independent creators and official Oman place brand channels both showed a clear preference for outdoor locations, which further reinforced the region's natural environment and expansive terrain. This focus on outdoor activities reflects the typical approach to place branding, where there is a preference for highlighting the unique and real things about the place [4]. While indoor locations were in the minority, such images commonly showcase the cultural and social richness of the place, such as museums, restaurants, and markets.

There was considerable similarity between the official and independent channels that promoted Oman. Although several of the independent channels lacked the level of professionalism as official posts, the subjects between the two shared great similarities. The effective use of hashtags increased the visibility and level of engagement with followers, generating more comments and overall impressions through the sharing of posts. This finding is in correspondence with earlier studies that found hashtags had a significant impact on social media marketing, and place branding on social media is no exception [35, 36]. The use of hashtags that related to the unique features of the place further stimulated content creation that reflected these themes (e.g., #Oman, #ExperienceOman, #Adventure, and #Beach). These latter examples exploit the tactic of using generic phrasing to extend the visibility of the posts to a broader audience that may be interested in travel-related content.

One of the challenges facing official place brand managers is the lack of control over the production of social media content. The practical implications of this research suggest there are three strategies available to official practitioners of place branding to influence independent content creators. One suggestion for steering the independent representations of the place brand is for official channels to generate creative hashtags, as this has been shown to influence the type of content created on independent channels. Second, as might be expected, influencers with a greater number of followers receive a higher level of engagement with their posts, implying that it

would be prudent for brand managers to prioritise the inclusion of these influencers as crucial stakeholders throughout the place branding process. Third, independent creators with higher social status cultivated greater engagement with their content, and this was particularly evident in individuals that had received a royal award from the Sultan of Oman. This suggests that there would be considerable merit in encouraging these influencers to create content that reflects higher status, which would likely result in greater engagement.

The findings from this research included 12 months of data (between November 2022 and October 2023) and therefore only include the posted place brand material between this period. As the nature of social media content can be influenced by broader, emergent national and international issues, there are likely to be trends and cycles of content that have emerged outside of the specific time period of data used in this study. Similarly, the singular focus on one social media platform has limitations on the generalisations; nonetheless, the Instagram platform provides a highly informative indication of the use of social media content in place branding. One final limitation to mention is that this case solely focused on Oman as a place brand, which has its own unique geographical and cultural features. The findings of this study therefore may only readily translate into insightful observations for other place brands that share a similar set of environmental and contextual conditions as those in the region of Oman.

## **8. Conclusion**

This chapter highlights the significance of social media, specifically Instagram influencer content, in building greater visibility of place brand communications. The components that increased engagement included the use of high-quality, visually interesting content that focused on the most distinctive features of the region. The incorporation of specific and generic hashtags, especially ones that focused on a creative theme, stimulated a higher level of content creation and sharing. Posts that featured positive emotional content were shared more readily. This was particularly true for posts that reflected a strong moral message or displayed admirable values. Individuals who shared these types of posts were able to reflect their own online identity by endorsing such communications.

Although official place brand managers have limited control over independently published content, these findings suggest that content in alignment with the intended brand message can be cultivated through several strategic initiatives. These include the tactical use of hashtags to influence content creation around a theme, encouraging the production of themes that drive content that, when shared by individuals, endows the sharer with the values associated with a higher level of moral and social standing, and finally ensuring that content creators with higher levels of influence are included in the formative stages of place brand planning, in order to cultivate a partnering mindset in the individual content creators.


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## Chapter 6

# Media Participation in Midterm Elections: Creative and Consumptive Influences on Political Engagement

*Erik P. Bucy, Jacob Groshek and Li Zhang*

### Abstract

Building upon the media participation hypothesis, this study examines the relationship between creative and consumptive media use during two pivotal midterm elections in the U.S. A series of regression analyses utilizing original, nationally representative data from 2014 and 2018 were modeled across dimensions of campaign participation, crossover political talk, and political system efficacy. Overall, support is found for increased creative media activity in comparison to more passive consumption in predicting political engagement. The results introduce additional nuance to the media participation literature while contextualizing the evolving nature of the uses made of interactive media for civic purposes.

**Keywords:** media participation, interactive media, political interactivity, midterm elections, civic participation, political system efficacy, crossover political talk

### 1. Introduction

This chapter uses survey data across two points in time to investigate two long-standing concerns of political communication scholars. The first is the nature of media use during election campaigns and the effects that different forms of news following an expressive engagement have on political outcomes and evaluations. Questions about media influence on campaigns are foundational to the field and constitute some of the classic works on public opinion and American politics (see [1, 2]). A more recent, though no less pressing, concern has to do with Donald Trump's impact and norm-busting influence on the American political system [3]. The chaotic reign that Trump's election unleashed on normal government functioning and lack of adequate checks and balances has been cast as nothing short of a crisis of democracy [4].

From a research perspective, Trump's election and conduct in office provides a political rupture significant enough to serve as an environmental shock worthy of before and after analysis. Despite general satisfaction with then-President Obama, the midterm elections of 2014 were a lackluster affair that did not attract much voter interest [5] but nevertheless set the stage for the Republican Party's reascension, as GOP lawmakers regained control of the Senate and effectively blocked any meaningful legislative action—and Supreme Court appointments—during the last 2 years of

the Obama Administration. Four years later, the situation could not have been more different—and dire. Pundits, mainstream news organizations, and former government officials were sounding the alarm that the project of American democracy itself was under such attack that not restoring partisan balance to Congress (by voting Democratic) would represent a potentially irreversible step towards authoritarian rule (e.g., [6]). Hearing these calls, voters responded with turnout during the 2018 midterms at levels normally only seen during presidential election years—49% nationwide [7].

These contrasting election contexts provide the backdrop for an examination of passive and active media use and its role in both political involvement and assessments of system functioning when the political stakes are seemingly routine on the one hand and extraordinary on the other. Under such disparate circumstances, we would expect differing modes of media use to be associated with varying levels of political interest and concern while significantly impacting depth of campaign attention and involvement. At the same time, attention and engagement with news that places citizens in conversations about politics should shape overall evaluations of how well the political system is serving the needs of citizens, or the sense of system efficacy.

In this paper, we analyze data from two national surveys conducted during the two national midterm elections in the U.S., the first in fall 2014 when for various reasons (e.g., the number of problematic police shootings caught on video, the rise of the Black Lives Matter movement that some equated with urban unrest, and Barack Obama's second term as president) the country seemed to be drifting rightward but seemed relatively stable politically, and the second in fall 2018 when political institutions were under such consistent attack from the Trump White House, which itself was engulfed in scandal, that the project of democracy seemed increasingly precarious. These contrasting years allow us to investigate the role of media use in promoting civic engagement and resilience under varying political conditions. In examining media use, we distinguish between passive news consumption (consumptive use) that entails exposure to traditional media without any interactivity, and active media use (creative activity) that entails more proactive engagement with digital platforms and fellow citizens through technology.

In the democracy under threat context (the 2018 midterms), we predict that different forms of media use (consumptive vs. creative) will have more influence on democratic outcomes (political system efficacy, campaign participation, and talking about politics across party lines) than in the more stable context of moderate urban unrest (the 2014 midterms). Because active engagement with digital media for political purposes (i.e., “media participation”) is tantamount to active political participation, creative media activity should also positively predict campaign involvement. And as an affirmation of the legitimacy and functioning of the system, higher levels of creative media activity should positively influence the sense of political efficacy. We expect these effects to be contingent, however, on perceptions of political urgency and what's at stake in a given election.

## **2. Media use and political involvement**

In the analog era, the influence of different forms of print and broadcast media was considered independently and compared for their influence on such outcomes as voting intention, political knowledge, interest, and attitudes (e.g., [8, 9]). With the rise of cross-platform news brands and content, and concurrent development of

interactive features on media platforms that support civic and political involvement [10, 11], it has become more important to track media behaviors and engagement with content than insisting on arbitrary distinctions between legacy distribution channels [12]. Traditional media use of course still exists, but when describing citizen engagement with politics through media, platform distinctions are increasingly fluid and a multiscreen culture now prevails [13, 14].

In the contemporary mediascape, therefore, the emphasis should be placed on varying forms of engagement that transcend delivery platforms and instead consider different modes of user activity as a reflection of one's engagement with politics (see [15]). Here, a more passive mode of attention-paying would suggest a spectator view towards politics, where the political sphere is regarded as something to observe from a distance rather than attempt to engage with proactively. Fundamentally, passive spectatorship implies a consumptive orientation towards the political process, where different candidates, policies, and choices are regarded as something to intellectually consider and informationally consume at arm's length but not necessarily partake in beyond that.

By contrast, an active mode of engagement suggests a gladiatorial view of citizen involvement at the media/politics interface, where through a combination of online and social media activity, efforts to acquire political knowledge, clarify and persuade take on a more assertive and goal-oriented cast. Such activity may occur across different platforms (e.g., social media, news sites, and topic-driven user communities) and devices (e.g., mobile media, laptops, and desktops) and at varying levels of analysis depending on the scope of the audience. Indeed, on distributed platforms, it is increasingly important to recognize new hybrid forms of political engagement that are simultaneously forms of both interpersonal and mass communication—or “masspersonal” communication [15, 16].

As media and technology researchers are showing with growing clarity, engagement with participatory media formats increases in different ways with each passing election cycle, showing generally positive outcomes on political attitudes and perceptions [17–19], although most notably for people who are already politically active [20]. A key explanation for this effect is the feeling of individual empowerment and efficacy that networked technologies afford (see [11]). Indeed, this is a core appeal of social media that lack institutional gatekeepers and which rely on user-generated content. Whether media participation affects actual change (see [21]), online platforms make accessible to citizens a political system that otherwise seems highly orchestrated, professionalized, and out of reach. At the individual level, use of interactive tools and technologies may thus offer a feeling of participatory empowerment capable of producing various social or civic “rewards,” including knowledge gain, proximity to important people or events, or a heightened sense of system satisfaction [22].

Though unlikely to influence an election or change policies directly, mediated forms of participation are important because they provide a ready avenue of active involvement that transcends consumptive surveillance of the political environment. Indeed, although considered dysfunctional for democratic stability, emotional objections to Donald Trump's 2020 election loss and protests following the presidential election were largely amplified and organized through social media [23]. By allowing people to enact their civic role and engage with others in politically relevant spaces, networked platforms and technologies satisfy the need for popular involvement in civic life by delivering a continuous stream of daily opportunities for active citizenship—something the political system absent electronic media and digital platforms is unable to do. Moreover, civically consequential media behaviors are often highly consistent with, and overlap, “real world” political involvement [20, 21, 24].

Thus, media participation works to enhance the perception of political accessibility and openness by, first and foremost, giving citizens the opportunity to act as citizens [25], even if that energy is at times misdirected.

## **2.1 Predictions**

Based on this discussion, the following three hypotheses are posed, each predicting a positive relationship between creative media activity and political involvement. The analysis they support add to our understanding of active versus passive engagement with media use, particularly in the understudied context of midterm elections:

H1: Increased participatory media use in the form of creative media activity will be positively associated with higher levels of campaign participation compared to (a) consumptive media use and (b) this tendency will manifest over time.

H2: Increased participatory media use in the form of creative media activity will be positively associated with higher levels of crossover political talk compared to (a) consumptive media use and (b) this tendency will manifest over time.

H3: Increased participatory media use in the form of creative media activity will be positively associated with higher levels of political system efficacy compared to (a) consumptive media use and (b) this tendency will manifest over time.

## **3. Method**

### **3.1 Data**

This study is based on analysis of two separate, nationally representative surveys that measure the same behavioral, cognitive, and affective variables before the 2014 and 2018 U.S. midterm elections. Demographically, the surveys were fielded using stratified sampling methods that carefully constructed national samples reflecting Census data distributions. The 2014 survey was fielded online between October 20 and November 3 (Election Day was November 4) by Social Survey International (SSI) and the 2018 survey was fielded online between October 28 and November 5 (Election Day was November 6) by Simple Opinions using the Prodege Market Research panel. After removing incomplete responses, the final datasets were compiled ( $N_{2014} = 1142$ ,  $N_{2018} = 1169$ ). Among other variables, this study takes into account partisan differences among Democrats ( $N_{2014-D} = 474$ ,  $N_{2018-D} = 380$ ), Republicans ( $N_{2014-R} = 259$ ,  $N_{2018-R} = 422$ ), and Independents ( $N_{2014-I} = 358$ ,  $N_{2018-I} = 336$ ). In both years, just a small number of respondents identified with other parties ( $N_{2014-Other} = 51$ ,  $N_{2018-Other} = 31$ ).

### **3.2 Independent variables**

The key independent variables in this study were the use of different types of media, in particular the use of such media for what can be considered consumptive or creative activities. Consistent with earlier analyses [12], these different uses can be placed on a continuum of increasing participation with media. In the contemporary media environment, a “traditional” versus “emerging” view of technology may not fully reflect the role that interactivity now plays in people’s daily media practices. Based on this conceptualization, we created two blocks of activities, each consisting of six different self-reported behaviors to reflect consumptive (i.e., non-participatory) and creative (i.e., participatory) media use.

*Consumptive activities:* Consumptive activities include reading a newspaper, watching television, listening to radio, using social media for information gathering, using a news aggregator, and paying attention to other online sources for political and social issues. These six items act as the baseline for understanding the extent to which users were receiving information from various media platforms but not necessarily actively participating with that media.

More specifically, participants in both rounds of survey collection responded to the question “On average, how many days per week do you consume news using each of the following?” and indicated their weekly use frequency (0 = *none* to 7 = *everyday*) for each of the following media. Options here included reading a newspaper in print or online ( $M_{2014} = 3.29, SD_{2014} = 2.81; M_{2018} = 2.09, SD_{2018} = 2.56$ ), watching television news ( $M_{2014} = 5.36, SD_{2014} = 2.41; M_{2018} = 3.88, SD_{2018} = 2.72$ ), listening to talk and news radio ( $M_{2014} = 2.93, SD_{2014} = 2.65; M_{2018} = 2.34, SD_{2018} = 2.47$ ), using social media for news ( $M_{2014} = 2.64, SD_{2014} = 2.89; M_{2018} = 3.01, SD_{2018} = 2.80$ ), and using news aggregators such as Google News ( $M_{2014} = 2.94, SD_{2014} = 2.80; M_{2018} = 2.74, SD_{2018} = 2.64$ ). Another consumptive activity was simply “paying attention to news online” measured using a 7-point scale, where 1 = *none* and 7 = *everyday* ( $M_{2014} = 4.21, SD_{2014} = 1.98; M_{2018} = 4.54, SD_{2018} = 2.01$ ).

*Creative activities:* On the other hand, creative activities refer to those forms of engagement where media users participate in the original development of media content or actively share or elaborate on media content provided by others. In the data used for the study reported here, creative activities include searching, forwarding, or circulating information, “liking” a post, adding a post, creating original content, and participating in discussions.

To clearly identify how these measures were operationalized, participants in both the 2014 and 2018 surveys provided responses to the question “Please indicate how often you have participated in any of the following online activities in the past month.” Here again, respondents indicated their frequency of partaking in each activity using a 7-point scale. Options included searched for information about the candidates ( $M_{2014} = 3.57, SD_{2014} = 2.05; M_{2018} = 4.02, SD_{2018} = 2.09$ ), forwarded or circulated information about them ( $M_{2014} = 2.95, SD_{2014} = 2.08; M_{2018} = 2.86, SD_{2018} = 2.03$ ), “liking” a post about them ( $M_{2014} = 2.73, SD_{2014} = 2.09; M_{2018} = 3.36, SD_{2018} = 2.25$ ), posting original content about them ( $M_{2014} = 2.51, SD_{2014} = 2.01; M_{2018} = 2.72, SD_{2018} = 2.04$ ), creating original content about them ( $M_{2014} = 1.92, SD_{2014} = 1.69; M_{2018} = 2.03, SD_{2018} = 1.72$ ), and participating in a discussion about them ( $M_{2014} = 2.66, SD_{2014} = 2.00; M_{2018} = 2.85, SD_{2018} = 1.99$ ).

### 3.3 Dependent variables

Based on earlier work [12, 20, 21], we examined the relationship between media engagement and three key outcome measures shown to be consequential for enacting citizenship.

*Campaign participation:* To model how participating in the campaign related to participating with media, respondents provided self-reports to a five-item, 7-point scale that captured the frequency of their participation in pre-election campaign activities ranging from, for example, “displayed a political button, sticker, or sign” to “volunteered for a campaign to help get a candidate elected,” where we have 1 = *not at all* and 7 = *very frequently* as options. Participation scores were generated by calculating the mean for each individual’s participatory activity frequency ( $M_{2014} = 1.86, SD_{2014} = 1.50; M_{2018} = 1.67, SD_{2018} = 1.33$ ). While it may be counterintuitive that our

measure of participation was not found to be increasing over time, this may well reflect how citizens generally view midterm elections as being less pivotal than presidential election years and their contributions less clearly pronounced. 2018 was also a highly polarized year in American politics and the overall climate could have discouraged certain voters from participating.

*Political conversation:* Respondents were asked to estimate how often in a typical week they have in-person or mediated conversations about politics with different social groups including friends, family, coworkers, and acquaintances (0 = *none*, 7 = *everyday*). An average was calculated as an individual's score for general political conversation ( $M_{2014} = 1.49$ ,  $SD_{2014} = 1.77$ ;  $M_{2018} = 2.79$ ,  $SD_{2018} = 1.64$ ). In addition to the questions about general political conversation, respondents were also asked using the same 0 to 7 scale as to how frequently, in a typical week, they engaged in conversation with people who "express political views you disagree with" ( $M_{2014} = 1.39$ ,  $SD_{2014} = 1.91$ ;  $M_{2018} = 2.21$ ,  $SD_{2018} = 1.74$ ).

*Political system efficacy:* For this construct, respondents provided input to a four-item, 7-point Likert scale adapted from a widely used scale [26] about their political system efficacy. Measures here included questions, such as "There are many legal ways for citizens to successfully influence what the government does" on a 7-point agreement scale, where 1 = *strongly disagree* to 7 = *strongly agree* scale ( $M_{2014} = 3.99$ ,  $SD_{2014} = 1.19$ ;  $M_{2018} = 3.99$ ,  $SD_{2018} = 1.23$ ).

### 3.4 Control variables

We also control for germane demographic variables including gender (Male<sub>2014</sub> = 55%, Male<sub>2018</sub> = 49%), age ( $M_{2014} = 48.43$ ,  $M_{2018} = 53.76$ ), education ( $M_{2014} =$  some college or 2-year degree,  $M_{2018} =$  some college or 2-year degree). We also control for individual partisanship strength ( $M_{2014} = 4.85$ ,  $SD_{2014} = 1.77$ ;  $M_{2018} = 5.01$ ,  $SD_{2018} = 1.63$ ).

## 4. Results

The first hypothesis expected that increased participatory media use in the form of creative media activity will be positively associated with higher levels of campaign participation. In comparison with consumptive media activities, creative media activities were not only a consistent and positive predictor of campaign participation, they also produced the largest regression coefficients in both 2014 ( $\beta = 0.454$ ,  $SE = 0.028$ ,  $p < .001$ ) and 2018 ( $\beta = 0.365$ ,  $SE = 0.024$ ,  $p < .001$ ). There is thus evidence to support H1a, which is summarized in **Table 1**.

When looking at comparisons over time, while the relative strength of the creative media use measure declined slightly from 2014 to 2018, the effect of discussing politics online became significant and weighed heavily on the model in 2018 ( $\beta = 0.134$ ,  $SE = 0.023$ ,  $p < .001$ ). Other factors that were significant in 2014 dropped from statistical significance by 2018, namely sharing and liking political posts online. The overall takeaway from comparing these models in terms of campaign participation is that the influence of more participatory, creative activities is variable over time and contributes more, not less, than consumptive activities, where the net effect is either stagnant or declining over time.

Moving forward, the second hypothesis predicted that increased participatory media use in the form of creative media activities will be positively associated with higher levels of crossover political talk. Compared to consumptive media activities,

Variables	2014		2018	
	B	(SE)	B	(SE)
Newspaper	.065	(.012)**	.063	(.014)*
TV	-.026	(.014)	.032	(.013)
Radio	.044	(.013)	.047	(.014)
News Aggregator	-.053	(.013)*	.016	(.014)
Social Media	-.029	(.014)	.011	(.014)
Online Pay Attention	-.023	(.024)	-.087	(.011)*
Online Search	.052	(.028)	.066	(.023)
Online Share	.077	(.027)*	.035	(.026)
Online “Like”	.081	(.026)*	-.008	(.022)
Online Post	.052	(.033)	.080	(.027)
Online Discuss	.072	(.028)	.134	(.023)***
Online Create	.454	(.028)***	.365	(.024)***
N	1142		1169	
Adjusted R <sup>2</sup>	.510		.376	

Note: Coefficients reported are standardized and results summarize the final media blocks in a hierarchical regression model where R<sup>2</sup> change was significant for demographic, partisanship, consumptive, and creative blocks.  $p \leq .05$ .  
 \* $p \leq .01$ .  
 \*\* $p \leq .001$ .

**Table 1.**  
 Regression analyses of campaign participation, 2014 compared to 2018.

a similar pattern emerged. Creating media online, discussing politics online, and posting about politics online all had consistently strong standardized  $\beta$  coefficients that, as shown in **Table 2**, seemed to drive crossover political talk in both 2014 and 2018 to a greater extent than consumptive activities. It is, however, worth noting that political talk radio use was significant in both 2014 ( $\beta = 0.093$ ,  $SE = 0.019$ ,  $p < .001$ ) and 2018 ( $\beta = 0.076$ ,  $SE = 0.019$ ,  $p < .01$ ), which connects meaningfully to previous conceptualizations of the media participation hypothesis [22, 25]. On the whole, there is general support for H2a.

When looking at the contribution of more participatory media use between 2014 and 2018, there are again general gains. For example, online searches for political information were significant in 2018 ( $\beta = 0.091$ ,  $SE = 0.032$ ,  $p < .05$ ) and the action of online “liking” went from negative and significant in 2014 to non-significant in 2018. Moreover, the standardized coefficients online posting about politics increased between 2014 ( $\beta = 0.159$ ,  $SE = 0.047$ ,  $p < .01$ ) and 2018 ( $\beta = 0.167$ ,  $SE = 0.038$ ,  $p < .001$ ). The same was true of online discussions about politics between 2014 ( $\beta = 0.180$ ,  $SE = 0.039$ ,  $p < .001$ ) and 2018 ( $\beta = 0.194$ ,  $SE = 0.032$ ,  $p < .001$ ). For online content creation, however, the coefficients decreased slightly between 2014 ( $\beta = 0.180$ ,  $SE = 0.040$ ,  $p < .001$ ) and 2018 ( $\beta = 0.135$ ,  $SE = 0.038$ ,  $p < .001$ ), and online sharing, which was significant in 2014, was no longer significant in 2018. There is thus overall but not overwhelming support for H2b.

Finally, when considering the third hypothesis, that increased participatory media use in the form of creative media activities would be positively associated with higher levels of political system efficacy, there was no evidence to support the

Variables	2014		2018	
	B	(SE)	B	(SE)
Newspaper	.054	(.017) <sup>*</sup>	.051	(.019)
TV	.034	(.020)	.108	(.018) <sup>***</sup>
Radio	.093	(.019) <sup>***</sup>	.076	(.019) <sup>**</sup>
News Aggregator	.073	(.019) <sup>**</sup>	.023	(.019)
Social Media	-.03	(.020)	.058	(.019)
Online Pay Attention	.087	(.034) <sup>*</sup>	-.037	(.032)
Online Search	-.049	(.039)	.091	(.032) <sup>*</sup>
Online Share	.131	(.038) <sup>**</sup>	-.007	(.037)
Online “Like”	-.015	(.037) <sup>*</sup>	-.016	(.030)
Online Post	.159	(.047) <sup>**</sup>	.167	(.038) <sup>***</sup>
Online Discuss	.180	(.039) <sup>***</sup>	.194	(.032) <sup>***</sup>
Online Create	.180	(.040) <sup>***</sup>	.135	(.038) <sup>***</sup>
N	1142		1169	
Adjusted R <sup>2</sup>	.398		.302	

Note: Coefficients reported are standardized and results summarize the final media blocks in a hierarchical regression model where R<sup>2</sup> change was significant for demographic, partisanship, consumptive, and creative blocks. \*p ≤ .05.

<sup>\*\*</sup>p ≤ .01.

<sup>\*\*\*</sup>p ≤ .001.

**Table 2.**  
*Regression analyses of crossover political talk, 2014 compared to 2018.*

Variables	2014		2018	
	B	(SE)	B	(SE)
Newspaper	-.025	(.013)	.049	(.016)
TV	.054	(.015)	.066	(.015) <sup>*</sup>
Radio	.058	(.014)	.018	(.016)
News Aggregator	-.025	(.014)	.025	(.016)
Social Media	.008	(.008)	-.006	(.016)
Online Pay Attention	.186	(.026) <sup>***</sup>	.091	(.013) <sup>*</sup>
Online Search	.078	(.030)	.052	(.026)
Online Share	.081	(.029)	.080	(.030)
Online “Like”	-.075	(.028)	-.068	(.025)
Online Post	.070	(.036)	-.010	(.031)
Online Discuss	-.120	(.030) <sup>*</sup>	.080	(.027)
Online Create	-.034	(.030)	-.062	(.028)
N	1142		1169	
Adjusted R <sup>2</sup>	.105		.055	

Note: Coefficients reported are standardized and results summarize the final media blocks in a hierarchical regression model where R<sup>2</sup> change was significant for demographic and consumptive blocks. p ≤ .05.

<sup>\*\*</sup>p ≤ .01.

<sup>\*\*\*</sup>p ≤ .001.

**Table 3.**  
*Regression analyses for political system efficacy, 2014 compared to 2018.*

prediction (see **Table 3**). The analysis showed a negative relationship between online discussions and political system efficacy in 2014 ( $\beta = -0.120$ ,  $SE = 0.030$ ,  $p < .05$ ) and lack of significance altogether in 2018. When looking at consumptive activities, a few significant associations materialized, including television viewing in 2018 ( $\beta = 0.066$ ,  $SE = 0.015$ ,  $p < .05$ ) and paying attention online in both 2014 ( $\beta = 0.186$ ,  $SE = 0.026$ ,  $p < .001$ ) and 2018 ( $\beta = 0.091$ ,  $SE = 0.013$ ,  $p < .05$ ). But, when looking more closely at the change across time, not only were none of the creative activities significant in 2018, the *R*-squared change of the entire block was non-significant.

## 5. Conclusion

From a critical point of view, consumptive media practices flow from a detached view of citizenship where responsibility for political change is vested in elites and other civic actors. As consumers, citizens are content to monitor the information environment and may decide to vote when formally called upon to take part in elections but little else—and even then, when it comes to midterm elections especially, most do not even vote (see [27]). In his political writings, Lippmann [28, 29] described such an arrangement as desirable, given the growing complexity of governing, diplomacy, and modern society: Why rely on the involvement of a disengaged “phantom public” whose grasp of the issues was incomplete at best? In Lippmann’s view, the onus of civic vitality rightly rested with a cadre of educated and technocratic elites, who should remain circulating and accessible to the masses but who should make the critical decisions for society without much interference. Such forms of elite pluralism, however, are inevitably considered thin versions of democracy.

A more engaged view of citizenship is supported by creative media activities, where the conception of citizen-as-spectator shifts to citizen-as-participant with the pursuit of various mediated behaviors including content generation and sharing during elections as well as interactively responding to content provided by others. Granted, it does not take much effort to share posts on media platforms and occasionally comment on an issue or candidate. Nevertheless, generating messages and engaging in debate do imply a distinctly stronger form of civic involvement than passive reception of political information. Such forms of media participation are important because they facilitate the right of all to participate in democratic discussion, which theorists have noted is an important norm governing the behavior of political elites ([25, 30], p. 152).

Our findings are consistent with this view. Creative media activities were not only consistent and positive predictors of campaign participation, they also generated the largest coefficients across both elections studied. Although we found that the influence of individual creative activities changes over time and with varying election contexts, as a class of media behaviors they consistently contribute more to active citizenship than consumptive activities, where the net effect is either stagnant or declining over time. Creating media online, discussing politics online, and posting about politics online also all had consistently stronger positive relationships with crossover political talk, that is, engaging in discussions with people whose political views respondents disagreed with, compared to consumptive activities. Thus, across two very unique elections, participatory media engagement contributes positively to active campaign participation and to a hallmark quality of democratic citizenship: engaging in political conversation with non-like-minded others.

Interestingly, and unlike relationships we have documented in presidential election years (see [12]), participatory media use had almost no effect on estimates of political system efficacy—the notion that the political system is open, responsive, and works effectively on behalf of citizens. In fact, the only significant coefficient, for online discussions, was negative in 2014. However, consumptive media use, namely, paying attention to politics online (both years) and television news use (in 2018) was positively associated with assessments of system efficacy, although not strongly. The weak effects for both election years, and both forms of media engagement (creative and consumptive) suggest the presence of an underlying third variable that may be moderating the relationship. Further modeling should assess whether this is the result of the midterm election context or perhaps underlying partisan dynamics.

As with any empirical study, this research is not without limitations. As noted, some of the relationships documented here are significant but not strong. Additional studies might identify and model individual differences between users to more precisely identify how interactive media use enhances perceptions of system responsiveness. Technological sophistication is likely to play an important role, as are media repertoires or patterns of media use and engagement across platforms and content genres. With the identification of moderators, path modeling might better identify the sequence of causality. Additionally, motivations for media use, which in the media participation literature overlap with motivations for political involvement, likely drive the effects that creative media use can have. If a user's goal is merely to be entertained, we would expect less civic impact from either creative or consumptive media use. If, however, the goal is to be informed and socially engaged, then the door opens to a broader panoply of expected outcomes.

As research advances, examining the correlates of creative and consumptive media influence across citizens with varying levels of technological and political sophistication, and in ever-more precisely defined networked environments, becomes a compelling proposition. How does media expertise interact with political sophistication to affect democratically important outcomes? Technologically, are so-called “power users” more satisfied with system functioning than “end users” who gravitate towards consumptive media—even online? If so, what factors moderate these relationships? Towards this end, future research should consider the contingent conditions under which different audience segments navigate the political sphere, integrating a wider array of political outlooks and behaviors as outcome measures. It remains to be determined, with more precise measures and modeling, how trends in creative and consumptive media use relate to other critical considerations such as political cynicism and voting.

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# The Rise of Influencer Culture – Marketing, Monetization, and Authenticity in the Social Sphere

*Zohaib Riaz Pitafi and Tahir Mumtaz Awan*

## Abstract

Influencer marketing has become a transformative force in modern marketing, altering brand engagement with consumers and redefining media consumption. The chapter examines the evolution from traditional celebrity endorsements to the emergence of digital influencers, facilitated through social media platforms such as Instagram, YouTube, and TikTok. Key insights include the classification of influencers into micro-, macro-, and mega influencers, each serving distinct roles and engagement levels. Micro-influencers, with niche followings, often achieve higher engagement rates and closer connections with their audience. Macro-influencers extend their reach to broader audiences, while mega influencers, similar to traditional celebrities, command significant social media presence. Influencers act as trendsetters and cultural icons, shaping public discourse and societal norms through authentic content that builds trust and loyalty among followers. A crucial aspect discussed is the importance of authenticity in influencer marketing. As consumers become more skeptical of traditional advertising, they value genuine, relatable content from influencers. The role of social media algorithms in determining content visibility and engagement emphasizes the strategic importance for influencers and brands to understand these mechanisms. Readers will gain comprehensive understanding about influencer marketing, the strategic categorization of influencers, and the significance of authenticity in building consumer trust.

**Keywords:** influencer culture, marketing, monetization, social media, authenticity, modern society

## 1. Introduction

The phenomenon of influencer marketing has become a dominant force in contemporary marketing, transforming the brands interact with consumers and reshaping the dynamics of media consumption. This shift marks a departure from traditional celebrity endorsements, which historically relied on the star power of film actors, musicians, and athletes to promote products [1]. The advent of digital influencers has ushered in a new era characterized by the democratization of influence,

where individuals from various backgrounds can amass significant followings and wield substantial impact on public opinion and consumer behavior. The rise of the internet and social media platforms has catalyzed a fundamental shift in the information that is consumed and shared. Social media platforms like Instagram, YouTube, and TikTok have emerged as central hubs for content creation and distribution, enabling influencers to build and engage with their audiences directly. In defining influencer roles, it is crucial to delineate the impact of different types of influencers [2]. Influencers can be categorized based on their reach and engagement levels, commonly referred to as micro-, macro-, and mega influencers. Micro-influencers typically have smaller, more niche followings but often enjoy higher engagement rates and stronger connections with their audience. Macro-influencers have larger followings and can reach broader audiences, while mega influencers, often celebrities in their own right, command substantial social media presence and widespread recognition. Each category of influencers plays a distinct role within the social media sphere, contributing uniquely to the ecosystem [3].

The influence exerted by these individuals extends beyond mere product promotion. Influencers serve as trendsetters, thought leaders, and cultural icons, shaping public discourse and influencing societal norms. Their ability to craft relatable and authentic content allows them to build trust and loyalty among their followers, a quality that is increasingly valued by brands seeking to connect with consumers on a more personal level. This shift in marketing dynamics underscores the growing importance of authenticity in influencer marketing, as consumers become more discerning and skeptical of traditional advertising techniques [4, 5]. The rise of digital influencers has also been facilitated by significant changes in media consumption patterns. The decline of traditional media has been paralleled by the exponential growth of social media platforms, which offer a more interactive and immersive experience for users. These platforms are designed to foster engagement and community-building, providing influencers with the tools to create compelling content and interact with their audience in real-time. Algorithms play a critical role in this ecosystem, determining the visibility and reach of content based on various metrics such as engagement rates, relevance, and user preferences. Understanding the mechanics of these algorithms is essential for influencers and brands alike, as it directly impacts their ability to reach and engage their target audience. Influencers can be categorized into micro-, macro-, and mega influencers based on the size of their audience. Micro-influencers, typically with a following of 1000 to 100,000, engage closely with their audience, often seen as more relatable and authentic [6]. Macro-influencers, with followers ranging from 100,000 to a million, bridge the gap between niche and mainstream appeal. Mega influencers, boasting over a million followers, are akin to traditional celebrities with a broad and far-reaching impact (**Table 1**).

### **1.1 The evolution of influence: from celebrities to social media stars**

The key to this shift lies in the interactive nature of social media. Unlike traditional media, which operates on a one-to-many communication model, social media facilitates many-to-many interactions. This interactivity allows influencers to engage directly with their audience, fostering a sense of community and authenticity that is often absent in traditional celebrity endorsements. Followers can comment, share, and react to content in real-time, creating a feedback loop that strengthens the bond between influencers and their audience. Another critical factor in the evolution of influence is the changing nature of content creation [12, 13]. Traditional celebrities

Term	Definition	Example
Influencers: Ref. [7]	An individual with the power to affect the purchasing decisions of others due to their authority, knowledge, position, or relationship with their audience.	Social media personalities with a loyal following.
Content creators: Ref. [8]	Someone who produces and shares content across various platforms, often specializing in a specific niche.	YouTubers, bloggers, and Instagrammers.
Thought leaders: Ref. [9]	Individuals recognized for their expertise and insight into a specific field, influencing others through their innovative ideas and opinions.	Industry experts, keynote speakers.
Micro-influencers and Macro-influencers: Ref. [10]	Influencers with a following of 1000 to 100,000, known for their close engagement and relatability. Influencers with a following of 100,000 to 1 million, offering a balance between niche and mainstream appeal.	Local fashion bloggers, niche community leaders. Mid-tier YouTubers, popular Instagram personalities.
Mega-influencers: Ref. [11]	Influencers with over a million followers, akin to traditional celebrities with a broad and far-reaching impact.	A-list celebrities, top-tier social media stars.

**Table 1.**  
*Key definitions.*

are often associated with highly produced, polished content, whereas social media influencers thrive on relatability and authenticity. Influencers create content that resonates with their audience’s everyday experiences, aspirations, and challenges. This authenticity engenders trust and loyalty, key components of effective influence in the digital age. Influencers are seen not just as endorsers, but as relatable figures who share a genuine connection with their followers.

The rise of niche influencers has further diversified the landscape of influence. While traditional celebrities appeal to broad demographics, social media influencers often cater to specific niches or communities. This specialization allows brands to target their marketing efforts more precisely, reaching audiences that are highly engaged and relevant. Micro-influencers, for example, may have smaller followings but enjoy higher engagement rates and deeper connections with their audience, making them valuable partners for brands seeking authentic engagement [14]. The evolution from celebrities to social media stars also reflects broader societal changes. Consumers today are more skeptical of overt advertising and prefer recommendations from trusted sources. Social media influencers, who often appear more genuine and approachable, fulfill this need for authenticity. Their success underscores a shift toward more decentralized and democratized forms of influence, where the power to shape public opinion and drive consumer behavior is distributed across a broader spectrum of individuals.

## 2. The mechanics of influencer marketing

In recent years, influencer marketing has emerged as a pivotal strategy in the digital marketing landscape. It leverages the reach and trust of social media personalities to promote products and services to targeted audiences [15]. The effectiveness of this marketing approach lies in its ability to connect with consumers in a more authentic and relatable manner compared to traditional advertising.

## **2.1 Understanding the influencer marketing ecosystem**

Influencer marketing represents a multifaceted ecosystem involving various stakeholders, components, and strategies. This ecosystem primarily includes brands, influencers, audiences, and social media platforms, each playing a critical role in the success of marketing campaigns. The cornerstone of influencer marketing lies in the relationship between brands and influencers. Brands seek to leverage influencers' reach and authenticity to promote their products or services, while influencers benefit through monetary compensation or free products. This relationship is often managed through influencer marketing agencies or platforms that facilitate connections and ensure both parties' interests are met. Influencers, categorized by their reach into micro-, macro-, and mega influencers, bring different levels of engagement and audience specificity. Micro-influencers, with their niche but highly engaged audiences, offer authenticity and personal connections, making them valuable for targeted campaigns [16]. Macro-influencers, with larger but slightly less engaged audiences, provide broader reach, suitable for campaigns aiming for wider exposure. Mega-influencers, often celebrities, offer extensive reach but at a higher cost and potentially lower engagement rates. Audiences play a crucial role in this ecosystem, as their engagement and perception determine the campaign's success. The trust and connection between influencers and their followers are pivotal, often surpassing the effectiveness of traditional advertising methods. This dynamic relationship is fostered through consistent, authentic content that resonates with the audience's interests and values [17]. Social media platforms act as the stage where influencer marketing unfolds. Each platform offers unique features and algorithms that influence content visibility and engagement. Understanding these platforms' nuances is essential for crafting effective strategies. For instance, Instagram's visually driven environment favors esthetically pleasing content, while TikTok's algorithm promotes virality through short, engaging videos.

## **2.2 The role of social media platforms: algorithms and affordances**

Social media platforms are instrumental in shaping the influencer marketing landscape, primarily through their algorithms and affordances. Algorithms, the set of rules and calculations determining content visibility, significantly influence the reach and engagement of influencer content. Understanding these algorithms is critical for both influencers and brands to optimize their strategies [18]. Each platform employs unique algorithms that prioritize certain types of content and user interactions. For instance, Instagram's algorithm favors posts with high engagement rates, such as likes, comments, and shares, often promoting visually appealing and interactive content. This necessitates influencers to produce high-quality, engaging visuals to enhance their visibility. Conversely, TikTok's algorithm is designed to promote viral content by highlighting videos that quickly gain traction, regardless of the creator's follower count. This allows for rapid content dissemination and offers opportunities for new influencers to gain prominence [19].

Affordances, or the inherent properties of social media platforms that enable certain actions, also play a vital role. Instagram's affordances include features like Stories, IGTV, and Shopping, each providing different avenues for influencer marketing. Stories, with their ephemeral nature, create a sense of urgency and intimacy, fostering direct engagement. IGTV allows for longer-form content, suitable for detailed reviews or tutorials, while Shopping integrates e-commerce, enabling direct

product purchases from posts. TikTok, with its emphasis on short, engaging videos, offers features such as Duets and Challenges, encouraging user participation and content creation. These affordances facilitate viral trends, enhancing brand visibility through creative, user-generated content. YouTube, another dominant platform, supports long-form video content, making it ideal for in-depth product reviews, vlogs, and tutorials. YouTube's monetization options, such as ad revenue and membership features, further incentivize influencers to produce high-quality content.

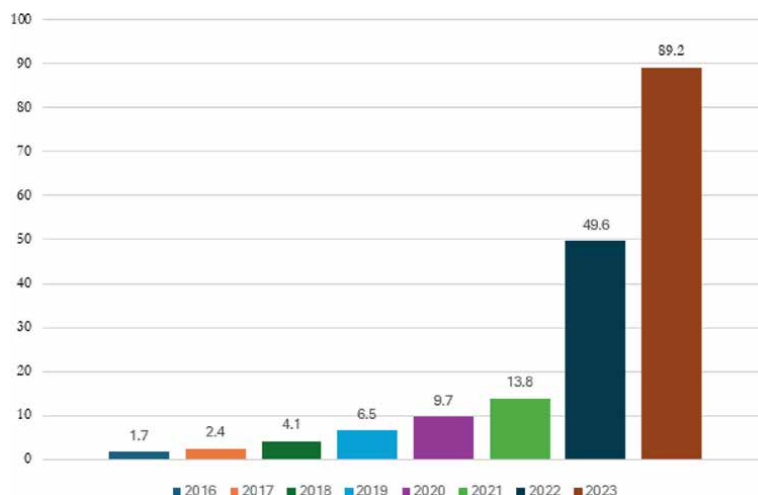
### **2.3 Successful influencer campaigns and their impact**

Analyzing successful influencer marketing campaigns provides valuable insights into the strategies and elements that contribute to their effectiveness. Several case studies from diverse industries illustrate the impact and best practices of influencer marketing. One notable example is Daniel Wellington, a watch brand that leveraged Instagram influencers to build its brand. By partnering with a wide range of influencers, from micro to mega, and providing them with customized discount codes, Daniel Wellington created a sense of exclusivity and urgency. The campaign's success lay in the influencers' authentic endorsements, which resonated with their followers, resulting in substantial sales growth and brand awareness [20].

Another impactful campaign was conducted by Fenty Beauty, a cosmetics brand founded by Rihanna. Fenty Beauty's strategy involved collaborating with beauty influencers across various social media platforms to promote its inclusive range of products [21]. The brand's emphasis on diversity and inclusion, reflected through its influencer partnerships, garnered significant attention and positive reception. This campaign's success was evident in the extensive social media buzz, high engagement rates, and impressive sales figures, solidifying Fenty Beauty's position in the competitive beauty industry. In the tech industry, the collaboration between YouTube influencer Marques Brownlee (MKBHD) and smartphone brand OnePlus serves as an exemplary case. MKBHD's in-depth, honest reviews of OnePlus products provided credible and comprehensive insights into his tech-savvy audience [22]. This partnership not only boosted OnePlus's brand credibility but also drove significant interest and sales among tech enthusiasts. The campaign's success highlights the importance of selecting influencers whose expertise and audience align with the brand's product offerings. The travel industry also presents a compelling case with the "Follow Me To" campaign by Murad and Nataly Osmann. This visually stunning campaign, featuring iconic locations worldwide, captivated Instagram users and promoted travel destinations and brands [4, 15]. The unique and creative content generated high engagement and inspired numerous user-generated imitations, amplifying the campaign's reach and impact.

## **3. Monetization strategies in the influencer world**

Influencers employ various tactics to monetize their content and leverage their online presence. The most common revenue streams include sponsored content, affiliate marketing, ad revenue, and product collaborations. Sponsored content is a prevalent monetization strategy where brands pay influencers to promote their products or services through posts, stories, or videos. The effectiveness of sponsored content lies in its seamless integration into the influencer's regular content, maintaining authenticity while delivering the brand's message [23]. Influencers often disclose



**Figure 1.** Global influencer marketing industry value (in billions). Source: Statistic 2024.

these collaborations to comply with legal requirements and maintain transparency with their audience. Affiliate marketing involves influencers promoting products or services through unique affiliate links. When followers purchase through these links, influencers earn a commission. This performance-based model incentivizes influencers to generate sales and allows brands to track the effectiveness of their campaigns. The success of affiliate marketing depends on the influencer's ability to create compelling content that drives their audience to take action (**Figure 1**) [16, 24].

Ad revenue is primarily associated with platforms like YouTube, where influencers earn money through advertisements displayed on their videos. Influencers receive a portion of the ad revenue based on the number of views and engagement their content generates. This model provides a steady income stream for influencers who consistently produce high-quality, engaging videos. Product collaborations involve influencers partnering with brands to create co-branded products [25, 26]. This strategy allows influencers to leverage their creativity and personal brand to develop unique offerings, ranging from clothing lines to beauty products. Product collaborations can be highly lucrative and enhance the influencer's brand identity and credibility.

### 3.1 Brand partnerships

Brand partnerships are a cornerstone of influencer monetization, encompassing various collaboration types that require careful navigation of sponsorship complexities. Influencers engage in several forms of brand collaborations, including one-off sponsored posts, long-term partnerships, and ambassadorships. One-off posts provide immediate exposure but may lack the depth of engagement seen in long-term partnerships [27]. Long-term collaborations allow influencers to develop a deeper connection with the brand, resulting in more authentic endorsements. Ambassadorships represent a higher level of commitment, where influencers consistently promote a brand over an extended period, often participating in product development and exclusive events.

Sponsorships involve negotiating contracts, setting clear expectations, and aligning brand values with the influencer's personal brand. Contracts typically outline

deliverables, timelines, compensation, and disclosure requirements. Clear communication is essential to ensure both parties understand the campaign's objectives and expected outcomes. Influencers must also balance sponsored content with organic posts to maintain authenticity and audience trust. The success of brand partnerships hinges on the alignment between the influencer's audience and the brand's target market. Authenticity is crucial, as followers are more likely to engage with content that genuinely resonates with the influencer's personal brand and values. Influencers often select partnerships with brands they already use and trust, enhancing the credibility of their endorsements [28].

### **3.2 Diversifying income**

To achieve long-term financial sustainability, influencers must diversify their income streams beyond traditional monetization methods. This section explores merchandising, digital products, subscription models, and the importance of financial planning. Merchandising involves influencers creating and selling branded products, such as clothing, accessories, and merchandise [4, 21, 24]. This strategy allows influencers to leverage their creativity and personal brand to develop products that resonate with their audience. Successful merchandising campaigns often involve limited edition drops or collaborations with established brands, generating excitement and driving sales.

Digital products, such as e-books, online courses, and exclusive content, offer influencers an additional revenue stream while providing value to their audience. These products capitalize on the influencer's expertise and can be sold through their website or platforms like Patreon. Digital products also allow influencers to scale their income by reaching a broader audience without the constraints of physical inventory. Subscription models provide influencers with a recurring revenue stream by offering exclusive content or perks to subscribers. Platforms like Patreon, OnlyFans, and YouTube Memberships enable influencers to monetize their most dedicated followers through monthly subscriptions. Subscribers often receive benefits such as early access to content, behind-the-scenes footage, or personalized interactions. This model fosters a sense of community and loyalty among followers while ensuring a steady income for the influencer [29, 30].

Achieving long-term financial sustainability requires influencers to adopt sound financial practices and diversify their income. Influencers should invest in financial planning, including budgeting, saving, and investing, to ensure stability and growth. Building a diverse portfolio of income streams mitigates the risk associated with relying on a single source of revenue. Additionally, influencers should continuously explore new monetization opportunities and adapt to changes in the digital landscape to maintain their relevance and financial success (**Table 2**).

### **3.3 Challenges in the monetization**

While monetization strategies offer significant opportunities, influencers face challenges and considerations that impact their success. Maintaining a balance between sponsored and organic content is crucial for preserving authenticity and audience trust. Overloading followers with sponsored posts can lead to disengagement and skepticism. Influencers must strategically integrate sponsored content into their regular posting schedule and ensure that it aligns with their personal brand and values [20]. Influencers must navigate various legal and ethical considerations,

Year	YouTube	Instagram	TikTok	Facebook	Twitter
2017	10.0	4.0	0.1	26.9	2.4
2018	11.9	6.2	0.3	33.8	3.0
2019	15.1	9.5	0.5	40.7	3.5
2020	19.8	13.9	1.1	47.6	3.7
2021	28.8	18.2	2.5	51.6	4.0
2022	29.2	20.0	4.0	55.6	4.3
2023	32.0	23.0	6.5	60.0	4.5

*Source: Statistic 2024.*

**Table 2.**

*Ad revenue by major social platforms (in Billions USD).*

including disclosure requirements and compliance with advertising regulations. Transparency is essential to maintaining trust with the audience and avoiding legal repercussions. Influencers should familiarize themselves with guidelines set by regulatory bodies such as the Federal Trade Commission (FTC) and ensure that sponsored content is clearly disclosed. Audience expectations can vary, and influencers must manage these expectations to maintain engagement and satisfaction.

Providing consistent, high-quality content is essential, but influencers should also communicate openly with their audience about sponsored collaborations and changes in their content strategy. Engaging with followers and soliciting feedback can help influencers better understand and meet their audience’s needs. Social media platforms continually evolve, introducing new features, algorithms, and monetization options [31]. Influencers must stay informed about these changes and adapt their strategies accordingly. Flexibility and innovation are key to capitalizing on new opportunities and maintaining a competitive edge in the ever-changing digital landscape.

## 4. Authenticity in digital sphere

The concept of authenticity is central to the success of influencers in the digital sphere. Authenticity refers to the perception that influencers are genuine, transparent, and relatable. This perceived authenticity fosters trust and loyalty among followers, making influencer endorsements more effective. However, the growing commercial nature of influencer marketing presents a paradox: influencers must balance their desire to monetize their content with the need to maintain authenticity.

### 4.1 The authenticity paradox

As influencers gain popularity, they receive numerous offers from brands seeking to collaborate. While these partnerships can be financially rewarding, they also risk compromising the influencer’s authenticity. Followers may become skeptical if they perceive that influencers are promoting products solely for monetary gain, rather than out of genuine belief in the product’s value. This skepticism can erode the trust that influencers have worked hard to build, ultimately impacting their credibility and influence [32].

## 4.2 Strategies for authenticity

Maintaining authenticity in the digital sphere requires deliberate strategies that prioritize transparency and genuine engagement with followers. One effective strategy is clear communication about sponsored content. Influencers should explicitly disclose paid partnerships, ensuring that their audience is aware of the commercial nature of certain posts. This transparency can help mitigate skepticism and maintain trust. Another strategy involves selecting brand partnerships carefully. Influencers should collaborate with brands that align with their personal values and the interests of their audience. By promoting products and services that they genuinely believe in, influencers can maintain authenticity and strengthen their connection with followers. Engaging with followers in a meaningful way is also crucial for maintaining authenticity. Influencers should interact with their audience through comments, direct messages, and live sessions, fostering a sense of community and personal connection [33]. This engagement demonstrates that influencers value their followers' opinions and are not solely focused on commercial gains. Creating a balance between sponsored content and organic posts is another important strategy. Influencers should ensure that their content remains diverse and not overly commercial. By sharing personal stories, insights, and content that reflects their genuine interests, influencers can maintain the authenticity that their followers appreciate.

## 4.3 Challenges to authenticity

Despite best efforts, influencers face several challenges in maintaining authenticity. Negative feedback is a common challenge, particularly when followers perceive that an influencer has compromised their authenticity. Negative comments and backlash can be damaging to an influencer's reputation, necessitating careful management of their online presence. The pressure to maintain a perfect image is another significant challenge. Influencers often feel compelled to present an idealized version of their lives, which can lead to unrealistic portrayals and inauthentic content. This pressure can result in mental health issues and burnout, as influencers struggle to meet the expectations of their followers while staying true to themselves. Balancing personal and professional boundaries is also a challenge. Influencers often share personal aspects of their lives to build authenticity, but this can blur the lines between their private and public personas. Maintaining a healthy balance between personal privacy and public engagement is essential for sustaining long-term authenticity [16, 34–36].

The following tables provides an overview of the key strategies and challenges related to maintaining authenticity for influencers (**Tables 3 and 4**):

Strategy	Description
Transparency in sponsored content	Clearly disclose paid partnerships to maintain trust and mitigate skepticism
Careful brand selection	Partner with brands that align with personal values and audience interests
Genuine engagement	Interact meaningfully with followers through comments, messages, and live sessions
Content diversity	Balance sponsored content with organic posts reflecting genuine interests

**Table 3.**  
*Key strategies to maintaining authenticity for influencers [37].*

<b>Challenge</b>	<b>Description</b>
Negative feedback	Managing reputation amidst negative comments and backlash
Pressure for perfection	Coping with the need to present an idealized version of life
Personal vs. Professional boundaries	Balancing privacy with public engagement to sustain authenticity
Algorithm changes	Adapting to platform algorithms without compromising genuine voice

**Table 4.**  
*Key challenges to maintaining authenticity for influencers [38].*

Effective strategies for preserving authenticity include transparency in sponsored content, careful selection of brand partnerships, genuine engagement with followers, and maintaining content diversity. However, influencers also face significant challenges such as negative feedback, the pressure for perfection, balancing personal and professional boundaries, and navigating algorithm changes. By understanding and addressing these challenges, influencers can sustain their authenticity, thereby enhancing their credibility and influence in the digital world [29].

## **5. Audience engagement and community building**

Engagement is a critical factor in influencer marketing, determining the effectiveness of an influencer’s content and their overall influence. Several techniques can be employed to foster engagement, ensuring that audiences remain actively involved and invested in the content. Strategies to grow an engaged community revolve around consistency, interaction, and value-added content. Consistency involves regularly posting high-quality content that resonates with the audience. It is essential to maintain a content calendar to plan and schedule posts, ensuring a steady flow of content that keeps the audience engaged [39]. Interaction is equally important; responding to comments, messages, and engaging in conversations fosters a sense of community and strengthens the relationship between the influencer and their followers. Value-added content provides meaningful and beneficial information, entertainment, or inspiration to the audience, enhancing their overall experience and encouraging continued engagement.

### **5.1 Importance of consistency and quality**

Consistency and quality are foundational to building a strong, engaged community. Consistency ensures that the audience knows when to expect new content, which can increase anticipation and regular engagement. Maintaining a content calendar helps influencers plan their posts in advance, allowing them to balance different types of content and avoid periods of inactivity [31, 39, 40]. Quality, on the other hand, ensures that the content meets the audience’s expectations and standards. High-quality content is more likely to be shared, liked, and commented on, increasing its reach and impact. Maintaining high quality involves several elements, including visual esthetics, relevance, and originality. High-resolution images, well-edited videos, and clear, concise text contribute to a professional appearance that attracts and retains followers. Relevance ensures that the content aligns with the audience’s interests, preferences, and needs. Originality differentiates the influencer from others, providing unique value that encourages followers to engage and stay loyal.

## **5.2 The role of interactive content**

Interactive content plays a significant role in audience engagement, providing opportunities for direct interaction between influencers and their followers. Live streaming, Q&A sessions, and interactive stories are particularly effective in fostering engagement. Live streaming allows real-time interaction, creating a sense of immediacy and personal connection. Followers can ask questions, make comments, and receive instant feedback, enhancing their involvement and investment in the content. Q&A sessions provide a structured format for addressing follower questions and concerns, fostering transparency and trust [41]. Interactive stories, such as polls, quizzes, and challenges, encourage followers to participate actively, increasing engagement and providing valuable insights into their preferences and opinions.

## **5.3 Community as currency**

Building and maintaining loyalty is essential for long-term success in influencer marketing. A strong sense of community and belonging can significantly enhance audience loyalty, leading to tangible and intangible benefits. Creating a sense of community involves fostering a welcoming and inclusive environment where followers feel connected to the influencer and each other. This can be achieved through regular interaction, personalized responses, and creating opportunities for followers to connect and engage with each other. For example, influencer Emma Chamberlain often shares personal stories and experiences, creating a sense of intimacy and relatability that resonates with her followers. The tangible benefits of a dedicated community include brand loyalty and word-of-mouth marketing [42]. Loyal followers are more likely to support the influencer's brand partnerships, purchase recommended products, and share content with their networks, amplifying its reach and impact. Intangible benefits include personal satisfaction and a sense of fulfillment from creating meaningful connections and positively impacting followers' lives.

## **6. The influence of technology on influencer culture**

Emerging technologies such as augmented reality (AR), virtual reality (VR), and artificial intelligence (AI) are significantly transforming content creation in the influencer space. These technologies offer innovative ways to engage audiences and enhance the overall content experience. AR allows influencers to overlay digital elements onto the real world, creating interactive and immersive experiences. For example, beauty influencers use AR filters to demonstrate makeup products, allowing followers to see the different products look on their own faces. This interactive approach enhances engagement and provides a unique value proposition that traditional content cannot offer [43].

VR takes immersion to another level by transporting followers into entirely virtual environments. Influencers in the travel and lifestyle sectors use VR to offer virtual tours and experiences, providing a sense of presence and adventure. This technology allows followers to explore new destinations and experiences from the comfort of their homes, increasing engagement and interest. AI is revolutionizing content creation by enabling personalized content recommendations, automated editing, and even virtual influencers [44]. AI-driven algorithms analyze follower data to provide personalized content suggestions, enhancing relevance and engagement. Automated

editing tools powered by AI streamline the content creation process, allowing influencers to produce high-quality content more efficiently. Virtual influencers, created using AI, offer new possibilities for brand partnerships and audience engagement, although they also raise questions about authenticity and connection.

### **6.1 Future technologies**

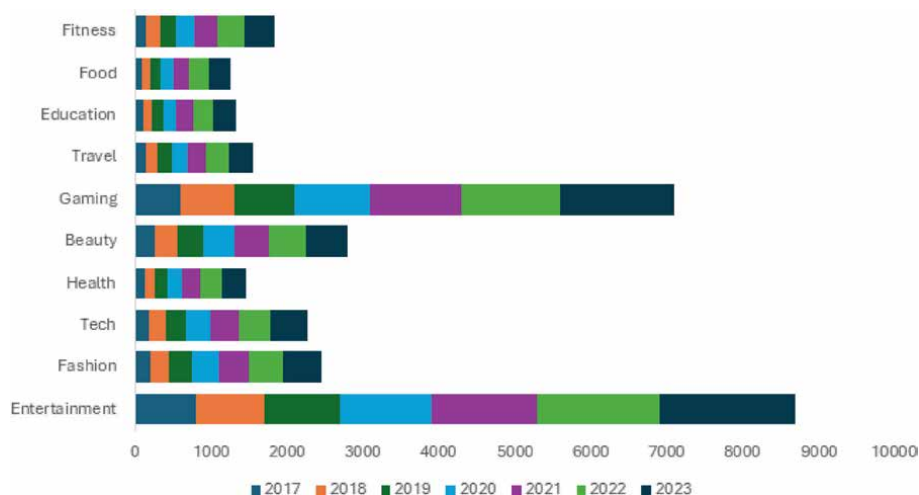
Future technologies hold the potential to further reshape the influencer industry. Developments such as advanced machine learning, blockchain, and 5G connectivity will likely play significant roles. Advanced machine learning will enhance content personalization and predictive analytics, enabling influencers to tailor their content to individual follower preferences with greater accuracy. This will improve engagement and relevance, fostering deeper connections with audiences. Blockchain technology could revolutionize influencer marketing by introducing decentralized platforms that enhance transparency and trust. Blockchain-based systems can verify influencer authenticity, track engagement metrics, and ensure fair compensation through smart contracts [19]. This transparency will benefit both influencers and brands, fostering a more equitable and trustworthy ecosystem. 5G connectivity will enable faster data transfer and lower latency, enhancing the quality of live streaming and interactive content. Influencers will be able to deliver high-resolution, real-time content experiences, increasing engagement and satisfaction.

### **6.2 The future of social platforms**

The future of social platforms will be shaped by emerging trends and new features designed to enhance user engagement and content creation. Predictions for evolution include the rise of niche platforms, increased focus on video content, and the integration of e-commerce. Niche platforms catering to specific interests and communities will gain prominence, offering influencers opportunities to connect with highly targeted audiences. These platforms will provide specialized features and tools tailored to the needs of their user base, enhancing engagement and relevance. Video content will continue to dominate, with platforms investing in new video formats and features. Short-form videos, live streaming, and interactive video content will become increasingly popular, driven by platforms like TikTok, Instagram Reels, and YouTube Shorts [36]. The integration of e-commerce features will transform social platforms into comprehensive shopping destinations. Influencers will be able to showcase products, host live shopping events, and provide seamless purchasing experiences, driving sales and enhancing their monetization opportunities. Decentralized platforms powered by blockchain will offer new models for content creation and monetization. These platforms will enable influencers to maintain ownership of their content, receive direct compensation from followers, and operate with greater transparency and fairness.

### **6.3 Analyzing trends**

The role of data analytics in influencer marketing is crucial for understanding audience behavior, optimizing content strategy, and maximizing impact. Influencers use data analytics tools to track engagement metrics, identify trends, and refine their content approach. Insights derived from data analytics enable influencers to tailor their content to the preferences and interests of their audience. By analyzing



**Figure 2.**  
 Estimated earnings from YouTube monetization by category. Source: Statistic 2024.

metrics such as likes, comments, shares, and views, influencers can determine which types of content resonate most with their followers [14, 40]. This data-driven approach enhances relevance and engagement, leading to greater success. Tools and techniques for maximizing impact include social media analytics platforms, audience segmentation, and A/B testing. Social media analytics platforms provide comprehensive insights into follower behavior, content performance, and engagement trends. Audience segmentation allows influencers to categorize their followers based on demographics, interests, and engagement levels, enabling more targeted content strategies. A/B testing involves experimenting with different content variations to determine which performs best, allowing influencers to optimize their approach based on data (**Figure 2**).

## 7. The global landscape of influencer culture

Influencer culture varies significantly across different regions, shaped by local customs, societal norms, and market dynamics. These variations influence the strategies employed by influencers and the impact they have on their audiences. Understanding these regional differences is crucial for brands and influencers aiming to operate effectively on a global scale [32].

### 7.1 Regional variations in influencer impact and strategies

In Western countries, particularly the United States and Europe, influencer marketing is a well-established industry characterized by a high degree of professionalization. Influencers often operate as businesses, with professional teams managing their branding, partnerships, and content creation. The content tends to be polished and produced with significant resources, reflecting the competitive nature of the market. Influencers in these regions frequently engage in diverse monetization strategies, including sponsored content, affiliate marketing, and product collaborations [29, 32]. In contrast, influencer culture in Asia, particularly in countries like China, South

Korea, and Japan, is deeply integrated with local platforms and cultural practices. For example, in China, platforms like Weibo, Douyin (the Chinese version of TikTok), and WeChat dominate the social media landscape. Influencers, known locally as “KOLs” (Key Opinion Leaders), often have a significant impact on consumer behavior [28].

The content here tends to be more localized, with influencers frequently engaging in live streaming and direct interactions with their followers. The use of social commerce, where influencers sell products directly through their content, is particularly prevalent. In Latin America, influencer culture is growing rapidly, with a strong emphasis on community and relatability. Influencers in this region often engage with their audiences in a more informal and personal manner, reflecting the social dynamics of the region [22]. Platforms like Instagram, YouTube, and Facebook are popular, and influencers frequently address social and political issues, leveraging their platforms to engage in advocacy and community building. Africa presents a unique landscape where influencer culture is burgeoning, driven by increasing internet penetration and the growing popularity of social media. Influencers in countries like Nigeria, South Africa, and Kenya are gaining traction, often focusing on local content that resonates with regional audiences. These influencers frequently use platforms like Instagram, Twitter, and YouTube, and there is a growing trend of leveraging mobile technology to reach a wider audience [17].

## **7.2 Case study: influencer dynamics in different cultures**

In the United States, influencers like Kylie Jenner exemplify the Western approach to influencer marketing. Jenner’s influence extends beyond social media into various business ventures, including her cosmetics line, Kylie Cosmetics. Her content is highly curated, featuring professional photography, high-production-value videos, and strategic brand partnerships. Jenner’s approach leverages her celebrity status, combining personal branding with extensive product marketing to create a powerful influencer persona [3].

In South Korea, influencers like PONY (Park Hye-min), a beauty and makeup artist, showcase a different dynamic. South Korean influencers often focus on creating detailed, informative content, particularly in the beauty and skincare industries. PONY’s content includes elaborate makeup tutorials, product reviews, and live streaming sessions, which resonate deeply with her audience. The Korean market places a high value on authenticity and expertise, and PONY’s detailed, educational approach aligns well with these cultural expectations [32]. Additionally, South Korean influencers often collaborate closely with brands to develop and promote products specifically tailored to local preferences.

## **7.3 Globalization vs. localization in influencer marketing**

The tension between globalization and localization in influencer marketing presents both challenges and opportunities for brands seeking to operate across diverse markets. Globalization involves leveraging universal themes and strategies that can be applied broadly across different regions. In contrast, localization focuses on tailoring content and strategies to fit the specific cultural, social, and economic contexts of each market. Global brands often adopt a hybrid approach, balancing global consistency with local relevance. For instance, global campaigns might feature universally appealing themes, such as empowerment or sustainability, while allowing for local adaptations in terms of language, imagery, and cultural references. This approach

enables brands to maintain a cohesive global identity while resonating more deeply with local audiences.

Nike's marketing strategy exemplifies this balance. The global sportswear giant often launches campaigns with universal themes, such as the "Just Do It" slogan, which emphasizes motivation and perseverance [36]. However, Nike also collaborates with local influencers and athletes to create region-specific content that reflects local cultures and values. For example, Nike's campaigns in China feature local athletes and influencers, integrating traditional Chinese cultural elements and addressing region-specific social issues. On the other hand, some brands prioritize a more localized approach, particularly when entering new or culturally distinct markets. This strategy involves extensive market research to understand local consumer behavior, preferences, and cultural nuances. Brands then collaborate with local influencers who have a deep understanding of the market and can create content that resonates authentically with the audience [43]. A prime example of effective localization is Coca-Cola's marketing strategy in India. Coca-Cola collaborates with local influencers and celebrities to create content that aligns with Indian cultural themes and festivities. The brand's campaigns often feature popular Bollywood stars and incorporate traditional Indian music, dance, and festivals, creating a strong local connection while maintaining the brand's global identity.

## **8. Challenges and critiques of influencer culture**

The influencer marketing landscape has seen exponential growth over the past decade, leading to a saturation of influencers across various social media platforms. This saturation presents significant challenges for both influencers and brands as they vie for consumer attention in an increasingly crowded market [14, 36]. The proliferation of influencers has led to a diluted impact, where the sheer volume of content makes it difficult for individual influencers to stand out and for brands to identify the most effective partners.

### **8.1 Saturation and the battle for attention**

One of the primary consequences of market saturation is content fatigue among consumers. With an overwhelming amount of content being produced daily, users are bombarded with promotional messages, leading to desensitization and reduced engagement. This scenario forces influencers to continuously innovate and find unique ways to capture and maintain their audience's attention. Creativity and originality become paramount as influencers strive to produce content that is not only engaging but also distinguishes them from the competition. Brands also face challenges in this saturated environment [32]. The abundance of influencers makes it difficult for brands to select the right partners who align with their values and can authentically promote their products. The need for thorough vetting processes, including evaluating an influencer's engagement metrics, audience demographics, and content quality, becomes essential to ensure effective partnerships. Additionally, the return on investment (ROI) for influencer campaigns is harder to predict and measure due to the variability in influencers' effectiveness. To combat these challenges, both influencers and brands must adopt more sophisticated strategies. Influencers need to focus on niche markets where they can build a dedicated and engaged audience rather than attempting to appeal to the masses. Specializing in

specific content areas allows influencers to become authorities in their fields, thereby increasing their value to both their audience and potential brand partners.

## **8.2 The psychological impact of influencer culture on society**

Influencer culture exerts a profound psychological impact on society, affecting individual self-esteem, societal norms, and consumer behavior [14]. The pervasive nature of social media allows influencers to shape public perceptions and aspirations, often setting unattainable standards of beauty, success, and lifestyle. One significant psychological effect is the phenomenon of social comparison. Constant exposure to idealized representations of life on social media can lead individuals to compare themselves unfavorably to influencers, resulting in feelings of inadequacy and low self-esteem. This is particularly concerning among younger audiences, who are more impressionable and likely to be influenced by what they see online. Studies have shown that excessive social media use correlates with increased anxiety, depression, and body dissatisfaction, highlighting the potential negative mental health implications of influencer culture. Moreover, the emphasis on materialism and consumerism propagated by many influencers can foster unrealistic expectations and pressure to conform to certain lifestyles [22]. Influencers often promote a facade of perfection, showcasing luxury goods, travel, and experiences that may not be accessible to the average person. This can create a sense of exclusion and inferiority among followers who cannot attain these standards, further exacerbating mental health issues.

## **8.3 Legal and regulatory challenges facing influencers and brands**

The rapid growth of influencer marketing has outpaced the development of comprehensive legal and regulatory frameworks, leading to a landscape fraught with challenges for both influencers and brands. These challenges revolve around transparency, disclosure, intellectual property, and advertising standards. Transparency and disclosure are paramount issues. Regulatory bodies like the Federal Trade Commission (FTC) in the United States mandate that influencers must clearly disclose when their content is sponsored [29]. This is intended to ensure that consumers are aware of the commercial intent behind the content they consume. However, compliance with these regulations is inconsistent, with many influencers either unaware of the requirements or deliberately obscuring their disclosures to maintain authenticity. The lack of clear, enforceable guidelines across different regions further complicates the issue, creating a patchwork of regulations that can be difficult to navigate for international brands and influencers. Intellectual property rights also present significant challenges. Influencers frequently use third-party content, such as music, images, and videos, in their posts. Without proper licensing, this practice can lead to legal disputes over copyright infringement. Brands and influencers must be diligent in ensuring that all content used in their campaigns complies with intellectual property laws to avoid costly litigation and damage to their reputations.

Advertising standards and the potential for deceptive practices are additional concerns. The rise of influencer marketing has prompted scrutiny over the authenticity and truthfulness of the claims made in sponsored content [16]. Influencers promoting products without adequate knowledge or experience can mislead consumers, resulting in negative consequences for both the influencer and the brand. Regulatory bodies are increasingly vigilant about enforcing advertising standards to protect consumers

from deceptive practices, imposing fines and sanctions on those who violate these standards. Brands and influencers must navigate these legal and regulatory challenges by adopting robust compliance practices. This includes educating influencers about disclosure requirements, implementing clear contractual agreements that outline legal obligations, and conducting regular audits to ensure adherence to relevant laws and regulations. By prioritizing transparency, ethical practices, and legal compliance, brands and influencers can build trust with their audiences and avoid the pitfalls associated with regulatory breaches.

## **9. The future of influencer culture**

The evolution of influencer culture continues to progress at a rapid pace, driven by emerging trends and technologies that shape its future trajectory. As the digital landscape evolves, new forms of influence and novel methods of engagement are expected to redefine the influencer industry [13, 29, 39]. This section explores key trends and predictions for the future of influencer culture, providing insight into its potential long-term impact on marketing and society.

### **9.1 Emerging trends and technologies**

#### *9.1.1 Virtual influencers*

Virtual influencers, computer-generated characters that mimic human influencers, are becoming increasingly prevalent. These digital personas can engage with audiences, promote products, and participate in brand campaigns just like their human counterparts. Examples such as Lil Miquela and Shudu have demonstrated the potential of virtual influencers to captivate audiences and generate substantial engagement [45]. As technology advances, the sophistication and realism of virtual influencers are expected to improve, leading to wider adoption and more innovative uses.

#### *9.1.2 The rise of niche influencers*

Niche influencers, who cater to specific interests and subcultures, are gaining prominence. These influencers possess deep knowledge and passion for their particular niche, whether it be veganism, sustainable fashion, or vintage technology. Their highly targeted content resonates strongly with dedicated audiences, offering brands an opportunity to reach consumers with specific interests [46]. The rise of niche influencers represents a shift towards more personalized and specialized forms of influence, which can drive higher engagement and loyalty.

#### *9.1.3 Augmented reality (AR) and virtual reality (VR)*

AR and VR technologies are transforming the influencers create and share content. AR filters and effects are already popular on platforms like Instagram and Snapchat, enhancing the interactive experience for users. VR offers immersive experiences that can transport followers into virtual environments, making content more engaging and memorable [47]. These technologies enable influencers to create unique and innovative content, offering new ways for brands to connect with consumers.

#### *9.1.4 Artificial intelligence (AI) in content creation*

AI is playing an increasingly significant role in content creation and personalization. AI-driven tools can assist influencers in generating content ideas, editing videos, and analyzing audience data to optimize engagement [48]. AI can also help in creating personalized content experiences for followers, tailoring messages and recommendations based on individual preferences. The integration of AI in influencer marketing is expected to enhance efficiency and effectiveness, allowing influencers to produce high-quality content more consistently.

#### *9.1.5 E-commerce integration*

The integration of e-commerce features within social media platforms is streamlining the purchasing process for consumers. Features like Instagram Shopping, YouTube's merch shelf, and TikTok's shoppable ads enable influencers to directly sell products to their followers. This seamless integration of content and commerce simplifies the consumer journey, making it easier for followers to purchase endorsed products [49]. The trend towards social commerce is likely to grow, further blurring the lines between content consumption and online shopping.

## **9.2 Predictions for the future**

#### *9.2.1 Increased regulation and transparency*

As influencer marketing matures, increased regulation and transparency are expected to become more prominent. Governments and regulatory bodies are likely to introduce stricter guidelines to ensure transparency in sponsored content and protect consumers from misleading advertisements. Influencers and brands will need to adapt to these regulations by clearly disclosing partnerships and adhering to ethical standards [42]. This shift towards greater accountability will help maintain trust and credibility in the influencer industry.

#### *9.2.2 Diversification of influencer platforms*

While platforms like Instagram, YouTube, and TikTok currently dominate the influencer landscape, diversification is anticipated as new platforms emerge. These new platforms may offer unique features or cater to specific audiences, providing influencers with additional avenues to reach and engage followers [50]. The diversification of influencer platforms will encourage innovation and competition, driving the development of more advanced and user-friendly tools for content creation and audience interaction.

#### *9.2.3 Emphasis on authenticity and social responsibility*

The demand for authenticity and social responsibility is expected to grow, with audiences seeking influencers who genuinely align with their values. Influencers who prioritize transparency, ethical practices, and social impact will likely gain more traction. This emphasis on authenticity will drive influencers to be more selective in their brand partnerships, ensuring that their endorsements reflect their true beliefs and values [51]. Brands will also need to align with these values to resonate with socially conscious consumers.

#### 9.2.4 Expansion of influencer roles

The role of influencers is expected to expand beyond product promotion. Influencers are likely to take on more diverse roles, such as brand consultants, product developers, and social advocates. Their deep understanding of audience preferences and trends positions them as valuable partners for brands looking to innovate and connect with consumers on a deeper level [25]. This expansion of roles will elevate the status of influencers as integral players in the marketing ecosystem.

#### 9.2.5 Long-term impact on marketing and society

The long-term impact of influencer culture on marketing and society will be profound. Influencer marketing will continue to evolve as a core strategy for brands, offering a powerful way to reach and engage with target audiences. The personalized and relatable nature of influencer content will drive higher levels of consumer trust and loyalty, challenging traditional advertising methods. In society, the influence of social media personalities will shape cultural norms, values, and behaviors. Influencers will play a key role in promoting social causes, driving positive change, and fostering a sense of community among their followers [44]. However, the ongoing challenge will be to balance commercial interests with authenticity and ethical considerations.

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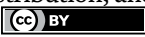
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# Perspective Chapter: The TikTok Phenomenon – Harnessing Opportunities, Assessing Risks and Marketing Insights

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## Abstract

This chapter examines the influence of TikTok on its users and its broader social implications. The chapter goes on to discuss the benefits of the platform, including high user engagement and the potential for viral content dissemination. It also considers the encouragement of creativity, originality and self-expression. However, it also identifies a number of risks associated with use, including those pertaining to privacy, the security of user data and the impact on mental health. The text also considers the issue of social media addiction and the negative psychological consequences that can result from excessive use of social media, such as reduced self-esteem and increased stress. The analysis of empirical data and scientific studies offers a comprehensive understanding of the TikTok phenomenon. The findings of this study provide valuable insights for researchers, marketing professionals and policymakers who are concerned with the regulation and safe use of social media. The final recommendations emphasise the necessity for further research and the implementation of effective strategies to mitigate the identified risks and encourage the responsible use of this dynamic platform.

**Keywords:** TikTok, social media, user engagement, marketing strategies, risks and opportunities

## 1. Introduction

The evolution of social media has been shaped by a multitude of factors, with technological advancements and the associated opportunities for utilisation playing a pivotal role. As of January 2024, the number of social media users has reached over 5 billion, representing 62.3% of the global population [1]. In the context of global internet usage, it can be observed that almost every internet user utilises at least one social media platform. It is noteworthy that the growth rate of individual users is of interest. Whilst the number of active social media users increased by 266 million year-on-year,

the number of internet users increased by only 97 million [1]. Consequently, the aforementioned trend may potentially exceed the current stratification in a few years.

The gradual expansion of social media use has prompted a number of questions, many of which are the subject of scholarly inquiry. Amongst the most frequently investigated areas are the negative impacts of social media use, its overuse, the spread of fake or hateful messages, and its impact on the behaviour of people and society as a whole. Nevertheless, it is also important to mention research into the positive effects and impacts of social media, particularly in the area of its use for education, promotion or raising awareness of important social issues.

It can be posited that social media, and social networking in particular, has transformed the manner in which individuals utilise the internet in nearly every nation on the planet. Social media has enabled users to communicate with one another, establish friendships, share private content or follow popular personalities or even brands of their favourite products.

However, social media is also influencing the way in which media is consumed, and the manner in which information is received, processed and evaluated. The social network TikTok has been a significant contributor to these changes and has brought about a number of fundamental changes in this respect.

The objective of this chapter is to provide an overview of the current state of use of this social network and its impact on the younger generation, which constitutes a significant proportion of social network users. In the individual subchapters, the authors provide a detailed analysis of the various dimensions of TikTok's use, examining its impact on users and brands. Furthermore, the study considers the broader social implications and potential negative impacts associated with the overuse of the platform.

In order to inform this study, the most recent scientific knowledge and data from a range of sources, including empirical research, marketing analysis and sociological studies, were collected and analysed. In this way, the authors seek to provide a comprehensive approach to the phenomenon of TikTok, encompassing its positive and negative aspects and its impact on contemporary digital culture.

## **2. The evolution of TikTok: from a local phenomenon to a global giant**

A significant aspect of TikTok is its capacity to enable users to create and disseminate brief video content, incorporating background music, visual filters and special effects. A significant aspect of this platform is its recommendation algorithm, which employs machine learning and artificial intelligence to generate personalised content based on user preferences and interactions [2].

TikTok exerts a considerable influence on cultural trends, social discourse and digital marketing strategies [3, 4]. The platform has become a pivotal tool for content creators, brands and institutions to reach a vast and diverse audience, with young people aged 16–24 years constituting the predominant user group. The demographic profile of users is resulting in significant alterations to consumer behaviour and cultural norms. TikTok acts as a mediator between traditional media formats and new digital practises [5].

TikTok represents a significant phenomenon in the field of digital communication and social interaction. The app, developed by the Chinese company ByteDance, was launched globally in September 2016 under the name Douyin. The creation and subsequent development of the app have been driven by the need to respond to the

demands of modern life, which has in turn promoted a certain lifestyle change [4]. It is, in particular, a novel type of internet economy, designated the ‘celebrity economy’, which commenced its evolution in China as early as 2013. The popularity of Douyin increased exponentially, with 100 million users and 1 billion video views per day within a year [6].

In September 2017, the company launched an international version of Douyin under the name TikTok. In order to facilitate its global expansion, ByteDance proceeded to acquire Musical.ly in November 2017. This rival platform boasted a substantial user base in the United States and Europe. The merger was completed in August 2018, when Musical.ly merged with TikTok and assumed its name and identity. This strategy enabled TikTok to rapidly expand its user base by millions.

Although initially popular amongst teenagers, as is the case with Instagram, the user base of TikTok has matured over time. This was the rationale behind the decision to expand the target audience (and thus the services) to older users. This was accompanied by further expansion activities and the utilisation of TikTok as a marketing platform. In September 2020, TikTok introduced the ‘TikTok For Business Marketing Partner Program’, which focuses on promoting businesses. Like Instagram, it offers marketing solutions for businesses to increase engagement with their audience (interactive polls and hashtag challenges) [7].

In 2020, it is projected that TikTok will become the platform with the most downloads, with an estimated 2 trillion downloads. In the same year, the Indian government banned the use of TikTok. Along with 58 other Chinese apps, it was identified as a potential threat to India’s integrity and sovereignty. Additionally, TikTok was identified as a platform with inadequate user privacy. The app ban occurred concurrently with a heightened state of tension between India and China, including military confrontations along the border. The geopolitical context contributed to the Indian government’s decision to ban Chinese apps as part of broader measures to reduce dependence on Chinese technology. TikTok also encountered similar issues in the United States. It was perceived as a potential threat to national security, and concerns were also raised regarding the potential for misuse of data. TikTok has thus far managed to avoid a definitive ban in the US, although it remains under close scrutiny by regulators and political leaders [8, 9].

In particular, during the period of the global pandemic caused by the novel coronavirus, the number of users of the platform increased significantly. The platform gained particular popularity amongst young people as a means of socialising and spending leisure time. A significant proportion of teenagers have become or are becoming addicted to it [3, 10].

As reported by Statista in April 2024, Indonesia had the largest TikTok audience by a significant margin, with approximately 127.5 million users engaging with the popular social video platform. The United States followed with approximately 121.5 million users of the platform. Brazil ranked third, with approximately 101.8 million users on TikTok viewing short videos. In Europe, the number of users of the video-sharing platform TikTok is 24.59 million in France and 22.6 million in Germany [11].

TikTok is the fifth most utilised social platform. In terms of time spent using social media applications, TikTok is the app with the highest average time per month spent by active users (34 hours) [1].

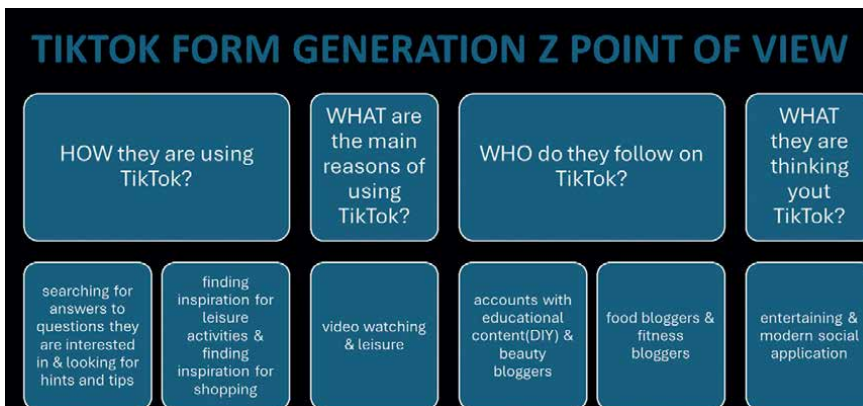
According to advertising resources published by ByteDance, TikTok had 1.06 million users aged 18 and above in Slovakia in early 2024. In fact, the number of TikTok users is higher than indicated by the aforementioned figures, as these tools only show audience data for users aged 18 and above [12].

A more detailed examination was conducted of TikTok's social network usage. In-depth interviews were conducted with 24 active social media users, aged between 18 and 24. The investigation sought to ascertain the manner in which the subjects utilise the TikTok application, the rationale behind their usage, the profiles they follow, their preferences regarding the content they consume and their perceptions of the TikTok social network.

The results indicated that the average duration of use for the TikTok app was 1.5 years. The majority of participants indicated that they utilised TikTok as a resource for seeking answers to questions that piqued their interest or for locating helpful suggestions and guidance. Similarly, the respondents indicated that they used TikTok as a source of entertainment, viewing videos and spending their leisure time on the platform. Additionally, the participants indicated that they frequently used TikTok to seek inspiration for leisure activities or for shopping. The most frequently visited websites amongst the monitored group were those offering educational content (DIY) and beauty blogs, followed by food blogs and fitness blogs. TikTok is perceived by users as a social network that is both enjoyable and contemporary. The mean duration of mobile phone usage per week was 25 hours and 17 minutes. The results of the survey are presented in **Figure 1**.

Additionally, TikTok is distinguished by its considerable impact on cultural trends, social discourse and digital marketing strategies. It has rapidly evolved into a pervasive cultural phenomenon that exerts a profound influence on a multitude of domains, including music, fashion, humour and political discourse. Users are responsible for the creation and dissemination of viral trends, dances, challenges and memes. A considerable number of musical compositions have achieved considerable popularity as a result of their appearance on the TikTok platform, which has resulted in their appearance at the summit of the charts. Furthermore, the platform has facilitated the emergence of new influencers and celebrities who exert a considerable influence on the younger generation [13, 14].

The most popular account on TikTok is that of Khabane Lame (@khaby.lame), which has amassed over 162.5 million followers and 2.4 billion likes. Khabane 'Khaby' Lame is a Senegalese-Italian social media influencer who uses the TikTok platform. His videos are characterised by brief comic parodies in which he employs sarcasm to highlight the absurdity of individuals who unnecessarily complicate simple tasks.



**Figure 1.** TikTok from Generation Z point of view. Source: Own processing, 2024.

Account	Followers (in millions)	Likes (in millions)	Avg. views (in millions)	Engagement rate
Khabane lame @khabylame	163.5 M	2436.6 M	6.1 M	6.54%
charli d'amelio @charlidamelio	154.5 M	11,640.1 M	12.5 M	3.83%
MrBeast @mrbeast	96.2 M	937.8 M	18.1 M	6.84%
Bella Poarch @bellapoarch	94.1 M	2335.2 M	8.9 M	2.21%
Addison Rae @addisonre	88.8 M	5818.7 M	18.8 M	3.13%
Zach King @zachking	82.1 M	1169 M	10.2 M	4.83%
Kimberly Loaiza @kimberlyloaiza	81.2 M	5115 M	15.5 M	8.78%
TikTok @tiktok	80.7 M	324.4 M	486.5 K	3.26%
cznburak @cznburak	75.1 M	1476.3 M	925.7 K	5.16%
domelipa @domelipa	74.8 M	4711.4 M	5.4 M	12.7%

Source: Own processing (data as of 10 June 2024).

**Table 1.**  
 TikTok accounts with the most followers.

Other notable influencers on TikTok include Charli Grace D’Amelio, @charlidamelio; Jimmy Donaldson, known online as MrBeast, @mrbeast; Denarie Bautista Taylor, known professionally as Bella Poarch, @bellapoarch; and American dancer, actress and singer Addison Rae Easterling, @addisonre. The 10 most popular accounts on TikTok are presented in **Table 1**.

These accounts are defined by their status as influencers who have achieved notable recognition within the social media sphere, particularly following the establishment of their presence on TikTok. It is therefore inaccurate to categorise them as showbiz personalities, although many can be considered famous thanks to their popularity. A further defining feature is that the subjects are young people, with an average age of 25.7 years.

Bossen and Kottasz propose a typology of TikTok usage comprising three categories: passive consumption (i.e. viewing), participation (i.e. commenting, following, liking or sharing) and contribution (i.e. producing original TikTok videos) [15]:

1. The first category of engagement is passive consumption, which can be defined as the act of merely observing videos without any form of interaction with the content. Passive consumption is the act of merely observing videos without engaging with the content in any meaningful way. Those who consume content passively on TikTok do not engage in any form of interaction with the content, whether that be commenting, liking or sharing. This group of users employs TikTok as a source of entertainment and relaxation. The phenomenon of passive consumption may result in an increased dependence on the app, as users may spend a considerable amount of time watching content without actively engaging.
2. Participation can be defined as the more active forms of engagement, such as commenting, liking, watching and sharing videos. Those who engage in active participation on the platform not only consume content, but also interact with the content created by other users. This encompasses the act of liking, commenting and sharing videos with their followers. This type of usage can facilitate the formation of social connections and enhance user engagement. Participation frequently engenders a sense of belonging to a community and stimulates social interaction.
3. The act of contributing to the platform entails the creation and dissemination of original videos. Contributors are defined as content creators who upload their own videos to the platform. This type of usage necessitates a more advanced level of creativity and technical and digital expertise. The act of contributing to a platform encourages users to engage in creative and self-expressive behaviours. Furthermore, content creation may facilitate the development of a personal brand and the acquisition of a larger following.

It can be stated that, in conclusion, TikTok has become a pivotal instrument for content creators, brands and institutions to disseminate their material to a vast and heterogeneous audience, with the 16–24 age group representing the most prevalent demographic. Ngilangil posits that the success of TikTok is largely attributable to its status as a platform for free and creative self-expression for many users aged 16–24 [16].

### **3. Benefits and potential for use of TikTok in the digital age**

A substantial body of research has demonstrated the profound influence of TikTok in a multitude of domains. It is crucial that both users and parents of young children are adequately informed about the potential benefits and risks associated with this platform, as well as the effective utilisation of TikTok to promote mental health. A significant number of researchers have observed that TikTok can have a positive impact on mental health when used in moderation and with an awareness of potential negative consequences.

The research by Link et al. concentrated on the psychological aspects of TikTok use and its impact on mental health. The study found that active engagement in content creation on TikTok can improve self-esteem and sense of identity amongst young users [17]. The authors Milton et al. corroborate the assertion that TikTok constitutes an invaluable repository of mental health-related content, wherein users frequently seek counsel and solace from their fellow sufferers. However, due to the algorithmic focus on similar content, a positive experience may become a distressing one, which may in turn lead to the need to cease using the platform [18].

A study conducted by Professor Piacentini from the University of California, Los Angeles (UCLA) examined the influence of the ongoing pandemic on adolescent mental health and the role of TikTok in this context. The study confirmed that TikTok was an effective coping mechanism for young people during the pandemic, providing a platform for social interaction and entertainment, which was crucial for their mental well-being [19].

As reported by Jaffar et al., the use of TikTok has been found to have a positive impact on creativity, originality and self-esteem [20]. Cheng et al. conducted a study to examine the impact of TikTok on users' creativity. It was demonstrated that regular use of this social network fosters creative thinking and the adoption of innovative approaches to problem-solving. TikTok enables users to create and share short videos that frequently incorporate a multitude of creative challenges, thereby stimulating their imagination and ability to solve problems in original ways [21]. A study published by Maretha and Anggoro demonstrated that TikTok fosters the development of essential skills such as communication, collaboration, creativity and critical thinking. Nevertheless, it is also important to note that the quality of content is of great importance, as public and unverified videos may contain inaccurate or inappropriate information [22].

The authors frequently emphasise the advantages of this application for educational purposes. The authors describe TikTok as a suitable platform for illustrating ideas or examples. Anderson investigated the potential of TikTok as an educational and information dissemination tool. He found that short, visually appealing videos can be an effective tool for educating young people and increasing their interest in various topics. The findings of the study indicated that TikTok has the potential to enhance communication abilities, collaborative and creative skills, and critical thinking [23].

TikTok provides the general public with access to a diverse range of educational content. The concise format of educational videos facilitates comprehension of complex topics. The use of visually appealing and dynamic videos has been demonstrated to enhance student motivation and engagement in learning.

Furthermore, Akbari et al. investigated the marketing potential of TikTok in the context of higher education. The researchers discovered that the platform can be

utilised as an effective instrument for the promotion of educational institutions and the enhancement of student engagement [24].

Guo et al. concentrated on the influence of TikTok on social interaction and community development. In their research, they discovered that TikTok facilitates connections between individuals with shared interests, thereby fostering the formation of novel online communities. This phenomenon has the potential to positively influence users' social lives [25]. Newly constituted communities are formed around specific topics or interests, including, for example, eating, exercise, cooking, travel and so forth. Such communities facilitate the exchange of ideas, mutual support and the formation of novel social interactions. To illustrate, the findings of a study conducted by Wang et al. indicated that the majority of adolescents utilise TikTok as a platform for exchanging information pertaining to healthy eating, providing guidance on recipes and dietary habits [26].

Finally, we may consider the economic or marketing benefits of TikTok, which will be discussed in greater detail in a subsequent chapter. The popularity and capacity for viral content creation afford both business and non-business entities a distinctive opportunity to enhance visibility, familiarity, image and revenue generation.

#### **4. Disadvantages and risks of using TikTok in times of digital transformation**

Whilst the preceding chapter has outlined the advantages of TikTok, it is important to acknowledge the potential risks associated with its use. In the majority of cases, these are risks inherent to the use of social media in general. However, the literature also describes specific threats associated with the use of TikTok in particular.

For instance, a forensic analysis conducted by Khoa et al. demonstrated that it is feasible to procure watchlists, keywords and user messages on Android devices [27].

In a pioneering study, Montag et al. provided the first insight into the psychology of TikTok usage. The study revealed that the majority of TikTok users are adolescents, a demographic that is potentially vulnerable to the various aspects of using this platform [28].

Qin and Bahiyah examined the behavioural patterns of TikTok users in relation to addiction, with a particular focus on young users. The researchers discovered that the personalised content provided by TikTok has the potential to become addictive for younger users of the social network. This addictive behaviour is associated with the features that TikTok offers, including special effects, filters and content editing tools. Therefore, both intrinsic factors (the content experience) and extrinsic factors (the quality of the information system) can contribute to the development of TikTok addiction. The authors posit that excessive immersion in the platform can induce addictive behaviour and have a negative impact on users' mental health [29].

Research by Zhou et al. and Jung et al. indicates that the quality of information and the system can influence the experience of information flow and user loyalty. TikTok optimises the user experience through the provision of high-quality information and system functionality, which positively impacts the user experience of the content and may potentially contribute to addictive behaviours [30, 31].

As Figliola notes, adolescents with short attention spans are particularly susceptible to an algorithmic content adaptation system, with increased exposure to adapted content leading to prolonged use and immersion in viewing content on TikTok [32].

A number of authors, including Beyens et al., Enez Darcin et al., Fu et al. and Weinstein and Lejoyeux, have highlighted that excessive use of TikTok can lead to addiction, with the potential for a range of adverse consequences, including depression, anxiety, insomnia, poor eyesight, learning difficulties and poor job performance [33–36].

Yiyun examined the impact of psychological variables on the development of TikTok addiction amongst Chinese adolescents. The findings indicated that social anxiety, loneliness and lower subjective well-being were identified as contributing factors to TikTok addiction amongst Chinese young people. These psychological factors were found to elevate the risk of addiction, as social anxiety, loneliness and subjective well-being may influence the desire for socialisation and relationship formation [37].

Additionally, Miranda et al. have investigated the motivational factors and sense of belonging that contribute to addiction. The objective of the study was to examine the relationship between escapism, social interaction motivations and TikTok addiction. The study revealed that social anxiety, loneliness and lower subjective well-being exert a positive influence on TikTok addiction amongst young people in China. These factors both directly and indirectly increase susceptibility to addiction through the need to compensate for the absence of relationships. The concept of escapism from reality and the compensatory aspect of relationships have been identified as key mediators of TikTok addiction. Loneliness is a direct cause of escape behaviour, which in turn increases the risk of addiction. The study further posits that whilst psychological factors may contribute to the development of TikTok addiction, they are not the sole determining factor. Social intervention can also play a role in influencing the likelihood of developing this addiction [38].

The findings of the authors' research indicate that psychological factors, such as social anxiety, loneliness and subjective well-being, exert a significant influence on the addiction of young people to TikTok. These factors exert a direct and indirect influence on addiction through the mediation of factors such as the need to compensate for relationships or to escape from reality.

Similar research has been conducted by authors Risalah and Rina, who focused on comparing the implementation of creativity and addictive behaviour amongst TikTok users. Their findings revealed a significant difference. In relation to addictive behaviour, the researchers found that addictive behaviour is more common during periods of mood change, as TikTok users seek entertainment and distraction in order to temporarily forget their problems [39].

Qin et al. investigated the impact of information quality and system quality on the app experience (flow experience) and, in turn, on young people's addiction to TikTok. The findings indicate that system quality exerts a more pronounced influence on user experience and addiction than information quality. The user experience, which is divided into three states—concentration, enjoyment and temporal distortion—has a positive influence on behaviours that lead to TikTok addiction [40].

Irmer and Schmiedek examined the intrapersonal and interpersonal associations of social media use, subjective well-being and upward social comparison. The results of the multilevel structural equation models indicated that social media use was associated with lower positive and higher negative self-esteem on a daily basis. Additionally, the findings demonstrated that upward social comparisons were associated with decreased subjective well-being across all dimensions. Moreover, their findings were consistent with the partial mediation of the effect of social media use on subjective well-being through upward social comparisons at the interpersonal and intrapersonal levels [41].

A further negative aspect of social media use is the dissemination of misinformation in the form of unverified, untrue and fake news. TikTok is no exception to this rule.

By the end of September 2023, a total of 87 problematic Slovak accounts had been identified that disseminated conspiracy theories, hoaxes and disinformation, whilst simultaneously failing to align with the profiles of politically active individuals. The identified accounts are presumed to have received a considerable number of views on the videos, likely exceeding a few dozen. The most prevalent narratives included the war in Ukraine, the labelling of the Ukrainian regime as fascist, misinformation about vaccinations, anti-NATO narratives, narratives about emigrants and misinformation related to the parliamentary elections [42].

The analysis demonstrated that a number of accounts with a relatively modest number of followers and a limited number of views on the majority of videos were nevertheless able to generate content that achieved tens of thousands, or even hundreds of thousands, of views due to the influence of the For You algorithm. However, what differentiates TikTok from other social networks is that, due to the abundance of audiovisual content, the language barrier is not a significant factor. Consequently, many videos do not necessitate the comprehension of a foreign language, as misinformation, hoaxes or any other problematic content are expressed and displayed in a graphic format (video, photo and sound). The greater the popularity of a video, the more likely it is to be viewed by individuals who hold opposing views or have not yet encountered the content in question.

## **5. TikTok as a marketing tool: impact on brand strategies and consumer behaviour dynamics**

As previously stated in the chapter on the advantages of utilising TikTok, this platform provides a convenient avenue for marketing communication. This is a topic that is the subject of a separate scientific investigation, and thus warrants special attention.

Despite its recent emergence as a social media platform, TikTok has existed in its current form for approximately 8 years. However, with regard to the field of marketing communication, it is evident that the platform is utilised to a comparatively lesser extent than other social networks, particularly Instagram and Facebook. Meanwhile, a review of the literature reveals numerous examples of the use of TikTok for marketing activities.

Green et al. identified the creation of new opportunities for businesses and consumers through the utilisation of TikTok's distinctive features and content as a key benefit of the platform [43]. Sasmita et al. found that TikTok is an effective tool for increasing brand awareness and encouraging user interaction [44]. In their study, Ratnapuri et al. identified that TikTok Shop presents a novel opportunity for the growth of small businesses in the social commerce domain [45]. Cheng et al. demonstrated that TikTok maintains a competitive advantage through the introduction of innovative features and high user engagement [46]. Peng demonstrated that TikTok has a significant impact on marketing campaigns and increased brand awareness [47]. MacKinnon et al. demonstrated that TikTok can be an effective tool for disseminating knowledge and supporting community initiatives [48]. In a similar vein, Gesmundo et al. demonstrated that TikTok is an effective tool for increasing brand awareness and encouraging purchase intentions [49].

BRAND	Facebook	Instagram	TikTok	YouTube
APPLE	14,000,000	32,800,000	4,400,000	19,100,000
GOOGLE	28,000,000	15,100,000	1,800,000	12,000,000
MICROSOFT	13,000,000	4,400,000	676,000	1,610,000
AMAZON	29,000,000	4,800,000	976,600	587,000
MCDONALD'S	82,000,000	5,000,000	4,200,000	700,000
NVIDIA	2,400,000	2,100,000	605,600	1,540,000
VISA	22,000,000	48,300	8550	52,900
FACEBOOK	183,000,000	5,400,000	333,000	1,600,000
ORACLE	2,900,000	352,000	N/A	132,000
TENCENT	11,000	4400	N/A	N/A

Source: *Own processing, 2024.*

**Table 2.** Number of followers (subscribers) of the top 10 global brands on social networks: Facebook, Instagram and TikTok and YouTube platform.

Tartaraj et al. demonstrated that collaboration with influencers on TikTok significantly enhances brand awareness. The authors posit that user engagement with influencer content on TikTok is positively associated with purchase intention. This suggests that the more users engage with influencer content, the more likely they are to consider purchasing products or services promoted by those influencers. Moreover, the research revealed a significant positive correlation between influencer engagement on TikTok and the likelihood of making a purchase. Furthermore, the study revealed that trust in TikTok influencers had a significant positive impact on actual purchase behaviour. Consequently, the trustworthiness and relatability of influencers can be regarded as pivotal factors in consumers' purchasing decisions [50].

Research by Martini et al. has demonstrated that TikTok influencers play an important role in increasing brand awareness, influencing purchase intentions and actual consumer buying behaviour. The study demonstrated a significant correlation between influencer exposure and the likelihood of purchases influenced by influencers. This suggests that greater exposure to influencers increases the probability of purchases [51].

Rezek posits that the utilisation of the social media platform TikTok constitutes an indispensable component of the marketing mix for brands targeting the demographic cohort designated as Generation Z. This platform is endowed with the capacity to exert a profound influence on the attitudes of this generation, thereby conferring upon it the status of a pivotal instrument for the attainment of pre-established marketing and communication objectives. TikTok and its influencers play a pivotal role in contemporary marketing communications, which must evolve to align with the evolving media habits and preferences of Generation Z [52].

The findings of the individual studies indicate that the use of appealing content and the establishment of collaborative relationships with influencers are pivotal elements in the effective communication of messages on TikTok directed towards the Generation Z demographic. The key factors are authenticity and creativity. Furthermore, research indicates that Generation Z places a premium on genuine content and places a high degree of trust in influencers, making TikTok an optimal platform for the establishment of enduring connections. In order to be successful, brands must create consistent, authentic content and utilise the distinctive features of TikTok in order to connect with this digitally native generation.

Despite the aforementioned advantages and applications, the social network of TikTok is still utilised by a relatively limited number of brands, particularly when compared to other social networks. Although the prevalence of TikTok usage is gradually increasing, it remains a significantly smaller phenomenon than that observed on Facebook and Instagram. This is evidenced by a comparison of the number of followers of the top 10 brands for 2024 on Facebook, Instagram, TikTok and YouTube (Table 2).

## **6. Conclusion**

As one of the fastest growing social platforms, TikTok represents a revolutionary tool for social interaction, particularly amongst younger users. The distinctive algorithmic approach, which prioritises content deemed interesting and engaging, facilitates the expeditious dissemination of videos and the formation of trends. This is one of the reasons why it has become one of the most popular social platforms in the present era.

The popularity of TikTok and its wider social impact have given rise to a number of questions that are being explored in a variety of fields. From an academic standpoint, TikTok has been the subject of interdisciplinary research, encompassing fields such as media studies, psychology, sociology, economics and information technology. This research is concerned with content analysis and its impact on users. Furthermore, it examines the algorithms that influence the distribution and consumption of content. The research examines the impact of TikTok on the mental health of young people, as well as legal and ethical issues related to the regulation of social media and the protection of users and their consumption behaviour. Further research and discourse are required to ascertain the impact of TikTok on lifestyles, health, educational understandings of beauty or food choices, and its impact on individual and collective spheres. Additionally, the long-term effects of TikTok on society remain the subject of intense academic and professional debate.

A significant number of authors have observed that if used in moderation and with an awareness of the potential negative consequences, this social network can have multiple benefits. For instance, it can facilitate an increase in creativity, foster originality and boost self-esteem. Some authors posit that regular use of the social network may facilitate creative thinking and the adoption of innovative approaches to problem-solving. Furthermore, the utilisation of TikTok for the dissemination of educational content appears to be a promising avenue. The research in this area indicates that the use of social media can facilitate understanding of complex topics and increase student motivation and engagement in learning.

Research in the field of social media and psychology has predominantly focused on the negative aspects of social media use, including its impact on users' psychological well-being, the formation of collective identity, and social relationships. Other negative areas include privacy and data security, as well as the potential negative impact on users' mental health, including social media addiction and impaired self-esteem.

Furthermore, excessive use of TikTok has been linked to social isolation, disrupted sleep patterns and increased stress. Moreover, the influence of algorithms on the dissemination of misinformation and extremist content, which can have a detrimental impact on public opinion and social cohesion, must also be considered.

A further area of interest is the impact of social media on consumer behaviour and marketing communication. Research indicates that the social network TikTok has a significant impact on brands' marketing strategies, particularly with regard to Generation Z. The platform enables brands to communicate effectively with their target audiences through authentic and creative content, often mediated by influencers. TikTok thus presents brands with the potential to not only raise awareness of their products and services but also to encourage user interaction and engagement.

TikTok has the potential to positively influence social relations; however, it is essential to consider the possible negative consequences and implement measures to minimise the risks. This encompasses the implementation of privacy measures, the dissemination of information to users regarding the responsible utilisation of social media, and the facilitation of research into the long-term psychological effects of technology.

It is imperative that research in this field continues to examine the long-term effects on society and identify strategies to guarantee the secure and beneficial utilisation of this prevalent platform. It would be beneficial for future studies to investigate the effectiveness of various interventions and regulatory measures that could mitigate the negative aspects of social media use and promote its positive potential.

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## Chapter 9

# Perspective Chapter: Social Media through Digital Humanities – Why Not Educate the Non-Engineering Students?

*Valiur Rahaman, Rayees Ahmad Bhat and Barkha Singh*

### Abstract

The chapter presents a qualitative study of considering Digital humanities (DH) as a domain that explores the intersection of humanities, digital/AI technology, all forms of media, and its impact on society at large. DH has expanded since the 1990s, focusing on fundamental research paradigms and methodologies in various academic domains. Additionally, it focuses on understanding social media, its changing forms, and its role in e-democratic expression and innovation. The chapter aims to develop arguments for how it is important to understand DH as an explorer of multiliteracies (constituted of knowledge-based skills to live in a digital society), and multimedia, a computer-based genre of communication that combines multiple media into an interactive whole. Without comprehensive adoption of multiliteracies and multimedia, Mark Bauerlein, an English Professor, suggests that digital illiteracy is increased due to technological advancements and that students should practice works without technology and return to “chalk and blackboard” methods. The chapter criticizes his proposal and provides a concept of “social media or education through digital humanities” as a solution to multiliteracies, by justifying that the future of combining digital humanities and social media is a postdigital media I called DH media (defined as the latest form of media), that demands reformulation of designing curricular, teaching, and learning practices. DH media facilitates multiliteracy pedagogy for multiple social media spaces, digital citizenship, digital society, and digital globalization. To evaluate how DH media facilitates learning about these issues, the chapter conceptualizes four phases of digital illiteracy: unlettered phase, unlearned phase, nescient phase, and nood phase; and discusses how Media (social/communication/creative, or art) needs Teaching Digital Humanities (TDH) for bridging the gap, divide, and chasm in teaching the non-engineering students to equip them with imperatives to navigate all the digital intersectionality of life. The chapter, hence, encourages researchers to explore DH as a new solution for all the phases of digital illiteracy prevalent in digital globalization and develop suitable users of contemporary social media.

**Keywords:** social media, digital humanities, multimedia, polymedia, postmodern social media

## **1. Introduction**

The chapter introduces how Digital humanities provides a thorough comprehension of social media, allowing students from non-engineering backgrounds to interact with it from several academic viewpoints. DH as a pedagogy promotes the development of analytical thinking skills, as well as an awareness of how it affects society, ethical considerations, privacy concerns, and the building of personal identity. Presenting critical viewpoints on refutations of technology by humanities scholars, and pedagogues, the chapter attempts to define “DH social media” in terms of the intersectionality of digital humanities and social media. It examines changing forms of social media relating to disinformation and algorithmic biases, privacy protocols, and other ethical concerns arguing for the need of understanding social media through the lens of digital humanities. It also explores how digital humanities investigates the use of social media for e-democratic expression, and innovation. This comprehensive approach may be used in several domains such as marketing, journalism, public relations, and cultural heritage management, equipping students with the necessary skills to traverse its intricacies in a responsible manner.

## **2. Social media: a new definition**

Social media has evolved significantly over time, with platforms like Facebook and Twitter being the most significant. The content of social media reflects millions of tweets, core genres, regional differences, and social and emotional consequences for users. The internet has changed the polarization of communication, allowing email sending to groups, bulletin boards, specialized forums, chat rooms, and blogging. Platforms like WhatsApp and WeChat have consolidated this trend, forming smaller, more private groups, particularly important for young people [1]. Based on observations of theorists, contemporary social media is called “Digital media, new media, hypermedia, or multimedia” [2] and “polymedia” [1]. Multimedia is a computer-based genre of communicative work that combines multiple media into an interactive whole [2]. It is a digital work that can be accessed through the computer, even if parts were created in analog form and digitized for integration. Multimedia works are designed to convince, delight, or instruct in the classical sense of rhetoric, and are not just random collections of different media gathered on the system. The integration of media is the result of deliberate artistic imagination aimed at producing a work that has artistic unity. Interactivity is a defining feature of multimedia, helping weave the multiplicity into a whole [2]. The names given for multimedia works emphasize different characteristics, such as “new media” and “hypermedia” [2]. Multimedia works are not new forms of expression but remediated forms of existing genres of expression. They share common characteristics including emerging modes of electronic production, distribution, and consumption. Multimedia works can be defined as multimedia for the purposes of thinking through the effects of merging multiple media into interactive digital works to be accessed on the computer. Multimedia can be classified into various types, such as web hypermedia, computer games, digital art, and multimedia encyclopedias. The first multimedia works to be considered seriously in humanities computing circles were hypertexts like *The Dickens Web* [3], which explored the possibilities of hypertext and multimedia in education [2]. Computer games, such as Rand and Robyn Miller’s

adventure game *Myst*, have become commercially successful due to advancements in multimedia technologies. Digital art, such as David Rokeby's *Very Nervous System* [4], uses multimedia to create interactive installations controlled by computers. Multimedia encyclopedias are a common form of educational and reference multimedia, enhancing information accessibility. The history of multimedia is still being negotiated, including the evolution of the personal computer from an institutional machine designed for numerical processing to a multimedia personal computer that most people can afford. The first computers were designed for number crunching and data processing, but they soon became adapted to handle alphanumeric strings, raster and vector graphics, audio, moving pictures, and three-dimensional objects and space [2].

As a matter of fact, desktop publishing, a precursor to multimedia, was made accessible on personal computers with the release of the Mac Plus™, Aldus PageMaker™, and the PostScript capable Apple LaserWriter™ in 1986 [5, 6]. This allowed designers to compete with professional designers working on dedicated typesetting systems for low-end, monochrome publishing jobs [2]. The Mac II, combined with image-editing software like Adobe PhotoShop™, replaced dedicated systems as the industry standard for graphic design and publishing [7]. Today, popular authoring environments include Macromedia Director and Macromedia Flash™. The Macintosh™ also incorporated sound manipulation as a standard feature, with the introduction of MIDI controllers and software. Digital video, the latest media threshold to be overcome in affordable personal computers, combines asynchronous and time-dependent media like audio, animation, and video [2]. Multimedia systems currently offer a two-dimensional graphical user interface, but they lack the 3-D input and output devices associated with virtual reality (VR) systems. The future of multimedia computing is driven by miniaturization and the Internet, with desktop multimedia systems being repackaged as portable devices that can play multiple media. Multimedia has become a parallel object to life itself. We live multimedia. We are multi-mediated being.

### 3. Where is academic study of multimedia?

But the problem is that people of the age of information, technology, or multimedia are not equipped with knowledge about multimedia. Hence, the *academic study of multimedia* should be distinguished from the *craft of multimedia*, with best practices in multimedia production being studied [2]. The field of Human-Computer Interface (HCI) design is a rich area of research, focusing on interface and interactivity. *The study of multimedia as a form of expression has yet to develop a theoretical tradition, but critical theories from existing disciplines are being applied.* The intersection of technology, communication, and culture is also a topic of interest. Scholars of multimedia should take the challenge of creating multimedia as a way of thinking about multimedia and attempt to create exemplary works in the traditions of the humanities [2]. With these developments, the rate of digital illiteracy has also been increased. Mark Bauerlein traces out impacts of these illiteracies on the current generation, and appeals to practice works without technology, to return to “chalk and blackboard” [8].

Mark Bauerlein's interesting essay “Online Literacy Is a Lesser Kind” [8] shares some observations that following the implementation of the Telecommunications Act

of 1996, there has been a rise in technological funding in public school classrooms. However, the outcomes have been unfavorable. He reports that both the Technology Immersion Pilot by the Texas Education Agency and the E-Rate initiative by the University of Chicago did not have a noteworthy influence on student results. *The absence of proper training and effective collaboration among educators and parents is a contributing factor to the unfavorable outcomes.* Students have been using computers for an extended period, and while the introduction of digital classrooms may bring up novel intellectual difficulties, they do not express dissatisfaction with acquiring knowledge via other methods. Bauerlein's major complaint is encapsulated here:

*To teachers and professors, a row of glistening new laptops in their classroom after a dozen years with nothing but chalk and blackboard, or a podium that has been transformed from a wooden stand into a multimedia console, can appear a stunning conversion. But to the average freshman walking through the door and finding a seat, it is nothing new. Our students have worked and played with computers for years [8].*

The article suggests restraining the digitization of liberal arts classrooms and focusing on slow-reading and slow-writing spaces. It emphasizes that digital technology should face more opposition and that educators must maintain a disconnect from technology. Pencils, blackboards, and books still play a crucial role in intelligence formation, as countermeasures to information-age mores [8]. The chapter argues that media, as a form of expression, is now being used by individuals in society. It is not in the hands of media persons in the media industry. Everyone is now an explorer and content provider. Bauerlein reports, "*Our students have worked and played with computers for years,*" [8] without considering (1) non-English and non-technological background learners (NETBL), (2) rationales after playing with computers, and (3) the mass growth. Earlier, mass communication was handled by a few media industries, but now, everyone's smart mobile has developed a networked society of human communication. Hence, I reciprocate against Bauerlein's proposal.

*let us restrain the digitizing of all liberal-arts classrooms...let us frame a number of classrooms and courses as slow-reading (and slow-writing) spaces. Digital technology has become an imperial force...Educators must keep a portion of the undergraduate experience disconnected, unplugged, and logged off. Pencils, blackboards, and books are no longer the primary instruments of learning, true, but they still play a critical role in the formation of intelligence, as countermeasures to information-age mores [8]. (Italics are mine).*

Further, he appeals to react against technological advancements and their use in the classroom:

*That is a new mission for educators parallel to the mad rush to digitize learning, one that may seem reactionary and retrograde, but in fact strives to keep students' minds open and literacy broad [8].*

The italicized part of the above-quoted lines is an undeniable requirement as the basics of learning, but the basics need a stage of advancement and growth. It is not a "mad rush to digitize learning," but a need to digitize learning. Bauerlein should not forget that he is reaching out to us via the digital platform of the Chronicle of Higher Education (<https://www.chronicle.com/article/online-literacy-is-a-lesser-kind/>).

## 4. Phases of digital illiteracy

Bauerline's essay "Online Literacy" does not yield any perspective on digital illiteracy, though it criticizes technology. Teaching Digital Humanities involves a balance of bridging the gap, divide, and chasm between media studies, law, linguistics (hate sign system, etc.), and informatics to equip students with imperatives to navigate all the digital intersectionality of life. DH explores new solutions for all the phases of digital illiteracy prevalent in digital globalization being conceptualized here: the unlettered phase (unschooled not knowing about the world around digitals), unlearned phase (schooled but could not be skilled), nescient phase (ignorant due to lack of awareness), and nood phase (inexperienced with certification).

### 4.1 Unlettered phase (ULP)

The population of this digital illiteracy phase is identical with zero knowledge about the world around digitals. It is caused by zero-schooling of a person. ULPs are unschooled throughout life. They always suffer from technophobia.

### 4.2 Unlearned phase (ULRP)

The population of this digital illiteracy phase is identical with poor schooling where an *insufficient* teaching-learning environment restricts a person to know about the world around digitals. It is caused by ungraded defective course contents and inadequate and poor schooling for learners/people. ULRPs are poorly unschooled throughout life. They are schooled but could not be skilled, resulting in incompetent, incapable, unfit users of digital/social media. They always suffer from technophobia.

### 4.3 Nescient phase (NP)

The population of this digital illiteracy phase is identical with degraded modern schooling where an *inefficient* teaching-learning environment restricts a person to know about the world around digitals. Members of the population are incapable to bring out a required transformation or change, and, that incapability is estimated with intended desire. It is caused by poor schooling of a person. ULRPs are poorly unschooled throughout life. They are schooled but could not be skilled. They always suffer from technophobia.

### 4.4 Nood phase

There is no dictionary meaning of the word "nood." Here, the etymology of the word conveys the sense of the word. "Nood" is borrowed from middle Dutch *nôot*, from Proto-Germanic *naudiz* stands as a noun to suggest distress. Following the given etymology of the word, "nood phase" is developed here which means inert watch, inert observation, stressful observation, and feeling of distress due to a new advancement. The population of this digital illiteracy phase is identical with not interested in adopting/providing non-smart schooling where technological aids are not used for creating a more visual teaching-learning environment, and that restricts a person to know the value of new advancement of digitals around the world. It is caused by non-smart schooling, and self-insufficiency, intended desires. NPs are poorly unschooled throughout life. They are schooled and earn academic degrees, certificates, and

diplomas in technology but have no experience, resulting in incompetent, incapable, unfit users of digital/social media. They develop the dumbest generation. They always suffer from technophobia.

These phases can be challenged by practicing social media through digital humanities. Furthermore, the chapter provides a brief discussion of.

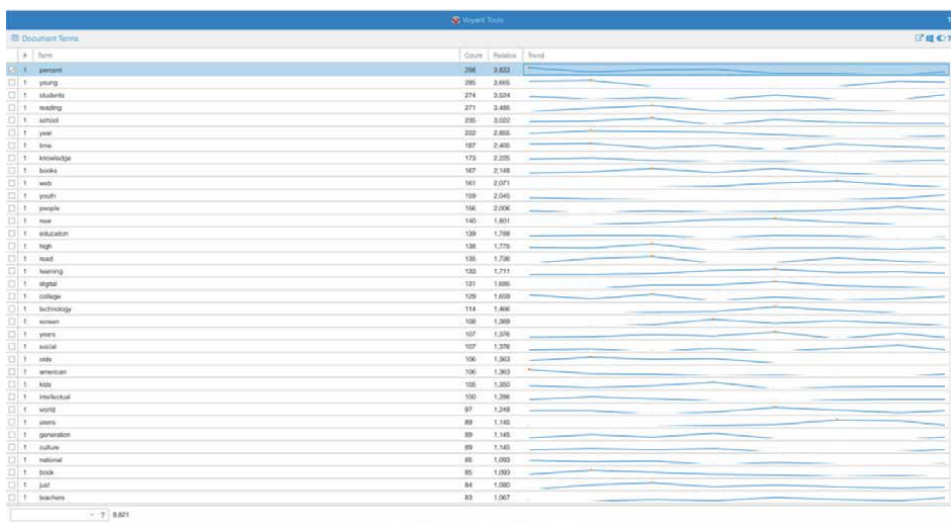
## **5. Technophobia: irrevocable result of digital illiteracy**

These phases of digital illiteracies result in technophobia or technofear. Technophobia is the fear or dislike of advanced technology, particularly personal computers and smartphones. It has affected various societies worldwide, leading some groups to take stances against modern developments to preserve their ideologies. Two basic reasons for phobia are digital illiteracy and uncontrollable misuse of social media. Digital media illiteracy has already been discussed above. The second reason can be illustrated by a recent email we received from Mozilla. It reports requesting to donate 10 USD that AT&T has reported that nearly all of its 110 million customers' phone records and interactions have been stolen by hackers. This breach highlights the importance of privacy laws in large markets like the US, where over 1800 data breaches affected 400 million people in 2022 alone. Mozilla, a global platform for making the internet safe, private, and trustworthy, is working to protect privacy online and take on companies with irresponsible data practices. The stolen data spans from May 1, 2022, to October 31, 2022. AT&T has been aware of the hack since April and is working with law enforcement before going public. The consequences of this hack are wide-ranging, especially in the world of AI, where scammers and malicious intentions have access to tools like AI voice generation. (Source: email received at [valiur.bsb@gmail.com](mailto:valiur.bsb@gmail.com) from [mozilla@eml.mozilla.org](mailto:mozilla@eml.mozilla.org) Jul 18, 2024, 6:03 PM.) In addition to it, discrimination data policy, misrepresentation, gender/race-based datasets [9], and data-search engine responses, breaches, or data leakages are responsible factors for technophobia [10–15]. We can trace out its genesis. Technophobia has been a significant theme in popular culture since the 1960s, with films like *Metropolis* and *Modern Times* exemplifying how technophobia can occur. Technophobia gained attention as a movement in England with the dawn of the Industrial Revolution. Post-World War II, fear of technology continued to grow, catalyzed by the bombings of Hiroshima and Nagasaki, nuclear proliferation, and the Cold War. Several societal groups, including the Luddites [16], Amish, and Old Order Anabaptists, are considered technophobic. Technophobia was germinated during and after the release of commercially successful movies like *The Terminator*, *Blade Runner*, Fritz Lang's directed *Metropolis* (1927), and *Star Trek: Voyager*; and literary works like Mary Shelley's *Frankenstein*, Huxley's *Brave New World*, and contemporary STEM novelist Mary Lu's *Warcross series*. However, attitudes toward technophobia seem to be changing, with the 2021 movie *The Mitchells vs. the Machines* depicting a robot uprising caused by an AI, and the Bollywood film *Robot 2*. Digital humanities make us aware of these issues.

## **6. The dumbest generation without IT knowledge**

In his book *The Dumbest Generation: How the Digital Age Stupefies Young Americans and Jeopardizes Our Future*, Bauerline provides a realistic portrayal of the young

American mind and suggests ways to address its deficiencies. He argues that the internet, email, blogs, and video games promised a more intellectually sophisticated generation, but instead, they have led to a nation of know-nothings, highlighting the need for a more balanced approach to addressing these issues. He used the word “death” 7 times in Ref. to youngsters’ relation with “computer,” which he used 33 times in the book. VOYANT corpus viewer (see **Figure 1**) is used to analyze the frequencies of words, collocations, and contexts of the words used by the author. **Figure 1** shows that the corpus of *The Dumbest Generation* was constituted with 77,754 total words and 10,222 unique word forms. It is found that the word “percent” is the most frequently used word in the entire document. Can Bauerline reply to the question of how he calculates data in “percentage” or from where he borrows the records in percentage related to an object, event, thing, or person that he has mentioned in *The Dumbest Generation*? Its answer is from knowledge of statistical studies which is not feasible without the usage of computers and software like SPSS or Atlas.ti. Will he not wish to see his students knowing about statistical analysis of esthetics, art, literature, culture, heritage, human progress, and developments? Now second question is who has developed SPSS or Atlas.ti or Grammarly or ChatGPT like software? He would answer “engineers” without considering the contribution of people having a background in humanities and social sciences knowledge systems. Our argument rests on three major points: 1. there are students devoid of knowledge of technology, they need training and tutorials; 2. daily users of technology without knowing about technology itself, they also need training and tutorials; 3. in both conditions of students, any “digital closure” (not to include digital knowledge or learning criticizing it as bad practices in curriculum) will develop dumbest generation. It is a matter of every student (especially in liberal and creative arts, humanities, and social sciences) not knowing about computers, their accessories, concerned software; and how they work. Consequences of it include the development of a lack of interest in learning the most advanced areas and analytical thinking skills, as well as a lack of awareness of how technology affects society, ethical considerations, privacy concerns, and the building of personal identity. It will develop “technoledge deficiency syndrome” (coinage).



**Figure 1.** Document terms in *The Dumbest Generation* through VOYANT tool.

## **7. Solution of two culture conflicts, digital illiteracy, and technophobia**

Michael Davis's *Thinking Like an Engineer: Studies in the Ethics of a Profession* provides a comprehensive analysis of engineering ethics and the profession. Drawing from historical context, he examines the Challenger disaster and the intricate connection between engineering ideals and contemporary practice. He recalls the status of the negligence of humanities in institutions and its consequences in the life of an engineer.

*The first engineers in the United States, or at least the first to bear the title, were officers in the Revolutionary War; the first school of engineering here was a military academy, West Point.... All our early engineering schools focused on mathematics, physics, chemistry, and drawing.... There was little of the Latin, Greek, or Hebrew; classical literature; or rhetoric characteristic of the liberal arts college [17].*

One of the consequences of this negligence is observed when experts in humanities and social sciences seem reluctant to introduce information and technology to the core courses. These consequences have already been discussed years back by Professor C.P. Snow throughout his lectures on two cultures [16]. Digital humanities intersected and intermediated these two poles of disciplinary differences, and uniformly challenged the consequences and administered solutions to students/learners devoid of technological knowledge. It is much required this time when Artificial intelligence (AI) is transforming traditional artistic and cultural production, including art education. AI image generators like Midjourney and DALL-E allow individuals to create diverse, polished images quickly, TikTok video makers, tools for analysis, and visualization have become habits of mind of users. There are three cardinal DH issues: 1. how technology generated in all the future forms or current forms like AI-generated art impacts socially, making it “postdigital” [18, 19] and changing the way images are made, distributed, consumed, and understood; 2. how technology can be humanitarian and a serving object to human and other beings; how humanities or art educators can address the impact of technology or AI-generated art in a digital visual culture by creating accessible and user-friendly AI art, especially for disabled and non-English and technology background artists. These cardinals include ethical issues that arise when AI-generated art draws from digital images without consent and acknowledgment. The future of the combination of digital and humanities is postdigital media that needs to be practiced in humanities and art education to challenge all forms of Cyber Violence and Crimes like CVDWG. It requires strategies for reshaping teaching and learning, and art educators need to develop technologically responsive pedagogies [20]. Topics like CDVWG, Glitch Feminism, Digital identity, e-Citizenship, e-Literature, Hyperreal Media, Data Journalism, and Data feminism cannot be taught by educators who hate technology and suffer from technophobia [21–26].

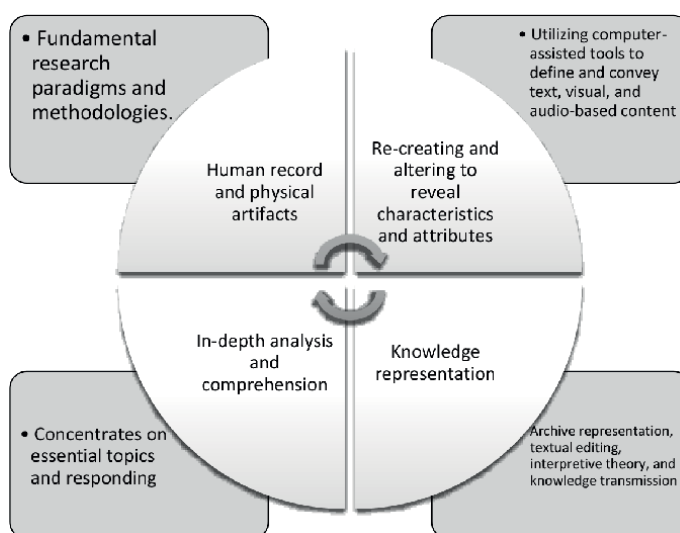
## **8. What is digital humanities?**

Digital humanities has/have expanded its scope since the 1990s, especially with the emergence of the World Wide Web. It starts with Father Roberto Busa's effort to establish an index verborum of 11 million words of medieval Latin, leading to the construction of computer facilities in major language schools. Hence, Digital humanities is an inspired version of the digital publication of works of Roberto A.

Busa and IBM [2, 21]. It has mostly concentrated on using information technology to shed light on the human record. With a shared focus on maintaining physical artifacts, re-creating and altering them to reveal characteristics and attributes not visible when the artifact was in its original form, and producing new digital artifacts that demand in-depth analysis and comprehension, the digital humanities have a rich and dynamic past. The area highly values the methods of sharing the outcomes of these efforts, and the planning and administration of projects may be as significant practical considerations as those often linked to academic endeavors.

Greg Crane’s “Classics and the Computer: An End of the History” elucidates how the rise of the personal computer and the World Wide Web has diffused computation throughout the daily life of scholars, and new computer-based projects continue to emerge. Classicists must insinuate themselves within larger groups, making allies of other disciplines and sharing infrastructure [2]. The field of digital humanities centers on the portrayal of archive material in electronic format. This technique comprises utilizing computer-assisted tools to define and convey text, visual, and audio-based content. Knowledge representation, a topic that utilizes artificial intelligence, aims to create computationally feasible models of human comprehension. This area has ramifications in matters including archive representation, textual editing, interpretive theory, and knowledge transmission. **Figure 2** presents how digital humanities involve(s) addressing fundamental research paradigms and methodologies, concentrating on essential topics, and responding to new ways of asking and replying facilitated by our engagement with the computer.

Susan Hockey [2] analyzes the evolution of humanities computing, concentrating on its applications in the humanities and arts. In “The History of Humanities Computing,” she defines it as quantitative methods applicable to style and authorship studies. The first computer-based authorship research was the Federalist Papers study in the early 1960s [2]. The 1960s saw the emergence of facilities devoted to the use of computers in the humanities, leading to the development of the Oxford Concordance Program (OCP) and other general software. The mid-1980s to early 1990s witnessed



**Figure 2.**  
*Digital Humanities as Pedagogical Initiative.*

considerable breakthroughs in humanities computing, thanks to personal computers and electronic mail technology. The TEI Guidelines for Electronic Text Encoding and Interchange were created in 1987 [2]. Let me illustrate further DH intersectionality with various disciplines of humanities and social sciences.

## **9. DH media: social media through digital humanities**

Social media is all about writing, storage, and dissemination in digital space [1]. “Media theorists divide the history of writing into four periods delimited by technological innovations: the oral age; the chirographic age (manuscript writing); the print age; and the digital age” [2]. I add here “DH media” to the historical categorization of the four periods. DH media covers the study of multifarious intersectional inquiries of humanities with digital and AI technology. I situate DH media period after the period of comprehensive practices of postdigital media in all its forms [18–20, 27]. It represents “e-democratic” [5, 6] informational channel of both public and private communication be it discourse or chat, ranging from a general chat to #tags; from an application to feedback; from a recorded mobile talk, its transmission, share, post to preservation and conservation of heritage and culture; from e-publication and e-book reading to analysis and visualization; from texts to data formation and to development of big data [23, 28] DH media covers these media as “public sphere[s]” in Habermas’s terms [29–31]. This is how Social media intersects with Digital humanities and defines social media as DH media. DH media is an outcome of intersectionality. DH intersects all the domains of humanities and social sciences: Politics [32, 33], Sociology [34], Literature, Culture [35], History [36], Applied and Performing Arts [37], Archeology [38, 39], Museology, Library Science [40], Policy, Law, Governance [36], Education [38, 41], Film studies.

The role of computers in historical studies, particularly in the context of computing, cannot be ignored at all. William G. Thomas, II’s “Computing and the Historical Imagination” [2] discusses various studies on the role of computers in historical research led by Aarseth, Appleby, Barzun, Blomley, Bogue, Burton, Degler, Greenstein, Gutman, Engerman, and cited in the essay. The text also discusses the impact of computing on historical research, with some arguing that it has led to a “brave new world” or a “blind alley” in preserving the past; the impact of the “new” generation of computers on American history, with some arguing that they have a significant impact on the field; and concludes by highlighting the importance of computing in historical research [42–44].

In the late 1960s and early 1970s, historians faced a cultural war between “new” history and classic narrative historians. The “new” [2] historians employed computers for calculations and linkages, but detractors questioned the expense and usefulness of these efforts. Robert Fogel and Stanley Engerman’s *Time on the Cross* is one of the most influential works on intersectionality between history and technology [5]. Historians have employed computer technology in three phases: quantitative history, social science history, and the PC revolution. The World Wide Web, launched in 1993, allowed historians a new venue for publicizing their work. Digital technology has changed history but also creates obstacles and expectations for historians, educators, administrators, and the public. Historians must adjust their methodology to make sense of electronic records and modify their methodologies to make sense of digital artifacts for evidence, analysis, and reference [45, 46].

## 10. Multiliteracy required

In June 2004, the National Endowment for the Arts (NEA) presented a report *Reading at risk: a survey of literary reading in America* edited by Tom Bradshaw that book is a system that “evolved over centuries in ways that map our collective endeavor to understand and express our world” whereas “the electronic book, on the other hand, represents—and furthers—a circuitry of instant access.” Tom Bradshaw’s survey-based assertion is identical to Bauerlein’s observational complaints (discussed above), but one should not forget that electronic book/e-book reading needs not only literacy but multiliteracies. DH facilitates multiliteracy pedagogy for enjoying social media space; operating all the intricacies of digital citizenship, digital society, and digital globalization; and understanding the role, responsibility, ethics, and multimodalities of social media technology affecting cultural and social diversity. For this and other reasons, I call DH media “cognitive social media” [47].

## 11. Mystery of technological reproduction

There is a reciprocal relationship between the user and social media technology. According to this reciprocity, both learn from each other, feed each other, and nourish each other through languages. Machine also learns from human communication. Machine is intelligent now. Cognitive computation and neurocomputation strategies are used to develop such a machine. Alexa and Siri are examples. No social media space is inert now. All AI-based LLM software like ChatGPT responds in a few seconds. Digital technology and social media platforms return us in bulk what we give to various digital platforms. It is a process of knowledge economy.

## 12. Conclusion

To conclude, social media in the AI age demands users who know more about perspectives of Digital Humanities than technology itself. Social media through Digital Humanities is a boon for someone who belongs to a non-technology background. DH challenges technological or digital phobia. In schools of humanities and social sciences, Deans may question if a non-technology background student can learn the basics of STEM; and be aware of the values of knowledge technology. Should he/she not learn how computers and data work for social media? Should she/he not know the best way of presenting the ideas, concepts, and analysis, functions of hashtags, ethics of social media; and how to live in a digital age? Should she/he not know how to develop an online/digital publishing house by knowing about web domain, web hosting, online software, APP development, database, data storage, achieving, parsing, blogging, digital preservation, cyber violence, data violence, digital rights, data leakages, AI music, AI art, JavaScript Object Notation (JSON) skills set, and other AI-based recent developments with their pros and cons? Digital Humanities primarily focus on project-based and research-based pedagogies which include practical sessions on these issues, knowledge systems, and skill sets. Answers in the affirmative connote the impact of this chapter. Unsworth in his talk “A Master’s Degree in Digital Humanities” has rightly observed that teaching Digital Humanities means to lean “more toward media studies, some more toward linguistics, some more toward informatics. The model that seemed

to fit best with the interests and resources already in evidence at Virginia was somewhere between media studies and informatics” [48]. Future recommendations cannot be ignored during the study of social media through digital humanities. Researchers in social media, liberal, and creative arts may enhance one’s knowledge in an unexplored area i.e. beyond multimedia and multiliteracy called “mulsemedia” literacy, that needs critical attention. Adhering to the digital illiteracy phases discussed in the chapter, a critical review of several “mulsemedia” tools and projects is much required. There is a big gap between multimedia and mulsemedia for representing sensory effects and their characteristics, outlining a set of desirable features for mulsemedia digital society. Open challenges and future directions regarding the DH media and “mulsemedia” may also be explored critically.

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## **Conflict of interest**

The author declares no conflict of interest.

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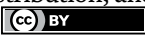
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# Perspective Chapter: Social Media and Knowledge Society – A Study on the Theory of Interpretive Determinism for Digital Content Reference

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## Abstract

In the era of a knowledge society, social media have become tools for exchanging knowledge among users. It has also become the means on which the public relies for learning. Therefore, the digital environment is considered a source for teaching and learning in the field of media education. Students can also use the digital environment to complete research and other study activities, as well as to entertain themselves. Digital learning environments are used as formal virtual classes, and their capabilities have contributed to sustainable development, especially during crises, as witnessed during the COVID-19 pandemic, when digital environments were invested and harnessed for creating virtual classrooms in the educational process at all levels, but the reliance on recording deprived learning experiences of immersion. Going digital has become an obsession for users of this digital reality, which allows for moving and interacting with multiple learning sources from different locations. The month of Ramadan witnesses increased use of digital media more than any month of the year, largely due to the influence of demand on TV drama shows and advertisements. However, there remains a gap in understanding the value and interpretation ascribed to digital content provided to users during the month of Ramadan.

**Keywords:** social media, knowledge society, interpretive determinism, media literacy education, adoption, digital environment, Ramadan digital content

## 1. Introduction

Debates about the media and the Internet are very complex and are not limited to specific areas. This study aims to examine digital media content delivered during the month of Ramadan and how this relates to a set of variables in terms of direct or indirect relationships. The study is interested in understanding how users interpret media content through two channels: the use of official media outlets that publish their content on their websites and social media sites that create digital content through

individuals and influencers. The problem raised in this intervention is the extent to which users interpret the digital content delivered during Ramadan and the mechanisms that allow users to interpret this content during the month of Ramadan. In this research paper, we will also try to examine the foundations, concepts, and indicators that affect and are affected by the interpretation of Ramadan digital content.

Over the past decades, the holy month of Ramadan has been associated in the minds of the masses with an annual season of films, drama series, media programs, and commercial advertisements, as media outlets, production entities, and companies produce content specifically for viewing during this month, which is characterized by high viewing rates, which ignites the pace of competition to attract the public's attention.

## **2. Research problem**

Digital media content delivered during the month of Ramadan is a significant multi-faceted topic related to several influential factors. If the media in general has a tremendous impact on the lives of individuals and societies—to the point that it is said that man is the son of his media—then it also has a definite impact during the month of Ramadan, and it is a topic that expands as the circle of media itself expands. It suffices to announce the words of Dr. Mohammed Abdel Qader Hatem: “The main means of media extend to include many print means such as the press, news agencies, publications, books, flyers and posters, and audio means such as radio, public speaking, seminars and discussions, visual means such as the arts, and audio-visual means such as television and satellite channels, theatre, cinema and the Internet...”. Thus, issues related to media content presented during the month of Ramadan media are expected to be so numerous that it will be difficult to address them all in the intervention proposed in the present study. Therefore, this study will be limited to briefly describing the state of digital media delivery during the month of Ramadan, with an approach to interpretive determinism in communication.

### **2.1 Research questions**

1. What is the media-related theoretical approach that frames the relationship between digital content and the audience?
2. What is digital media?
3. What is the digital and social media content industry?
4. What is Ramadan digital media?
5. How can an interpretive determinism approach be applied to Ramadan digital media?

## **3. Literature review**

Media theories that frame the relationship between digital content and the audience have received growing attention recently. This situation raises questions about

the role of the media, advertising, and drama, or in a broader sense, any communicative content in shaping awareness and education as well as in satisfying the needs of the public, and the mechanism of the media's work, specifically with regards to what that is referred to as "agenda setting". Moreover, it is important to investigate whether it is the public that controls that agenda, or whether the media is the one that determines the public's agenda and interests [1].

The aforementioned issues have been the focus of popular media theories. The most prominent of these is the "prioritization theory," which assumes that there is a relationship between the issues to which the media pays attention, and the public's interest in those issues. Prioritization is concerned with transferring prominence and interest and moving issues from the media's agenda to the public's agenda.

"Information Society", a term commonly used in the United States and other Western nations and, primarily serves as an extension of the theories that spawned the terms of "industrial society" and "post-industrial", as is evident from the "title". The label "technological optimism" holds potential for resolving many social problems that are intractable by using descriptive information, which spurred the need for unity of "computing" and "media" which have interspersed with the social fabric as a whole. This issue draws attention the Japanese experience, which provides an example of the information society. In Japan, an ambitious program that aims to create and develop the social structure, in which computers are used in production, distribution and transportation services and management, education and livelihoods, computers permeate networks télé-computing (the Greek word "télé" means "away" or "distance") so that people can use them to address their own professional problems by direct contact. There is also a national policy in Japan for the creation and establishment of "industry knowledge" as well as projects to reform the country's social development, including the systems of workforce rehabilitation and re-distribution, with the aim of affecting comprehensive transformation in society. This project also aims to facilitate resolving personal problems and promote creativity and self-realization through the global use of planetary information, with the hope of creating of promoting "globalization" and "internationalization" in the use of new information [2].

The terms "knowledge society" and "knowledge worker" were coined by Peter Drucker in his seminal 1959 book, *Landmarks of Tomorrow*. Since then, knowledge society has become an increasingly important topic in the business world. In addition, the idea of "knowledge society" is inseparable from studies on information society. The notion of information society realizes the new economy based on scientific knowledge and changes in the workplace. Information society is reliant on technical breakthroughs to handle massive data streams through digital networks. The information and communication technology (ICT) can eliminate the main technical obstacles preventing the establishment of information society. For a deeper understanding of knowledge society, Charles Van Doren discussed the history of the humankind from its known beginnings to twenty-first century. The effects of social networking and online connectivity through the ICT infrastructure are interestingly imagined to make the future knowledge society" [3].

With the emergence of social media and innovative information technologies, learners and teachers can collaborate, communicate, and exchange knowledge anywhere and anytime. However, despite these new learning opportunities, it is also commonly recognized that this new generation of Internet-based social media and technologies has drastically grown, become more complex, and increasingly driven by commercial interests. Therefore, there is a need to further explore resources on

learning processes based on a transdisciplinary approach in order to arrive at a shared vision in education for a better society. This special issue aims to form a prospective view of the future of education by considering those transdisciplinary factors. The papers related to this issue present research findings on the investigation of new teaching methods or social technologies enhancing the learning process [4].

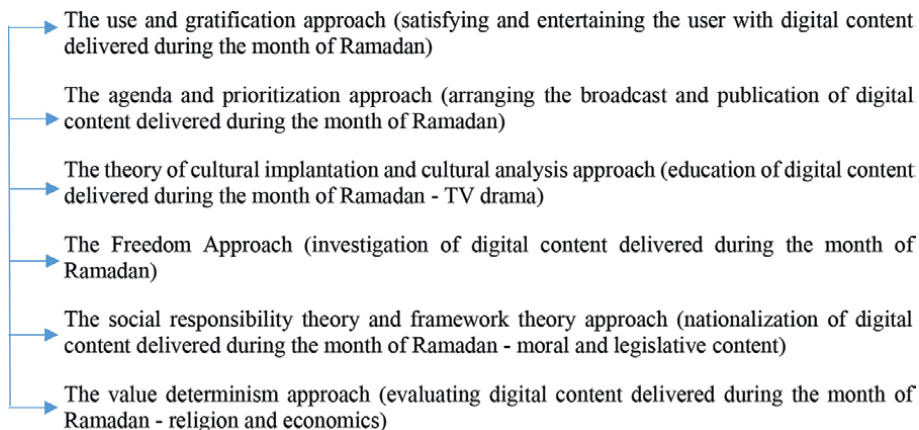
Another theory that is relevant to the present study is the “cultural implantation theory”, which is based on the long-term relationships between individuals’ attitudes and opinions on the one hand, and their viewing habits on the other hand, and it assumes that television is a unique means of implantation compared to other means of communication. There is also the “uses and gratifications theory”, whose theorists believe that members of the public are not passive consumers of media, but rather have the power to consume media and integrate it into their lives. It believes that the public is solely responsible for choosing the media to satisfy their desires and needs, and this means that individuals are aware of the media they want to be exposed to and also select content that meets their psychological and social needs through the available information and entertainment channels [5].

Through our discussion of the topics and schools of interpretation and the interpretation of the discourse, it becomes clear that the importance of interpretation in the communication process does not deviate from the context of the obligation and subservience of the recipient in his interpretation of the message. Therefore, interpretation, as an independent variable in the process of reception, with its perceptual and cognitive mechanisms, makes us describe it as inevitability “in communication”, and the communication process cannot take place without the occurrence of interpretation, regardless of the levels of understanding of the recipient and its differences. The interpretive inevitability of digital content is strongly presented in framing the reception of digital contents among users [6].

The author combines the fatigue of describing the new communication environment due to its modernity and the philosophical transformations that occur to it, in addition to the fatigue of defining and controlling the concept of new media, as it is like other concepts and social philosophy and its importance in this era, due to the importance of media in our daily lives, in addition to its marriage with modern technology, but it has remained the subject of controversy and widespread disagreement, whether in terms of naming, as it was known as digital electronic media, alternative media, media, or in terms of the concepts of its era [7].

#### **4. The interpretive determinism of communication approach**

The interpretive inevitability in communication is of great importance in media and communication studies, as it attempts to overcome the epistemological shortcomings in Western theories that only studied the physical aspect of communication. Marshall McLuhan’s theory of technological determinism of communication is a case in point. This theory does not capture the true nature of human communication, but rather expresses part of it, as it focused on the technological aspect but neglected the cognitive and intellectual aspects of communication. Cognitive and intellectual aspects of communication are highlighted in the Holy Quran: “And thus will your Lord choose you and teach you the interpretation of hadiths” (Surat Yusuf N 6). Moreover, the interpretive imperative in communication seeks to establish a theoretical foundation for studying the dimensions of interpretation in communication processes (**Figure 1**) [8].



**Figure 1.**

*Approaches to interpretive determinism in viewing digital content delivered during the month of Ramadan (production, transmission, use, reception, interactivity). Source: Personal effort, Prepared by the author.*

## 5. Digital media

Several terms are used to refer to digital media with examples including the following: interactive media, multimedia media, live online media, and participatory media, among others.

Digital media are defined as a form of modern media that emerged with the advent of the technological revolution in the twenty-first century. Digital media use electronic devices for transmission and circulation, and data are transmitted through these devices in the form of binary signals. Examples of such devices include the following: digital cables, satellites, computers, and portable devices. Digital media are commonly used in programs and multimedia such as audio and video, websites, video clips, and Internet advertisements [9].

Related to the main topic of social media are the sub-topics listed below:

- Digital media legislation: most countries around the world have established laws and legislations to regulate the use of digital media, and these legislations sometimes differ from those established for traditional media due to the difference in the nature of the two types.
- Digital media theories: these theories are similar to those pertaining to traditional media theories in that the latter are general theories about media, while the former apply are more applicable to this relatively new field. Students learn digital media theories to gain an understanding of the theoretical nature of the field.
- Effects of digital media: digital media have positive and negative effects. Therefore, students should learn about those effects to avoid the negatives associated with digital media creation.
- Digital media ethics: there is weaker censorship on digital media compared to traditional media, which places heavy moral burdens on media message creators. Therefore, ethics are taught to enable the student to create effective and influential messages while adhering to professional ethics and media codes of conduct [10].

## **6. Strategic implementation of social media**

In the previous section, we understood the importance of social media and purposes for which they can be used in libraries. These conceptual knowledge and ideas presented will give a holistic view about the current situation in the profession. However, in real life situations, to bring these ideas into life requires good strategic planning of actions. The knowledge, wider reading of case studies of implementation, the success stories, and the technical documents in the specified areas will be the key sources to develop a good strategic plan for implementation of any services. Before discussing how to make good strategic plans, a number of questions should be asked:

- Why should we consider social media for our library?
- Are our library users ready to expect Library 2.0?
- Is my library ready to provide Library Services 2.0?
- Am I capable and do I possess skills to offer service in this Web 2.0 world?
- Finally ask yourself—what do you want to achieve, who would you like to target, which user group will be most interested in the information you are sharing? [11]

### **6.1 Types of digital media**

Digital media includes all types of traditional media, in addition to some types of digital media that were not available before. The main types of digital media include the following:

- *Media sites*: the Internet has allowed news channels to create comprehensive readable, audio-visual media. Prominent news channels now have websites through which they publish written news alongside video news stories. Some channels also allow watching live broadcasts online through their website.
- *Electronic newspapers*: these are electronic media that rely on written news, and some of them may produce video content in addition to news. Most of them work on publishing news and video news stories via social media networks, linking social media pages to their websites and diverting visits to the site.
- *Electronic radio and television*: these stations present content in the form of broadcasting live video or audio clips, and some of these channels have millions of followers from all over the world, as they are not linked to a limited broadcast range in a specific geographical area. These stations can be followed from all over the world and their content can be retrieved at any time.
- *Individual media or public media*: it is a new type of media linked to social networking sites. It allows average users to create content that can be viewed from anywhere, attract the attention of other users, and share content made by other users to expand the audience.

- *Custom Commercials*: this is one of the most important distinctive features of electronic media, as advertisers have become able to target specific segments of audience according to age, gender, geographical area, and interests. This helps in achieving the highest level of effectiveness and impact of advertising campaigns; these advantages cannot be enjoyed, with which advertisements are directed to general, non-segmented audiences [12].

## 7. Importance of digital media

Digital media has all the characteristics of traditional media, and it even has many additional features that make it superior to traditional media in effectiveness. The importance of digital media is that it is globalized and not linked to a limited geographical scope, nor is it linked to a specific language. Any media message can be translated from any language into another via the Internet through several simple and easy-to-use means. The importance of digital media stems from the following factors:

- Digital media is generally more credible than traditional media for many people because it is not tied to restrictions of capital or power. On the other hand, traditional media that is often owned by governments from whose territories they broadcast, which often makes it lose credibility and impartiality.
- Digital media expresses and is created according to the interests of the audience. Content that is not created to suit the requirements of search engines and the searches performed by users remain private.
- Digital media are convenient to use. They allow users to select the content and view it at any time. Without being bound by any specific time constraints, users save the content to view it later.
- The emergence of websites for broadcasting and creation, such as YouTube, many people have moved away from watching television entirely because they can now watch what they want whenever they want without the need to follow a certain programming schedule.
- With regard to the press, many users around the world have begun to follow the news in real time via the Internet without the need to wait for newspapers a day later. Thus, users no longer need to pay for buying newspapers daily or for subscriptions to access them, as was the case in the past. As a result, users can save both time and money.
- Digital media have become a part of basic daily life needs for many people. The importance of traditional media is gradually declining compared to that of digital media, which is developing in terms of the quality of content, size of the audience, and the number of message makers in various media fields.
- Digital media are new digital methods and activities that enable users to produce and disseminate digital content and receive it in various forms through electronic devices or media reliant on the Internet within interactive processes between content creators and consumers [13].

## **8. Digital content creation, with an economic perspective**

Digital content creation is the process of transforming ideas into written or visual content to attract customers. Thus, digital content is a marketing message in various forms [14]. Digital content creation allows marketers to create free and useful information for the target audience, attract potential customers, and retain existing customers.

It is very natural in light of the aforementioned theories of media freedom and media surveillance, and it is expected that marketing via social media, such as Facebook, Twitter, and Snapchat, will become more commonly used. In order to maintain good performance and user experience on social media, governance, accountability, and social responsibility are crucially needed. Social responsibility dictates that users of virtual spaces be alert to behaviors that are considered uncivilized and clashing with accepted social values [15].

## **9. Creating digital content, with a religious approach**

Religious digital media are media that reflect the Islamic spirit, principles, and values. Examples of such media include websites and applications for communication. They can also be used for preaching and addressing religious issues [16].

## **10. Ramadan digital media**

“Ramadan digital media” is a broad concept that refers to media production carried out by media organizations with the aim of broadcasting it to the public during the month of Ramadan via social media. However, studies show that traditional TV is far more popular during that month. In fact, it is estimated that the number of TV viewers during Ramadan increases by 30% compared to that in the rest of the year.

“Ramadan digital media” is known to have many goals and visions and has many significant effects on the viewers’ minds. There is often interest in consuming religious content during Ramadan, especially if it is designed to be rich, accurate, and expressive. Such content is received with higher viewership rates, thereby reflecting stronger effects of Ramadan digital media both on individual and collective levels. Producing quality and engaging Ramadan digital media requires commitment to a set of basic rules, which include the following:

- Supporting facts with statistics and numbers.
- Avoidance of subjectivity and striving for objectivity in presenting the facts.
- Honesty in collecting data from their original sources [17].

Creating Ramadan digital media also requires constant guidance and renewing the direction toward national goals and aspirations and addressing society’s problems. Moreover, it is neither reasonable nor feasible for the media message to contradict the nature of the holy month, and therefore purposeful Ramadan media has a good

opportunity to prove itself despite the challenges. Thus, faith-based Ramadan media still has its deep-rooted status and absolute importance, according to which it gives those who carry the media message a moral boost, by gaining time and fueling effort while raising the faith value of the month of Ramadan in a manner commensurate with the requirements of the times, and diving into the depths of minds.

## **11. Features of the Ramadan digital, advertising, and dramatic media scene between value and superficiality**

It is worth noting that media is strongly influential in modern societies, as it is the primary promoter of thought and culture and contributes to the process of shaping social awareness among individuals along with other institutions of upbringing, such as the family and educational institutions. Certain features are observed to be shaping the landscape of communication content (media, drama, and advertising) in the current Ramadan season, and they are as follows:

- The trend is toward using social media celebrities in advertisements, or hosting them in superficial programs that are classified as programs that combine the elements of adventure and humor in order to achieve high viewership rates.
- Prevalence of poor-quality content in some advertisements, which are characterized by with bold content that does not take into consideration the spiritual atmosphere of the holy month of Ramadan and clashes with the values of society. There is also content that degrades human worth and dignity from a purely class perspective, which represents an insult to a segment of society “the financially incapable”. There is no doubt about the intentional preparation of controversial advertisements in order to create a state of momentum and capture the public’s attention in the light of fierce competition among commercial advertisements.
- It is common to find content that promotes objectionable behaviors, such as bullying others, showing scenes that include smoking, and scenes that include depictions of violence and horror.
- Although the above is the dominant feature of the content, this does not negate the existence of examples—albeit limited—of programs that provide a purposeful message and are dedicated to the values of loyalty and appreciation for every effort that serves society [6].

## **12. The knowledge society**

A 2005 report by the United Nations Educational, Scientific and Cultural Organization (UNESCO), titled *from the Information Society to the Knowledge Society*, states under the sub-topic “Knowledge societies cannot be reduced to an information society” that a global information society should emerge, as it is the fruit of the technological revolution. What is new is to make us forget that it is only a means to achieve a true knowledge society, as the prosperity of networks alone cannot establish knowledge bases.

## **12.1 Characteristics of the knowledge society**

Knowledge societies are characterized by the fact that knowledge constitutes the most important component of any work or activity, especially with regard to economy and society's Culture as well as all other human activities that have become dependent on the availability of large amounts of knowledge and information. Knowledge societies are not a recent phenomenon. For example, fishermen have long been sharing knowledge about weather forecasting within local communities in which they live, and more is constantly being added to this knowledge, which is part of the capital of these communities. What is new is that:

- Thanks to modern technologies, it is no longer necessary to be restricted to being in the same geographical location.
- Technology allows for more possibilities for sharing, preserving, and retrieving knowledge.
- Knowledge has become one of the most important components of capital in the current era, and the progress of any society has become primarily linked to the ability to use it.

## **12.2 The increasing importance of the knowledge society and its connection with society as a whole**

Every society is shaped by a set of common concepts. Globalization has led to the creation of a global society with shared knowledge on all topics and possibilities. Material resources and their transformative processes (i.e., economic resources) were the basis on which economic growth was based, while things such as music, art, and the meeting of cultures (i.e., cultural resources) were the factors that prompted growth in society as a whole, and with society reaching a stage of maturity This knowledge has become available in documents, written laws, and unwritten laws which are in the form of people's opinions, beliefs, the words they use in languages, etc. As is the case in terms of the absence of a fair distribution of material and economic resources, which has created a kind of inequality within society, the lack of equal distribution, availability, and sharing of knowledge has hindered development. Knowledge societies recognize the importance of having, building, sharing, and distributing knowledge appropriately for the development of society.

## **12.3 Knowledge gap**

The knowledge gap theory emerged in the light of results of numerous studies that indicate that different segments of society have a balanced access to information flowing from modern means of communication. This theory is based on the following assumption: "The flow of information from the media within the social system leads to the categories of the public with a high socioeconomic level acquiring this information at faster rates than the groups with a low socioeconomic level, and thus the knowledge gap between the different categories of the public tends to increase instead of decrease" [18]. This hypothesis confirms that groups with a low socioeconomic level do not remain poor in information in general, but they acquire relatively less information than groups of higher socioeconomic levels.

Numerous studies have supported the validity of this hypothesis in the United States, Europe, Latin America, and the Middle East, indicating that economic and social factors are the main determinants of the public's acquisition of knowledge. Currently, the knowledge gap theory is being applied at two main levels:

1. *Narrow individual level*: the micro level includes the individual's acquisition of knowledge from means of communication, and is influenced by: individual differences, communication skills, cognitive ability, level of interest, and other individual factors.
2. *Broader societal level*: the macro level includes the nature of the social structure and variables related to society, such as: methods of disseminating and distributing information, available means of communication, the nature of social conflicts, ownership of media outlets, and methods of financing and operating media outlets [19].

Researcher Salman Rashid Salman also stated that there is no doubt that the technological and economic gap has created the so-called “center countries”, which are the economically and technologically advanced countries that dominate the “periphery countries”, which are represented by poor countries of the world that lack scientific and technological structures and are overburdened by debt. This dependency has shifted between the center and the periphery; it went from political dependency to economic dependency, but now the periphery countries follow the center cognitively, which increases the economic and political dependency of developing countries and their continued dependency on the center represented by developed countries. This dependency has exacerbated, especially in the field of information, as it is created and sent in one direction, which is from the center to the periphery [20].

### **13. The principle of freedom in the knowledge society**

1. Knowledge is, by nature, free.
2. Knowledge must remain free for the good of society.
3. Knowledge must remain free in order for society to achieve further development and enrichment of this knowledge.
4. The view that liberating knowledge or making it free will kill motivation must be discussed.

#### **13.1 Examples of groups that can grow into knowledge communities**

- Individuals working in the same field.
- Teachers who teach the same subject.
- Fans who love the same band.
- Artists with similar interests.

- Individuals with different specializations.
- Engineers discuss with scientists scientific topics related to their engineering projects.
- Researchers from different fields discuss a common research problem.
- Sufis and clerics in their dialog with scholars.

### **13.2 Infrastructure**

Knowledge society requires an infrastructure that includes:

1. *Physical infrastructure*: such as meeting rooms and discussion boards.
2. *Technological infrastructure*: such as information sharing technologies, electronic mailing lists, electronic (Internet-based) portals, wiki pages, chat rooms, video conferencing, virtual meetings, development environments through collaboration, and distance learning [21].

### **13.3 The issue of individuality**

*“... The individual serves the group’s expression for the most part, which is always positive. Giving new forces to hobby, associations, and groups against fans – culture is not against democracy – one of the first results of the historical sociology of the media, prepared by Robert Park. It is a group of minorities that uses various media both to defend their identity and to help achieve their collective integration with partial privacy interests that exhaust themselves microscopically, countless sites that are not seen on the Internet and perhaps not a utopia, but they realize that they do not work. To undermine social changes in his speech anyway, and it is just the media...” [22].*

## **14. The interpretive imperative of Ramadan digital content**

Below are some conventional definitions of interpretation that appeared in later books and dictionaries. Arranged in chronological order to note the extent of development in the definition and the stages of maturity and definition it has gone through. As for modern hermeneutic anthropologists, Turner pointed out an important methodological point about the nature of the interpretation process. He distinguishes between two types of interpretations:

- Firstly:

Interpretations provided by specialists who have precise knowledge of the ritual and the symbols and meanings it conveys, and they also lead to the performance of the ritual.

- Second:

Interpretations offered by ordinary, non-specialized individuals who participate in performing the ritual without having the privilege to lead it [23].

## **15. A network for analyzing indicators of the interpretive imperative of Ramadan digital content**

Of course, we cannot limit the network of indicators of the theory of interpretive determinism in communication to Ramadan digital content, but we will touch upon some of the interpretive indicators affecting the content in some Ramadan communication contexts. These indicators include the following:

- The user sender is the first (interpreter): this is the one who interprets the processed message—the new applications: YouTube, Twitter, Instagram, and Snapchat.
- Awareness and sub-consciousness of the sender (user): this means the extent of the sender's presence psychologically, cognitively, and perceptually in the processed digital content.
- Digital (original message): the digital message or content produced by the sender of message types that contain argumentative structures and emotional and mental appeals in the presented opinions.
- Signification: the true significance is what the sender intends in the message. Significance does not differ because the meaning (sense) is subordinate to the sender's intention and will. In fact, words are mainly a means of indicating intent, followed by verbal clues, and influenced by the context of production (effects, time, place, demonstrative nouns, and indicative references to the sender).
- Response interpretation text: it is the interpretation of the message or digital content by the user as a result of the interaction with the stimulus and the meaning to achieve interpretive consistency to fill the gaps and fill the voids across the text of the digital message or the digital content. This is all in order to produce meaning for the message and the content; it can also be described as chemistry between stimulus and significance.
- The intentionality of the digital message: the intentionality of the digital messages and not the intentionality of the user's speaking self. This means that the interpretation is a response to the experience of reading and receiving the content by the user of the digital content.
- Reference (reference of interpretation): the original event of the digital message and its role in directing the interpretation process by the user.
- Interpretation context: manifested in the temporal and psychological context of the user; aspects of the context include the month of presenting the digital content, such as the holy month of Ramadan.
- Result of interpretation: adopting a position in the interpretive process, either with emotional empathy for or cognitive dissonance with the Ramadan digital content.

## **16. Conclusion**

In less than 2 decades, the world has witnessed a comprehensive technological change in the economic, political and cultural fields. These winds of change have been described as the information revolution, or the second revolution after the industrial revolution. The slogan of this revolution is the computer or the electronic mind as it was depicted in science fiction films. This device was able to re-arrange the activities of political, social and cultural institutions, factories, communications, media devices and information processing, storage, and retrieval processes.

But with the emergence of the knowledge society and its manifestations in societies, individual and collective differences have appeared and a change has occurred in society in terms of behavior, so the behaviors of individuals and groups have changed, and this has happened in information and knowledge societies because there are societies that are still primitive in their dealings, so a digital and knowledge gap has emerged in the world between the major industrialized countries and the third world countries, so the major bets of the information society have been manifested in individualism and electronic democracy, so there has been flexibility in the access of information through information highways, so man has become a cyborg in the full sense of the word, i.e. a semi-automatic human being who coexists and deals with the machine most of his time, which has been reflected in his life by adopting new behaviors in a unique lifestyle and other matters, but he lives in a society that is fed by information, and its economy is based on information, and therefore will the individual invest in this lifestyle and exploit it in a polite way in his interest and in the interest of society and transform information into knowledge and the environment around him or will he be preoccupied with its negatives and effects A waste of effort, time, and money.

In conclusion, Ramadan digital media content has a media specificity compared to other months during the year, especially with the increase in media availability through television drama, commercial advertisements, and other types of content, but the problem remains at the level of valuation by users. In light of the findings, the study recommends educating content creators and users alike through scientific and educational programs on the nature of digital environments.


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**\*\*Interpretive Anthropology:** It is a movement in anthropology that was based on moving away from biological explanation frameworks and rejecting sociological and psychological preconceptions. It focuses on the functioning of symbols in communicative acts, and thus rituals and ceremonies become the focus of ethnographic interest. See Clifford Geertz, see: Muhammad Badawi, *Interpretation of Cultures*, 1st edition, Center for Arab Unity Studies, Beirut, Lebanon, 2009, p 829. /See: Mr. Hafez Al-Aswad, *Symbolic Anthropology—A Critical Comparative Study of Modern Trends in Understanding and Interpreting Culture -*, 1st edition, publisher, Alexandria Knowledge Establishment, Egypt, 2001, p 130

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# Perspective Chapter: The Impact of Social Media on the Fear of Missing Out (FOMO) among Teenagers Aged between 18 and 25

*Veena Prasad Vemuri*

## Abstract

In recent years, social media has significantly transformed human interaction and communication. One emerging phenomenon is the Fear of Missing Out (FOMO), which refers to the anxiety individuals feel when they believe they are missing out on rewarding experiences. This study explores the relationship between social media usage and FOMO among teenagers aged 18–25. While social media facilitates constant connectivity, it also contributes to feelings of inadequacy and anxiety as users compare their lives to curated online content. This research, employing a mixed-methods approach of surveys and focus groups, reveals a positive correlation between time spent on social media and FOMO, with significant psychological impacts. Despite minimal differences in FOMO levels across age and gender, the study underscores the profound effects on teenagers' mental health. It also highlights the need for strategies to manage FOMO and suggests implications for social media designers, educators, and policymakers to foster healthier social media habits among young adults.

**Keywords:** FOMO, social media, anxiety, teenagers, depression

## 1. Introduction

Social media is defined as Internet-based applications that promote consumer-generated content and two-way conversation interactions. Also, it helps users connect, socialize, and exchange information. Social media has transformed human life in terms of the way people do things and associate with one another. All these platforms are made to make content sharing easier and effortless. No matter what it is you are into, social media networks have something to provide. However, countless societally related challenges have resulted from the increased access to social media structures. One significant problem encountered by individuals on social networking sites is they have a “fear of missing out” (FOMO) on something incredibly fun or exciting elsewhere, leading to the individual's desire to stay linked with the immeasurable streams of knowledge on various websites. The myriad of activities on social media networks has resulted in the vast number of adolescents who use social networking sites becoming dependent on them [1, 2].

## **1.1 Background of the study**

Social media is very popular not only locally but also globally and is well-known by all. The popularity of social media has indeed increased in line with current advances in mobile technology. The prevalence of the use of social media among teenagers can be considered a global phenomenon. Given the importance of social media in the life of the current generation, the present digital era has further enabled the function of social media in social relationships, including friendships, interactions, communication, and others. Even though social media has positive and negative effects, these include teenagers' fear of missing out, which should be given special attention and recognized.

According to the theory of social comparison, individuals base information about themselves on different sources, and at times, they compare their lives with other individuals' lives. The upward social comparison model developed by FOMO is driven by the principle of social comparison, whereby individuals are motivated to compare themselves to those who are at a level they want to achieve or even fear not achieving. Such individuals attempt to improve their competitive ability and maintain being in competition with someone above them through upward social comparison, and this will facilitate positive and negative emotions. Hindered positive effects can be seen in self-esteem and positive emotion, while anxiety and low mood can also be seen. The stronger the urge to be included, the greater the social media use will be and the greater the fear of missing out. Previous studies between FOMO and the use of social media are, in fact, related.

## **1.2 Significance of the study**

The study draws attention to a concern that has a considerable effect on the current generation. The extent of social media usage among the current generation is very high. It has increased so much that it has a large negative effect on the individual's well-being. Despite the positive impact of social media, it has created fear among teenagers, which is defined as the state of mental or emotional strain caused by the belief that one is missing out on something. Although FOMO has been relatively underexplored in the literature, scholars highlight its potential to cause detrimental outcomes. It is also indicated as the preliminary cause of various mental as well as bodily illnesses. It is sometimes labeled as a psychological disorder, which ultimately affects their academic performance. In relation to the previous researchers, these authors feel that their research would potentially give more practical insights to industry practitioners, enabling them to overcome the negative impact on teenagers and acquire positive effects. Thus, by exploring practical ways, this study can benefit different stakeholders.

The study also highlights various highly affected countries by FOMO. The present research is very significant as it examines the solutions for identified FOMO, a frustrating psychological experience with negative implications for individuals, enabling young adults to better manage and cope. This is particularly important considering the current generation spends the highest number of hours on the Internet. Additionally, if teenagers learn to manage their FOMO, stupidity may be prevented from increased spending. Hence, this research is of particular interest, considering it has been suggested that FOMO may lead to increased spending. The authors examined some practical implications of the findings. One party that stands to benefit from the study is a cultural online consumer environment. Additionally, policy formulators will benefit from identifying a segment that is opinionated in the

growth and management of social media platforms. Furthermore, teenagers may benefit from gaining psychological control over FOMO.

### **1.3 Research objectives**

Having reviewed the literature on the relationship between the fear of missing out and social media among young adults aged 18–25 years, the question arises as to what variables influence the level of the fear of missing out in users of those online platforms. The purpose of this research is to analyze to what extent select individual and technological variables determine the fear of missing out, as one of the potential negative consequences of using social media, among individuals belonging to the study sample. The average age of the study sample is 20 years, and slightly over half of the participants are females. Anonymity records were provided to ensure the confidentiality of the participants. The questionnaire was carried out considering the structured interview technique.

Specifically, the main research objectives aimed at achieving this purpose are as follows. The first goal is to examine the differences in the fear of missing out in the use of social networks in terms of select individual characteristics (e.g., gender, learning language, self-assessment of overall learning, and characteristics of the mobile device used). The literature indicates that social network users, in terms of their personal characteristics or patterns of social network usage, differ in the level of the fear of missing out, alongside differing in select other areas of life.

## **2. Literature review**

The impact of social media on the fear of missing out (FOMO) is a common concern among many people of all ages. The proposed study will focus on teenagers aged between 18 and 25 to investigate how social media affects their FOMO. Adventures, family outings, and party invitations shared on social media are likely to trigger FOMO among them. According to researchers, FOMO has a direct impact on social media activity as it encourages users to sign in more often. This will allow them to be in tune with what is happening around them. Studies have shown that FOMO has negative effects aside from having a high degree of engagement in social media.

Chances are, at some point, we have all been hit by the fear of missing out. It is likely that there are plenty of good ideas, photos, and images being posted without us. As we watch, we experience the feeling of anxiety, jealousy, and maybe even depression. However, not everybody will be able to notice its impact. Those who may suffer from the negative impact are teenagers. Researchers found a negative correlation between FOMO and life satisfaction, autonomy and competence, the pressure to be perfect, perceived stress, and resilience/self-efficacy in a group of teenagers. Unfortunately, the growth and recruitment of social media among people are in direct proportion. Users continue to flock to social media sites, seeking the virtual pleasant lives of others over social circles, entertainment, and pastimes.

1. The impact of social media on the fear of missing out (FOMO) has garnered considerable attention in recent years. FOMO is defined as a pervasive apprehension that others might be having rewarding experiences from which one is absent [3]. This phenomenon is especially prevalent among teenagers and young adults, making it a critical area of study.

2. *FOMO and Social Media Usage*: Research indicates that social media platforms amplify feelings of FOMO among users. This is particularly evident among teenagers aged 18 to 25, who are highly active on social media [4]. Adventures, family outings, and party invitations shared online are common triggers for FOMO [5]. These triggers lead individuals to check social media more frequently to stay updated on their peers' activities, exacerbating FOMO [6].
3. *Psychological effects of FOMO*: FOMO is associated with various negative psychological outcomes. Studies have shown that high levels of FOMO correlate with increased anxiety, jealousy, and depression [7]. Furthermore, FOMO negatively impacts life satisfaction, autonomy, competence, and resilience among teenagers [8]. The pressure to present a perfect life online and perceived stress are also heightened by FOMO, leading to reduced self-efficacy [9].
4. *Social Media and Life satisfaction*: The growth of social media usage has been proportional to the increase in FOMO among users [3]. This trend is concerning as it suggests a cyclical relationship where social media usage feeds FOMO, which in turn drives further social media engagement [10]. Teenagers, in particular, are vulnerable to this cycle, as they are in a developmental stage where peer approval and social belonging are paramount [11].

## **2.1 Comparison and envy**

In this sense, it has been proposed that three domains of envy (benign and malicious, and personal distress) may be distinguished, each with very different psychological, affective, and cognitive components. The benign envy, which is characterized as relatively moderate, aspiring, and assertive in nature, may give impetus to self-improvement and influence learning and may even play a motivating role. On the other hand, malicious envy reflects a destructive, negative set of behaviors fueled by the intention to penalize others in order to decrease the social and emotional distance from them. The third domain is the personal distress category, in which the envious individual exhibits primarily self-directed sources of distress and negative consequences, such as feeling guilty about their emotions or being hostile. It has been confirmed that, compared to benign and malicious envy, personal distress patterns are significantly and positively associated with lower levels of well-being.

For example, a study found that Facebook users who had not interacted with their spouse during a computerized task formed greater negative feelings toward their spouse when primed with select open-ended Facebook statuses of other individuals. Furthermore, comparative short-term mood states differed based on the social comparison direction of the primed statuses. Among these negative states is envy, which is conceptualized as a maladaptive, complex social emotion or a two-person emotion involving longing, confusion, and discontent triggered by another person's better situation, talent, or valuable item [12, 13].

## **2.2 Definition of FOMO**

Fear of missing out (FOMO) can be defined as the feeling or perception that everyone else is having more fun and fulfilling relationships than an individual is. It is the sense of not being part of a group and/or having less of a deserved positive

experience. Social media gives rise to a pervasive and increasingly influential tool for communication. The potential threats associated with excessive social networking site use on individual well-being include increased feelings of social isolation, contributing to one's FOMO, contributing to envy, reducing productivity, and decreasing self-esteem while supporting mood disorders.

The word "fear of missing out" (FOMO) was added to the Oxford Dictionary to describe the feeling of apprehension that an exciting or interesting event may be happening elsewhere, often aroused by posts seen on a social media website. FOMO can also be considered as a social media-fueled anxiety where an individual feels that other people are having rewarding experiences and/or other types of rewarding experiences that they are not partaking in. FOMO happens in social media interaction where an individual feels a direct threat that derives from believing that someone else is having a good experience that they are not having.

### 2.3 Previous studies on social media and FOMO

Previous studies on social media and FOMO have demonstrated that the use of a wide range of social media platforms, such as Twitter, Snapchat, Facebook, and Instagram, worsens the fear of missing out among teenagers. Using Instagram especially leads to a significant increase in both types of FOMO (need-related and significance-related), implying that the more a person uses Instagram, the more they feel that they cannot afford to miss these activities.

Similarly, teenagers (age 18 and above) who spend large amounts of time on Facebook express the greatest need to be connected. These findings can be explained by the fact that social media does not merely convey news about social events but also creates a desire to remain in the loop with the world around us.

Conversely, another factor of FOMO arises because current social media practices do not quench our deepening thirst for connection. Therefore, experiencing poor connection may cause FOMO to increase.

## 3. Methodology

This chapter discusses the research methods used in the study to answer the research questions. The aim of this study is to identify or measure the impact of social media on FOMO. To achieve this aim, the survey research design was found to be the best choice for three aspects: only *in situ* survey possible, mass classes, limited funds, and a larger number of respondents. Based on the research aim, four research objectives were designed to guide the research activities. The questionnaire was structured and developed. The format included open-ended, close-ended, multiple-choice, and rating scale types of questions.

To identify the correlation between social media behavior and FOMO, we focused on the frequency and intention of the use of several social media options. The newly constructed questionnaire contains three main parts. The first part is the demographic description. The demographic factors considered are age, gender, education level, living place, and family income. The second part is the measurement of social media using duration and frequency; the respondents will be asked to rate their frequency of accessing social media on a typical daily basis. The third part measures and examines the intensity of social media use for the individual social media; for instance, asking the respondents the total time that they typically spent on social media each day on

specific platforms such as Facebook, Instagram, YouTube, Twitter, and Snapchat. The last part measures the FOMO. The Fear of Missing Out Scale is used in this research to measure the FOMO level of each respondent.

### **3.1 Research design**

The main aim of this research study is to determine the relationship between the two constructs: social media and the fear of missing out among teenagers aged 18–25. This would identify if social media usage actually promotes FOMO among young adult users. Using this research, the researcher aims to determine the psychological impacts on adolescents and young adults and suggest advice for better social media use. The discoveries from this research should give answers to the proposed questions and hypotheses formed in the literature review chapter.

This research is designed to be a quantitative study as it aims to carry out a survey to understand the relationships between variables through statistical tests. Suitable hypotheses are formulated for this research purpose, and a questionnaire is constructed as the research instrument which would be delivered to young adult college participants. For this quantitative study, it is essential for the participants of the survey to respond based on their personal concerns and perspectives with all questions in the questionnaire. Due to the nature of human involvement in survey-based research, this research would utilize Simple Random Sampling to collect data from a range of people who are active users of social media. With a large population size, this method is best as it would work well to obtain a random set of responses that would be representative of the perspectives of the population. After collecting the data with the survey instrument, this research would then proceed with weight-of-evidence and methodological assessment steps to confirm and validate the collected data. Finally, a hypothesis testing approach would be adopted to investigate if the bases of social media and FOMO among teenagers in the context of the study are reliable and applicable.

### **3.2 Sampling technique**

In this study, convenience sampling will be adopted based on the existing students in the university. Convenience sampling is a non-probability sampling technique where the subjects are selected because of their convenient accessibility and proximity to the researcher. According to Etikan, Musa, and Alkassim [14], convenience sampling generally delivers a high response rate as the researcher will be able to approach most of the target population. Convenient sampling is also known to be more cost-effective and time-saving for the researcher. Furthermore, Kendrick and Veruttipong [15] pointed out that convenience sampling is the only available or feasible way to approach a survey target group, such as students in a university or employees in a company. The respondents that will be approached must match the defined students required for the tests and accurately represent the required targets with proper distribution and variety demographics and data.

### **3.3 Data collection methods**

This research project will make use of qualitative research methods. Qualitative research is used to conduct exploratory research for the collection of data and is flexible in terms of collecting data and can be used to engage with everyday phenomena.

Qualitative research allows research that looks at behavior and the reasons behind the behavior and so provides a rich insight into approach. Ideal for studying people, it enables researchers to get to grips with the way that culture, values, and attitudes inform a diverse range of phenomena. In particular, this research will make use of focus group discussions. Focus group research is a powerful tool for understanding how people fundamentally feel and think about the world. It enables researchers to understand the emotional and cultural dimensions of life, and so lead the industry in developing communications that genuinely connect with real values and attitudes.

It allows a rare opportunity for people to speak freely, and it is good for plugging business thinking into these free conversations. What is great about them is how open-minded and responsive they can be. They can be fired with energy and fresh thinking that you struggle to find in one-on-one, in-depth interviews. For this, two focus groups will be carried out – one representing females and one representing males aged 18–25, respectively. The focus group size recommended is 6–8 participants. A 60-minute focus group session will be held in a warm, appropriate, relaxed, and comfortable location for the participants. It will make use of a semi-structured focus group discussion guide to provide focus and make sure that discussions are on track. Participants will give consent before the start of the focus group discussion, and using recording devices will ensure accurate feedback recording while respecting privacy.

#### **4. Data analysis**

In the social media question, we asked respondents how many platforms they had accounts on. Facebook emerged as the platform where most respondents operated an account (98.8%), while Instagram (72.94%) came second and Twitter (9.6%) third. At least 73.3% of the interviewed individuals had an account on two platforms, 19% indicated they operated an account on three platforms, while 3% of the sample operated an account on six platforms. Some platforms were neither popular nor attractive to the respondents, as reflected in the percentage of respondents operating an account on the respective platform. For example, only seven percent of the respondents labored under the burden of platforms such as Tumblr, Snapchat, and Ask.fm.

We utilized logistic regression to model the relationship with our study since FOMO was measured as a binary outcome: whether FOMO was triggered or not. The procedure behind logistic regression can be specified as simple and fits our data perfectly and effectively. Yager and Borowsky [16] used it in analyzing the impact of social media against FOMO. Additionally, in line with Kaye et al. [17], the use of logistic regression becomes necessary when a dependent variable is in the form of 0 and 1.

##### **4.1 Descriptive statistics**

The study findings revealed that no teenagers considered social media harmful, and neither female nor male participants reported thinking that social media promoted addiction. Similarly, no teenagers mentioned the effect of social media on mental health. However, the reasons for the excessive use of social websites varied: most participants indicated that social media was a source of several kinds of family problems caused by not spending time together; it could affect the physical conditions, i.e., sleep at night, daily rhythm, and eyes hurt; and psychological conditions, such as links to

anxiety or inattentiveness. The execution of homework and students' low performance at the university or school were also important reasons for teenage participants.

The findings indicated that no participants had ever heard about FOMO, or they were not familiar with the word. These findings can be related to the fact that only one participant reported the negative sides of social media, and the reasons for the excessive or occasional use of social media did not contain FOMO either. However, none of the participants had applied for alcohol use yet. Behind the point is that only one participant declared forming feelings of anxiety. Still, no female or male participants expressed that social media could raise feelings of anxiety or addiction because of the standardized, glamorous, happy, or deceiving photos on these websites. The quality of social media, innovation, or frequency, does not exacerbate or eliminate underused adolescent reactions. The age was not found relevant for analysis because all participants were in the same age range, and participants referred to the same five common websites.

## **4.2 Inferential statistics**

Several tests were carried out to establish the relationship between excessive social media use, the impact of social media images on the emotions felt by the targeted subjects, and finally the impact of FOMO on the studied subjects. The first question was geared toward understanding how often teenage girls check social media. The results of the Chi-Square Tests used to test how often teenage girls use social media on their teenage girlfriends on the three preferred social media sites were significant. The check-ins from friends were revealed on both Instagram and Facebook. Both sites had large proportions of teenage girl check-ins from friends at both intervals – 51.4% (IG) and 43.1% (FB) for today and 18.6% (IG) and 29.4% (FB) for the first thing. These scores were higher than the expectations and, therefore, inferential that Instagram and Facebook are checked by teenage girls from 18 to 25 close to the time they wake up in the morning.

This similarly applies to Kiwis but at a lower rate and not at the time they first wake. Over the two sites, only 35% of the teenage girls receive no check-ins from friends at all on any day. Therefore, the girls get substantially higher self-assurance from this constant activity, and some of the kids get a lift every day straight after getting up. After the morning check-ins had been viewed, there was still more social media to interact with the form of hearting and commenting. The high statistical significance achieved via multiple chi-square tests shows that teenage girls are willing to devote large amounts of time, both morning and day, to preferred social media channels by interacting with each other. While daytime social media usage is difficult to measure, it is clear from this process that a huge proportion of teenage girls live out their entire day through social media.

## **5. Findings**

### **5.1 Demographics 1. 54.1% of the sample were female, and 45.9% were male**

1. The majority of our sample (66%) post on social media between 3x per day to every couple of days.
2. The majority of people reported looking at social media 3–4 hours a day but believing that they spent well over 5 hours a day looking at social media.

3. The likes and comments on social media profile pic are the selfiest of all the pictures a user can have. Accordingly, a significant majority have 1–10 likes and comments on their profile picture.

## 5.2 Hypotheses

H1 – Age and FOMO. FOMO scores were compared by age – reducing the sample into younger (18–20) and older (21–25) age groups. The independent samples t-test was applied, and no significant difference was found.

H2– Gender and FOMO. The independent samples t-test was applied to the data to explore any differences in FOMO by gender. No significant difference was found.

H3 – Social media viewing time and FOMO. There was a positive correlation between FOMO and both current social media use and social media usage over the holiday period.

H4 – Social media posting frequency and FOMO. Correlation analysis was applied to explore the relationship between social media posting frequency and FOMO. There was no significant correlation.

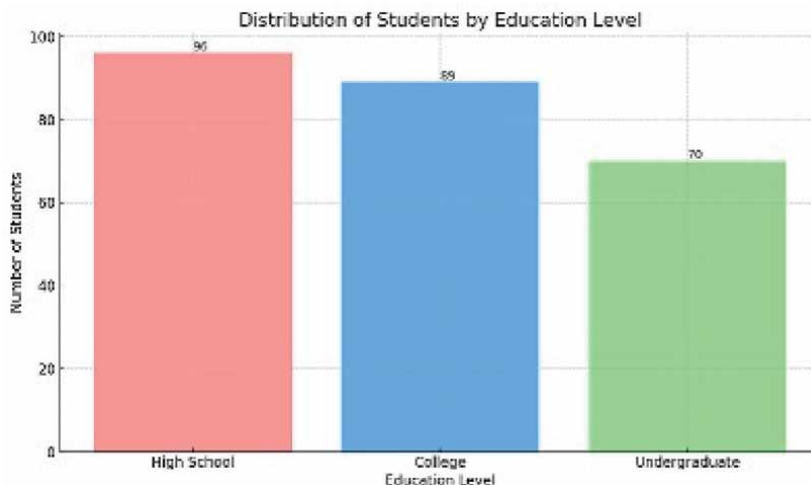
## 5.3 Overview of participants

The present study aimed to investigate the impact of social media on the FOMO condition among 255 teenagers aged 18–25. A social media website analysis was conducted, relating to four social indicators (amount of use, reasons for use, attitude toward SNS, and participants' preference for real-time interaction) of social media usage. After gathering all the necessary information, our team designed and administered an Internet-based survey in which the four indicators for social media were considered. A sample of adolescents participated in the study, and the impact of media usage on the fear of missing out was outlined.

Filled questionnaires were collected from a total of 255 students who were attending for-credit courses. They were studying at the college, high school, and undergraduate level primarily in the city of Mumbai (Wadala area). Most participants, or 56% (142/255) were female, and the mean age of the participants was 20 years (SD = 1.1, Range = 18–25). It was found that 37.6% (96/255) were high school students, 35% (89/255) were from college, and 27.4% (70/255) were undergraduate students. Most of the participants were categorized as having moderate health and economic status. With 61.2% (156/255) of the participants, a family medium income was based in accordance with the table of the college expenditure.

## 5.4 Key findings on social media usage and FOMO

A survey questionnaire was designed to understand how teenagers and people in their 20s use social media. Specifically, questions related to the frequency of social media usage, the type of content being accessed, the duration of the social media session, and the platform being utilized were evaluated. Moreover, various questions related to any symptoms or signs of FOMO materializing from the usage of the social media platform were also asked (**Figure 1**). This survey consisted of 31 questions divided into three main sections, including social media use and dependency section, FOMO, and demographic information. To analyze their FOMO, single items related to 'fear of not being constantly connected to the world' were tested.



**Figure 1.**  
*Distribution of students as per education level.*

The survey questionnaire was distributed only to participants aged 18 to 25. A total of 120 have participated in this survey. All those participants were social media users, and they have joined the survey anonymously. They are given 2 weeks to respond to the survey, the completion time of which varies from 3.5 to 25.5 minutes. The choice of the age range is not a random decision but one that requires careful deliberation. According to Statista [18, 19], the projected number of social media users aged 18–25 in Malaysia was 5.1 million people. In addition, based on social media users by age group, it was found that the most active age group for daily usage was 20–30 years old, with 43.79 percent among some countries, including Indonesia, Venezuela, Argentina, and Morocco [20].

## **6. Discussion**

The study aims to identify the relationship between the use of social media and the fear of missing out on teenagers aged 18–25. The findings indicate that there is a positive relationship between the time spent on social media and the fear of missing out. It shows that the fear of missing out is intensified with longer usage of social media as it would increase the frequency of exposure to social activities of online contacts. As frequent exposure would further invoke the fear of being left behind, users' dependency on social media may increase to follow and stay interactive in the social world created on social media. It is aligned with the findings by Theiss and Estassi [21] that greater usage of the Internet for communication leads to increased dependency on the Internet, and the occurrence of dependency leads to perceived Internet threats.

The study also identifies that the type of social media used by teenagers affects the fear of missing out, and the effect provided are social media in its general capacity, offline communication-oriented social media, and picture browsing-oriented social media. With respect to the general attribute of social media, it is mentioned that social media, regardless of its nature, is a tool that links to friends, relatives,

acquaintances, and the world in an instant. Individuals would have a powerful impulse to check notifications or feeds, feeling irritated to want to know when they are active on social media. Furthermore, mobile apps provide real-time information from a person's social network, putting further pressure on its users to be constantly connected and up to date. As teenagers are becoming digitally dependent and significantly more interactive with mobile apps, a smartphone would act as a stimulant to develop severe users' fear of missing out if their use is leading toward the risks of missing out. The result that shows the general capability of social media usage leads to a fear of missing out among teenagers is in line with the concept on which social media has the greatest potential to produce fear of missing out effect based on the architecture of the social media interface design, unlike numerous handheld mobile applications. Firstly, the embedded real-time notifications or feeds from friends, relatives, and other acquaintances would shape an instant relationship between the participants within the social media network. Secondly, all previous informational posts are available at all times, leading to chronic keenness to feel connected with their online social world.

### **6.1 Interpretation of findings**

This predictive cross-sectional study reveals that the duration of social media usage significantly influences teenagers' fear of missing out. The more time spent on social media, the greater the potential for teenagers to deactivate their accounts. It must be understood that this investigation measures the behavior of supplanting a realistic self-presentation with an ideal one and examines whether this is to such an extent for some online users that it leads to an illusive experience of being central in such situations. Age is another significant influencer that prevents this from happening to the studied group. With each cohort, the FOMO scores decrease continuously, with young adults aged 25 years old possessing it the least.

By limiting the scope to a mere 1 week before this study, the attempt is to examine how social media usage has a short-term correlation with how teenagers wish to use their time that is not spent on the platforms. This aim could thereby better predict when they favor inactive social media experiences and define how often they go offline. Future work could delve into how their decline in FOMO would enable these young adults to carry out offline-based activities in a determined and organized manner, effectively using a balance of both online and offline experiences.

### **6.2 Implications for future research**

There are several limitations of this study that can provide opportunities for future research. Firstly, the sample population is restricted to teenagers in the age range of 18–25 years old. This study only focused on the influence of social media platform usage, such as Facebook, Instagram, YouTube, and Snapchat, and the impact of social media usage on FOMO. Hence, it is suggested that future studies can focus on other social media platforms such as the next big social media app for hooking up, highly addictive video-sharing app, and even “TikTok.” Each social media platform does not perform the same way. Thus, the use of each social media platform might have significantly different impacts on FOMO.

Secondly, as the impact of social media on FOMO is one of the social psychology studies that have not yet been deeply analyzed, much is needed to be identified.

Although many social psychology studies exist on social media and its effect, no specific research has been studied on the relationship between Instagram, Facebook, Twitter, YouTube, and the new influential social media posts. However, the current study only focused on Facebook, Instagram, Snapchat, and YouTube. Thus, it is suggested that future studies may investigate other new emerging social media.

Thirdly, the primary limitation of this study is that the data was only collected from the urban area of Klang Valley. The current research is geographically limited to the psychological impacts of social media toward the Klang Valley's teenagers in Malaysia. Therefore, it is advised that future studies can expand the research by extending the areas in other cities across different regions in Malaysia and expanding research on teenagers in rural areas, too [22].

## **7. Conclusion and recommendations**

In conclusion, this study advanced the knowledge of social media and psychological health, speculated on the limited conditions of FOMO, and contributed to practitioners. Teenagers are at a stage where their identities are still developing and have yet to be determined. Their willingness to seek external recognition can be said to be stronger than that of adults. They emphasized that they would touch the social media app to confirm whether their publications had any feedback, comments, or likes or whether they were interested or even active at the moment. It is impossible for students to avoid being influenced by FOMO during the development process, which seriously affects their psychological development. Therefore, we hope that the findings of this paper can make teenagers understand the norms of the use of social media to truly relieve the threat of FOMO. Additionally, college educators can create courses related to the use of social media and the psychological impact of social media in colleges and universities to eliminate the negative psychological impact on students in time. The theoretical contributions of the study are the exploration of boundary conditions of FOMO and the examination of various important psychological outcomes of FOMO. This theoretical understanding will be helpful for the academic and non-academic community including government and principal to think about reducing negative psychological impact and promoting the positive impact by harnessing FOMO.

On the other hand, this research has several plausible implications for practitioners. Social media platform designers should provide or promote features that can enable users to satisfy either of these wants. An example of the fulfillment of these wants is to develop social media platforms that allow users to accurately control the accuracy of information that is shared with them and thereby enable users to limit their ability to like or respond to the specific contents of another user, which is termed ad hoc interactions. As we are in an era of new-generation media, social media platform designers should consider different dimensions of experience as part of the design principles of their platforms based on their media usage experience and patterns. Such platforms should particularly focus on the design principles of personalized information and privacy security management. A social media platform should be designed with functions to allow users to collect and share the information that is most appealing to them and to receive only the information that is most appealing to them. For instance, it should be designed to allow users to restrict the contents of other users to which the user can respond and access, also called privacy

settings. Not all scholars share the same views on the association between how individuals witness others online (i.e., others' happy moments posted online) and how the individuals feel satisfied with their lives or levels of emotional well-being. They should also not frequently view others' happy moments that are negative for their well-being.

## **7.1 Summary of findings**

This research aimed to examine the impact of social media on the fear of missing out (FOMO) among teenagers aged 18–25. The study was implemented in an Australian university setting. Analysis of the data showed that while those involved in social media and Internet activities recognized and reported the outcomes of involvement (i.e., sleep problems, affected quality and time spent with family or friends, low academic achievements, etc.), they balanced these concerns with the personal advantages they received from using social media. However, those who did not have the opportunity to be on social media were more concerned with potential negative outcomes of being involved, sometimes exaggerating them (e.g., as a result, reporting that if the phone and/or social media activity is taken away, it creates anxiety and stress).

While teenagers often express fears when their adults are using mobile phones or being on social media, teenagers' own experiences are different. They consider this to be quite normal and value the positive aspects that they see in these social media activities as youth. The results of the research show that social media does not cause FOMO in teenagers but determines its sense for more fun and engagement in young life. As a result, this study allows us to question the phenomenon of FOMO, which is widely identified as 'social knowledge' and which is also discussed as something that can become a dominant effect of mobile phone and social media use. In the final section of this chapter, the findings are compared with the existing literature, and the results are discussed. The benefits of the FOMO components are identified, and the practical implications are presented. The chapter concludes with the limitations of the study and the potential topics for future research.

## **7.2 Recommendations for parents and educators**

Given the fascination and hold of social media on teenagers, it is only natural to understand how a lack of involvement in social media can lead to a fear among teenagers of being left out. It is also understandable why parents and educators may turn to coercive measures to decrease or alleviate such fears. However, doing so does not address the issue behind FOMO. The positive and negative usage of social media can teach a teenager a lot. Hence, uncovering the use and perceptions of social media and its associated fear levels will help in forging a genuine understanding of the relationship that teenagers have with social media, particularly the use and perceptions of social media by the local teenage population.

Firstly, it will include the teenagers' need for connection that draws significant interest. Secondly, it will enhance a better understanding of psychological connections. Thirdly, its revelation of the ways teenagers handle their FOMO will help to provide a roster of coping strategies. It will also show that FOMO can lead to a perception of mean behavior. In-depth interviews also help to uncover the main sub-contextual dimensions, giving insights into how sub-parts fit into the broad context

of the local teenager's perceptions. They also give teenager bloggers a genuine voice. One of the limitations of the study is that self-reported data often has a problem of self-serving bias, and this situation often occurs when extensive under-reporting of responses appears. As with all exploratory studies, further testing, with more varied age groups and cultural backgrounds, is needed.


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# Social Media Addiction: Challenges and Strategies to Promote Media Literacy

*Delia Perez-Lozano and Francisco Saucedo Espinosa*

## Abstract

This chapter explores social media addiction, its underlying causes, consequences, and the role of media literacy in mitigating its impact. It examines the influence of artificial intelligence on content personalization and the role of cybersecurity in preventing social media addiction. The methodology involved a comprehensive literature review and a quantitative survey of 264 participants across various generations. The survey featured 25 Likert scale items designed to perform a factor analysis on addiction and literacy, as well as general questions about social media behavior. The findings indicate that social media addiction is driven by psychological factors such as social comparison, the need for social validation, and the fear of missing out (FOMO). The consequences of addiction include increased anxiety, depression, disrupted sleep patterns, and decreased face-to-face interactions. The factor analysis revealed key dimensions of addiction, including compulsive use and social comparison. The study underscores the critical role of media literacy in addressing social media addiction. By equipping individuals with skills to critically evaluate media content and promoting a balanced approach to online and offline activities, media literacy can mitigate the negative impacts of social media use. The chapter highlights the need for integrating media literacy into education and fostering collaborations to create a healthier digital environment.

**Keywords:** social media addiction, media literacy, artificial intelligence, cybersecurity, digital platforms, AI-driven content, content personalization, media education

## 1. Introduction

In the digital age, social media has become an integral part of our daily lives, connecting individuals across the globe and shaping the way we consume and share information. However, the ubiquity of social media has also given rise to a growing concern: the issue of social media addiction [1].

Recent years have seen social media addiction emerge as a pervasive phenomenon with far-reaching implications for modern society. As digital platforms continue to evolve and proliferate, individuals find themselves increasingly drawn to the allure

and gratification they provide. This chapter aims to delve into the causes and consequences of social media addiction, shedding light on its multifaceted impact on individuals, communities, and the broader societal fabric.

Understanding the factors contributing to social media addiction is crucial in devising effective strategies for prevention and intervention. One prominent factor worth exploring is the role of artificial intelligence (AI) in content personalization. AI algorithms have become adept at tailoring social media content to individual preferences, thereby enhancing user engagement. However, this personalized experience can also contribute to addictive behaviors, as users are exposed to a constant stream of content that aligns with their interests, further fueling their usage and dependency.

To address this challenge, it is crucial to promote media literacy among individuals, empowering them with knowledge and skills to navigate the digital landscape in a healthy and balanced manner [2]. The chapter investigates the intricate relationship between cybersecurity and social media addiction prevention. With the rise of cyber threats and privacy breaches, individuals may become more reliant on social media platforms for a sense of security and connection. This reliance, however, can exacerbate addictive tendencies as users fear missing out or losing their online presence. Exploring cybersecurity measures and their impact on addiction prevention could provide valuable insights into mitigating the adverse effects of social media addiction.

This chapter presents a comprehensive study on social media addiction, including a literature review and a quantitative survey. The research explores the psychological, social, and technological factors contributing to addiction and evaluates the effectiveness of media literacy interventions in mitigating its negative impacts. Practical recommendations are provided to foster healthier social media usage and enhance media literacy across different demographics.

## **2. Theoretical framework**

### **2.1 Causes of social media addiction**

The increasing prevalence of social media use has raised concerns about its potentially addictive nature and the implications for users' mental health and well-being. The need for social validation, the urge to construct a carefully curated online identity, and the appeal of continuous social feedback are key contributors to the development of addictive behaviors [3]. Social media addiction is characterized by excessive and compulsive use that interferes with daily life, leading to negative outcomes such as anxiety, depression, and disrupted sleep patterns [4].

Recent studies highlight the role of psychological factors, such as the need for social validation and fear of missing out (FOMO), in driving addictive behaviors on social media platforms [5]. These platforms are designed to provide continuous and immediate rewards, reinforcing compulsive use patterns [6].

The impact of social media addiction extends beyond mental health, affecting productivity and real-world social interactions. Individuals who are addicted to social media often report difficulties in managing their time and maintaining a healthy balance between online and offline activities [7].

Aside from the above, the influence of peer pressure cannot be underestimated. Research reveals that individuals are more likely to engage in excessive social media use when they perceive that their peers are doing the same [8]. The desire to fit in and conform to societal norms intensifies addictive behaviors.

Despite the growing recognition of social media addiction, there is still a lack of consensus on its definition and measurement. Different scales and criteria have been developed, but there remains a need for standardized tools that can accurately assess the extent of addiction across various platforms [9].

Media literacy has been proposed as a potential solution to mitigate the negative impacts of social media addiction. Media literacy programs aim to equip individuals with the skills to critically evaluate and navigate digital content, reducing susceptibility to addictive behaviors [10]. These programs emphasize the importance of understanding the psychological tactics used by social media platforms to engage users.

The relationship between social media use and well-being is complex. While some studies point to the detrimental effects of excessive use, others suggest that social media can also provide benefits, such as enhancing social connections and providing access to valuable information and resources [11]. This duality underscores the need for a balanced approach in addressing social media addiction.

Educational interventions that promote media literacy and digital citizenship are essential in fostering responsible social media use. By enhancing individuals' ability to critically engage with digital content, these interventions can help mitigate the risks associated with social media addiction and promote healthier online behaviors [12].

The growing body of research on social media addiction highlights the importance of developing comprehensive strategies to address this issue. Media literacy emerges as a critical component in these efforts, providing individuals with the tools to navigate the digital landscape responsibly and mitigate the negative impacts of excessive social media use.

## **2.2 Consequences of social media addiction**

In recent years, the rise of social media platforms has led to increased concerns regarding their addictive nature and impact on mental health and well-being. This section discusses the detrimental effects of social media addiction and the importance of addressing this issue.

One primary challenge posed by social media addiction is its impact on mental health. Excessive social media use has been linked to negative psychological outcomes, including anxiety, depression, and lower subjective well-being. Constant comparison with others' seemingly perfect lives on social media can erode self-worth, leading to depressive thoughts and decreased mental well-being [6].

Studies have shown that social media addiction contributes to psychological distress and symptoms of depression. Feelings of loneliness, anxiety, and low self-esteem are common among those who excessively use social media. The Social Media Disorder Scale (SMDS) highlights that individuals' scoring higher on this scale report higher levels of stress, anxiety, and loneliness, along with difficulties in interpersonal relationships and academic performance [9].

Moreover, social media addiction is linked to "fear of missing out" (FOMO), which refers to anxiety about missing rewarding experiences others are having. This leads to feelings of inadequacy, anxiety, and a persistent need to stay connected to social media, decreasing overall well-being [5].

Sleep disturbances are another significant consequence. The constant engagement with social media often results in late-night scrolling, reducing sleep duration and quality. This can lead to increased irritability, decreased cognitive function, and heightened stress levels [7].

Excessive social media use also diminishes face-to-face interactions, resulting in isolation and weakened social relationships. Time spent on social media can detract from real-life connections, exacerbating loneliness and negatively impacting overall well-being, leading to depressive thoughts, a negative impact on mental well-being, and body image dissatisfaction [13].

Recognizing the potential harm caused by social media addiction is essential to promote a healthier balance between online engagement and real-life interactions. It is crucial for individuals to practice mindful and responsible use of social media platforms, while society should raise awareness and develop strategies to mitigate these negative impacts on mental health and well-being [11].

Addressing social media addiction requires a balanced approach that promotes media literacy, self-awareness, and healthy coping strategies to help individuals navigate the complexities of the digital age.

### **2.3 Impact of artificial intelligence on content personalization**

Artificial intelligence (AI) has significantly revolutionized how social media platforms personalize content for users, impacting user experiences and behaviors. AI algorithms analyze users' preferences, behaviors, and demographics to generate personalized recommendations and advertisements, increasing user engagement and satisfaction [9, 14].

AI-driven content personalization can lead to addictive behaviors. The dual-system theory explains that AI targets the impulsive system by presenting engaging and relevant content, contributing to addiction. Users are constantly exposed to content aligning with their interests, fueling usage and dependency [5].

AI-powered content personalization also impacts self-image and social comparison. Algorithmically curated content can lead to unrealistic comparisons, triggering negative emotions and lowered self-esteem. This can exacerbate mental health issues and contribute to body image disorders and other psychological problems [6].

AI algorithms analyze user behavior data, including likes, shares, comments, and browsing history, to generate personalized content. This ensures users are presented with content that aligns with their interests, enhancing user experience and engagement. However, this personalization can also lead to filter bubbles, where users are exposed to content that reinforces existing beliefs, limiting perspectives and contributing to misinformation and polarization [7].

AI algorithms also personalize advertisements by analyzing demographic data and preferences. This increases the effectiveness of ads, leading to higher engagement and conversions. Personalized ads provide a more relevant experience, reducing intrusive promotions.

While AI enhances user experiences and engagement, it raises ethical concerns. Algorithms may perpetuate biases and stereotypes, resulting in discrimination and unequal representation. Adopting transparent and accountable practices in AI development is crucial to address these issues [11].

The impact of AI on content personalization extends beyond addiction. It was noted that AI algorithms also influence users' information consumption patterns and filter bubbles, where individuals are presented with content that aligns with their existing beliefs and opinions [15]. While this can enhance user satisfaction and engagement, it can also lead to echo chambers and the reinforcement of confirmation bias. This narrow exposure to content can limit users' perspectives, hinder critical

thinking, and contribute to the spread of misinformation and polarization within online communities.

Overall, the interplay between social media, AI, and content personalization highlights the complex and multifaceted nature of the challenges associated with social media addiction. Addressing these challenges requires a comprehensive approach that considers the psychological, technological, and societal implications of AI-driven content personalization [16].

The use of AI in content personalization raises ethical concerns. The algorithms implemented to customize content may unintentionally perpetuate biases and stereotypes, resulting in possible instances of discrimination and unequal representation [17]. This emphasizes the importance of adopting transparent and accountable practices in the development and implementation of AI algorithms to address these ethical issues.

Overall, AI has profoundly impacted content personalization in social media. It enhances user satisfaction but also contributes to addictive behaviors, filter bubbles, and ethical concerns. Understanding AI's impact on content personalization is vital for responsible implementation and promoting a healthier social media experience.

## **2.4 Role of cybersecurity in social media addiction prevention**

Cybersecurity is crucial in preventing and addressing social media addiction. As individuals spend more time on social media, their well-being, mental health, and productivity can be negatively impacted. Effective content moderation and filtering systems play a key role in mitigating these risks.

Social media platforms collect extensive user data, including personal information, online behavior, and preferences, to tailor content and advertisements. This data collection can be intrusive and facilitate addictive behaviors. Implementing strong cybersecurity measures enhances user privacy and mitigates addiction risks. This includes giving users control over their data, ensuring transparent data practices, and using robust encryption techniques to protect sensitive information. Privacy-focused mechanisms like “privacy by design” can further safeguard users and promote responsible usage [12].

Effective content filtering and moderation are also essential in addressing social media addiction. Platforms are inundated with vast amounts of user-generated content, including potentially harmful or addictive material. Without proper moderation, users may be exposed to addictive stimuli, increasing their likelihood of excessive usage. Advanced machine learning algorithms and AI can analyze user behavior, detect addiction patterns, and proactively warn or limit exposure to addictive content. Techniques such as content analysis, sentiment analysis, and real-time monitoring provide insights into usage patterns or triggers of addiction [7].

Cybersecurity measures are especially important for vulnerable populations like children and teenagers. Parental controls and educational initiatives help parents supervise and manage their children's social media usage. Effective tools can restrict access to addictive content, limit screen time, and monitor online activities. Combined with educational campaigns promoting responsible usage, these measures can help instill healthy digital habits from an early age [6].

Therefore, cybersecurity is vital in preventing and managing social media addiction. By leveraging advanced technologies, cybersecurity measures can enhance user privacy, implement robust content moderation, and provide tools for vulnerable populations. Prioritizing these measures can significantly reduce the risks associated with excessive social media use.

## **2.5 Importance of media education in developing critical skills**

The pervasive influence of social media has led to problematic usage patterns, including excessive engagement and compulsive behaviors. Media education plays a crucial role in modern society, particularly in empowering individuals to navigate the digital landscape and develop critical thinking skills [12]. With digital technologies advancing rapidly, acquiring media literacy—the ability to access, analyze, evaluate, and create media in various forms—is increasingly important.

Social media platforms like Facebook and Twitter have become vital sources of information, changing traditional news consumption methods [10]. In this context, media education is essential in empowering individuals to navigate the digital world critically. It aims to develop skills such as critical thinking, media literacy, digital citizenship, and the ability to discern fact from fiction.

Media education helps individuals analyze media messages critically, understand production processes, and express their messages through digital platforms. This critical perspective enables individuals to evaluate the credibility and reliability of sources, which is especially important in preventing the spread of misinformation and reinforcing detrimental narratives [11, 18]. Media education goes beyond mere comprehension of media content; it includes understanding the motivation behind the content, interpreting the underlying messages, and evaluating the impact on the target audiences [19]. Through media education, individuals also learn about the potential risks and ethical considerations associated with digital media.

Media literacy empowers young individuals to understand and assert their digital rights, such as privacy and freedom of expression. Through media literacy programs, they can navigate the digital landscape responsibly, manage social media usage, avoid addictive behaviors, and maintain a healthy balance between online and offline lives [6].

Moreover, media education promotes critical thinking and empathy by analyzing media messages critically. It fosters understanding of different perspectives and cultural contexts, promoting empathy and tolerance. This reduces the likelihood of engaging in online harassment and helps challenge media representations, fostering a more inclusive social media environment.

Integrating media literacy into formal education curricula is essential to foster critical skills. Media literacy should be an ongoing learning process starting in early childhood and continuing throughout adulthood. Partnerships between educational institutions, media organizations, and other stakeholders can ensure widespread access to media literacy resources, equipping individuals with the skills needed to navigate the digital landscape responsibly [10].

Media education significantly contributes to developing critical thinking abilities. Individuals must question, critique, and evaluate the information they consume. Understanding the motivations behind media content and its impact on target audiences is a vital aspect of media literacy. Knowing how to use media responsibly and ethically is as important as using it effectively [7].

As the prevalence of social media addiction highlights the need for critical digital skills, media education equips individuals to navigate the digital landscape, make informed choices, and mitigate the risks associated with excessive social media use. By promoting digital and media literacy, individuals can analyze media messages critically, exercise their rights in the digital age, and foster empathy and tolerance [18].

## **2.6 Combating social media addiction from a media literacy perspective**

A media literacy perspective is crucial in combating social media addiction by equipping individuals with the skills to navigate social media responsibly and critically. Media literacy helps individuals understand the persuasive techniques and addictive features of social network sites (SNS), enabling them to make informed choices, establish boundaries, and adopt healthier behaviors [10].

Media literacy initiatives can address the digital gap, particularly for children and young individuals. These programs equip individuals with the necessary skills to engage critically with social media platforms, democratizing their ability to use social media responsibly and mitigating the risks of addiction [7].

Key strategies from a media literacy perspective include raising awareness about the addictive features of social media platforms. Educating individuals about design principles and psychological tactics empowers them to take control of their social media experiences. Critical analysis and reflection help individuals recognize manipulation techniques and develop skills to resist and manage these tactics.

Balancing online and offline activities is another crucial aspect. Media literacy education can help individuals develop strategies for managing their time on social media, setting boundaries, prioritizing other aspects of their lives, promoting healthier habits, and preventing addiction [6].

Developing critical evaluation skills is essential in media literacy. By fostering critical thinking, media literacy enables individuals to evaluate the credibility of content on social media, reducing the risk of falling into addictive patterns driven by misinformation or fake news [11].

Media literacy also addresses the societal implications of social media addiction. It highlights the impact on mental health, relationships, and overall well-being, fostering a culture of digital citizenship and responsible social media engagement. Educating individuals about their digital rights and promoting ethical behavior and respectful communication online contribute to a healthier social media environment and mitigate addiction risks.

Media literacy is instrumental in combating social media addiction. By raising awareness about addictive features, promoting balanced usage, developing critical evaluation skills, and fostering responsible digital citizenship, media literacy equips individuals to navigate social media responsibly and prevent addiction. Integrating media literacy into educational curricula and promoting collaboration among educational institutions, government bodies, and media organizations ensure the widespread adoption of media literacy programs, empowering individuals to engage critically with social media platforms.

## **3. Methodology**

To explore the challenges and strategies related to social media addiction and media literacy, a comprehensive literature review was conducted. The review drew upon scholarly articles, research studies, and relevant reports from reputable sources, including peer-reviewed journal publications and authoritative organizations [6, 20]. The review involved searching for relevant academic journal articles, reports, and other scholarly sources that addressed the topic of social media addiction, its impact on mental health, and strategies for promoting media literacy. This search was conducted using various databases, including PubMed, PsycINFO, and Google Scholar,

using keywords such as “social media addiction,” “mental health,” “media literacy,” and “well-being.”

The selected sources were carefully analyzed and synthesized to identify the key themes, challenges, and potential solutions related to addressing social media addiction and fostering media literacy. The findings from this literature review provide a thorough understanding of the current state of research on social media addiction and the strategies that can be employed to promote media literacy and mitigate the negative impacts of excessive social media use.

The comprehensive review of the existing literature serves as a solid foundation for this study, providing a thorough understanding of the current state of research and the key considerations surrounding social media addiction and media literacy. By synthesizing and building upon the findings from these studies, the research can further strengthen its scientific quality and contribute to the ongoing scholarly discourse on this critical issue.

To complement the literature review, a quantitative survey approach was employed to collect empirical data on users’ perceptions, attitudes, and behaviors related to media literacy and social media usage. The survey aimed to understand the current perception of respondents regarding their level of media literacy and the challenges they face in using social media. This survey provided an adequate diagnosis to support future lines of research.

The survey was designed in several parts. The first part consisted of 25 items on a Likert scale, intended to perform a factor analysis to understand addiction and literacy, along with gathering interesting information about consumer behavior. The remaining questions were general inquiries about their social media behavior.

The survey sample consisted of 264 individuals, excluding those who either declined to participate or did not complete the survey. The survey was administered over 5 days at the end of June, capturing responses from all generations. The respondents were distributed by generation, including Baby Boomers, Generation X, Millennials, and Generation Z.

The survey was developed following rigorous methodological standards to ensure the validity and reliability of the collected data. This included pilot testing the survey to refine questions, ensuring they were clear and unbiased. The survey was distributed online (several social media platforms, such as Facebook, Instagram, TikTok, and WhatsApp) to a diverse sample to capture a wide range of perspectives.

#### **4. Findings**

This section presents the findings from our study on social media addiction and media literacy. The analysis includes both descriptive statistics and a detailed factor analysis. The descriptive statistics provide an overview of the demographic distribution of the sample and key insights into perceptions of social media use, addictive behaviors, media literacy, and the impact of social media on mental health. The factor analysis uncovers underlying dimensions related to social media addiction and media literacy, revealing the multi-dimensional nature of social media use. These findings offer valuable insights into the patterns of social media behavior and highlight the importance of targeted interventions and educational programs to promote responsible use and enhance media literacy skills. The findings of this study are derived from the comprehensive literature review and the quantitative survey conducted to understand social media addiction and media literacy.

## 4.1 Descriptive statistics

The demographic distribution of *the survey* indicates the predominance of younger generations, particularly Generation Z, which may reflect higher engagement and potential vulnerability to social media addiction; the sample composition is as follows: Generation Z (38.3%) constitutes the largest group among the respondents, followed by Generation X (30.7%), Millennials (16.7%), and Baby Boomers (14.4%).

### 4.1.1 Perceptions of social media use

A significant proportion (42.8%) of respondents agreed, and 28.4% strongly agreed that they spend too much time on social media. 40.2% agreed, and 43.6% strongly agreed that they frequently check their social media upon waking up and before sleeping.

### 4.1.2 Addictive behaviors

While 31.4% of respondents believe social media can improve self-esteem, a larger portion (65.2%) strongly agree that social media can be addictive and negatively impact mental health. Also, 26.1% of respondents felt anxious or restless when unable to access social media, and 25.0% agreed that they had tried to limit their social media use but were unsuccessful. The high frequency of checking social media first thing in the morning and before bed suggests that interventions should focus on creating healthy routines and reducing compulsive behaviors.

### 4.1.3 Media literacy and awareness

A substantial number of respondents (48.5%) felt they had a good understanding of the risks and benefits associated with social media. 39.4% expressed a desire for more education on using social media healthily and responsibly. The strong desire for more media literacy education emphasizes the role of educational initiatives in fostering responsible social media use and mitigating addiction risks.

### 4.1.4 Impact on mental health

About 31.4% of respondents believed social media could be addictive and negatively affect individuals. 22.0% were unsure if social media had a positive impact on their lives, indicating ambivalence about the benefits of social media use. These mixed perceptions of social media's impact on self-esteem and mental health indicate that while some users benefit, a majority acknowledge the potential for addiction and negative effects, necessitating a balanced approach in media literacy programs.

### 4.1.5 Behavioral insights

The auto-perception of average time spent on social media per day was approximately 3.96 hours, with a standard deviation of 2.458 hours. Respondents reported various frequencies of content posting, with 72.0% posting once a week or less. The significant amount of time spent on social media daily underscores the necessity for interventions aimed at time management and reducing excessive use.

## **4.2 Factor analysis**

The factor analysis conducted on the Likert scale items aimed to uncover underlying dimensions related to social media addiction and media literacy. The factor table shows the total variance explained by each component. In this analysis, six components with an Eigenvalue over 1, have been extracted, explaining 58.416% of the total variance. KMO is .907, and Bartlett's test of sphericity is significant.

An orthogonal (varimax) rotation was used, which maximizes the variance of the loadings of each item on each factor. Each of the six identified key factors are explained as follows.

### *4.2.1 Social media dependency*

Items in this factor include statements like "I feel that I spend too much time on social media," "I feel anxious or restless when I cannot access my social media," "Social media often distracts me from my daily tasks and responsibilities," "Comparing myself to other users on social media makes me feel insecure about myself," "I have tried to limit my use of social media, but I have not succeeded," and "I would like to reduce the time I spend on social media, but I find it difficult."

This factor reflects the extent to which individuals feel dependent on social media, experiencing anxiety, distraction, and difficulty in limiting usage. It highlights the addictive nature and the negative emotional impact of social media use.

### *4.2.2 Social comparison and approval seeking*

This factor includes items such as "Social media has improved my self-esteem and personal image," "I feel pressured to post interesting content and get 'likes' and comments," "I frequently share personal information on my social media," "I feel pressured to always be available and respond quickly to messages," "I believe social media reflects my true personality and who I am," and "Interactions on social media positively impact my mood and emotional well-being."

This factor captures the role of social media in self-presentation and social interaction. It reflects the pressure to maintain a certain image, the sharing of personal information, and the perceived positive impact on self-esteem and emotional well-being.

### *4.2.3 Connectivity and education*

Items here involve statements like "Social media helps me stay connected with friends and family," "I would like to receive more education on how to use social media healthily and responsibly," "I believe social media can be addictive and negatively affect some people," and "Social media has helped me discover new interests and hobbies."

This factor represents the role of social media in maintaining connectivity with others and the desire for education on healthy usage. It highlights the dual nature of social media, providing connectivity and opportunities for learning while also posing risks of addiction.

### *4.2.4 Engagement and usage patterns*

This factor includes items such as "Sometimes I lose sleep because I stay up late using social media," "I check my social media immediately after posting something

to see the reactions,” “Interactions on social media positively impact my mood and emotional well-being,” and “I feel comfortable interacting and meeting new people on social media.”

This factor reflects the patterns of social media engagement and usage, including checking reactions to posts, losing sleep due to usage, and interacting with new people. It indicates how social media usage can impact daily routines and emotional states.

#### *4.2.5 Awareness and knowledge*

Items loading highly in this factor are: “I believe I have a good understanding of the risks and benefits associated with social media,” “I believe social media can be addictive and negatively affect some people,” and “I am satisfied with the amount of time I spend on social media.”

This factor captures the awareness and knowledge about social media. It includes understanding the risks and benefits, as well as satisfaction with time spent on social media, indicating a more informed and balanced perspective on usage.

#### *4.2.6 Desire for guidance*

There is only one item that is highly loaded in this factor: “I would like to receive more education on how to use social media healthily and responsibly.”

This factor is focused on the desire for guidance and education on healthy social media usage. It reflects the need for better understanding and tools to manage social media use responsibly.

The factor analysis reveals the multi-dimensional nature of social media addiction, indicating that it is influenced by various psychological, social, and behavioral factors. Understanding these factors is crucial for developing targeted interventions and educational programs to promote media literacy and mitigate the negative impacts of social media addiction.

The findings from the factor analysis suggest that interventions should address the different dimensions of social media addiction. For instance: (1) Educational programs should focus on enhancing media literacy, helping individuals critically evaluate their social media use and understand the psychological tactics used by platforms. (2) Behavioral interventions can target compulsive use and social comparison, helping individuals develop healthier social media habits and manage their time more effectively. (3) Mental health support should be provided to those experiencing anxiety, depression, or other negative mental health outcomes related to social media use.

These findings provide valuable insights into the patterns of social media use and the level of media literacy among individuals. They highlight the need for targeted interventions to promote responsible social media use and enhance media literacy skills to mitigate the negative impacts of social media addiction.

## **5. Discussion**

The literature review revealed several key challenges and strategies related to social media addiction and media literacy [1, 3]. A primary challenge is the addictive nature of social media platforms, which can lead to excessive and compulsive use,

negatively impacting mental health and well-being. Features like the continuous feed of new content, intermittent reinforcement, and the fear of missing out (FOMO) contribute to addictive behaviors, resulting in decreased productivity, disrupted sleep patterns, increased anxiety, and a decline in real-world social interactions. Additionally, the lack of a clear and universally accepted definition of “social media addiction” complicates addressing the issue effectively. The pervasive use of social media, particularly among young people, highlights the vulnerability of this demographic to its negative impacts, making it difficult to maintain a healthy balance and manage consumption.

The literature underscores the importance of media literacy in the digital age. Media literacy equips individuals, especially young people, with the skills to critically evaluate and navigate the online environment. Educational interventions and the development of digital citizenship skills are proposed as potential solutions to mitigate the negative impacts of social media addiction. The review also acknowledges the nuanced relationship between social media use and well-being. While most evidence points to the detrimental effects of social media addiction, some researchers highlight its potential benefits, such as facilitating social connections and providing access to information and resources. This underscores the need for a balanced approach when addressing social media addiction and promoting media literacy.

The findings from this study provide a comprehensive understanding of the factors contributing to social media addiction, its consequences, and the role of media literacy in mitigating these effects. These findings align with existing literature and emphasize the significance of developing targeted interventions and educational programs. Strategies for enhancing media literacy can help individuals critically evaluate their social media use, understand the psychological tactics employed by platforms, and develop healthier social media habits. This multi-dimensional understanding is crucial for promoting responsible social media use and mitigating the negative impacts of social media addiction.

## **5.1 Social media addiction and its causes**

The study confirms the multifaceted nature of social media addiction, aligning with previous research that identifies various psychological, social, and technological factors as contributors. The literature review highlighted that social media platforms are designed to provide constant reinforcement and immediate gratification, which are key drivers of addictive behaviors [4]. This reinforcement often comes in the form of likes, comments, and shares, which enhance users’ self-esteem and sense of belonging, encouraging continued engagement.

Social comparison and the desire for social validation are significant psychological factors contributing to social media addiction. As noted in previous studies, individuals frequently compare themselves to others on social media, leading to feelings of inadequacy and the fear of missing out (FOMO) [8]. This study’s survey results corroborate these findings, with many respondents acknowledging that they feel pressured to post interesting content and compare their lives to others on social media.

## **5.2 Consequences of social media addiction**

The negative consequences of social media addiction on mental health and well-being are well-documented in the literature. Excessive social media use has been linked to increased anxiety, depression, and lower subjective well-being [2, 11].

The survey results in this study support these findings, with respondents reporting feelings of anxiety, restlessness, and a decline in face-to-face interactions. This aligns with the literature that suggests social media addiction can lead to social isolation and impaired real-world relationships [4].

Furthermore, the phenomenon of FOMO exacerbates these negative impacts, as individuals feel compelled to stay connected to social media to avoid missing out on rewarding experiences [6]. This persistent need to stay updated can disrupt sleep patterns, leading to sleep disturbances and further affecting mental health [7]. The survey results reflect this, with many respondents reporting late-night social media use and poor sleep quality.

### **5.3 The role of artificial intelligence in content personalization**

Artificial intelligence (AI) plays a crucial role in enhancing user engagement on social media platforms through content personalization. While AI-driven content can improve user experience by tailoring content to individual preferences, it also contributes to addictive behaviors. The dual-system theory perspective suggests that AI-driven content personalization primarily targets the impulsive system, presenting users with highly engaging content that fuels their usage and dependency [10].

The survey results indicate that respondents are aware of the personalized nature of social media content, yet they continue to engage with it, often to the detriment of their mental health. This underscores the need for users to develop critical evaluation skills to manage their social media consumption effectively.

### **5.4 Cybersecurity and social media addiction prevention**

Cybersecurity measures play a pivotal role in preventing social media addiction by protecting user privacy and implementing effective content moderation and filtering systems. The extensive collection of user data by social media platforms can facilitate addictive behaviors if not managed responsibly [12]. This study highlights the importance of robust cybersecurity measures, including providing users with control over their data and adopting privacy-focused mechanisms.

Effective content filtering and moderation can help identify and reduce exposure to addictive content, thereby mitigating the risk of social media addiction [17]. The survey results emphasize the need for parental controls and education initiatives to assist parents in managing their children's social media usage and fostering healthy digital habits from an early age [21].

### **5.5 Importance of media education in developing critical skills**

Media education is critical in empowering individuals, especially young people, to navigate the digital landscape responsibly. Media literacy programs can equip users with the skills to critically evaluate media messages, understand digital rights, and foster empathy and tolerance [10, 12]. The survey results indicate a strong desire among respondents for more education on responsible social media use, highlighting the importance of integrating media literacy into formal education curricula.

By promoting a balanced approach to online and offline activities, media literacy can help individuals set boundaries, manage their time on social media, and prioritize other aspects of their lives. This study supports the view that media literacy is essential in preventing social media addiction and promoting overall well-being [16].

## **5.6 Combating social media addiction from a media literacy perspective**

Addressing social media addiction requires a comprehensive approach that includes raising awareness about the addictive features of social media platforms, promoting a balanced approach to social media use, and fostering critical evaluation skills. Media literacy programs should focus on these areas to empower individuals to navigate social media responsibly and prevent addiction [22].

This study highlights the importance of fostering a culture of digital citizenship and responsible social media engagement. By educating individuals about their rights and responsibilities in the digital space and promoting ethical behavior, media literacy can contribute to a healthier social media environment and mitigate the risk of addiction [23].

## **6. Conclusion and further research suggestions**

This chapter has explored the importance of media education and literacy in the context of social media. It has highlighted the role of media education in developing critical skills and empowering individuals, particularly children and young people, to navigate the digital landscape responsibly.

From a media literacy perspective, it is evident that media education plays a crucial role in equipping individuals with the necessary skills to critically analyze media messages, evaluate the credibility of sources, and navigate the vast amount of information available on social media platforms. By promoting digital and media literacy as lifelong learning processes, starting from early childhood and continuing throughout adulthood, media education can empower individuals to exercise agency, make informed decisions, and assert their rights in the digital age.

Media education can contribute to combating social media addiction by raising awareness about the addictive features and persuasive tactics employed by social media platforms. By fostering critical thinking skills, media literacy enables individuals to resist manipulation and make deliberate choices about their social media use. Emphasizing the importance of a balanced approach to online and offline activities, media literacy programs can help individuals set boundaries, manage their time on social media, and prioritize other aspects of their lives.

Media literacy also empowers individuals to evaluate the credibility and reliability of the information they encounter on social media, reducing the risk of falling into addictive patterns driven by misinformation or fake news. By fostering a culture of digital citizenship and responsible social media engagement, media education promotes ethical behavior, empathy, and respectful communication online, contributing to a healthier social media environment.

To fully realize the benefits of media education and combat social media addiction effectively, it is vital to integrate media literacy into formal education curricula and establish partnerships between educational institutions, media organizations, and other stakeholders. By promoting collaboration and ensuring wide access to media literacy resources, we can equip individuals of all ages with the necessary skills to navigate social media responsibly, prevent addiction, and contribute to a more informed, critical, and inclusive social media landscape.

Media education and literacy are essential in today's digital age. By developing critical skills, raising awareness about addictive features, promoting a balanced approach to social media use, and fostering responsible digital citizenship, media

education empowers individuals to navigate social media responsibly and combat addiction. By prioritizing media literacy in education and fostering partnerships, we can create a society where individuals are equipped with the tools to make informed decisions, critically engage with social media platforms, and contribute positively to the digital landscape.

Future research should continue to explore the complex relationship between social media use and well-being, considering both the potential benefits and risks. Longitudinal studies could provide deeper insights into the long-term effects of social media addiction and the effectiveness of media literacy interventions. Additionally, research should investigate the role of emerging technologies, such as AI, in shaping social media behaviors and the implications for addiction prevention.

In conclusion, this study underscores the critical role of media literacy in addressing social media addiction. By equipping individuals with the necessary skills to navigate the digital landscape responsibly, media literacy can help mitigate the negative impacts of social media addiction and promote healthier relationships with digital platforms.

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## **Conflict of interest**

The authors declare no conflict of interest.

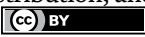
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Section 2

# Regional and Local Contexts

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# Perspective Chapter: The Effects of Social Media on Local Democracy

*Hilde Bjørnå*

## Abstract

This chapter discusses social media impact on local democracy and aims to provide knowledge about how social media impact politicians and political communication in local democracies. It discusses the special characteristics of social media, provides a brief overview of deliberative democracy values, and identifies what makes social media special in local politics. The empirical section examines Norwegian local politicians' perceptions about social media impacts on some core deliberative values. It finds that social media is not a very good arena for reason-giving communicative practices, largely because discussions tend to be shallow and emotional, and that social media has impacted the relationship between politicians and citizens both negatively and positively. On one hand the hate speech and negative posts seem to have open a new divide in the relationship and on the other social media have developed to be arenas that enable increased two-way communication. Social media also provides information about local concerns and what is going on in the community.

**Keywords:** social media characteristics, local democracy, local politicians, deliberative democracy, Norway

## 1. Introduction

It is argued that social media have become a new, digital public sphere (e.g. [1, 2]) with an own independent effect on politics in established democracies [3]. Many recent research contributions find this disturbing [4–6], whilst others are more interested in the new opportunities the new digital public sphere offer. Most notably because it provides a variety of opportunities to enhance public participation in democracy and deliberative democratic ideals [7]. Deliberative democracy is a theoretical approach which prioritizes citizen involvement in political decision-making and an approach that holds that the most legitimate and effective policies arise when citizens come together to thoughtfully exchange ideas [8, 9].

Much of the research on social media and politics are focusing on the national stage and the potentials in different digital platforms. The local political dimension has had far less attention, even from proponents of digital participation in democracy. This is unexpected because the local democracy is per definition closer to the people and deals with problems that affect citizens in everyday life [10]. Citizens and politicians in local communities tend to know each other and to exchange experiences, concerns, and ideas face-to-face. Moreover, the local traditional news outlets are few

and tend to have powerful roles as opinion formators on local concerns. Social media impacts on these relations, and local democracy itself, in ways we know little about.

This chapter aims to provide knowledge about how social media impact politicians and political communication in local democracies. It does so by examining Norwegian local politicians' perceptions about social media impacts on their relations to the citizens; is it an arena for reason giving practices, does it bring politicians and the citizens closer together, is it providing information relevant for political problem-solving? The answer to these questions contributes to the understanding of how social media is changing local democracies.

## **2. What is special with social media?**

It is useful to compare social media with traditional news outlets to illustrate its special characteristics. Here we find that social media has low barriers to entry and user-generated content. The low entry barriers and user-generated content make it possible for citizens, including marginalized groups, to take part and set the agenda in political discussions, and politics are not just for the political establishment and media journalists. Gatekeeping of the spread of political information is less effective than in traditional news outlets and provides citizens a voice that previously could more easily be sidelined. For local communities, the low barriers to participate in local political discussions are likely to be especially low, as many of the issues up for discussion are affecting the citizens directly and are known to them. Hence, local citizens have a local knowledge that is relevant for the discussions and can more easily participate with confidence.

The user-generated content has the potential to change how citizens and politicians interact. Social media enables immediate feedback on political proposals, decisions, and policy actions, and social media reactions can lead to better knowledge of citizen's evaluation. This in turn, can lead to improved policy decision-making and advance public good [11]. Moreover, social media is a direct communication channel between politicians and citizens and provides as such opportunities for both individual politicians and citizens to explain their opinions more in full than in traditional news outlets that is short of space and often edited to get juicy headlines [12]. Misunderstandings and misinterpretations can be explained, and more personal sides can be revealed. This can lead to closer relations between politicians and citizens and is particularly relevant at a local arena where it always matters for politicians to know their constituency personally and to find solutions to their everyday problems.

On a general level, it is argued that social media is a channel for increased transparency as social media can be used for disseminating critical information about government operations [13], making it harder for political and business actors to hide information [14] and make them more accountable for their decisions [15]. At a local setting the transparency is presumed to be especially high, as information spreads easily between people who know each other.

On the other hand, despite the potential in social media to facilitate a closer relationship between the politicians and citizens, the negative side with social media is highly present in contemporary literature. One of the founding fathers of deliberative theory, Jürgen Habermas, for instance, is negative to political deliberations on social media. Social media structure and ownership represents a problem because large economic firms can manipulate systems to advance certain interests and opinions and have little interest in informing and editing the public debate [16].

A second issue is that strong actors can use social media to polarize and fragment the public sphere [17], and a third issue is that social media is problematic as an arena for information and deliberation. On social media we find a clear difference from traditional media, where few people argued on behalf of others, to a situation with many authors of arguments. These new authors do not have the same normative limits and scholarship as authors in traditional news outlets [16]. This, argues Habermas, contributes to fragmentation and privatization of arguments and a situation where individual actors relate to each other in a limited degree. When normative limits are surpassed and qualitative filters are reduced, the ability to form a reasoned opinion becomes damaged in a way that has negative implications for democracy [18].

Most of these arguments against political social media use are relevant to all levels of government; it would be naïve to believe that system manipulation does not occur at the local level, and that social media is not used manipulatively by strong actors. The argument about the arena itself not being suitable for information and deliberation at a local political level is, however, debatable. Although there is little reason to believe that user-generated content has the same normative limits as authors in traditional news outlets, it is likely to believe that local citizens have good relations to their local politicians, especially in smaller local communities. They do after all relate to each other as neighbours, in shops, on festivals and other social gatherings, and local politicians are likely most eager to appear interested in how citizens perceive problems.

The current literature also informs that social media can be used to spread extremist ideas and fake news in a way that potentially increase their influence and by that serve as a threat to democracy. The social media is providing opportunities to repost, reshare, and copy content, and if false, this undermines the reputation mechanisms that serve to guard the quality of information of traditional media outlets in developed democracies [3]. Social media has also made more room than ever for publicizing personal experiences related to policies, to express emotions, and, as redactional editing is low, to use hash language and hate speech. Some politicians find that the use of hash language and hate speech is hard to take, and they do not like their “new” work situation and contemplate whether to renew their candidature. Ultimately, this development can lead to a lesser range of new politicians [10].

It is further argued that social media has contributed to the “privatization of politics”, and that this is challenging political parties in political systems where the political party plays the main role for spelling out politics [19]. Social media has been grasped as an opportunity by many politicians as they increasingly post “self-promoting” messages and are marketing themselves on social media [20], especially in electoral campaigning. The literature on political marketing and self-promotion is attentive to the willingness to disclose personal life, personal attributes, and new media as a semi-private space for self-representation, e.g. [21]. This “intimization” and personalization of politics is, however, not new, nor is it illegitimate in a local setting, because local representatives are expected to develop of close relations and hold values that are sensitive to local identities [10].

### **3. Deliberative democracy and social media**

It is expected that citizen participation provides decisions with greater legitimacy, quality, and acceptance [7], and as digital media has become everyday use by large segments of the population, it offers a new infrastructure with ample room for engagement in public deliberations, e.g. [22, 23].

Public deliberation is regarded as a cornerstone of democracy and is a process through which deliberative democracy occurs. Public deliberation is reason-giving communicative practices between citizens, politicians, the civil society organizations, and mass media that aim to solve problems and disputes in the public sphere [24–26]. Deliberative democracy is a type of participation that is distinguished by informed discussions between individuals about issues that concern them and contribute to reduce basic disagreement and to establish grounds for greater agreement [27].

More demanding interpretations of the deliberative perspective, for example, [9, 28] is to pay respect to the better argument that different actors should try to agree through exchanges of opinions, that they follow procedural rules such as listening to others and reflect on their arguments, that they show respect, treat each other's as equals, are truthful and civil, that their arguments are generalizable so that others can respond to them, and that the reason-giving deliberation is inclusive in terms of equal access and participation opportunities. Ideally, deliberative processes should include information about all relevant issues.

The vast literature of empirical studies of deliberation has, however, contributed to a stretching of the concept [29]. The use of digital media has contributed as well, as the empirical research on online deliberation is on the rise [7]. There is, however, relative agreement in empirical research that deliberative democracy rests on reason-giving communicative practices that involve a broad set of stakeholders, and that the communication informs the debate. Hence, at interest here is to get further understanding of how local politicians perceive social media as an arena for reason-giving communicative practices, dialog with citizens, and better information about local issues.

#### **4. What makes local politics different on social media?**

Traditions for citizen participation make the local setting unique [30]. It is normal in local democracies to engage local citizens in local decision-making and to let them have influence on matters that are important in their everyday lives. Citizens have local knowledge and tend to have a shared understanding of local challenges, something that makes them able to participate in local debates with confidence. What is up for discussion often does not require expert knowledge beyond their experience as citizens. This is likely to lead to especially low barriers for participation in local political debates on social media. Moreover, especially in smaller communities, information spreads easily as people tend to know a lot about each other and what goes on in the community.

Local democracies are set up to deal with local problem-solving and involves a special closeness between the citizens and the representatives. The local politicians are to serve citizen interests, and they have an ombudsman role towards individual citizen and have broad networks in local communities. Contrary to national politicians that is more tuned to traditional news media journalists to get their messages across, local politicians need, and have always needed, to talk to their constituents. Local politicians tend to know a lot of the local citizens, if not personally, then by small conversations or greetings. This proximity is likely to enhance responsiveness in social media debates.

Local politicians in smaller democracies, at least in a Scandinavian setting, tend to be “ordinary people”, a person of the people, rather than professional politicians with large support apparatus. Many of them have an ordinary job beside the position as an

elected politician. This has impact on how they can deal with political discussions on social media as they have limited time to use social media to launch ideas and follow up discussions. As they are “ordinary people”, they might be more sensitive to negative posts and hate speech than professional politicians and more worried over how families and friends react to hate speech from citizens in the community. They do after all meet many of them in everyday life. Besides this, many of the local politicians are less skilled in how to operate the various social media arenas. This makes platforms like Facebook more favorable for the older generation, whilst the younger generation and professional politicians tend to use all kinds of platforms.

## **5. Methods**

This chapter uses a qualitative-explorative approach using a multiple-case study method [31] and makes use of interviews with local politicians. Interviews with key informants enable in-depth understanding of how different actors perceive the social and political realities to which such communication relates [32]. The empirical material is from North Norway, part of a country currently located in the vanguard of the global information society [33] and named the world’s most democratic country in 2022 [34]. Social media are widespread and commonly used by both national and local politicians.

Norwegian municipalities have, compared to municipalities in most other nations, a prominent position in the wider government structure; they do for instance run kindergartens, primary schools, and homes for the elderly, and they maintain local infrastructure and deal with development and local challenges. At the local council, we find an influential political executive board consisting of prominent local representatives and local party leaders. The chapter builds on interviews with 39 such executive board representatives across Northern Norway and asked semi-structured questions concerning the opinion local representatives had about the impact of social media on their role as politicians, on political debates, and whether they perceived that social media contributed to them becoming closer to the citizens and more informed. Interviews were performed on Teams, and they lasted 30–40 minutes and was transcribed and translated by the author.

The semi-structured interviews enabled an exploration of personal experiences and discussions of different perceptions. However, while the interviews indicate certain findings, this study is not necessarily representative of the effects of social media on local democracy in other political systems and other Norwegian local governments.

## **6. What do local politicians think about social media and democracy?**

### **6.1 Previous studies**

Previous studies have found that Norwegian local politicians view on social media is divided between those who find it positive, those who hates it, and those who sees both positive and negative sides with this new political arena. The latter category is by far the largest [10, 12]. Generally, it is found that most local politicians increasingly participate on social media, but that traditional modes of communication for political purposes remain important [35]. It is also found that Facebook is a service

where “ordinary” people engage in political interaction with politicians, and that the stronger the political interest citizens express, especially on Facebook, the more commenting and sharing of content [36]. Recent studies find that local politicians take advantage of social media in the agenda-setting process, for problem definition and to sell their ideas, suggesting that social media is an increasingly important tool for politicians to reach out to citizens and that social media discussions are transported into the political forums, and indirectly to traditional media outlets [12]. Fake news and extremist ideas have so far not been considered a problem in the Norwegian context.

## **6.2 Empirical findings**

The interviews with 39 representatives revealed both negative and positive perceptions of social media. On the negative side, politicians report hash language and hate speech. This makes it personally difficult for them, not only because it affects them, but also because their families are affected. Some, mostly men, do not care to much, but younger women are more targeted and affected. Some ponder whether to continue as political representatives because of it. Politicians express this in comments like “The worst thing for me is when it affects the family”; this was a family man that was not affected himself but felt that it had become a burden for his son. A young woman had to have her husband to read her social media for a period: “I needed to take a break. It became too negative”. The negative posting on social media astonishes: “This is people I can meet in the shop a few days after, and they do not seem ashamed of the post, they pretend as nothing has happened” said a female representative, whilst a man said that hate speech had “made my wife suggest that we move away from this community”.

The emotionality and the personal perspectives on local political problems on social media are mostly considered a problem for those to have to defend political decisions. The political arguments may become personal, and based on single personal experiences, and if so, it may to a lesser degree give room for broad considerations. “It is difficult to defend yourself and your broad policy when confronted with singular negative personal experiences. It is hard to participate when you are accused of being unethical” says a man in the political position, and that “politicians become afraid to act.” A man from a party in opposition finds the emotionality and personal stories important and says that “social media is an important channel for us as a [opposition] party to highlight our views on elderly care”. This suggests that emotional communication on social media can be used strategically to enhance support in a local setting, and that it, in worst cases, can cause non-decision making.

Most local politicians report that social media is time-consuming. It takes lot of energy to follow up discussions. “Social media has changed politics and the role of the party. It is a clear expectation to politics and political parties to be present in social media that you can deal with social media and stay online”. The expectation of immediate reactions changes things “One become more active and keep up, responses cannot wait, you have to react within five minutes”. Many local representatives find it very stressful to always be online and to be expected to justify viewpoints. Most are after all doing local politics in their spare time, and only have dedicated colleagues that voluntarily help them.

Many also report that it is difficult to have deeper conversations on social media. Short, punctuated arguments are what is shared and therefore matters. Although short, punctuated arguments can be both rational, clear, and inform the debate, it is, according to some of the informants, the dissatisfied posts that are given attention.

Examples of this are quotations like “It is a channel for those who cries the loudest, it is the dissatisfied who get space. The discussion is not nuanced” and “it is impossible to reach out with facts and no point in social media discussions”. Hence, the informed discussion has, in many local politicians’ view, poorer conditions.

On the positive side, politicians report of increased knowledge about peoples’ perspectives on local challenges. Through their participation in different Facebook sites, politicians get increased knowledge of local concerns and what is going on in the local community. They get relevant information and quite a few reports along these lines: “I have been active in some groups that proved very useful. They have provided contact and information. We have had conversations that were very useful, such as in a village group where I participated a lot.” Many also feel that social media provides an arena for citizen perspectives on issues up for debate “I feel I speak more with a lot more people on Facebook, I reach out. Social media is an information channel for me, I can register the critique and dissatisfaction”. Many experience that social media has provided them with a closer relationship with citizens. Some do, however, doubt that citizen views on social media are representative for the community.

They also, in this sample of 39 representatives, largely respond to direct questions from citizens and find this positive: “The positive side with social media is that it is a low threshold for people to contact me.” Hence, the flow of information and two-way communication seem to have rather good conditions on social media in a local setting.

Politicians also note that social media makes them able to explain themselves in full and appreciate the existence of an arena where they can correct misinterpretations from traditional news outlets. “The best thing is that I have an arena where I can correct other media’s misinterpretation and explain quotations that are taken out of context. Newspapers, local Tv, and local radio just want headlines and sometimes give false impressions.” Traditional news outlets often cut them short and strive for headlines, making the political messages misunderstood.

The interviews reveal what local politicians find problematic and beneficial with social media use in local politics, although they do not agree on all aspects. The main impression is, however, that hate speech and negative posts are the most problematic, whilst the ability to reach out to the citizens and to explain themselves in full towards traditional news outlets are the most beneficial impact of social media in local politics.

## **7. Conclusion**

Social media is largely an ungoverned public debate arena, and political discussions are not moderated nor governed by the same regulations and norms as found in for instance local councils. It is very inclusive, nearly all can take part, and communication on this arena demands immediate feedback. Participants share and are interested in punctuated comments and are often emotional and personal. These characteristics make it impossible to fulfill ideal deliberative ideals. It provides minimal grounds, for example, the rational argument, agreement through exchanges of opinions and mutual respect, most notably because a few can destroy for the many, and because ordinary people are emotional and unschooled [16] in deliberative political communication.

That said, political social media debates may have some beneficial inputs to local deliberative democracy. Here, we have looked at perceptions of reason-giving communicative practices, closeness between politicians, and information relevant for problem-solving.

Many Norwegian local politicians find that social media is not a very good arena for reason-giving communicative practices, largely because discussions tend to be shallow and emotional. Emotions on social media can be used strategically in the political game. On the positive side, however, the politicians themselves strive to provide reasoned arguments to the citizens. Twisting of truth, fake news, and extremist ideas is at least not a problem at present.

Local political communication is different from other arenas both because of this closeness between politicians and citizens and because citizens have a local knowledge that provides them with expertise in local debates. On the national and international arena, we find politicians who are more dependent on journalist attention and broader networks and who discuss broader societal challenges. Local politicians are there to serve citizens, and they need to be liked by locals and are dependent of close relations to their constituents. Social media seems to have impacted the relationship between politicians and citizens both negatively and positively. On one hand, the hate speech and negative posts seem to have opened a new divide in the relationship, making it personally stressful and less tempting for politicians to engage in politics. They do after all often know and meet those who send such messages in everyday life, and so do their family and friends. Local politicians get this negative side with social media closer than politicians on higher political levels do. On the other hand, the social media relationship between politicians and citizens seems to have developed from previous one-way communication from the politicians to citizens [37] to arenas that enable increased two-way communication. Local politicians largely answer direct questions from citizens. This enablement suggests that social media contributes to increased citizen input in local politics.

As to information relevant to problem-solving, findings are more conclusive. Social media provides information about local concerns and what is going on in the community. This is relevant for informed decisions and knowledge of the community and suggests that social media contributes to local political learning. In addition, and in common with the politicians at the national level, local politicians get an idea about moods in the population and citizen perspectives from social media. Although it is debatable if citizen perspectives on social media are representative for the entire constituency, social media posts provide some ideas about how different proposals and viewpoints are received.

This chapter has also shed light on how social media is further changing the condition for local politics. The local traditional news outlets are no longer the only public source of information. Social media has provided an arena where citizens and politicians can express opinions and defend themselves. This has reduced the previous powers of traditional news outlets.

Also, whilst national politicians can get professional help with social media communication, such help is not common in local politics. This may contribute to participatory equality on social media, but it also makes local politics more vulnerable to negative elements such as hate speech. In addition, it is perceived as stressful for a large part of local politicians to always be present on social media and to always be ready to justify arguments. Such presence is something one can expect from politicians that has this for a living, but perhaps not from people who do politics in their spare time. The pressure to be present online may enhance employment of social media experts and in worst case scenarios make politicians leave local politics.

This study of social media effects on democracy contributes to the research community by providing knowledge about effects on local democracy; local democracy is closer to the people and therefore affected differently. This is to a large degree

overlooked in current studies and is a topic that deserves more attention in further research.

Within the Norwegian national context, this is an interesting and useful study for local governments. Findings here provide knowledge for practical use as it provides a background for understanding how social media is changing local democracy and makes aware of problems such as hate speech and online presence. Such problems need to be addressed through some form of assistance, because if not, politicians may leave office.

Findings here also contribute to the wider debate on social media in modern society. Although hindering voices becoming heard is considered detrimental to deliberative democracy, the current debate in Norway and elsewhere is largely negative to social media, and call for regulations. This study finds that although social media's low barriers to entry, user-generated content and immediate reactions do generate problems in Norwegian local democracy, social media also tend to be perceived as grounds for politically relevant information and increased responsiveness in democracy. Such positive effects of social media may suffer from increased regulations, and so will the participatory grounds that this media offer.

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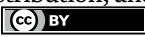
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# Social Media as Local Medium: The Mobilisation of Local Wind Farm Opposition Online

*Evan Boyle and Robert Galvin*

## Abstract

Renewable energy developments within local contexts are increasingly political rather than technical challenges. The research question guiding the findings presented within this chapter is on the role of social media in mobilising a community in opposition to a renewable energy development. The paper analyses a social media campaign acting as a mobilising force for the successful opposition to a rural wind farm development. A mixed-method approach to social media analysis has been developed to provide insights across two key parameters: geographical context and engagement. Two key empirical findings are represented; firstly, the geographical context of social media posts has a clear impact on rates of engagement, with relevance to organising online opposition, and trying to manage conflict for developers. Secondly, there was a strong correlation between engagement with the page and successes within the opposition campaign in real life, highlighting the role social media plays both in energy politics in local contexts, and in a broader societal context, energising real world action. As with much of social life, social media and online communication holds significant influence. Further consideration is needed as to how this may impact upon energy transitions and climate action more broadly.

**Keywords:** energy transitions, social media, public engagement, social movements, renewable energy, online mobilisation, opposition

## 1. Introduction

The need for an expedited energy transition is beyond debate [1], however, how this is implemented is still open for discussion. Whilst at a national [2] or global level the idea of renewable deployment is generally viewed favourably, at the local level social acceptance is often a contentious issue [3]. In many cases [4, 5] local resistance to the deployment of renewable energy infrastructure has succeeded in preventing the development of renewable capacity. Within this context, communicative social media platforms have a role as mechanisms through which to mobilise opposition to potential developments.

Renewable energy developments within local contexts can be seen as a political rather than technical challenge [3] within which social and ecological values play an

important role and trade-offs occur [6]. Place attachment, place change and visual impact are three of the many reasons for opposition found in the literature [7, 8]. A lack of trust in developers [9]; disagreements over the payment of compensation [10] and a lack of information from project developers [11] are also noted as issues. Reasons for supporting proposals include having a global rationale, being a supporter of the technology in question [12], the economic benefits of renewable energy, and trust in the scientific knowledge base [13]. Despite these reasons for supporting development, there are still difficulties with regards to representation in discussions on the development. The idea of a 'silent majority' [14] has been used to describe the situation in which a minority of people who hold oppositions to a potential project are involved in discussions with developers in the public sphere while the majority in favour of the development stay quiet to not disrupt things within their community. This is in keeping with the theoretical work of Noelle-Neumann [15] on the 'spiral of silence' within public opinion. As noted "people generally do not come forward with positive responses to planners' agendas" ([16]: 58). The contentious nature of the development of wind is represented in this research paper.

The potential for Facebook and other online platforms to act as an amplification of opinion, be that positive or negative, has been previously noted (See: [17] on fake news). The network effect of social media platforms and how they are designed for maximising attention in order to increase available revenue through advertising drives engagement which can create the emergence of viral content and within this the spread of misinformation. Social influence spreads through networks, shaping behaviour and beliefs. Algorithmic amplification prioritises information which garners the most attention often leading to this spread of misinformation, and as it plays out over time leads to the polarisation of opinion into factions. This dynamic is somewhat reminiscent of the Spanish-American War, "if it bleeds it leads", however differently to those days there are no longer centralised broadcasting instead replaced with atomised narrowcasting and echo chambers. This development has led to the contemporary milieu where emotion and personal beliefs shape public opinion above objective facts leading to the erosion of public trust in institutions and the regression of spaces for civil discourse. Contemporary research has sought to understand the way in which new mechanisms for communication established through instantaneous connectivity at global scale, coupled with the challenges references above are impacting upon the individual. Writing in 2010, Carr provides a comprehensive analysis of the ways in which internet use has a cognitive impact upon users in relation to attention, memory, and information retrieval. Users move towards skimmed reading in a sea of information away from immersive deep reading found through physical mediums. On from this, and facilitated by the rise of social media as a dominant force within the attention economy, studies have been undertaken which provide a basis for a correlation between social media use and negative mental health effects such as depression and anxiety [18].

Despite these emergent studies, the impact of media on public discourse has been well analysed from the middle of the 20th century onwards. The often-referenced work of Marshall McLuhan [19] presented the famous aphorism that the "medium is the message" whereby the way in which information is consumed is of greater relevance in relation to its implications for society than what said information actual pertains to. In relation to the challenges imposed by increasing social media use, this concept has contemporary relevance. At the same time work emerged to understand the role of an image mediated culture in preserving established power structures, embedding the individual into a passive consumer structure rather than being active

participants within political life [20]. What this means when the individual is both a consumer and producer of said image mediation in current times draws up interesting questions for such power structures and political and democratic processes. The work of Postman [21] outlines the shift from print to image-dominated culture implemented through the rise of television had led to the trivialization of news, politics and social issues with an associated decline in societies capacity for critical thinking. This movement towards entertainment over engagement with serious topics of discourse, Postman argued, presents challenges to intelligent discourse and has the potential to undermine democracy.

The negative impacts of social media are well documented. They can, however, provide a means through which a wider citizenry can become engaged in the public discourse, through the virtual public sphere. Despite disinformation and polarisation, the democratic potential of such spaces for participation in social life must be acknowledged. How to improve social media moving forward is much discussed (see: [22] on legislation; [23] on open-source technology and decentralisation). This tension between participation and misinformation is often of importance across many contemporary social issues.

New forms of interconnection established through social media have been studied with relation to activism and protest [24]. As Marshall suggests; “the internet has produced entirely new areas for the formation, expression and enforcement of social norms and in-group out-group dynamics. Facebook enables people to broadcast their views far more widely and brazenly than would happen in typical social interactions” ([25]: 23). While research does exist on the role of online platforms for offline protests [26], further investigations on the impact this may have within the socio-technical transition is warranted. Misinformation with regards to climate change did not emerge alongside social media and has a long history (see: [27]). Studies investigating the implications of post-truth politics and the culture of misinformation around climate change is something that is beginning to emerge within the literature [3, 28]. More specifically, recent research has begun looking at social media as a powerful mobilizer of local resistance to wind power [29] and the central role of social media platforms in energy debates [30].

In this chapter, a novel contribution is made through the longitudinal analysis of the social media presence and operations of an opposition campaign to a wind farm development over 12 months. This has been done to analyse the importance of social media as a space for mobilisation and the role this may play in the socio-technical transition to a low-carbon society moving forward. This paper analyses the use of Facebook by an opposition group to the development of a proposed wind farm claiming to be for community benefit in the Irish context. Through qualitative interviewing the importance of Facebook as a space for the mobilisation of social resistance emerged as a key area for research. This chapter seeks to highlight the role of the social media platform in enabling the facilitation of a successful opposition campaign which culminated in the abandonment of the proposed development.

## **2. Context**

### **2.1 Social acceptance issues for wind developments in Ireland**

The primary renewable energy resource being pursued in the Irish context to meet emissions reduction targets is wind- both onshore and offshore. While increases have

been made with regards to the generation of electricity capacity through the deployment of wind over the last number of years, there is still a considerable gap to bridge to meet emission reduction targets for 2030. Financial barriers exist such as taxes on renewable energy technologies and the lack of adequate financial incentives at government level to support development. Also, technical issues such as grid connection provide hurdles for potential developments. The major issues, however, preventing the increased development of Ireland's natural wind resource are social [31]. The increased importance of offshore wind in harnessing potential capacity has so far been lacking with regards to adequate care towards such social dynamics.

In this Irish context, reference has been made to the historical belief that the dissemination of necessary information was all that was needed to implement low-carbon solutions [32]. In recent times the role of the citizen has been recognised, helped by a range of oppositional campaigns and their representation in the media. The development of wind in Ireland became an ever-increasing issue of contention in 2013 when three large wind farm developments in the midlands were proposed which aimed to export all electricity produced to the UK. Alongside the range of reasons for opposition referenced above, members of the citizenry opposed to renewable development for domestic needs are unlikely to respond favourably to projects for export [11]. In the context of 2013 and austerity, the likelihood of an export project to the United Kingdom being met with no opposition was unlikely, particularly in the historical context of the Irish 'breadbasket' during the Great Famine [33]. Also in 2013, several anti-pylon protests in the country began to link in with one another, strengthening opposition to the proposed Grid Link project [34]. From this point onwards in the Irish context, opposition to wind turbines and associated infrastructure has become a common occurrence within the renewable energy transition [35]. At a broad level, the importance of environmental issues has fluctuated in Irish society over the last twenty years. The current drive towards decarbonisation, outlined in an all of government Climate Action Plan [36], is counterbalanced with the increased levels of opposition to renewable deployment and associated infrastructure. Poor practice on the part of developers has played a considerable role.

## **2.2 Case study wind farm (CSWF)**

Six years before the 12 months under investigation in this study a committee of individuals formed within the anonymised villages of A, B and C to discuss the possibility of developing a community wind farm for the area, under the company name of CSWF (fictional). A long planning process occurred from this point up until the 12 months under investigation, when upon hearing of the proposal an oppositional campaign began to emerge predominantly operating through the social media platform Facebook through the use of a 'like' page, i.e. a page in which an administrator can post content which is viewed in the newsfeed of Facebook members who have 'liked' the page. In month 1 a meeting was held in a nearby town hall adjacent to the study area, organised in opposition to the proposal, and calling into question the viability of the project across a wide range of topics such as aesthetics, health, house prices, noise, proximity to homes and other such objections. Following this meeting, a strong oppositional campaign began. The oppositional group (Anti-CSWF) championed the rejection of the proposed wind farm, citing the lack of community buy-in as a fundamental flaw within the proposal. Suspicion of the proposal, and the motives of the interested parties, was of crucial importance to the oppositional campaign. These concerns were often outlined on signage opposing the development throughout the

three villages following the initial meeting in month 1. In months 4 and 5 Anti-CSWF undertook a community-wide survey in which the response suggested that 99.2% of the community were against CSWF's proposal. Prior to this, a contentious online debate emerged surrounding the proposal in month 3. No public consultation around the project had yet emerged.

At this time, CSWF put out a tender for a community development officer who would assist in attempted to gain community support for the project. As part of this process, a consultation was planned for month 7, but due to a death within the community, it was cancelled and rescheduled for month 9. In month 9, before the public consultation, a protest march was organised in village A. The anti-CSWF group gauged attendance at the march to be 1000 people, with local media suggested it to be in the 'hundreds' and no official figures given. The public consultation went ahead the following week and involved several consultants speaking with members of the public about noise issues, site location, community benefit and technical specifics. As part of this process, public feedback forms were issued for completion to supplement online feedback forms. From this process 67 of the 72 respondents were resolutely opposed to the project, stating that under no circumstances were they in support of the proposal, rather than highlighting concerns that could be overcome for the project to move on. The CSWF project had a divisive effect within the community with many personal accounts referencing the tensions which it has caused in a previously tight-knit community. Following on from the public consultation and the feedback, the CSWF committee met to discuss the plans for the project. In month 10 it was announced that they could not persist with the community wind farm development as it had become too much of a contentious issue within the area and their ability to garner local buy-in had been compromised by the overwhelming opposition to the proposal in place.

### **2.3 Online activism and mobilizations for protest**

Within this chapter we support the suggestion that online spaces for the mobilisation of protest and resistance are central to the overall case; "digitally mediated interaction is not a domain of its own but has become part and parcel of how controversies unfold" ([29]: 2). Within the contemporary context, it is important to note that the internet, and within this social media, "makes a significant contribution to protest mobilization" ([37]: 782). The ability of social media platforms to enable the creation of solidarity in a digital sphere [38] has relevance to offline participation. In some cases, it is suggested "slacktivism" occurs whereby online participation satisfies citizens enough, preventing offline action [39]. Alternatively, "spillover" may occur, with online engagement acting as an entry point for offline participation [40]. The Right 2 Water campaign against Irish Water's introduction of water charges (2014–2016) was the first popular protest in the country to make use of social media with 22,700 videos uploaded online and shared across 110 separate social media pages [41]. Some estimations suggested it to be the largest protest movement in the history of the state [42]. As noted previously, "social media carry the potential to empower their users to express their own discourses, shape public debates and influence the political decision making" ([43]: 2).

Despite being a relatively underdeveloped area of study [44], the relationship between social media and social movements has begun to gain more traction moving beyond the oversimplified rejection of the potential influence of the former on the latter found in earlier discussions [45]. Following on from Tufekci [46] the internet has emerged as a digital iteration of the public sphere. The ability of this digital public sphere to enable protesters to mobilise quickly, facilitating solidarity is recognised as a

potential benefit. Yet, such mobilisation can quickly dissolve, lacking a well-developed structural foundation. Depending on the context, this ability to enable fast mobilisations may be beneficial in relation to the situation at hand. The American insurrection on 6th January 2021 was a coming of age moment for the linkages between online information and offline action. Here, the research approach is aligned with the theoretical understanding that the relationships between social media and activism is evident with regards to potential success, particularly in specific contexts which require speed of mobilisation such as an imminent infrastructure project.

### 3. Methods

Through investigating a rural protest campaign against the development of a wind project, a mixed-method approach has been used. Through initial interviews, several respondents focused on the importance of social media in mobilising the protest campaign (see: 4.1). This data guided further investigation into the role of social media in this process. The chronological outline of methods has been provided below (**Table 1**).

#### 3.1 Conducting exploratory interviews

In the initial stages of this research process, investigating an oppositional wind farm campaign, a number of qualitative interviews were conducted in the geographical area in question. These interviews were used to gather responses and analyse the motivations of both those in support and opposition to the proposed development. As Rubin and Rubin explain “qualitative interviewing is appropriate when the purpose of the research is to unravel complicated relationships and slowly evolving events” ([47]: 51). The role of social media in mobilising online opposition to the proposed development became a key consideration through the interview process and guided further research outlined below. Relevant quotations from these interviews have been included in the results section (see: 4.1 Online opposition and its divisive potentialities).

#### 3.2 Analysing the Facebook page

In response to rumours within the community, a Facebook “like” page was set up anonymously which centred on a clear anti-turbine message. Soon after its initial set up, this page was observed to take an active and central role in the community resistance to

Chronology of methods	
1. Exploratory Interviews	Initial interviews took place in the community with both those opposed and those in favour of the development. The role of social media emerged as a theme for further research. (See: 4.1)
2. Quantifying engagement	Every post made on the Facebook page was analysed for the amount of likes and shares it received during the study period. (See: 4.3)
3. Determining Geographical context	After engagement was quantified, the geographical context of each post was determined and logged based on the location codes. (See: 4.2)
4. Graphing Engagement and Context	The progression in engagement and context of the posts on the Facebook page during the study period were graphed against time. (see: 4.4)

**Table 1.**  
*Chronology of methods used.*

the proposed wind turbine development. The role was evidenced by the pre-emptive nature of the posts on the page regarding protest meetings and actions. Throughout the period from its setting up to after the wind turbine development failed, the anti-turbine community protest Facebook page contains 507 posts created by the administrator(s). Specific focus on the role of the administrator(s) was excluded from the study due to ethical considerations. 12 months of posts on the page constitutes the data analysed in this paper. The posts were analysed during 2019 after the page became inactive. The contextual nature of privacy in online social media platforms was noted [48] and any names/places/dates associated with the case in question have been removed.

For this research, each post made by the Facebook page during the study period was analysed for the level of engagement garnered and for the geographical relevance of the topic of the post. Due to a lack of third-party software and/or api availability, this aspect of the research was conducted manually with each post analysed individually and entered an excel sheet tracker during the timeframe of this research. Each post made by the page during the study period was analysed in chronological order. The real-time and date of each post was noted firstly. The level of engagement that each post garnered was assessed based on the number of likes, comments and shares that the post received. The more likes, comments and shares a post received the higher the level of engagement with it has been. The spreadsheet headings are shown below (**Figure 1**).

Facebook [49] has been noted to assign different relative values to each of these metrics with shares having the most relative value followed by comments and likes. The relationship between these relative values and user sentiment has been further noted by Kaur et al. [50] and Lou et al. [51] in subsequent research on social media user sentiment. In practise how a user interacts with Facebook posts both determine their engagement with the posts as well as the likelihood of others engaging with the same post. This is reflected in the likelihood of a particular post appearing in the news feeds of other Facebook users who do not share a direct interest in the page in question. In this respect, a share has a value that is approximately equal to 2 comments, each of which has roughly equal weight to 7 likes. Therefore a share has a value equivalent to 14 likes when Facebook determines whether a post is worthy of being seen by its users. The equation used is as follows; {Likes (1): Comments (2): Shares (14)}. Each of these metrics was noted for every post during the study period and can be seen in the graphed data. Specific reference to the content of comments was excluded from the study due to ethical considerations. The manual method of analysis used during this research was onerous but guaranteed the availability of reliable data, something which is often cited as a problem in social media-based research [52]. Two coders worked on the data over 12 months using a pre-designed coding scheme to ensure intercoder reliability (**Figure 1**) [53]. Qualitative social media analysis, while evident [54], is not established in the literature when compared with a quantitative approach.

Throughout the study period, the posts were made by an anonymous administrator(s) and the posts authors were never identified. The actual dates of the study period have been standardised (i.e. month 1, month 2 etc.) to secure the anonymity of the study area.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2	Date/Time	Engagement (likes)	Engagement (Comments)	Engagement (Shares)	Engagement (to Credibility)	Context	Subject	Post text/link	Notes	Post content or Comment			
3													
4													
5													

**Figure 1.**  
 Headings used to classify content on Facebook Page in MS Excel.

<b>Context</b>	<b>Post description</b>
Local	Post content or link has relevance only to the immediate study area. This could include meetings, local issues or points of view that would be most relevant and easily understood by those living within the area. This would also entail any post that relates only to the development in a local sense.
National	Post content or link has relevance beyond the study area within a national context. This would be the case if it was related to a similar development or instance of protest elsewhere in the country or related to national policy.
International	Post content or link refers to a broader or internationally relevant issue that is not specific to either the national or local context.

**Table 2.**  
*Outline of post descriptions for classification of geographical context.*

### 3.3 Geographical context analysis

During the analysis of the engagement of the Facebook pages posts, it was determined that every post noted during the study period also had a clear geographical context which varied from local, to national, to international. The context of the content produced by the page was noted in each post. In the absence of any previous method to determine the geographical relevance of social media posts in transitions research, one was created for this study. This method of defining the geographical relationship between the Facebook posts and the study area was done by comparing the post content and any contained links to the below table and giving the post a context label. The context labels indicated whether the Facebook post was local, national, or international in terms of its primary relation to the study area (**Table 2**).

The application of context labels was the responsibility of both persons assessing the data. Of the total 507 posts investigated over the 12 months, 10 have been excluded from the results as the context in question was unclear.

## 4. Results

### 4.1 Online opposition and its divisive potentialities

The most indicative depiction of the conflict around the proposed wind farm development occurred online; through social media forums. Its central role was evident throughout the interview process which guided further investigation focusing more specifically on the online forum to see what role social media played in the rise of opposition to CSWF (**Table 3**).

### 4.2 Data related to geographical context of posts

The dataset analysed is the 507 anonymized Facebook posts that appeared on the Facebook page during the study period of this research. Of these 497 are included. 10 have been excluded as the geographical context was unknown. The left-hand column below represents the average likes, comments and shares per post. The right represents the total. Values have been assigned to each engagement metric, aligning with the work of Kim and Yang [49]. The total value once an assignment has been applied is represented in bold.

Quotes from Interviewee's
"This is a project which has given a very local example of fake news and the internet phenomenon. Internet shaming and all of that is there, online bullying (is) very prominent in this campaign".
"There have been a few heated debates on Facebook".
"I think over the last number of weeks it has not been good, some of the Facebook and all that... not what you want to see".
"it gets out (opposition) and it's no bother at all on one of these (gestures to phone)... It makes it kind of anonymous in one way (to oppose project)"

**Table 3.**  
*Quotes from interviews in the initial investigation guiding further research on the role of social media.*

Across the three geographical contexts likes ranked as the most often invoked form of engagement in terms of clicks. Once each engagement form was weighted [49], shares ranked as the most impactful form of engagement across the three geographical contexts. 33% of posts were with relation to the local context, of which the average value weighted engagement per post was 241.6. 36% of posts were with relation to the national context, of which the average value weighted engagement per post was 129.3. 31% of posts were with relation to the international context, of which the average value weighted engagement per post was 96.4. Of the total value-weighted engagements of 67,712, 52% were local, 29% were national and 19% were international.

### 4.3 Graphs of engagement with posts per month

Through looking at engagement with posts over 12 months, likes and shares have been focused on. With relation to comments, total numbers were relatively low throughout all three geographical contexts so have not been focused on here in-depth. It is worth noting, however, that the local context posts gained most engagement with relation to comments, followed by national and then international context (see: **Tables 4–6**). Two clear spikes in engagement are evident throughout the 12 months. The weighting given to shares ( $\div 14$ ) indicates their relative importance compared to likes ( $\div 1$ ) and comments ( $\div 2$ ) in this context.

### 4.4 Geographical context of posts over 12-month period

In highlighting posts per month with relation to the geographic context we see a relatively stable trend in the opening months (1–2) of the online campaign. In month 6,

Local posts (164)			
Average Likes per post	21.0 (x1) 21.0	Total Likes	3449 (x1) 3449
Average Comments per post	3.2 (x2) 6.4	Total Comments	297 (x2) 594.0
Average Shares per post	15.3 (x14) 214.2	Total Shares	2249 (x14) 31486
Total Average per post	39.5241.6	Total Sum	5995 35,529

**Table 4.**  
*Outline of engagement with local posts with relation to likes, comments, shares and total.*

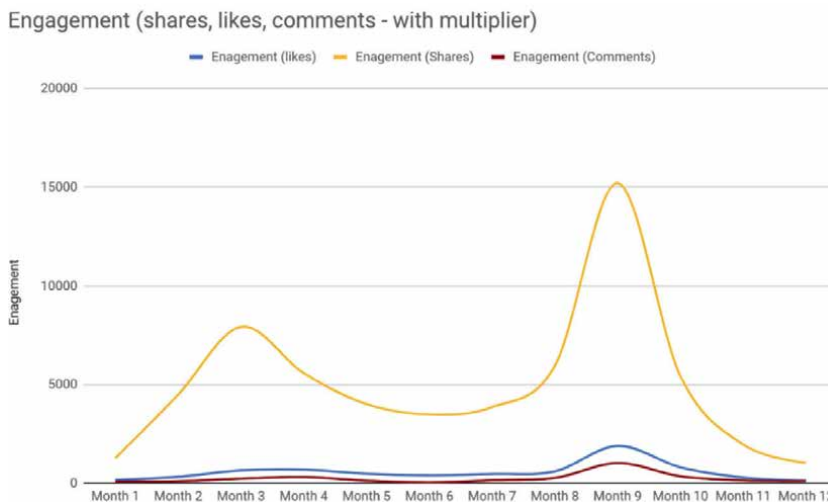
National posts (181)			
Average Likes per post	11.7 (x1) 11.7	Total Likes	2110 (x1) 2210
Average Comments per post	1.4 (x2) 2.8	Total Comments	106 (x2) 212
Average Shares per post	8.2 (x14) 114.8	Total Shares	1219 (x14) 17066
Total Average per post	20.6129.3	Total Sum	3435 19,488

**Table 5.**  
Outline of engagement with national posts with relation to likes, comments, shares and total.

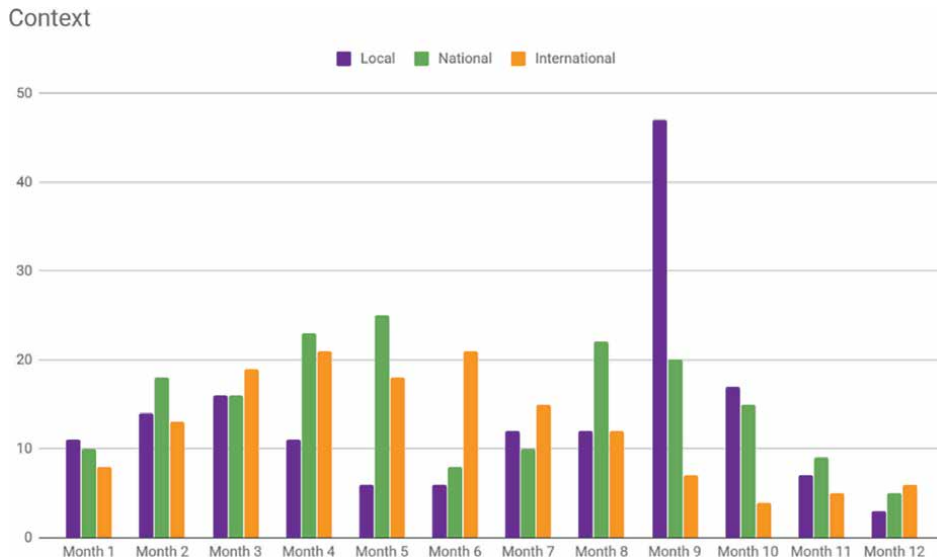
International posts (152)			
Average Likes per post	9.0 (x1) 9.0	Total Likes	1339 (x1) 1339
Average Comments per post	1.0 (x2) 2.0	Total Comments	43 (x2) 86
Average Shares per post	6.1 (x14) 85.4	Total Shares	805 (x14) 11270
Total Average per post	16.1 96.4	Total Sum	2187 12,695

**Table 6.**  
Outline of engagement with International posts with relation to likes, comments, shares and total.

the middle of the campaign, the majority of the posts were International in context. In month 9, the majority of posts were local in context. **Figures 2 and 3** illustrates the value of local posts in gaining engagement, running in parallel to the scaling up of offline protest mechanisms towards the end of the period under investigation. It is also interesting to note that the national context remained most stable throughout the 12 months, with both the local and international context fluctuating in terms of post numbers per month.



**Figure 2.**  
Engagement with posts per month using likes, comments and shares which act as a measure of engagement. The relative importance of these different metrics is graphed according to the engagement multipliers noted by Kim and Yang [49]. Two spikes in engagement are seen during Month 3 and Month 9. These spikes correlate with the beginning of the protest movement and the failure of the project respectively.



**Figure 3.** Percentage of posts per month with relation to geographical context showing a spike in the proportion of locally relevant posts during Month 9 followed by a decline in the local relevance, coupled with an increase in the incidence of international relevance, of the posts as wind farm projects became unviable.

## 5. Discussion

### 5.1 The importance of geographical context

As noted previously, opposition to wind turbines and associated infrastructure has become a common occurrence in Ireland within the renewable energy transition [35]. Both historically and in recent times, the country mobilises best at the level of community. A communitarian ethic has been traced concerning the socio-religious discourse on community [55] developed through the Catholic Church. In modern times the importance of community, in this case, local place-based communities, to mobilise against the Right2Water campaign must be recognised. It is in this context that the findings illustrated in **Figure 3** and **Tables 4–6** can be discussed. As the tables show, there was a relatively even distribution between the three categories in terms of posts. However, there was a much greater level of engagement with local posts on the page. In **Figure 3** we can see the geographical context of the posts playing out over 12 months.

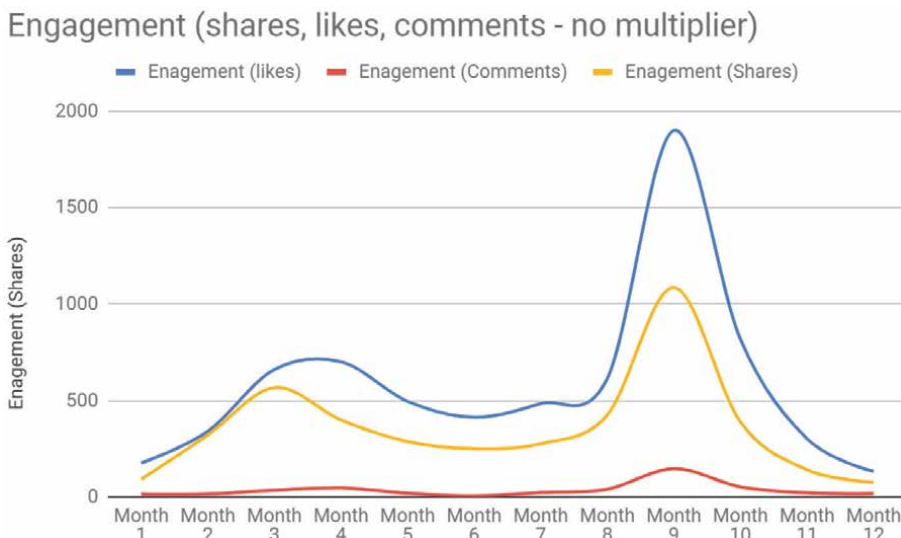
The mapped code “geographical context” can be taken as a signifier of place attachment within the context of this research. Community attachment with place is a complex and multifaceted process that has been shown [56] to link both individual and community-level place and social cognition, emotions, and behaviours in response to community-level environmental disruptions or threats which lead to collective actions, adaptations, or acceptance. We explore the relationship between place attachment, within the sphere of online protest action, through graphing the reaction and engagement between the public and a Facebook page in terms of geographical context. A clear correlation between spikes in engagement **Figure 2** and an increase in the percentage of locally relevant content **Figure 3** can be seen in our graphed data.

## 5.2 Engagement rates with the page through 12-month period

Two spikes in engagement with posts are evident through the analysis (see **Figures 2 and 4**). The first, occurring in month 3 coincided with signage being erected throughout the area in opposition to the proposed development. At this time the page used links to international studies to highlight the negative implications of a wind development for the area. These negatives have precedent in the literature with relation to wind opposition and included; infrasound [57], house prices [8], turbine collapse [58], flicker [59], landscape impact [60]. The use of international literature to highlight potential negative implications of the development of wind in the area was undertaken in parallel to both the erection of signage in opposition and the announcement that a survey would be administered to gauge support for the development. The Facebook page was used to distribute signage throughout the community for a small fee.

The second spike concerning engagement (likes and shares) occurred in month 9. This was the height of the oppositional campaign both online and offline. As outlined previously, in month 9 a protest march was organised with the anti-CSWF group gauging attendance to be approximately 1000 people, gaining local media attention which gave a vague estimate of attendance in the 'hundreds'. A public consultation went ahead the following week involving several consultants speaking with members of the public about noise issues, site location, community benefit, environmental impacts and technical specifics. As part of this process, public feedback forms were issued with 67 of the 72 respondents resolutely opposed to the project, stating that under no circumstances were they in support of the proposal. In month 10 it was announced that the project would not be continuing.

The importance of early involvement, full information and transparency has long since been noted in the literature on community engagement for wind



**Figure 4.** Engagement with posts per month using likes, comments and shares which act as a measure of engagement. The relative importance of these different metrics is graphed according to their incidence without any interpretation. A lag variance between engagement spikes is seen when comparing the different metrics.

development [61]. The ability of the opposition campaign to successfully raise awareness of the project from their perspective, conduct a survey of local opinions, and organise a community-wide protest before the first public consultation on the part of the developers was helped by the use of social media. Following the announcement in month 10 that the project would not go ahead, the opposition page moved into national solidarity, sharing content related to national cases framed differently than before. Now, the page offered support to national cases, moving beyond the previous use of national cases to gain local support. The networked nature of social media pages in opposition to wind developments has been previously studied [29].

## 6. Conclusion

In the case study outlined here, the developers' ability to garner local buy-in was compromised by the overwhelming opposition to the proposal which was in place by the time a public consultation occurred. The mobilisation of this opposition was assisted through the use of an online social media platform. Recent developments within the literature have highlighted the importance of online platforms as spaces for opposition within the socio-technical transition to a low-carbon society [29, 30]. Our research has made contributions on three levels. Firstly, a methodological contribution has been made within a mixed-method approach through the development of a systematic approach to qualitative social media analysis of post content with relation to geographical context and rates of engagement. Future research could apply this method to other online campaigns. On from this, at a theoretical level, there is a great need for further research to investigate the relationship between online activism and local mobilisations of protest.

Secondly, at an empirical level, this research found that the geographical context of social media posts has a clear impact on rates of engagement with the content. Local content was most frequently engaged with. Finally, there was a strong correlation between engagement with the page and successes within the opposition campaign in real life. This highlights the crucial role social media now plays in conflicts related to the deployment of renewable energy technologies in local contexts. The use of international misinformation to gain support for a local campaign was noted here on a cursory level and requires further in-depth research to develop this emergent area of investigation [28].

Overall, social media platforms must be acknowledged by developers and policymakers as focal points for controversies and conflict with relation to engaging with local communities on the development of renewable energy capacity. For groups mobilising in opposition to a proposed development, this research has highlighted the central role of content related to the local context in gaining traction online. To leverage social media in mobilising opposition, focus should be given to content related to the local context. Renewable energy developments within local contexts can be seen as a political rather than technical challenge [3], and with this the relationship between social media and the development of renewable energy in local contexts must be given greater attention moving forward, aligning with the rise of digital platforms for participation in political discourse.

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# Perspective Chapter: Myths of the Child Welfare Services – An Online Bogeyman for Muslim Families

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## Abstract

This chapter explores the social media myths that surround the Norwegian Child Welfare Services (CWS). Twenty-three migrant parents from Muslim majority countries were interviewed about how they experienced collaboration with Norwegian public institutions, such as the CWS, and how they talk about these institutions within their social networks. The findings are that social media becomes a space for not only information and advice but also myths and unverified narratives. On the one hand, social media provides a way to meet people and for migrants to learn about their rights. On the other hand, many of the narratives circulating create fears that the CWS will steal children away. Truth and myth bleed over into each other, so that the more migrants rely on social media for socialising and sharing information, the more developed these networks become and the more easily unverified narratives spread. It becomes a bogeyman bent on taking away the children of migrants whose myth is circulated on social media. Those who had been in touch with the CWS themselves related that this image was not true and indeed tended to have positive experiences. Nevertheless, the myth of the CWS as a stealer of children persisted on social media.

**Keywords:** Muslim families, child welfare services, fear, online narratives, information sharing, myths

## 1. Introduction

In the 1990s, as the internet was just beginning to emerge, the hope was that it would serve to democratise the access to information and facilitate communication. This would be especially valuable for individuals in vulnerable and marginalised positions with limited access to the traditional sources of information that existed in the pre-internet era. The internet was made public in 1993, and the first social media site was launched in 1997. It was in the early 2000s, however, that social media became widely used by the populace at large [1]. For migrants, social media has become a blessing and a curse. On a societal level, it has the potential to spread and amplify hate against minorities and marginalised groups, as well as serve as a tool for generating awareness and rallying support. For the migrant groups themselves, online platforms enable them to better maintain communities with their own information networks.

Certainly, these networks themselves can be a mixed blessing, depending on how they are used. On the one hand, it is evident that the internet enables the dissemination of accurate and helpful information amongst migrants, while also enhancing social connections [2–4]. The possibility of online communication has made it much more feasible to maintain communities with less need for physical proximity [5]. On the other hand, however, there is a sinister side to social media. In recent years, especially since the COVID-19 pandemic and the advent of the “post-truth” era, there has been much focus on the capacity of the internet to spread misinformation and disinformation [6–8]. This seems to operate on the same logic as old-school tabloid journalism, where the more sensational, salacious or outrageous a story was, the more it garnered attention [9]. We have seen this manifested in the role played by social media in spreading hate against minorities [10, 11].

Social work research in Norway tends to focus on the top-down perspective, that is, the view of workers vis-à-vis clients. Studies utilising the clients’ perspective are in the minority. While it was known that migrants harboured an intense distrust of the Child Welfare Services, there have been few studies exploring the migrants’ perspective and next to none focusing on how “horror stories” about the agency spread within the social networks. This was only recently rectified by the work of Handulle [12, 13]. While Handulle represents a clear contribution to the field, her work does not focus on online narratives and also does not cover the mythical element of the Child Protective Services. This chapter seeks to expand on this point, as well as the dual role of the information-sharing network. The useful aspects of this network are the very characteristic that makes migrants rely on it as a source of information, which in turn increases the spread of dubious myths along the same network. This chapter specifically examines the information flow within migrant communities, demonstrating both the dissemination and distortion of information. It provides both a space for Muslim immigrants in Norway to maintain social ties, share useful information, and assist each other. However, we can also clearly see that, on certain topics, this information takes on the trappings of sensationalism and becomes distorted. Particularly, narratives surrounding the “barnevern”, the Norwegian Child Welfare Service, gain a particular focus, hijacking the well-oiled information networks to spread terrifying myths about a menacing agency bent on taking migrants’ children away.

The Norwegian Child Welfare Service is tasked with protecting the most vulnerable children in society and to ensure that they can grow up in a safe environment [14]. However, amongst minority users, it is a very unpopular agency [15]. Whether the Child Welfare Service in general is discriminatory has issues with cultural sensitivity or a low level of allowance for other parenting styles, there is a distinct lack of trust in this institution from minority communities [16]. It is often portrayed as a malevolent organisation that aims to resettle children and who disproportionately target minorities [15].

This study is based on 23 interviews with first-generation migrants from Muslim majority countries living in Norway. The aims of the project were to investigate the intersections of Muslim migrant families and the state institutions with whom they collaborate. In this regard, we also found it relevant to consider the views that the participants have of these institutions. We hypothesised that these views would likely be coloured by the sharing of stories between migrant parents. Therefore, the interviews also focused on the narratives that Muslim families share with each other about these agencies. With all this in mind, the research question for this chapter is “how do Muslim families communicate about the Child Welfare Services through social media, and how does this colour their image of the agency?” Most of the participants had

neutral or positive experiences themselves, but relayed that the Child Welfare Services was presented as a figure of fear in the narratives circulating within their networks [15, 16]. It is presented as a malevolent actor which is aimed at taking the children of migrants away from them. In this way, it functions almost like a modern-day fairy-tale monster or bogeyman.

## **2. Theoretical concepts**

### **2.1 Social media use**

The focus of this chapter is to explore the social media use of the participants of Shared Horizons, and how this can help give rise to harmful myths. Migration scholars have always been aware that the information available to migrants can influence their migration behaviours [17]. The flow of images globally can influence the ways in which people see other places [18, 19], which in turn can influence people's decisions to move [20]. It is likely to assume that social media can play a role in shaping these imaginaries. More pertinent to this chapter, however, is the influence of direct person-to-person communication. Social media is cheap, easy to use and provides instant access to information that can be valuable for migrants in deciding where, when and how to move [21, 22]. It can also be used by governments to influence migration behaviours [23]. For refugees, for instance, the information shared may allow them to determine the best routes into the countries they are trying to reach [22]. However, the lack of verification remains an issue, as any of the information shared may potentially be misunderstood, overstated or simply untrue [24].

After migration, social media continues for many to be a way to follow news and current events [25]. It also makes it easier to keep in touch with friends and relatives in the country of origin [26], as well as managing networks in the country of residence [27]. Recent research has also explored the synergy between these, looking at how intercultural connections with the society of origin can aid acculturation in the society of residence [28]. Social media not only allows migrants to maintain social networks generally but also makes it possible to create dedicated groups for migrants, for people from a certain area, or of a given ethnic group. This allows group retention with less need to meet physically than would be the case without these groups. This is often viewed in terms of integration, as there is disagreement as to whether such networks promote co-ethnic groupings at the expense of integration or provide support for migrants allowing them to function better in their new society [28, 29].

### **2.2 Child welfare service**

One common topic of discourse within the information-sharing networks of migrants is the Child Welfare Service, although, until recently, there has been relatively little academic focus on this [12]. One might reasonably assume that the advent of the internet, particularly social media, has impacted the ways in which migrants share such stories. Showing how the flow of narratives has altered in the social media age would also serve to emphasise the role social media plays. Unfortunately, in Norway, this is a relatively recent research focus, and there are no studies we can find on the topic much earlier than 2010. Rather, when it comes to the topic of minorities' mistrust of public institutions in Norway, the pre-social media era had a greater focus on the indigenous Sami population [30]. These are difficult to generalise, however, as

the Sami have a very specific history with the Norwegian state that will colour their experiences.

Be that as it may, there are only a very few studies that focus on the circulation of stories about the Child Welfare Service in migrant networks. Most notably, Handulle and Vassenden [12] studied the circulation of child removal stories amongst Somali living in Norway. Their findings were that there was a fear-driven set of narratives circulating that presented it as an institution aimed at removing children. This is ostensibly driven by discriminatory attitudes within the institution itself. While there may indeed be such discrimination, the authors point out that there do not seem to be a disproportionate number of child removals amongst Somali living in Norway [31, 32]. While very few studies in Norway focus directly on such narratives, they do crop up in other research. Fylkesnes et al. [16], for instance, conducted a study of minority parents' experiences of the Child Welfare Service. As part of the interview data, some participants noted that they had talked to friends about their cases and received advice as to how to proceed. An earlier study by the same team [33] explored the fears of minority parents directed towards the Child Welfare Service. While this did not seem to ask explicitly about the circulation of narratives, these featured prominently in the interview data, with the shared stories clearly stoking the fears that the participants were relating.

In these studies, recurring themes are that the Child Welfare Service is aimed at removing children, that they have ethnic and racial biases and that they do not show cultural sensitivity.

As for the first point, there seems to be little basis in the idea that the Child Welfare Service is looking for excuses to remove the children of migrants. At a rate of 33%o migrants are certainly overrepresented in child welfare cases and interventions [34]. However, this appears not to translate into increased levels of child removal [35].

The point about discrimination is harder to ascertain. The studies we have reviewed so far are based on the participants' subjective experiences, and not on any objective measures of discrimination.

When it comes to cultural sensitivity, the chief complaint is that Child Welfare Service in particular, and Norwegian society in general, have very rigid ideas of correct childrearing that conflicts with that of the migrants' countries of origin [16]. The Child Welfare Service in Norway has been criticised for not allowing for different parenting values amongst migrant populations [35]. Any style of parenting that differentiates itself from that of the majority is viewed as deviant and inherently inferior [33]. This is coupled with a general perception of scrutiny, and that migrants are assumed to be inadequate parents. Furthermore, the power disparity between Child Welfare Service workers and parents means the advice given by the former can be experienced as an instruction by the latter [36].

The perception that the Child Welfare Service is overbearing may partly be a result of the way children's cases are treated in Norway. There, the rights of the child are well-established, with strong regulations against physical punishment [37]. In family disputes, there will always be cases where the rights of the child collide with the rights of the parent. When such concerns need to be considered against each other, Norway is one of the countries that gives most weight to the rights of the child. Because of this, there are cases which in Norway have ended in the removal of a child which have been judged a breach of the rights of the parents by international courts, e.g., Strand Lobben et al. v. Norway [38]. However, cultural sensitivity may go the other way, and there is evidence that Child Welfare Service may in some cases be slower to intervene in cases involving migrants if the infraction that is investigated is seen as part of the parents' culture [37].

One very salient factor, which affects the way in which minorities engage with the Child Welfare Service, is that child protection agencies tend to be engaged with involuntarily [39]. Often, concerns will have been lodged as to the child's situation, which may then lead to an investigation. It is therefore reasonable that a certain antagonism might arise in how the parents view the Child Welfare Service.

In general, migrants in Norway show a high level of trust in the Norwegian system, laws and agencies [36, 40], but this does not carry over to the individuals within these agencies who enforce the laws [41]. While many migrants appreciate the level of security and support that comes from the welfare state, the level of insight into, and control of, the families' private lives can be experienced as overbearing [36]. So, while there is generally high trust in public institutions, the Child Welfare Service is an exception. The bottom line is that they are a figure of fear for many minorities, which is not conducive to trust and collaboration [12].

### **3. Method**

This chapter is based on the project Shared Horizons. This is an interdisciplinary collaboration between researchers at the Department of Social Work at The Norwegian University of Science and Technology and The Department of Special Pedagogy at Queen Maud University College of Early Childhood Education. The hypothesis of Shared Horizons is that there are systemic issues with the cultural understanding and communication amongst many of the public employees tasked with serving and helping migrant families, particularly impacting Muslim parents. These include the schools, the kindergartens, the Labour and Welfare Administration, The Directorate of Immigration and the Child Welfare Service.

The study was limited to first-generation immigrants from Muslim majority countries who also identified as Muslim. This is because migrants from Muslim majority countries tend to be more marginalised than other migrants [42, 43]. This is exacerbated by religiosity as most Norwegians consider Islam incompatible with Norwegian values, and have a more negative image of such migrants if they are practising Muslims [44]. Because of our focus on the family, we had a further criterion that the participants should have at least one child who had attended kindergarten and/or school in Norway.

We utilised a snowball sampling method, going by immigrant families we were acquainted with in order to reach potential participants, some of whom put us in touch with further parents. This method was chosen in order to gain a more representative range of perspectives on the institutions. Recruiting through the schools or other relevant institutions, we feared, would only be responded to by those parents who had positive relationships, and thus positive experiences. One potential limitation of this snowball sampling is that it impacted the ethnic diversity amongst our participants, with most of them being from Arabic countries, except for one couple from Bosnia-Herzegovina.

As far as was possible, we attempted to interview both the mother and father in each family. However, there were a few of our participants who were single parents, and there were some where only one parent wished to participate. In total, we conducted 23 interviews, 14 of which were paired together representing seven couples. Overall, we interviewed nine men and 14 women. The participants were given the choice of a male or female interlocutor. Some of the interviews were conducted in Norwegian or English, but most were carried out in Arabic. These interviews lasted

approximately 45–60 minutes and were recorded with the written consent of the participants. The questions focused on the participants' experiences in Norway generally, before moving on to the experiences with the various agencies with which the participants had been in contact. Lastly, we focused on the social networks, and the stories that circulated in these networks about the agencies that had been discussed. The participants who focused on these topics in the interviews were almost entirely the mothers.

The project was approved by the Norwegian Centre for Research Data (SIKT) and was carried out in accordance with their guidelines.

## **4. Findings and discussion**

### **4.1 Norway through social media**

This chapter explores Muslim migrants' interlocutions over social media and the ways they can spread both fact and counterfact about life in Norway and about dealing with Norwegian welfare professionals. From the literature, it can be predicted that these migrants have substantial connections over social media, and that these connections fulfil a number of different roles. This was borne out by the findings. Many of the participants, overwhelmingly the mothers, related being active on social media, primarily Facebook. They used it to engage both with each other, and with Norwegian society at large. With regard to the latter, we can see that these connections begin even before the participants come to Norway, and may be a factor in the decision to migrate.

*“I was sceptical before I came because I read in social media that Norwegians are not sociable at all, that I would feel lonely, that Norwegians don't like to have relationships with anyone that is not Norwegian like them, etc. (Mother-10)”.*

Mother-10 is here concerned with the social milieu in Norway. However, it seems more widespread to inquire about how the system works, what rights one has, etc.

*“Now if you pay attention in the Facebook groups, there are girls or young women who haven't even arrived to Norway yet and are asking about rights and opportunities and options (Mother-13)”.*

This was one of several participants who had gathered information about Norway before coming. Many of the participants had come to Norway through family reunification, and there were some amongst them who had met their spouses through social media. Mother-03 was amongst those who had met her future husband online but was able to come for work and not have to go through the lengthy family reunification process.

*“We first started talking on Facebook, but it turned out that my dad and his know each other from work. It is a coincidence. He asked for my hand and we got engaged. My husband is one year older than me. I am a strong woman, if I had applied with family reunion we would have needed to wait until I was 24 years old, and it takes between 3-5 years. My husband thought it would be so long away from each other (Mother-03)”.*

In the rest of the interview, Mother-03 makes it clear that she did not feel safe staying in Syria, and obviously chose Norway for her fiancé. Mother-10, however, was vague about what eventually helped her decide, but relates the importance of a solid support network once arriving. This was important not only for combating loneliness, but also for traversing an unfamiliar system and helping to learn the language. Mother-10 did this mainly through in-person socialisation, but other participants relied on online contacts. Mother-14, for example, was a relatively recent arrival. She noted the importance of connections and was currently attempting to meet more people.

*“I have just started the Norwegian course and started expanding my network. I know some of the Moroccans from the Facebook group too but not many. Little by little, I guess. They are nice (Mother-14)”.*

Here, a dedicated group for a particular national group helped her get in touch with a wider range of people. We see from participants who have been in Norway longer that such networks do provide support, both emotional and practical. For instance, such groups allow the migrants to share tips in their own language about how to better navigate the Norwegian systems. Mother-13 laments not having had access to this when she first arrived.

*“My teacher told me I had potential and encouraged me to continue studying. Back then, I didn’t even know I could, because back then we didn’t have Facebook groups or social media in general where we can learn a lot from, actually (Mother-13)”.*

Such networks also help the participants vent frustrations and air grievances. Previous research has suggested that such grievances tend to be topical, reacting to the latest issue that has arisen [40, 41]. At the time of writing, the issue of the day is Ukraine. Since the invasion began, Norwegian refugee numbers have exploded, with tens of thousands of Ukrainians coming each year, by far the largest migrant flow Norway has ever seen [45]. It is also clear that Ukrainians have received significantly better treatment than non-European refugees [46]. Many of our participants were refugees themselves, and all had friends who were refugees. As such, there was some resentment as to the blatant favouritism shown to Ukrainians compared to Arab refugees.

*“Ukrainians have adapted better in my opinions. I think this is because they are Europeans and their culture is closer to the Norwegian one and their religion too. I also think that they got more support and empathy, and lately I saw on Facebook that Bergen doesn’t want more Syrians but only Ukrainians, that the Bergen commune refuses Arabs (Mother-09)”.*

*“There are so many people complaining now and so many people calling UDI (The Directorate of Immigration) asking ‘why is it only us who have to wait two years to have our applications processed?’ But for Ukrainians, it’s not like that, for example, when they came, they got free bus passes, and all Syrian people were talking about this. Then they (UDI) said that ‘there are so many Ukrainian applications, that we will postpone Syrian applications until later’. They have said it in the international news. I heard it on Instagram or Facebook that ‘they have light colour, same as us, so we need to help’ (Mother-08)”.*

The issue of unfair treatment was something all the Arab and Kurdish participants raised. Some had the experience of being refugees firsthand, along with the scrutiny and red tape that went with it. These participants spoke of endless waiting in the refugee reception centres waiting for their claims to be processed. Ukrainians fleeing war had been allowed to circumvent a lot of this in a way that had never been approved before [46].

#### **4.2 Social media and children**

Due to the nature of the interview questions, much of the conversation revolved around the participants' children. For the mothers, children were a common topic of conversation on Facebook as well. The topics they raised are the ones that may have been predicted by the literature, the first of which being that the participants typically disagreed with the ways in which children were raised in Norway. This extends not only to the way other families handle their progeny, but also how the participants' own children were treated at the healthcare centre, a public institution where children in Norway receive their basic medical follow-up the first 5 years of life.

*“For the other three children that were born here, we were stressed when we had to go to the infant healthcare centre. We were thinking ‘what are they going to do?’ they were checking their bodies, that’s not normal for us. (...) there are some parents who go to the yearly controls, and who say that they do very strange things. For example, there was a woman on Facebook who said that the employee did a women’s examination of the girl who was only five. And she asked ‘is this OK, is this normal?’ to a five year old girl. Here in Norway. There were many women who answered her and said that maybe they think you are from a culture that does cutting, so it was not OK for a five year old girl. I wrote and said that she had to call the infant healthcare centre and check whether this is allowed. This is not normal. We are stressed all the time. Like, when the children do the control at school with the school nurse. First, we were thinking that they might take off the girl’s clothes or something. They say ‘no, we are just going to take the weight and check the ears and eyes and such... weight... but we ask all the time. All the parents are stressed when they go to the infant healthcare centre (Mother-08)”*

We can see that there is an issue with the encroachment of the state into the private sphere of the family. On one level, there is an easily understandable discomfort with strangers examining the children's private parts. On another level, there may be resistance against the ways in which state actors are exploring and attempting to control the children's sexuality, something that for the participants it should be up to the family to protect. At the same time, we see that the idea that these controls were done to check for female genital mutilation seemed entirely based on speculation. The way that the participant related the story, this idea arose from the network and does not appear to have been stated by any employee at the centre. By her reaction to these narratives, by getting stressed over the images of the healthcare centre that these narratives evoke, we can see that she is questioning the need for these examinations, but there is a limit to how far this can go.

*“At the same time, if they protest too much, they are worried the nurse will get suspicious and open a case with the Child Welfare Service (Mother-08)”*

### 4.3 Myths surrounding the child welfare service

We now see the real coercive power that these institutions wield, whether they are aware of this or not. Migrants fear “barnevernet”, the Child Welfare Service, and thus also fear the prospect of being reported. We saw from the literature that this institution holds a uniquely threatening position for many migrants, particularly non-European. The same is related by the participants of this study. There were few of these participants that related particularly negative stories themselves, but had experienced them second-hand through the narratives that circulated in their social networks.

*“It is hard. Specially because when I got pregnant I was hearing people here (Arab migrants) telling everybody ‘don’t have kids! Norway will take away your kids. Barnevernet (The Child Welfare Service) would take your children.’ I knew nothing about barnevernet, I was terrified and could see everybody was scared of kids been taken away (Mother-09)”.*

From the above quotes by Mother-08 and Mother-09, we can infer that the service is almost attaining the status of fairy-tale monster. You better behave yourself, or “barnevernet” will come take your children away. This fits with the literature as well. While Fylkesnes et al. [33] discuss their participants’ fears and negative experiences with the Child Welfare Service, much of the actual data pertains to the negative experiences of others disseminated through the networks rather than being the experiences of the participants themselves. Later, Handulle and Vassenden [12] more directly explore the sharing of such narratives. These too, we can see, gain a mythic quality with vagueness and speculation feeding the fear felt by the network. In these narratives too, helplessness and disempowerment are common themes, which resonate well with the participant statements presented in this study. The elevation of the Child Protective Service to this mythic status is hardly surprising. There is a reason why children being taken away is a common trope in fairy tales [47].

### 4.4 Testing myths: the reality of lived experience

Speculation, half-truths and uncertainty seem to elevate the mythic quality of the agency’s penchant for child removal. The importance of vagueness in giving the agency its power is borne out by the way in which these myths seem tempered by the reality of lived experience. While the stories circulating about the Child Welfare Services were invariably negative, the participants’ actual experiences were mixed. Certainly, some had negative experience of the Child Welfare Service, although none had had their children taken away. One criticism that was levelled was that they do not listen to the parents’ explanation of the issues the children are experiencing.

*“And you know what? They keep saying that, for instance, my daughter has anxiety because of the Syrian war unconsciously. That is not the problem my daughter has. My daughter doesn’t even remember the war. My daughter is victim of the Norwegian school being racist, we have nobody, she needs friends and she feels lonely and excluded. The Child Welfare Service tries to put the Norwegian society at the best light instead of criticize it and try to improve (Father-03)”.*

More than simply not listening, it is the father’s interpretation here that the Child Welfare Service is attempting to deflect blame from issues within Norwegian society

and ascribing the difficulties of the daughter to the experience of being a refugee. While less dramatic than child removals, this is a fairly serious accusation of systemic racism, although obviously it is impossible to ascertain from this whether the father is right. However, most direct experiences that our participants have had serve to moderate the online myths. Indeed, some note the role played by social media in creating a distorted image.

*“If you read on Facebook, there are many stories about laws, Child Welfare Services, etc but one has to be conscious and use his brain. When I read these things the first time, I got terrified (Mother-14)”.*

*“They think that the Child Welfare Services will just immediately take children. And they don’t have enough experience, they don’t have enough information, and they get stressed. They are very simple people. They don’t have enough information. But it’s on the Facebook groups where they speak about this. There may be a part that’s positive and a part that’s not so positive. A thing that is positive is that people can ask about the Child Welfare Services and get information in this group, but one part that’s not positive is that people get worried about the Child Welfare Services all the time, when they hear things or when they see that film about the Indian lady. A woman whose children were taken by the Child Welfare Services, which is popular in the media. They are stressed, they are stressed because they get wrong information from Facebook groups (Mother-08)”.*

From these statements, we can infer that the participants are attributing fear felt by migrants towards the Child Welfare Service to misinformation, to “not using one’s head”. This more nuanced view seems to be a result of people having experiences with Child Welfare Service and realising that they are not aiming to remove children, but are only doing their job. Some participants even found them to be helpful.

*“What I have heard and read from Facebook is that the Child Welfare Services takes away your kids. You certainly have seen this yourself in the Moroccan group. I personally don’t believe these stories because most people omit the whole story and don’t tell you things as they are. I know a case personally where the Child Welfare Services has actually helped her. And I remembered that when I had called them they told me I could always contact them if I needed help with anything (Mother-10)”.*

*“I have been in contact with Child Welfare Services 2 times. The first time, the neighbour heard my daughters crying. She called them out of spite because she had issues with my ex. All because of parking space. We have 2 cars, and she didn’t like it. In my renting contract it says up to 3 cars so if we have 2 it is our right. She clearly did not agree with that. They came and had a talk to us and they closed their case on one go. I was terrified to meet them because everything they have been telling me was that Child Welfare Services was a mafia who stole children from their parents, especially when you are a migrant. People encourage against coming to Norway on social media, on Facebook for instance if they ask ‘Norway or Holland?’, most comment things like ‘don’t come here’. The second time I had contact with the Child Welfare Services was extremely hard for me. This time [my daughter] had reported me to the teacher because she didn’t like us moving to the south. She wanted to go back to the North by any means. When I told her ‘no way’, she took it out on me. She went to the teacher and told her ‘my mum threatened me with a knife’. Of course, Child Welfare Services*

*told me. Logically if they were that evil, after what [my daughter] said, they would have taken her away. They led an investigation for 2 and a half months though. We were going to meetings, they were visiting us, all the fear vanished when I had my own experiences (Mother-09)”.*

This idea that the fears are not wholly founded is somewhat reflected in the literature. Handulle and Vassenden present a participant statement where the mother says “to be honest, I’m afraid of them. I know I shouldn’t be” ([12], p. 205).

## 5. Conclusion

This chapter described first-generation migrant parents from Muslim majority countries living in Norway and how they share information over social media. In this regard, social media becomes a space for sharing both news, opinions, narratives and myths. It can have many values, such as providing a way for migrants to find other people from the same country. It is also a way for migrants living in Norway to gather information about their rights. It is likely, however, that the veracity of the information these migrants were able to access was mixed, as the veracity of the materials shared over social media varies greatly, and the boundary between fact, speculation and myth becomes blurred. This chapter is based on semi-structured interviews with 23 first-generation migrants in Norway. These interviews concerned how they experienced their collaboration with Norwegian public institutions, such as the Child Welfare. This is the most discussed agency amongst our participants, for good and for ill. This institution elucidates the contradictory roles of social media, being a vector of both factual and counterfactual information. On the one hand, migrants can share information about Child Welfare Service and about their own rights as parents. On the other hand, many of the narratives circulating portrayed this institution in an extremely negative light. It becomes a bogeyman that comes to take away the children of migrants whose myth is circulated on social media. Those who had been in touch with the Child Welfare Service themselves related that this image was not true, and indeed, tended to have a positive image. However, despite these positive narratives, the myth of them as a stealer of children persisted on social media.

This chapter shows that social media plays an important role as an information-sharing network. However, this network is a double-edged sword, and the same mechanisms that allow true and useful information to be disseminated also allow harmful myths to be amplified. On the one hand, it allows migrants to share important information, find social support and maintain communities. On the other hand, it also acts as both echo chamber and amplifier, promoting and sensationalising stories of a macabre or salacious nature, and little fits this description better than having one’s children taken away.

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## **Conflict of interest**

The authors declare no conflict of interest.

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# Amplifying Hate: Mapping the Political Twitter Ecosystem and Toxic Enablers in Greece

*Ioanna Archontaki and Dimitris Papaevangelou*

## Abstract

Detecting hate speech on social media and the way it spreads have proved trickier than originally thought. Alt-right politicians seem to be ahead of the technological curve, exploiting existing biases in society and platforms to promote hateful messages. As a result, messages get traction by both good and bad faith actors. In the following research, we examined 36.8 million tweets and 1.5 million unique accounts related to Greek politicians on Twitter, in an effort to map the information dissemination ecosystem. In this chapter, we present a scalable model to predict amplification accounts used by various actors in Greece, alongside a toxicity classifier for short messages. We mainly focused on the political context to scan for toxicity spreaders affiliated to Greek politicians. Our approach investigates behavioral characteristics that differentiate normal accounts with the amplifiers without addressing the binary logic—bot or not. Our preliminary results show that the majority of Greek politicians' networks of followers are amplifier accounts without necessarily meaning that these are bot accounts. In compatibility with other research findings, we find that the majority of the accounts promoting toxicity are predominantly partisans from the right of the political spectrum.

**Keywords:** X (former twitter) bot detection, bot classification, twitter API, online toxicity, hyper-partisanship

## 1. Introduction

Social media were once seen as the forerunners of democracy, especially in such countries where systemic failures and chronic corruption made citizens' trust in authorities strained and, in some cases virtually nonexistent. Twenty years later, this image has completely flipped on its head. Concerns are multiplying on whether social media is just another tool for political manipulation of the public, with the additional danger that now we can only theorize about who is hiding behind the message. As a result, academia has put in great effort to map disinformation in social media over the past decade, especially since Brexit and the 2016 US presidential elections, when Russian interference was heavily speculated.

Despite earnest attempts, the discussion on social media disinformation mainly swiveled around the existence of automated accounts (bots) as a sign of political manipulation. However, this question can be misleading. Bots are not malicious per se. There are automated accounts in the service of reporting information, raising awareness, distributing content across platforms, providing support, etc., while other automated accounts are used to amplify certain (political) messages, sway public opinion, and suppress dissenting voices. Therefore, focusing on the nature of a social media account but not on its action lumps together useful and harmful accounts.

Social media's vulnerability to manipulation (i.e., Cambridge Analytica) has casted deep doubts regarding their use for information purposes in most European countries with the notable exceptions of the Balkans and Eastern European region [1]. There, trust in social media seems to go hand in hand with an unfree political culture, a disconnection with national authorities, and decades of deregulation, crisis, and poverty [2].

The case of Greece, the least trusting country in mainstream media in the European continent, further serves to explore the dangers of political manipulation taking place on social media platforms. In a clientelist media system as the Greek one, news coverage on certain topics such as political scandals and corruption allegations is particularly vicious, resulting in spilling over pre-election periods and permanent political campaigning [2–4]. This system has a series of implications, such as political cynicism and distrust toward institutions, lower voters' turnout during elections, and a political system that is unable to form coalition governments or achieve wide-base legitimacy. The culmination of Greek media in the hands of a few oligarchs has also the (un)intended effect of stifling any alternative voice, a trend depicted in the concerningly low position of the country in press freedom indexes [5]. As a result, the Greek population has sought to use social media as a way of getting independent information. In reaction, over the course of the past decade, social media has become the battleground for political control over Greek voters. X (former Twitter) in particular, despite the fact that it is only used by 10% of the Greek population [1] has become an indispensable tool for shaping perceptions and opinions, especially since the Greek mainstream media turned to X to construct news stories based on alleged "trending" topics. In the meantime, research is showing that prominent Greek politicians and the majority of political parties have been making extensive use of Twitter farms, amplifier armies, and fake accounts to spread misinformation, attack their opponents, and influence the political discourse.

The drive to control social media is not a solely Greek phenomenon. As far back as the early 2010s, concerns were raised about regulating the toxic social media ecosystem riding on a wave of harassment campaigns against journalists and opinion writers mainly coming from the gaming community (i.e., Gamergate). Similarly, smaller social media platforms such as 4chan and Reddit were gaining notoriety for allowing subcultures of fascism, racism, and sexism to take hold of their channels [6]. To what extent the users of these social media platforms managed to organize over the years is still a matter of fierce debate. The fact remains that in concord with Trump's candidacy in 2015 several concerning trends came to co-existence: online communities seemed to congregate around social media figureheads, a concise set of anti-Muslimism, anti-immigration, anti-multiculture, anti-LGBTQ, and anti-women arguments spectacularly similar, despite the cultural differences spread from the USA to the EU. These arguments were expressed by nativist and exclusionary political movements that in the following years penetrated the Eurosceptic and far-right political wing. A scientific report from Schoch et al. [7] demonstrated astroturfing political

movements online showing coordination patterns across the world. According to this study, these centrally coordinated campaigns consisted of both automated and human-operated accounts and did not necessarily spread disinformation and fake news. They, however, deceived users over their true motivations by using false identities.

In this study, we are mainly concerned with this question: which accounts are truly harmful when it comes to disinformation. To answer this question, we focus on accounts' activity on X (former Twitter) platform from 2009 to 2021. Instead of focusing on whether an account is a bot or not, we distinguish between accounts that provide original content and accounts that just amplify content. To have a better insight regarding an account's activity we also consider the range of topics that the account has been engaging in, as well as its activity history.

In the first part of the chapter, we address the problem of online political manipulation, the various tactics employed, and the political reasons behind them. More precisely, we explore concepts such as the bandwagon effect, astroturfing, and online toxicity. Then, in the second part, we analyze the methodology we chose to study the Greek Twittersphere. Our methodology employs a new schema for studying bot accounts affiliated to politicians, as well as a new way to measure online toxicity. In the last part, we discuss the findings, as well as the limitations of our study, and proposals for further research.

The present study comes to add to a long tradition of academic study of bot activity online. We raise the question of whether a bot is harmful, promoting disinformation, and/or fostering online toxicity. Studying bots' activity in the Greek online sphere also provides the benefit of examining these practices in an unregulated and usually overlooked side of the Greek internet.

## **2. Literature review**

### **2.1 Political manipulation on X (former twitter)**

Social media has turned into virtual spaces where conflicting narratives struggle to gain visibility [8]. As Terranova pointed out [9] the concept of an information society (limitless information) was soon challenged by the scarcity of attention, a quantifiable resource like other economic goods, open to "marketization and financialization." In this power struggle, various actors compete in online environments, like social media platforms, to reach the widest audience possible and to win audiences' attention. To do so, they use a variety of means. Since audiences' attention is also sold to other interested parties, big tech companies designed social media operations to be as addictive as possible, raising concerns over the ethics of the attention economy [10].

By employing cutting-edge AI technologies social media platforms offer to their users personalized/tailored content [11], interactive features [12], as well as a sense of community [13, 14]. Interestingly, Shahbaznezhad et al. [11] show that users are more likely to engage with negative content. Ferrara and Young [15] research suggested that negative messages tend to spread faster than positive ones. Similarly, tweets conveying negative emotions tend to be retweeted more often and more quickly compared to positive and neutral ones [16, 17], as well as populist messages that provoked anger [18]. Pérez Curiel [19] demonstrated the strategies that right-wing populist actors follow to make their messages go viral on X: homogeneity of the message,

limited topics, high volume of publishing tweets, and limited response. García Benítez-D'Ávila [20] identified 18 types of personal attacks populist politicians use to confront opposing voices and also demonstrated that the more vicious the personal attacks were, the more polarization and engagement it generated on X. Furthermore, Guldmond et al. [21] showed that users on X became more polarized and used more “uncivil” language when they followed deceitful opinion leaders meaning accounts that spread fake news, rumors, conspiracy theories and disinformation.

By examining the literature, we can agree that messages that convey emotions, especially anger tend to become viral on platforms such as X. On top, we saw that populist politicians engage in toxic debates, not only to silence opponents' voices but also to gain traction for their message. But is this engagement coming from actual users? Are users on X so prone to these messages that they engage and amplify them as soon as they come across such content? Or do politicians use other methods to fake the image of wide popular support? Based on Liebenstein's bandwagon effect theory [22], researchers have proven that people are more likely to choose candidates they perceive as more popular or more likely to win [23–25]. This internalized human tendency for conformity is highly exploited by astroturfing tactics [14] that create the illusion of wide popular support on a given matter, influencing people to align their opinions or behavior accordingly. Astroturfing tactics disguise top-down activities, initiated by actors with political interests, as bottom-up demands [26] and can take place both offline (fake grassroots movements, demonstrations, etc.) and online (campaigns, bots, influencers, etc.). Astroturfing on social media has been the object of research in the context of elections [27] with the use of bots, as a phenomenon of multiple accounts on different platforms with a single author [28], in mapping various detection techniques [29], but most importantly as a coordinated phenomenon across diverse political and geographic contexts and different periods of time [7].

During the 2016 US presidential elections, there is compelling evidence to suggest that the republican party utilized bots to garner support for Donald Trump. Al-Rawi et al. [30] mapped out former's Twitter traffic related to Trump's candidacy to discover that at least a third was generated by bots and highly automated accounts. Similarly, Bryden and Silverman [31] have shown that computational propaganda from automated X accounts played a significant role in developing Trump's online following. The use of bots carried throughout the entirety of Trump's presidency picking up during significant events like the first Trump impeachment [32, 33]. These bots were instrumental in creating a false sense of wide support for Donald Trump, as well as confusing and demobilizing the opposition spreading alternative facts and influencing the agenda [34]. Following the bot purging by X (former Twitter) in 2018, Silva and Proksch [35] found that the radical right and several Eurosceptic politicians from across the European Union noted the biggest drops in followers, suggesting their extensive use of bots.

## **2.2 Anatomy of X amplifiers**

Research on X (former Twitter) bots has explored a wide range of topics, reflecting the diverse concerns within the academic community. Some of the main themes that have emerged from these studies include technical aspects of creating bots [36, 37], the detection and identification of bots [38–41], the influence and role of bots on X [40, 42–44], and the development of methodologies and tools for analyzing bot behavior [45–48].

While extensive and diverse, research on X bots is not without limitations. Several key challenges and constraints have been identified in the existing literature. First of all, the diversity and complexity of content on X is a significant restraint toward establishing universal bot detection methods [49]. Other researchers have pointed out the scarcity of labeled datasets for training detection models [50] and therefore the insufficiency of solely machine learning techniques to identify bots [36], while available data may also lack in reliability affecting the validation of detection algorithms [51].

In this study, we argue that the automated activity of an account should not outperform the nature of its activities, since mis/disinformation can be spread by all types of accounts (automated, semiautomated, human-operated). By training new models with the help of VouliWatch coders, we put under the spotlight the accounts' activity instead (whether they produce original content or just amplify content), while examining at the same time how these accounts perform regarding the spread of toxicity.

### **2.3 Online toxicity**

Examples of online toxicity, such as the use of offensive language, trolling, bullying, harassment, physical threats, doxing, obscenity, and racial or identity-based hate among other things, are a constant presence in the online experience ever since the 1990's [52]. Though there has been some research on cyberbullying and toxic behavior during online games before 2015 [53], the academic research surrounding online toxicity peaked in concord with studying social media's negative by-products. Social media's interactivity, especially in the form of commenting, also brought about an escalation of aggressive online rhetoric that definitely pre-existed [52]. There is no doubt that this escalation of toxic discourse had a serious impact on the willingness to engage in public debate on the one hand and skewed the decision-making process of forming one's personal opinion by misrepresenting or exaggerating public opinion around issues of "alleged" common concern on the other [54]. However, there is no consensus on what this online toxic behavior entails: Some scholars maintain that online toxicity should only include harmful, disrespectful, discriminatory, or other hateful or abusive language [55, 56], while others include borderline unlawful or illegal activities such as doxing, online harassment, cyberbullying, and physical threats [57]. The definition of toxicity also varies from platform to platform, depending on the community norms and linguistic patterns [58]. According to Google's documentation [59], online toxicity is treated in a case-by-case scenario, based on the guiding principle of banning users that violate terms of conditions or domestic/international laws. This categorization encompasses a wide category of language which is subject to the individual interpretation of the administrator/moderator of the message.

In this study, we categorized toxicity based on its qualitative differentiation making a distinction on severity; therefore, verbal insults were marked as toxic, hateful messages and threats as severely toxic, and insults based on race, gender and other characteristics as identity hate. In addition, based on Angela Nagle's exposé on online subcultures and toxicity [6], we counter-imposed the above categories on an extreme left-extreme right political axis to determine the origin of online hate in the Greek X sphere. The reasoning for exploring the political origins of online toxicity is to determine whether the horseshoe theory, meaning that the extreme left and the extreme right converge during times of crisis, hold true in the Greek case. An additional investigation is to determine whether bots are used by both extremes with the same goals and employing the same tactics.

### 3. Methodology

#### 3.1 Approach, data, and specifications

In our approach, we decided to focus exclusively on Greek politicians who were active on Twitter, the targets, and their surrounding network of followers, since in this way we were able to correlate the content of the Greek politicians with the information dissemination ecosystem. We ended up dividing our datasets into three different subsets; (1) targets—with information collected about Greek politicians, (2) followers—with information collected for all the followers of each target up to November 2021, and finally (3) tweets—a sample of up to 800 tweets from each account within the previous datasets up to January 2022. The target dataset comprises a manually curated dataset in collaboration with VouliWatch, with information about each Greek politician including FullName, District, Party, Link, and UserName (**Table 1**).

To collect our data we used Twitter API, v2 to collect account (get-users-by) specific information and followers (get-users-id-followers), and v1 to collect tweets (user-timeline). For each account, we collected basic information provided by the API including ID, CreatedAt, Name, UserName, Description, Location, Protected, Verified, Followers, Following, Tweets, Listed, ProfileImageURL, URL, PinnedTweetID, PinnedTweetCreatedAt, PinnedLang, PinnedSource, PinnedText and additional enriched information including Target and Party (**Table 2**).

Firstly, we collected data on the 300 members of the Greek Parliament, including 17 members of the General Government coming from the six political parties (KKE, MERA 25, SY.RI.ZA, PASOK-KIN.AL, New Democracy, and Greek Solution) composing the Greek Parliament. Targets who were not elected as members of the Greek Parliament but appointed as members of the Government or the State apparatus were grouped in a separate category (GOV) and were not included in the final analysis of political preference. Of all politicians, 236 had an X (former Twitter) account. To avoid imbalanced data, we only used the data of the first 63 accounts related to the New Democracy party.

In the second stage, we collected data for all *targets' Followers*, creating a dataset consisting of approximately 4.68 million accounts of which 1.5 million were unique (**Table 3**). Almost two-thirds of the accounts collected were inactive or without any activity or followed only one target. At the same time, popular targets such as political

ID	Party	# Targets	# Used
KKE	KKE	2	2
M25	MERA 25	7	7
SRZ	SY.RI.ZA	63	63
KIN	PASOK-KIN.AL	18	18
ND	New Democracy	125	63
EL	Greek Solution	5	5
GOV	Government	16	0

**Table 1.**  
*Targets.*

Type	Attributes collected
Tweet data	ID, CreatedAt, FullText, Hashtags, Media, URLs, Mentions, Source, Lang, FavoriteCount, RetweetCount, Link, UserName
Account data	ID, CreatedAt, Name, UserName, Description, Location, Protected, Verified, Followers, Following, Tweets, Listed, Favorites (v1), ProfileImageURL, URL, PinnedTweetCreatedAt, PinnedLang, PinnedSource, PinnedText
Shared data	Target, Party

**Table 2.**  
*Data collection.*

Total Followers	4,677,796
Unique Followers	1,560,996
Followers with >1 Targets	449,686
Followers with >2 Targets	255,229

**Table 3.**  
*Followers.*

party leaders (i.e., K. Mitsotakis, A. Tsipras, and G. Varoufakis accounts), that enjoy high visibility coming from abroad, had followers who followed one, two, or all three targets at the same time without offering any content related to Greece (politicians, journalists and other celebrities from abroad). These accounts were also removed from our final dataset since they created an imbalance in the overall sample. Our final sample consisted of about 450 K accounts.

In the final stage, a sample of approximately 36.8 million Tweets in four different cycles was collected, with mentions from January 2007 to January 2022 for each of the accounts included in the final survey. Of the references we collected, about 19.2 million were written in Greek or contained Greek text that we could use, while 39.18% of our sample consisted of primary content (tweets), 34.34% of retweets, 23.36% of replies, and 4.12% of quotes. Finally, we associated each report and account collected with the targets and political parties they were associated with.

### 3.2 Account/user classification

*Amplifiers* are accounts that amplify content through likes and retweets and their purpose is to increase the popularity of a post or to promote a narrative, that is, a commercial product, a political slogan. These accounts are occasionally engaged by the overall network to carry out attacks on political opponents, boost the impact of a hashtag, or contribute to the overall narrative by creating content (i.e., Twitter Storm platform). We often refer to these accounts by the designation *bots*, however, this designation mainly refers to automated accounts or accounts controlled by a central system (Botnet). In the case of amplifiers, their activity is not necessarily automated, but they have similar (or even similar) behavior to that of bots. In our research, we have included bots in the amplifiers category.

To detect the behavior of amplifiers we had to isolate them from the rest of the accounts that had normal behavior. The following categories of accounts were created:

- **Influencers:** highly influential accounts, whose content is reproduced no matter what.
- **Active:** accounts that interact with all the content and with a large number of topics. They actively participate in organized or unorganized discussions and deal with current topics.
- **Amplifiers:** accounts with a strong but at the same time restrained activity regarding topics (i.e., politics and entertainment, politics and sports) with a much lower percentage of primary content.
- **Unknown:** locked accounts, accounts without any activity, and accounts that we cannot classify in any of the above-mentioned categories.
- **New:** accounts created up to 120 days before their detection. New accounts are identified solely by the difference between the date we collected them and the date the account was created.

Since we wanted to create a scalable machine learning model without depending on linguistic features, we only used features exclusively from the accounts (**Table 4**).

<b>User metadata</b>	<b>Derived features</b>
Tweets	Number of Tweets
Followers	Number of Followers
Following	Number of Following
Favorites	Number of Favorites
Listed	Number of lists the Account is on
Default Profile	Whether or not, an account has the default profile
Verified	Whether or not, an account is verified
Actions Frequency	(Tweets + Favorites) / Dates Since
Tweets Frequency*	Tweets / Dates Since
Reputation**	Followers / (Followers + Following)
Credibility	Listed / (Followers + Listed)
Followers Growth Rate*	Followers / Dates Since
Following Growth Rate*	Following / Dates Since
Favorites Growth Rate*	Favorites / Dates Since
Listed Growth Rate*	Listed / Dates Since
Followers/Following Ratio	Followers / Following
Tweets/Favorites Ratio	Tweets / Favorites

\*Ref. [60].  
 \*\*Ref. [40].

**Table 4.**  
*List of features used in our framework.*

### 3.3 Partisanship and hyper-partisanship ratio

To define partisanship, we tracked the sharing of tweets associated with X (former Twitter) accounts (targets) of known political valence. The valence ranged from  $-1$ , indicating left-leaning accounts, to  $+1$ , indicating right-leaning accounts, and was defined as shown in **Table 5**. This definition of partisanship assumes that following a target account implies approval of its content [61]. Research has shown that following an account is the strongest predictor of a user's stance compared to retweeting, replying, etc. [62].

#### 3.3.1 Partisanship ratio

In accordance with Nikolov et al.'s model [61], we defined the partisanship ratio of each user  $u$  as  $Vu = \sum_t p(t|u)vt$  where  $p(t|u)$  is the fraction of targets  $t$  that a user  $u$  follows and  $vt$  is the political valence of target  $t$  (values from  $-1$  to  $1$ ).

#### 3.3.2 Hyper-partisanship ratio

Similarly, we defined the hyper-partisanship ratio of each user  $u$  as  $Hu = ut|t$  where  $ut|t$  is the fraction of targets that a user  $u$  follows out of the total targets.

### 3.4 Tracing toxicity

A frequent debate regarding research on media platforms revolves around the term toxicity. However, as already stated the term itself is poorly defined and often contradictory, encompassing everything from online harassment and bullying to negative commentary. To map online toxicity on the platform we formed seven different categories: (i) hateful, (ii) insulting, (iii) threatening, (iv) racist, (v) sexist, (vi) using xenophobic rhetoric, and (vii) using nationalistic language (**Table 6**). These categories were clustered into wider groups. Every tweet that contained insulting language against a person was marked as *toxic*. Further on, tweets that included hateful language, threats and/or insults were marked as *severely toxic*. Tweets targeting an individual or a group based on identity characteristics such as gender, ethnic minority, and/or religion were marked as *identity hate*.

Vouliwatch, a Greek nonprofit and nonpartisan organization that monitors the Parliament of Greece and its activities, participated in the annotation process with 15 coders that marked 112,000 tweets from May 10, 2021, to July 17, 2021, [64] resulting in training a Machine Learning Model (open-source) and the MultiLabel Text Classification Model [65].

## 4. Results

In **Figure 1** we see a timeline of the tweets collected from the accounts in our sample marked as amplifiers. We see that approximately 450,000 amplifier accounts produced

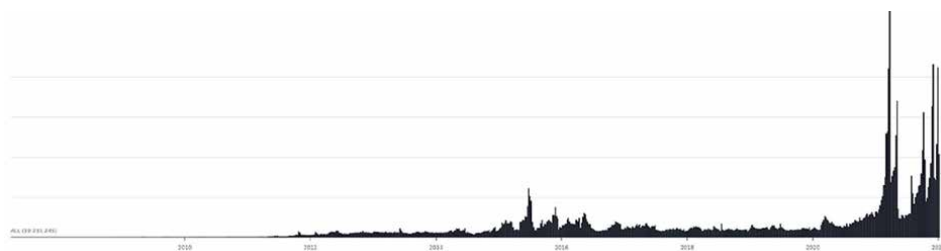
KKE	M25	SRZ	KIN	ND	EL
-1	-0.6	-0.2	0.2	0.6	1

**Table 5.**  
*Political valence.*

Main categories	Attribute name	Description
Toxic	Insult	Insulting, inflammatory, or negative comments toward a person or a group of people, a very rude, disrespectful, or unreasonable comment that is likely to make people leave a discussion
Severe toxic	Hate	Offensive discourse targeting a group or an individual
	Threat	Describes an intention to inflict pain, injury, or violence against an individual or group.
Hate speech* (identity-based toxic language)	Racism	Ideas or theories of superiority of one race or group of persons of one color or ethnic origin (anti-semitism, anti-Roma speech, xenophobia)
	Anti_refugee	Against (im)migration, anti-Refugees, against granting asylum
	Sexism	Beliefs of genders and the role they play in the society, Gender stereotypes, Homophobia, Transphobia, Patriarchy, Sexual Violence, Harassment, Gender Violence
	Nationalism	strong, often excessive, feelings of pride in and allegiance to one's nation (usually the nation in which one is a citizen, although sometimes a nation with which one has ties <i>via</i> ethnicity or heritage) and its culture or belief in its superiority.

\*Ref. [63].

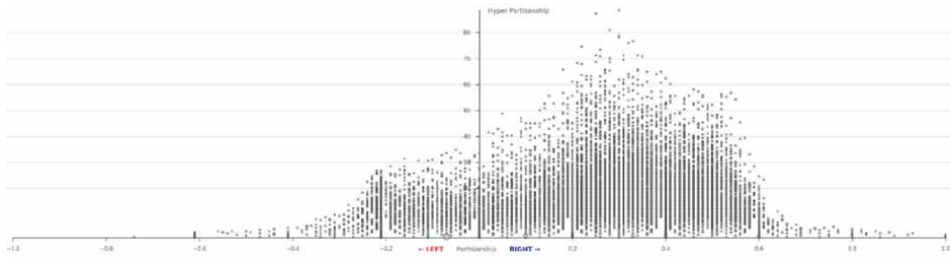
**Table 6.**  
Categories used in defining toxicity.



**Figure 1.**  
Tweets collected from the Greek X (former Twitter) sphere ( $n = 19,231,245$ ).

19 million tweets in the course of a decade. This counts for more than half (52%) of the total tweets of the period under investigation. The first period of increased publishing takes place during the course of 2015, a turbulent period for Greece with double national elections, and the forming of a coalition government between SY.RI.ZA and AN.EL. parties and the imposition of capital controls on the Greek banks. Although there is another round of national elections taking place in 2019, the levels of amplifiers' activity during the period remain rather low. It is from 2020 to 2022 that these accounts report unprecedented activity with peaks around key events, such as the Greece-Turkey border crisis in 2020, the COVID-19 pandemic crisis, and the period preceding the Russian invasion of Ukraine. Domestic politics was also shaken during the same period by the outbreak of the wiretapping scandal, known as *Predator Gate*, involving journalists, politicians, members of the armed forces leadership, and known businessmen as targets and serious indications of government involvement.

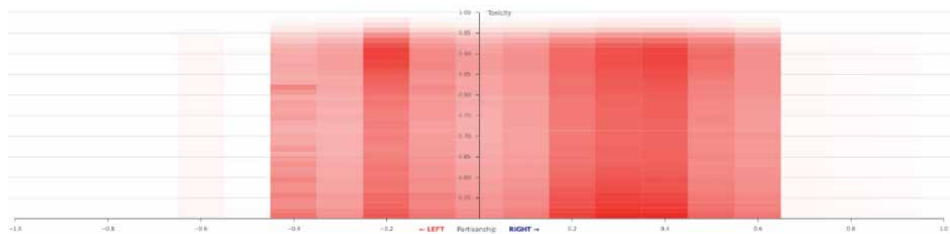
The levels of partisanship of amplifier accounts are shown in **Figure 2**. As it can be seen, amplifier accounts affiliated to the right of the political spectrum are more than



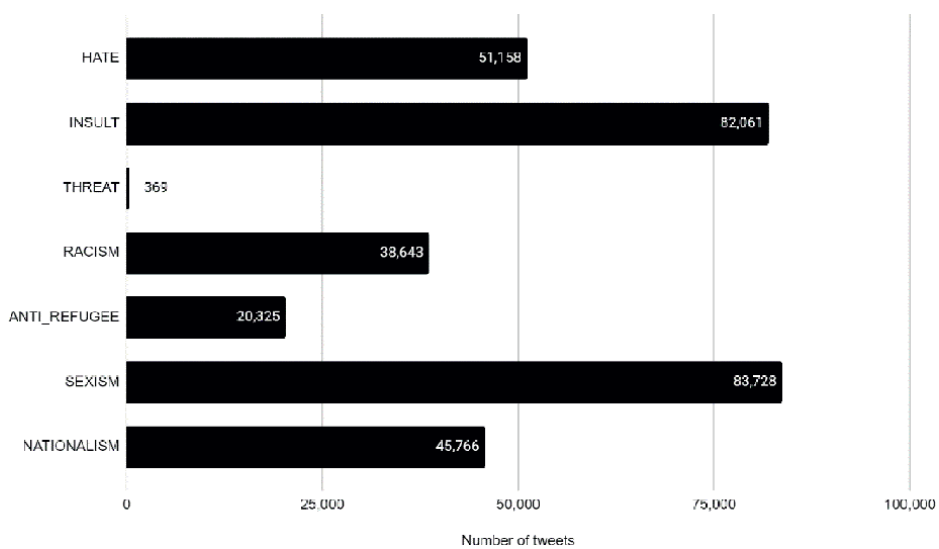
**Figure 2.**  
*Levels of partisanship in amplifier accounts across the political spectrum.*

double than those affiliated to the left, while they also demonstrate higher levels of polarization too.

Regarding toxicity, we see that the amplifier accounts affiliated to the right of the political spectrum promote more toxic tweets both in terms of volume as well as in intensity (see **Figure 3**, marked in red). Although accounts on the left of the political spectrum also tweet content marked as toxic, they lack in volume and intensity. One



**Figure 3.**  
*Levels of toxicity in produced tweets according to partisanship.*



**Figure 4.**  
*Number of tweets containing toxic content (May 10, 2021 to July 17, 2021), n = 112,000.*

exception is a number of amplifier accounts affiliated with the SYRIZA party that also tweet severely toxic content. However, based on our research the theory of the two extremes cannot be supported, since right affiliated accounts outperform the left ones in terms of polarization and radicalization.

With the help of human annotators, we trained a consistent toxic language model. The results of this process are shown in **Figure 4**. Many of the tweets were marked with two or even three types of toxicity. However, as it is shown very few of them contained actual threats, while insults (personal attacks) and sexism were by far the most common types of toxic content. Hate speech, defined as a verbal attack based on one's characteristics [64], is also prevalent in almost half of the sample, followed by racist and anti-refugee rhetoric. Nationalistic messages were also traced in 45,766 tweets.

## **5. Conclusions**

This study analyzed the online patterns manifested by amplifier (automated or not) accounts in the Greek Twittersphere. The premise of the study was that whether an account was automated or human-operated was of little consequence compared to its online activity. Besides, a recent study published in Nature Scientific Reports [7] demonstrated that human amplifier accounts working under a central coordinating authority can easily match bot accounts activity (coincidentally during regular office hours) in terms of content creation and amplification. Additionally, a study conducted by MIIR [66] showed that during periods of low political activity amplifier accounts switch from promoting their political sponsors to promoting commercial products. These trends indicate that in Greece as happens around the world, there is a robust industry led by advertising firms that provide shares, likes, and retweets to a wide range of customers, either politicians, celebrities, businesses, or all of the above.

The study implements a scalable classification to predict amplification accounts on X (former Twitter) based on features derived exclusively from the accounts, without focusing solely on the level of automated activity. Given that AI developments are making bot detection an ongoing challenge, attention should shift to understanding the behavior of social bots, particularly in spreading disinformation and the ultimate objectives of the actors deploying these bots. In this effort, we focused on the activity of the accounts affiliated with the Members of the Greek Parliament and their network. In our endeavor, we also looked at other tactics employed by shedding light on their toxic behavior. Therefore, we trained a Machine Learning Model and a MultiLabel Text Classification Model, both open-source and publicly available. Indeed, from our research, it was evident that amplifier accounts along with propaganda are also promoting toxic content, mostly in the form of personal attacks, in an attempt to silence dissenting opinions.

The key takeaway from the study is that even though we could argue for the existence of an online public sphere in Greece up until 2019, the explosion of amplifier accounts from 2020 onwards forced us to understand the Greek Twittersphere as a tool for political manipulation. Additionally, even though a number of amplifier accounts support the predominant left-wing party SYRIZA, the dominance of the New Democracy party when it comes to the sheer number of contents promoted by amplifier accounts is indisputable. The trends hold through when it comes to toxicity as well. Right-wing affiliated amplifiers demonstrate promotion of severely toxic content, mainly insults, sexist remarks, and racist anti-refugee rhetoric. A possible reason behind this trend is that the job of amplifier accounts is to amplify hate and silence tactics against opposition supporters by swarming the Twittersphere with hateful content. Lastly, another

tactic is visible: from 2020 to 2022, amidst a maelstrom of political scandals involving the governing party, amplifier accounts associated with New Democracy promoted the official narrative that downplayed, refocused, or outwardly denied political implication of the governing party to these events.

To summarize, the Greek Twittersphere demonstrates all too familiar patterns when it comes to amplifier accounts. The existence of an industry that provides followers and amplifiers should be thoroughly investigated to better understand the political implications. On the other hand, the prevalence of hate content on the right wing of the political spectrum as well as cyber harassment and silencing tactics do not seem to corroborate the existence of a “two extremes” scenario. Plainly said, at least in the case of the Greek Twittersphere toxicity is to a great extent unipolar.

In lieu of a conclusion, we need to again, warn on the concerning development of an increasingly contracting social sphere. With the development of AI technologies, propaganda campaigns online are already too difficult to discern by users without a very good grasp of social media literacy. Similarly, scholars analyzing social media should always be wary of the extent to which the social media environment is representative of a genuine public discourse. Instead, we would suggest that social media are the fertile ground to explore astroturfing campaigns and other propaganda tactics and how these may influence the political and media agendas, and ultimately the electoral decision-making process.

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## **Conflict of interest**

The authors declare no conflict of interest.

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# Community Policing and the Social Media Use in Nigeria

*Aminu Musa Audu*

## Abstract

Community policing has assumed the latest bride in curbing the perception of crime and security challenges confronting humanity. This is in view of the understanding that no matter how sophisticated the institution of policing, fulfilling the police constitutional mandate of tackling crime and promotion of community safety required the robust collaboration between the police and the public, characterised by sharing intelligence information and provision of other useful forms of supports. However, what is pertinent is the democratisation of access to information through instrumentality of digital technology and social media space such as Facebook, Twitter, Instagram, and WhatsApp. These digital resources are used to facilitate the dissemination of information, including sharing of intelligence data between the citizens and security providers. However, the emerging realities have suggested that the use of social media space is subjected to various forms of corruption and abusive practices by users such as promotion of news contents perceived to be fake, divisive, and capable of producing escalation of criminal behaviours across the nations and globally. Relying on the reviews and analysis of relevant literature, this chapter submits that although social media practices contribute enormously to the effectiveness of community policing; nevertheless, the positive impact of social media on community policing seems to have been overshadowed by various forms of corruption. It is therefore imperative that adequate trainings on social media use and its regulations be provided to critical stakeholders including the Law Enforcement Officers by governments in Nigeria and international communities without losing sight of the human rights of the users as well as entrenchment of anti-corruption policies and practices in Nigeria.

**Keywords:** social media, community policing, corruption, crime, digital technology, Nigeria

## 1. Introduction

While the perception of crime and insecurity have become immanent safety issues confronting humanity, community policing seemed to have assumed the latest bride in curbing these challenges in recent years. This is in view of the understanding that no matter how sophisticated is the institution of policing, fulfilling the police's constitutional mandate of tackling crime problems and the promotion of community safety would require the robust collaboration with the public. This

is in terms of intelligence information-sharing activities and other forms of useful supports. Nevertheless, what is pertinent is the democratisation and deregulation of access to information using digital technologies and the social media spaces such as Facebook, Twitter, Instagram, and WhatsApp used to facilitate the dissemination of information, including sharing of intelligence data between the citizens and security providers. However, the emerging realities have suggested that the use of social media space is more often than not has been subjected to abusive practices by users such as the promotion of news contents that are relatively perceived to be fake, divisive, and capable of producing escalation of criminal behaviours across the globe. This chapter aimed to theoretically explore the impact of social media on community policing and the corresponding challenges faced in Nigeria. In this connection, this chapter addresses the following questions: What is the relationship between community policing and social media use, and the inherent impacts? How is/are the issue(s) arising from the implications addressed for desirable positive outcomes?

## **2. The reality of crime in Nigeria**

The problem of crime and insecurity have over times believed to have pervaded the Nigerian space. There are cases of kidnapping of people for ransoms, including school children in their various hostel accommodations, ethno-religious killings, insurgency mostly in the North-East and youth restiveness, and a range of politically motivated murders in vogue (Nigeria 2020 Crime & Safety Report: Lagos Country Security Report, 2020). In an interview with the Network Magazine, a publication of British Sociological Association Audu ([1], p. 28) mentioned that:

“...But during my work I began to see the way people disturbed about the level of crime and general insecurity in my country, at a time of an increase in armed robbery, kidnapping, insurgency, rape, corruption and other forms of domestic violence and terrorism. The problem had reached a stage where everybody was in fear and uncertainty. People in Nigeria find it difficult to sleep in their home, work in offices, board flights, transact business freely for fear of what their fellow human beings can do, and the activities of Boko Haram were becoming a threat to national survival. However, members of public are not willing to cooperate with the police by giving useful information that may assist in the prevention of crime. This situation has posed a serious threat to the Nigeria Police’s ability to protect lives and property and maintain law and order...”

Even the lives and operational property of the police are not spared in Nigeria. For instance, the Premium Times Newspaper dated 29 March 2021 reported that: “497 Nigerian Policemen Killed in Six Years...”. In 2 months, sixty-two police officers were killed in 15 States in Nigeria (Daily Trust, 2 March 2021), and “...at least twenty-five police stations burnt in the South-East and South-South region of the country, while sixty-seven security men were killed” (Vanguard Newspaper, 7 April 2021). However, sociology is about understanding of the society to describe, analyse, and predict behaviours. Sociology is scientifically interested in the working of institutions, structures, organisations, social behaviours, and development of society. To quote sociology at the University of Nottingham UK, it:

*“offers opportunities to explore how societies work and what can be done when they do not” [2].*

### **3. Community policing**

In the light of enormous crime issues confronting humanity and the long-term desire to find solution, the concept of community policing has in recent times become the new bride in the internal security equation among nations of the world. This premised on its prescription for a robust relationship and intelligence information flow between the public and their security providers such as the police. Those who had upbringing in a relative rural setting in the country are likely to appreciate the kind of togetherness prevalent in the village social system that promotes community policing including the policing of poverty. Reflecting on this important aspect of social system in Africa and its potency to respond to several concerns of environment in the black continent, Dambazau ([3], p. 245) noted that community policing in its original form is not a strange phenomenon in Africa as the traditional Nigerian setting is characterised with communal living, as reflected in their mutual respect for elders and peer groups, recognition and promotion of the nuclear and extended family institution, consciousness of the value attached to the traditions, and a deep sense of security and safety within the community. In this social system, the socialisation patterns reflect the philosophy, ethics, and values necessary to tackle criminogenic conditions including the culture of integrity. Friedman ([4], pp. 2–4) defined community policing as policy and strategy that guarantee more effective and control of crime. In this context, while effort should gear towards reducing the “reduce fear of crime”; improved quality of life, police services, “police legitimacy” and ensure an “initiative-taking reliance on community resources”; but also “seek to change crime causing conditions”; “greater accountability of police”; “share in decision making and concern for civil rights”. While this definition summarised the essence of community policing in its ideal form, most of the developing and even developed economies have issues that tend to make it unrealisable. Although, the security strategy started in operational term in the UK and the USA and the rest of the West in the 1970s, the policy transfer to other part of the globe assumed prominence in the 1990s [5].

However, community policing as a strategy has witnessed culturally related hurdles when it comes to policy transplant in areas other than where it started partly because this kind of strategy has little or no African socio-cultural background. The Western model of the crime-fighting strategy perceived as a novel development, linked with scepticisms. Consequently, it requires institutionalised effort to imbibe its operational patterns and prescriptions in most African countries such as Nigeria. The UK-DFID in 2003 invested about £30million for community policing in collaboration with the British Council’s Security Justice and Growth in Nigeria [6]. However, this peace project has suffered a setback resulting from the wide communication gaps between the police and public [7, 8]. Nevertheless, the Federal government of Nigeria have again, in 2020, invested about £26 million to promote community policing [9–12].

Audu’s [7] Ochamalienwu theory of community policing aimed to address community safety concerns, stipulating whining of squirrel on the sensing of suspicious behaviours. The theory states that the level of crime in the society is directly related to the level of useful and timely intelligence information that the public provide to their security providers such as the police and the corresponding capacity of the security agents to act in accordance with policing specificities. The more the information gap between the community and police, the more the high perception of crime. The Ochamalienwu theoretical philosophy identifies wide intelligence information gap between the community and security providers, as underlining reason for high perception of crime and threat of global terrorism. The information and communication

gaps are consequent upon negative impact of the prevailing family norms that frown at the family members from reporting the criminal or suspicious behaviour of fellow family members to the police; the negative influence of the community network, such as the membership of political party, religious groups, occult groups, professional bodies, ethnicity, the socio-cultural practices, such as patriarchy, stigmatisation and shaming, patterns of socialisation, and poverty. The relationship gaps between the police and the public are being consolidated by the trust crises resulting from the perception of various forms of corruption such as giving and taking bribes, police brutality, and police miss-governance among the police and community during interactions. To ensure that there is a bridge of communication gap between the security providers and communities, it is important that efforts must be put in place by the institutions of governance at government, security management, and community levels for a robust re-orientations and police-community relationships, sustainable trust building, and anti-corruption mechanism. Ochamalienwu theory of crime and community policing which derives its meaning from squirrel whining in the context of African cosmology prescribes say what you see, do what is right; whining on sight of suspicious behaviour to the security providers in the light of the police and community relationship; and the establishment of cultural conditions to reduce crime such as poverty reduction, anti-corruption programs, and a community-driven Volunteers Community Police Constabulary system. The system is meant to complement the work of conventional police agencies of government, to bridge the security governance gaps in local communities, provision of trainings for police officers, and community to encourage and brace up the required cultures of crime reporting. The Broken Window Theory propounded in 1982 by James Q. Wilson and George L. Kelling stipulates that any visible signs of criminal behavioural pattern have potentials to develop into complex crime problems. The theory that was notably popularised by the New York City Police Commissioner William Bratton advocated for the policing of minor crimes and misdemeanours such as public drinking, jaywalking, loitering, and fare evading to prevent the escalation into more serious criminalities [13]. The proponents of the Broken Windows Theory argued that prompt response to crime at its earliest simple degree through zero-tolerance policing strategies is likely to engender enduring peace and security but that a close interaction with the community was necessary to make it possible. While prompt responses to visible signs of crime have the tendencies to prevent its escalation, it, however, depends on the availability of timely but relevant intelligence information about such visible signs of crimes to the security providers.

#### **4. Social media use**

In the world of knowledge production and dissemination, engagement with the public is gaining popularity in recent years being a strategy to make research works much more impactful in the society. In 2004 at the Presidential Address to the American Sociological Association Annual conference, Burawoy [14] introduced the concept of public sociology that involved propelling the knowledge of sociology to the public space. By implication, Burawoy [15] believed that there was a growing difference between the fundamental ethos of sociology as a discipline and the society in which it tends to scientifically study. Therefore, public sociology deemed to have the enormous task of bringing into the fold of the profession the framework and the structure necessary to engage the members of the public in the variety of

ways. This is germane despite that the task of understanding public sociology framework, its potentialities, possibilities, its successes, its risks, its contradictions, and failures are characteristically enormous [16]. Burawoy [14] further argued that the motivating factors for the general interests in sociology were its tendencies to stimulate actions that lend voices to ensuring gender equality, social justice, economic and human rights, dignity, sustainable environment, and the political freedom that can engender a better world for human beings to live in. On the one hand, public sociology brings up a dialogue between sociologists and the public, and in the process, these agendas so common to both are brought to the table for meaningful discourse and to provide an avenue for adjustments to each other's perceived variations in areas of values and goals [17].

While the need for a drastic sociocultural re-orientation in favour of community policing best practices cannot be overemphasised, this can only be achieved in Nigeria through research-based initiative-taking public engagements [7, 8]. Therefore, it is important to examine the role of social media in the propagation of community policing ideals and prescriptions. According to Appel et al. [18], social media is defined as:

*"...a collection of software-based digital technologies usually presented as apps and websites that provides users with digital environments in which they can send and receive digital contents or information over types of online social network..."*

Again, the Police Foundation briefings ([19], p. 1) London, noted that:

*"Social media-a growing form of internet-based communication interfaces with all areas of policing. It offers the police a way of connecting and engaging with the public, it enables valuable information distributed quickly and easily, and it can assist in intelligence gathering. With the growing impact and reach, social media presents real opportunities but also poses challenges and increasingly seen as game changer in the police."*

Social media are Websites and computer programs that provide people to create, view, and receive news contents, at public space, and engage in communications, entertainments, social enhancement, identity formations, maintaining interpersonal connections, and information sharing on the Internet [20]. Examples of social media platforms are Facebook, blogs, podcasts, Twitter, LinkedIn, Web-baked Apps, Tick-tock, Tablets Messenger, Instagram, YouTube, WhatsApp, Telegram, etc. Social media is accessed using a computer system such as desktops, laptops, smartphones, tablets, downloads, or mobile phone. Social media have become veritable marketing tools to reach, nurture, and engage with the target audience. Facebook alone has about 2.38 billion active monthly users having recorded 1.56 billion users by 31 March 2019 [21]. By 2022, it is to increase to 3.29 billion which is about 42.3% of the projected world population. By implication, stakeholders such as marketers, academics, researchers, industries, businesses, and other relevant audiences have developed considerable interests [22]. Social media use has also become veritable instrument for sharing intelligence data, identification of evidence sources and criminals, support for criminal investigations, communication of security tips to the public, involvement in communities, among security agents in recent years [23].

It is estimated that 7 of 10 individuals in the United States of America make use of social media to interact with others, thereby becoming a geometrically increasing phenomenon of the twenty-first century [20, 24, 25]. While the culture of Internet

usage commenced in 1990 in Nigeria, the 2019 Social Media Poll Report suggested that a total of 120 million Nigerians have access to various varying categories (51% WhatsApp, 45% Facebook, 2% Twitter, and 2% Instagram) despite prevailing challenges occasioned by the shortages of awareness of Internet use among the larger part of the population generally, about how crime is fought among the law enforcement personnel, lack of adequate training by police officers, unguarded spread of sensitive information, and shortages in the supply of power and electricity in the country [23].

Nevertheless, while social media are believed to have provided hopes of democratisation and unhindered access to information, it has been subjected to horrendous criticisms in the face of enormous outrage, fear, scepticisms largely premised on the tendencies of the users to perpetrate various forms of corruption, and abuses such as spread of fake news and misrepresentation and under-representation of information and violation of privacies of individuals [26, 27]. The UNDP research report has indicated that social media resources are more often than not used by terrorist organisations such as Boko Haram, ISIL, and al-Shabaab to radicalise targeted individuals in Africa [28]. A clear instance of official reactions was the Nigeria Independence Day Speech delivered by President Muhammadu Buhari on 1 October 2019, reacting to the debilitating impact of gross corruption and abuse of digital space and social media and the spread of hate speech in Nigeria, and it was mentioned that:

*“Our Attention is increasingly being focused on cybercrimes and the abuse of technology through hate speech and other divisive material being propagated on social media...while we uphold the constitutional rights of our people to freedom of expression and association, where the purported exercise of these rights infringes on the rights of other citizens or threatens to undermine our national security, we will take firm and decisive action” (The Guardian, 1 October 2019) [29].*

In as much as the presidential declaration adjudged as reasonable, there were series of expressed concerns by the citizens over the tendencies of the government to limit the freedom and human rights of activists in Nigeria. But, before the aforementioned reaction of the Nigerian president, there was The Cybercrime (Prohibition, Prevention, etc.) Act 2015 that legally provided for the prohibition, detection, prevention, investigation, response, and protection against various forms of cybercrime and related offences in Nigeria [30]. The legal framework addressed infractions around for instance cyberstalking, phishing, spreading of false information, cyberbullying, identity theft, hacking and online fraud, etc. There is also the Nigeria Data Protection Act 2023 and establishment of the Nigeria Data Protection Commission [30, 31]. Of course, this appeared not peculiar to the black continent as other countries world over have demonstrated that the challenges that social media use posed are universal in nature. For example, in response to the devastating impact of social use and abuse, the UK’s House of Commons in the published Online Harms White Paper in April 2019 required that the care companies must take adequate responsibility for the safety and security of their respective users and to tackle the content-induced harms. The Code of Practice area to cover Section 7 of the paper sets out terrorism, disinformation, the abuse of public figure, encouraging self-harms and suicide, cyberbullying, hate crime, harassment, serious violence, and children accessing inappropriate content [32, 33]. Again, a New York State Senator David Carlucci had on 15 January 2020 introduced the Senate Bill 7275 titled “Social Media Hate Speech Accountability Act”, seeking amendment to the New York (USA) general business

regulations and laws to include among other things, the definition of hate speech and urging the social media platforms as a requirement to create a transparent procedure its prompt removal and in the event of failure to comply accordingly, the bill also grant the power to the Attorney General to seek up to the maximum of \$1million or 10% of annual global turnover whichever is higher, as damages for its violation [34].

## **5. Conclusion**

In this chapter, the reviewed literature has supported the perception that crime incidence is ripe in Nigeria with both the public and the police and other security agents sharing forms of victimisation. While its attendant negative consequences on safer communities and socio-economic development are rife, community policing being the mechanism to promote collaboration between the public and the police is capable of stimulating effectiveness in crime prevention and control in the country.

However, in this chapter, effort has been made to clarify the concept of community policing and how it can be impacted by the use of social media or digital technology in its facilitation, and there are evidences suggestive of positive impacts of digital technology and other social media space in relation to democratisation of people's access to data. This can facilitate community policing through the sharing of intelligence information among the citizens and the security providers globally and Nigeria in particular. The Federal government of Nigeria's £26 million investments in 2020 and the current effort of the President Ahmed Bola Tinubu to consolidate in the promotion of community policing is promising, but it is largely dependent on the extent to which available human and material resources can be mobilised in this direction.

However, despite the seeming saliency of the social media use to the effectiveness of community policing, there are enormous cases of various forms of corruption, abuse, and far-reaching negative implications associated with the social media use in Nigeria. And more worrisome is apparent dearth of sufficient digital knowledge and skills among the security agents in the course of carrying out their constitutional mandate of crime investigation, thereby making the force organisation vulnerable to the manipulative tendencies of those with criminal tendencies. In the light of this, therefore, stringent government regulations against media misuse and the political will to create and enforce relevant governance and anti-corruption policies have become necessary to safeguard its advantages necessary in the promotion of Ochamalienwu theory of community policing ideals, though without losing its human rights appeal. Finally, Nigeria Police should organise intensive training for police officers on how to use social media in criminal investigation and law enforcement practice. Consequently, the provision of sufficient trainings for police officers and the public would encourage and brace up the required cultures of crime reporting in line with the theoretical prescriptions of the Broken Window and Ochamalienwu theories.

## **Conflict of interest**

There is no conflict of interest in this paper, and there is no funding support either [35].


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This book offers a compelling exploration of how social media platforms are reshaping contemporary life, and driving economic, political, and cultural transformations. It brings together theoretical insights and empirical studies to examine the multifaceted impact of social media on communication, behavior, policy, and societal norms. The various chapters address critical issues such as digital marketing, social responsibility, and the role of influencers, emphasizing how businesses and individuals are navigating the evolving digital landscape. The book delves into pressing concerns, including the psychological effects of social media on youth, the spread of misinformation, and the challenges of digital addiction. It highlights the dual nature of social platforms as both enablers of civic engagement and sources of division, presenting case studies on topics such as political discourse, community activism, and local democracy.

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