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Public Sentiment on Generative AI: Analysis of the Gap between Positive Online Media and Negative Narratives on Social Media

Diana Anggraini (Orcid id: 0000-0001-6319-5341)^{1*},

Ari S. Widodo (Orcid id: 0000-0001-8703-8068)²,

Albert³ (Orcid id: 0009-0000-2323-3518)

^{1,2,3} *LSPR Institute of Communication and Business – Jakarta*

¹ diana.a@lspr.edu; ² ari.swp@lspr.edu ; ³ albert@lspr.edu

Abstract

This study examines the differences in public sentiment towards generative AI on two different communication platforms: social media and *online* media. Sentiment analysis from 35,433 discussions on social media showed that 45% of them had negative sentiments, which mainly focused on privacy, data security and ethics issues. In contrast, an analysis of 27,970 articles in *online* media revealed that 71% of them had positive sentiments, highlighting the potential of generative AI in improving efficiency, creativity, and innovation in sectors such as education and healthcare. This difference confirms how the characteristics of the platform affect public perception. The findings have important implications for policymakers and technology development. Addressing public concerns through strong AI regulation and developing inclusive communication strategies is essential to bridging the sentiment gap. A balanced Naras can increase public literacy and trust in generative AI, encouraging responsible technology adoption. By expanding the scope of the analysis, further studies can provide evidence-based insights to support decision-making in technology governance.

Keywords: Generative AI, Public Sentiment, Social Media, Online Media, Sentiment Analysis, AI Policy, Media Narratives

I. Introduction

a. Background

Artificial Intelligence (AI) has become one of the most significant technological innovations in the last decade. Among the various applications of AI, Generative AI has created a tremendous impact, enabling the creation of content as text, images, videos, and even music, that resemble human work (Lv, 2023 p. 210). Not only does this technology offer efficiencies in various sectors, such as the creative industries, healthcare, and education, but it also opens up new opportunities for innovation (Rahimli & See-To, 2018 p. 73). However, according to Gruenhagen et al., (2024), as it continues to evolve, Generative AI also poses various challenges, including the risk of misuse, invasion of privacy, and the potential replacement of human labor.

Additionally, the adoption of Generative AI has sparked intense discussions on various media platforms about the benefits and risks that come with it. With the increasing speed of information dissemination, people are faced with the choice of accepting or rejecting this technology based on their understanding (Rawas, 2024 p. 4-5). Therefore, understanding the dynamics of public perception of Generative AI is essential to ensure that the technology can evolve in a responsible and sustainable way.

The rapid development of generative AI not only offers a wide range of opportunities, but also poses new challenges that affect the way people perceive this technology (Gruenhagen et al., 2024 p. 2). Discussions about the benefits and risks of this technology are becoming increasingly intense, Hakim, (2022) discussed that this is mainly because of its immediate impact in various sectors of life. In this context, public perception is a determining factor in whether Generative AI can be widely accepted or even face resistance, as reported by Portulans Institute, (2023). This aspect is crucial because according to Kurniati, (2023), a very revolutionary technology requires a balanced understanding between its positive potential and the risks that arise so that its adoption can be carried out responsibly.

Public perception plays a key role in determining the direction of acceptance or rejection of new technologies, including Generative AI. When people have a positive perception, such as believing that this technology will improve their quality of life, then its adoption can go faster on the other hand if negative perceptions dominate, especially if people feel that Generative AI threatens their jobs, privacy, and social values, then the acceptance of this technology can be hampered (Lee & Kim, 2024 p. 4; Dwivedi et al., 2021 p. 10). Therefore, the processing of public perception is one of the crucial factors in the success of technology implementation.

In today's context social media platforms and *Online* media play a big role in shaping public perception of Generative AI. *Online* media often conveys a more structured and optimistic narrative about this technology (Octavianto et al., 2024 p. 173; Saheb et al., 2024 p. 2), while social media allows people to express their concerns directly. Discussions on social media tend to be freer and spontaneous, while often result in higher negative sentiments (Cahyono, 2016 p. 140). This creates a huge challenge for policymakers and technology developers to bridge the gap between the public perspective and the true benefits of generative AI.

The two platforms, according to Malewicz, (2025), reflect different perspectives in conveying information about Generative AI, and these differences are rooted in the unique characteristics of each medium. Social media, with its interactive nature and *real time*, is often a common space for people to express their personal concerns and experiences related to technology (Jebaselvi et al., 2023 p. 2). On the other hand, the *Online* media which tends to focus on more curated content, playing a role in shaping a more optimistic narrative about the benefits of this technology. This gap suggests that while generative AI is recognized as having great potential, there is a need to understand and manage the differences in public perception in order for this technology to be more widely accepted.

Differences in sentiment on social media and media *Online* is an interesting phenomenon in understanding public opinion about Generative AI. On the one hand, social media tends to reflect people's concerns and dissatisfaction, such as a lack of regulation or the potential risk of misuse of technology (Miyazaki et al., 2024 p. 4-5). This can be seen from the high percentage of negative sentiment on social media (45%). On the other hand, the media *Online* often provide a more positive narrative (71%), focusing on the potential of technology to increase efficiency, creativity, and innovation (NoLimit Indonesia, 2024 p. 5).

This gap reflects the duality in public perception, which is largely influenced by the characteristics of each platform. Social media often uses personal opinions and criticizes policies that are considered

inadequate, while the media *Online* prioritizing formal news that supports technological innovation (McCarthy et al., 2023 p. 2172). This imbalance suggests that, while Generative AI offers many opportunities, there is still a huge homework in aligning the public's views with the potential position of this technology (Chan & Hu, 2023 p. 2). The gap also requires more attention from policymakers to build regulations that are not only responsive, but also able to ease public unrest.

b. Problem Formulation

1. Why is there a significant difference in sentiment between social media and *online media*?
2. How does this perception affect the urgency of policies related to Generative AI?

The significant difference in sentiment between these two platforms raises an important question: what causes such a contrasting narrative? Factors such as user characteristics, communication patterns, and content goals can be the main triggers for these differences. In addition, higher negative perceptions on social media show that there is public unrest that cannot be ignored, especially regarding the lack of clear and firm policies regulating the use of Generative AI.

This raises the urgency to explore how public perception can affect the need for AI regulation. Policies that are not responsive to public concerns have the potential to hinder the adoption of these technologies, while inclusive policies can help build public trust in generative AI. Therefore, this study seeks to understand the sentiment gap and its implications for the policies needed.

c. Research Objectives

1. Analyze the distribution of public sentiment towards Generative AI.
2. Identify the factors that influence differences in sentiment across social media and *online media*.

d. Research Benefits

1. Academic Benefits

- a. Contribution to the development of science: this research provides new insights into the dynamics of public perception of Generative AI by integrating sentiment analysis on two different platforms, namely social media and *online media*. The results of the research can be a reference for further studies in the fields of digital communication, technology, and public policy.
- b. Literature enrichment on AI and media: this study fills a gap in the academic literature by focusing on the differences in perceptions shaped by social media and online media . This provides a deeper understanding of how various mediums of public opinion towards technological innovation.
- c. Development of sentiment research methodology: the sentiment analysis approach used in this study can be a model for other academics to explore public perception of technology or other issues using digital media.

2. Practical Benefits

- a. Recommendations for policymaking: this study provides empirical data on public unrest, particularly on social media, which can be used to design more responsive and inclusive policies in regulating generative AI. By understanding public perceptions, governments can create regulations that not only protect society but also encourage responsible adoption of technology.
- b. Communication Strategies for AI technology developers: the results of this study can help technology companies and Generative AI developers in designing effective communication strategies to educate the public and reduce negative sentiment, especially on social media platforms.

II. Literature Review

a. Generative AI and its impact

Generative Artificial Intelligence (AI) refers to systems that are able to generate new content, such as text, images, or sounds, by learning patterns from existing data. In the field of education, the application of Generative AI has shown significant potential in improving the learning process. For example, the use of generative AI capital can help in the creation of teaching materials that are more interactive and responsive to student needs, thereby increasing the understanding of the concepts taught (Kanont et al., 2024 p. 16-17). Similarly, a study from Siregar et al., (2024) shows that the application of economy-based generative learning can facilitate students' ability to understand concepts more effectively.

However, despite the benefits, the adoption of Generative AI in education also poses challenges that cannot be ignored, especially related to ethics and academic norms. Research by Noroozi et al., (2024) analyzed the impact of AI literacy on changes in students' academic norms and ethics, the findings of the study were that the use of AI without proper understanding can blur the line between original work and generative results, thus potentially reducing academic integrity. This emphasizes the importance of institutional policies that are able to guide the use of Generative AI to be in line with the expected educational goals.

The flexibility of generative AI is not only limited to the world of education, but also extends to various other sectors. This technology provides adaptive and innovative solutions to meet the specific needs of each field. For example, in addition to aiding the learning process, generative AI also offers real contributions in the healthcare, creative industries, and technology sectors (Moulaei et al., 2024 p. 2-5). With its extraordinary ability to create diverse content, Generative AI is one of the most revolutionary innovations that is able to support various human activities in the modern era.

Thus, Generative Artificial Intelligence (AI) shows cutting-edge performance in solving complex real-world problems in various fields. In image translation, generative AI models are able to transform medical images by improving image quality, as discussed in the study Marcos et al., (2024). In medical diagnostics, generative AI plays a role in improving diagnostic accuracy through the analysis of complex medical data. Study "Revolutionizing Personalized Medicine with Generative AI: A Systematic Literature Review", by Ghebrehiwet et al., (2024), which highlights the role of generative models in precision medicine, including the creation of realistic synthetic data to improve patient privacy.

In addition, in text checking, Generative AI is capable of generating coherent and relevant text, supporting a wide range of applications such as content creation and virtual assistants. Research "Explainable Generative AI (GenXAI): A Survey, Conceptualization, and Implementation" by [Schneider, \(2024\)](#) discusses the importance of transparency in generative AI models to ensure the reliability and accuracy of the outputs produced.

These achievements demonstrate how these technologies can contribute significantly to providing efficient and innovative solutions to various challenges. Its success in various applications proves the relevance and potential of Generative AI to continue to grow, not only as an auxiliary tool, but also as a key driver of social and economic change at the global level.

b. Public Sentiment Theory

Public sentiment analysis is a field of study that analyzes opinions, assessments, evaluations, sentiments, attitudes, and emotions towards entities such as products, services, organizations, individuals, events, topics, and other attributes ([Marreddy & Mamidi, 2023 p. 142](#)). In the context of mass communication, the theory of *Framing* and agenda *Settings* to be relevant. Framing theory, popularized by Erving Goffman in 1974 in his book "*Frame Analysis: An Essay on The Organization of Experience*", explains how the media presents information in a certain way to influence perception Audience ([Arowolo, 2017 p. 4](#)). Meanwhile, agenda theory *Settings* introduced by Max McCombs and Donald Shaw in 1972, stated that the media has the ability to determine what issues are considered important by the public ([Olayinka & Odunayo, 2024 pp. 31-33](#)).

Public sentiment analysis has become an important tool in understanding public opinion on various issues, especially with the increasing use of social media as a communication platform. Social media provides rich data and *real-time*, allowing researchers to identify and measure public feelings and opinions more accurately. For example, research conducted by [Leidiyana et al., \(2024\)](#) analyze public sentiment towards the policies of the People's Housing Savings Program (Tapera) by using comment data from the YouTube platform. This study applies various machine learning algorithms (*machine learning*) such as Support Vector Machine (SVM), K-Nearest Neighbors (KNN), Multinomial Naive Bayes (MNB), and Decision Tree. The data were classified into categories of positive and negative sentiment, using the SMOTE technique to address data imbalances. The results show that the SVM algorithm has the best performance, with an accuracy of 88% and an F1 score of 85% ([Leidiyana et al., 2024 p. 127](#)). This study provides insight into how social media can be used to understand public opinion on government policies, and emphasizes the importance of using technology to support public policy evaluations more effectively and data-based.

In addition, sentiment analysis is also used to understand people's reactions to certain events. Study by [Pratama et al., \(2023\)](#) analyzed public sentiment towards electric vehicles on social media Twitter, using Logistic Regression algorithms and Principal Component Analysis (PCA) optimization. The data used consisted of 1,874 tweets collected through *crawling* with keywords related to electric vehicles. Public sentiment was categorized into positive and negative opinions, where the results showed that 86.9% of sentiment was positive and 13.1% was negative. Optimization with PCA increases the accuracy of the Logistic Regression algorithm from 87.9% to 90%. This research provides important insights into how social media can be used to understand public opinion towards green technologies, such as electric vehicles, while highlighting the effectiveness of sentiment analysis methods and in supporting data-driven policymaking ([Pratama et al., 2023 p. 4](#)).

The use of public sentiment analysis in studies such as those conducted by [Pratama et al., \(2023\)](#) shows how this method can reveal the pattern of public opinion on certain issues by utilizing data from

social media. The findings highlight the importance of understanding public sentiment to support more effective policymaking. To understand further, it is necessary to have a fundamental understanding of sentiment analysis including the concept, the technology used, and its role in interpreting public opinion that is developing on various communication platforms.

Public sentiment analysis, or *opinion mining*, is a branch of natural language processing (*Natural Language Processing, NLP*) which aims to identify and extract subjective information from text (Saber & Saad, 2017 p. 1660). This process involves the use of technologies such as machine learning (*Machine Learning, ML*) to identify linguistic patterns and interpret user sentiment, whether positive, negative, or neutral. With its ability to process large amounts of data in a *real-time*, according to Cruz, (2023), Sentiment analysis is an important tool for understanding the growing public opinion across various communication platforms, including social media and media *Online*.

In its application, sentiment analysis has various types, such as detailed sentiment analysis, emotion-based and aspect-based. These types provide a framework for understanding how public sentiment towards a particular topic is evolving, including in discussions about new technologies such as generative AI (Mao et al., 2024 p. 2). Social media, for example, according to Mohamed et al., (2024) is often the place where critical opinions on the risks and challenges of generative AI emerge, while the media *Online* tend to highlight the benefits of this technology in improving efficiency and creativity. These differences in patterns can be explained through various sentiment analyst models designed to uncover nuances in evolving narratives.

Generative AI, as a revolutionary technology, has influenced the way society acts on technological innovation. Discussions about generative AI on social media often reflect concerns about privacy, security, and its impact on the workforce (Amankwah-Amoah et al., 2024 p. 2-3). On the other hand, the media *Online* highlight the benefits of this technology in various sectors such as education, healthcare, and creative industries (Wibowo et al., 2024 p. 1369). Sentiment analysis allows for the identification of these gaps, helping to understand how public opinion is divided based on the communication platform used.

The application of sentiment analysis to generative AI is very relevant to understand narrative patterns on social media and media *Online*. For example, research Leidiyana et al., (2024) suggests algorithms such as the Support Vector Machine (SVM) can be used to categorize positive and negative sentiment towards technology policies. Similarly, research Pratama et al., (2023) Highlights how Logistic Regression-based sentiment analysis helps uncover public opinion towards electric vehicles. A similar approach can be applied to generative AI discussions to identify opinion trends across multiple platforms, so that it can be used by policymakers to formulate more effective communication strategies.

c. The Role of the Media in Influencing Public Opinion

The media plays a significant role in shaping public opinion through the dissemination of information and the framing of certain issues. According to Gamson & Modigliani (1989), the media provides an "interpretive package" that helps the audience understand and interpret complex events or issues. This package consists of a central idea or framework (*Frame*) which gives meaning to an issue, thus affecting how the public views and responds to it. Thus, the media not only conveys information, but also forms a perception of the public's attitude towards various topics.

In addition, the emergence of social media has changed the dynamics of public opinion formation. Sentiment disseminated through the media *Online* can influence consumer behavior, business decisions, and society as a whole (Hanaysha, 2022 p. 2-3). Sentiment analysis in the media *Online* serves as a new explanatory variable that can complement survey data in various areas, such as tourism demand and

consumer confidence (Daas & Puts, 2014 p. 5). This confirms that social media is not only a communication platform, but also a powerful tool in shaping public narratives and perceptions.

The role of the media in influencing public opinion is not only limited to the dissemination of information, but also includes the formation and reinforcement of stereotypes and social norms. Through certain representations, the media can reinforce existing views or form new perceptions in society. For example, research conducted by Helfmann et al., (2023) shows that media and influencer strategies can influence the dynamics of public opinion, where traditional media tend to maintain a more stable position. While influencers can cause fragmentation of opinions through more dynamic changes in position.

On the other hand, the interaction between media and social influences plays an important role in the behavior of opinion dynamics teams. Study by Colaiori & Castellano, (2015) revealed that the messages conveyed by the media play a significant role in shaping attitudes and encouraging change in opinion. However, individuals are also greatly influenced by peer pressure when forming their own judgments. The study highlights that increased media pressure can shift the system from pluralism towards global consensus, with four distinct classes of collective behavior emerging, depending on the outcome of direct interactions between individuals who have opposing opinions.

III. Research Methods

a. Research Approach

The research approach used in this study is a quantitative description based on sentiment data. This approach aims to describe phenomena that occur systematically, factually, and accurately regarding the characteristics of a certain population or phenomenon, in this case public sentiment towards generative AI. The descriptive method allows researchers to provide a detailed understanding of sentiment patterns, including the distribution of positive, negative, and neutral sentiments contained in the data.

The quantitative approach in this study utilizes big data obtained from various digital platforms, such as social media and *online* media. This data was analyzed using *Natural Language Processing* (NLP) algoritma to identify public sentiment in a measurable manner. With this technique, the research is able to produce a numerical-based picture that shows how the public narrative of generative AI is formed, both on social media and online media. The results of this quantitative analysis not only provide insight into public perception, but also allow for a more objective comparison between sentiment across the two platforms.

This sentiment data-driven approach supports *evidence-based decision-making*, especially in identifying patterns of public opinion that policymakers, companies, or researchers can use to understand the dynamics of sentiment towards generative AI.

b. Data Source

In this study, the data sources used consist of two main categories: data from social media and data from the media *Online*. Data from social media includes 35,433 conversations collected from platforms such as Twitter, Facebook, and Instagram. Sentiment analysis of this data shows that 45% of those conversations have negative sentiment. This finding is in line with research from Wijanarko et al., (2017) who conducted sentiment analysis on the development of Artificial Intelligence (AI) on Twiteer social media using the Random Forest method, which showed that there was significant negative sentiment in AI-related discussions.

Meanwhile, data from the media *Online* consisting of 27,970 news articles obtained from various digital news portals, sentiment analysis of these articles revealed that 71% of them had positive sentiment. These results are in line with the findings Gultom et al., (2024) which discusses the application of the Vader Sentiment algorithm to detect emotions in English texts in a *real-time* through a web-based platform. The data used came from Twitter comments obtained from YouTube user "Simplilearn," with a focus on grouping opinions into positive, negative, and neutral sentiments. The study shows that lexicon-based algorithms such as VADER Sentiment are effective in detecting sentiment, with an accuracy of 80%. If associated with data from the media *Online*, this study shows the potential of lexicon algorithms in identifying positive sentiment patterns that dominate news narratives in the media *Online*, similar to the finding that 71% of news articles have positive sentiment.

This difference in the proportion of negative and positive sentiment between social media and *online* media provides insight into how different platforms can influence public perception of a particular topic, in this case generative AI. Further analysis is needed to play into the factors that cause these differences and their implications for the formation of public opinion.

c. Analysis Method.

In this study, the analysis method used include sentiment analysis with visualization of the distribution of positive, negative, and neutral sentiments, as well as comparative analysis between social media and media *Online*. Sentiment analysis aims to identify and classify public opinion expressed in texts into specific sentiment categories. For example, a study by Romadhony et al., (2024) using the *Random Forest* to analyze sentiment against the development of Artificial Intelligence (AI) on social media Twitter, which shows the distribution of positive, negative, and neutral sentiment.

Next, a comparative analysis between social media and media *Online* It was carried out to understand the difference in public perception conveyed through the two platforms. Research conducted by Kamarula & Rochmawati, (2022) comparing the methods of CNN and Bi-LSTM in analyzing the sentiments and emotions of the Indonesian people on social media Twitter during the COVID-19 pandemic, which highlights the difference in the distribution of sentiments and emotions expressed.

Using these analysis techniques, research can reveal how public opinion on a particular topic differs between social media and *online media*, as well as understand the factors that influence those differences.

IV. Results and Discussion

1. Result

In this study, the distribution of public sentiment towards Generative AI is analyzed to understand how public perception is formed through two main backgrounds, namely social media and *online* media. The analysis aims to identify patterns of positive, negative, and neutral sentiment expressed by users, while also exploring the differences in narratives that develop across each platform. These findings provide an in-depth look at the dynamics of public opinion and the significant role that the media plays in framing perceptions of innovative technologies such as Generative AI.

a. Sentiment Distribution on Social Media

An analysis of the data shows that sentiment on social media towards Generative AI is dominated by negative opinions, which account for 45% of the total 35,433 entries. Social media is often a space

for users to express concerns related to the impact of this technology, such as threats to privacy, data security, and the risk of replacing human walking jobs by technology. This reflects the dynamics of more critical and personal opinions on the platform.

In addition to negative sentiment, social media is also a place for neutral and positive opinions to develop, albeit in smaller proportions. Neutral sentiment often comes from informative or exploratory discussions related to Generative AI, such as how this technology works or its potential applications in various fields. Meanwhile, positive opinions tend to come from professionals or technology enthusiasts who understand the benefits of Generative AI in improving work efficiency, creativity, and innovation. However, these opinions are often masked by the dominance of criticism that is widespread on social media.

Social media characteristics such as user anonymity and freedom of expression allow the spread of more emotional opinions than online media, algorithms that prioritize content that triggers high interaction, and also increase exposure to negative sentiment in the generative context of AI, this results in a more critical perception of the technology which is often influenced by regulatory uncertainty, potential for technology abuse, and concerns about its impact on the social and economic aspects of this phenomenon suggest that social media is not only a mirror of public opinion, but also a catalyst that reinforces that narrative in society .

b. Sentiment Distribution in Online Media

On the contrary, the sentiment generated from online media tends to be more positive, reaching 71% of the total 27,970 news reports. Online media more often highlight the benefits of generative AI in improving efficiency and productivity in various sectors, such as education, healthcare, and creative industries. This news story features a structured, fact-based narrative that supports technological innovation as a solution to future challenges.

In addition to conveying the benefits of generative AI, *online media* also tend to display the viewpoints of experts and practitioners in the field of technology. Articles in *online media* often cite interviews, case studies, or industry reports reinforcing the positive narrative about this technology. This approach not only builds public trust in Generative AI, but also encourages the adoption of the technology by various sectors. By utilizing a fact-based and data-based approach, *online media* is able to mobilize public perception in a more optimistic direction and support innovation.

In addition, the nature of content curation in *online media* makes the narrative conveyed tend to be more controlled and focused on certain aspects that are considered relevant and interesting. Many *online media* outlets collaborate with technology companies or research institutions to convey information that can build public awareness about the great potential of Generative AI. The focus on the successful implementation of this technology in various countries is also one of the factors that strengthens positive sentiment in *online media*. With more structured narratives, *online media* not only influences public opinion, but also provides guidance on how this technology can be integrated into everyday life.

c. Differences in Trends on Both Platforms

The difference in sentiment distribution between social media and *online media* reflects a gap in how these two platforms frame the Generative AI narrative. Social media reflects a more diverse and

often emotional opinion of individuals, while online media reflects a collective narrative strategically crafted to support innovation. This difference is an indication that the public's perception of Generative AI is greatly influenced by the characteristics of the communication platform used.

The interactive and real-time *nature of social media* allows users to express opinions spontaneously, both based on personal experiences and opinions influenced by popular narratives. This makes social media a dynamic, but less structured discussion space, resulting in more emotional and critical sentiments. The anonymity factor also strengthens the courage of users to voice sharp criticism of Generative AI, especially regarding the risks of this technology to human work, privacy, and data security. As a result, discussions on social media are often dominated by narratives that highlight potential threats rather than the benefits of the technology.

In contrast, *online media* have stricter editorial controls, which allow for curated delivery of information with a focus on the success and potential of Generative AI. Articles in *online media* tend to emphasize the benefits of this technology in encouraging innovation in various sectors, such as education, health, and creative industries, as well as convey an optimistic view of technological advancements. This structured narrative is often influenced by collaborations with research institutions, technology companies, or experts in the field, which lends legitimacy to the positive sentiments conveyed. As a result, *online media* is able to create a more stable and supportive picture of Generative AI, which contributes to the acceptance of this technology by the public and the industry sector.

2. Discussion

In this discussion, it is important to look at how the unique characteristics of each communication platform affect the way people frame their perception of generative AI. Social media and *online media*, with their respective nature and dynamics, offer different spaces for the public to express their views. These differences reflect variations in emerging narratives, ranging from sharp criticism to optimism about technology, which collectively shape diverse public perceptions.

a. Criticism on Social Media

Social media provides space for user anonymity, which allows for the free expression of opinions without the significant influence of editorial control. In the context of Generative AI, social media users tend to focus on the risks of this technology, including the lack of clear regulation. This negative sentiment is also influenced by the spread of unverified information, which often triggers public concern.

Anonymity on social media also allows for the emergence of more emotional and unstructured discussions, which are often lengthy debates among users. In the context of generative AI, the most frequently expressed concerns are ethical issues, such as the potential for attackers where technology spreads fake news or harmful content. Many users also highlighted the lack of transparency from technology developers in providing understanding to the public regarding the limitations and risks of Generative AI. These concerns reflect growing public distrust due to a lack of adequate education and regulation.

Additionally, social media algorithms designed to increase user engagement often prioritize content that triggers emotional reactions, such as sharp criticism of Generative AI. This magnifies the exposure to the negative sentiment that spreads rapidly on the platform. Even a discussion that starts with an informative goal can easily shift into a debate that focuses more on the disadvantages of this technology than its potential benefits. As a result, social media has become an arena that is more

supportive of critical narratives compared to other media, reinforcing the public's negative perception of Generative AI.

b. Optimism in Online Media

Instead, *online* media are leveraging a rigorous editorial structure to shape a more optimistic narrative of generative AI. Published articles often emphasize the economic and social benefits of this technology, such as its ability to increase innovation in the fields of education and health. This optimism is supported by media collaborations with tech industry players, which aim to promote the widespread adoption of generative AI.

In addition to highlighting the economic and social benefits, *online* media also often presents successful case studies as tangible evidence of the potential of Generative AI. For example, articles discussing how these technologies help companies improve operational efficiency or create innovative solutions to industry challenges. This approach gives legitimacy to the optimistic narrative conveyed, while strengthening the public perception that Generative AI is a tool that is able to bring positive change in various sectors. By using data and interviews from experts, *online* media ensures that the information presented is not only interesting but also credible.

In addition, *online* media have a tendency to highlight collaboration opportunities between government, industry, and academia in making the most of Generative AI. Articles often contain policy initiatives or training programs designed to improve people's technological literacy. This narrative not only builds optimism towards Generative AI, but also encourages readers to see this technology as an integral part of a sustainable future. By conveying structured and solution-oriented information, *online* media plays a role as a catalyst in shaping a more positive public perception of Generative AI.

c. Implications of the Sentiment Gap

This difference in sentiment distribution has significant implications for public perception of Generative AI. While social media amplifies public concerns, *online* media forms a more positive perception and supports innovation. This gap shows the importance of the role of the media in shaping public opinion, while emphasizing the need for communication policies that are able to bridge the narratives on both platforms so that the public can have a better understanding of this technology.

The emerging sentiment gap between social media and online media reflects how platform characteristics can affect the mindset and public perception of Generative AI. Social media, with its fast, *real-time interaction dynamics*, often triggers emotional reactions that reinforce negative sentiments. On the other hand, more structured online media tend to present information that provides a sense of security and optimism to its readers. This imbalance can result in a difference in public understanding of generative AI, where some people may focus too much on risks without considering the benefits, while others only see opportunities without paying attention to the potential challenges.

The implications of this gap can also affect policymaking and technology adoption at large. Negative perceptions that spread on social media can hinder public trust in Generative AI, thereby slowing down the adoption of this technology at the community level. Conversely, the prevailing optimism in *online* media can provide an impetus for governments and industry to continue promoting technological innovation without considering critical input from the public. Therefore, a more inclusive and data-driven communication approach is needed to bridge this sentiment gap, so that it can encourage a more balanced and productive discussion about generative AI. That way, the public can make wiser decisions based on complete and objective information.

V. Conclusion

This study found significant differences in the distribution of sentiment towards Generative AI between social media and online media. Social media is dominated by negative sentiment (45% of 35,433 conversations), which focuses on risks such as privacy and data security. In contrast, *online* media tend to highlight the benefits of this technology, with 71% of 27,970 news articles describing Generative AI as an innovation that improves efficiency across various sectors. These differences reflect how platform characteristics affect the way the public frames perceptions of new technologies.

This difference in sentiment emphasizes the importance of policy interventions to bridge the narrative gap that emerges on both platforms. Social media, which has been dominated by criticism, reflects the need for regulations that are responsive to issues such as privacy, security, and ethics in the use of generative AI. On the other hand, optimistic narratives in *online* media provide an opportunity for policymakers to promote the benefits of this technology more broadly. An inclusive and data-driven communication strategy is needed to ensure better public literacy and increase trust in technology.

To support effective policies, in-depth follow-up research is needed on the impact of public perception on the implementation of Generative AI policies. The study can also explore the influence of media narratives on technology adoption in various sectors, such as education, healthcare, and creative industries. By expanding the scope of the analysis, future research can provide more comprehensive evidence-based insights to support strategic decision-making at the national and international levels.

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