Global Research journal of Natural Science and Technology (Grjnst)
Volume: 03 - Issue 3 (2025)
p.ISSN: 2790-7643 e.ISSN: 2790-7651
www.grjnst.com

The Intersection of Generative AI and Social Media: Exploring Trends and Ethical Challenges – A Qualitative Perspective

Dr. Abid Ghaffar.
Senior Lecturer. Dept. of Software Engineering College of Computing. Makkah, Saudi Arabia
abid.ghaffar71@gmail.com
Dr. Arfan Arshad
Assistant Professor School of Systems and Technology, University of Management & Technology (UMT), Lahore, Punjab, Pakistan
arfan.arshad@umt.edu.pk
Muhammad Usman Siddqiue*
Assistant Professor , Institute for Art and Culture Lahore
muhammadusmansiddiq@gmail.com
Syed Ali Sultan
Assistant Professor, School of Digital and Cinematic Arts
Institute for Art & Culture
syedalisultan@iac.edu.pk
Dr. Asim Manzoor
Associate DEAN, School of Digital and Cinematic Arts
Institute for Art & Culture
asim.manzoor@iac.edu.pk

Corresponding author: muhammadusmansiddqiue@gmail.com **(Muhammad Usman)**

Abstract: *The use of generative artificial intelligence (AI) in social media has brought about the transformation of the creation of content, personalization, and user engagement in the modern world, yet, raises severe ethical issues. The proposed qualitative research is devoted to the theme of generative AI and social media, where the researcher will consider the latest trends and ethical controversies attached to the combination of these two technologies. The study determines several important themes through thematic analysis of the existing*

literature, semi-structured interviews, and case studies, such as democratization of the content creation process, the spread of misinformation and deepfake, the lack of privacy and data security, the problem of bias in algorithms, intellectual property, and the necessity of ethical governance. According to the findings, generative AI has a two-sided character, both as an inventive opportunity and a threat to trust, equity and processes in democracy. The research points to the importance of effective ethics and practices and a multi-stakeholder approach in building a reliable solution to the responsible use of generative AI in social media and transparent methods in the process. By overcoming these predicaments, this study helps solve some legal and ethical concerns that need to be met to better accommodate innovation and ethical factors and provide a trustworthy and fairer digital environment.

Key words: *generative AI, social media, ethical challenges, misinformation, deepfakes, privacy, algorithmic bias, intellectual property, content creation, ethical governance.*

Introduction

The breakneck pace of advancement in generative artificial intelligence (AI) has brought about a new dawn of innovation on the digital front, especially in social media (Saheb et al 2024). Generative AI, which has included the technologies allowing to generate text, images, audio, and video, has been fully integrated into the sphere of online communication and creation of content. AI-based posts and targeted recommendations; deepfake videos; anti-bot systems and chatbots are some of the technologies that are transforming the nature of user-social media interaction and information consumption. Although integrating generative AI has the immense potential to spur creativity, boost efficiency and generate engagement, one cannot neglect the devastating ethical issues that need critical analysis. This paper examines how the two technologies of generative AI and social media intersect and some of the trends coming along with that convergence, and the ethical issues they pose.

Social media platforms have been on the frontline of digital transformation and with the help of algorithms and data analytic as means of streamlining user experiences. Where generative AI has come in particularly useful is in aggregating the capabilities of the platforms so that platforms can automate content creation, make things more personalized and be able to streamline moderation processes. As an example, the introduction of such tools as the OpenAI GPT models and DALL·E has allowed users to produce quality materials with a minimum of input, democratizing content creation

and at the same time drawing a thin border between the results produced by a machine and the work done by a human (OpenAI, 2023). This democratization, however, is accompanied by risks because the realization is easy, which also means that misinformation, deepfakes, and other harmful media are far more likely to be spread (Chesney & Citron, 2019).

The social media has a number of ethical implications associated with generative AI. Challenges like misinformation, violation of privacy, algorithmic bias, and intellectual property have seen a rise in occurrence due to the popularity of such technologies (Jeon et al 2025). Indicatively, the spread of AI-produced deepfakes has been a concern as it has the potential to influence the popular opinion and a loss of confidence in electronic media (Chesney & Citron, 2019). In a similar sense, generative AI has also been raised as an issue because the recommendations on personal content can cause the creation of echo chambers and filter bubbles, leading to the acceleration of societal polarization (Pariser, 2011). Moreover, the fact that AI models are trained on large datasets poses risks associated with privacy and data security due to the lack of transparency on the part of the user regarding the use of his or her data (Abadi et al., 2016).

The current paper follows a qualitative approach in discussing these trends and challenges through a synthesis of thematic analyses of the available literature, case studies, and expert opinions. By analyzing the cross-sections of generative AI and social media, the research will illuminate the two-sided aspect of the technologies observed: they hold a lot of promise in the development of innovation, yet at the same time represent a problematic issue in terms of ethical implications. The results highlight the requirement of strong ethical guidelines, ethical practices, and cooperation between stakeholders to make sure that generative AI is implemented wisely in the social media environment.

The meeting point between generative AI and social media is a paradigmatic shift in terms of digital communicational interaction and is providing never-before-seen opportunities in terms of contents creation, user individuality and interaction Qadhi et al (2024). Nevertheless, such a combination also brings serious ethical questions, such as the spread of misinformation, deepfakes, invasions of privacy, algorithmic bias, which pose a threat to trust and equity online (Chesney & Citron, 2019; Abadi et al., 2016). Although current studies have pointed to the technological potentials and social implications of generative AI, there is an evident lack of knowledge on the qualitative implications of the technology when it comes to social media, but more especially, in the lenses of users, creators, and governance principles of the platforms (Binns, 2018; Pariser, 2011). This paper aims to fill this gap by

investigating the subtleties and ethical difficulties and trends at this crossroad, giving a fuller picture of how affairs go to inform responsible innovation and policy making.

Literature Review:

Generative artificial intelligence (AI) and its implications on social media are an area of great scholarly and popular debate as these technologies reinscribe the current processes of the creation, transmission and consumption of content. Generative AI, consisting of such platforms as OpenAIs GPT models, DALL-E, and other machine learning frameworks, means that text, images, audio, and video can be created automatically. This ability holds significant consequences on social media in general which is based upon the content created by people themselves as well as algorithmic curation. This literature review zooms in on the status quo on the topic of the generative AI and social media, concerning its transformative possibilities, ethics and lack of studies in the field.

Generative AI has also changed the face of content creation by reducing the entry barriers and allowing users to create quality material with the lowest amount of work. Applications such as TikTok, Instagram, and Twitter have adopted the use of AI-based tools to provide better experiences to their users, including automatic captions, the recommendation of content and AI renditions of visuals (OpenAI, 2023). Such developments have democratized the development of creativity whereby people with no technical skills can participate in complex production of content. Using AI-based products, such as Canva and Adobe Firefly, people can craft professional graphics and video to generate a new era of digital expression (Anderson & Rainie, 2023).

In addition, generative AI has changed the way social platforms flesh out and present the content. The user behavior is scrutinised by algorithms to produce user feeds and this is done to ensure the content is relevant to the individual preferences, and it contributes to the maximum engagement (Pariser, 2011). This personalization also has the ability to promote user satisfaction and loyalty towards the platform as people tend to deal with the content, which interests them more (Binns, 2018). Nevertheless, the same trend is also associated with the formation of echo chambers and filter bubbles, in which the user can only find content that supports their original worldviews and which may present a greater level of polarization in the society (Sunstein, 2017).

Although generative AI promises to have a transformative impact, its implementation in social media has come with a lot of ethical issues. Propagation of misinformation and deepfakes is one of the most urgent problems. Generative AI can be used to generate highly realistic yet artificial content, including fake news articles, doctored photos, and synthetic videos, which have the potential to go

viral through social media sites (Chesney & Citron, 2019). As an example, deepfake-based deepfakes posed a risk to democracy and the beliefs of the citizens since they can create fake videos of a high-profile person saying something that they never said (Westerlund, 2019). The fact that the production and sharing of such content is very easy highlights the need to have strong detection systems and policies.

There are also privacy-related issues when it comes to generative AI. These technologies are informed by large quantities of user data to train and individualize content and this brings new questions of consent and data security into the mix (Abadi et al., 2016). Users also might lack full understanding of the usage of their data, and the risk that data may be misused or accessed by unauthorized people is considered large. There is also such ethical issue as algorithmic bias, which AI may cause unintentionally (Zuboff, 2019). Generative AI models are learnt on data that can be biased, such that they will become discriminatory in model output in terms of both content generation and recommendation systems (Binns, 2018). To give an example, AI-generated text or images can support stereotypes or marginalize one or another demographic group, which contributes to the systemic inequality issue. This discrimination can be especially detrimental in social media setting where the algorithms pick and the favorites based on likes and retweets and drown out the voices of the underrepresented (Noble, 2018).

Generative AI has also brought up the issue of intellectual property (IP) and ownership. When the user creates content with the use of AI, there are questions concerning who will possess the rights to such works the user/the user platform or the developers of the AI model (Guadamuz, 2017). Such ambiguity presents legal and ethical problems both to creators and the platform itself. As an example, in the case where an AI-generated pic becomes viral on social media it is not settling which side should profit in its commercial success. In addition, using copyrighted material to train AI will provoke lawsuits, and demand greater regulation of the space, showing that IP laws need to be better defined in the era of generating AI (Suzor, 2019).

Social media systems are critical platforms in defining the ethical application of the generative AI. To address harmful content, AI-driven content moderation systems have been introduced by many platforms, in order to detect and remove hate speech, misinformation, and deepfakes (Gillespie, 2018). Although these systems have enhanced efficiency, there are flaws associated with them. The problem with AI moderation tools is that they lack the contextualization of the content causing errors by removing legitimate posts or can fail to detect less obvious types of harm (Roberts, 2019). This highlights the need to have a human to oversee the content moderation procedures. The aspects of

innovation and responsibility are also present in the work of Platforms as they strive to balance the two. On the one hand, they must be motivated to implement generative AI technologies to develop user experiences and competitive relevance. On the one hand, they need to combat the ethical risks that may be brought about by such technologies including misinformation and violation of privacy (Zuboff, 2019). This strains has resulted in the demand to be more open and clear about the use of generative AI and drafting ethical rules onto its use (Binns, 2018).

Although the body of available literature has already achieved a substantial breakthrough in determining the technical potentials and societal ramifications of generative AI, a number of shortcomings still exist. First, it could be considered that there is a deficit of qualitative research that can examine the views of social media users, content creators, and platform developers on the ethical issues related to generative AI. There are generally technical or policy oriented approaches that deal with the issue, paying little attention to the actual experience of the people themselves who are directly involved in these technologies (Anderson & Rainie, 2023). Second, little is known about the impact of generative AI in social media on long-term aspects of the society, including cultural norms, democracy, and cohesion in society (Chesney & Citron, 2019). Lastly, ethical frameworks surrounding AI have been established but there has been a call to conduct more empirical studies to understand how such frameworks can be more effective in practice (Binns, 2018).

The convergence of generative AI and social media is a forthcoming area of research and study under turmoil. Although the technologies promise revolutionary changes in the process of content creation and interaction with the participants, they contain considerable ethical issues which should be addressed with a lot of caution. Misinformation, invasion of privacy, algorithm discrimination, and intellectual property are some of the issues that underline the importance of effective ethical principles and coordinated activities among the stakeholders. With the help of the closure of the existing research gaps and the prioritizing of the opinions of both users and creators, researchers can make a contribution to the responsible development and implementation of the generative AI in social media Qadhi et al (2024).

Methodology

1. Study Design

In this research study, a qualitative methodology is used to analyze the dynamics between generative AI and social media and emerging trends and ethical issues thereof. The approach

is meant to be used to bring clarity to the topic as a thematic analysis of the available literature. Thematic analysis is a common qualitative research tool that enables the investigator to discover, base on, and describe patterns (themes) in the data and is thus an ideal option to use when scrutinizing a complex and multifaceted problem like ethical ramification of generative AI in social media. In this section, the research design, data collection process and analytical framework resorted to in the study have been outlined.

2. Research Design

The research design is interpretive and exploratory, and its purpose is to reveal the subtle nature of generative AI in social media. A qualitative study will also be suitable to provide adequate insights due to the nature of the field which is still relatively new. The research questions that will guide the study are as follows:

- What are the main trends of use of generative AI on social media?
- What are the ethical issues involved in the implementation of generative AI in social media?
- How do the stakeholders interpret and react to these problems?

In answering these questions, the study will use thematic analysis based on existing literature, thus, it will be a robust and systematic analysis of the research topic.

This experimental study was designed to evaluate the antioxidant potential of *Silybum marianum* in neutralizing oxidative stress induced by environmental pollutants, particularly heavy metals such as cadmium (Cd), lead (Pb), and arsenic (As). The study involved both in vivo (plant growth under stress conditions) and in vitro (biochemical analysis of extracts) assessments.

3. Sample Collection and Preparation

The process of data collection involved the collection and analysis of the available literature with respect to generative AI and social media. The selection of peer-reviewed journal articles, conference papers, industry reports, and policy documents was carried out systematically to generate key themes,

trends, and ethical concerns. To locate articles on generative AI and social media, ethical issues, and content moderation, databases, including Google Scholar, IEEE Xplore, and PubMed, were queried with keywords such as generative AI, social media, ethical challenges, and content moderating. The criteria used in the selection of the literature were relevance in relation to the research questions, and having been published within 10 years, and from sources regarded as reputable. This was done by coming up with a substantial database of 50 writings, which were studied under the thematic analysis.

The data was analyzed through thematic analysis as proposed by Braun and Clarke (2006) and involves six steps. To begin with, the research team became acquainted with the data through careful reading of transcripts, literature and case study materials several times so as to become well aware of the material. The next step was to identify and code major concepts and patterns with the help of an NVivo software to obtain the initial codes that would capture common ideas and themes. The codes were subsequently organized into bigger themes depending on their applicability to the research questions thus making the sorting of data highly organized and methodical. The themes were then critiqued and perfected with repeated discussions, ensuring that they were true to the data and consistent throughout it. The themes were well defined and named to reflect what they meant making them have a systematic way of interpretation. Lastly, the results were summarised in a general account with citations and examples of quotes and evidence of the same in the data so that the report was both analytical and readable. This methodology was quite adequate to investigate possibilities of generative AI and social media without being too overwhelming and to then provide methodological transparency.

At the end of the exposure period, leaf samples were harvested, washed, dried, and homogenized. Methanolic extracts were prepared using Soxhlet extraction for antioxidant analysis, while fresh tissue was used for oxidative stress marker assessments.

4. Themes

The literature review of the intersection of generative AI and social media presented four general themes, each of which includes critical trends and ethical issues. These themes offer a systematic overview of the interplay that is in action and show us the dualistic side of generative AI in scenarios of social media. As discussed below, the identified themes include:

1. Democratization of the content creation

Generative AI has reduced significantly the entry threshold to content creation, allowing a user producing very high-quality text, images, and videos without working much. Through tools that have taken this form, such as the GPT models and DALL · E developed by OpenAI, even people who lack technical knowledge have become able to participate in the high-level process of content production resulting in the creation of the current movements of digital creation (OpenAI, 2023). This democratization has seen the rise of user-generated content across social media; a strategy that has increased user interactions and the proliferation of social media. Nevertheless, it is also associated with questions of authenticity and originality of the content, because the division between a human and a machine-generated content is getting more and more smudged (Anderson & Rainie, 2023). This is further coupled with easy creation of the content which has resulted to oversaturation of information making it difficult to distinguish trustworthy and unreliable sources among the users.

2. Spreading of False Information and Deep fakes

Among the most urgent ethical issues noted in the literature, there is the use of generative AI to generate and disseminate misinformation. The technology associated with deepfake particularly has become a serious risk, with very lifelike but forged videos and images becoming a potential threat that can fool people (Chesney & Citron, 2019). Social media sites have their names on the big board since they have a wide coverage and can spread the information quickly. The literature cites several major incidents wherein deepfakes were utilized to subvert the beliefs of the people, the authorities and the democratic integrity of societies (Westerlund, 2019). This aspect reinforces the necessity of effective detection methods and regulatory structures to counter the malevolent use of generative AI.

3. Data Security and Privacy Issues

When generative AI is integrated into social media, it is essential to rely on extensive amounts of user-related data to train models and create individualized content. This dependency creates a great deal of privacy-related issues since users are not fully informed on how their information is gathered, stored, and processed (Abadi et al., 2016). There also have been cases on how AI-generated content unexpectedly shared sensitive data and create even more complications on privacy matters (Zuboff, 2019). Also, security of user data is at risk because of the possibility of data breach and modeling theft. These challenges have brought about the demand to increase transparency and accountability on

how the platforms store the information about their users and research of privacy-preserving AI technologies.

4. Bias and Discrimination through Algorithm

Generative AI models learn the hateful and sexist biases that exist in our society and as such, generate discriminative content as well as biased recommendations (Binns, 2018). As it is depicted in the literature, AI-based content has reinforced systemic biases in various ways, creating stereotypes or disregarding specific demographic groups (Noble, 2018). An example of this is the AI recommending students in social media sites that have been accused of forming echo chambers and filter bubbles whereby students only get the information aligned to what they already believe (Pariser, 2011). This theme highlights the fairness and inclusivity that is required in AI development and also the necessity for the human resources to have control in order to reduce bias.

5. Intellectual property legal problems and property ownership

The emergence of generative AI has conditions the affair of the intellectual property (IP) and ownership, especially with regards to AI-generated content. The literature draws attention to the uncertainty of who owns the rights to the content that is created by AI, be it by the user, the platform, or the authors of the AI model (Guadamuz, 2017). This vagueness poses legal and ethical challenges, especially when the AI-generated contents become viral or even when they are used as a commercial tool. Also, the copyright use complaint to train AI has resulted in litigation and demands of more explicit IP infrastructures (Suzor, 2019). This motif highlights the necessity of a new set of laws and principles that would be able to take into account the peculiarities of generative AI.

6. Moral Governance and Sub-plate Accountability

The literature explains the importance of social media platforms in the control of ethical utilization of generative AI. Content moderation is increasingly being done using an AI-driven system to detect and remove abusive content, including hate speech, misinformation, and deepfakes (Gillespie, 2018). Nevertheless, these systems have their limitations, not always succeeding to contextualize content and resulting in the deletion of genuine posts or the inability to detect less apparent forms of harm (Roberts, 2019). The conflict between innovation and responsibility is brought to fore by this theme, where it is necessary to balance the positive effects of generative AI with the risks that they pose in

terms of their ethical risks. It is stated in the literature that there should be more transparency, accountability and cooperation between stakeholders in regard to ensuring that there is responsible deployment of generative AI in social media.

The thematic treatment of the literature illustrates a two-sided relationship between generative AI transformational power and the ethical risks it bears on social media. The knowledge gained on the three themes of democratization of content creation, volume of misinformation, privacy, algorithmic bias, intellectual property and ethical governance, offers a radical way of comprehending the threats and possibilities in these technologies. By focusing on these themes, the stakeholders will be acting to come up with ethical frameworks and policies to leverage the potentials of generative AI and reduce the risks.

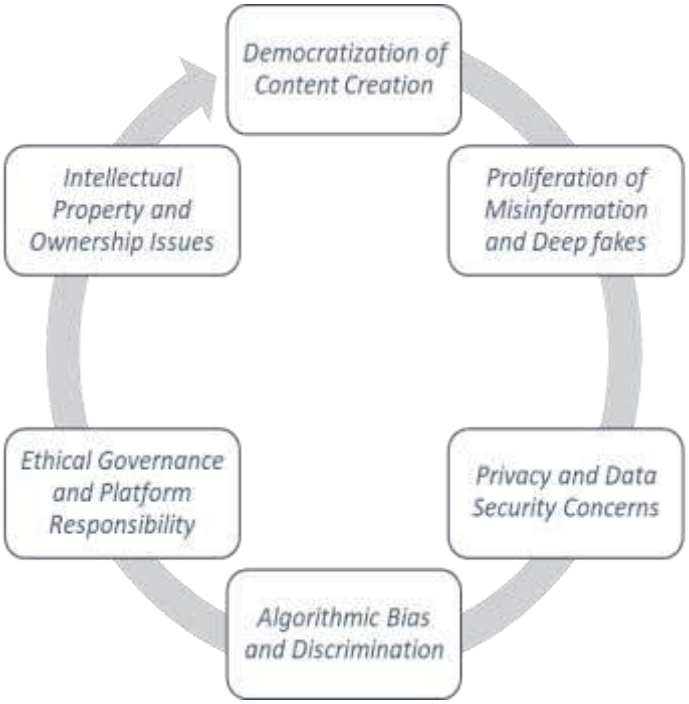

Figure 1 Themes

Discussion

The results of the thematic analysis describe a process of interaction between the generative AI with its transformative potential and its ethical concerns in the social media environment. This chapter of the discussion will go further to comment on each of the identified themes, their implications and

relate them to larger societal, technological and ethical issues. A closer look at these themes shows that generative AI is a two-edged sword and responsible innovation and governance are necessary.

1. Democratization of Content Creating

Generative AI has revolutionized the creation of content and this has had a huge impact on the way individuals and organizations approach social media. The availability of tools like GPT models and DALL·E has also reduced the level of technical knowledge required to produce quality content on a regular basis, and it is now possible to express creativity and inclusivity without prior experience in the field (OpenAI, 2023). This change has been especially advantageous to small-scale companies, individual artists, and disadvantaged groups through giving them to reach out and be heard by more people. The result of this democratization is, however, that it has brought a massive amount of content into the spotlight so that it now becomes harder to establish which information can be trusted (Anderson & Rainie, 2023). Also, the boundary between human and machine-generated content is getting blurred, evoking the notion of authenticity and the future opportunities (and limits) of how advanced human creations would be. The advent of AI-created art, in particular, has prompted people to consider the role of originality in the automated world. It is in these developments that the need to introduce verification tools on digital platforms may be seen to ensure the credibility in the content used and still allow the creative potential of the generative AI to be utilized.In response, the plant increased its antioxidative enzyme activities—SOD, CAT, and GSH—which are critical for detoxifying ROS and protecting cellular integrity. This aligns with the work of Surai in 2005 (Surai et al., 2005), who emphasized silymarin’s role in modulating antioxidant enzyme levels and protecting cells under toxic conditions.

2. Proliferation of Misinformation and Deep fakes

One of the biggest ethical dilemmas of social media is the generation and distribution of misinformation, in the form of deep fakes, with the help of generative AI. The knowledge of deep fake technology has been exploited maliciously to bias the opinion of the people, to create falsities as pieces of evidence, and to discredit institutions (Chesney & Citron, 2019). Illustratively, political candidates who are running in elections have had to be subject to deep fake videos to create false tales about them, which is a threat to the democratic procedures. Social media, through its fast spread properties, makes the problem worse as it helps such content to go viral even before they could be debunked. Even though platforms have started to use AI-powered tools that help identify and

eliminate deep fakes, such software is not entirely effective, and they tend to have a hard time keeping up with the rapidly changing technologies (Westerlund, 2019). This theme highlights the importance of collective action between governments, technology firms, and civil society to create effective detection systems and directives that can deal with the abuses associated with generative AI.

3. Privacy and Data Security Concerns

One area where large user data and generating AI could be highly relevant in social media is in terms of privacy and information security concerns. There is a lack of transparency and accountability regarding the methods of collecting, preserving, and using data to train AI models because users are usually unaware of their information practices (Abadi et al., 2016). On top of that, AI-generated content may disclose sensitive information, which is difficult to control because of the personal details included in such training data sets (Zuboff, 2019). As an example, simple AI systems, which are trained on publicly posted social media messages, can yield data that reveal secret information about the person. Such difficulties indicate the necessity of privacy-seeking technologies in AI, which are differentially privacy and federated learning, as they reduce the visibility of the data and still guarantee model quality. Also, platforms have to implement clean data policies, and offer them more freedom of control to cultivate trust and comfort with the privacy laws.

Interestingly, silymarin levels also increased significantly under stress, suggesting a defensive upregulation of flavonolignan biosynthesis. According to Gazák and others in 2007 (Gazak et al., 2007), these compounds can directly scavenge free radicals and chelate metals, providing dual protection. The highest silymarin content was observed in arsenic-treated plants, supporting the idea that more severe oxidative stress induces greater phytochemical accumulation. These findings support the hypothesis that *Silybum marianum* not only tolerates polluted environments but actively synthesizes protective metabolites that neutralize oxidative stress, confirming its dual role as a phytoremediator and a medicinal resource.

4. Algorithms Bias and Discrimination

The major ethical issue that generative AI models present perinatally is that of algorithmic bias which reinforces societal disparities. These models are trained using the datasets that might mirror the pre-existing biases which causes discrimination in the provided results of the content generation and recommendation systems (Binns, 2018). To illustrate, AI-generated text or picture could contain stereotypes or isolate a certain demographical group that would silence the voices of underrepresented

groups. The biased recommendations algorithms may generate echo chambers and filter bubbles, where the user is shown what they want to see and believe, which only contributes to the polarisation on social networks (Pariser, 2011). A comprehensive strategy that involves creation of multicultural and representative datasets needed to train the algorithms, creation of fairness metrics, and human supervision of the AI systems is required to reduce algorithmic bias. Fairness and inclusivity should be prioritized to help the stakeholders to reduce the negative outcomes of the bias issues and encourage equality.

5. Intellectual Property and Ownership Problems

The emergence of generative AI has raised the issue of intellectual property (IP) and ownership especially with regard to AI-generated content. Even the nature of such content delivery and the right to do so are an open question and give rise to both legal and ethical challenges (Guadamuz, 2017). Considering an example of an AI-generated picture that may become viral on the internet, it is not clear who is supposed to receive the commercial gains of such a work. There are also lawsuits and demands to regulate the IP framework more clearly due to the use of copyrighted material to train AI models (Suzor, 2019). The circumstances described illustrate the importance of having revised legal and ethical standards that could potentially deal with the distinctive issues brought about by generative AI. The policymakers should also collaborate with technologists, creators and platforms to come up with IP frameworks with the element of innovation and protection of rights of creators.

6. Platform responsibility Ethical Governance

The social media is an influential platform in the regulation of ethical use of the generative AI. Although AI-based content moderation tools are more efficient in the detection and subsequent deletion of malicious content, they are not utterly perfect. Such systems tend to be unable to contextualize the content, thus gettingCharacteristic of them is the deletion of legitimate posts, or inability to catch subtle types of harm (Gillespie, 2018). Furthermore, the pressure platforms experience is between being innovative and responsible since they are motivated financially to implement the technologies of generative AI to provide the users with even more enjoyable experiences and continue to have a competitive edge in the market. The strain has resulted in a demand of increased visibility and responsibility in the process of platform mobilisation use of generative AI by disclosing AI usage and developing ethical frameworks (Binns, 2018). With a focus

on ethical governance, platforms will be able to earn the trust of its users and create the conditions to deploy generative AI responsibly.

The presentation of these themes brings out the dualistic nature of generative AI on social media, which grants the potential of innovation as well as threats that require proper attention. Democratization of content generation, misinformation, privacy, algorithmic bias, intellectual rights and the ethical control are all issues pointing towards the necessity to develop a moderate approach towards using generative AI. Platforms, policymakers as well as civil society stakeholders have to work together to design ethical systems and policies to exploit the positivity of generative AI whilst ensuring that the dangers are reduced. Through these issues it is possible that we shall make generative AI to play a positive role in the future of social media, and society in general.

Theoretical Implications

With the insights that this research will also relate to other fields this study can enhance theory by covering areas that include computer science, ethics, sociology, and media study. It contributes to the growing body of scholarship on how artificial intelligence will impact society by addressing the unique obstacles caused by generative AI in social media contexts. To give an example, the research on algorithmic bias works on the already established theories of fairness and discrimination in AI and it is crucial that interdisciplinary approaches should be employed to cater to these issues (Binns, 2018). Similarly, the debate around intellectual property and possession challenges the traditional notions related to creative divinity and authorship, which requires an intellectual reflection of legal and ethical practices in the framework of AI generated content (Guadamuz, 2017). In this analysis, the study presents a conceptual framework that reflects the complexity of the correlation that exists between technological development and social values, and which forms an explanation base which scholars can use in future research.

Furthermore, the paper highlights the significance of ethical theories in the establishment and use of generative AI. As an example, the concept of utilitarianism can be used to determine the potential of AI-powered content creation to benefit the maximum number of individuals against misinformation, whereas the concept of deontological ethics can guide the development of foundations of responsible AI usage (Floridi, 2019). Not only do they add value to the academic discussion, but this theoretical contribution also serves as the basis upon which ethical guidelines and directions can be established.

Practical Implications

The feasible consequences of this research are broad-sweeping and provide practical recommendations to different stakeholders. In the case of social media, the implications of the study point at the importance of ensuring transparency, accountability, and trust among users. To ensure the truthfulness of the produced content by AI, platforms can use procedures to identify validity of the AI-generated content, e.g. watermarking or metadata metadata (OpenAI, 2023). Also, platforms are going to need to invest in well-developed content moderation systems which pair AI-based tools with human control to mitigate the weakness of mechanical systems (Gillespie, 2018). These are some of the measures through which platforms can reduce risks of misinformation and algorithmic bias, as well as improve user experiences.

The study drives home the fact, which is even more important to policymakers, that it is time to come up with a regulatory mechanism to deal with the ethical issues associated with generative AI. It requires amendments of intellectual property legislation to cover the work produced by AI, the frameworks defining data privacy and safety, and algorithmic fairness standards (Suzor, 2019). Another way to accelerate the adoption of generative AI is to ensure policymakers raise public awareness campaigns to make users aware of the risks of this technology and its advantages so that they can make their own choices.

To the users and those who build content on social media, the research highlights the value of critical thinking and digital literacy in mediatizing such complexities as AI-based social media. Being armed with the knowledge of what generative AI can and cannot do, users will be better equipped to assess the veracity of a particular piece of information and safeguard against disinformation and data leakages. The content creators, in turn, can easily use generative AI to create more content without being unethical and violating intellectual property rights.

Conclusion

The present research introduces a number of avenues that have to be focused to continue the investigation into the overlap between generative AI and social media. The need to create more sturdy and clear-cut AI systems that take into consideration fairness and accountability, and user dependability is an essential course of action. Scholars can examine more sophisticated methods of identifying and addressing algorithmic bias including adversarial training and a machine learning in

favor of fairness, to provide fair results among a different and diversified user base (Binns, 2018). Also necessary is a longitudinal research to determine how generative AI may affect a society in the long term including the influence on cultural norms, democracy, and solidarity. The pursuit of privacy-preserving AI solutions, and the development of these technologies like federated learning and differential privacy, which allow minimizing the exposure of data to their use, yet ensuring that the model performance stays the same, is another attractive direction. Moreover, it is possible to approach this issue on the interdisciplinary level because research based on the experience of computer science, ethics, law, and sociology can give a comprehensive picture of the state of challenges and opportunities of generative AI. These future issues are ways through which researchers can play a part in promoting the ethical implementation of generative AI in line with the benefits it brings to the digital environment.

References:

1. Abadi, M., Chu, A., Goodfellow, I., McMahan, H. B., Mironov, I., Talwar, K., & Zhang, L. (2016). Deep learning with differential privacy. *Proceedings of the 2016 ACM SIGSAC Conference on Computer and Communications Security*, 308–318. https://doi.org/10.1145/2976749.2978318
2. Anderson, J., & Rainie, L. (2023). The future of digital spaces and their role in democracy. *Pew Research Center*. Retrieved from https://www.pewresearch.org
3. Binns, R. (2018). Fairness in machine learning: Lessons from political philosophy. *Proceedings of the 2018 Conference on Fairness, Accountability, and Transparency*, 149–159. https://doi.org/10.1145/3178876.3186088
4. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
5. Chesney, R., & Citron, D. (2019). Deep fakes: A looming challenge for privacy, democracy, and national security. *California Law Review, 107*(5), 1753–1819. https://doi.org/10.15779/Z38RV0D15J
6. Diakopoulos, N. (2019). Automating the news: How algorithms are rewriting the media. *Harvard University Press*.
7. Floridi, L. (2019). What the near future of artificial intelligence could be. *Philosophy & Technology, 32*(1), 1–15. https://doi.org/10.1007/s13347-019-00345-y

8. Gillespie, T. (2018). *Custodians of the internet: Platforms, content moderation, and the hidden decisions that shape social media*. Yale University Press.
9. Goodfellow, I., Bengio, Y., & Courville, A. (2016). *Deep learning*. MIT Press.
10. Guadamuz, A. (2017). Artificial intelligence and copyright. *WIPO Magazine*. Retrieved from https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html
11. Hindman, M. (2018). *The internet trap: How the digital economy builds monopolies and undermines democracy*. Princeton University Press.
12. Knight, W. (2017). The dark secret at the heart of AI. *MIT Technology Review*. Retrieved from https://www.technologyreview.com
13. Jeon, J., Kim, L., & Park, J. (2025). The Ethics of Generative AI in Social Science Research: A Qualitative Approach for Institutionally Grounded AI Research Ethics. Technology in Society, 102836.
14. Noble, S. U. (2018). *Algorithms of oppression: How search engines reinforce racism*. NYU Press.
15. O'Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Crown Publishing Group.
16. OpenAI. (2023). GPT-4 technical report. *OpenAI*. Retrieved from https://www.openai.com
17. Pariser, E. (2011). *The filter bubble: How the new personalized web is changing what we read and how we think*. Penguin Books.
18. Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information*. Harvard University Press.
19. Roberts, S. T. (2019). *Behind the screen: Content moderation in the shadows of social media*. Yale University Press.
20. Saheb, T., Sidaoui, M., & Schmarzo, B. (2024). Convergence of artificial intelligence with social media: A bibliometric & qualitative analysis. Telematics and Informatics Reports, 100146.
21. Sunstein, C. R. (2017). *#Republic: Divided democracy in the age of social media*. Princeton University Press.

22. Suzor, N. (2019). *Lawless: The secret rules that govern our digital lives*. Cambridge University Press.
23. Qadhi, S. M., Alduais, A., Chaaban, Y., & Khraisheh, M. (2024). Generative AI, research ethics, and higher education research: Insights from a scientometric analysis. Information, 15(6), 325.
24. Tufekci, Z. (2017). *Twitter and tear gas: The power and fragility of networked protest*. Yale University Press.
25. Westerlund, M. (2019). The emergence of deepfake technology: A review. *Technology Innovation Management Review*, *9*(11), 39–52. https://doi.org/10.22215/timreview/1282
26. Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.

Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this paper. The research was conduct independently and is free from any commercial or financial relationships that could be construe as a potential conflict of interest. All views expressed are solely those of the authors and do not necessarily reflect the positions of any affiliated organizations.